



NOAA Technical Memorandum NMFS-AFSC-259

Community Profiles for North Pacific Fisheries - Alaska

Volumes 1-12

by
A. Himes-Cornell, K. Hoelting, C. Maguire, L. Munger-Little,
J. Lee, J. Fisk, R. Felthoven, C. Geller, and P. Little

U.S. DEPARTMENT OF COMMERCE
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ABSTRACT

This document profiles 196 fishing communities in Alaska with information on social, economic and fisheries characteristics. Various federal statutes, including the Magnuson-Stevens Fishery Conservation and Management Act and the National Environmental Policy Act, among others, require agencies to examine the social and economic impacts of policies and regulations. These profiles serve as a consolidated source of baseline information for assessing community impacts in Alaska.

The communities profiled in this document were selected through a quantitative process that assessed involvement in North Pacific fisheries. Demographic and fisheries data from the year 2009, the most recent year for which data were available when community selection occurred, were used to determine fisheries involvement. Data envelopment analysis was used as a quantitatively rigorous method to rank communities based on their overall engagement and/or dependence in North Pacific fisheries (including commercial, recreational and subsistence fisheries). Engagement was defined as the value of each indicator as a percentage of the total present in the state, for example, the percent of all fishing vessels registered in the state that are owned by residents of a given community. Dependence was then defined as a per capita measurement of each indicator within the community, reflecting the importance of fishing to residents. The quantitative indicators used to represent commercial fisheries participation included commercial fisheries landings (e.g., landings, number of processors, number of vessels delivering to a community), communities that are the registered homeports of vessels participating in the fisheries, and communities that are home to documented participants in the fisheries (e.g., crew license holders, state and federal permit holders, and vessel owners). The indicators used to represent recreational fisheries participation included sportfish licenses sold in the community, sportfish licenses held by residents, and the number of charter businesses and guides registered in the community. The indicators used to represent subsistence fisheries participation included participation in the Subsistence Halibut Registration Certificate program, number of subsistence salmon permits issued to households in the community, and local marine mammal harvests. A community was selected to be profiled when it surpassed the median index score on either the ranking of community dependence or engagement.

Each community profile is given in a narrative format that includes six sections: *People and Place*, *Natural Resources and Environment*, *Current Economy*, *Governance*, *Infrastructure*, and *Involvement in North Pacific Fisheries*. *People and Place* includes information on location, demographics (including age and gender structure of the population, racial and ethnic make-up), education, housing, and local history. *Natural Resources and Environment* presents a description of the natural resources in the vicinity of the community, as well as specific information on local parks and preserves, resource exploration opportunities (e.g., mining and fishing), natural hazards and nearby environmental contamination sites. *Current Economy* analyzes the principal contributions to the local economy, including the distribution of occupations and industries that employ residents, as well as unemployment and poverty statistics. *Governance* lays out information regarding city classification, taxation, Native villages, corporations, and other organizations, proximity to fisheries management and immigration offices, and details regarding municipal revenue and fisheries-related grants received by each community. *Infrastructure* covers connectivity and transportation, facilities (e.g., water, waste, electricity, schools, police), medical services, and educational opportunities. *Involvement in North Pacific Fisheries* details community activities in commercial fishing (e.g., processing, permit holdings, and vessel

ownership), recreational fishing, and subsistence fishing. The term ‘community’ was defined based on Census place-level geographies where possible, and communities were grouped only when constrained by fisheries data. In total, profiles were written for 188 individual communities. Regional characteristics and fisheries issues are briefly described in regional introductions.

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ACRONYMS

ACS	U.S. Census American Community Survey
ADF&G	Alaska Department of Fish and Game
AEL&P	Alaska Electric Light and Power Company
AEWC	Alaska Eskimo Whaling Commission
AFSC	Alaska Fisheries Science Center
AIDEA	Alaska Industrial Development and Export Authority
AJV	APICDA Joint Ventures, Inc.
AKFIN	Alaska Fisheries Information Network
ALARI	Alaska Local and Regional Information
AMA	Arctic Management Area
AMHS	Alaska Marine Highway System
AMNWR	Alaska Maritime National Wildlife Refuge
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Land Conservation Act
ANWR	Arctic National Wildlife Refuge
APA	Alaska Packers Association
APIAI	Aleutian Pribilof Islands Association
APICDA	Aleutian Pribilof Island Community Development Association
ASNA	Arctic Slope Native Association
ASRC	Arctic Slope Regional Corporation
AVCP	Association of Village Council Presidents
B.C.	British Columbia
BBAHC	Bristol Bay Area Health Corporation
BBEDC	Bristol Bay Economic Development Corporation
BBNA	Bristol Bay Native Association
BBNC	Bristol Bay Native Corporation
BCIS	U.S. Bureau of Citizenship and Immigration Services
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BLM	U.S. Bureau of Land Management
BOF	Alaska Board of Fish
BSEAG	Bering Sea Elders Advisory Group
BSNA	Bering Straits Native Association
BSNC	Bering Straits Native Corporation
CBSFA	Central Bering Sea Fishermen’s Association
CDP	Census Designated Place
CDQ	Community Development Quota
CFEC	Commercial Fisheries Entry Commission
CGSCHA	Clam Gulch State Critical Habitat Area

CHA	Critical Habitat Area
CHAP	Community Health Aid Program
CIRI	Cook Inlet Region, Inc.
CITC	Cook Inlet Tribal Council
CMA	Chignik Management Area
COE	U.S. Army Corps of Engineers
CPI	Consumer Price Index
CQE	Community Quota Entity
CRRC	Chugach Regional Resources Commission
CSIS	Community Subsistence Information System
CVRF	Coastal Villages Regional Fund
CVS	Coastal Villages Seafood
DCCED	Alaska Department of Commerce, Community, and Economic Development
DCRA	Alaska Department of Community and Rural Affairs
DEC	Alaska Department of Environmental Conservation
DNR	Alaska Department of Natural Resources
DOLWD	Alaska Department of Labor and Workforce Development
DOT&PF	Alaska Department of Transportation & Public Facilities
EDA	U.S. Economic Development Administration
EEZ	Exclusive Economic Zone
EMS	Emergency Medical Services
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Administration
FFP	Federal Fisheries Permits
FMP	Fishery Management Plan
FUDS	Formerly Used Defense Sites
FWS	U.S. Fish and Wildlife Service
GANPP	Gates of the Arctic National Park and Preserve
GHL	Guideline harvest limits
GOA	Gulf of Alaska
IFQs	Individual Fishing Quota
IHS	Indian Health Services
IPHC	International Pacific Halibut Commission
IWC	International Whaling Commission
JEDC	Juneau Economic Development Council
KANA	Kodiak Area Native Association
KIC	Ketchikan Indian Community
KMA	Kodiak Management Area
LACL	Lake Clark National Park and Preserve
LLP	License Limitation Program
LUD	Land Use Designation

MEA	Matanuska Electric Association
MMPA	Marine Mammal Protection Act
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
NERRS	National Estuarine Research Reserve System
nm	Nautical Miles
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
NPRA	National Petroleum Reserve Alaska
NPS	National Park Service
NSC	Nilavena Subregional Clinic
NSEDC	Norton Sound Economic Development Corporation
NSSP	Norton Sound Seafood Products
NWFSC	Northwest Fisheries Science Center
NWR	National Wildlife Refuge
OCS	Outer continental shelf
PAF	Pacific American Fisheries
PFD	Permanent Fund Dividends
PSMFC	Pacific States Marine Fisheries Commission
PWI	Prince of Wales Island
RAC	Regional Advisory Committee
RACR	Roadless Area Conservation Rule
RHA	Reindeer Herders Association
RurAL CAP	Rural Alaska Community Action Program
SEARHC	Southeast Alaska Regional Health Consortium
SHARC	Subsistence Halibut Registration Certificate
SMP	State Marine Park
SRA	State Recreation Area
SWHS	Statewide Harvest Survey
TAC	Total allowable catch
TDX	Tanadgusix
TNWR	Togiak National Wildlife Refuge
U.S.	United States
U.S.CG	U.S. Coast Guard
UAS	University of Alaska Southeast
UCU.S.MA	Upper Copper/Upper Sustina Sport Fish Management Area
VPSO	Village Public Safety Officer
WISGS	Walrus Islands State Game Sanctuary
YDFDA	Yukon Delta Fisheries Development Association
YDNWR	Yukon Delta National Wildlife Refuge
Y-K	Yukon-Kuskokwim

FOREWORD

The Alaska Fisheries Science Center (AFSC) has published this enlarged and updated technical memorandum entitled *Community Profiles for North Pacific Fisheries – Alaska* in order to provide a broad and reliable socioeconomic overview of those communities in Alaska that are engaged in harvesting fishery and aquatic resources. This report creates profiles of selected Alaskan communities that are comprehensive, thorough, and accurate, and that can be used by the National Marine Fisheries Service, the North Pacific Fishery Management Council, and other related state and federal agencies to shape government policy and to evaluate the social and economic impact of existing regulations on these communities. In order to generate these complex community profiles, the AFSC relies on the Alaska Fisheries Information Network (AKFIN) to acquire and process the best available data on Alaska commercial, recreational, and subsistence fisheries. Using a complex database management system, AKFIN is able to process a vast quantity of diverse data into functional information that allows AFSC to construct fact-based community profiles which can guide state and federal agencies in developing and deploying the most effective policies for the Alaska fisheries.

Under the direction of the Pacific States Marine Fisheries Commission (PSMFC), AKFIN was established in 1997 in response to the pressing demand for a comprehensive information management center that would be able to process, store and distribute the growing volume of data being accumulated by the Alaska fisheries. AKFIN functions as an intermediary network that supports the collection and processing of fisheries' statistics gathered in Alaska. Moreover, AKFIN consolidates this information within a single comprehensive database, provides value-added analysis and interpretation, and then disseminates this information to fishery analysts, managers, and scientists. AKFIN operates in accordance with the objectives of the PSMFC, which is to support and promote policies that contribute to the conservation, development, and management of our fishery resources in Alaska and on the West Coast of the United States.



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INTRODUCTION

Purpose

This document profiles 196 Alaska communities significantly involved in commercial, recreational and subsistence fisheries in Alaska, including state waters, and federal waters in the Bering Sea, the Aleutian Islands, the Gulf of Alaska, the Beaufort Sea and Chukchi Sea. For the purposes of this project, these areas are collectively referred to as the North Pacific.

Fishing Communities in Law and Policy

A variety of federal laws make clear the imperative for the National Marine Fisheries Service to consider the human communities that are involved in fisheries. National Standard Eight of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) states:

Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.

In addition, the National Environmental Policy Act requires that agencies assess the impacts of major federal actions on the environment, including the human environment. Typically, an Environmental Impact Statement will include a description of the social environment, and an assessment of the impacts of alternative policy choices on that environment.

Other laws and policies mandating attention to impacts on human communities include Executive Order 12898 on Environmental Justice, which directs agencies to assess impacts that may disproportionately affect low income and minority populations, Executive Order 12866 on Regulatory Planning and Review, which requires agencies to assess the costs and benefits of proposed regulations and alternatives, and the Regulatory Flexibility Act (RFA), which requires agencies to assess impacts of proposed policies on regulated small entities, meaning small businesses, organizations, and governmental jurisdictions as defined in the RFA and the Small Business Act.¹

In order to facilitate implementation of these laws, and improve available information on affected communities, the National Marine Fisheries Service (NMFS) has engaged in a nationwide effort to profile fishing communities. Analysis of social impacts often uses a geographic

¹ “‘Small businesses’ are defined in section 3 of the Small Business Act, 15 U.S.C. . 632, and in the SBA's regulations at 13 C.F.R. 121.201 (2002). 5 U.S.C. 601(3). . . . ‘Small organizations’ are any not-for-profit enterprises that are independently owned and operated and not dominant in their fields (for example, private hospitals and educational institutions). 5 U.S.C. 601(4). ‘Small governmental jurisdictions’ are governments of cities, counties, towns, townships, villages, school districts, or special districts with a population of less than 50,000. The size standard used by the Small Business Administration to define small businesses varies by industry; however, the SBA uses the “fewer than 500 employees” cut off when making an across-the-board classification.” Quoted from the U.S. Equal Employment Opportunity Commission *Regulatory Flexibility Act Procedures* posted at <http://www.eeoc.gov/policy/regflexibilityact.html>.

scale larger than the community, such as county or region, to analyze the data because that is the geographic level at which much of the data is available, and because the resources are not available to conduct an analysis with finer geographical resolution. Detailed analysis at the community level usually focuses on those communities which are likely to experience the most significant impacts -- an approach that is entirely appropriate given the limited time allotted for most impact assessments. Thus, there are dozens of communities which may be impacted by policy matters that cannot be analyzed on an individual basis. Because the North Pacific already has regional economic profiles² and detailed community-level profiles of some places most heavily involved in federal fisheries,³ the profiles given here may be particularly useful in providing basic information on some of the fishing communities not included in these other reports.

Fishing Community Profiles

The profiles of Alaskan fishing communities in this document are part of this national endeavor, and represent the first update to the original document published in 2005.⁴ The fisheries considered in these profiles include both state and federal fisheries in the commercial, recreational and subsistence sectors. From the perspective of a community dependent on or engaged in fishing, whether a particular fishery is under state or federal jurisdiction is of less importance to the health and resilience of the community than the strength and sustainability of the fishery itself. Furthermore, it can sometimes be challenging to identify from available databases whether a documented fish delivery was taken under a state or federal fishery, particularly where there are parallel seasons for the same species and gear types, and much of the available information concerning involvement in fisheries is not fishery-specific. Finally, this combined state and federal approach was the recommended method for the national profiling project, so the Alaska Fisheries Science Center profiles will be compliant with the larger effort.

The communities profiled in the document were selected by a quantitative assessment method described in detail below. This method was based on commercial, recreational and subsistence fisheries data, recognizing that in the life of a community, one, two or all three types of fishing may be of great importance socially, culturally, and economically. These community profiles include information on all three types of fishing activities as part of the narrative.

Related Projects

Many communities outside of Alaska are also highly involved in North Pacific fisheries. In 2004, the AFSC and the Northwest Fisheries Science Center (NWFSC) undertook a joint project to profile communities in Washington, Oregon, California and other states that are

² "Regional Profiles in the North Pacific Groundfish Fisheries" prepared for the National Marine Fisheries Service and the North Pacific Fishery Management Council by Northern Economics, Inc. and EDAW, Inc. posted at http://www.fakr.noaa.gov/npfmc/misc_pub/NorthernEconomics/RegionalProfile.pdf.

³ Community-level profiles are included in the Social Impact Assessment sections of various NMFS Environmental Impact Statements, e.g., Alaska Groundfish Fisheries Revised DRAFT Programmatic Supplemental Environmental Impact Statement, September 2003 posted at <http://www.fakr.noaa.gov/sustainablefisheries/seis/intro.htm>.

⁴ These community profiles were published as NOAA Technical Memorandum NMFS-AFSC-160 in December 2005.

involved in commercial fisheries. In addition to descriptions of the communities, the profiles included descriptions of local involvement in both North Pacific and West Coast fisheries. In addition, the AFSC is involved in creating more in-depth profiles of significant fishing communities, based on rapid assessment procedures and ethnographic fieldwork in a limited number of communities.

Other NMFS Regional Offices and Science Centers have also profiled communities involved in commercial and recreational fisheries. Eventually, the NMFS will create a national database of fishing community information that will be updated on a regular basis.

The profiling of communities involved in fishing is related to, but is not necessarily the same as, the designation of Fishing Communities according to the definitions of the MSFCMA. The process for designating MSFCMA Fishing Communities is at present being discussed by NMFS social science staff. It will likely bear similarities to the process used in this project to decide which communities to profile, but it will also have significant differences. The results of the MSFCMA Fishing Communities designation process may have an effect on which communities are selected for profiling when this document is updated.

Finally, there are a number of projects that have been undertaken by Fishery Management Councils, Commissions, and other fisheries management and information groups which involve narrative profiling of fishing communities. These include the just-released *West Coast Marine Fishing Communities* by Jennifer Langdon-Pollock of the Pacific States Marine Fisheries Commission (funded by NMFS and the Pacific Fisheries Management Council),⁵ the 2001 *New England's Fishing Communities* by Madeleine Hall-Arber et al. at the MIT Sea Grant Program,⁶ funded by the Marine Fisheries Initiative of the National Marine Fisheries Service, and the 2004 *Mid-Atlantic Fishing Communities* by Bonnie McCay et al.⁷

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⁵ Langdon-Pollock, Jennifer. (2004). *West Coast Marine Fishing Community Descriptions*. Portland: Pacific States Marine Fisheries Commission, Economic Fisheries Information System.

⁶ Hall-Arber, Madeline; Dyer, Chris; Poggie, John; McNally, James; & Gagne, Renee. (2001). *New England's Fishing Communities*. Cambridge: MIT Sea Grant College Program.

⁷ McCay, Bonnie J., Bryan Oles, Johnelle Lamarque, Brent Stoffle and Kevin St. Martin, eds. (2004). *Mid-Atlantic Fishing Communities: A Report to the NEFSC, NMFS, NOAA*. New Brunswick, NJ: Rutgers Fisheries Project, Department of Human Ecology, Cook College, Rutgers the State University.

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METHODS

The task of preparing a document about the Alaskan communities involved in North Pacific fisheries, an area of vast scale and diversity, was a daunting one, and one whose complexity is reflected in the research methods used to select communities to be profiled in this document. Fortunately, the fisheries of the North Pacific, large and lucrative as they are, have had a wealth of information collected about them. Our task was to compile these disparate sources of information in order to produce a document that could serve as baseline data for policy analysts and decision-makers, and a starting point for social scientists conducting more complex analytical research. In this section, the research methods, including the community selection process, data sources, and how the data was treated, are explained in detail. In many cases, online publically-available data sources were used, and are cited as such in footnotes. In other cases, specific data requests were made to agencies in order to obtain the necessary information. This section also discusses some of the methodological challenges our team encountered during the course of the project, and how they were resolved.

Determining Fishing Dependence and Engagement

There are hundreds of communities in Alaska involved to some extent in commercial, recreational and/or subsistence fishing. Quantitative selection criteria were used in order to reduce the number of communities to be profiled to a manageable list consisting of those with the most involvement in commercial, recreational and/or subsistence fisheries.

Communities were selected according to two different measurements of fishery participation, following the methods used to select communities in the earlier profiling efforts of the NWFSC (hereafter named the West Coast Profiling Project).⁸ These measurements include 1) the community's dependence on fishing and 2) the community's engagement in a specific fishery. The selection process continues to represent an experimental approach towards quantifying fishing involvement.

⁸ Norman, Karma, Jennifer Sepez, Heather Lazrus, Nicole Milne, Christina Package, Suzanne Russell, Kevin Grant, Robin Petersen Lewis, John Primo, Emile Springer, Megan Styles, Bryan Tilt and Ismael Vaccaro. (2007). *Community profiles for West Coast and North Pacific Fisheries: Washington, Oregon, California, and other U.S. States*. U. S. Dep. Commer., NOAA Tech. Memo. NMFS-NWFSC-85, 602 p.

However, this is not the only way of estimating participation nor is it the singular approach sanctioned by NMFS. In effect, the project described here presents a novel and defensible means of quantifying the legal language spelled out in the MSFCMA:

The term "fishing community" means a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such community. 16 U.S.C. 1802 §3 (16).

This definition includes commercial, recreational and subsistence fishing. As such, data from all three types of fishing were included in the selection criteria used here. In this project, the terms *dependence* and *engagement* are quantitatively defined in accordance with the definitions used in the West Coast Profiling Project, and then used in the community selection process for profile production. A community's dependence on fishing is:

a measure of the level of participation in a fishery relative to other community activities, and relative to all other communities linked to fishing in some way.

A community's engagement in fishing is:

a measure of the level of participation relative to the overall level of participation in a fishery.

In this study, dependence has been determined through a comparison of community involvement in commercial, recreational, and subsistence fishing to community population. Engagement is determined by comparing indicators that measure a community's participation in a fishery or fisheries relative to the aggregate participation in fisheries across the state of Alaska. Engagement refers to community participation by specific fishery, which required separation of data by fishery for each data element (e.g., weight or value of landings). In this case, all landings made in a community are broken down by fishery, and the community's relative involvement in a specific fishery is measured.

The specific fisheries used to indicate engagement represent the major fisheries management plan (FMP) categories of the North Pacific Fishery Management Council (e.g., Bering Sea/Aleutian Islands king and Tanner crabs, Bering Sea and Aleutian Islands (BSAI) groundfish, Gulf of Alaska (GOA) groundfish, scallops), other major fisheries in Alaska (halibut, herring, salmon), and all remaining fisheries in Alaska divided between finfish and shellfish (i.e., other finfish, other shellfish). Throughout each community profile, time series data between 2000 and 2010 were used to provide a look at how communities have changed their involvement in fishing over time.

Determining fishing dependence and engagement involves considering multiple dimensions of fishing history, infrastructure, specialization, social institutions, and gentrification trends in addition to economic characteristics. Due to the limitations of the methods used to select communities, our quantitative measurements of dependence and engagement have been based only on commercial, recreational and subsistence fisheries data. Our expectation is that the methods used here captured most Alaska communities that would qualify as engaged or dependent on the basis of most North Pacific fisheries.

In recognition that fisheries-specific indicators only provide a partial picture of fishing involvement, we have included historical, demographic, and other qualitative information in the narrative profiles. Importantly, while each community profile is intended to stand alone, fishing communities are not economic or social isolates, but contributing partners to regional (and often international) networks of labor pools, marine services, fisheries knowledge, and other socioeconomic phenomena.⁹

Defining “Community”

An important aspect of this project is that it compiles data at the community level. However, it is not always clear what counts as a community, and what a community’s boundaries are. For the purposes of generating a list of communities from which to select, we generally considered as communities those localities listed as such in the various other databases we used. For the purposes of profiling, we generally treated as a community any location within the state of Alaska that the U.S. 2000 Decennial Census treats as a “place,”¹⁰ – either an incorporated community or a “census designated place” for unincorporated areas that are nonetheless recognized as place-level communities by the Census.

Some of the indicator data, however, involved self-reported information or data obtained directly from the state management agencies (e.g., Alaska Department of Fish and Game (ADF&G), Commercial Fisheries Entry Commission (CFEC)), often provided by persons who are not concerned with issues of place or community. Thus, every database includes both a creative array of spellings of community names, which needed to be standardized in order to correctly count data by community, and some of these communities are not recognized as ‘places’ by the Census. For spelling issues, the U.S. Geological Survey Geographical Names Information System was the final arbiter for disagreements.¹¹ Latitude and longitude information, where available in the data, was particularly helpful in determining whether two communities had similar names, or one community had multiple spellings. In the case of all data, community name spellings were standardized in the AKFIN database in a joint effort between AKFIN and AFSC staff.

Communities listed in the fisheries information databases which were not considered “places” by the Census -- and therefore did not have data for a place-level population -- were generally not included in the selection procedure. Some of these “communities,” such as “Bristol Bay,” arise in the data because a person recorded something other than a recognized community as their residence, or in the case of “Bristol Bay,” listed it as the homeport of their vessel. In other cases, the community or sub-community has been subsumed by a larger “place” in the U.S. Census. Where this latter situation was detected prior to the selection procedures, fisheries data for sub-communities were combined with fisheries data for the Census place-level community for the purpose of selection.

⁹ Sepez, J., K. Norman, A. Poole, B. Tilt. (2006). *Fish Scales: Scale and Method in Social Science for North Pacific and West Coast Fishing Communities*. Human Organization, Autumn.

¹⁰ “Place” refers to one of the geographies used by the U.S. Census Bureau, which include geographies generally larger than place, such as state and county, and geographies generally smaller than place, such as tract and block group.

¹¹ U.S. Geological Survey. (n.d.). *Geographical Names Information System*. Retrieved October 29, 2012 from <http://geonames.usgs.gov/>.

In addition, it is important to note that many communities in this document are extremely intertwined socially and economically with neighboring communities. It is also the case that community boundaries are defined and recognized differently by different agencies, and in different situations. We found that many of our data sources did not always correspond in their treatment of intertwined communities. Thus, for some communities, the fisheries-related data was available for two nearby places, while the U.S. Census gives place-level information that treats the two as one. In addition, we also encountered communities which were named in non-CFEC fisheries data (e.g., fish tickets or vessel registrations), but for which no Census information was available. We dealt with these cross-agency community designation disparities and other data gaps, on a case-by-case basis. More detailed information on each case is available in Table 1.

Table 1. Combined, Unrecognizable and Subsumed Communities.

Community*	Data Issues	Treated as separate places by:			Action
		CFEC	Census	Other	
Akhiok and Alitak Bay	There was no individual information available for Alitak Bay in the Census or the Alaska Department of Community and Rural Affairs (DCRA) Community Database. CFEC names it as a separate community, but does not separate the data from Akhiok data. Alitak Bay shows up separately in fish ticket data due to the presence of a processor.	No	No	Yes	Alitak Bay not profiled individually, but fishing information is included in the Akhiok profile. Alitak Bay is also discussed in sub-regional introduction for Kodiak.
Anchorage , Girdwood, Eagle River, Chugiak	Data for Anchorage, Girdwood, and Eagle River/Chugiak are given separately by the CFEC, but these are not treated as separate “places” in Census or other data. For crew data, the overall crew numbers are reported as combined (based on ADF&G data), but CFEC’s reported numbers for Girdwood and Eagle River/Chugiak are also reported.	Yes	No	No	Combined during selection procedures, general data reported as combined in Anchorage profile, followed by separated CFEC data.
Excursion Inlet and Funter Bay	Excursion Inlet and Funter Bay are named separately in the CFEC database, but information is only given for the two combined.	No	No	Yes	Combined in Excursion Inlet profile.
Hobart Bay (HB) , Idaho Inlet (II), and Skagway (S)	Hobart Bay, Idaho Inlet, and Skagway are all named separately in the CFEC database, but information is only given for the three combined. Hobart Bay and Skagway are treated as separate in all other data sources, while Idaho Inlet does not appear in other data sets.	No	HB = Yes II = No, S = Yes	HB = Yes II = No, S = Yes	Combined in Hobart Bay profile.

Table 1. Cont'd. Combined, Unrecognizable and Subsumed Communities.

Community*	Data Issues	Treated as separate places by:			Action
		CFEC	Census	Other	
Juneau (J) , Douglas (D)	Douglas was fully annexed into the Juneau City and Borough in 1970. Therefore, the U.S. Census has since combined demographic data for Douglas with Juneau. The CFEC also does not recognize Douglas as a separate place.	No	No	No	Combined in Juneau profile.
		CFEC	Census	Other	
Ketchikan (K) and Ketchikan East (KE) and Ward Cove (WC)	The CFEC names “Ketchikan East” separately, but does not give separate data for it. Ketchikan East is not recognized as a separate place by other data sources. CFEC data is given separately for Ward Cove and Ketchikan. We combined Ward Cove with Ketchikan data because Ward Cove does not appear separately in other (fish ticket and Census place-level) data.	K and KE = No, K and WC = Yes	No	No	Combined in Ketchikan profile.
Kodiak and Chiniak	Although the U.S. Census treats Kodiak and Chiniak as separate “places,” the CFEC does not give separate data for the two.	No	Yes	Yes	Combined in Kodiak profile.
Nome and Council	Council is considered an Alaska Native Village Statistical Area by the U.S. Census Bureau and provided no demographic information in 2010. In addition, the CFEC does not	No	No	No	Combined in Nome profile
Unalaska and Dutch Harbor	Although CFEC separates these data, U.S. Census does not treat Dutch Harbor as a separate “place.”	Yes	No	Yes	Combined for profile of “Unalaska/Dutch Harbor”
Whale Pass (WP) , Tokean (To), Tuxekan (Tu), and Noyes Island (NI)	Whale Pass, Tokean, Tuxekan, and Noyes Island are all named in the CFEC database, but information is only given for the five combined. Whale Pass and Port Protection are treated as separate places by the Census, but the others are not. Whale Pass and Port Protection also show up independently in fish ticket data, but the others do not.	No	WP = Yes, T, T and NI = No	WP = Yes To, Tu and NI = No	Combined in Whale Pass profile

*Bold indicates the main community that was profiled in this document. Other communities listed in the first column were subsumed into the bolded community’s profile. The parameters and constraints indicated in the Data Issues column ultimately drove the treatment of the communities as indicated in the Action column.

Data Envelopment Analysis

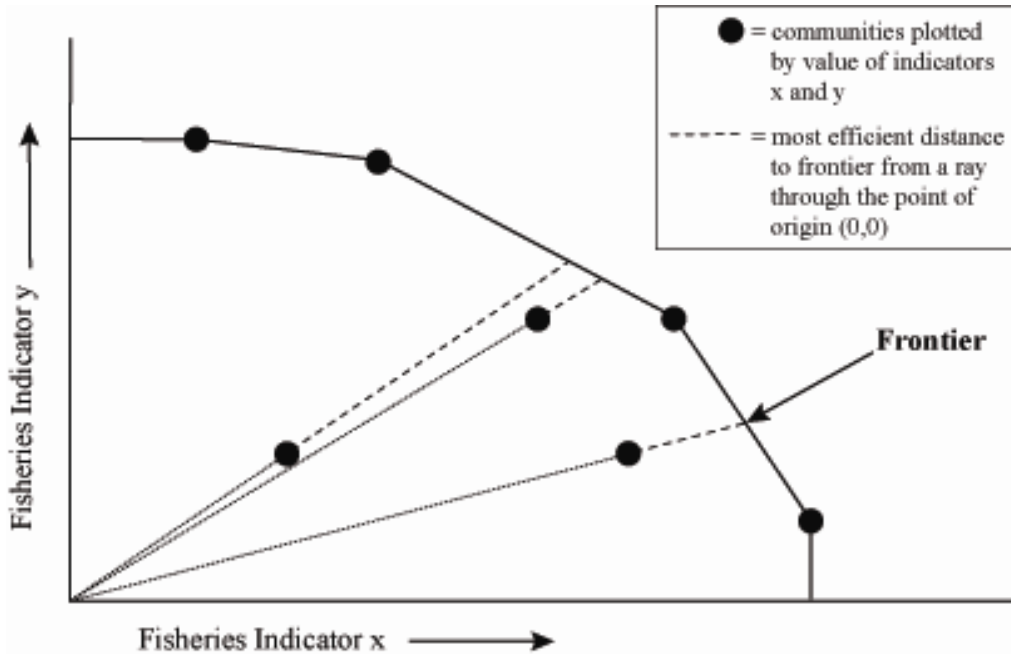
The number of communities to be profiled was determined using a quantitative selection process that entailed two steps. First, indicators were analyzed using a modeling technique referred to as Data Envelopment Analysis (DEA), an established analytical method that attributed a score to each community based on multiple indicators of participation in various fisheries. At its most basic, the DEA technique is a non-parametric approach to measuring participation and allows for the incorporation of multiple indicators simultaneously. Additionally, the method does not require a pre-determined structural relationship between inputs and outputs, which allows for flexibility in the estimation of a “frontier” of fisheries participation.

Typically, DEA produces an efficiency frontier for multiple quantitative indicators, and proximity to that frontier presents a means of comparing units for multiple measures at the same time (Figure 1). Each input is considered with a weight most suitable to that input. For each unit in the analysis, a series of relative efficiencies is obtained using both those weights most favorable to itself and those most favorable to other units in the analysis. Thus, the DEA model provided a means of analyzing and scoring communities according to their proximity to an efficiency frontier (Figure 1), wherein that proximity measured each individual community’s relative level of fisheries involvement.

An overall frontier of participation was estimated based on a community’s score for each indicator. As a result, communities that lie along the frontier have demonstrated strong participation according to the indicators in the model. Regardless of a community’s score either for dependence or engagement in North Pacific fisheries, the amount of attention devoted to profiling the particular community was not affected. All communities, once selected through the rank ordering of their DEA scores, were given the same treatment in the narrative profiles themselves.

In order to consider fishing *engagement* and *dependence* separately, we implemented two separate runs of the DEA model, both of which were output-oriented models. Datasets were selected on the basis of availability and informational value. The community selection process used particular indicators chosen from all the available datasets to best indicate a high level of involvement in fisheries. Indicators based on permit and harvest data from the year 2009 were used to measure a variety of types of involvement in North Pacific fisheries.

Figure 1. Graphic representation of the data envelopment analysis (DEA) model fisheries involvement frontier for two dimensions.



Source: Sepez, J., K. Norman, A. Poole, B. Tilt. (2006). *Fish Scales: Scale and Method in Social Science for North Pacific and West Coast Fishing Communities*. Human Organization, Autumn.

Twenty-one quantitative indicators of fishing dependence and 48 quantitative indicators of fishing engagement in North Pacific fisheries were used in the community selection process (Tables 2 and 3). The indicators include information specific to state- and federally-managed commercial, recreational and subsistence fisheries in Alaska, across various species and different types of involvement in those fisheries. These indicators allowed for consideration of communities that are engaged in or dependent on commercial, recreational and subsistence fisheries as well as just one or two categories of fishing. Additional data, which we were unable to include in the selection process for a variety of reasons, was included in the community profiles themselves (detailed below the *Profile Structure and Sources* section below).

Data inputs in the first run of the model, measuring *dependence*, were community populations,¹² and outputs were counts associated with each indicator (Table 2). In determining dependence, aggregated tallies of activity in all species categories were used and indicators were not broken down by specific fishery. For example, for the community of Sitka, in Southeast Alaska, the input was a population of 8,627, and outputs were counts of crew licenses and various types of fishing permits held in the community, charter guide businesses, and pounds of fish and marine mammals harvested for subsistence, to name a few.

In a second run of the model, in order to determine engagement, each data element was broken down by specific fishery to illustrate how important a particular community's participation is in that fishery relative to the participation of other communities. Data inputs were

¹² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

all equalized to one. Outputs for each community were the proportions of each North Pacific fishery in which the community was in some way involved divided by the state total for that indicator (Table 3). For example, 5.6% of all crew licenses issued to Alaskan residents were issued to residents of Sitka.

Using these two DEA scores – for dependence and engagement – communities were then ranked based upon their proximity to the participation frontier, determined by their relative counts in each of the indicator categories. The valid results from both lists produced scores ranging between zero and one; one being the highest possible score and showing up on the frontier indicating higher dependency on or engagement in fishing, and zero being the lowest possible score and the farthest point from the frontier indicating lower dependency on or engagement in fishing. The ranked lists of communities were subsequently subjected to a median-based analysis in the second step of the selection process. The scores of the communities in each DEA model (the dependence and engagement models) were used to determine the median score for each model. The median threshold was selected as it provided the clearest method of selecting all communities that are commonly heavily involved in either commercial, recreational or subsistence fishing. Each community received two scores, one for engagement and one for dependence. A community was identified for profiling if it received at least one score above the median. The final list of profiled communities consists of those which demonstrated the highest involvement in commercial, recreational and subsistence fisheries in 2009, relative to the others.

Table 2. Outputs used in the DEA dependence model.

Commercial fishing indicators	
# of permit holders:	Total net pounds landed (all species) ⁴
• Gear permits ¹	Total ex-vessel value of landings (all species) ⁴
• Setnet permits ¹	# of vessels homeported in community ¹
• Federal fisheries permits ²	# of vessel owners registered in community ¹
• CFEC permits (all species) ¹	# of crew licenses issued to residents ⁵
• American Fisheries Act permits ²	
• Halibut quota share account holders ³	
• Sablefish quota share account holders ³	
• Crab quota share account holders ³	
Recreational fishing indicators	
# of sportfishing licenses sold in community ⁵	# of sportfishing guide businesses ⁶
# of sportfishing licenses sold to residents ⁵	# of sportfishing guide licenses issued to residents ⁶
Subsistence fishing indicators	
# Subsistence Halibut Registration Certificates (SHARC) issued to residents ⁷	Total pounds harvested (all fish and marine invertebrates) ^{8,9}
# of salmon harvested ⁷	Pounds of marine mammals harvested (all species) ^{10, 11, 12}

Note: Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. URLs for all data sources not publicly available as some information is confidential.

¹ CFEC. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*.

² NMFS Alaska Regional Office. (2011). *Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders*.

³ NMFS Alaska Regional Office. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*.

⁴ ADF&G and CFEC. (2011). *Alaska fish ticket data*.

⁵ ADF&G Division of Administrative Services. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*.

⁶ ADF&G Division of Administrative Services. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*.

⁷ Fall, J.A. and D. Koster. (2011). *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage.

⁸ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage.

⁹ ADF&G Division of Subsistence. (2011). *Community Subsistence Information System (CSIS)*. Retrieved February 2011 from <http://www.adfg.alaska.gov/sb/CSIS/>.

¹⁰ Frost, Kathy J., and Suydam, Robert S. (2010). *Subsistence harvest of beluga or white whales (Delphinapterus leucas) in northern and western Alaska, 1987–2006*. Journal of Cetacean Research and Management 11(3): 293–299.

¹¹ U.S. Fish and Wildlife Service Office of Marine Mammals Management. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear*. Anchorage, Alaska.

¹² Wolfe, R.J., Fall, J.A. and M. Riedel. (2009). *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Table 3. Outputs used in the DEA engagement model.

Commercial fishing indicators		
# of permit holders:	Ex-vessel value of: ³	Net pounds landed of: ³
<ul style="list-style-type: none"> • Gear¹ • Setnet¹ • Federal fisheries permits (FFP)² • CFEC halibut¹ • CFEC herring¹ • CFEC salmon¹ • CFEC sablefish¹ • CFEC rockfish¹ • CFEC other finfish¹ • CFEC crab¹ • CFEC other shellfish¹ • Groundfish limited license program (LLP)² • Crab (LLP)² 	<ul style="list-style-type: none"> • Crab • BSAI groundfish • GOA groundfish • Other finfish • Halibut • Herring • Salmon • Other shellfish • Scallop 	<ul style="list-style-type: none"> • Crab • BSAI groundfish • GOA groundfish • Other finfish • Halibut • Herring • Salmon • Other shellfish • Scallop
	# of crew licenses ⁴	
	# of halibut quota shares held ⁵	
	# of sablefish quota shares held ⁵	
	# of crab quota shares held ⁵	
Recreational fishing indicators		
# of sportfishing licenses sold in community ⁴	# of sportfishing guide businesses ⁶	
# of sportfishing licenses sold to residents ⁴	# of sportfishing guide licenses issued to residents ⁶	
Subsistence fishing indicators		
# Subsistence Halibut Registration Certificates (SHARC) issued to residents ⁷	Pounds of halibuts harvested ⁷	Pounds of other fish harvested ^{7,8}
Pounds of marine invertebrates harvested ⁸	# of salmon harvested ¹¹	Ice seal harvesting importance ¹⁰
Pounds of marine mammals harvested ⁹	# of beluga whales harvested ¹²	# of Walrus harvested ¹³

Note: Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. URLs for all data sources not publicly available as some information is confidential.

¹ CFEC. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*.

² NMFS Alaska Regional Office. (2011). *Data on LLPs, Alaska Federal Processor Permits (FPP), FFPs, and permit holders*.

³ ADF&G and CFEC. (2011). *Alaska fish ticket data*.

⁴ ADF&G Division of Administrative Services. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*.

⁵ NMFS Alaska Regional Office. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*.

⁶ ADF&G Division of Administrative Services. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*.

⁷ Fall, J.A. and D. Koster. (2011). *Subsistence harvests of Pacific halibut in Alaska, 2009*. ADF&G Division of Subsistence, Technical Paper No. 357, Anchorage.

⁸ ADF&G Division of Subsistence. (2011). *Community Subsistence Information System (CSIS)*. Retrieved February 2011 from <http://www.adfg.alaska.gov/sb/CSIS/>.

⁹ Wolfe, R.J., Fall, J.A. and M. Riedel. (2009). *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

¹⁰ Pers. Comm. with Lori Quakenbush on January 26, 2011, ADF&G, Division of Wildlife Conservation.

¹¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011), revised. *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage.

¹² Frost, Kathy J., and Suydam, Robert S. (2010). *Subsistence harvest of beluga or white whales (Delphinapterus leucas) in northern and western Alaska, 1987–2006*. Journal of Cetacean Research and Management 11(3): 293–299.

¹³ U.S. Fish and Wildlife Service Office of Marine Mammals Management. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear*. Anchorage, Alaska.

Scores generated from both models ranged from 0.000 to 1.000.¹³ The median score for the engagement model was 0.074, with 135 communities falling above the median, including 22 communities with a score of 1.000.¹⁴ The median score for the dependence model was 0.401, with 140 communities falling above the median, including 54 communities with a score of 1.000.¹⁵ A total of 39 communities fell above the median only in the engagement model, 37 fell above the median only in the dependence model, and 95 communities fell above the median in both models. In total, 171 unique communities fell above the median in one or both models (Table 4).

Based on a variety of other criteria, an additional 24 communities were profiled, for a total of 196 communities profiled for this project. This includes an additional 13 communities that did not meet the threshold for the DEA models; however, they were profiled in the previous version of the *Community Profiles for North Pacific Fisheries – Alaska*. These communities include Alitak Bay, Excursion Inlet, Fritz Creek, Hobart Bay, Ivanof Bay, Karluk, Kwigillingok, Port Moller, Port Protection, Prudhoe Bay, Twin Hills, Whale Pass and Willow. Since they were previously profiled, they are included in this updated version of the profiles as well. In addition, seven communities that are included in the Community Development Quota (CDQ) Program did not meet the threshold set for the DEA models, including Chevak, Ekuk, Ekwok, Levelock, Newtok, Portage Creek and Teller. Given their involvement in the CDQ program, they were also added to the list of communities to be profiled. Finally, an additional four communities were selected for profiling due to their participation in subsistence fisheries for which data was not available in 2009, including Akiak, Lower Kalskag, Shageluk and Tyonek. All communities profiled are presented in Figure 2.

¹³ Some invalid results were due to communities having no data for the specific indicators used in the DEA model (due to minimal fisheries involvement), or were due to non-convergence in the DEA model which could have occurred for various reasons (the particular indicator mix, the scale of the different indicators relative to other communities). These communities were removed after consideration. Invalid communities due to DEA Non-Convergence include: Butte, Coho, Eklutna, Fox River, Kalifornsky, Kupreanof, Lower Kalskag, Mendeltna, Pope-Vannoy Landing, Thoms Place, Tolsona.

¹⁴ Communities with engagement scores of 1.000 include: Anchorage, Bethel, Cordova, Craig, Emmonak, Gambell, Homer, Hooper Bay, Juneau, Ketchikan, Kiana, Kodiak, Kokhanok, Kotzebue, Petersburg, Petersburg, Saint Paul Island, Seward, Sitka, Togiak, Unalaska and Wrangell.

¹⁵ Communities with dependence scores of 1.000 include: Akutan, Alakanuk, Anchorage, Bethel, Chenega, Chignik, Chignik Lagoon, Cooper Landing, Cordova, Council, Dillingham, Edna Bay, Egegik, Elfin Cove, Emmonak, Gakona, Haines, Homer, Hoonah, Iliamna, Juneau, Kasilof, Kenai, Ketchikan, King Cove, Kodiak, Kotzebue, Larsen Bay, Manokotak, Mekoryuk, Meyers Chuck, Mountain Village, Naknek, Nelson Lagoon, North Pole, Old Harbor, Pelican, Petersburg, Pilot Point, Point Baker, Port Alexander, Saint Paul Island, Sand Point, Seward, Shishmaref, Sitka, Skwentna, Soldotna, South Naknek, Togiak, Tununak, Ugashik, Unalaska, Wasilla and Yakutat.

Table 4. Communities with DEA scores above the median.

Both models			Engagement model		Dependence model	
Adak	Iliamna	Pilot Station	Akhiok	Kwethluk	Aniak	Nikiski
Akiachak	Juneau	Port Alexander	Anvik	Larsen Bay	Brevig Mission	Ninilchik
Akutan	Kake	Port Lions	Atka	Nelson Lagoon	Chefornak	Noatak
Alakanuk	Kasigluk	Quinhagak	Barrow	Nikolski	Diomede	Nome
Aleknagik	Kasilof	Saint Mary's	Chenega	Nunam Iqua	Douglas	Nondalton
Anchor Point	Kenai	Saint Paul	Chignik Lake	Ouzinkie	Fort Yukon	Oscarville
Anchorage	Ketchikan	Scammon Bay	Clam Gulch	Pelican	Galena	Petersville
Angoon	Kivalina	Seldovia	Clarks Point	Pilot Point	Gambell	Point Lay
Bethel	Klawock	Seward	Coffman Cove	Platinum	Kiana	Russian Mission
Chignik	Kodiak	Shaktoolik	Cold Bay	Point Baker	King Salmon	Saint Michael
Chignik Lagoon	Koliganek	Shishmaref	Council	Port Alsworth	Kipnuk	Savoonga
Cooper Landing	Kotlik	Sitka	Edna Bay	Port Graham	Kokhanok	Selawik
Cordova	Kotzebue	Skwentna	False Pass	Port Heiden	Kongiganak	Sterling
Craig	Manokotak	Soldotna	Gakona	Red Devil	Koyuk	Tuluksak
Delta Junction	Marshall	Stebbins	Glennallen	Saint George	Moose Pass	Two Rivers
Dillingham	Mekoryuk	Talkeetna	Haines	Sand Point	Napaskiak	Valdez
Eek	Metlakatla	Tanana	Halibut Cove	South Naknek	Nenana	White Mountain
Egegik	Meyers Chuck	Thorne Bay	Hyder	Tatitlek	Newhalen	Willow
Elfin Cove	Mountain Village	Togiak	Kaktovik	Tenakee Springs	Nightmute	
Elim	Naknek	Toksook Bay	King Cove			
Emmonak	Nanwalek	Tuntutuliak				
Fairbanks	Napakiak	Tununak				
Golovin	New Stuyahok	Ugashik				
Goodnews Bay	Nikolaevsk	Unalakleet				
Grayling	North Pole	Unalaska				
Gustavus	Nuiqsut	Wainwright				
Holy Cross	Nunapitchuk	Wales				
Homer	Old Harbor	Wasilla				
Hoonah	Palmer	Whittier				
Hooper Bay	Pedro Bay	Wrangell				
Hydaburg	Perryville	Yakutat				
Igiugig	Petersburg					

provided in each section. In cases where communities provided additional information about their involvement in North Pacific fisheries in the 2011 AFSC survey or where additional information was found, it was included in an *Additional Information* section at the end of the profile. Below, we outline how we compiled and used the data for each of these sections. We also discuss some of the methodological challenges we encountered along the way, and how we sought to resolve them.

People and Place

Each community is situated in time and space by providing information not only on the current condition of the community but also on its historical development. Each community is first described in terms of geographic location and demographics, followed by a brief account of local history. We used data from the U.S. Census Bureau,¹⁶ Alaska Department of Labor and Workforce Development,¹⁷ and the Alaska Department of Community and Rural Affairs (DCRA),¹⁸ as well as scholarly and popular works, to provide a rounded picture of each community. In addition, data related to seasonal and permanent population counts were provided from the 2011 AFSC survey.

The depth of information available at the community level was highly variable from place to place. A wealth of information is available, for example, about urban centers such as Anchorage and Juneau, while information about smaller and more remote communities is less readily available. This is reflected in the level of detail with which we were able to portray the history and development of each community and provide insight into the demographic composition of the communities. All profiles report the number of inhabitants, a short demographic evolution when possible, the gender structure, median age, educational attainment, racial and ethnic composition, and an indication of how many community members were born outside of the U.S. In addition, some profiles report further information if it helped to illustrate the character of the community, such as age structure, percentage of individuals living in family households,¹⁹ and ancestry.

To compile brief accounts of local history, historical information was gleaned from various relevant websites and print material, and was cross-checked for verification between multiple sources. Where we encountered a lack of historical information, we give the best possible illustration of a community's origins but likely do not adequately portray its past. In a few cases

¹⁶ U.S. Census Bureau. (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁷ Alaska Department of Labor and Workforce Development. (2011). Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

¹⁸ The Alaska Department of Community and Rural Affairs (DCRA) provides perhaps the most comprehensive information about the social and economic characteristics of Alaskan communities, boroughs, and census areas. The DCRA maintains the *Community Database* at: http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁹ The U.S. Census Bureau provides this definition of household: "A household includes all of the people who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room occupied (or if vacant, intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other people in the building and that have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living quarters."

community history has been reported at the Borough/Census Area level because we were unable to discover more detailed information.

Natural Resources and Environment

This section concentrated on providing an overview of the local climate and terrain, natural resources available locally and the state of the local environment. Information is also presented regarding local parks and protected areas, including the resources that they are designed to protect, natural resource based industries that are relied on locally, natural hazards and hazardous environmental clean-up sites.

Current Economy

For data on the current economic conditions in each community we consulted the U.S. Census Bureau,²⁰ the Alaska Department of Labor and Workforce Development (DOLWD)²¹ and the Denali Commission.²² The description of the current economy is useful for understanding where fishing stands in relation to other economic opportunities in a community, and predicting how a community might be affected when faced with a change in fishing patterns. Statistics are provided regarding important local job providers, any available information about community members' reliance on subsistence, inflation adjusted income, recognition of distressed status, poverty rates and the distribution of the labor force across various occupational and industry categories. We also report both the percentage of unemployed workers and the percentage in the labor force (not seeking work) in order to provide as complete a picture as possible of unemployment for each community. We faced several challenges during the process of combining data from these disparate sources. Information on unemployment from the DOLWD, for example, occasionally did not match the information reported by the U.S. Census and does not include self-employed or federally employed workers. As such, we routinely provide data from both sources. In addition, it should be noted here that the unemployment statistics have been calculated to report community residents who are in the labor force but are unemployed. This is in an attempt to differentiate it from the indicator with residents who are not in the labor force. However, the graphical representations of employment structure do not make this distinction in order to have all three measures as proportions of the total community population 16 years and above. Finally, the number reported for a community's employment in fishing is most likely an underestimate of the total number of fishermen in the community. The U.S. Census may not accurately capture this demographic as many fishermen are "self employed," an undistinguished category on the U.S. Census forms. Fishermen may also categorize themselves as employed in a different category than fishing if they fish for part of the year and hold another job for the rest of the year.

²⁰ U.S. Census Bureau. (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²¹ Alaska Department of Labor and Workforce Development. (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²² Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Table 5. Governance structures present among Alaskan communities.

Type of governance structure	Type	Description
1 st Class or Home Rule city	Municipal	A First Class City, or Home Rule City, must have at least 400 permanent residents.
2 nd Class City	Municipal	A Second Class City must have at least 25 resident voters.
Recording district	Municipal	The Alaska Court System established 34 recording districts established for the administration of a system for recording and filing of documents
Strong mayor form of government	Municipal	An elected mayor is given administrative authority for day to day operations of the community
Hired manager form of government	Municipal	The elected mayor is a figurehead or lobbyist with veto powers. A city manager would be hired by the mayor and city council to run the day to day operations
Village and Regional native corporation	Tribal	220 village and 13 regional corporations established under the Alaska Native Claims Settlement Act (ANCSA) that were awarded monetary and property compensation after the path of the Alaska pipeline was determined. These corporations provide economic and social benefits to their members, all of which are Alaska Natives and their descendents born before 1971.
Village Council	Tribal	Each federally recognized Alaska Native group has a village council to act as a politically representative body for the community. There are over 226 Native village councils in the state.

Governance

Governance structures can vary tremendously within Alaska, with city, borough, Native village, and state interests each represented by separate entities. For an explanation of tribal and municipal governance structures present in Alaskan communities, refer to Table 5. Principally, the local governance structure (both Native and municipal) is described as well as trends in the total municipal revenue, sales tax revenue, State and Community Revenue Sharing contributions, and fisheries-related grants over the 2000 to 2010 time period. Information is also provided regarding the location of the nearest offices of governmental organizations important to the fishing industry: NMFS,²³ the ADF&G,²⁴ the Alaska Department of Natural Resources (DNR), Department of Commerce, Community, and Economic Development (DCCED) and the U.S. Bureau of Citizenship and Immigration Services,²⁵ formerly known as Immigration and Naturalization Services. As the key bodies regulating fisheries, access to NOAA, ADF&G, DNR and DCCED can help with the flow and clarification of information (from research reports to

²³ NMFS' Alaska Regional Office website (<http://www.fakr.noaa.gov/default.htm>) provides a list of all branch offices in Alaska.

²⁴ The Alaska Department of Fish and Game website (<http://www.adfg.state.ak.us/>) provides a list of all branch offices in Alaska.

²⁵ The U.S. Bureau of Citizenship and Immigration Services lists most field offices in their Office Locator (https://egov.uscis.gov/crisgwi/go?action=offices.type&OfficeLocator.office_type=LO), although the website does not post a complete list of field offices.

grounds closures), as well as influencing a community's enfranchisement in a regulatory system. In addition, the location of permanent or semi-permanent U.S. Bureau of Citizenship and Immigration Services can affect the labor practices of industry, particularly the seafood processing sector, through level and intensity of monitoring, and may also affect use of local services by undocumented residents.

Infrastructure

The infrastructure section is an overview of the community's connectivity with other areas of the state, physical infrastructure that support the community, medical services and educational opportunities. In many cases, the primary rationale for offering descriptions of facilities is to reveal the accessibility of the outside world to community members, particularly with regard to communication and travel. This is especially significant given the emphasis on stakeholder participation in fisheries management, wherein frequent Fishery Management Council meetings are held in differing locations in each management region. Facilities descriptions also offer insight into a community's investment and dependence in the industry and the relative importance of particular assets. A community, for example, with one fish processing plant may be especially vulnerable to any fish allocation decisions in its associated region. In addition, information about schools, healthcare, utilities, and public safety facilities are important because such amenities may factor into people's decisions about where to live. Marine facilities are described where available to give an illustration of the physical infrastructure serving the local fishing industry in its commercial as well as recreational dimensions. This information has been primarily sourced from the websites of individual communities, the 2011 AFSC survey, harbors and marinas, and when possible or necessary, content has been supplemented by telephone communications with community staff.

More important than distance, in many ways, is cost of travel. Travelocity²⁶ and Kayak,²⁷ on-line travel planning services, as well as many small airline companies provided information on the cost of air travel between each community and Anchorage; costs were based on travel during June, 2012. Although Anchorage is not the only place one might need to travel to participate in governance or other aspects of fisheries management, it is such a travel hub for the state that costs for continuing on to locations such as Seattle or Washington, D.C. may be assumed to be uniform.

Descriptions of physical and even social infrastructure may have a tendency to treat communities in isolation. However, the ways in which a community is connected to other places is a critical element of how it functions. Connectivity or isolation can affect language, culture, trade, tourism, health, opportunity, and quality of life – though it is not always possible to say in what manner, as individuals differ in what they consider desirable. Connectivity or isolation can also be difficult to measure, as actual travel is always more than a matter of mere distances. Cost, for example, may be more prohibitive of travel than distance. Weather patterns and landing/docking facilities may also affect connectivity/isolation. If a community's air strip is inaccessible due to visibility or storm conditions for days at a time, price and distance may have less effect on participation in out-of-town business than weather windows. In addition, Anchorage is considered the central economic hub in Alaska, with the assumption that access to

²⁶ Prices were retrieved from Travelocity's home page at <http://www.travelocity.com>.

²⁷ Prices were retrieved from Kayak's homepage at <http://www.kayak.com>.

urban power centers is an important part of participation in North Pacific Fisheries, and that Anchorage is the most consistent and influential locus (though not the only one) of fisheries governance. Juneau, the state capital, is also important in this respect, but is less of an economic center. Seattle is also very important, except that, from some Southeast Alaska locations, most air trips to Seattle probably go through Anchorage.

Physical infrastructure – as the foundation of a logistical basis for supporting both economic and social activities – is also indicative of how a community may respond to change. The DCRA, community development plans and the 2011 AFSC survey provided detailed information on the physical facilities in each community, including marine, sea and land-based facilities. In addition, individual chambers of commerce, particularly for the larger communities, were consulted regarding local businesses and employment structures. Facilities information includes data on basic support systems such as roads, airports, docks, water, and electricity, as well as institutions which support the community such as and public safety offices. Information was also provided regarding locally and regionally available medical services and educational opportunities.

Involvement in North Pacific Fisheries

In nearly every case, the section on involvement in North Pacific fisheries is the longest and most detailed for each community. It was our goal to provide the most comprehensive information possible on commercial, recreational, and subsistence fishing practices for each community, based on available data. A significant amount of information is provided on the history and evolution of fisheries within each community as well as in the region surrounding the community. Characterization of fisheries is both in terms of the nature and degree of involvement. Sections are included that provide information on shore-side processing plants in the community and fisheries-related revenue that the community received between 2000 and 2010. The commercial fishing section contains information on vessel owners, crew members, commercial permits by species, geographic fishery and gear type, federal catch share program participation, as well as information on processing activities and landings both in the community and by residents of the community. This information was compiled from the CFEC²⁸ and NMFS Alaska Regional Office.²⁹ In addition, information provided in the 2011 AFSC survey regarding the most common gear types used, the seasonality of fishing in the community and the most important species to the community.

The recreational fishing section outlines the major sport species in each community, as well as sport license sales and charter and guiding services. ADF&G provided the data for this

²⁸ The Commercial Fisheries Entry Commission is an agency responsible for promoting the sustained-yield management of Alaska's fishery resources by regulating entry into the fisheries. CFEC provides logs of all fishing permits issued by the State of Alaska. Such a permit is required to land fish at a shore-based processor, even if the fish were taken in a federally-regulated fishery. Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data, commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁹ National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit and Alaska processors' Weekly Production Reports (WPR) data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

section.^{30,31,32} Each profile includes data on the number of sport fish guide businesses, guide licenses issued to residents, sport fishing licenses issued to residents (irrespective of point of sale), and sport fishing licenses sold in the community (regardless of license holder residence). In addition, where available, information on the species caught by private anglers and guided charter clients was reported.^{33,34} Each community was associated with one of ADF&G's Alaska Sport Fishing Survey Areas, including reports of saltwater and freshwater angler days fished in the area by Alaskan residents and non-Alaska residents.

The subsistence fishing section provides a description of the importance of subsistence harvests to the community. Where available, data were reported regarding subsistence activities in each community, including per capita harvests, percentage of households using subsistence resources, permits held by residents or households (i.e., subsistence salmon permits and Subsistence Halibut Registration Certifications (SHARC)) and the composition of subsistence harvests (i.e., salmon, marine invertebrates, halibut, other fish and marine mammals). Data reported in this section were principally retrieved from the ADF&G Division of Subsistence,^{35,36,37,38} the U.S. Fish and Wildlife Service,³⁹ and published reports;⁴⁰ however, additional data from other available sources were available for specific communities and were reported.

Our team encountered various challenges while compiling data for the fisheries section. A principle issue for the team was that certain types of fisheries-related data in Alaska are confidential under NOAA Administrative Order 216-100 and Alaska Statute 16.05.815. The agreement between NMFS and ADF&G regarding the release of data obtained from state fish

³⁰ Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³¹ Alaska Department of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³² Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³³ Ibid.

³⁴ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁵ Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Retrieved February 2011 from <http://www.adfg.alaska.gov/sb/CSIS/>.

³⁶ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011), revised. *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage.

³⁷ Fall, J.A. and D. Koster. (2011). *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage.

³⁸ Wolfe, R.J., Fall, J.A. and M. Riedel. (2009). *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

³⁹ U.S. Fish and Wildlife Service. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska.

⁴⁰ Frost, Kathy J., and Suydam, Robert S. (2010). *Subsistence harvest of beluga or white whales (Delphinapterus leucas) in northern and western Alaska, 1987–2006*. Journal of Cetacean Research and Management 11(3): 293–299.

tickets requires at least four individuals or firms for a given statistic in order for that statistic to be made public. Some of the communities profiled in this document therefore contain no data on fish landings. In such cases, the profile indicates that one or two or three fish buyers or vessels landing catch are present, but contains statements that indicate that fish landings associated with those fish buyers or vessels is considered confidential.

The subsistence fishing section brought unique challenges of its own. First, a shifting policy environment due to conflict between the State and the Federal governments has made the accounting of subsistence practices difficult. Federal authority was extended over subsistence management on federal waters in Alaska in 1999 under Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA). An interagency Federal Subsistence Board is managing most federal subsistence fishing, except for subsistence halibut, which, as a marine species, is now regulated by NMFS in conjunction with the North Pacific Fishery Management Council. Thus, subsistence fishing in a given community may be taking place under any of three jurisdictions: the State of Alaska, the Federal Subsistence Board, and the National Marine Fisheries Service.

Second, much of the subsistence data available at the community level is collected through household surveys conducted by the ADF&G Division of Subsistence that are not necessarily collected every year. Therefore, the data provided represents estimates of subsistence harvests in a community rather than accurate numbers. For example, marine mammal subsistence data for Steller sea lions, harbor seals, and spotted seal are extrapolated based on years where observations were made, where if a survey accounted for eight harbor seals in 2006, and no observations were made in 2007, it was assumed that eight harbor seals would be a sufficient estimate for that year despite the fact that no survey was conducted. In addition, household surveys were not conducted in every year in every community. Therefore, the lack of data reported for a given community in some years does not necessarily mean that residents of that community did not harvest those subsistence resources. Likewise, when harvest data is reported as the same in subsequent years, it is not necessarily an accurate count. In addition, for many of the subsistence harvest data collected by ADF&G, estimates were not available at the time of publication for any years after 2008.

Third, we relied on the quantitative characterization of subsistence harvesting provided by the ADF&G Division of Subsistence electronic Community Subsistence Information System (CSIS). The CSIS provided adequate data for most of our selected communities; however, the data was collected during different years for different communities. Where more than one year of data was available for a community, we used the year designated as most representative of the community's practices by ADF&G. In addition, ADF&G subsistence data is often lacking for a given community – and this is particularly true for the communities selected in Western Alaska, where subsistence uses are known to be high. In some cases, additional data on wild food harvests were found in reports published about individual communities.⁴¹ Finally, it should be noted that the subsistence database contains harvest information for resources taken under a variety of regulations, including subsistence regulations, commercial fishery removals, and in some cases, recreational regulations. There is legitimate scholarly and policy debate over whether such harvests may all be considered subsistence. Although the CSIS uses the terminology of subsistence, it is probably more accurate to say that it reports on “home use” (J.

⁴¹ Reports published by ADF&G are located at <http://www.adfg.alaska.gov/sf/publications/>.

Fall, ADF&G Division of Subsistence, pers. comm. 2003). In some, but not all, communities, home use and subsistence use are essentially the same.

Finally, it was challenging to understand how ‘harvest’ and ‘use’ of subsistence resources were entered into a calculation and resulted in a ‘subsistence participation’ estimate in the ADF&G database. It is important to understand this caveat because it is hard to characterize what the data in fact represented (not harvest, not use... but some vague ‘participation’ estimate); for example, the term ‘participation’ does not necessarily mean ‘harvest participation,’ and could in fact refer to consumption of subsistence resources rather than actual harvesting activities.

Figures and Tables

In addition to the narrative community profiles, each community has an associated set of figures and tables that provide graphical and tabular displays of various data. The *People and Place* section includes a table showing population counts from 1990 to 2010 and figures showing the racial and ethnic composition and the population structure from 2000 to 2010. The *Current Economy* section includes figures that display changes in local employment by industry and occupation between 2000 and 2010. The *Governance* section provides a table showing annual municipal revenue, sales tax revenue, State and Community Revenue Sharing contributions and fisheries-related grants received by the community between 2000 and 2010. Finally, the *Involvement in North Pacific Fisheries* section includes 13 tables with annual fisheries-related data between 2000 and 2010, including the following:

- Known fisheries-related revenue (in U.S. dollars) received
- Permits and permit holders by species
- Characteristics of the commercial fishing sector
- Community participation in federal halibut fisheries (including quota share account holders, quota shares held, and Individual Fishing Quota (IFQ) allotment)
- Community participation in federal sablefish fisheries (including quota share account holders, quota shares held, and IFQ allotment)
- Community participation in federal crab fisheries in the Bering Sea and Aleutian Islands (including quota share account holders, quota shares held, and IFQ allotment)
- Landed pounds and ex-vessel revenue, by species
- Landed pounds and ex-vessel revenue, by species, by residents
- Sport fishing trends (including sport fish guide businesses, sport fish guide licenses, sport fishing licenses sold to residents, sport fishing licenses sold in the community and angler days fished in salt and freshwater by Alaskan residents and non-residents)
- Subsistence Participation by Household and Species
- Subsistence Fishing Participation for Salmon, Marine Invertebrates and Non-Salmon fish
- Subsistence Halibut Fishing Participation
- Subsistence Harvests of Beluga, Polar Bears, Sea Otters and Walrus
- Subsistence Harvests of Steller Sea Lions, Harbor Seals, and Spotted Seals

Community Comments

After drafting the Alaska community profiles, the profiling team made a substantial effort to solicit comments and suggestions for improvement to the draft from within NOAA and from representatives of the communities profiled. Initially, the draft introduction and methods section, along with a few example profiles, were circulated within NOAA for internal review. Comments were also sought from other social scientists. The introduction and methods section was then revised in response to these comments.

The process of requesting comments from communities began with the formulation of a list of official contacts within the community, compiled from DCRA's Community Database Online,⁴² as well as from internet searches for additional information. We included governmental bodies, such as city governments and village councils, as well as quasi-governmental resource management bodies such as village Native corporations and regional Native corporations. The goal was to involve a broad representation of any particular community, through official representative bodies, without creating an overwhelming task. The ability to locate contact information for the organizations was also a factor in compiling the list. Unfortunately, no contact information of any kind was located for six communities.⁴³ A total of 251 separate organizations were contacted by mail for the remaining 190 communities included in the profiling effort.

An initial email was sent out to the list of community contacts in August 2012 to inform them of the project and to provide them with an electronic draft of their community's profile. The email requested that if the recipient was not the correct person to review the profiles, that the correct person and contact information be indicated to the profiling team. Many contact people requested, by telephone, mail, email or fax, that the profiles be sent to someone else in the community. In response, we updated the contact list as appropriate. The email had the additional effect of alerting other people in the communities to the project and the request for comments, and many of these people requested information or copies of the profiles. Following this initial request, comments were received from ten communities. All comments were incorporated into the draft profiles for those communities.

Following this initial attempt, additional revisions were made to the profiling team and a second request for comments was sent to community contacts in November 2012. This time, all draft community profiles were posted to the AFSC website and communities were asked to download their profile from the website or to email us back for a copy by email, mail or fax. Overall, the reaction to the profiles project was positive and those community members who responded appeared to be enthusiastic about the profiling effort and appreciative of the opportunity to give suggestions. The content of the comments ranged from indicating that there were no corrections to be made, to providing a complex description of how subsistence in the village is affected by regulations, and providing whole sections to add to the profile from an already existing source. Some comments included a detailed review of the profile text, indicating such things as incorrect names, whereas others included few or no suggestions, and still others did not pertain directly to the text.

⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴³ Communities that we were not able to find contact information for included Cold Foot, Council, Kaktovik, Nuiqsut, Petersville and Red Devil.

For the majority of comments, the corrections suggested were to the data elements included in the facilities and governance sections, specifically correcting such things as village school information, the type of garbage collection/disposal, barge service, harbor information, lodging, the borough the community is included in, number of city council members or type of government, heating method, health care center, taxes, plumbing, transportation, and so on. These comments were particularly welcomed by the profiling team, since our limited resources sometimes prevented us from gathering information in this level of detail. Corrections were also included for such things as misspellings, the year a particular event occurred, general history, sport fishing information (such as species and lodges), businesses located in the community, processor information, and changes to commercial fishing permit information.

Disagreements with the Census data (demographics and employment) were expressed somewhat frequently, as were problems with the aggregation of fishing data for multiple communities as presented by the CFEC. In such cases, data from published sources were still relied upon, even if changes were suggested, in order to maintain the same standard for all profiles. These comments prompted us to check our sources, and numerical changes were made only if a recording error had been made; however in some cases the qualitative description was changed based on the comments received.

The comments provided were incorporated into the text using the profiling team's best judgment. Community members were considered experts on their own communities; however, in a few cases the suggested changes or additions could not be made for reasons of length or uniformity. For suggestions regarding facilities, governance, and history, community members' comments were in most cases directly incorporated. The types of comments that could not be incorporated tended to be general suggestions for the complete document which were not feasible given the scope, time frame, and resources of the project. A number of these general suggestions were constructive and will be noted for future profiling efforts.

STATE OVERVIEW

At the time of community selection, the 2010 Decennial Census had not yet been conducted; therefore, communities were selected from the 2000 Decennial Census for inclusion. The 2000 Decennial Census reports a total of 349 "Places" in Alaska; these are cities, towns, and communities with populations.⁴⁴ This was the total pool of Alaskan communities from which we selected communities for inclusion in the profile project. Applying the selection criteria described in the Methods section of this document, we selected 196 communities for profiling. As a result, of the 349 Census-recognized Places in Alaska in 2000, just over half (55.9% of Census Designated Places) were profiled in this document.

These numbers say several things about the nature of community involvement in commercial fishing in Alaska. First, the breadth of fishing involvement is significant. Second, it is striking that half of all Alaskan communities were involved enough in fishing to meet the selection criteria for this project. This substantial degree of participation points toward the significance of fishery-related activity to the overall economy and social organization of Alaska.

⁴⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data). Retrieved August 1, 2009 from <http://factfinder.census.gov/home/saff/main.html>. Website has since been updated to <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

This section of the profile document is meant to serve as an overview of the state as a whole. It provides aggregate information for these communities as well as a context in which to interpret this information.

People and Place

Location

Vast in scale and diverse in latitude and topography, Alaska exhibits tremendous variation in its climate, from maritime climatic zones in the Gulf of Alaska to arctic zones in the far north. All regions, however, are influenced to some extent by storms from the North Pacific Ocean as they move eastward from Asia. There is also a great deal of variability in Alaska's weather from one year to the next, primarily due to the shifting path of the jet stream.

Climate, topography and latitude all have an influence on the ecology of Alaska's different regions, and these ecological differences in turn determine the species composition of fish and patterns of human use. Alaska's diverse marine and terrestrial ecosystems provide habitat for 436 fish species, including 52 freshwater or anadromous species and 384 saltwater species.⁴⁵ From pelagic species to estuarine species to freshwater fish living in inland lakes and streams, Alaska produces a huge volume of aquatic life. The people who live in Alaska—Native groups whose ancestral history in the region stretches back thousands of years, and newly arrived residents alike—have co-evolved with Alaska's marine life, and have come to depend on it for their livelihoods.

Figure 2 shows the location of the 196 Alaskan communities selected for profiling in this document. Their geographical dispersion reflects several phenomena. From an ecological perspective, these communities, with a few exceptions, are located on or near the coastline where dependence on marine resources would be expected to be high. Their locations also reflect historical settlement patterns, first by Alaska Natives, and by Europeans beginning in the 18th century.

Demographic Profile

The communities selected for profiling all share a common reliance on fisheries-related activities, but represent a diversity of demographic, socio-economic and historical conditions. In terms of size, some communities are large municipalities that serve as regional economic hubs, such as Anchorage, while other communities are relatively isolated and have only a few dozen inhabitants. There are 145 city governments in Alaska⁴⁶ and 16 organized boroughs (Bockhorst 2001).⁴⁷ A First Class City, or Home Rule City, must have at least 400 permanent residents. A city may incorporate as Second Class if it has 25 voters. In the rest of the U.S., the difference between a 400-person and a 25-person (voter) community would hardly be recognized, since both communities would be considered quite small. But in Alaska, a population of 400 is

⁴⁵ Armstrong, Rober H. (1996) *Alaska's Fish: A guide to selected species*. Anchorage: Alaska Northwest Books.

⁴⁶ Incorporated cities are automatically recognized by the Census as Places.

⁴⁷ Bockhorst, Dan. (2001). *Local Government in Alaska*. February 2001. Alaska Department of Community and Economic Development: Anchorage. Retrieved November 5, 2012 from http://www.commerce.state.ak.us/dca/lbc/pubs/Local_Gov_AK.pdf.

relatively substantial. Of the 352 Census communities (Places) in Alaska with a positive population in 2010, 60.5% (213 communities) had fewer than 400 residents, while 8.8% (31 communities) had fewer than 25 residents (Table 6). Other States have a very small percentage of their populations living in communities of less than 400.

One of the most important stories that emerges from these community profiles is how quickly many Alaskan communities have experienced demographic change. Population numbers in certain communities have swelled in recent years, a trend that is in large measure driven by fisheries-related activities. Unalaska, for example, was transformed from a community of less than 200 in 1970 into a booming small city of 4,376 residents in 2010.⁴⁸ This dramatic transformation coincided with the Magnuson-Stevens Fisheries Management and Conservation Act’s “Americanization” of the groundfish fleet in North Pacific waters and the subsequent growth of the fish processing industry, both onshore and at sea. Communities in Southeast Alaska underwent a similar transformation in response to the growth of the international market in salmon, which has been tempered in recent years by foreign competition from the salmon farming industry. In general, communities that have experienced rapid population growth have also seen an influx of racial and ethnic minorities—particularly Asians and Latinos—as the fishing industry has become a global enterprise that draws labor from around the world. By contrast, many Native communities that participate in commercial fishing have lived in situ for centuries and have maintained relatively stable populations since the beginning of U.S. Census data collection. Some communities have experienced population decline in recent years as local economic conditions (especially those recently influenced by global trends) make getting by more difficult and opportunities elsewhere draw residents away.

Table 6. Census Places in Alaska by population size, and cumulative percent in 2010.

Population	Number of Census Places	Cum. %	Mean	Median	Min	Max
≤25	31	8.8%				
25-400	182	60.5%				
400-4,000	111	92.0%				
4,000-20,000	25	99.1%				
20,000+	3	100%				
<i>Total population</i>	<i>710,231</i>					

Source: U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

When considering a snapshot of the nation’s population as provided by the decennial U.S. Census, the population is segmented into racial categories (White, Black, Alaska Native or American Indian, Asian, Native Hawaiian or Other Pacific Islander, Some Other Race, and Two

⁴⁸ U.S. Census Bureau. (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

or More Races) as well as ethnic categories (Hispanic or Non-Hispanic).⁴⁹ The profiles supply this snapshot for each selected Alaskan community, which is followed by a historical account of the community which helps explain and contextualize the contemporary composition of the specific communities' populations. For purposes of comparison, Table 7 provides the racial and ethnic distribution seen both across Alaska and the U.S.

One of the most interesting characteristics of Alaskan communities is the bi-modal nature of racial structure. Throughout the state, most commonly, communities either have a significant majority of the community that considers themselves White or a majority that considers themselves to be Alaska Native. For example, in the 2010 Decennial Census, 37.2% (132 communities) exhibited more than 75% White residents and 39.7% (141 communities) exhibited more than 75% Native Alaskan residents. Many of the profiled communities with the highest percentages of White residents are located in Southeast Alaska or on the Kenai Peninsula, both areas which had a large boom of White settlers partly because of resource extraction—Southeast Alaska in the late 1800s and early 1900s, and the Kenai Peninsula in the 1950s. Today, both areas are also the densest sites of sport fishing in the state, providing sport lodges and a plethora of guiding services. The communities with the highest percentages of Native residents are predominantly located in Western Alaska. Western Alaska is home to a predominantly Native population, in part because the region has a less extensive history of European colonization and natural resource extraction compared to other areas of the state.

The remaining categories of racial and ethnic groups are not nearly as abundant. The largest communities in the state contain higher percentages of Black or African American residents than many other communities (Fairbanks 11.2% in 2000 and 9% in 2010, Anchorage 5.8% and 5.6% in 2010, and Juneau 0.8% and 0.9% in 2010). The remaining communities with higher percentages of Black residents are located for the most part in on the Alaska Peninsula and Aleutian Islands.

The communities with the largest percentages of Asian residents are primarily major fishing ports with large fish processing plants. Fish processing remains an under-studied sector of Alaska's fisheries; however, according to anecdotal evidence, Asian migrant workers, particularly from the Philippines and other areas of Southeast and East Asia, make up a large portion of fish processing workers in many communities. Unalaska, for example, has a particularly high percentage of Asian processing workers (32.6% of the 2010 population). About 50.4% (46.7% in 2000) of the profiled communities did not include any Asian residents.

In 2010, only about 28.4% of communities included any Native Hawaiians or Other Pacific Islanders, compared to 27.3% in 2000. Many of the communities with the highest percentages of Native Hawaiian or Other Pacific Islanders are small communities where one person or one family can have a large impact on overall percentages.

⁴⁹ All data presented here on race and ethnicity was obtained from the following source: U.S. Census Bureau. (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 7. Racial distribution of the Alaskan and U.S. populations in 2000 and 2010.

	Alaska		U.S.	
Total population 2000	626,932		281,421,906	
One race	592,786	94.6%	274,595,678	97.6%
Two or more races	34,146	5.4%	6,826,228	2.4%
White	434,534	69.3%	211,460,626	75.1%
Black or African American	21,787	3.5%	34,658,190	12.3%
American Indian and Alaska Native	98,043	15.6%	2,475,956	0.9%
Asian	25,116	4.0%	10,242,998	3.6%
Native Hawaiian and Other Pacific Islander	3,309	0.5%	398,835	0.1%
Some other race	9,997	1.6%	15,359,073	5.5%
Hispanic or Latino (of any race)	25,852	4.1%	35,305,818	12.5%
Not Hispanic or Latino	601,080	95.9%	246,116,088	87.5%

	Alaska		U.S.	
Total population 2010	710,231		308,745,538	
One race	658,356	92.7%	299,736,465	97.1%
Two or more races	45,368	6.4%	9,009,073	2.9%
White	518,949	73.1%	223,553,265	72.4%
Black or African American	33,150	4.7%	38,929,319	12.6%
American Indian and Alaska Native	138,312	19.5%	2,932,248	0.9%
Asian	50,402	7.1%	14,674,252	4.8%
Native Hawaiian and Other Pacific Islander	11,154	1.6%	540,013	0.2%
Some other race	15,183	2.1%	21,748,084	7.0%
Hispanic or Latino (of any race)	39,249	5.5%	50,477,594	16.3%
Not Hispanic or Latino	670,982	94.5%	258,267,944	83.7%

Source: U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

On average, Alaskan communities were only 1.8% Hispanic in 2000 and 2.1% Hispanic in 2010, with a range of 0% to 20.8% in both years. Communities with the highest percentage of Hispanic residents tend to be heavily involved in fish processing, which provides job opportunities for seasonal workers. Many of these communities are located on the Alaska Peninsula and the Aleutian Islands.

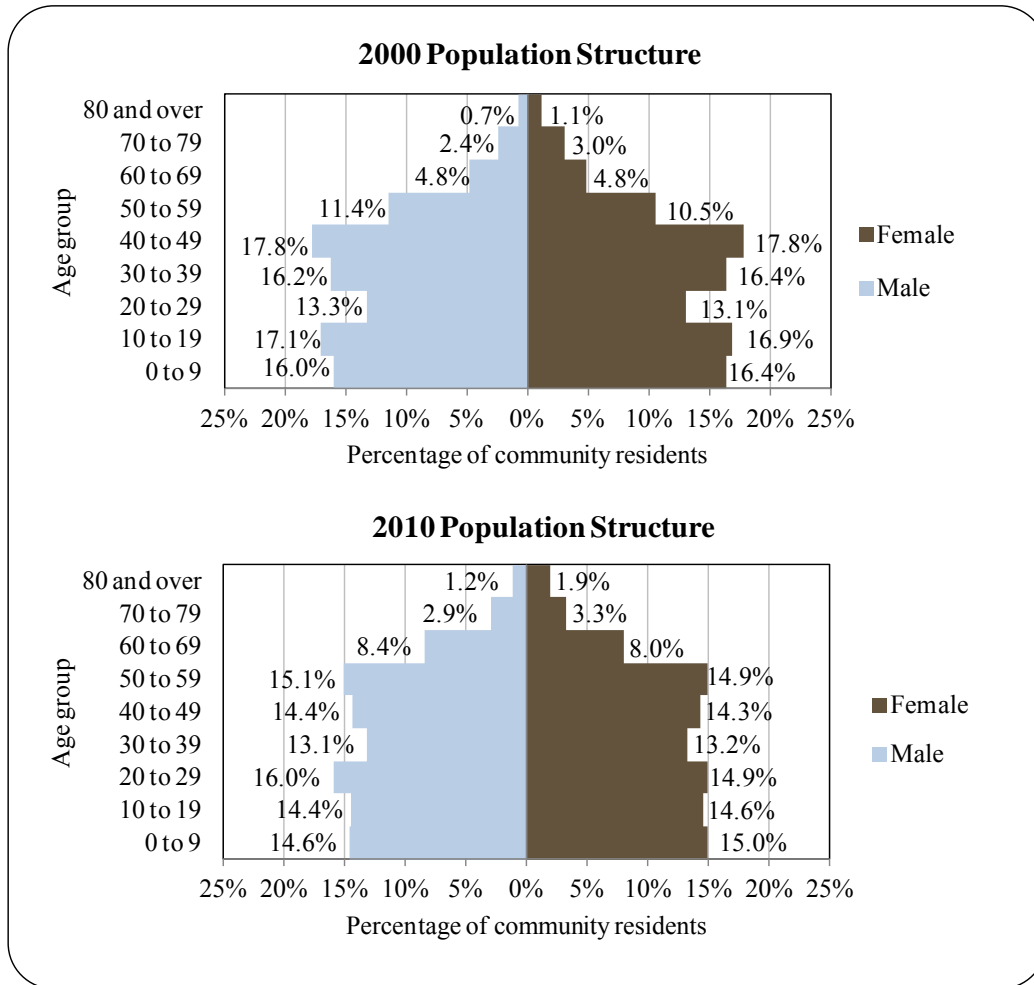
The ratio of men to women in many Alaskan communities tells the peculiar story of labor mobility in industries such as fishing and oil extraction. Most of the communities profiled in this document have more men than women, but this is particularly true of communities that rely heavily on fishing and fish processing. When compared to the overall U.S. population, which is approximately equally distributed between men and women (49.1% male in 2000 and 49.2% in 2010), and even when compared to the overall population of the State of Alaska (51.7% male in 2000 and 52.0% in 2010), a majority of the communities profiled in this document are more heavily skewed toward male residents. Over 70% in 2000 and 66% in 2010 of Alaskan communities had male percentage greater than the state average. A considerable number of those communities which have the highest ratio of men to women are located in Southwest Alaska (in the Alaska Peninsula and Aleutian Islands), and in Southeast Alaska. Both of these areas are

heavily involved in commercial fishing and fish processing, labor sectors that tend to be male-dominated.

By contrast, large communities, communities with less transient employment opportunities, and some traditional Native communities, tend to be much more balanced in terms of gender composition. Anchorage (50.6% male in 2000 and 50.8% in 2010), Ketchikan (50.4% male in 2000 and 50.8% in 2010), and Juneau (50.4% male in 2000 and 51.0% in 2010) are all relatively balanced in terms of gender composition and all have large populations by Alaska standards. These communities also have a wider variety of employment opportunities such as tourism, finance, real estate, communications, government, mining, timber, and oil and gas industries. These more metropolitan communities follow the relatively balanced gender pattern of other major metropolitan areas in the United States. Some remote and largely Native communities, such as Newhalen (50% male in 2000 and 48.4% in 2010) and Hooper Bay (49.7% male in 2000 and 51.5% in 2010), have very balanced gender structures as well, in part because of the somewhat more limited commercial fishing opportunities; neither community had a fish processing plant. Excursion Inlet, Nikolski, Portage Creek and Wiseman all have exactly balanced gender structures; each of these communities has a population under 100 and lack commercial crew or processing employment. Some communities have more females than males, but this is considerably less common, with only 10.4% of Alaskan communities having more than 50% women.

The age structure in many of Alaskan communities is also telling. The average median age of communities was 32.7 years in 2000 and 36.2 years in 2010, somewhat younger than the U.S. median of 35.3 years in 2000 and 37.2 in 2010. This indicates a slight trend toward a young working-age population with few elderly residents for the entire State of Alaska. Approximately 54% of Alaskan communities have a lower median age than the U.S. average. This is due in part to the physical demands of the work and the transient nature of employment in fishing and fish processing. It is also influenced by the relative absence of the elderly in the small coastal communities of Alaska, except in traditionally Native communities. These trends are also represented graphically in Figure 3.

Figure 3.-Population structure of the population as a whole in Alaska.



History of Alaska

Although the precise date of initial occupation of Alaska’s coastline is still somewhat in dispute, it is widely confirmed that people from northeast Asia came to Alaska during the peak of the last glacial period more than 10,000 years ago.⁵⁰ These early arrivals spread across the coastal (and later interior) lands of Alaska, and gave rise to quite different material cultures, languages, subsistence patterns and cultural identities. There are twenty Alaska Native languages from four distinct language families: Eskimo-Aleut, Tsimshian, Haida, and Athabaskan-Eyak-Tlingit. Migration, descent, and cultural diffusion over the millennia help to explain the complex cultural mosaic that is Native Alaska.

The history of contact between Europeans and Alaska Natives is turbulent and ever-changing. The first European to enter Alaskan territory was Vitus Bering, who, sent by Peter the Great of Russia in 1728, sailed into the strait that now bears his name. By the mid-18th century,

⁵⁰ Ames, Kenneth W. and Herbert D.G. Maschener. (1999). *Peoples of the Northwest Coast: Their Archaeology and Prehistory*. London: Thames and Hudson.

the intensive resource extraction that would characterize Alaska's colonial history had begun. Russian expeditions began harvesting North Pacific sea otters and fur seals in great quantities for the international market. This early contact for primarily economic purposes resulted in a long and significant cultural exchange; many coastal communities throughout Alaska have residents with Russian surnames and maintain a faith in the Russian Orthodox Church.

In 1867, the U.S. government purchased Alaska from Russia for \$7.2 million. The deal, signed by Secretary of State William H. Seward, was widely referred to as "Seward's Folly," as most U.S. citizens could see no use or value in acquiring 586,000 square miles of northern land.⁵¹ Throughout the mid- and late-19th century, gold was discovered in various locations, including near Sitka, Windham Bay, Gastineau, and, most famously, at the mouth of the Klondike River in 1897, beginning the great Klondike gold rush. Many North American towns and cities, including the metropolis of Seattle, owe their early population growth in part to the Alaskan gold rush, which brought supply-hungry miners, explorers and settlers to the area.

Military operations have long been an important part of Alaska's history. Early operations were in support of trading companies, targeting fractious Native groups, as with the shelling of Angoon in 1882. In 1942, during the height of World War II, the Japanese attacked Dutch Harbor where the U.S. had amassed a force 40,000, including civilian support personnel.⁵² The Japanese attacked and occupied the island of Attu, taking the Aleut residents back to Japan as prisoners.⁵³ The U.S. responded by forcibly evacuating the entire Aleut population and holding them in internment camps in Southeast Alaska for the duration of the war.⁵⁴ The war also precipitated the Alaska-Canada highway, built through about 1500 miles of Canadian wilderness in just eight months as an overland supply route to the territory, and used today by thousands of adventurous tourists each summer. In the 1960's and 70's, the United States used the Aleutian Islands as a nuclear weapons testing ground, exploding three devices including the largest underground nuclear explosion ever conducted by the United States.⁵⁵ Although the end of the Cold War changed Alaska's immediate strategic position, it is still a critical part of U.S. presence in the Pacific. Most recently, Adak was selected as a key site for the new U.S. missile defense system.

Beginning in the early 1900s, and expanding in the 1950s, oil extraction has been a mainstay of the state economy. With the completion of the Trans-Alaska Pipeline from Prudhoe Bay to Valdez in 1977, Alaskan oil began flowing in high volumes to the U.S. and international markets. In 1980, the Alaska Legislature established the Alaska Dividend Fund to distribute Permanent Fund earnings from oil extraction on the North Slope to Alaska residents. For all its benefits, the oil industry in Alaska also brings significant risks and liabilities. In what has become one of the most widely publicized environmental disasters and clean-up efforts in

⁵¹ Gislason, Eric. (n.d.). *A Brief History of Alaska Statehood (1867-1959)*. Retrieved June 2005 from <http://xroads.virginia.edu/~CAP/BARTLETT/49state.html>.

⁵² Rourke, Norman Edward. (1997). *War Comes to Alaska: The Dutch Harbor Attack, June 3-4, 1942*. Shippensburg, PA: Burd Street Press.

⁵³ Mitchell, Lt. Robert J. (2000). *The Capture of Attu. A World War II Battle as Told by the Men Who Fought There*. University of Nebraska Press: Lincoln.

⁵⁴ Kohlhoff, Dean. (1995). *When the Wind Was a River. Aleut Evacuation in World War II*. University of Washington Press: Seattle.

⁵⁵ Kohlhoff, Dean W. (2002). *Amchitka and the Bomb. Nuclear Testing in Alaska*. University of Washington Press: Seattle.

history, the *Exxon Valdez* oil tanker ran aground on March 24, 1989, spilling 11 million gallons, and fouling shoreline from Prince William Sound to the Alaska Peninsula.

Marine species were among the earliest and most important of Alaska's commercial resources, especially marine mammals. The fur trade, based on sea otter and fur seals, drove the economics of the Russian colonial empire. Commercial whaling was an important factor in the late 19th century. Some marine mammal populations have recovered from over-exploitation, while other populations remain low or are declining, affecting subsistence users and commercial fisheries.

Commercial fisheries began in the mid 1800s with salted cod, salmon, and herring, and later canned salmon. Lucrative offshore fisheries were conducted by fishing fleets from Russia, Japan and Korea, until the 1976 Magnuson Fishery Conservation and Management Act claimed the area between 3 and 200 miles offshore as the exclusive economic zone of the U.S.⁵⁶ Crab and other shellfish, herring, halibut, salmon and groundfish have all contributed to this important industry for the state, supporting a fishing economy that ranges from family fishing operations to multinational corporations, and transforming the social landscape by the immigration of workers from around the world.

Alaska's economic, social and cultural milieu continues to evolve. Major industries including oil, military and commercial fishing remain tremendously important to the state's continued growth. At the same time, new sectors such as tourism have begun to contribute noticeably to Alaska's economy. Cruise ships, recreational fishing excursions, cultural tourism and eco-tourism are on the rise as people from around the world discover Alaska's unique character.

Current Economy

Important Economic Sectors

There were 304,851 Alaskan residents employed throughout the state in 2010, compared to 284,000 in 2000. The government sector—including federal, state and local levels—was the largest in terms of employment figures, with 70,260 jobs in 2010 and 74,500 jobs in 2000. In 2000, this was followed by services/miscellaneous (73,300), trade (57,000), transportation, communications and utilities (27,300), manufacturing (13,800, with seafood processing contributing the bulk of jobs at 8,300) and mining (10,300, with oil and gas extraction contributing the most jobs at 8,800).⁵⁷ This changed slightly in 2010 to where trade transportation and utilities (63,028 or 20.7%) providing the most jobs, followed by educational and health services (42,534 or 14.0%), leisure and hospitality (29, 835 or 9.8%) and professional and business services (25,777 or 8.5%).⁵⁸ Employment in commercial fishing has declined over

⁵⁶ Rigby, Phillip W., Ackley, David R., Funk, Fritz, Geiger, Harold J., Kruse, Gordon H., and Murphy, Margaret C. (1995). *Management of the Marine Fisheries Resources of Alaska*. Regional Information Report 5J95-04. Juneau, AK: Alaska Department of Fish and Game.

⁵⁷ Alaska Department of Labor and Workforce Development. (2001). *The Year 2000 in Review: Growth Picks up in Alaska in 2000. Alaska Economic Trends 2001*. Anchorage: Alaska Department of Labor and Workforce Development.

⁵⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved August 4, 2012 from <http://live.laborstats.alaska.gov/alari/>.

the past decade. Despite this decline, the commercial fishing and fish processing industries remain an important factor in Alaska’s employment picture.⁵⁹

Governance

The governance structure of Alaska differs from that of the rest of the U.S. The state is divided into 19 boroughs which are roughly analogous to counties in many other states, though certainly larger in terms of land and smaller in terms of population than a typical county. This includes four “unified municipalities” (Anchorage, Juneau, Sitka and Wrangell) that are borough-level jurisdictions. However, not every community is contained in an organized borough. In fact, over half of the state’s land mass is not included within the borders of the 18 organized boroughs, including the Municipality of Anchorage.⁶⁰ The remainder of the state is considered one ‘unorganized borough,’ which has been divided into 11 Census Areas.⁶¹ In all other states in the U.S., cities are organized within counties (except in the case of Louisiana, in which they are located within parishes). This higher level of governance can assist in providing various services at the local level, which may include jails and courts, housing, emergency, solid waste, transportation and additional community services.

Although fewer than 50% of Alaskan communities are located within organized boroughs, boroughs play a vital part in the governance and support of communities that are located within them. In the case of the Kenai Peninsula Borough, for example, the borough devotes a 2% consumer sales tax to the schools of the borough. Other typical responsibilities of borough-level government include: solid waste disposal, 911 communications, college funding, senior citizen funding, planning and zoning, solid waste disposal, education, and tax assessment and collection.⁶² Boroughs have the ability to institute taxes including such taxes as sales and use tax and property tax.

As described in Table 5, in Alaska, an incorporated place falls into one of three municipal classifications: home rule cities, first class cities, and second class cities. City classification depends largely on population. Home-rule and first-class cities must each have at least 400 residents, while second-class cities must have at least 25 registered voters. The municipal classification scheme determines the powers that municipalities may exercise, including the passage of land use regulation and the assessment and collection of taxes. Many Alaskan communities are unincorporated, and so do not fall under the municipal system, although most of these are nonetheless designated as Places by the Census. The communities profiled in this document are divided between various types of incorporation, but are made up largely of second-

⁵⁹ Carothers, Courtney and Jennifer Sepez. (2005). Commercial Fishing Crew Demographics and Trends in the North Pacific. Poster presented at the *Managing Our Nation’s Fisheries: Focus on the Future* Conference, Washington D.C., March 2005. Available at ftp://ftp.afsc.noaa.gov/posters/pCarothers01_comm-fish-crew-demographics.pdf.

⁶⁰ Aleutians East Borough, Municipality of Anchorage, Bristol Bay Borough, Denali Borough, Fairbanks North Star Borough, Haines Borough, City and Borough of Juneau, Kenai Peninsula Borough, Ketchikan Gateway Borough, Kodiak Island Borough, Lake & Peninsula Borough, Matanuska-Susitna Borough, North Slope Borough, Northwest Arctic Borough, City and Borough of Sitka, and City and Borough of Yakutat.

⁶¹ Alaska Dept. of Labor and Workforce Development, Research and Analysis. *Alaska Borough & Census Area Boundaries – 2010*. Retrieved November 19, 2012 from <http://labor.alaska.gov/research/census/2010CNTY.pdf>.

⁶² Kenai Peninsula Borough. (n.d.). *Our government*. Retrieved November 5, 2012 from <http://www.borough.kenai.ak.us/our-government>.

class cities or unincorporated communities, although some first-class cities and unified home rule municipalities were selected for profiling.

Communities generate revenue in a variety of ways, including the implementation of taxes, the sale of permits, involvement in enterprise, and through outside funding programs. Incorporated communities have two types of municipal revenues: local operating revenues (generated from taxes, licenses/permits, service charges, bingo, enterprise, and other sources) and outside operating revenues (generated from federal operating revenues, state revenue sharing, state safe communities, state fish tax sharing, other state revenue, and other inter-government sources), and state/federal education funds. For many communities, much of their local operating revenue (and much of their total revenue in general) is generated by locally administered taxes, which may include sales tax, property tax, accommodations tax, bed tax, rental car tax, raw fish tax (see *Fish Taxes in Alaska* section), alcohol tax, tobacco tax, and gaming tax.

Unincorporated communities and communities located outside of organized boroughs are eligible for the State/Community Revenue Sharing program (as are communities which are incorporated which are in either an organized or unorganized borough). This program helps to fund public services including education, water and sewer, police, road maintenance, health care, and fire protection.⁶³

Alaska is the only state that does not collect state sales or income tax (sales tax in many cases is collected by cities and boroughs). However, other state taxes are in place including: alcoholic beverages, games of chance and contests of skill, conservation surcharge on oil, corporate net income, dive fishery management assessment, electric cooperative, estate (phased out in 2003), fisheries business, fishery resource landing, mining license, motor fuel, oil & gas property, oil and gas production, regulatory cost charge, salmon enhancement, salmon marketing (repealed in 2005), telephone cooperative, tire fee, tobacco, and vehicle rental tax. The largest percentage of General Fund taxes collected in 2000 by the State was made-up of oil and gas severance (production tax and conservation surcharge) which was 53% of the \$1,334,388,911 in total tax collections. A large percentage as well of the total taxes were from other oil and gas taxes: oil and gas property (20%) and oil and gas corporate (12%). The remaining pieces of the total tax collections were made-up of: other corporation (4%), fisheries business (3%), other fisheries (1%), motor fuel (3%), tobacco (1%), alcohol (1%), and other taxes (2%).⁶⁴ By comparison, in 2010, taxes on the oil and gas industry (production) made up a significantly larger percentage (76.7%) of all revenue collections. Other large tax contributors included oil and gas corporate income (11.4%), oil and gas property taxes (2.7%), other corporate income (1.9%), tobacco (1.7%), alcohol (0.7%), commercial passenger vessel (1.0%), and fisheries business (0.3%).⁶⁵

Village councils are the politically representative bodies of federally recognized Alaskan Native groups. A village council is either an Indian Reorganization Act (IRA) council or a

⁶³ Information about the State and Community Revenue Sharing programs can be found at the following websites:
<http://commerce.state.ak.us/dca/LOGON/srs/srs-srs.htm> and

http://commerce.alaska.gov/dca/pub/Community_Revenue_Sharing.pdf

⁶⁴ Alaska Department of Revenue, Tax Division. (2000). *Fiscal Year 2000 Annual Report*. Anchorage: Alaska Department of Revenue. Retrieved November 5, 2012 from <http://www.tax.alaska.gov/programs/annualrpt2000.pdf>.

⁶⁵ Alaska Department of Revenue, Tax Division. (2011). *Fiscal Year 2011 Annual Report*. Anchorage: Alaska Department of Revenue. Retrieved November 5, 2012 from <http://www.tax.alaska.gov/programs/documentviewer/viewer.aspx?2470f>

traditional council. There are over 226 Native village councils in the State of Alaska. Some communities which have village councils also have a municipal city government, and some do not. Many communities have additional layers of tribal representation through Alaska Native Claims Settlement Act (ANCSA) village and regional corporations that manage natural resources. There are 13 such Native regional corporations (12 for the state, and one to represent those living outside of Alaska), 168 village corporations, and four urban corporations. In addition, many Native villages are members of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were originally identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of social services to villages in their regions.⁶⁶

Infrastructure

The accessibility of Alaskan communities profiled in this document varies tremendously, largely due to significant varying levels of economic development across different regions of Alaska. While some communities such as Anchorage, Dutch Harbor/Unalaska, and Bethel have airport facilities capable of handling jet aircraft, others have only small airstrips; still others are accessible primarily by sea. Many small communities in the Bethel and Dillingham Census Areas of Western Alaska, for example, have no roads at all, relying primarily on marine and river transport, and in some places, winter ice landing strips; ground transportation in these areas is by ATVs in the summer and snowmobiles in the winter.

Similarly, there is a great deal of variation between the communities in terms of fisheries-related and other marine facilities, also reflecting significant differences in economic development. Some of the larger communities, such as Juneau and Kodiak, serve as major commercial fishing and seafood processing centers. These communities have more than one boat harbor with moorage for hundreds of vessels, several commercial piers as well as numerous shore-side processing plants. By contrast, many smaller coastal communities, especially in Western and Northern Alaska, lack dock and harbor facilities. Many of these communities do not have stores, and residents rely on coastal supply shipments by barge from Seattle. Where there are no harbor facilities, residents must use small skiffs to offload the supplies and lighter them to shore. Although fishing activity occurs in these areas and provides a vital source of employment and income, the relative underdevelopment of infrastructure and facilities remains a significant barrier to economic development.

In addition to marine facilities, there is tremendous variation in access to other types of facilities, such as hospitals, hotels, and shopping centers. A few large metropolises and many smaller micropolises serve as regional hubs, providing an array of services to surrounding villages.

⁶⁶ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

Involvement in North Pacific Fisheries

Fish Taxes in Alaska

Taxes generated by the fishing industry, particularly the fish processing sector, are a very important revenue source for communities, boroughs and the state. The Fisheries Business Tax, begun in 1913, is levied on businesses that process or export fisheries resources from Alaska. The tax is generally levied on the act of processing, but it is often referred to as a “raw fish tax,” since it is based on the ex-vessel value paid to commercial fishers for their catch. Tax rates vary under the Fisheries Business Tax, depending on a variety of factors, including how well established the fishery is, and whether processing takes place on a shoreside or offshore processing facility. Although the Fisheries Business Tax is typically administered and collected by the individual boroughs, revenue from the tax is deposited in Alaska’s General Fund. According to state statute, each year the state legislature appropriates half the revenue from the tax to the municipality where processing takes place or to the Department of Community and Economic Development. The Fisheries Business Tax contributed \$18.2 million in fiscal year 2000 and \$32 million in fiscal year 2010 to total Alaska state revenue.⁶⁷

In addition to the Fisheries Business Tax, the state has collected the Fisheries Resource Landing Tax since 1993. This tax is levied on processed fishery resources that were first landed in Alaska, whether they are destined for local consumption or shipment abroad. This tax is collected primarily from catcher-processor and at-sea processor vessels that process fishery resources outside of the state’s three-mile management jurisdiction, but within the U.S. Exclusive Economic Zone, and bring their products into Alaska for transshipment to other locales. Fishery Resource Landing Tax rates vary from 1% to 3%, depending on whether the resource is classified as “established” or “developing.” According to state statute, all revenue from the Fishery Resource Landing Tax is deposited in the state’s General Fund, but half of the revenue is available for sharing with municipalities. The Fishery Resource Landing Tax contributed \$2.2 million in fiscal year 2000 and \$12.6 million in fiscal year 2010 to total Alaska state revenue. Taken together, the Fisheries Business Tax and the Fishery Resource Landing Tax make up only a small portion of Alaska’s budget, contributing only 0.3% of total state fiscal revenues in both 2000 and 2010.⁶⁸

In addition to these state taxes, many communities have developed local tax programs related to the fishing industry. These include taxes on raw fish transfers across public docks, fuel transfers, extraterritorial fish and marine fuel sales, and fees for bulk fuel transfer, boat hauls, harbor usage, port and dock usage, and storing gear on public land. There is no one source for data on these revenue streams; however, many communities report them in their annual municipal budgets. In addition, a request was made to communities to report this information in the 2011 AFSC survey. Where this information was provided, it has been reported in each community’s profile.

⁶⁷ Figures are reported in two sources: (1) Alaska Department of Revenue, Tax Division. (2000). *Fiscal Year 2000 Annual Report*. Anchorage: Alaska Department of Revenue. Retrieved November 5, 2012 from <http://www.tax.alaska.gov/programs/annualrpt2000.pdf>. (2) Alaska Department of Revenue, Tax Division. (2011). *Fiscal Year 2011 Annual Report*. Anchorage: Alaska Department of Revenue. Retrieved November 5, 2012 from <http://www.tax.alaska.gov/programs/documentviewer/viewer.aspx?2470f>

⁶⁸ Ibid.

Commercial Fishing

The profiles in this document examine Alaskan communities and their involvement in North Pacific fisheries. Even with brief regional introductions, however, analysis at the community level of geography does not allow for the larger picture of fisheries in Alaska to emerge. In view of that, the following section examines statewide fisheries data in order to provide a rough picture of the larger fisheries context in which the selected communities operate.

In particular, fisheries in Alaska have a high volume of landings compared to other areas of the country. The industry supplies the largest source of employment in the state through harvesting and processing jobs, and the economic activity of fishing produces important sources of both private and public (tax) income. Each of these topics will be discussed more below. Together, they indicate that Alaska is a very important contributor to U.S. fisheries, and that the fishing industry is a very important aspect of Alaska's economy.

A notable characteristic of Alaska fisheries from a statewide perspective is that the types of fisheries conducted are fairly diverse. Groundfish, salmon, crab, and herring all make substantial contributions to the state's fishery profile, and except for herring, each of those resource groupings involves multiple species which can be very different from one another. These fisheries are engaged in by a diverse fishing fleet with vessels ranging in size from small skiffs to more than 300 feet. These vessels utilize many harvest methods, including pelagic trawl, bottom trawl, troll, longline, purse seine, drift gillnet, setnet, pot, jig, and other commercial gear types. Divided, as they are, by species, gear type, vessel size and management area, the state limited entry permit system issues harvest permits in 326 different categories.⁶⁹ However, this diversity at the state level does not necessarily translate to communities. While a few communities, such as Kodiak, participate in the broadest range of fisheries, most communities are sustained largely by a single dominant fishery and/or gear type.

The North Pacific's commercial fisheries have changed through time with increased technology, man-power, demand, and legislation. The 1860s saw the earliest commercial fishing efforts by U.S. vessels in Alaskan waters, primarily targeting Pacific cod.⁷⁰ After the purchase of Alaska from Russia in 1867, U.S. interest in Alaska fisheries increased. Salmon and herring were two of the earliest commercial fisheries in Alaska. In the late 1800s, the product was salted for storing and shipment.⁷¹ Improved canning technology and expanded markets led to dramatic growth in the Alaska salmon industry, with 59 canneries throughout Alaska by 1898 and 160 in operation by 1920.⁷² With the development of diesel engines, commercial fisheries for Pacific halibut and groundfish had also expanded north to the Gulf of Alaska (GOA) and into the Bering

⁶⁹ State of Alaska, Commercial Fisheries Entry Commission. (2011). *Current Fishery Codes Description Table*. Retrieved November 5, 2012 from <http://www.cfec.state.ak.us/misc/FshyDesC.htm>.

⁷⁰ Rigby, Phillip W., Ackley, David R., Funk, Fritz, Geiger, Harold J., Kruse, Gordon H., and Murphy, Margaret C. (1995). *Management of the Marine Fisheries Resources of Alaska*. Regional Information Report 5J95-04. Juneau, AK: Alaska Department of Fish and Game.

⁷¹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁷² Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

Sea region by the 1920s.⁷³ Catch of herring for bait began around 1900. A boom in herring reduction for fish meal and oil took place from the 1920 to 1960s, and sac roe fisheries developed in the 1970s to provide high value product to Japanese markets. By the mid-1900s, fisheries were also developing for crab, shrimp and other shellfish, as well as an expanding variety of groundfish species. Substantial commercial exploitation of crab began in the 1950s with the development of Bering Sea king crab fisheries. Today, king crab harvests are well below their peak in 1980, when crab fisheries rivaled the highly profitable salmon industry in terms of landings value.⁷⁴

Between 2000 and 2009, groundfish were caught in the highest volume and accounted for the highest percentage of total landings revenue of all Alaskan fisheries. In particular, walleye pollock landings averaged 3 billion pounds through the 2000-2009 period, compared to an average of 680 million pounds of salmon landings per year. Although walleye pollock was valued at an average of only \$0.13 per pound during this period, pollock landings still accounted for the highest landings revenue of any fishery between 2000 and 2009, averaging \$371 million per year compared to \$262 million per year from salmon fisheries. Pacific cod fisheries produced the third greatest volume and landings value over the decade, averaging 520 million pounds harvested per year and an average of \$168 million in landings revenue. It is also important to note that sablefish had the highest average annual ex-vessel price between 2000 and 2009 (\$2.47), followed by crab (\$2.42), and Pacific halibut (\$2.33), although these fisheries accounted for smaller overall portions of total Alaska catch volume.⁷⁵

Salmon. The majority of commercial salmon are caught on a large fleet of small vessels using troll, gillnet, and purse seine gear. Salmon fisheries are restricted by a limited entry permit system. All five species of Pacific salmon found along the west coast of North America are harvested commercially: pink (humpback) salmon, sockeye (red) salmon, chum (dog) salmon, coho (silver) salmon, and Chinook (king) salmon.⁷⁶ The profitability of salmon for Alaskan fishermen has gone down greatly through the 1990s and early 2000s, brought about largely by the year-round availability of farmed salmon to the world, mostly grown in Chile and British Columbia, Canada (farming salmon is not allowed by law in the State of Alaska). Correspondingly, the value of fishermen's permits, vessels and gear, and the amount of money received for their catch also crashed, despite the fact that the commercial catches of wild Alaska salmon continue to be high. From the years of 1990 to 2000, the number of salmon fishermen declined by 37% which also resulted in a decline in the number of opportunities for crew members. Processors in many cases have dealt with this collapse in salmon prices with plant closures and the consolidation of operations, including the ceasing of salmon operations by the Wards Cove Packing Company in 2002.⁷⁷ However, since 2002, salmon ex-vessel prices and value have rebounded as a result of new marketing efforts and techniques, new product forms,

⁷³ International Pacific Halibut Commission. 1978. *The Pacific Halibut: Biology, Fishery, and Management*. Technical Report No. 16 (Revision of No. 6).

⁷⁴ See footnote 71.

⁷⁵ National Marine Fisheries Service. (2010). *Fisheries Economics of the United States, 2009*. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-118, 172 p. Retrieved November 20, 2012 from <http://www.st.nmfs.noaa.gov/st5/publication/econ/2009/FEUS%202009%20ALL.pdf>.

⁷⁶ See footnote 71.

⁷⁷ Gilbertson, Neal. (2003). The global salmon industry and its impacts in Alaska. *Alaska Economic Trends*, October 2003, 3-11.

improved quality, and development of new markets. In addition, an increase in the price of farmed salmon on the world market after 2002 meant reduced price competition, since buyers no longer had a cheaper alternative to wild salmon.⁷⁸

Overall, Alaska's salmon runs remain relatively healthy as a result of good fisheries management, minimal freshwater habitat disturbance compared to highly developed regions further south on the west coast of North America, and favorable ocean conditions in recent decades.⁷⁹ However, it is important to note that specific stocks have experienced declines. For example, commercial fishery failures were declared on the Yukon and Kuskokwim Rivers and in the Cook Inlet in 2012 due to low Chinook salmon returns that year.⁸⁰ Previously, salmon fishery failures were also declared for Bristol Bay/Kuskokwim River in 1998, Bristol Bay/Kuskokwim River/Yukon River in 1999, Norton Sound/Kuskokwim River/Yukon River in 2000 and 2001, and the Yukon River in 2010.⁸¹ These poor salmon returns have adversely affected many rural Alaskan communities included in this document.

Herring. Herring has been important as subsistence for Alaska Natives for a very long time. As subsistence, it is still commonly utilized by Bering Sea villages in the dried form or as eggs gathered on hemlock boughs by those in the Southeast. The commercial herring fishery began in the Northwest by European settlers who salted the herring as a method of preservation. After World War I, the production of both pickled and salted herring peaked. In Alaska, around the 1920s plants sprung up from Kodiak to Craig to turn herring into meal and oil, or “reduce” the herring. As with other fisheries, the herring fishery hit a high in the 1920s and 1930s and has declined since. Stocks may have been impacted by the high catches during those years, but also another cheaper alternate for herring meal and oil, Peruvian anchoveta became dominant in the 1950s. By 1966, all of the Alaskan herring reduction plants had closed. In the 1960s and 70s, a herring food products foreign fishery was in place, but this was extinguished by the MSFCMA).

Today, herring is harvested for bait or for sac roe (for Japanese consumption (using purse seine or gillnet), and roe is also harvested in spawn on kelp fisheries (collected by scuba, rake, or by hand – or gathered on fronds from impounded herring).⁸² The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay near the village of Togiak. Commercially exploitable quantities of herring are also found in Southeast Alaska, Kodiak, the Kuskokwim Delta and Norton Sound. Norton Sound has the northernmost fishery for Pacific herring. Although the Norton Sound herring spawning biomass has been relatively stable in

⁷⁸ Knapp, Gunnar. (2012). *Trends in Alaska Salmon Markets*. Institute of Social and Economic Research, University of Alaska Anchorage. Power Point presentation prepared for the Northwest Fisheries Association meeting in Seattle, WA, March 7, 2012. Retrieved November 19, 2012 from http://www.iser.uaa.alaska.edu/Publications/presentations/2012_03-GunnarKnapp-TrendsInAlaskaSalmonMarkets.pdf.

⁷⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁸⁰ NOAA Fisheries Service. September 13, 2012. “Secretary of Commerce declares disaster for Alaska King Salmon.” Retrieved November 19, 2012 from http://www.nmfs.noaa.gov/mediacenter/2012/09/13_secretary_of_commerce_declares_disaster_for_alaska_king_salmon.html.

⁸¹ Upton, Harold F. (2010). *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

⁸² See footnote 105.

recent times, the market for herring roe has declined due to decreasing consumption of herring roe in Japan. Processor interest in the Norton Sound sac roe fishery has declined more than in other areas of the state, largely due to the timing of the fishery, which takes place later than sac roe fisheries elsewhere in the state and conflicts with the opening of the first salmon fisheries of the season. In addition, ice floes are often present in Norton Sound during the herring season. Along the Yukon-Kuskokwim coast, herring harvests have been declining in recent years, in part due to lack of processing capacity in the region.⁸³

In addition, large aggregations of herring were historically found in both Cook Inlet and Prince William Sound. However, Cook Inlet stocks never recovered from overfishing in the first half of the 20th Century,^{84,85} and Prince William Sound herring stocks collapsed in 1993 as a result of an outbreak of hemorrhagic septicemia virus, four years after the Exxon Valdez oil spill. The relationships between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.^{86,87}

Groundfish and halibut. The earliest commercial venture by U.S. vessels in the North Pacific was in 1865, when the first schooner reached the Bering Sea to explore the Pacific cod resource. The Pacific cod fishery had its peak at about 1916 to 1920 and then declined until approximately 1950.⁸⁸ By the 1880s, the commercial fishery for halibut had also expanded north from Washington State and B.C. to the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.⁸⁹ With the rise of diesel engines in the 1920s, the range of fishing vessels expanded, and more consistent commercial exploitation of halibut and groundfish extended into the Gulf of Alaska and Bering Sea regions.⁹⁰

The groundfish fisheries off of Alaska have been fished by a series of foreign nations; including Japan, Russia and Canada as major players. Canada was very active in the fishing of halibut in Alaska waters, but after 1980 the Canadian fishery in U.S. waters was phased out. Japan has been involved in flounder (yellowfin sole) and the pollock fishery, as has Russia. The flounder fisheries by both Japan and Russia declined with the collapse of yellowfin sole, with the peak in the fishery having been in 1960 at about 500,000 metric tons. More heavily targeted by both the Russians and the Japanese was the pollock fishery which started in the 1960s by Japanese trawlers. The peak of the pollock catch was in 1972 with over 1.7 million metric tons harvested by the Japanese in the Bering Sea. Russian maximum harvests of Pollock were also

⁸³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁸⁴ Ibid.

⁸⁵ Alaska Dept. of Fish and Game. (2012). *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyarealci.main>.

⁸⁶ See footnote 83.

⁸⁷ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=herring.main>.

⁸⁸ Rigby, Phillip W., Ackley, David R., Funk, Fritz, Geiger, Harold J., Kruse, Gordon H., and Murphy, Margaret C. (1995). *Management of the Marine Fisheries Resources of Alaska*. Regional Information Report 5J95-04. Juneau, AK: Alaska Department of Fish and Game.

⁸⁹ See footnote 83.

⁹⁰ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

during this time, but were on somewhat of a smaller scale of 300,000 metric tons per year. The Bering Sea was also fished during the 60s and 70s by a small Korean fleet. The maximum total foreign catch of pollock, flatfish, rockfish, cod, and other groundfish was in 1972 at 2.2 million metric tons. The foreign fleets also moved into the Gulf of Alaska in 1960 and targeted additional species. Additional foreign nations became involved and added to this time of overexploitation including: Taiwan, Poland, West Germany, and Mexico. By the 1970s it was in Alaska's obvious interest to control foreign involvement. The groundfish fishery was Americanized with the MSFCMA in 1976, and by 1991 the foreign fishers had been transitioned out and the entire American groundfish fisheries were harvested by U.S. vessels. The fisheries changed with the introduction of the first independent factory trawler in 1980 and subsequent over-harvest.⁹¹

Pacific halibut fisheries are managed under the International Pacific Halibut Commission (IPHC). Other federally managed groundfish species have been organized into a License Limitation Program (LLP) permitting system. In addition to federal groundfish fisheries, the state manages parallel fisheries for Pacific cod and walleye pollock along the southern coast of the Aleutian Islands and Alaska Peninsula, Kodiak Island, and Gulf of Alaska. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, 'state-waters fisheries' for Pacific cod were initiated in Prince William Sound, Cook Inlet, Chignik, Kodiak, and the southern Alaska Peninsula areas. Management plans for state-waters fisheries are approved by the Alaska Board of Fisheries (BOF), and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.⁹²

In 1995, management of the commercial Alaskan halibut and sablefish fisheries shifted from limited entry to a system of catch shares. Motivations for the shift included overcapitalization, short seasons, and the derby-style fishery that led to loss of product quality and safety concerns. As a result of program implementation, the number of shareholders and total vessels participating in the halibut and sablefish fisheries declined substantially, and product quality has improved. This shift to catch shares has been controversial, raising concerns about equity of catch share allocation, reduced crew employment needs, and loss of quota from coastal communities to outside investors. The program includes allocation of the annual TAC of halibut and sablefish to commercial fishermen via Individual Fishing Quota (IFQ), and in the Bering Sea – Aleutian Islands (BSAI) region, quota shares are also allocated to six Community Development Quota (CDQ) non-profit organizations representing 65 communities in Western

⁹¹ See footnote 88.

⁹² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

Alaska.⁹³ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.⁹⁴

Although the 1995 catch share program implementation resulted in many benefits to commercial fishermen, processors, and support businesses, an unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out of smaller communities themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. While this issue had been addressed for the BSAI region through the CDQ program, these factors also lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries in other regions of Alaska. To address this issue, the North Pacific Fishery Management Council (NPFMC) implemented the Community Quota Entity (CQE) program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf. As of 2010, the Prince of Wales Island Community Holding Corporation, which represents Craig, was the only CQE non-profit that had purchased quota share.⁹⁵ More recently, at the October 2012 meeting of the NPFMC, Council members voted to approve a new catch sharing plan for halibut that would combine the allocations given to the commercial and recreational sectors;⁹⁶ however, as of the printing of this document, NMFS has not issued a final rule solidifying this new management structure.

Halibut and sablefish are primarily caught using longline gear on vessels of between approximately 50 to 100 feet in length,⁹⁷ although some state-managed sablefish fisheries in inside waters allow for use of pot, jig, hand-troll gear, or bottom-trawl gear.⁹⁸ Groundfish are still caught in trawl nets and some of this is delivered to onshore processors or floating processors, but the majority are caught on large catcher/processors the size of a football field and frozen at sea.⁹⁹ Today the groundfish fisheries are the largest in terms of both weight and value out of all the North Pacific fisheries. Walleye pollock independently accounted for almost half of all landings weight in North Pacific fisheries between 2000 and 2009,¹⁰⁰ and in fact the Eastern

⁹³ Fina, Mark. 2011. "Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific." *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

⁹⁴ International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved October 16, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

⁹⁵ North Pacific Fishery Management Council. (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

⁹⁶ North Pacific Fishery Management Council. (2012). Draft for Public Review: Regulatory Amendment for a Catch Sharing Plan for the Pacific Halibut Charter Sector and Commercial Setline Sector in International Pacific Halibut Commission Regulatory Area 2C and Area 3A – Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis. Anchorage. Retrieved November 21, 2012 from http://www.fakr.noaa.gov/analyses/halibut/drafthalibut_csp0912.pdf.

⁹⁷ Gay, Joel. (1997). Commercial fishing in Alaska. *Alaska Geographic*, 24(3).

⁹⁸ See footnote 92.

⁹⁹ See footnote 97.

¹⁰⁰ National Marine Fisheries Service. (2010). *Fisheries Economics of the United States, 2009*. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-118, 172 p. Retrieved November 20, 2012 from <http://www.st.nmfs.noaa.gov/st5/publication/econ/2009/FEUS%202009%20ALL.pdf>.

Bering Sea pollock fishery is the largest ‘by-volume fishery’ in the U.S.¹⁰¹ Pacific cod was landed in the third greatest volume in Alaska over the decade, after salmon.¹⁰²

Walleye pollock remains a top volume fishery in Alaska despite limitations placed on the fishery due to concerns about Steller sea lion populations. Between the late 1970s and the early 1990s, Steller sea lion populations in the western Gulf of Alaska (GOA) and Aleutian Islands (AI) declined by almost 80%. Pollock is a primary food source for the Steller sea lion, and expansion of the high volume pollock fishery into the AI region in the 1970s was implicated in the decline.¹⁰³ In order to protect Steller sea lions, pollock fisheries management measures include time and area closures around critical sea lion habitat, and reductions in total allowable catch (TAC) that can be harvested from critical habitat areas.¹⁰⁴ In addition, NMFS listed the eastern Aleutian Islands population segment of Steller sea lions as endangered under the Endangered Species Act in 2011. Conflict still occurs, however, as the decision was legally challenged and NMFS is redoing its analysis regarding whether the population should continue to be listed.

Crab. Crab is commercially harvested in the North Pacific using pot gear or ring nets. The baited pots range in different sizes to catch different target species, and target species are also caught at varying depths ranging from 20m for Dungeness to as deep as 200-1000m for golden king crab. Seven species of crab are commercially caught in the North Pacific: red king crab (*Paralithodes camtschaticus*), blue king crab (*Paralithodes platypus*), golden king crab (*Lithodes aequispinus*), Tanner crab (*Chionoecetes bairdi*), snow crab (*Chionoecetes opilio*), hair crab (*Erimacrus isenbeckii*), and Dungeness crab (*Cancer magister*). Commercial fisheries for these species constitute approximately one-third of the total catch of crab in the U.S.¹⁰⁵

Red king crab stocks range from Norton Sound to the Bering Sea / Aleutian Island (BSAI) region, as well as the Gulf of Alaska and Southeast Alaska. Blue king crabs are more concentrated, with small populations around islands in the Bering Sea and areas of the Gulf of Alaska and Southeast Alaska. Golden king crabs are distributed along the Aleutian Island chain, the Bering Sea, and Gulf of Alaska, and are also harvested in Southeast Alaska. Tanner crabs are found in the eastern Bering Sea, Aleutian Islands, and Gulf of Alaska, while snow crab are found in the north and central regions of the Bering Sea.¹⁰⁶

Initially, Bering Sea crab stocks were targeted by Japanese trawlers starting in the late 1800s with a break during World War II, with Japanese fishers returning in the mid-1950s. In the 1920s American boats began fishing in Cook Inlet, Kodiak, and the Alaska Peninsula and the first crab cannery opened at that time. Crabbing was revolutionized with the freezing of catches which had never been done before. In 1959, tangle nets and trawlers were banned in the state of Alaska and it was necessary that crab fishermen find a new harvest method. Alaskan crabbers

¹⁰¹ NOAA Fisheries Service, Alaska Fisheries Science Center. (2010). Walleye Pollock Fact Sheet. Retrieved November 21, 2012 from http://www.afsc.noaa.gov/Education/factsheets/10_Wpoll_FS.pdf.

¹⁰² See footnote 100.

¹⁰³ Prince William Sound Science Center. (2007). *Steller Sea Lion Research*. Retrieved November 21, 2012 from <http://www.pwssc.org/research/biological/Stellar/ssl.shtml>.

¹⁰⁴ Alaska Department of Fish and Game. (2012). *Walleye Pollock Species Profile*. Retrieved November 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=walleyepollock.main>.

¹⁰⁵ Alaska Department of Fish and Game. (n.d.) *Information by Fishery: Commercial Crab Fisheries*. Retrieved November 26, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryShellfish.crab>

¹⁰⁶ Ibid.

developed new pots based on those used by fishermen in the Lower 48, but immensely stronger – in the end weighing up to 800 pounds and reaching eight feet by three feet.¹⁰⁷

In the 1960s, the demand and price for crab increased and by the end of that decade the crab fisheries around the Alaska Peninsula and Kodiak had decreased and fishermen’s attention was focused on the eastern Bering Sea where “the average boat’s catch quadrupled from 1968 to 1978” and prices rose immensely “from 38 cents a pound to \$1.23 in four years.”¹⁰⁸ Fortunes could be made overnight or at least in a short derby-style crabbing season for both boat owners and crewmembers and money flowed freely. The peak of the lucrative Bristol Bay king crab fishery was in 1980, where 130 million pounds was landed by a fleet of 236 boats in fewer than six weeks, for an average amount landed per boat of \$500,000, and an average crew share of about \$10,000 per week. Suddenly, the next year the fishery crashed to only 34 million pounds landed, and in 1982 only 3 million were landed.¹⁰⁹ The cause of this collapse remains unclear, and king crab stocks have never recovered to the extremely high levels of 1980.¹¹⁰ In addition to king crab, Tanner crab harvests saw a peak in the late 1970s, while snow crab harvests increased in the 1980s and 1990s.¹¹¹

By the early 2000s, king and snow crab fisheries were highly overcapitalized. The entire Bristol Bay red king crab season lasted several days, and the Bering Sea snow crab fishery lasted less than 2 weeks each year. Due to concerns about crew safety and inefficiency in these fisheries, NMFS implemented a crab rationalization program in 2005. The crab rationalization program resulted in a reduction of fleet size and is credited with improved crew safety and reduced fuel consumption. The program also led to a dramatic reduction in the number of crew positions available in BSAI crab fisheries, which has led to hardship for crew members from remote communities lacking other sources of employment.¹¹²

Dungeness crab is also an important commercial species ranging from Southeast Alaska to the Aleutian Islands. Important centers of the Dungeness crab fishery were historically located in Prince William Sound, Cook Inlet, Kodiak, the Alaska Peninsula and eastern Aleutian Islands, and Southeast Alaska. However, Dungeness crab stocks in Prince William Sound, the Copper River delta and the Kachemak Bay area of Cook Inlet have declined to levels that no longer support commercial fisheries. The decline may be due to some combination of overfishing, sea otter predation, and unfavorable climatic conditions. Small commercial fisheries are still viable in Kodiak and Southeast Alaska. However, the expanding range of sea otters in Southeast Alaska has had a sizeable impact on Dungeness crab stocks in recent years, leading to significant harvest and economic losses.¹¹³

¹⁰⁷ See footnote 105.

¹⁰⁸ Gay, Joel. (1997). Commercial fishing in Alaska. *Alaska Geographic*, 24(3).

¹⁰⁹ Ibid.

¹¹⁰ Loy, Wesley. (2005). Last great crab race, open derbies to be eliminated in favor of catch quotas for each boat. *Anchorage Daily News*, January 16, 2005. Retrieved August 18, 2005 from http://www.ifqsforfisheries.org/cover_story/news_crab.php.

¹¹¹ See footnote 79.

¹¹² Fina, Mark. 2011. “Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific.” *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹¹³ McDowell Group. 2011. *Sea Otter Impacts on Commercial Fisheries in Southeast Alaska*. Prepared for Southeast Alaska Regional Dive Fisheries Association. Retrieved September 11, 2012 from <http://www.scribd.com/doc/74857876/MCDOWELL-GROUP-2011-Sea-Otter-Impacts-Report>.

It is also important to mention the historical hair crab fishery that took place between the 1960s and 2000 near the Pribilof Islands. The fishery was started by the Japanese in the 1960s, and U.S. vessels began participating in 1979. However, the commercial fishery for hair crab was closed in 2000 due to low stock abundance. The stock remains depressed despite the closure.¹¹⁴

Other shellfish. In addition to North Pacific crab fisheries, a number of other shellfish species support commercial fisheries around Alaska. These include pot and trawl fisheries for shrimp, a dredge fishery for scallops, dive fisheries for sea urchin, sea cucumber, and Geoduck clams, and shovel fisheries for razor, littleneck, and other hardshell clams.

Pot fisheries targeting spot shrimp (*Pandalus platyceros*) currently take place in Southeast Alaska and Prince William Sound. The Prince William Sound spot shrimp fishery reopened in 2010 after being closed since the early 1990s due to low stock abundance. Spot shrimp stocks in Southeast Alaska are relatively stable, and annual harvest is capped at 800,000 pounds.^{115,116} Historically important trawl fisheries for northern shrimp (*Pandalus borealis*) are now closed following dramatic population declines in the late 1970s and 1980s.^{117,118} Today, shrimp trawl harvest is focused on sidestriped shrimp (*Pandalopsis dispar*), a larger and more valuable species.¹¹⁹

Weathervane scallops are harvested using dredges. Commercial scallop beds are located in the Gulf of Alaska, Bering Sea, and the Aleutian Islands. Given overharvest of scallop stocks throughout the world, Alaska's management of the scallop fishery is conservative, requiring 100% observer coverage in federal waters and scallop bycatch limits for crab vessels. Area closures are also common to protect bottom habitats from the impact of dredging.¹²⁰

Intertidal clam harvests in Alaska are concentrated along the sandy beaches of Cook Inlet, the Alaska Peninsula, and the Cordova area. Littleneck and other hardshell clams (cockles and butter clams) are dug by hand shovel, and razor clams are dug with shovels and 'guns'.¹²¹ In addition, a dive fishery for Geoduck clams has grown in Southeast Alaska in recent decades, after a market for Geoduck had already been established by fisheries in Washington State and B.C., Canada.¹²²

In addition, dive fisheries for sea urchin and sea cucumber take place in Southeast Alaska, as well as more limited harvests in the Kodiak Island and Alaska Peninsula regions. Red sea urchin is the primary target of the Southeast Alaska fishery, while green sea urchin is harvested in the Kodiak area. Red sea cucumber is the only commercially harvested species of

¹¹⁴ State of Alaska Commercial Fisheries Entry Commission. (2007). A Brief Overview of the Bering Sea Hair Crab Fishery and the Vessel Limited Entry Program. CFEC Report No. 07-1N. Retrieved November 20, 2012 from <http://www.cfec.state.ak.us/RESEARCH/07-1N/Rpt07-1N.pdf>.

¹¹⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹¹⁶ Alaska Dept. of Fish and Game. (2012). *Spot Shrimp Species Description*. Retrieved November 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=northernshrimp.printerfriendly>.

¹¹⁷ See footnote 115.

¹¹⁸ Alaska Dept. of Fish and Game. (2012). *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=northernshrimp.printerfriendly>.

¹¹⁹ Ibid.

¹²⁰ See footnote 115.

¹²¹ Ibid.

¹²² Ibid.

sea cucumber in Alaska.¹²³ As in the case of Southeast Alaska Dungeness crab stocks, the impact of an increasing sea otter population has led to significant economic losses in these fisheries in recent years.¹²⁴

Fish Landings and Processing

One notable aspect of many Alaskan fisheries is the high volume of processing activity that occurs offshore on floating processors. Because this document focuses on “fishing communities” as defined in the MSFMCA (16 U.S.C 38 §1802 (16) and further specified in NMFS guidelines,^{125,126} we are primarily concerned with inshore processing activity. Offshore activities are relevant insofar as they affect local communities through purchase and loading of goods and services, employment, employee furloughs, and processed product offloading. Fish processed offshore and offloaded in Alaska communities as processed product is converted into a whole fish weight by NOAA for statewide tabulation.¹²⁷ Offshore product is not credited to specific communities.

The amount of landings in each community depends in large part on the community’s proximity to productive fisheries, the size of the local fleet, and existing port facilities. In addition, the fish processing industry provides vital employment opportunities, income sources, and tax revenues for many Alaskan communities. In many cases, it is the most value-added point in the fishery process. Whether a community serves as a processing center, and whether fish processing is economically productive for a community, depend on a number of factors including location, population size, proximity to major fishing fleets, and the composition of species being processed.

Tables 8 and 9, below, list the top ten communities by weight and value of landings purchased by local fish buyers. Not surprisingly, in both 2000 and 2010, Dutch Harbor ranked highest both in terms of ex-vessel weight of landings and in terms of the monetary value of landings. In 2000, Akutan, ranked third in terms of weight, comes in behind Kodiak in terms of value. This is because Akutan is located along the Aleutian Island chain and processes primarily pollock and other groundfish species, a high volume, low per-unit value niche, while Kodiak processes salmon, halibut and other high-value species. This shows that geographic location affects community access to particular species of fishery resources, and this access in turn exerts an important influence on the community’s economic vitality. By 2010, processing in Kodiak activities had increased significantly, moving it ahead of Akutan in both pounds landed and ex-vessel value. But the changing order of communities between volume and value underscores the difference in fishery resource value.

¹²³ Ibid.

¹²⁴ McDowell Group (2011). *Sea Otter Impacts on Commercial Fisheries in Southeast Alaska*. Prepared for Southeast Alaska Regional Dive Fisheries Association. Retrieved September 11, 2012 from <http://www.scribd.com/doc/74857876/MCDOWELL-GROUP-2011-Sea-Otter-Impacts-Report>.

¹²⁵ National Oceanic and Atmospheric Administration. (1998). *50 CFR Part 600, Magnuson-Stevens Act Provisions; National Standard Guidelines; Final Rule*. Federal Register 63 (84): 24211-24237.

¹²⁶ National Oceanic and Atmospheric Administration. (2001). *Guidance for Social Impact Assessment* in Appendix 2G, page 13. Retrieved from http://www.st.nmfs.gov/st1/econ/cia/sia_appendix2g.pdf.

¹²⁷ National Oceanic and Atmospheric Administration. (2003). *Commercial Fisheries Landings: Data Caveats*.

Table 8. Top Ten Communities by Landings (ex-vessel weight) in 2000 and 2010.¹²⁸

Rank	Year 2000		Year 2010	
	Community	# of Fish Buyers	Community	# of Fish Buyers
1	Unalaska/Dutch Harbor	29	Unalaska/Dutch Harbor	14
2	Akutan	3	Kodiak	33
3	Kodiak	27	Akutan	4
4	Cordova	50	Cordova	33
5	Sitka	147	Ketchikan	76
6	Sand Point	4	Sitka	115
7	King Cove	9	King Cove	7
8	Naknek	17	Sand Point	6
9	Valdez	13	Valdez	20
10	Seward	18	Naknek	23
Top Ten Communities: Total Fish Buyers		317	331	
Top Ten Communities Combined Landings (weight)		911,156 tons	853,304 tons	
Total Statewide Landings (weight)		992,809 tons*	1,053,702 tons*	

* Total tons of fish landed in Alaskan communities. Landings for the top ten communities listed here sum to 91.8% of landings made in all Alaskan communities in 2000 and 81.0% of landings made in all Alaskan communities in 2010.

Table 9. Top 10 Communities by Landings (ex-vessel value) in 2000 and 2010.¹²⁹

Rank	Year 2000		Year 2010	
	Community	# of Fish Buyers	Community	# of Fish Buyers
1	Unalaska/Dutch Harbor	29	Unalaska/Dutch Harbor	14
2	Kodiak	27	Kodiak	33
3	Akutan	3	Cordova	33
4	Cordova	50	Akutan	4
5	Sitka	147	Sitka	115
6	Seward	18	Homer	27
7	King Cove	9	Naknek	23
8	Homer	37	Seward	13
9	Naknek	17	Ketchikan	76
10	Petersburg	36	Dillingham	18
Top Ten Communities: Total Fish Buyers		337	338	
Top Ten Communities Combined Landings (U.S. dollars)		\$581.2 million	\$835.9 million	
Total Landings made in Alaskan communities (U.S. dollars)		\$1,232.3 million*	\$733.5 million*	

* Total value of all landings made in Alaskan communities. The value of landings for the top ten communities listed here sum to 79% of the value of all landings made in Alaskan communities in 2000 and 68% of landings made in all Alaskan communities in 2010.

¹²⁸ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹²⁹ Ibid.

In addition to the value-per-unit factor affected by the types of fish processed, the structure of processing differs by community. For example, Akutan, with only a single shore-side processing facility present between 2000 and 2010, processed a greater volume of fish than Kodiak with its 13 shore-side processors in 2000 and 11 in 2010. This underscores the profitability of operating many small-scale specialty processors in a high per-unit value market such as Kodiak.

Of the 196 communities which were profiled, 65 communities included fish buyers that filed fish tickets with the CFEC in 2010 (Table 10). Twenty-four communities included more than 10 fish buyers, 20 communities had 3 to 10 fish buyers, 1 community had 2 fish buyers, 20 communities had 1 fish buyer, and 130 communities did not have an active fish buyer present in 2010.¹³⁰ Similarly few communities have shore-side processing facilities available to them. Again, of the 196 profiled communities, 66 had shore-side processing facilities that filed Intent to Operate declarations with ADF&G in 2010 (Table 10). Of these, two communities had more than 10 shore-side processing facilities, 8 had 6 to 10 shore-side facilities, 11 had 3 to 5 shore-side facilities, 7 had two shore-side facilities, and 38 had only one shore-side facility.

Table 10. Profiled communities with more than three shore-side processors in 2000 and 2010.¹³¹

Rank	Year 2000			Year 2010		
	Community	# of Shore-side Processors	# of Fish Buyers	Community	# of Shore-side Processors	# of Fish Buyers
1	Anchorage	17	8	Anchorage	13	11
2	Kodiak	15	27	Kodiak	11	33
3	Juneau	13	31	Juneau	9	85
4	Naknek	13	17	Naknek	9	23
5	Homer	12	37	Ketchikan	8	76
6	Kenai	11	11	Petersburg	8	52
7	Sitka	10	147	Kenai	8	43
8	Ketchikan	10	80	Cordova	7	33
9	Cordova	9	50	Unalaska/Dutch Harbor	7	14
10	Petersburg	9	36	Seward	6	13
11	Unalaska/Dutch Harbor	8	29	Sitka	5	115
12	Haines	6	87	Craig	5	42
13	Yakutat	5	21	Homer	5	27
14	Seward	5	18	Haines	4	21
15	Valdez	5	13	Yakutat	4	18
16	Craig	4	27	Egegik	4	13
17	Egegik	4	6	Klawock	4	3
18	Kasilof	4	3			
19	Soldotna	4	0			

¹³⁰ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹³¹ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Labor in Alaska's Commercial Fishing Industry

The commercial fishing sector is the largest private employer in Alaska. The fishing industry provides a variety of employment opportunities, including fishing, processing, transport, and dock and harbor work. According to the CFEC, in 2000 there were 21,009 commercial permits sold for all fisheries in Alaska; 58% of which were actively fished. The number of permits issued to residents of Alaskan communities declined over the decade to 17,698 in 2010 with 56% being actively fished (Table 11).

The number of licensed crew members employed annually in Alaskan commercial fisheries has declined over recent decades, from more than 32,000 in 1993 to approximately 17,500 in 2003 to 11,387 in 2010, an average decrease of 5.7% per year during that period (Table 12).^{132,133} The decline is likely due to a combination of declining salmon prices, fishery management policy changes, and other factors. Although the majority of licensed crew members are Alaska residents (59%), the labor pool also draws from Washington (22%), other U.S. states, and around the world. The industry remains male-dominated, with women accounting for just 14% of licensed crew over the past decade. In addition, personnel turnover is high; the average crew member holds a license for just 1.8 years.¹³⁴ Similar declines were seen in the total number of vessels primarily owned by Alaskan residents, vessels homeported in Alaskan communities and vessels landing catch in Alaskan communities (Table 12).

The employment data collected by the U.S. Census noticeably under-represents those involved in the fishing industry. Despite the heavy reliance on data supplied by the Census for the composition of the profiles contained in this document, the employment data given on fishing was not reported in the profiles because of its visible deficiencies. The figures originate from Census form questions which are phrased in a way that likely deters answers from self-employed persons (as most fishermen are). In the results of the Census, agriculture, forestry, fishing and hunting were combined together into one reported figure, which makes it difficult to discern which individuals were involved in the fishing portion of the category. Also, when examining the total figure for the category which includes fishing, the number is simply too small to be accurate even when compared to just the number of individuals in a community which fished their permits.

¹³² Alaska Department of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹³³ Carothers, Courtney and Jennifer Sepez. (2005). Commercial Fishing Crew Demographics and Trends in the North Pacific. Poster presented at the *Managing Our Nation's Fisheries: Focus on the Future* Conference, Washington D.C., March 2005. Available at ftp://ftp.afsc.noaa.gov/posters/pCarothers01_comm-fish-crew-demographics.pdf.

¹³⁴ Ibid.

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Table 11. Total Permits Held and Permit Holders by Species in Alaskan communities: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1,593	1,557	1,536	1,531	1,518	1,528	1,533	1,530	1,538	1,542	1,550
	Active permits	668	660	635	635	610	591	564	562	565	575	590
	% of permits fished	41%	42%	41%	41%	40%	38%	36%	36%	36%	37%	38%
	Total permit holders	1,414	1,384	1,370	1,360	1,346	1,353	1,359	1,358	1,366	1,360	1,366
Crab (LLP) ¹	Total permits	206	204	198	194	194	186	188	188	196	200	201
	Active permits	73	83	80	82	83	80	67	63	61	60	59
	% of permits fished	35%	40%	40%	42%	42%	43%	35%	33%	31%	30%	29%
	Total permit holders	176	176	174	172	166	166	163	161	165	166	171
Federal Fisheries Permits ¹	Total permits	1,184	1,228	1,256	1,031	1,083	1,113	920	1,044	1,110	942	971
	Fished permits	9	11	9	604	607	584	578	618	635	614	614
	% of permits fished	%	%	%	58%	56%	52%	62%	59%	57%	65%	63%
	Total permit holders	1,087	1,121	1,146	959	1,005	1,025	871	987	1,044	895	920
Crab (CFEC) ²	Total permits	931	1,156	1,110	987	961	1,028	885	832	811	782	867
	Fished permits	580	733	756	620	565	594	444	433	424	392	471
	% of permits fished	62%	63%	68%	62%	58%	57%	50%	52%	52%	50%	54%
	Total permit holders	753	965	908	812	755	878	776	755	739	711	790
Other shellfish (CFEC) ²	Total permits	973	1,024	883	855	848	858	833	816	821	789	990
	Fished permits	498	447	427	432	426	414	366	327	310	305	420
	% of permits fished	51%	43%	48%	50%	50%	48%	43%	40%	37%	38%	42%
	Total permit holders	748	782	731	715	712	707	702	692	684	676	875
Halibut (CFEC) ²	Total permits	2,925	2,851	2,725	2,656	2,492	2,363	2,325	2,309	2,180	2,131	2,052
	Fished permits	2,172	2,080	2,111	2,096	1,991	1,925	1,946	1,965	1,871	1,767	1,738
	% of permits fished	74%	72%	77%	78%	79%	81%	83%	85%	85%	82%	84%
	Total permit holders	2,787	2,713	2,614	2,546	2,398	2,292	2,263	2,253	2,128	2,077	2,003
Herring (CFEC) ²	Total permits	2,703	2,474	2,271	2,211	2,120	2,097	2,062	1,988	1,976	1,988	2,002
	Fished permits	866	664	653	613	519	514	361	293	384	417	402
	% of permits fished	32%	26%	28%	27%	24%	24%	17%	14%	19%	20%	20%
	Total permit holders	2,183	2,072	1,915	1,892	1,832	1,812	1,778	1,726	1,733	1,732	1,736

Table 11. Cont'd. Total Permits Held and Permit Holders by Species in Alaskan communities: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	698	699	653	649	642	621	620	613	594	592	581
	Fished permits	580	602	584	571	575	559	562	552	536	541	530
	% of permits fished	83%	86%	89%	87%	89%	90%	90%	90%	90%	91%	91%
	Total permit holders	619	619	587	579	576	561	558	547	537	537	527
Groundfish (CFEC) ²	Total permits	2,712	2,363	1,992	1,908	1,905	1,761	1,358	1,298	1,399	1,289	1,190
	Fished permits	1,048	772	635	709	674	583	485	505	588	556	540
	% of permits fished	38%	32%	31%	37%	35%	33%	35%	38%	42%	43%	45%
	Total permit holders	1,841	1,656	1,415	1,376	1,367	1,279	1,044	1,017	1,053	990	936
Other Finfish (CFEC) ²	Total permits	50	36	26	77	65	69	106	80	95	116	92
	Fished permits	2	4	2	39	3	16	34	24	26	42	44
	% of permits fished	4%	11%	7%	50%	4%	23%	32%	30%	27%	36%	47%
	Total permit holders	47	34	26	77	65	68	106	80	95	116	92
Salmon (CFEC) ²	Total permits	10,017	9,998	9,950	9,944	9,956	9,978	9,943	9,931	9,940	9,892	9,924
	Fished permits	6,501	5,486	5,110	5,353	5,532	5,774	5,712	5,782	5,734	5,607	5,865
	% of permits fished	64%	54%	51%	53%	55%	57%	57%	58%	57%	56%	59%
	Total permit holders	10,287	10,148	9,923	9,953	9,966	10,042	9,963	9,892	9,903	9,845	9,964
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>21,009</i>	<i>20,601</i>	<i>19,610</i>	<i>19,287</i>	<i>18,989</i>	<i>18,775</i>	<i>18,132</i>	<i>17,867</i>	<i>17,816</i>	<i>17,579</i>	<i>17,698</i>
	<i>Fished permits</i>	<i>12,247</i>	<i>10,788</i>	<i>10,278</i>	<i>10,433</i>	<i>10,285</i>	<i>10,379</i>	<i>9,910</i>	<i>9,881</i>	<i>9,873</i>	<i>9,627</i>	<i>10,010</i>
	<i>% of permits fished</i>	<i>58%</i>	<i>52%</i>	<i>52%</i>	<i>54%</i>	<i>54%</i>	<i>55%</i>	<i>54%</i>	<i>55%</i>	<i>55%</i>	<i>54%</i>	<i>56%</i>
	<i>Permit holders</i>	<i>13,271</i>	<i>13,114</i>	<i>12,754</i>	<i>12,785</i>	<i>12,698</i>	<i>12,714</i>	<i>12,603</i>	<i>12,568</i>	<i>12,496</i>	<i>12,404</i>	<i>12,558</i>

¹National Marine Fisheries Service. (2011). *Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 12. Characteristics of the Commercial Fishing Sector in all Alaskan communities: 2000-2010.

Year	Crew license holders ¹	Count of all fish buyers ²	Count of shore-side processing facilities ³	Vessels primarily owned by Alaskan residents ⁴	Vessels homeported in Alaska ⁴	Vessels landing catch in Alaskan communities ²	Total net pounds landed in Alaskan communities ²	Total ex-vessel value of landings in Alaskan communities ²
2000	13,969	233	583	12,028	13,017	6,466	2,188,769,897	\$733,483,275
2001	11,467	214	531	11,538	12,528	6,027	2,378,957,389	\$627,142,796
2002	9,837	220	545	10,882	11,832	5,647	2,508,194,612	\$676,262,504
2003	10,461	199	512	10,555	11,576	5,624	2,599,980,888	\$797,536,302
2004	10,518	194	583	10,370	11,466	6,088	2,720,867,260	\$863,035,877
2005	10,754	200	613	7,479	8,265	6,295	2,925,949,753	\$975,161,750
2006	10,709	194	598	7,219	8,044	6,101	2,772,927,194	\$1,029,754,286
2007	10,957	195	597	7,184	8,015	6,017	2,739,863,072	\$1,137,916,591
2008	10,828	192	606	7,140	8,017	6,006	2,245,098,643	\$1,317,397,706
2009	10,779	187	591	7,069	8,010	6,020	2,025,613,609	\$1,008,743,788
2010	11,387	181	595	7,218	8,140	6,010	2,323,017,267	\$1,232,334,327

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

The numbers of CFEC permits fished/not fished are given in the profiles, however; as well as the number of community members which held a crew license. Processing sector employment data was not available to us at the community level and is not included in the profiles. However, processing sector data is available at a higher aggregation level, such as at regional levels. Employment information for the important offshore processing sector is also not discussed in the profiles because the effect on Alaska communities is indirect and is brokered for the most part out of Seattle. Information regarding Seattle and other West Coast fishing communities is provided in the community profiles produced for that region.¹³⁵

Finally, over the last two decades, a number of catch share programs have been implemented in Alaskan fisheries. Three of which were implemented with respect to federal fisheries for halibut, sablefish and crab. The community profiles specifically call out these three programs as they are perhaps the most important to residents of Alaskan fishing communities. Data is provided in each profile on the participation of residents in these fisheries. Statewide, these catch share fisheries have allotted a significant number of pounds to quota share holders that are residents in Alaskan communities. However, allocation of individual fishing quota (IFQ) has decreased steadily for both the halibut and sablefish programs from approximately 31.1 million pounds of halibut and 13.2 million pounds of sablefish in 2000 to approximately 23.6 million pounds of halibut and 10.7 million pounds of sablefish in 2010 (Tables 13 and 15). On the contrary, the annual allocation of IFQ in the federal crab fisheries increased substantially from approximately 8.8 million pounds at the beginning of the program in 2005 to approximately 19.1 million pounds in 2010 (Table 17).

When broken down to the community level, the quota shares and annual IFQ allocation held by Alaskan residents associated with all three of these federal catch share fisheries is concentrated in few communities (Tables 14, 16 and 18). In addition, significant consolidation of quota shares owned by Alaskans has occurred in the federal halibut fishery, where residents of 137 Alaskan communities owned quota shares in 2000, but only 84 Alaskan communities had residents who owned quota shares in 2010. Both the federal sablefish and crab fisheries maintained steady numbers of Alaskan communities that participated in these fisheries between 2000 and 2010. In 2000, 50 communities were allocated sablefish quota and 14 were allocated crab quota in 2005 (when the program commenced), compared to 49 and 15 in 2010, respectively.¹³⁶

Tables 14, 16 and 18 provide further information on the top ten communities with holdings in each of these federal fisheries. Between 2000 and 2010, the rankings of the top ten communities with regards to annual IFQ allocations in all three fisheries changed minimally. In fact for sablefish, the top five communities with IFQ stayed the same of this time period and for halibut, the top four communities remained the same. For both of these fisheries, the top ten communities with IFQ are concentrated in southcentral and southeastern Alaska, with the exception of Dillingham in Bristol Bay. With regards to crab, the rank of communities changed slightly; however the magnitude of IFQ and quota share holdings changed dramatically for some

¹³⁵ Norman, Karma, Jennifer Sepez, Heather Lazrus, Nicole Milne, Christina Package, Suzanne Russell, Kevin Grant, Robin Petersen Lewis, John Primo, Emile Springer, Megan Styles, Bryan Tilt and Ismael Vaccaro. (2007). Community profiles for West Coast and North Pacific Fisheries: Washington, Oregon, California, and other U.S. States. U. S. Dep. Commer., NOAA Tech. Memo. NMFS-NWFSC-85, 602 p.

¹³⁶ National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

communities. Anchorage residents, for example, increased their holdings of crab quota shares by almost five fold. In addition, the community of St. Paul acquired a significant number of holdings in the first five years of the program ranking it fourth in terms of IFQ allotment in 2010.

Table 13. Halibut Catch Share Program Participation by Residents of Alaskan Communities: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	2,922	209,539,280	31,120,476
2001	2,881	204,268,510	33,552,017
2002	2,854	202,850,549	33,572,824
2003	2,773	200,408,826	33,289,195
2004	2,665	199,617,812	34,361,282
2005	2,593	200,874,442	33,916,535
2006	2,567	203,595,726	32,583,898
2007	2,421	200,862,015	29,988,439
2008	2,295	203,552,163	28,383,640
2009	2,246	204,365,178	25,589,203
2010	2,182	204,936,856	23,647,385

Source: National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 14. Top Ten Communities Participating in the Halibut Catch Share Program in 2000 and 2010.

Rank	Community	Year 2000		Community	Year 2010	
		Halibut IFQ Allotment (pounds)	Halibut Quota Shares Held		Halibut IFQ Allotment (pounds)	Halibut Quota Shares Held
1	Kodiak	9,255,627	57,080,447	Kodiak	6,444,672	47,765,032
2	Homer	3,881,334	23,729,260	Homer	2,906,081	22,477,522
3	Petersburg	3,473,528	26,393,894	Petersburg	2,746,515	29,696,587
4	Sitka	2,539,671	18,087,132	Sitka	1,763,397	18,673,731
5	Juneau	1,680,389	12,475,251	Anchorage	1,414,021	11,277,243
6	Anchorage	1,305,305	9,858,411	Juneau	1,126,851	11,869,905
7	Wrangell	786,869	5,694,096	Cordova	898,079	7,881,097
8	Ketchikan	770,792	5,830,642	Wrangell	479,945	5,778,992
9	Sand Point	757,064	2,724,455	Sand Point	449,399	2,465,946
10	Cordova	557,379	5,623,735	Seward	424,203	3,598,299
Top Ten Communities: Total Halibut IFQ Allotment/Quota Shares		25,007,958	167,497,323		18,653,163	161,484,354
Top Ten Communities: Percentage of Total Halibut IFQ		80.4%	78.8%		78.9%	80.0%

Source: National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 15. Sablefish Catch Share Program Participation by Residents of Alaskan Communities: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held in Alaska	Sablefish IFQ Allotment (pounds)
2000	579	135,581,211	13,205,712
2001	567	136,447,347	12,798,801
2002	552	133,236,225	12,486,873
2003	535	130,355,839	14,368,161
2004	532	128,426,655	15,383,671
2005	522	126,257,695	14,321,610
2006	518	125,471,016	13,705,736
2007	512	123,984,148	13,082,730
2008	515	124,571,050	12,028,038
2009	511	129,818,524	11,056,962
2010	517	132,636,856	10,664,165

Source: National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 16. Top Ten Communities Participating in the Sablefish Catch Share Program in 2000 and 2010.

Rank	Community	Year 2000		Community	Year 2010	
		Sablefish IFQ Allotment (pounds)	Sablefish Quota Shares Held		Sablefish IFQ Allotment (pounds)	Sablefish Quota Shares Held
1	Sitka	3,468,534	33,407,542	Sitka	2,331,889	29,734,443
2	Petersburg	2,713,036	27,963,913	Petersburg	2,059,608	27,422,822
3	Kodiak	1,573,109	17,988,783	Kodiak	1,447,274	19,086,362
4	Homer	1,303,948	14,348,725	Homer	917,114	9,611,888
5	Juneau	1,110,894	10,691,521	Juneau	836,744	9,679,945
6	Seward	481,446	5,348,346	Anchorage	752,348	7,656,130
7	Dillingham	286,564	3,176,112	Seward	480,714	6,659,312
8	Pelican	259,299	2,362,394	Dillingham	263,166	3,181,804
9	Ketchikan	255,102	2,471,368	Cordova	249,802	3,386,595
10	Halibut Cove	251,087	2,766,565	Wrangell	131,150	1,501,025
Top Ten Communities: Total Sablefish IFQ Allotment/Quota Shares		11,703,019	120,525,269		9,469,809	117,920,326
Top Ten Communities: Percentage of Total Sablefish IFQ/Quota Shares		88.7%	88.9%		88.8%	88.9%

Source: National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 17. Crab Individual Fishing Quota Participation by Residents of Alaskan Communities: 2005-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held in Alaska	Crab IFQ Allotment (pounds)
2005	96	279,055,343	8,840,502
2006	97	375,550,500	10,139,010
2007	99	415,678,073	18,366,989
2008	102	439,929,323	18,200,864
2009	116	517,769,501	17,428,510
2010	112	535,516,137	19,054,430

Source: National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 18. Top Ten Communities Participating in the Crab Individual Fishing Quota Program in 2005 and 2010.

Rank	Community	Year 2005		Community	Year 2010	
		Crab IFQ Allotment (pounds)	Crab Quota Shares Held		Crab IFQ Allotment (pounds)	Crab Quota Shares Held
1	Kodiak	4,459,871	146,078,033	Anchorage	8,043,956	213,051,176
2	Anchorage	1,832,134	49,486,504	Kodiak	5,715,071	174,235,081
3	Homer	838,857	28,276,099	Homer	1,641,051	47,440,206
4	Dillingham	626,024	19,973,229	St. Paul	1,388,538	35,569,158
5	Petersburg	491,302	15,201,889	Dillingham	823,238	23,425,807
6	Seldovia	190,769	6,654,936	Petersburg	573,533	14,825,512
7	Unalaska/Dutch Harbor	169,993	5,409,814	Seldovia	236,868	7,549,411
8	Yakutat	125,908	4,098,229	Unalaska/Dutch Harbor	183,863	5,534,552
9	King Cove	85,871	2,973,739	Yakutat	150,853	4,014,849
10	Soldotna	8,279	286,797	Sand Point	142,125	4,097,380
Top Ten Communities: Total Crab IFQ Allotment/Quota Shares		8,840,496	278,439,269		18,899,096	529,743,132
Top Ten Communities: Percentage of Total Crab IFQ/Quota Shares		99.9%	99.8%		99.2%	98.9%

Source: National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Recreational Fishing

Sport fishing continues to be an important part of Alaska’s economy. Opportunities for recreational fishing vary widely by region. Southeastern Alaska, Kodiak and the Kenai Peninsula are the most popular sport fishing destinations in the state; license sales and guide/charter businesses play a vital role in the local economies of these regions (Tables 19-21). In 2000, ADF&G sold 235,316 sport licenses, 16.9% of which were sold to visitors from other states or countries. The number of sport fish licenses sold almost doubled by 2010, where 441,044 licenses were sold, 52.9% of which were sold to visitors to the state indicating that almost the entire increase in licenses was due to license sales to visitors to the state.

The charter fishing industry, which caters to many of these out of state visitors, is especially strong in southcentral and southeast Alaska. The communities most active in catering to charter fishing have stayed relatively stable between 2000 and 2010, with Anchorage, Soldotna, and Sitka at the top, as well as other popular destinations such as Homer and Ketchikan (Table 20). However, it too has seen a relative decrease since 2000. Of the 196 profiled communities, 81 communities had charter businesses in 2010. Overall, the number of sport fish guide businesses in Alaska has dropped steadily from 2,002 in 2000 to 1,259 in 2010. The number of licensed sport fish guides has gone through an even stronger decrease. The number of guides between 2000 and 2004 remained relatively steady at approximately 3,300 and then dropped to a third that in 2005, likely due to the implementation of a 2-fish per person bag limit that was instituted by NOAA in 2005. In recent years, the number of licensed guides has continued to drop, although not as dramatically.

Table 19. Sport Fishing Trends in Alaskan Communities: 2000-2010.

Year	Sport Fish Guide Businesses in Alaska ¹	Sport Fish Guide Licenses Sold to residents of Alaska ¹	Sport Fishing Licenses Sold to residents of Alaska ²	Sport Fishing Licenses Sold in Alaskan communities ²
2000	2,002	3,169	195,527	235,316
2001	1,923	3,213	196,768	246,346
2002	1,881	3,334	193,751	263,664
2003	1,853	3,316	200,117	343,936
2004	1,843	3,366	203,828	398,430
2005	1,483	1,020	204,311	424,241
2006	1,486	1,100	198,181	422,625
2007	1,496	1,135	199,270	446,099
2008	1,455	1,102	197,058	455,038
2009	1,321	963	206,031	426,832
2010	1,259	945	207,756	441,044

¹ Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 20. Top Ten Communities Selling Sport Fishing Licenses in Alaska in 2000 and 2010.

Rank	Year 2000		Year 2010	
	Community	Sportfish licenses sold	Community	Sportfish licenses sold
1	Anchorage	75,997	Anchorage	101,073
2	Ketchikan	25,686	Juneau	77,313
3	Homer	13,646	Ketchikan	33,183
4	Wasilla	13,216	Soldotna	32,797
5	Juneau	12,908	Wasilla	28,511
6	Soldotna	10,087	Fairbanks	25,854
7	Fairbanks	9,589	Homer	19,211
8	Sitka	8,425	Sitka	15,117
9	Kodiak	6,402	Kodiak	11,436
10	Palmer	4,979	Kenai	7,278
Top Ten Communities: Total Sportfish Licenses Sold		180,935	351,773	
Top Ten Communities: Percentage of Total Sportfish Licenses Sold in Alaska		76.9%	79.8%	

Source: Alaska Department of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 21. Top Ten Communities With Charter Businesses in Alaska in 2000 and 2010.

Rank	Year 2000		Year 2010	
	Community	# of Charter Businesses	Community	# of Charter Businesses
1	Anchorage	347	Anchorage	144
2	Soldotna	166	Soldotna	141
3	Sitka	147	Sitka	85
4	Juneau	114	Ketchikan	81
5	Ketchikan	111	Homer	72
6	Homer	95	Kodiak	65
7	Kodiak	81	Juneau	58
8	Fairbanks	57	Kenai	47
9	Wasilla	56	Wasilla	40
10	Kenai	40	Ninilchik	38
Top Ten Communities: Total Charter Businesses		2,002	771	
Top Ten Communities: Percentage of Total Charter Businesses in Alaska		60.6%	61.2%	

Source: Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

The five species of Pacific salmon, halibut, steelhead, trout and northern pike are the most commonly fished sport species. Most other areas of the state offer sport fishing opportunities to some extent, but do not see the high volume of fishermen that the southeast and central regions attract. These other areas tend to offer less productive stocks of sport species and have more remote locations.

Although revenues generated from sport fishing license sales and guide/charter businesses are important, they are by no means the only forms of community development that stem from the sport fishing industry. Communities that have a reputation as good fishing locations also tend to be linked to the tourism industry in general, with more tourism infrastructure such as lodging accommodations, restaurants and other amenities. Sport fishing, in many cases, is merely one component of a growing tourism industry throughout the state.

Subsistence Fishing

Residents of many Alaskan communities participate in the harvest of fish, wildlife and other wild resources to a higher degree than in other parts of the U.S. A high reliance on subsistence resources characterizes many Native Alaskan communities, both as a source of sustenance and cultural identity.^{137,138} The subsistence way of life is also highly valued by non-Native residents of many Alaskan communities, and is often identified as a primary motivation for living in Alaska.^{139,140} In remote communities and places lacking full-time employment opportunities, subsistence resource use is typically high. Among several types of legally recognized uses of fish and wildlife (including subsistence, commercial and recreational), subsistence harvest is accorded the highest priority in Alaska by both the state and federal government.^{141,142}

The regulations governing the harvest of subsistence resources in Alaska are complex and changing. For many years, the federal government allowed the State of Alaska to manage subsistence harvesting on federal lands. Beginning in 1980 with the adoption of Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA), “non-rural” area residents were prohibited from harvesting subsistence resources on federal lands and waters. A 1989 court case, *McDowell v. State of Alaska*, challenged this designation and a decade-long legal battle ensued. By 1999, the federal government had taken over subsistence management of its own lands and waters; residents of populated areas like the Matanuska-Susitna area and the Kenai Peninsula have been designated “non-rural” and are thus ineligible to harvest subsistence resources on

¹³⁷ Thornton, Thomas F. (1998). “Alaska Native Subsistence: A Matter of Cultural Survival.” *Cultural Survival Quarterly*, Issue 22.3. Retrieved November 21, 2012 from <http://www.culturalsurvival.org/ourpublications/csq/article/alaska-native-subsistence-a-matter-cultural-survival>.

¹³⁸ Berger, Thomas R. (1985). *Village Journey: The Report of the Alaska Native Review Commission*. New York: Hill and Wang.

¹³⁹ As an example, see the Gustavus Strategic Plan. (Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan 2005: Protecting and Planning Our Future*. Retrieved June 15, 2012 from <http://cms.gustavus-ak.gov/services/planning/strategic>.)

¹⁴⁰ Alaska Dept. of Fish and Game, Division of Subsistence. (2010). *Subsistence in Alaska: A Year 2010 Update*. Retrieved November 21, 2012 from http://www.adfg.alaska.gov/static/home/library/pdfs/subsistence/subsistence_overview2010.pdf.

¹⁴¹ Alaska Dept. of Fish and Game. (2012). *Subsistence in Alaska: Overview*. Retrieved November 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=subsistence.main>.

¹⁴² See footnote 140.

federal lands and waters. Residents of non-rural areas, however, are eligible to harvest subsistence resources on lands and waters of the State of Alaska.¹⁴³ This divided system of management between state and federal agencies, known as “dual management,” creates a patchwork of differing regulations mapped to the different jurisdictions. For State lands, the Board of Game and the Board of Fisheries, whose members are appointed by the governor and approved by the legislature, create subsistence regulations. For federal lands, the Federal Subsistence Board, whose membership is comprised of leaders from five federal agencies in Alaska and an appointee of the Secretary of Interior, create subsistence regulations.^{144,145}

Both the state and federal government designate eligibility to harvest subsistence resources based on customary and traditional uses and availability of alternative resources. In addition, the federal government considers residence when designating subsistence eligibility. Since 1992, in order to reduce resource pressure, the state government has designated several “non-subsistence areas” where subsistence fishing and hunting is not allowed. These areas include the Fairbanks area, the Anchorage-Mat-Su-Kenai area, Juneau and Ketchikan.¹⁴⁶ The federal government limits access to certain subsistence resources. Halibut, for example, may be harvested for subsistence only by residents of communities with customary and traditional uses of halibut who hold a Subsistence Halibut Registration Certificate (SHARC) issued by NMFS.¹⁴⁷ The state government issues permits for the subsistence harvest of salmon.¹⁴⁸

The majority of Alaskan communities participate in subsistence harvesting to some degree; however, limited documentation of subsistence harvests is available. Based on subsistence harvest surveys conducted by the ADF&G Division of Subsistence in communities throughout Alaska, in 2010, urban communities were estimated to have an average per capita subsistence harvest of 23 pounds per person per year, while rural communities were estimated to have an average per capita harvest of 316 pounds. In rural communities, 75%-98% of households were estimated to harvest fish and 48%-70% were estimated to harvest wildlife in 2010. It is important to note that a greater percentage of households were estimated to *use* subsistence resources in these communities (92%-100% using fish and 29%-92% using wildlife resources) than were estimated to participate directly in harvest, highlighting the importance of subsistence food sharing between households.¹⁴⁹ Subsistence sharing networks have been shown to exist both within and between communities.^{150,151}

¹⁴³ McGee, Jack B. (2010). “Subsistence Hunting and Fishing in Alaska: Does ANILCA’s Rural Subsistence Priority Really Conflict with the Alaska Constitution?” *Alaska Law Review*, 27:2 (221-255).

¹⁴⁴ See footnote 140.

¹⁴⁵ U.S. Fish and Wildlife Service. (2012). *Federal Subsistence Management Program: Federal Subsistence Board*. Retrieved November 21, 2012 from <http://alaska.fws.gov/asm/board.cfml>.

¹⁴⁶ Alaska Dept. of Fish and Game. (2012). *Subsistence in Alaska: Nonsubsistence Use Areas*. Retrieved November 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=subsistence.nonsubsistence>.

¹⁴⁷ NOAA Fisheries Service. (2012). *Subsistence Halibut Registration Certificate (SHARC) Frequently Asked Questions*. Retrieved November 21, 2012 from <http://alaskafisheries.noaa.gov/ram/subsistence/halibutFAQ.pdf>.

¹⁴⁸ Alaska Dept. of Fish and Game, Division of Subsistence. (2009). *Alaska Subsistence Salmon Fisheries 2007 Annual Report*. Technical Paper No. 346. Retrieved November 21, 2012 from <http://www.subsistence.adfg.state.ak.us/techpap/TP346.pdf>.

¹⁴⁹ Alaska Dept. of Fish and Game, Division of Subsistence. (2010). *Subsistence in Alaska: A Year 2010 Update*. Retrieved November 21, 2012 from http://www.adfg.alaska.gov/static/home/library/pdfs/subsistence/subsistence_overview2010.pdf.

¹⁵⁰ Magdanz, J.S., Braem, N.S., Robbins, B.C., and Koster, D.S. (2010). *Subsistence Harvests in Northwest Alaska, Kivalina and Noatak, 2007*. Alaska Dept. of Fish and Game Technical Paper No. 354. Retrieved September 25, 2012 from: <http://www.subsistence.adfg.state.ak.us/techpap/TP354.pdf>.

The ADF&G subsistence surveys utilize several measures of participation in subsistence fishing, and we have reported on these measures in the community profiles. They include: the percentage of households participating in subsistence for various marine resources, the per capita yearly harvest of marine and terrestrial subsistence resources, and the total annual subsistence harvest of salmon and halibut. Based on these measures, there is tremendous variation in the amount and type of subsistence resources harvested in Alaska. This variation in volume of subsistence harvest can be clearly observed at the regional level. In 2010, the regions of Alaska with the highest per capita subsistence harvest were Western Alaska (490 pounds of useable weight harvested per person per year), the Arctic (436 pounds per person), and the Rural Interior (370 pounds per person).¹⁵²

Salmon is by far the widest relied upon subsistence resource in the state. In 2008 (the last year data was available), 220 communities harvested salmon for subsistence use, compared to 234 in 2000. The top ten salmon harvesting communities are widely spread across the state, ranging from Nome to Bethel to Kodiak and Anchorage (Table 23). By comparison, in 2009 (the last year data was available), 78 communities harvested halibut for subsistence use, compared to 80 in 2003 when the program started. The main halibut harvesting communities are located in Southcentral and Southeast Alaska from Kodiak towards the north to Hydaburg in the south. However, in recent years, residents of Unalaska on the Aleutian Islands chain have also recorded fishing for halibut for subsistence (Table 25). Tables 22 and 24 show the overall harvests of salmon, marine invertebrates, other fish (not including salmon and halibut), and halibut in the state.

Marine mammal harvests are also extremely important to many communities in Alaska. However, limited information is available about annual harvests by community. The information that was retrieved for use in these community profiles was obtained from ADF&G on seal and sea lion harvests, from the U.S. Fish and Wildlife Service for sea otter, walrus and polar bear harvests, and from the Alaska Beluga Whale Commission for beluga whale harvests. Tables 26 to 33 present overall harvests in the state and the top ten communities reporting harvests for each species. It is known that some communities in the northern areas of Alaska also hunt for whales for subsistence purposes; however, data on harvests by community was not available.

Overall, a total of 228 belugas were harvested in 2006 by residents of 26 communities, compared to 280 belugas harvested in 2000 by 25 communities. In general, harvests of belugas were consistent between 2000 and 2006, with the exception of a spike in 2001 to 415 whales harvested (Table 26). The top ten communities that reported harvesting belugas between 2000 and 2006 are exclusively located along the coast in Western and Northwestern Alaska (Table 27). At least 75% of all beluga harvests were made by the top ten harvesting communities.

In comparison, very few polar bears were harvested between 2000 and 2010. On average 51 polar bears were harvested each year with a maximum of 98 in 2002 and minimum of 14 in 2010. Since 2006, harvests of polar bears have been in decline, most likely due to its new status as threatened under the Endangered Species Act (Table 26). The number of communities harvesting polar bears is lower than any other subsistence resource, with only ten communities harvesting them in 2000 and five communities harvesting them in 2010. These low numbers

¹⁵¹ Brock, Mathew, Philippa Coiley-Kenner and the Sitka Tribe of Alaska. 2009. *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

¹⁵² See footnote 149.

suggest that polar bear harvests are linked to only those communities that are within the range of the polar bear above the Arctic Circle (Table 28).

Similar trends are seen for the subsistence harvest of walrus. In 2010, 16 communities harvested walrus, compared to 33 in 2000; however, between 75.5% (in 2000) and 85.6% (in 2010) of total harvests in the state were undertaken by residents of Savoonga and Gambell on St. Lawrence Island. The rest of the harvests are undertaken by relatively few communities located in Western and Northwestern Alaska (Table 29). On average, 1,417 walrus are taken each year for subsistence use; however, these numbers too have been in decline in recent years (Table 26).

Finally, harvests of sea otters, sea lions, harbor seals and spotted seals are undertaken annually by relatively few communities. On average, 782 sea otters, 150 sea lions, 1,574 harbor seals and 149 spotted seals are taken annually for subsistence use (Table 26). In general for these four species, the same communities participate in harvest activities from year to year. In 2010, 27 communities harvested sea otters, compared to 26 in 2000. The top ten communities harvesting sea otters are generally located in Southcentral and Southeast Alaska (with the exception of Shishmaref in 2000) and have harvested up to 98.3% of all sea otters taken (Table 30). In 2008, 16 communities harvested sea lions, compared to 18 in 2000. The top ten communities harvesting sea lions are generally located the Aleutian Islands and on the Alaska Peninsula and generally account for 90% of all harvests (Table 31). In 2008, 48 communities harvested harbor seals, compared to 56 in 2000. Harbor seal harvest is generally more evenly dispersed among communities, with only 56-60% of total harbor seal harvests taken by the top ten communities. The communities harvesting the greatest number of harbor seals are spread out between Southcentral and Southeast Alaska (Table 32). Finally, six Alaskan communities reported harvests of spotted seals to ADF&G between 2000 and 2008. All of these communities are located in Western Alaska near the Kuskokwim River delta (Table 33).

Table 22. Total Yearly Harvest of Salmon, Marine Invertebrates and Other Fish (Not Including Salmon and Halibut) by Alaskan Communities.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon fish ²
2000	29,135	24,152	135,830	252,906	106,880	55,550	475,261	34,445	15,386
2001	28,385	23,390	151,369	241,066	88,610	45,148	412,517	n/a	n/a
2002	23,985	20,574	132,684	224,471	83,476	83,964	326,029	n/a	172,808
2003	25,076	20,947	146,134	238,979	96,973	67,539	351,646	42,677	83,624
2004	27,067	20,942	176,414	241,025	103,921	92,317	453,647	609	462,956
2005	25,060	18,513	155,657	257,978	100,101	77,032	461,809	258	373,026
2006	23,923	16,652	142,100	291,209	88,007	70,348	426,654	1,659	317,215
2007	23,791	15,934	157,508	273,628	75,989	33,162	433,919	3,450	223,708
2008	26,074	18,766	173,354	264,627	112,716	83,472	404,840	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 23. Top Ten Communities Harvesting Salmon for Subsistence by Numbers of Fish Harvested.

Rank	Year 2000		Year 2008	
	Community	# of Salmon	Community	# of Salmon
1	Bethel	59,461	Bethel	88,757
2	Anchorage	58,064	Fairbanks	42,113
3	Fairbanks	41,153	Anchorage	39,595
4	Kotzebue	37,737	Kwethluk	26,777
5	Dillingham	26,823	Nome	26,239
6	Ketchikan	25,664	Tanana	25,927
7	Sitka	25,330	Dillingham	25,907
8	Kodiak	23,619	Akiachak	21,984
9	Unalakleet	21,982	Unalakleet	20,464
10	Tanana	21,476	Kodiak	19,996
Top Ten Communities: Number of Salmon Harvested		341,309	337,759	
Top Ten Communities: Percentage of Number of Salmon Harvested in Alaska		33.3%	32.5%	

Source: Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 24. Subsistence Halibut Fishing Participation by Alaskan Communities: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	11,464	4,905	1,039,959
2004	13,572	5,941	1,581,787
2005	14,076	5,775	1,175,795
2006	14,029	5,896	1,121,175
2007	14,794	5,916	1,029,931
2008	11,455	5,272	880,954
2009	11,600	5,252	851,878
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 25. Top Ten Communities Harvesting Halibut for Subsistence by Weight in 2003 and 2010.

Rank	Year 2003		Year 2009	
	Community	Pounds of Halibut	Community	Pounds of Halibut
1	Sitka	174,880	Kodiak	182,340
2	Kodiak	157,746	Sitka	97,424
3	Hoonah	61,096	Craig	48,930
4	Petersburg	55,718	Petersburg	46,766
5	Craig	45,658	Wrangell	46,668
6	Ketchikan	38,221	Ketchikan	37,170
7	Wrangell	33,006	Haines	29,635
8	Haines	31,765	Unalaska/Dutch Harbor	29,306
9	Klawock	30,831	Cordova	23,364
10	Metlakatla	26,185	Hydaburg	21,853
Top Ten Communities: Pounds of Halibut Harvested		655,106	563,456	
Top Ten Communities: Percentage of Total Pounds of Halibut Harvested in Alaska		66.1%	63.0%	

Source: Fall, J.A. and D. Koster. (2011). *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 26. Subsistence Harvests of Marine Mammal Resources by Alaskan Communities: 2000-2010.

Year	# of Beluga Whales ¹	# of Polar Bears ²	# of Sea Otters ²	# of Walrus ²	# of Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	280	42	834	2,059	147	1,975	217
2001	415	71	653	1,324	156	1,797	106
2002	366	98	667	1,710	144	1,585	185
2003	250	58	778	1,725	165	1,812	52
2004	234	37	816	1,215	150	1,581	124
2005	335	59	918	903	172	1,470	171
2006	228	73	716	982	137	1,423	140
2007	n/a	54	708	1,659	166	1,267	137
2008	n/a	29	664	1,105	116	1,260	213
2009	n/a	24	878	1,631	n/a	n/a	n/a
2010	n/a	14	977	1,271	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, Kathy J., and Suydam, Robert S. (2010). *Subsistence harvest of beluga or white whales (Delphinapterus leucas) in northern and western Alaska, 1987–2006*. Journal of Cetacean Research and Management 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. (2009). *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Table 27. Top Ten Communities Harvesting Beluga for Subsistence by Number Harvested in 2000 and 2006.

Rank	Year 2000		Year 2006	
	Community	Number of Beluga	Community	Number of Beluga
1	Kivalina	44	Emmonak	30
2	Hooper Bay	39	Point Lay	29
3	Emmonak	30	Alakanuk	15
4	Elim	30	Shaktoolik	14
5	Unalakleet	29	Kotlik	12
6	Point Hope	16	Elim	11
7	Stebbins	15	Unalakleet	10
8	Scammon Bay	12	Stebbins	9
9	Kotlik	11	Toksook Bay	8
10	Alakanuk	9	Scammon Bay	7
Top Ten Communities: Number of Beluga Harvested		235	171	
Top Ten Communities: Percentage of Total Number of Beluga Harvested in Alaska		83.9%	75.0%	

Source: Frost, Kathy J., and Suydam, Robert S. (2010). Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *Journal of Cetacean Research and Management* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 28. Top Ten Communities Harvesting Polar Bears for Subsistence by Number Harvested in 2000 and 2010.

Rank	Year 2000		Year 2010	
	Community	Number of Polar Bears	Community	Number of Polar Bears
1	Barrow	12	Barrow	6
2	Point Hope	6	Savoonga	4
3	Diomedede	5	Point Hope	2
4	Savoonga	4	Gambell	1
5	Gambell	4	Wales	1
6	Nuiqsut	4		
7	Wainwright	3		
8	Shishmaref	2		
9	Point Lay	1		
10	Wales	1		
Top Ten Communities: Number of Polar Bears Harvested		42	15	
Top Ten Communities: Percentage of Total Number of Polar Bears Harvested in Alaska		100%	100%	

Source: U.S. Fish and Wildlife Service. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 29. Top Ten Communities Harvesting Walrus for Subsistence by Number Harvested in 2000 and 2010.

Rank	Year 2000		Year 2010	
	Community	Number of Walrus	Community	Number of Walrus
1	Savoonga	849	Savoonga	617
2	Gambell	705	Gambell	509
3	Diomedede	164	Brevig Mission	45
4	King Island	106	Diomedede	30
5	Nome	56	Shishmaref	21
6	Wainwright	39	Wales	19
7	Hooper Bay	29	Teller	10
8	Barrow	17	Wainwright	5
9	Wales	14	Point Lay	4
10	Toksook Bay	10	Twin Hills	3
Top Ten Communities: Number of Walrus Harvested		1,989	1,263	
Top Ten Communities: Percentage of Total Number of Walrus Harvested in Alaska		96.6%	99.4%	

Source: U.S. Fish and Wildlife Service. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 30. Top Ten Communities Harvesting Sea Otters for Subsistence by Number Harvested in 2000 and 2010.

Rank	Year 2000		Year 2010	
	Community	Number of Sea Otters	Community	Number of Sea Otters
1	Cordova	213	Sitka	205
2	Sitka	155	Cordova	134
3	Hydaburg	95	Klawock	113
4	Valdez	69	Valdez	101
5	Shishmaref	42	Hoonah	53
6	Kodiak	41	Yakutat	52
7	Klawock	38	Anchorage	47
8	Craig	34	Ketchikan	41
9	Anchorage	25	Craig	39
10	Yakutat	24	Kodiak	35
Top Ten Communities: Number of Sea Otters Harvested		736	820	
Top Ten Communities: Percentage of Total Number of Sea Otters Harvested in Alaska		75.3%	98.3%	

Source: U.S. Fish and Wildlife Service. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 31. Top Ten Communities Harvesting Sea Lions for Subsistence by Number Harvested in 2000 and 2008.

Rank	Year 2000		Year 2008	
	Community	Estimated # of Sea Lions	Community	Estimated # of Sea Lions
1	Unalaska	49.2	Atka	35.0
2	St. Paul	17.3	St. Paul	20.0
3	Atka	16.8	Tatitlek	16.5
4	Old Harbor	12.9	St. George	9.3
5	St. George	11.8	Old Harbor	7.0
6	Nanwalek	6.5	Akutan	4.2
7	Sand Point	5.0	Adak	4.0
8	Perryville	4.5	Sand Point	3.3
9	King Cove	4.3	Port Lions	3.0
10	Akutan	4.1	Port Graham	2.8
Top Ten Communities: Estimated Number of Sea Lions Harvested		132.4	105.1	
Top Ten Communities: Percentage of Total Estimated Number of Sea Lions Harvested in Alaska		90.3%	90.2%	

Source: Wolfe, R.J., Fall, J.A. and M. Riedel. (2009). *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Table 32. Top Ten Communities Harvesting Harbor Seals for Subsistence by Number Harvested in 2000 and 2008.

Rank	Year 2000		Year 2008	
	Community	Estimated # of Harbor Seals	Community	Estimated # of Harbor Seals
1	Sitka	276.8	Sitka	140.6
2	Yakutat	193.3	Tatitlek	125.4
3	Hoonah	147.9	Yakutat	115.2
4	Ketchikan	111.7	Ketchikan	66.7
5	Kake	101.7	Kodiak	62.6
6	Cordova	87.8	Perryville	47.1
7	Klawock	67.1	Togiak	46.0
8	Angoon	64.3	Angoon	41.0
9	Juneau	59.9	Point Heiden	36.1
10	Old Harbor	59.1	Old Harbor	35.2
Top Ten Communities: Estimated Number of Harbor Seals Harvested		1,169.6	715.9	
Top Ten Communities: Percentage of Total Estimated Number of Harbor Seals Harvested in Alaska		59.2%	56.8%	

Source: Wolfe, R.J., Fall, J.A. and M. Riedel. (2009). *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Table 33. Top Ten Communities Harvesting Spotted Seals for Subsistence by Number Harvested in 2000 and 2008.

Rank	Year 2000		Year 2007	
	Community	Estimated # of Spotted Seals	Community	Estimated # of Spotted Seals
1	Togiak	147.0	Togiak	167.7
2	Manokotak	23.0	Manokotak	16.6
3	Clark's Point	22.4	Clark's Point	14.7
4	Dillingham	11.9	Aleknagik	6.7
5	Twin Hills	6.6	Twin Hills	6.6
6	Aleknagik	6.1	Dillingham	1.1
7	[Hatched area]			
8	[Hatched area]			
9	[Hatched area]			
10	[Hatched area]			
Top Ten Communities:				
Estimated Number of Spotted Seals Harvested		217		213.3
Top Ten Communities:				
Percentage of Total Estimated Number of Spotted Seals Harvested in Alaska		100%		100%

Source: Wolfe, R.J., Fall, J.A. and M. Riedel. (2009). *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Anchorage and Matanuska-Susitna

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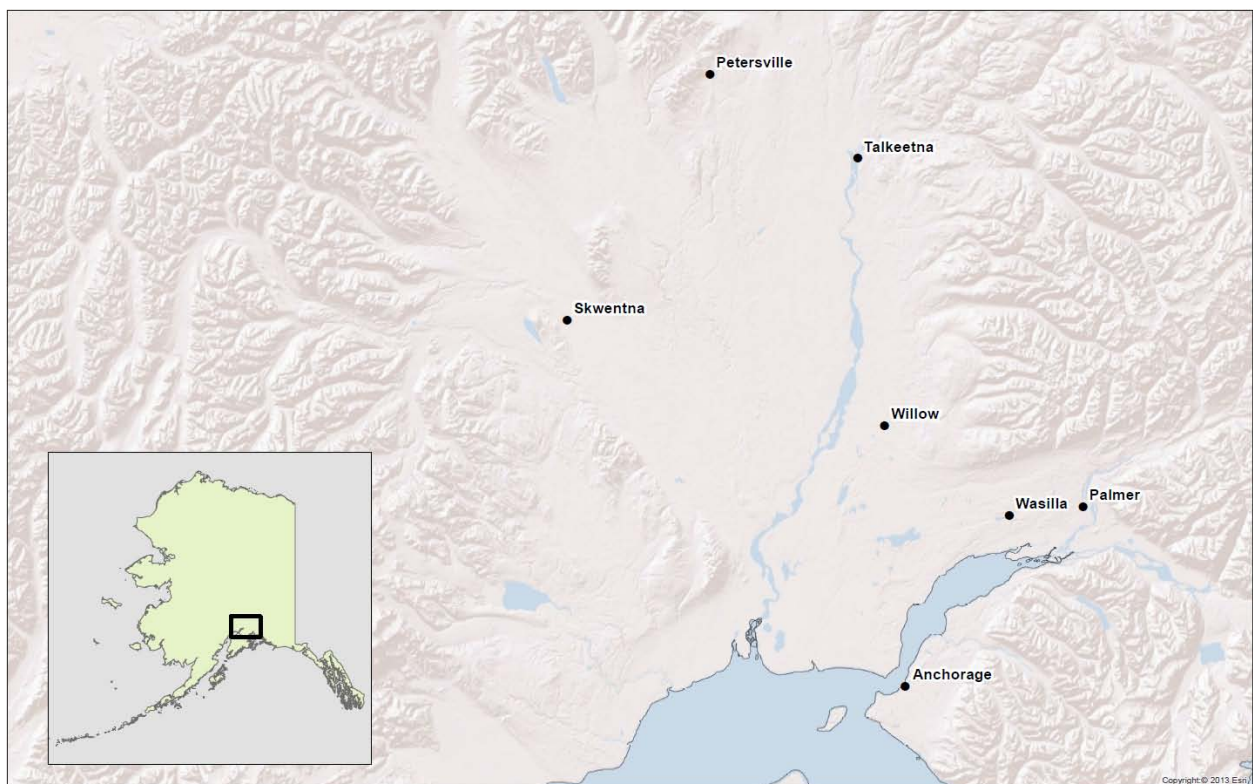
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Regional Introduction: Anchorage/ Matanuska-Susitna

Communities

Anchorage
Palmer
Petersville
Skwentna

Talkeetna
Wasilla
Willow



People and Place

Location

The Anchorage and Matanuska-Susitna (Mat-Su) area includes the Mat-Su Borough and Anchorage Municipality. The profiled communities in this sub-region are for the most part all located within about an hour travel by car of the City of Anchorage, which has made this one of the fastest growing regions in the state. This sub-region is situated at approximately 61° N. latitude and -149° W. longitude. The Matanuska-Susitna area is made up of thriving valley farmlands, whereas the Anchorage Municipality encompasses the largest city in Alaska which had a total of 291,826 inhabitants in the year 2010, approximately 41% of the population of entire state of Alaska.¹ Many of the communities are located off of Cook Inlet; however, some are located more inland in the lush agricultural countryside.

Demographic Profile and History

The area was historically occupied by Tanaina Indians, an Athabaskan Native group; however, today the Native population is very low in comparison to other areas in Alaska. A total of 11.1% of the population identified themselves as at least part Alaska Native or American Indian in Anchorage in the year 2010 and 9.5% of the population in the Matanuska-Susitna Borough overall. Overall, the combined population of both the Anchorage Municipality and Mat-Su Borough was 380,821 in 2010.² Recent development and growth has been mainly attributed to the closeness in proximity to the state's largest city of Anchorage.³ The metropolis of Anchorage accounts for about 76.6% of the population of the Anchorage/Mat-Su area⁴ and is the center of commerce for the entire state. The population of Anchorage includes the populations for Eagle River-Chugiak as well as Girdwood as reported by the U.S. Census.

Anchorage is the region's commerce center and has a largely diversified economy. Oil and gas industries, finance and real estate, transportation, communications, and government agencies are headquartered in Anchorage. Numerous visitor and tourist facilities and services are available. Over 13,000 military personnel are stationed at Fort Richardson and Elmendorf Air Force Base.⁵ The communities of Palmer and Wasilla have strong agricultural histories and also support other industries. Both of these areas continue to experience high levels of growth as Anchorage's population expands.^{6,7} The economy of Willow is based heavily on tourism and

¹ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Ibid.

³ Williams, J. G. (2010). *The Movement Between Alaska's Major Native Areas and Anchorage*. Retrieved December 6, 2012 from: <http://www.labor.state.ak.us/research/trends/feb10art1.pdf>.

⁴ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶ City of Palmer, Palmer Planning Team and Agnew:Beck Consulting. 2006. *City of Palmer Comprehensive Plan*. Retrieved March 12, 2012 from <http://www.commerce.state.ak.us/dca/plans/Palmer-CP-2006.pdf>.

sportfishing. Employment in Skwentna is for the most part available at the community store or school.⁸ All the profiled communities are tied to the commercial fishing sector, although Anchorage residents contribute the largest share to the local commercial fishing fleet and to the population of Alaska resident crew members that live in the region.

Natural Resources and Environment

The weather in the Anchorage/Mat-Su region varies quite a bit between those communities which are located near or on the water and those communities which are located farther inland. The inland communities, Palmer, Skwentna, Wasilla, and Willow have extreme temperatures during the winter months, ranging from -30 to 51 °F in January. Willow is very extreme in terms of snowfall, ranging between 48 to 150 inches per year and Skwentna has a higher average of snow as well with 70 inches per year. The other inland communities average about 50 inches per year of snow, about 16.5 inches of precipitation, and the temperatures in the summer range from about 37 to 85 °F. Coastal communities in the sub-region include Anchorage, Eagle River-Chugiak, and Girdwood and their winter temperatures range from about 8 to 21 °F, whereas their temperature in July ranges from about 51 to about 65 °F. The total average annual precipitation is approximately 15.9 inches in both Anchorage and Eagle River-Chugiak; however, Girdwood averages about 80 inches per year. The average snowfall is approximately 69 inches for all of these water-bordering communities.⁹

Much of the Mat-Su area is built on heavily glaciated sediments and alluvium. Subsurface geology consists of sedimentary rock typically found in lowland areas west of the Chugach Mountains. Upland areas consist of harder metamorphic and igneous rock. Surface materials consist of moraines, estuarine deposits, and bog deposits. Soils are made up primarily of silty loams.¹⁰

The diverse landscape is characterized by lowland marsh and tidal mudflats, subalpine and upland tundra, alpine meadows, taiga, mesic forest, barren rock, and icefields.¹¹ Most of the region is located in a transitional zone creating a mix of coastal and boreal vegetation communities. Coniferous stands dominated by Sitka spruce and mountain hemlock populate the coastal zones, while dwarf spruce birch, aspen, alder, and willow populate the boreal areas. Disturbed, lowland, or drainage areas typically consist of conifers mixed with cottonwood, willow, and birch. Upland muskegs and bogs consist of dwarf vegetation, shrubs, and sedges.^{12,13}

⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸ Ibid.

⁹ Ibid.

¹⁰ Municipality of Anchorage. (1993). *Chugiak-Eagle River Comprehensive Plan*. Retrieved June 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChugiakEagleRiver-CP-1993.pdf>.

¹¹ United States Forest Service. (1992). *The Alaska Vegetation Classification*. Retrieved December 16, 2011 from: http://www.fs.fed.us/pnw/publications/pnw_gtr286/pnw_gtr286a.pdf.

¹² Ager, T. A. and P. E. Carrara (n.d.). *Latest Wisconsin Deglaciation and Postglacial Vegetation Development in the Turnagain Arm Area, Upper Cook Inlet, South-Central Alaska*. Retrieved December 16, 2011 from: <http://esp.cr.usgs.gov/research/alaska/turnarm.html>.

¹³ U.S. Forest Service. (n.d.). *What types of vegetation are present? Land cover categories South-Central Alaska PNW-FIA*. Retrieved December 16, 2011 from: http://www.fs.fed.us/pnw/publications/pnw_gtr652/pnw-gtr652b.pdf.

Mineral resources in the area include the Wishbone Hill coal deposit 40 miles northeast of Anchorage, and the Willow Creek mineral area 40 miles north. Usibelli Coal Mine Inc. has been conducting exploration and feasibility studies to determine the viability of developing Wishbone Hill.¹⁴ The Willow Creek mineral area, which has a history of producing several gold prospects, is also currently being assessed for further development.¹⁵ Numerous small lakes, streams, wetlands, and wooded areas provide a range of ecological services and recreation resources.

Coal, timber, and gravel make up the majority of exploitable natural resources in the Willow area. Coal deposits studied in the Houston area are sub-bituminous and characterized as low to medium grade.¹⁶ The Chuitna Coal Project, located to the southwest of Willow, produces 12 million tons of coal annually and is expected to have a productive lifespan of 25 years.¹⁷ Oil and gas sources are known to exist in the area. There are several shallow gas leases within the Willow area and additional exploration licenses have been issued within the Susitna Valley.¹⁸ There are several oil extraction project located within the Cook Inlet as well. Other coal gasification developments are focused primarily within the Beluga River area to the southwest. Gas storage was approved for the Ivan River area outside of Beluga.¹⁹ Geothermal energy sources are also thought exist in the area.

Governance

There are two boroughs in this sub-region: the Municipality of Anchorage and the Matanuska-Susitna Borough. The communities in this sub-region have varying types of city governments ranging from Anchorage's status of Unified Home Rule Municipality to Willow which is unincorporated.

The communities in this region were not included in the Alaska Native Claims Settlement Act (ANCSA) and are also not federally recognized as Native villages. However, because Anchorage is the main commercial center of the state, many Native regional corporations, Native village corporations, non-profits, community development quota organizations, economic development organizations, regional health corporations have their headquarters or an external office located in the city.

¹⁴ Usibelli Coal Mine Inc. (n.d). *Homepage*. Retrieved December 16, 2011 from <http://www.usibelli.com/>

¹⁵ U.S. Geological Survey. (n.d) *Alaska Resource Data File: Anchorage quadrangle* Retrieved December 16, 2011 from: http://ardf.wr.usgs.gov/ardf_data/Anchorage.pdf.

¹⁶ City of Houston. (2003). *City of Houston Comprehensive Plan*. Retrieved April 26, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Houston-CP-2003.pdf>.

¹⁷ Alaska Department of Natural Resources (n.d.) *Chuitna Coal Project*. Retrieved April 26, 2012 from: <http://www.dnr.state.ak.us/mlw/mining/largemine/chuitna/>.

¹⁸ Alaska Department of Natural Resources (n.d.). *Exploration License Areas*. Retrieved April 26, 2012 from: <http://dog.dnr.alaska.gov/Programs/ExplorationLicenseAreas.htm#susitna>.

¹⁹ Alaska Department of Natural Resources (n.d.). *Cook Inlet Maps*. Retrieved April 26, 2012 from: <http://dog.dnr.alaska.gov/Publications/CookInlet.htm#cimaps>.

Involvement in North Pacific Fisheries

The Anchorage/Mat-Su sub-region is intimately linked to both commercial and recreational fishing industries. Many commercial permits are issued to its residents and many sport fishing licenses are sold in its borders annually. Information on subsistence on the other hand is not readily available for the most part because almost all of these communities are considered to be urban, and thus are not legally entitled to engage in subsistence harvests on federal land.

Anchorage is one of the main centers for commercial fishing in the state, providing a large amount of support services and businesses, many processing plants, the largest fleet in the state, a large number of resident crew members, and a large amount of permit holders in various fisheries. In the Anchorage/Mat-Su region, the main fisheries in terms of number of permit holders were salmon which had the largest participation overall, halibut, groundfish, herring, and a smaller amount of crab permits and other shellfish permits. In 2010, residents of profiled Mat-Su communities held a total of 1,617 fishing permits issued by the Commercial Fisheries Entry Commission. The vast majority of these permits (1,181) were held by Anchorage residents.²⁰

An extremely large number of sport fishing licenses were sold in profiled communities within the sub-region in the year 2010, totaling 137,647. Again, the vast majority were sold in Anchorage at 101,073.²¹ Many of these licenses, however, could have been purchased by tourists on their way to their final sport fishing destination, as most flights coming into the state pass through Anchorage and no distinction is made in records of permits sold in this regard. In addition there are many sport fishing guide businesses in operation within the communities, especially in Anchorage where there were 144 sport fish guide businesses in 2010.²²

Almost all communities profiled in the sub-region were considered urban areas and thus were not able to engage in subsistence activities on federal land, as mentioned above. In addition, little evidence of subsistence was available except for information regarding salmon subsistence permits. The amount of subsistence salmon permits are comparatively low for the area; however, frequently in urban settings subsistence can be disguised as sport fishing.²³

Regional Challenges

Because of the high number of permits issued to residents of the area for salmon, it is probable that many have been adversely affected by the recent falling salmon prices attributed to

²⁰ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²¹ Alaska Department of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²² Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²³ Fall, J. A., C. Brown, N. Braem, J. J. Simon, W. E. Simeone, D. L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T. M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

the expansion of aquaculture fish industries in other nations. Federal fishery disaster declarations have been made in 1997, 1998, 2000, 2010 and although no federal salmon disaster funds were allotted to the profiled communities in this region, it is likely that those which have permits for salmon in the Anchorage/Mat-Su area have been affected.²⁴ A city such as Anchorage may not demonstrate the devastating effects of falling salmon prices seen elsewhere because it has a larger budget and a robust tax base. However, the impacts on individuals may be significant.

Population migration patterns within the Anchorage/Mat-Su region have recently become a topic of interest for local and state governments, especially concerning migration from rural areas. In 2010, it was estimated that as much as 2% of rural areas with majority Alaska Native populations migrate annually to the Anchorage area either permanently or temporarily. In addition, there has been significant migration from the “Anchorage Bowl” area, to the greater Mat-Su region. During the 2000-2008 period, 14.5% of the average annual movement out of Anchorage was absorbed by the Mat-Su Borough. Changes in demographics due to population shifts can put pressure on public infrastructure and services. For the Mat-Su Valley, rapid population growth requires expansions of existing services. For the case of rural population flight, the specific demographic which is moving to Anchorage often does so in search of employment or to reduce their living expenses, and may require public assistance while adjusting.²⁵

²⁴ Upton, H. (2010). *Commercial Fishery Disaster Assistance*. Retrieved December 6, 2012 from: <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

²⁵ Williams, J. G. (2010). *The Movement Between Alaska’s Major Native Areas and Anchorage*. Retrieved December 6, 2012 from: <http://www.labor.state.ak.us/research/trends/feb10art1.pdf>.



Anchorage (ANG-kuh-ridge)

People and Place

*Location*²⁶

Anchorage, the most populated municipality in Alaska, is located in southcentral Alaska at the head of Cook Inlet, 576 mi northwest of Juneau and 1,400 mi northwest of Seattle. The area encompasses 1,697.2 sq mi of land and 263.9 sq mi of water. The city is surrounded by the rugged Chugach Mountains, Cook Inlet, and many miles of national forest land, state parks, and tidelands. Anchorage became a Unified Home Rule Municipality in 1975 and is located within its own borough.

*Demographic Profile*²⁷

In 2010, there were 291,826 residents, ranking Anchorage 1st of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 29.0%. Between 2000 and 2009, the population grew by 11.6% with an average annual growth rate of 0.81%, which was slightly higher than the statewide average of 0.75% and indicative of modest, steady growth.

The racial composition of Anchorage was predominately White in 2010. In that year, 66.0% of residents identified themselves as White, compared to 72.2% in 2000; 8.1% identified themselves as Asian, compared to 5.5% in 2000; 7.9% identified themselves as American Indian or Alaska Native, compared to 7.3% in 2000; 5.6% identified themselves as Black or African American, compared to 5.8% in 2000; 2.0% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.9% in 2000; 8.1% identified themselves as two or more races, compared to 6.0% in 2000; and 2.3% identified themselves as some other race, compared to 2.2% in 2000. In addition, 7.6% of residents identified themselves as Hispanic or Latino, compared to 5.7% in 2000.

In 2010, the average household size in Anchorage was 1.60, compared to 2.60 in 1990 and 2.67 in 2000. In that year, there were a total of 113,032 housing units, compared to 94,153 in 1990 and 100,368 in 2000. Housing characteristics in 2010 were virtually the same as in 2000. In both years 57% of households were owner-occupied, 38% were renter-occupied, 4% were vacant, and 1% was occupied seasonally. In addition, 8,450 residents were reported to be living in group quarters in 2010, compared to 3,384 in 1990 and 7,014 in 2000.

²⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

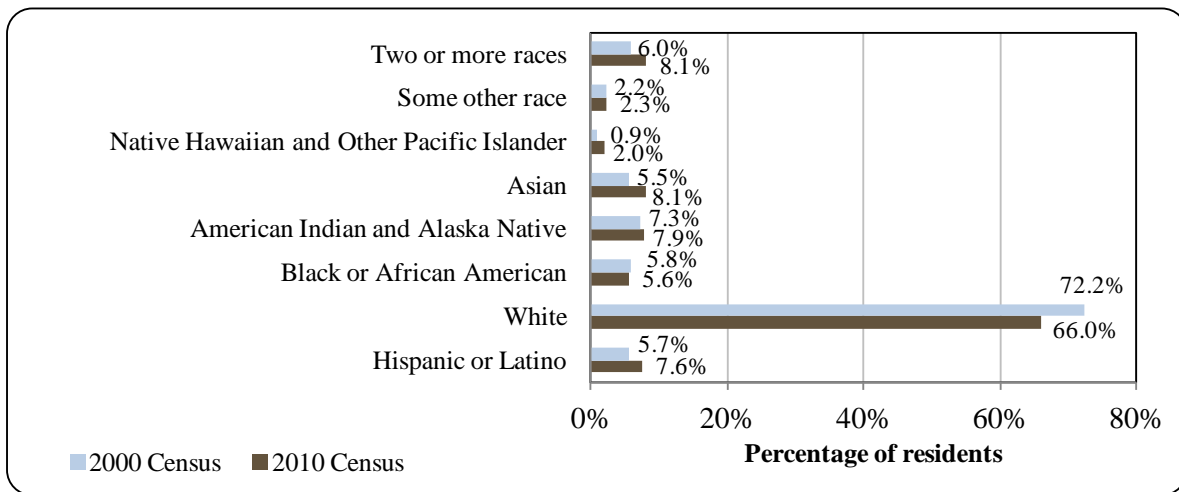
Table 1. Population in Anchorage from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	226,338	-
2000	260,283	-
2001	-	264,886
2002	-	267,860
2003	-	273,069
2004	-	277,880
2005	-	278,407
2006	-	283,348
2007	-	282,968
2008	-	283,912
2009	-	290,588
2010	291,826	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Anchorage: 2000-2010 (U.S. Census).



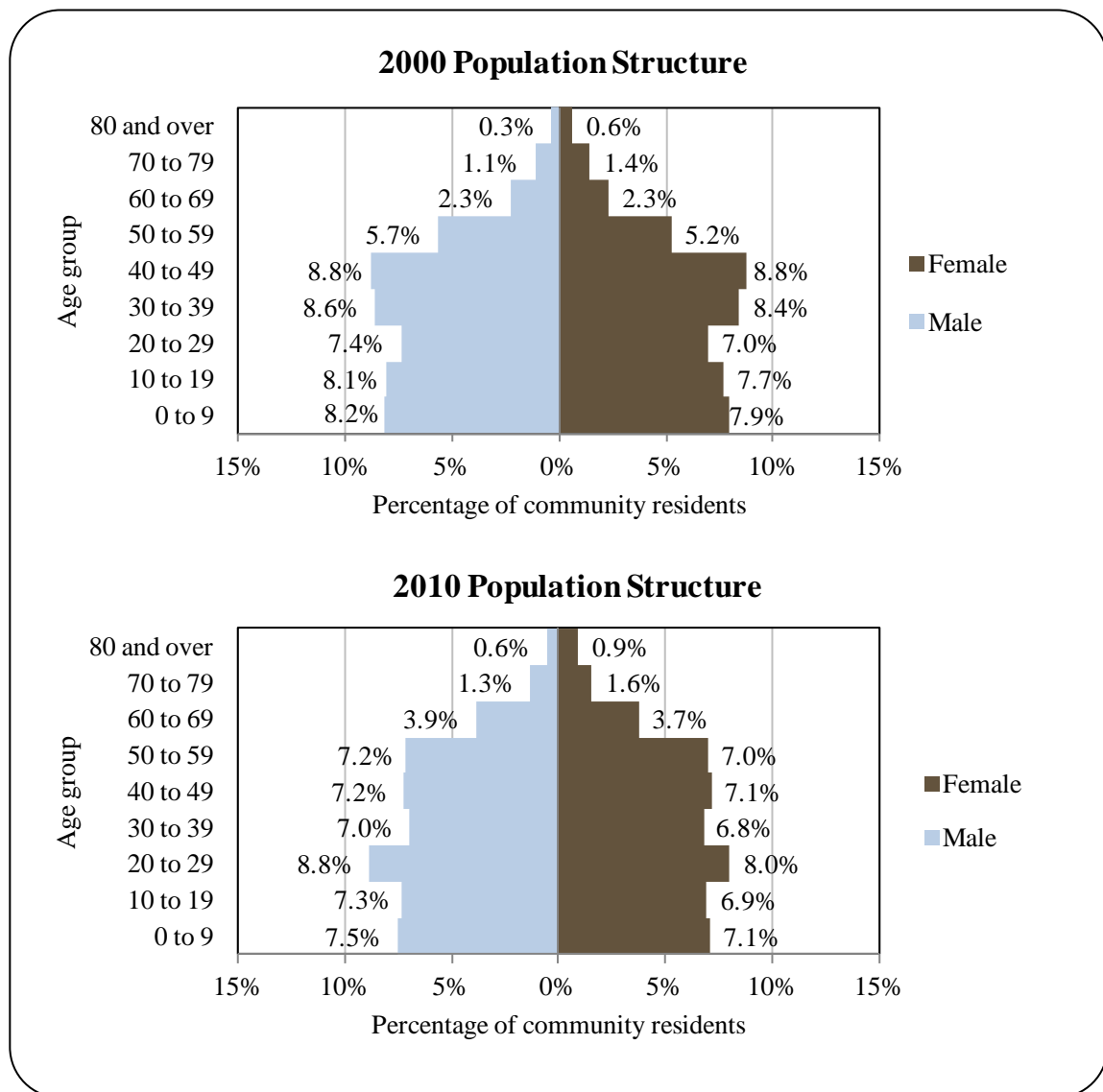
The gender distribution was relatively equal in 2010 at 50.8% male and 49.2% female. This was more even to the distribution statewide (52.0% male, 48.0% female), and similar to the distribution in 2000 (50.6% male, 49.4% female). The median age that year was 32.9 years, which was very similar to both the Alaska median of 33.8 years, and 2000 median of 32.4 years.

The population structure was stationary in both 2000 and 2010, although there was some overall aging within the total population in 2010, relative to 2000. In that year, 28.8% of

residents were under the age of 20, compared to 31.9% in 2000; 12.0% were over the age of 59, compared to 8.0% in 2000; 42.3% were between the ages of 30 and 59, compared to 45.5% in 2000; and 16.8% were between the ages of 20 and 29, compared to 14.4% in 2000.

Gender distribution by age cohort was slightly less even in 2010, with slight male biases occurring among most age ranges. In that year, the greatest absolute gender difference occurred in the 20 to 29 range (8.8% male, 8.0% female), followed by the 0 to 9 (7.5% male, 7.1% female) and 80 and over (0.9% female, 0.6% male) ranges. Of those three, the greatest relative gender difference occurred in the 80 and over range. Information regarding trends in Anchorage’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Anchorage Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS) estimated that 91.9% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 3.0% had less than a ninth-grade education, compared an estimated 3.5% if Alaska residents overall; an estimated 5.1% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 27.8% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 8.3% held an Associate's degree, compared to an estimated 8.0% of Alaska residents overall; an estimated 21.4% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 11.6% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture^{28,29}

Dena'ina Athabascans inhabited the area when Captain James Cook first explored Cook Inlet in 1778. Located near the northern end of the Municipality, the village of Eklutna was one of eight winter settlements and is the last occupied Dena'ina village in the Anchorage area. During the summer, villagers moved down the Knik Arm to Ship Creek and Fire Island to fish. In the fall, they returned to Eklutna to hunt and trap.

Russian fur traders and missionaries were the first Europeans to occupy the Anchorage area. The discovery of gold in the 1880s and in Interior Alaska in 1922 sparked development in the area. Initially, most prospectors and traders just passed through on their way to other gold fields. Some stayed to prospect the area, resulting in a few mining camps and small settlements along Turnagain Arm, mostly around present day Girdwood.

Construction began in 1914 on a federal railroad from the port of Seward, 126 mi south of Anchorage, through the coalfields of Interior Alaska, to the gold claims near Fairbanks (358 mi north). The midpoint construction headquarters was Anchorage, and by July of 1915, thousands of job seekers and opportunists had poured into the area; living in a tent city on the banks of Ship Creek near the edge of the present downtown. That July produced the "Great Anchorage Lot Sale;" a land auction that shaped the future of the city. Some 655 lots were sold for \$148,000 total, and an average of \$225 each. A month later, the town voted to call itself Alaska City, but the federal government refused to change its name from Anchorage. The City of Anchorage was incorporated on November 23, 1920.

From 1939 to 1957, major military and government construction of roads, airports, and harbors throughout Alaska contributed to the growth of Anchorage. During World War II, Anchorage's strategic location made it well positioned for the construction of defense support facilities serving the North Pacific. In 1940, Fort Richardson and Elmendorf Air Force Base were constructed. During the same period, the construction of the Glenn and Alaska Highways gave Anchorage an overland link through Canada to the rest of the contiguous United States. The port was completed by the early 1960s. The Greater Anchorage Area Borough was formed on January 1, 1964.

²⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁹ Municipality of Anchorage. (2001). *Anchorage Bowl Comprehensive Plan*. Retrieved June 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Anchorage1-CP-2001.pdf>.

The Good Friday earthquake of 1964 destroyed a large part of the city. During the 1970s, the development of the Prudhoe Bay oilfields and the Trans-Alaska Pipeline brought rapid growth to Anchorage. Population, office space, and housing tripled within a 10-year period. On September 15, 1975, the city and borough governments were unified, along with the cities of Girdwood and Glen Alps.

Natural Resources and Environment

The average temperatures in January range from 8 to 21 °F (-13 to -6 °C). In July, average temperatures range from 51 to 65 °F (11 to 18 °C). Average annual precipitation is 15.9 inches, and average annual snowfall is 69 inches.³⁰

Anchorage and its surrounding communities are located in close proximity to the Chugach National Park, Chugach National Forest, and Anchorage Coastal Wildlife Refuge. Terrestrial wildlife in the area includes wolves, otters, marmots, lynx, Dall sheep, bears, moose, muskrat, weasels, mink, hares, voles, shrews, and ground squirrels. Aquatic mammals include beluga, orca, gray, and humpback whale, porpoise, sea otters, Steller sea lions, and seals. Fish and shellfish include all five species of Pacific salmon, cod, sablefish, Dungeness, king, and Tanner crab, clams, trout, arctic grayling, char, sculpins, stickleback, halibut, and northern pike.³¹

Much of the Anchorage area is built on heavily glaciated sediments and alluvium. Subsurface geology consists of sedimentary rock typically found in lowland areas west of the Chugach Mountains. Upland areas consist of harder metamorphic and igneous rock. Surface materials consist of moraines, estuarine deposits, and bog deposits. Soils are made up primarily of silty loams.³²

The diverse landscape surrounding Anchorage is characterized by lowland marsh and tidal mudflats, subalpine and upland tundra, alpine meadows, taiga, mesic forest, barren rock, and icefields.³³ Anchorage is located in a transitional zone creating a mix of coastal and boreal vegetation communities. Coniferous stands dominated by Sitka spruce and mountain hemlock populate the coastal zones, while dwarf spruce birch, aspen, alder, and willow populate the boreal areas. Disturbed, lowland, or drainage areas typically consist of conifers mixed with cottonwood, willow, and birch. Upland muskegs and bogs consist of dwarf vegetation, shrubs, and sedges.^{34,35}

³⁰ Ibid.

³¹ Alaska Department of Fish and Game. (n.d.). *Anchorage Coastal – Wildlife Refuge: Fish and Wildlife*. Retrieved December 16, 2011 from:

<http://www.adfg.alaska.gov/index.cfm?ADFG=anchoragecoastal.species>.

³² Municipality of Anchorage. (1993). *Chugiak-Eagle River Comprehensive Plan*. Retrieved June 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChugiakEagleRiver-CP-1993.pdf>.

³³ United States Forest Service. (1992). *The Alaska Vegetation Classification*. Retrieved December 16, 2011 from: http://www.fs.fed.us/pnw/publications/pnw_gtr286/pnw_gtr286a.pdf.

³⁴ Ager, Thomas A. and Paul E. Carrara (n.d.). *Latest Wisconsin Deglaciation and Postglacial Vegetation Development in the Turnagain Arm Area, Upper Cook Inlet, South-Central Alaska*. Retrieved December 16, 2011 from: <http://esp.cr.usgs.gov/research/alaska/turnarm.html>.

³⁵ U.S. Forest Service. (n.d.). *What types of vegetation are present? Land cover categories South-Central Alaska PNW-FIA*. Retrieved December 16, 2011 from: http://www.fs.fed.us/pnw/publications/pnw_gtr652/pnw-gtr652b.pdf.

Mineral resources in the area include Wishbone Hill coal deposit 40 mi northeast of Anchorage, and Willow Creek mineral area 40 mi north. Usibelli Coal Mine Inc. has been conducting exploration and feasibility studies determining the viability of developing Wishbone Hill.³⁶ The Willow Creek mineral area, which has a history of producing several gold prospects, is also currently being assessed for further development.³⁷ There are several thousand acres of municipal greenbelts and parkland that link settled areas with surrounding natural open space. Numerous small lakes, streams, wetlands, and wooded areas provide a range of ecological services and recreation resources.³⁸

According to the U.S. Environmental Protection Agency (EPA) there are several Superfund sites in Anchorage currently under remediation. These include white phosphorus, volatile organic compound, heavy metals, and polychlorinated biphenyl contaminants affecting soils, groundwater, and surface water within Fort Richardson Army Base; and petroleum and heavy metals threatening community aquifers within Elmendorf Air Force Base.³⁹

According to the Municipality of Anchorage Hazard Mitigation Plan, natural hazards that have the potential to impact Anchorage include earthquakes, coastal erosion, avalanches, ground failure, volcanic ash fallout, coastal and river flooding, wildfire, extreme rain and cold events, and windstorms. Unconsolidated bluffs and shorelines around the Knik Arm are susceptible to coastal erosion.⁴⁰

Current Economy^{41,42}

Anchorage went through a period of rapid growth in the 1980s. During that time, the city saw \$2.8 billion in new construction, including more than 21,000 new homes, over 2 million sq ft of new office space, and nearly four million sq ft of new retail space. Between 1982 and 1985, 19,000 jobs and 44,000 residents were added to the municipality. Top employers in 2010⁴³ included Anchorage School District 9011, State of Alaska, Providence Hospital, Municipality of Anchorage, University of Alaska, Safeway Inc., Alaska Native Tribal Health Consortium, Fred Meyer Stores, Inc., Wal-Mart Associates Inc., and the Southcentral Foundation.

When oil prices dropped in 1986, state revenues and expenditures shrank, and Anchorage's economy stalled. Many unemployed residents walked away from mortgages and rental vacancies jumped from 3% in 1982 to 25%. In that year, residential and commercial property values declined by almost half. However, in 1989 the economy rebounded, thanks in

³⁶ Usibelli Coal Mine Inc. (n.d). *Homepage*. Retrieved December 16, 2011 from <http://www.usibelli.com/>

³⁷ U.S. Geological Survey. (n.d) *Alaska Resource Data File: Anchorage quadrangle* Retrieved December 16, 2011 from: http://ardf.wr.usgs.gov/ardf_data/Anchorage.pdf.

³⁸ See footnote 29.

³⁹ U.S. Environmental Protection Agency. (n.d.). *Alaska Cleanup Sites*. Retrieved December 16, 2011 from: <http://yosemite.epa.gov/r10/cleanup.nsf/webpage/Alaska+Cleanup+Sites>

⁴⁰ HDR Alaska. (2011). *All Hazards Mitigation Plan Update*. Retrieved December 16, 2011 from: http://www.muni.org/Departments/works/project_management/Documents/Public%20Review%20Draft%20March%202011%20Haz%20Mit.pdf.

⁴¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁴² See footnote 29.

⁴³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

part to the *Exxon Valdez* oil spill. Anchorage's economy continued to grow throughout the 1990s.

Today, Anchorage is a commerce center with a diversified economy. Oil and gas industries, finance and real estate, transportation, communications, and government agencies are headquartered in Anchorage. Numerous visitor and tourist facilities and services are available. Over 13,000 military personnel are stationed at Fort Richardson and Elmendorf Air Force Base.⁴⁴ Economic assets include efficient air and marine transportation services, strategic location, modern communication infrastructure, low cost utilities, low taxes, and good quality of life.

Construction is a large economic contributor. In the 1980s, about \$3.9 billion in construction value was added to the municipality and another \$3.2 billion in the 1990s. Anchorage's development as Alaska's center of commerce continues to contribute to its sizable construction sector. Revenues from the petroleum industry make up a very sizable portion of the Alaska state budget. The industry is also an important employer and purchaser of local goods and services. As prices for oil and gas products rise globally, it is expected that the petroleum industry will continue to be large economic force within Anchorage.

Anchorage is also closely tied to national and global economies. Alaska exports many of its resources, and much of Alaska's export economy is based in Anchorage. In addition, Alaska imports a larger share of consumables than any other state. Anchorage's prosperity is tied to national and international oil, gas, minerals, timber, and seafood markets. Likewise, the flow of tourists and cargo, which are the backbone of Anchorage's transportation economy, are also dependant on national and international economies. Ted Stevens International Airport is boasted as one of the busiest air cargo ports in the United States. In the late 1980s, 1.7 million travelers passed through the airport and jet service is provided throughout the United States, Europe, and Asia. In 2010, the number of passengers served rose to over five million.⁴⁵

In 2009, an estimated 1.58 million tourists visited Alaska; directly or indirectly contributing \$1.75 billion to southcentral Alaska, and creating 17,600 jobs in the area.⁴⁶ In addition to southcentral Alaska, Anchorage acts as a starting off point for many tourists seeking other destinations throughout the state. The Alaska Railroad provides transportation to cruise ship embark/debark points in Seward and Whittier, and visitors can link to interior destinations through Fairbanks. Bus tours provide excursions to Denali, interior Alaska, and Prudhoe Bay.

In 2010,⁴⁷ the estimated per capita income was \$34,678 and the estimated median household income was \$73,004, compared to \$25,287 and \$55,546 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,⁴⁸ the real per capita income (\$33,252) and real median household income (\$73,042) indicate that both individual and

⁴⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁵ Alaska Department of Transportation and Public Facilities. (n.d.). *Ted Stevens Anchorage International Airport*. Retrieved June 14, 2012 from: <http://dot.alaska.gov/anc/>.

⁴⁶ McDowell Group. (2011). *Cruise Ship Outlook 2012*. Retrieved June 13, 2012 from: <http://www.anchoragechamber.org/userfiles/files/CruiseShipOutlook2012.pdf>.

⁴⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

household incomes stayed relatively stagnant between 2000 and 2010. In that year, Anchorage ranked 31st of 305 communities from which per capita income was estimated, and 38th of 299 communities from which median household income was estimated.

According to 2006-2010 ACS estimates, 70.7% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 5.2%, compared to an estimated 5.9% statewide; and an estimated 7.9% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 71.6% worked in the private sector, an estimated 21.7% worked in the public sector, an estimated 6.4% was self-employed, and an estimated 0.2% was unpaid family workers.

By industry sector, most (21.4%) employed residents were estimated to work in education service, health care, and social assistance sectors in 2010; followed by retail trade (10.9%) and professional, scientific, management, administrative, and waste management (10.9%) sectors. Agriculture, forestry, fishing, hunting, and mining sectors made up 3.4% of sector employment that year, compared to 3.1% in 2000 (Figure 3). By occupation type, most (39.0%) employed residents were estimated to hold management or professional positions in 2010; followed by sales or office positions (25.5%); service positions (17.4%); natural resources, construction, or maintenance positions (9.1%); and production, transportation, or material moving positions (9.0%) (Figure 4). There was very little proportional change in sector employment or occupation types between 2000 and 2010, which was reflective of the large, stable economy.

Figure 3. Local Employment by Industry in 2000-2010, Anchorage (U.S. Census).

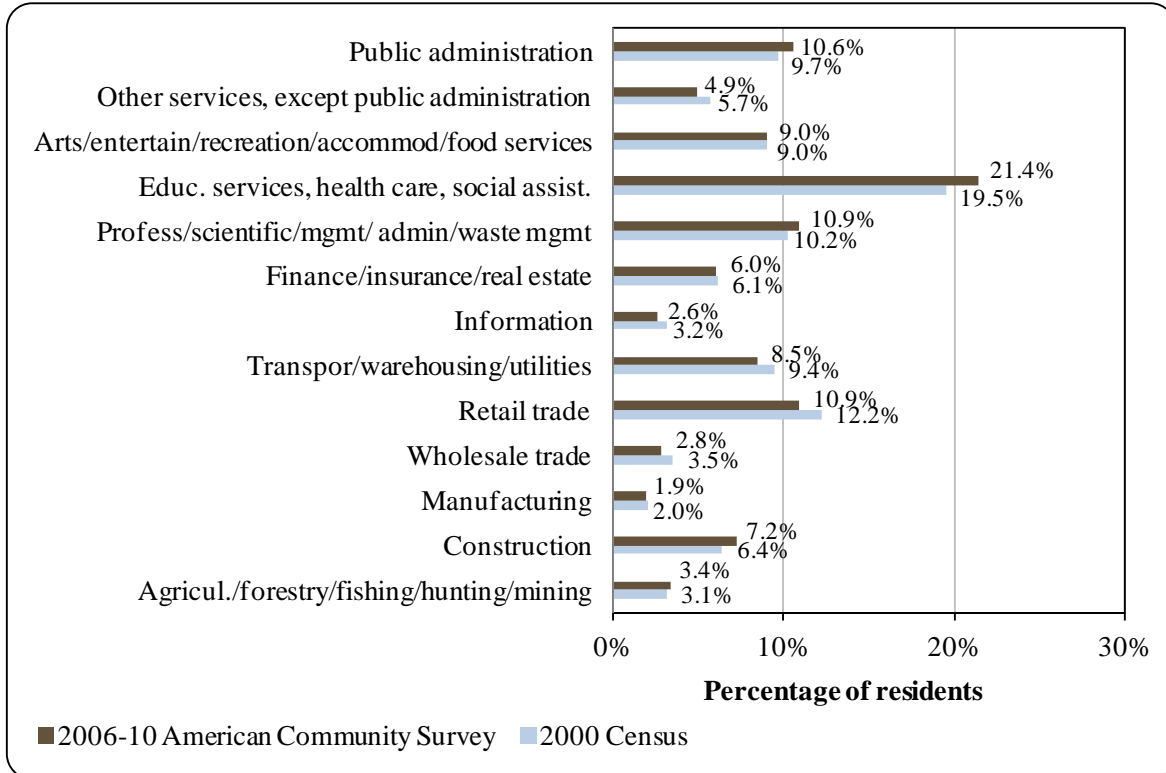
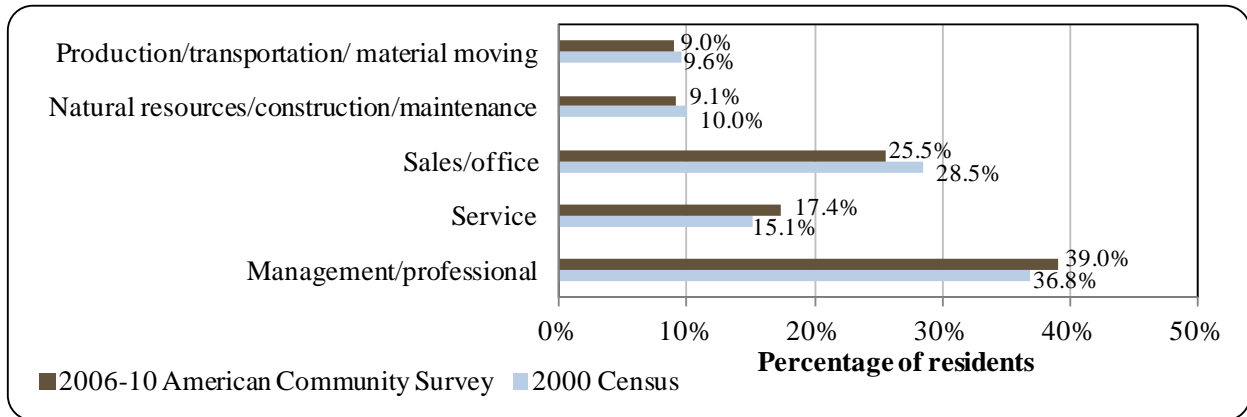


Figure 4. Local Employment by Occupation in 2000-2010, Anchorage (U.S. Census).



According to 2010 ALARI estimates,⁴⁹ most (22.3%) employed residents were estimated to work in trade, transportation, and utilities sectors; followed by education and health service sectors (14.5%); professional and business service sectors (11.5%); and leisure and hospitality sectors (11.3%). In addition, 4.1% of employed residents were estimated to work in natural resources and mining sectors.

Governance

Anchorage is a home rule municipality located within its own borough. Anchorage was not included in the Alaska Native Claims Settlement Act (ANCSA), and does not have its own federally recognized Tribal government or corporation. However, the City of Anchorage houses headquarters for offices of many regional institutions related to rural development, Native Alaska issues, commerce, communication, environment, infrastructure, fishing, education, and housing.⁵⁰ The Alaska Department of Fish and Game (ADF&G), National Marine Fisheries Service (NMFS), and U.S. Bureau of Citizenship and Immigration Services all have offices in Anchorage.

As of 2010, the city administered a 12% accommodations tax, 8% car rental tax, tobacco tax, and property tax (median rate: 15.72 mills).⁵¹ Total revenue in 2010 was \$421.4 million, compared to \$259.2 million in 2000; an increase of 25.7% after adjusting for inflation.⁵² State allocated Community Revenue Sharing accounted for 3.6% of total municipal revenues in 2010, compared to 1.4% in 2000 from State Revenue Sharing. State and federal fisheries-related grants awarded to Anchorage between 2000 and 2010 included: \$110.0 million for port expansion projects, \$198,000 for Lower Yukon salmon marketing, \$144,939 for 10th & M Seafoods processing and packaging equipment, \$25,000 for salmon marketing, \$6.3 million for harbor

⁴⁹ See footnote 43.

⁵⁰ Sepez, J. A., B. D. Tilt, C. L. Package, H. M. Lazrus, and I. Vaccaro. 2005. Community Profiles for North Pacific Fisheries – Alaska. U. S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-160, 552 p.

⁵¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵² Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

dredging, \$93,000 for seafood quality control, and \$6.0 million for dock improvements. Information regarding municipal finances can be found in Table 2.

Infrastructure

Connectivity and Transportation

Controlled airports include the state-owned Ted Stevens Anchorage International Airport and Lake Hood Float Plane Base, the municipality's Merrill Field, and U.S. Army and Air Force facilities. The Port of Anchorage handles 85% of the general cargo for the Alaska Railbelt area. There are five terminal berths, with 3,488 linear ft available. Several barge and trucking companies are available. The Alaska Railroad connects Anchorage to Seward, Whittier, and Fairbanks.⁵³ Highway networks connect Anchorage with the statewide highway system as well as the rest of the United States and Canada. Roundtrip airfare between Anchorage and Seattle in June 2012 was estimated at \$460.⁵⁴

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Anchorage from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$259,231,060	n/a	\$3,746,210	n/a
2001	\$258,381,150	n/a	\$3,176,186	\$1,000,000
2002	\$270,481,160	n/a	\$3,140,790	n/a
2003	\$283,497,130	n/a	\$3,043,987	\$2,793,000
2004	\$309,317,690	n/a	-	\$367,939
2005	\$332,772,920	n/a	-	n/a
2006	\$367,207,176	n/a	-	\$10,000,000
2007	\$399,396,750	n/a	-	\$10,000,000
2008	\$431,377,965	n/a	-	n/a
2009	\$422,421,304	n/a	\$15,018,748	\$15,000,000
2010	\$421,425,248	n/a	\$15,053,452	\$20,000,000

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

⁵³ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴ Airfare was estimated from travel websites, including <http://www.travelocity.com> (retrieved November, 2011)

Facilities

Water is diverted from three primary sources. Lake Eklutna supplies 35 million gal per day; Ship Creek Reservoir supplies 24 million gal per day; and deep wells supply another 20 million gal per day. Water is treated and piped throughout the municipality -- the Anchorage Water & Wastewater Utility maintains 670 mi of transmission and distribution mains. Most homes are served by the piped wastewater system. The John M. Asplund Wastewater Treatment Facility, built in 1972, provides primary treatment of 35 million gal of wastewater each day. Effluent is discharged into Cook Inlet. Approximately 15,000 homes use individual wells and septic systems. Eagle River and Girdwood are served by tertiary treatment facilities. Piped natural gas is available from ENSTAR Natural Gas Company and is the most prevalent and cost-effective home heating method. Electricity is provided to the core area by Anchorage Municipal Light & Power and the privately-owned Chugach Electric Association. Matanuska Electric Association serves the Eagle River and Chugiak area of Anchorage, as well as the Matanuska-Susitna Valley. In October 1997, these three utilities purchased the Eklutna Hydroelectric Facility. Anchorage Municipal Light & Power also owns 8 electrical generating facilities. Chugach Electric owns power generating facilities from the Kenai Peninsula to the Eklutna River. The municipality and privately-owned companies collect refuse for deposit into the Anchorage Regional Landfill on Hiland Road. The municipality collects hazardous wastes and waste oil. The privately-owned Anchorage Recycling Center collects cans, metal, paper, and newspaper.⁵⁵ Communications services include telephone and cable television infrastructure. Long distance fiber optic capacity for voice, video, and data transmission is available, as are transmission and receiving facilities for wireless communications. Civic facilities include the Anchorage Museum of History and Art, the Municipal Library System, Alaska Center for the Performing Arts, William A. Egan Civic and Convention Center, George M. Sullivan Arena, municipal offices, community recreation centers, public parking, Anchorage Senior Center, indoor ice rinks, and a number of parks and green spaces. Public safety services include a police headquarters, 11 substations, and a regional training center. Fire and rescue services include 10 fire stations.⁵⁶

Anchorage possesses a substantial amount of fisheries-related infrastructure, businesses, and services. The Port of Anchorage occupies 122 acres of tidelands. Facilities include three general cargo terminals providing 2,109 ft of dock face; two petroleum product terminals providing 600 ft of dock space each; loose cement offloading capability and storage; and intermodal deep-water connections via rail, road, and air.⁵⁷ In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there are ongoing fisheries-related infrastructure improvements including improvements to barge landing areas, dock space and structure, dockside utilities, transportation and connectivity, pilings, and harbor dredging. Harbor facilities are capable for handling regulated vessels, including rescue vessels, cruise ships, fuel barges, container ships, dry bulk carriers, and military vessels. Over the

⁵⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁶ Municipality of Anchorage. (2001). *Anchorage Bowl Comprehensive Plan*. Retrieved June 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Anchorage1-CP-2001.pdf>.

⁵⁷ Port of Anchorage. (n.d.). *Facilities*. Retrieved June 14, 2012 from: <http://www.portofalaska.com/operations/facilities.html>.

last 3 years, the city has seen an increase in the frequency and number of cruise ships and petroleum tankers; a trend they believe will continue. The Port of Anchorage does not have any public dock space for moorage of permanent or transient vessels, although numerous privately run moorage facilities are available.

*Medical Services*⁵⁸

Medical services include Alaska Regional Hospital, Providence Alaska Medical Center, Alaska Native Medical Center, Elmendorf AFB 3rd Medical Group, U.S. Army Medical Clinic/Fort Richardson, Air National Guard Medical Squadron/Kulis, and numerous others. Many facilities are acute, long term care facilities. In addition, a wide range of specialized care facilities are available locally.

*Educational Opportunities*⁵⁹

As of 2011, the Anchorage school district had 96 schools, 49,206 students enrolled, and 3,071 teachers employed. In addition, Anchorage is home to the University of Alaska's Anchorage campus and Alaska Pacific University. Numerous private schools and universities are also located in Anchorage.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Originally, the Kachemak tradition and Dena'ina Athabascans occupied the Cook Inlet region. Kachemak people were the first to arrive approximately 3,000 years ago followed by Dena'ina Athabascans. These groups utilized both marine and riverine ecosystems, relying on marine mammals and fish using drift nets, weirs, and dip nets, and basket traps. In general all five species of Pacific salmon and Dolly Varden char were utilized throughout the Cook Inlet.⁶⁰

The first commercial fish packing operation in the southcentral Alaska region started in 1878 by the Alaska Commercial Company at its Kenai River trading station. Large commercial salmon fisheries in the Cook Inlet did not begin until the 1880s, when a cannery was established at Kasilof. Once the fur trade collapsed in the 1890s, fur traders switched to salmon to make a living. Fish traps operated by canneries were established in the mouths of the Kenai and Kasilof rivers.⁶¹

An influx of Euro-Americans during the late 1880s gold rush brought increased competition for resources, and many Dena'ina were forced to take jobs in canneries. Instead of

⁵⁸ See footnote 55.

⁵⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶⁰ Workman, W. B., and K. W. Workman. 2010. The end of the Kachemak tradition on the Kenai Peninsula, southcentral Alaska. *Arctic Anthropology*, 47(2), pp. 90-96.

⁶¹ Fall, J. A., R. T. Stanek, B. Davis, L. Williams, R. Walker. (2004). *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Retrieved June 14, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/03-045final.pdf>

relying on traditional subsistence cycles, many Dena'ina took up a pattern of commercial fishing in the inlet and at the mouth of the Kenai River during spring and summer, and going up-river in the fall to harvest coho, hunt moose, fish for freshwater species, and trap.⁶²

During the early twentieth century, many Dena'ina and Alutiiq began using salmon resources for commercial sale. In 1904, transportation infrastructure was proliferating setting the stage for the first sport fishery on the Kenai Peninsula. Cooper Creek and Kenai Lake became destination rainbow trout fishing grounds. At that time, commercial traps at the mouth of the Kenai River, and nets upriver were beginning to severely impact salmon runs. By 1923, salmon runs on the Kenai River were severely depleted, with one dip netter recalling that only 160 fish were taken during that season when usually there would be thousands.⁶³

Homesteaders arrived on the Kenai Peninsula in the 1930s and 1940s, and commercial and subsistence fishing became important aspects of economic life. Back then, fill nets and seines were used in the Kenai, Skilak, and Tustumena Lakes to harvest northern pike, lake trout, grayling, whitefish, and char. Commercial catches were sold in Anchorage, Kenai, and Kasilof.⁶⁴

Commercial fishing for Chinook salmon in the Cook Inlet began to increase substantially during the 1940s. Before 1940, commercial fishermen harvested approximately 60,000 Chinook annually, however, over the next decade harvests would more than double. Average harvests of Chinook were about 13,000 fish during the 1960s, 12,000 fish during the 1970s, 25,000 fish during the 1980s, and 17,000 fish during the 1990s. Sockeye salmon harvests did not exceed 3 million fish in any year until 1982. Prior to that, the peak decadal average occurred in the 1940s at 1.6 million fish. Commercial harvests of sockeye averaged 4.5 million fish in the 1980s and 4.1 million fish in the 1990s. Coho salmon harvests averaged less than 400,000 annually until the 1980s when the annual commercial harvest averaged about 540,000 fish. During the 1990s average annual harvest dropped to 360,000 fish. The largest commercial harvest of pink salmon in the Cook Inlet occurred in 1952 when almost 5 million were caught. Commercial harvests of chum salmon peaked in the 1980s at an average annual catch of around 906,000 fish.⁶⁵

A commercial herring fishery began in the Lower Cook Inlet in 1914. A total of eight salteries were operating during the fisheries peak and over 7,900 tons were averaged between 1924 and 1926. In 1939, a fishery was started in and around Resurrection Bay and Day Harbor within the Eastern District. Again, peak years occurred from 1944 to 1946 where the average harvest was 16,250 tons. The fishery died out during the late 1950s due to overharvesting. A Lower Cook Inlet herring sac roe fishery began in 1969; however, it went into decline after 1973 until limits were established in 1974. However, quotas were never followed and Outer and Eastern districts were eventually closed until 1984 for stock recovery.⁶⁶

Today, the Cook Inlet is managed according to two distinct management areas: Upper and Lower Cook Inlet. The city of Anchorage plays a complex role in the Alaskan fishing industry. Historically, Anchorage was built around mining, and later petroleum. Fishing was never a central component of the city's economy in its early years. However, as fisheries

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Clark, J. H., A. McGregor, R. D. Mecum, P. Krasnowki, and A. M. Carroll. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved June 14, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶⁶ Schroeder, T. R. (1989). *A Summary of Historical Data for the Lower Cook Inlet, Alaska, Pacific Herring Sac Roe Fishery*. Retrieved June 14, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidPDFs/FRB.1989.04.pdf>

developed in the Cook Inlet and around the Kenai Peninsula, Anchorage found itself playing an increasingly important role in the support of those fisheries.

Anchorage is located in Federal Reporting Area 630, International Pacific Halibut Commission (IPHC) regulatory area 3A, and the Central Gulf of Alaska sablefish regulatory district. The community is not eligible for participation in the Community Quota Entity (CQE) program for sablefish and halibut quota.

Processing Plants

Originally founded in 1943 as a freezing facility for mink hunters, the two facilities of 10th and M Seafoods (also known as Alaska Sea Pack Inc.) in Anchorage process fresh and frozen crab, shrimp, halibut and salmon. In addition to buying fish and shellfish from various commercial fishermen from around the state, 10th and M Seafoods custom processes seafood for sport fishermen.⁶⁷

Alaska Wild Kenai Salmon owns and operates a processing facility and online seafood store in Anchorage. The facility processes fresh and frozen halibut and salmon. The salmon comes to the facility via their buying station in Ninilchik and their halibut is caught in Prince William Sound.⁶⁸

AquaTech is a family owned and operated seafood exporter with a processing facility in Anchorage. Aquatech specializes in live, fresh, and frozen King Crab. They also process and sell halibut and salmon. The Norton Sound red King Crab fishery is the only small boat, summer King Crab fishery in Alaska, taking place in July and August. Meanwhile the Bristol Bay Red King crab fishery takes place from October to December. The halibut season lasts from February through November, and collectively all five species of salmon are caught from May through the winter months.⁶⁹

Copper River Fine Seafoods is one of the three original fish companies that came together in 1996 to form Copper River Seafoods. Copper River Seafoods has a processing facility in Anchorage as well as a larger seafood processing plant in Cordova. Both its Anchorage and Cordova facilities, Copper River Seafoods collectively employs 150 fish processors (including foreign students with J-1 visas) and processes salmon (king, sockeye, coho), halibut, Pacific cod, rockfish, rock sole, red king crab and spot prawns. The processing season at its Anchorage facility begins in March and lasts until October.⁷⁰ The plant relies on public water services, power/electricity, gas, and waste management services. The plant receives fish that are already headed and gutted, and reports that it will be undergoing changes in 2012 that will change the overall character and processing capacity of the plant.⁷¹

Favco, Inc. has operated a seafood processing facility in Anchorage since 1974, processing black cod, clam, crab (Dungeness, king, snow), halibut, mussels, oysters, rockfish-

⁶⁷ 10th and M Seafoods. (n.d.). *About us*. Retrieved from: <http://www.10thandmseafoods.com/aboutus.asp>.

⁶⁸ Alaska Wild Kenai Salmon. (n.d.). *Homepage*. Retrieved from: <http://www.alaskawildkenaisalmon.com/default.htm>.

⁶⁹ AquaTech Seafood Exporter. (n.d.). *Homepage*. Retrieved from: <http://www.crabfactory.com/index.html>.

⁷⁰ Copper River Seafoods. (n.d.). *Our story*. Retrieved from: <http://www.copperriverseafood.com/Content.aspx?page=OurStory>.

⁷¹ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

snapper, salmon (Chinook, chum, coho, sockeye), scallop, shrimp and prawns.⁷² The plant operates year-round and has maximum of 35 employees, and relies on public water services, power/electricity, gas, and waste management services.

Established in 1977, Great Pacific Seafoods operates a seafood processing facility in Anchorage from January through March and from May through September, specializing in salmon and Pacific cod. During these periods Great Pacific employs as many as 100 people.⁷³

According to ADF&G's 2010 Intent to Operate list, there are two shore-based processors that go by the local name of Homer Fish Processing. Processor Code F8488 is owned by Wild Kenai Salmon and Naknek Family Fisheries, although its official port location code is Anchorage. According to the company website, this plant also goes by the name of "A Fisherman's Resort." Homer Fish Processing/A Fishermen's Resort has been family owned and operated for 5 years, and processes and smokes sockeye salmon and processes king crab.⁷⁴

Mat Valley Meats is a "full service, old-fashioned meat market" that custom processes sport game and fish and also smokes sport fish. It is actually located outside of Anchorage on the East Wasilla-Palmer Highway between Wasilla and Palmer.⁷⁵

For over 30 years Sagaya Corporation has operated a seafood retail and wholesale facility in Anchorage.⁷⁶ Sagaya's products include black cod, clam, Pacific cod, crab (Dungeness, king), halibut, lingcod, mussels, oysters, rockfish-snapper, and salmon (Chinook, chum, coho, sockeye).⁷⁷

The company Triple Threat Bait Company operates a seafood processing facility in Anchorage called Triple Threat Salmon Eggs. The facility specializes in processing salmon roe (coho and king) for bait, and prides itself in processing roe that is blood-free, fresh and hand-cured.⁷⁸

Togiak Seafoods LLC is also known to operate a seafood processing plant in Anchorage; however, little is known about its operations.

Fisheries-Related Revenue

Overall in 2010, Anchorage received \$185,120 in fisheries-revenues compared to \$80,281 in 2000. These revenues were collected from a Shared Fisheries Business tax and Fisheries Resource Landing tax. Between 2000 and 2010, fisheries-related revenue collected by the City of Anchorage was relatively insignificant, indicating that Anchorage's diverse economy isn't directly dependent on fisheries. However, the indirect importance of the fishing industry can be seen in the number of businesses and services in Anchorage which are tied to the local and statewide fishing industry. These entities, combined with the peripheral assets created by the businesses serving them, attest to Anchorage's complex relationship with Alaska's fishing communities. Information regarding fisheries-related revenue trends can be found in Table 3.

⁷² Alaska Seafood. (n.d.). *Supplier directory*. Retrieved from: <http://alaskaseafood.org/>.

⁷³ Great Pacific Seafoods Inc. (n.d.). *Homepage*. Retrieved from: <http://greatpacificseafoods.com/>

⁷⁴ Homer Alaska Fish Processing. (n.d.). *Homepage*. Retrieved from: <http://www.myalaskafish.com/>.

⁷⁵ Mat Valley Meats. (n.d.). *Homepage*. Retrieved from: <http://mvmeat.com/>.

⁷⁶ New Sagays's Markets. (n.d.). *Homepage*. Retrieved from: <http://www.newsagaya.com/>.

⁷⁷ Alaska Seafood. (n.d.) *Suppliers directory*. Retrieved from: <http://alaskaseafood.org/>.

⁷⁸ Triple Threat Salmon Eggs. (n.d.). *Homepage*. Retrieved from: <http://triplethreatsalmoneggs.com/>.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 1,009 residents, or less than 1% of the population, held a total of 1,181 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 1,073 residents held 1,416 CFEC permits. Of the CFEC permits held in 2010, 74% were for salmon, compared to 62% in 2000; 9% were for herring, compared to 11% in 2000; 6% were for halibut, compared to 10% in 2000; 5% were for “other” shellfish, compared to 1% in 2000; 2% were for groundfish, compared to 10% in 2000; 2% were for crab, compared to 3% in 2000; 2% were for sablefish, compared to 3% in 2000; and less than one-percent were for “other” finfish, compared to less than 1% in 2000. In addition, 36 residents held 41 Federal Fisheries Permits (FFP), 72 residents held 95 License Limitation Program (LLP) groundfish permits, and 24 residents held 35 LLP crab permits. Finally, residents held 11.28 million shares of halibut quota on 124 accounts in 2010, compared to 9.86 million shares on 211 accounts in 2000; 7.66 million shares of halibut quota was held on 20 accounts, compared to 2.25 million shares on 31 accounts in 2000; and 213.05 million shares of crab quota was held on 16 accounts, compared to 49.49 million shares held on 18 accounts in 2005.

Residents held 1,318 commercial crew licenses in 2010, compared to 1,378 in 2000. In addition, residents held majority ownership of 438 vessels that year, compared to 1,181 in 2000. Of the CFEC permits held in 2010, 54% were actively fished, compared to 61% in 2000. This varied by fishery from 87% of halibut permits, to 83% of sablefish, 50% of crab, 38% of groundfish, 27% of “other” shellfish, 9% of herring, and 0% of “other” finfish. In addition, 44% of FFPs, 31% of LLP crab, and 31% of LLP groundfish permits were actively fished. Fisheries prosecuted in 2010 by Anchorage residents included: Bering Sea pot king and Tanner crab; Bristol Bay pot king crab; Alaska Peninsula pot Tanner crab; statewide longline halibut; Southeast Alaska purse seine herring roe; Kodiak purse seine herring roe; Bristol Bay purse seine herring roe; Norton Sound gillnet herring roe and food/bait; statewide longline miscellaneous saltwater finfish; Gulf of Alaska pot, longline, and otter trawl miscellaneous saltwater finfish; statewide pot, otter trawl, and mechanical jig miscellaneous saltwater finfish; Prince William Sound pot shrimp; Southeast Alaska pot shrimp; statewide longline and mechanical jig sablefish; Prince William Sound fixed gear sablefish; Northern Southeast Alaska longline sablefish; Prince William Sound purse seine, set and drift gillnet salmon; Kodiak purse seine and set gillnet salmon; Chignik purse seine salmon; Alaska Peninsula purse seine, set and drift gillnet salmon; Southeast Alaska drift gillnet salmon; Cook Inlet drift and set gillnet salmon; Bristol Bay drift and set gillnet salmon; Yakutat set gillnet salmon; Kuskokwim gillnet salmon; Kotzebue gillnet salmon; Lower Yukon gillnet salmon; and statewide hand and power troll salmon.⁷⁹

In 2010, Anchorage ranked 31st of 67 communities reporting landings for that year and 31st of 67 communities in terms of ex-vessel revenue acquired from landings. In that year, 2.81 million lbs of fish were landed in Anchorage valued at \$4.13 million ex-vessel, compared to

⁷⁹ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

283,910 lbs valued at \$105,797 ex-vessel in 2001. Landings and ex-vessel revenues in 2010 were significantly higher than any other year going back to 2000. By fishery, salmon was the only species landed in Anchorage between 2001 and 2010. In 2010, 2.39 million lbs of salmon valued at \$3.69 million ex-vessel was landed, compared to 283,910 lbs valued at \$105,797 ex-vessel; an increase of \$1.01 per pound landed after adjusting for inflation,⁸⁰ and without considering the species composition of landings. In terms of landings made by Anchorage residents, salmon was most lucrative in 2010, followed by crab and Pacific cod. In that year, residents landed 37.35 million lbs of salmon valued at \$22.49 ex-vessel, compared to 25.30 million lbs valued at \$11.16 million ex-vessel in 2000; a decrease of \$0.01 per pound landed after adjusting for inflation,⁸¹ and without considering the species composition of landings. Revenues from salmon landings peaked in 2010. Crab landings that year totaled 8.55 million lbs valued at \$21.88 million ex-vessel, compared to 1.14 million lbs valued at \$3.03 million in 2000; a decrease of \$1.10 per pound landed after adjusting for inflation,⁸² and without considering the species composition of landings. Revenues from crab landings peaked in 2008 at \$30.71 million. Pacific cod landings totaled 9.59 million lbs valued at \$3.84 million ex-vessel, compared to 2.68 million lbs valued at \$932,672 in 2000; a decrease of \$0.08 per pound landed after adjusting for inflation.⁸³ Revenues from Pacific cod landings peaked in 2010. Halibut landings totaled 703,909 lbs valued at \$3.19 million ex-vessel, compared to 739,055 lbs valued at \$1.86 million in 2000; an increase of \$1.07 per pound landed after adjusting for inflation.⁸⁴ Revenues from crab landings peaked in 2008 at \$3.47 million. Sablefish landings totaled 462,738 lbs valued at \$1.58 million ex-vessel, compared to 176,365 lbs valued at \$567,867 in 2000; a decrease of \$1.01 after adjusting for inflation.⁸⁵ Revenues from sablefish landings peaked in 2010. Pollock landings totaled 4.05 million lbs valued at \$531,107 ex-vessel, compared to 5.73 million valued at \$652,283; a decrease of \$0.03 per lb landed after adjusting for inflation.⁸⁶ Revenues from pollock landings peaked in 2005 at \$1.30 million. Herring landings totaled 3.26 million lbs valued at \$264,233 ex-vessel, compared to 3.0 million lbs valued at \$346,404 in 2000; a decrease of \$0.08 per pound landed after adjusting for inflation. Revenues from herring landings peaked in 2002 at \$387,819. “Other” shellfish landings totaled 33,816 lbs valued at \$102,320, compared to 23,383 valued at \$76,729 in 2000. Revenues from “other” shellfish landings peaked in 2010. Finally, “other” groundfish landings totaled 392,172 lbs valued at \$40,854 in 2000. Revenues from “other” groundfish landings peaked in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁸⁰ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

⁸¹ Ibid.

⁸² Ibid.

⁸³ Ibid.

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Anchorage: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$80,281	\$82,750	\$41,575	\$37,946	\$51,526	\$68,777	\$53,888	\$85,247	\$60,210	\$99,112	\$184,339
Fisheries Resource Landing Tax ¹	n/a	\$1,591	\$3,045	\$2,359	\$354	\$826	\$793	\$599	\$908	\$432	\$780
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$80,281	\$84,341	\$44,619	\$40,305	\$51,880	\$69,603	\$54,681	\$85,846	\$61,118	\$99,544	\$185,120
Total municipal revenue⁵	\$259.2M	\$258.4M	\$270.5M	\$283.5M	\$309.3M	\$332.8M	\$367.2M	\$399.4M	\$431.4M	\$422.4M	\$421.4M

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Anchorage: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	73	79	83	83	82	82	84	86	97	91	95
	Active permits	22	25	26	27	27	23	19	24	26	21	30
	% of permits fished	30%	31%	31%	32%	32%	28%	22%	27%	26%	23%	31%
	Total permit holders	65	71	74	75	73	72	71	74	75	71	72
Crab (LLP) ¹	Total permits	22	22	23	24	25	24	26	27	34	33	35
	Active permits	6	7	9	10	12	12	9	10	11	9	11
	% of permits fished	27%	31%	39%	41%	48%	50%	34%	37%	32%	27%	31%
	Total permit holders	19	19	19	20	20	20	20	22	24	23	24
Federal Fisheries Permits ¹	Total permits	68	70	74	47	49	52	29	32	34	40	41
	Fished permits	1	2	1	22	16	17	15	17	17	18	18
	% of permits fished	1%	3%	1%	47%	33%	33%	52%	53%	50%	45%	44%
	Total permit holders	62	63	67	47	49	49	28	31	32	35	36
Crab (CFEC) ²	Total permits	39	41	47	49	40	38	28	22	22	26	24
	Fished permits	29	30	37	32	30	28	17	11	9	13	12
	% of permits fished	74%	73%	79%	65%	75%	74%	61%	50%	41%	50%	50%
	Total permit holders	21	26	28	28	23	29	19	18	18	20	22
Other shellfish (CFEC) ²	Total permits	20	23	19	12	16	15	14	13	14	14	59
	Fished permits	6	5	5	2	3	5	2	2	1	1	16
	% of permits fished	30%	21%	26%	16%	18%	33%	14%	15%	7%	7%	27%
	Total permit holders	18	22	18	13	14	14	13	12	13	13	57
Halibut (CFEC) ²	Total permits	142	139	129	125	110	100	87	85	79	77	67
	Fished permits	82	77	80	88	72	70	67	64	71	62	58
	% of permits fished	58%	55%	62%	70%	65%	70%	77%	75%	90%	81%	87%
	Total permit holders	137	134	124	121	105	98	86	84	78	77	67
Herring (CFEC) ²	Total permits	152	133	113	120	108	110	106	102	104	106	107
	Fished permits	38	19	19	19	9	16	10	4	5	7	10
	% of permits fished	25%	14%	17%	16%	8%	15%	9%	4%	5%	7%	9%
	Total permit holders	109	99	84	89	82	84	84	82	87	83	84

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Table 4 cont'd. Permits and Permit Holders by Species, Anchorage: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	41	39	35	37	33	29	27	25	25	24	23
	Fished permits	32	28	28	32	25	24	20	19	21	20	19
	% of permits fished	78%	72%	80%	86%	76%	83%	74%	76%	84%	83%	83%
	Total permit holders	34	34	31	35	32	28	27	24	24	23	21
Groundfish (CFEC) ²	Total permits	141	131	99	98	91	64	51	43	50	41	29
	Fished permits	49	32	23	33	29	18	15	22	20	12	11
	% of permits fished	35%	24%	23%	34%	32%	28%	29%	51%	40%	29%	38%
	Total permit holders	100	100	74	71	64	49	44	39	42	35	25
Other Finfish (CFEC) ²	Total permits	1	1	0	0	1	1	1	1	2	1	2
	Fished permits	0	1	0	0	1	0	0	0	1	0	0
	% of permits fished	0%	100%	n/a	n/a	100%	0%	0%	0%	50%	0%	0%
	Total permit holders	1	1	0	0	1	1	1	1	2	1	2
Salmon (CFEC) ²	Total permits	880	878	853	877	888	923	889	887	888	885	870
	Fished permits	631	542	451	490	505	556	511	514	504	513	511
	% of permits fished	72%	62%	53%	56%	57%	60%	57%	58%	57%	58%	59%
	Total permit holders	888	879	845	872	890	918	891	879	867	880	857
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1,416</i>	<i>1,385</i>	<i>1,295</i>	<i>1,318</i>	<i>1,287</i>	<i>1,280</i>	<i>1,203</i>	<i>1,178</i>	<i>1,184</i>	<i>1,174</i>	<i>1,181</i>
	<i>Fished permits</i>	<i>867</i>	<i>734</i>	<i>643</i>	<i>696</i>	<i>674</i>	<i>717</i>	<i>642</i>	<i>636</i>	<i>632</i>	<i>628</i>	<i>637</i>
	<i>% of permits fished</i>	<i>61%</i>	<i>53%</i>	<i>50%</i>	<i>53%</i>	<i>52%</i>	<i>56%</i>	<i>53%</i>	<i>54%</i>	<i>53%</i>	<i>53%</i>	<i>54%</i>
	<i>Permit holders</i>	<i>1,073</i>	<i>1,069</i>	<i>1,011</i>	<i>1,037</i>	<i>1,043</i>	<i>1,058</i>	<i>1,029</i>	<i>1,018</i>	<i>1,006</i>	<i>1,015</i>	<i>1,009</i>

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Anchorage: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Anchorage ²	Total Net Pounds Landed In Anchorage ^{2,5}	Total Ex-Vessel Value Of Landings In Anchorage ^{2,5}
2000	1,378	8	17	1,181	390	2	--	--
2001	1,185	13	16	1,128	379	6	283,910	\$105,797
2002	972	28	16	1,056	362	12	280,150	\$117,750
2003	1,112	6	13	982	317	12	688,840	\$235,079
2004	1,018	20	16	961	308	27	71,986	\$55,011
2005	1,103	7	15	435	170	10	154,964	\$61,104
2006	1,105	4	14	417	147	10	76,355	\$79,624
2007	1,131	3	15	413	139	5	--	--
2008	1,261	29	17	413	128	18	263,848	\$341,418
2009	1,174	17	11	393	125	36	173,400	\$169,340
2010	1,318	11	13	438	132	200	2,814,278	\$4,128,378

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Anchorage: 2000-2010.

Year	Number Of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Lbs)
2000	211	9,858,411	1,305,305
2001	211	10,293,078	1,615,748
2002	210	10,122,764	1,669,019
2003	209	10,653,955	1,720,876
2004	188	10,291,088	1,726,005
2005	175	9,644,945	1,581,485
2006	173	9,641,776	1,491,819
2007	155	9,769,094	1,482,889
2008	139	10,187,876	1,534,919
2009	136	10,613,100	1,455,170
2010	124	11,277,243	1,414,021

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Anchorage: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	31	2,254,088	205,507
2001	27	6,526,899	590,362
2002	31	7,159,972	648,906
2003	27	5,523,624	605,791
2004	24	5,733,754	707,720
2005	23	5,101,950	585,989
2006	24	5,549,606	632,671
2007	21	5,216,090	554,311
2008	21	7,406,255	788,455
2009	21	7,397,266	779,757
2010	20	7,656,130	752,348

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Anchorage: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	18	49,486,504	1,832,134
2006	18	108,321,961	3,172,778
2007	18	145,295,967	7,040,995
2008	18	172,729,655	7,802,512
2009	18	167,712,109	5,504,516
2010	16	213,051,176	8,043,956

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Anchorage: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	283,910	277,882	687,534	71,986	154,964	76,355	--	263,848	173,400	2,390,051
<i>Total²</i>	--	283,910	277,882	687,534	71,986	154,964	76,355	--	263,848	173,400	2,390,051
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	\$105,797	\$108,102	\$230,524	\$55,011	\$61,104	\$79,624	--	\$341,418	\$169,340	\$3,691,676
<i>Total²</i>	--	\$105,797	\$108,102	\$230,524	\$55,011	\$61,104	\$79,624	--	\$341,418	\$169,340	\$3,691,676

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Anchorage Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	1,139,849	1,456,434	1,838,119	1,683,501	638,252	1,288,695	3,197,309	8,837,818	12,260,390	10,290,408	8,545,836
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	739,055	1,131,736	1,530,571	944,748	918,318	931,005	824,596	783,409	804,034	774,674	703,909
Herring	3,001,299	1,729,257	3,176,863	3,635,437	2,192,311	3,452,879	2,534,519	--	--	--	3,256,199
Other Groundfish	3,494,026	2,881,464	2,645,126	2,721,406	1,661,552	1,829,664	74,364	53,268	94,347	79,894	392,172
Other Shellfish	23,383	40,029	25,088	--	33,971	86,700	18,375	19,227	14,841	19,587	33,816
Pacific Cod	2,684,599	6,590,379	5,588,725	4,705,250	2,238,158	3,429,448	1,892,093	2,108,014	3,000,155	1,300,065	9,589,051
Pollock	5,725,299	9,736,018	7,707,131	--	8,345,330	10,601,818	674,225	82,888	881,414	1,126,468	4,047,146
Sablefish	176,365	128,202	431,950	178,798	175,423	177,056	120,704	120,632	102,204	287,102	462,738
Salmon	25,301,658	20,663,916	18,225,515	22,518,015	18,727,774	38,613,718	21,967,003	34,328,541	29,846,812	26,140,568	37,354,398
<i>Total²</i>	<i>42,285,533</i>	<i>44,357,436</i>	<i>41,169,088</i>	<i>36,387,155</i>	<i>34,931,089</i>	<i>60,410,983</i>	<i>31,303,188</i>	<i>46,333,797</i>	<i>47,004,197</i>	<i>40,018,766</i>	<i>64,385,265</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$3,030,446	\$3,564,094	\$4,742,912	\$4,405,881	\$1,982,598	\$3,961,138	\$6,152,759	\$22,695,386	\$30,714,734	\$20,613,628	\$21,875,085
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$1,862,759	\$2,205,565	\$3,400,568	\$2,674,758	\$2,705,470	\$2,744,688	\$2,985,234	\$3,362,554	\$3,469,089	\$2,294,938	\$3,192,574
Herring	\$346,404	\$142,630	\$387,819	\$296,297	\$161,697	\$304,191	\$182,361	--	--	--	\$264,233
Other Groundfish	\$402,976	\$382,234	\$233,880	\$245,340	\$140,135	\$210,301	\$23,443	\$22,335	\$30,192	\$17,862	\$40,854
Other Shellfish	\$76,729	\$100,635	\$62,164	--	\$47,078	\$90,592	\$87,947	\$87,813	\$22,009	\$42,167	\$102,320
Pacific Cod	\$932,672	\$2,151,111	\$1,597,678	\$1,320,946	\$575,517	\$930,783	\$710,473	\$1,003,236	\$1,726,350	\$377,816	\$3,835,238
Pollock	\$652,283	\$1,128,586	\$810,363	--	\$855,585	\$1,297,047	\$87,465	\$9,955	\$181,822	\$212,755	\$531,107
Sablefish	\$567,867	\$389,995	\$632,048	\$560,815	\$472,317	\$466,432	\$320,341	\$323,180	\$337,144	\$937,898	\$1,583,587
Salmon	\$11,160,836	\$6,881,383	\$6,144,455	\$7,728,245	\$8,237,514	\$12,084,991	\$11,065,449	\$14,938,506	\$16,764,251	\$14,826,204	\$22,491,184
<i>Total²</i>	<i>\$19,032,971</i>	<i>\$16,946,232</i>	<i>\$18,011,887</i>	<i>\$17,232,282</i>	<i>\$15,177,910</i>	<i>\$22,090,161</i>	<i>\$21,615,474</i>	<i>\$42,442,965</i>	<i>\$53,245,592</i>	<i>\$39,323,268</i>	<i>\$53,916,182</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Anchorage's position as a point of entry for many of Alaska's visitors has encouraged many regional tourism related businesses to locate themselves within the city. However, the Anchorage area itself is not as popular a destination for sportfishing when compared to the Kenai Peninsula, Lower Cook Inlet, Prince William Sound, and Gulf of Alaska. For local anglers, popular streams and rivers include the Eklutna and Eagle rivers; and Thunderbird, Ship, and Bird creeks. However, there are many other drainages and lakes within the municipality which offer sportfishing opportunities.⁸⁷ Many local outfitters serve the greater southcentral Alaska area, and are not limited to Knik and Turnagain arms.

In 2010, there were a total of 48 sportfish guide businesses active in Anchorage, compared to 99 in 2000. The number of active sportfish guide businesses declined steadily between 2000 and 2010, from its peak in 2000 and 2001, to its lowest in 2000. Also in 2010, residents held 299 sportfish guide licenses, compared to 651 in 2000. The number of sportfish guide licenses held in Anchorage peaked in 2004 before declining significantly. Also in that year, there were a total of 101,073 sportfishing licenses sold locally, compared to 75,997 in 2000. The number of locally sold sportfish licenses peaked in 2005 at 114,509. Finally, residents were sold 79,066 sportfishing licenses in 2010, compared to 77,142 in 2000. Sportfishing licenses sold to residents peaked in 2004 at 80,571.

Anchorage is located within the Anchorage ADF&G Harvest Survey Area which includes all waters bounded by the Eklutna River to the north; Knik Arm to the west; Turnagain Arm, to Ingram Creek in the South; and the Chugach Mountains to the east. In 2010, there were a total of 1,675 saltwater and 60,029 freshwater angler days fished, compared to 2,197 and 165,302 in 2000, respectively. In that year, non-Alaska residents accounted for 5% of freshwater angler days fished, compared to 6% in 2000. In addition, non-Alaska residents accounted for 11% of freshwater angler days fished that year, compared to 9% in 2000. According to ADF&G Harvest Survey data,⁸⁸ local private anglers target all five species of Pacific salmon, landlocked salmon, rainbow trout, Dolly Varden char, cutthroat trout, whitefish, Arctic grayling, northern pike, sheefish, Pacific halibut, lingcod, Pacific cod, shark, smelt, steelhead trout, sablefish, Dungeness crab, Tanner crab, razor clams, hardshell clams, shrimp, and other finfish and shellfish. Information regarding recreational fishing trends can be found in Table 11.

⁸⁷ Alaska Outfitting. (n.d.). *Fishing the Anchorage Area*. Retrieved June 18, 2012 from: <http://www.alaskanoutfitting.com/fishing/Anchorage/anchorage.shtml>.

⁸⁸ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Anchorage: 2000-2010.

Year	Active Sportfish guide businesses ¹	Sportfish guide licenses ¹	Sportfishing licenses sold to residents ²	Sportfishing licenses sold in Anchorage ²
2000	99	651	77,142	75,997
2001	99	689	78,196	77,475
2002	80	719	76,404	74,227
2003	76	717	79,010	102,271
2004	81	729	80,571	113,036
2005	81	361	80,290	114,509
2006	73	352	76,771	108,472
2007	76	350	75,505	105,002
2008	66	350	75,153	102,045
2009	60	306	79,701	97,649
2010	48	299	79,066	101,073

Year	Saltwater		Freshwater	
	Angler days fished – non-Alaska residents ³	Angler days fished – Alaska residents ³	Angler days fished – non-Alaska residents ³	Angler days fished – Alaska residents ³
2000	128	2,069	14,294	151,008
2001	333	1,944	17,755	115,480
2002	378	3,115	13,805	94,502
2003	502	2,741	12,024	88,737
2004	221	1,030	10,128	90,564
2005	471	2,199	15,429	82,942
2006	208	1,332	13,292	88,968
2007	1,056	4,486	9,625	76,714
2008	135	2,842	11,224	96,920
2009	585	2,031	8,755	68,372
2010	85	1,590	6,790	53,239

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence activities do not hold the same importance in Anchorage as they do in more rural locations; however, residents still take advantage of subsistence and personal use fisheries. A significant number of Anchorage residents travel to the Kenai Peninsula to take advantage of personal-use fisheries in the area.

Of the species listed by ADF&G in Table 13, sockeye salmon were harvested most, followed by Chinook, coho, pink, and chum salmon. In 2008, residents reported harvesting 39,595 salmon, compared to 58,064 in 2000. Sockeye accounted for 92% of salmon harvests in both years. In addition, harvests reported by Anchorage residents accounted for 3.8% of total subsistence salmon harvests reported statewide for 2010. Reported salmon harvests peaked in 2001 at 74,529 fish. In 2010, residents held 232 Subsistence Halibut Registration Certificates (SHARC), compared to 176 in 2003. In that year, 15,344 lbs was harvested on 52 SHARC cards, compared to 11,584 lbs harvested on 38 SHARC in 2003. Between 2010 and 2000, an estimated 573 sea otters were harvested. Estimated sea otter harvests peaked in 2006 at 105. Between 2000 and 2007, an estimated seven walrus were harvested. Estimated walrus harvests peaked in 2002 at three. Between 2000 and 2008, an estimated 1 Steller sea lion and 337 harbor seals were harvested. Estimated harbor seal harvests peaked in 2003 at 55. Finally, an estimated 6 polar bears were harvested between 2003 and 2005. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Anchorage: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Anchorage: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	3,322	3,115	2,823	276	1,592	32	53,341	n/a	n/a
2001	3,801	3,510	2,572	61	1,352	8	70,536	n/a	n/a
2002	2,547	2,336	2,159	30	958	37	44,807	n/a	n/a
2003	2,394	2,179	1,691	122	964	390	41,901	n/a	n/a
2004	3,148	2,657	2,420	106	1,356	414	52,315	n/a	n/a
2005	2,860	2,353	1,632	158	673	169	57,101	n/a	n/a
2006	2,791	2,258	1,714	131	616	91	53,216	n/a	n/a
2007	2,881	2,453	2,076	167	492	86	56,996	n/a	n/a
2008	3,017	2,598	1,651	167	1,035	320	36,422	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Anchorage: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	176	38	11,584
2004	226	47	34,552
2005	240	40	23,871
2006	253	54	20,269
2007	314	67	16,415
2008	215	48	7,692
2009	227	52	12,991
2010	232	30	15,344

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Anchorage: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	25	1	n/a	n/a	44	n/a
2001	n/a	22	2	n/a	1	45	n/a
2002	n/a	33	3	n/a	n/a	40	n/a
2003	n/a	60	n/a	1	n/a	55	n/a
2004	n/a	58	n/a	4	n/a	47	n/a
2005	n/a	63	n/a	1	n/a	25	n/a
2006	n/a	105	n/a	n/a	n/a	25	n/a
2007	n/a	68	1	n/a	n/a	27	n/a
2008	n/a	66	n/a	n/a	n/a	29	n/a
2009	n/a	26	n/a	n/a	n/a	n/a	n/a
2010	n/a	47	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Palmer (PALL-mur)



People and Place

Location

Palmer is located in the center of the lush farmlands of the Matanuska Valley, between the Talkeetna and Chugach mountains. The City is situated on the west bank of the Matanuska River, just north of its junction with the Knik River. Palmer is 42 miles northeast of Anchorage on the Glenn Highway. It is located in the Palmer Recording District and the Matanuska-Susitna (Mat-Su) Borough Census Area. The City encompasses 3.8 square miles of land and 0 square miles of water.^{89,90}

*Demographic Profile*⁹¹

In 2010, there were 5,937 residents in Palmer, ranking it as the 18th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Palmer more than doubled. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 22%. The average annual growth rate during this period was 0.67%, reflecting a consistent upward trend with small declines in some years. According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders indicated that seasonal workers or transients are present in Palmer between May and September, and the population of the community typically peaks between June and August. They also reported that population fluctuations are only slightly driven by employment in fisheries sectors.

In 2010, the majority of the population of Palmer identified themselves as White (79.1%), along with 9.2% who identified as American Indian or Alaska Native, 1.8% as Black or African American, 1.1% as Asian, 0.4% as Native Hawaiian and Other Pacific Islander, 0.8% as 'some other race', and 7.6% who identified with two or more races. In addition, 4.6% of Palmer's population identified themselves as Hispanic in 2010. The percentage of the population made up of White residents decreased from 88.6% in 1990 to 80.9% in 2000, and 79.1% by 2010. At the same time the percentage of the population made up by American Indians and Alaska Natives increased from 7.7% in 1990 to 8.2% in 2000, and 9.2% by 2010. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

⁸⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁰ City of Palmer, Palmer Planning Team and Agnew:Beck Consulting. 2006. *City of Palmer Comprehensive Plan*. Retrieved March 12, 2012 from <http://www.commerce.state.ak.us/dca/plans/Palmer-CP-2006.pdf>.

⁹¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

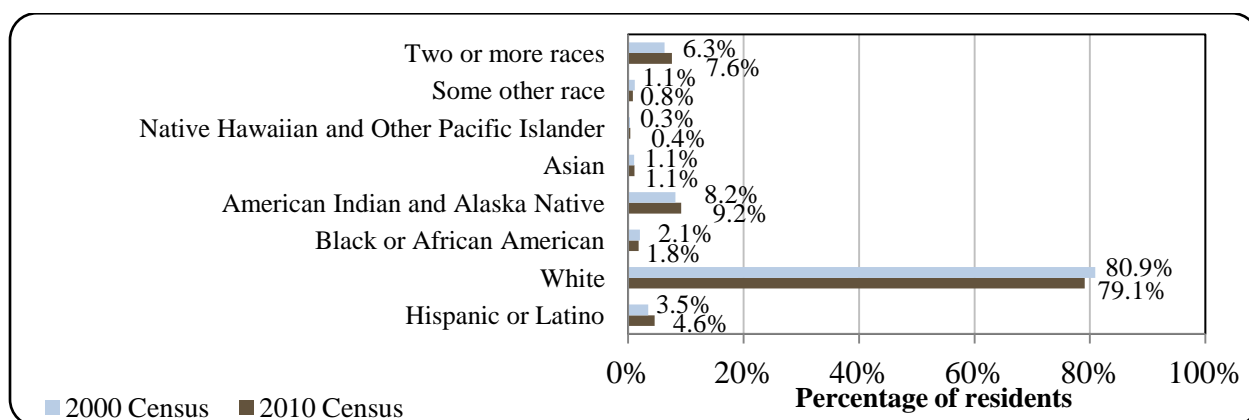
Table 1. Population in Palmer from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	2,866	-
2000	4,533	-
2001	-	4,581
2002	-	4,837
2003	-	5,261
2004	-	5,221
2005	-	5,308
2006	-	5,444
2007	-	5,417
2008	-	5,395
2009	-	5,532
2010	5,937	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Palmer: 2000-2010 (U.S. Census).



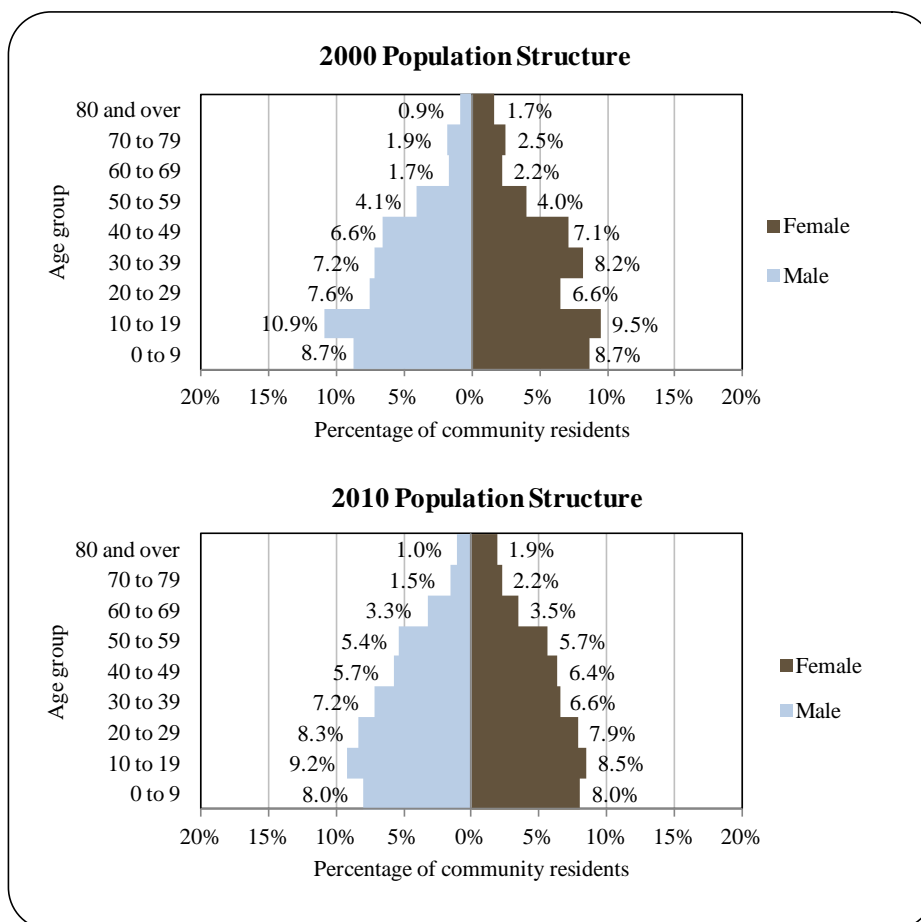
Based on the U.S. Census, the average household size in Palmer remained relatively stable between 1990 and 2010, increasing from 2.7 to 2.81 between 1990 and 2000, and decreasing again to 2.7 in 2010. The number of households in Palmer increased over time, from 998 households in 1990 and 1,472 in 2000, to 2,113 in 2010. Of the 2,281 housing units surveyed for the 2010 U.S. Census, 54.5% were owner-occupied, 38.1% were rented, and 7.4% were vacant or used only seasonally. In 2010, 423 Palmer residents were living in group quarters.

In 2010, there were more women than men in Palmer (population 49.5% male and 50.5% female). In comparison, the state population had more men than women overall (52% male, 48% female). The median age of Palmer residents was 38.8 years, lower than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, there was a relatively even

distribution of males and females across age groups. That year, 13.4% of Palmer’s population was 60 or older. The population structure of Palmer in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁹² 89.4% of Palmer residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 3.8% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 6.8% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 30.6% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 7.7% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 13.8% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 6.4% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Palmer Based on the 2000 and 2010 U.S. Decennial Census.



⁹² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Starting around 1000 A.D., the Matanuska Valley was the home of two groups of Athabascan Indians, the Ahtna and Dena'ina.⁹³ The Athabascan people migrated seasonally, traveling in small groups to fish, hunt, and trap. They traditionally lived in small groups of 20 to 40 people that moved systematically through their resource territories. Annual summer fish camps for the entire family and winter villages served as base camps.⁹⁴ Historical accounts and oral traditions suggest that at least two villages were located at the head of Knik Arm, near the mouth of the Knik and Matanuska Rivers, and another village was once located near Palmer.⁹⁵

During the time of Russian fur trading, the Ahtna traveled along the Matanuska River, transporting furs from the Dena'ina to Copper Fort near Chitina.⁹⁶ George Palmer is said to have arrived in 1875. He was a trader in Knik and established a trading post on the Matanuska River around 1890. A railway siding was constructed in Palmer in 1916. In 1935, Palmer became the site of one of the most unusual experiments in American history: the Matanuska Valley Colony. The Federal Emergency Relief Administration, one of the many New Deal relief agencies created by President Roosevelt, planned an agricultural colony in Alaska. Two hundred and three families, mostly from Michigan, Wisconsin, and Minnesota, were invited to join the colony. They arrived in Palmer in the early summer of 1935. Although the failure rate was high, many of their descendants still live in the Valley today. The City of Palmer was formed in 1951. Construction of the statewide road system and the rapid development of Anchorage have fueled growth in the area. Today, the Valley is renowned for the annual Alaska State Fair.⁹⁷

Natural Resources and Environment

Palmer is influenced by both continental and maritime climate patterns. Temperatures in January range from -36 to 51 °F and from 37 to 85 °F in July. Annual precipitation averages 16.5 inches, with 50 inches of snowfall.⁹⁸ The landscape around Palmer is primarily bottomland spruce-poplar forest, typical of floodplains and low river terraces.⁹⁹ As of 2008, the State of Alaska owned approximately 1.8 million acres of timber lands in the Matanuska and Susitna Valleys. Timber harvest for use as lumber has decreased in recent decades.¹⁰⁰ Relatively level, deep and easily tilled soils in the area allowed the development of a thriving agricultural industry in the Matanuska Valley historically.¹⁰¹ The Matanuska Valley continues to produce vegetables

⁹³ City of Palmer, Palmer Planning Team and Agnew:Beck Consulting. 2006. *City of Palmer Comprehensive Plan*. Retrieved March 12, 2012 from <http://www.commerce.state.ak.us/dca/plans/Palmer-CP-2006.pdf>.

⁹⁴ Alaska Native Heritage Center. 2008 *Athabascans - Who We Are*. Retrieved January 9, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/athabascan/.

⁹⁵ See footnote 93.

⁹⁶ Ibid.

⁹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁸ Ibid.

⁹⁹ See footnote 93.

¹⁰⁰ Metiva, M., and D. Hanson. 2008. *Mat-Su Comprehensive Economic Development Strategy: December 2008 Update*. Mat-Su Resource Conservation & Development Center and Mat-Su Borough. Retrieved March 13, 2012 from <http://www.matsugov.us/>.

¹⁰¹ See footnote 93.

and potatoes, and as of 2008 had four operating dairy farms. However, the role of agriculture has declined as a percentage of the modern economy, and increased housing development has placed pressure on the best agricultural lands.¹⁰²

Popular recreation sites near Palmer include Hatcher Pass Public Use Area, Crevasse-Moraine Trails, Kepler Lake, Bonnie Lake, Finger Lake, and Long Lake.¹⁰³ Hatcher Pass Public Use Area is located 15 miles north of Palmer on the Little Susitna River. This area provides for a variety of recreational activities, including recreational gold panning. It has also been identified as important habitat for spawning, rearing, and migration of anadromous fish. Permits are required to ensure that recreational mining activities do not conflict with habitat considerations.¹⁰⁴ The 130,000-acre Matanuska Valley Moose Range is also located north of Palmer. Created in 1984, the Range is managed for wildlife habitat, coal, and timber production, and public recreation, with grazing as a secondary land use.¹⁰⁵ Northeast of Palmer, the Nelchina Public Use Area (NPUA) encompasses approximately 2.5 million acres of the Talkeetna Mountains. The NPUA was established in 1985 for the protection of fish and wildlife habitat, including caribou calving areas, trumpeter swan nesting areas, and habitat for moose, Dall sheep, and brown bear, as well as to perpetuate and enhance public uses including wildlife hunting and viewing, and recreation. Recreational mining activities are also allowed within area boundaries, with restrictions during caribou calving season.¹⁰⁶

In 2010, the most important commercial mineral export from the Matanuska Valley was sand and gravel.¹⁰⁷ Additional mining activity in Southcentral Alaska included continued exploration by Full Metal Minerals Ltd. and Harmony Gold Corp. at the Lucky Shot gold property, located just northwest of Palmer. To the northeast of the City, Usibelli Coal Mine Inc. continued to develop coal deposits at the Wishbone Hill coal property near Sutton. The Mat-Su Borough granted Usibelli a 25-year lease to 60 acres of land. Usibelli estimated that approximately one-half million tons of bituminous coal is buried near the surface in the western portion of the coal lease area.¹⁰⁸ Some oil and natural gas exploration and production activity is also taking place within the Borough. Several coal bed methane leases have been granted, including a pilot project on 840 acres of farmland near Palmer that is being developed by Fowler Oil and Gas Corporation.¹⁰⁹

Natural hazards that have been identified in Palmer include earthquakes, and flood and erosion hazards.¹¹⁰ Three types of earthquakes have the potential to occur in the Mat-Su Borough, including those caused by subduction of the Pacific Plate under the North American Plate, transform earthquakes caused by plates sliding past each other, and intraplate earthquakes that occur within a tectonic plate, sometimes at great distance from the edge of a plate.

¹⁰² See footnote 100.

¹⁰³ See footnote 97.

¹⁰⁴ Alaska Dept. of Natural Resources. 2012. *Fact Sheet: Hatcher Pass Public Use Area*. Retrieved March 13, 2012 from http://dnr.alaska.gov/mlw/factsht/mine_fs/hatcherp.pdf.

¹⁰⁵ Alaska Dept. of Natural Resources. (n.d.). *Matanuska Valley Moose Range Management Plan*. Retrieved March 13, 2012 from http://dnr.alaska.gov/mlw/planning/mgtplans/mat_valley/pdf/Summary_Brochure.pdf.

¹⁰⁶ Alaska Dept. of Natural Resources. 2000. *Fact Sheet: Nelchina Public Use Area*. Retrieved March 13, 2012 from http://dnr.alaska.gov/mlw/factsht/nelchina_pua.pdf.

¹⁰⁷ See footnote 100.

¹⁰⁸ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

¹⁰⁹ See footnote 100.

¹¹⁰ See footnote 93.

Approximately 11% of the world's earthquakes take place in Alaska, at a rate of about one earthquake per year.¹¹¹ Although 99% of the City of Palmer is located outside of the range of flooding from the Matanuska River, river erosion threatens homes located close to its banks, as well portions of an old railroad line that runs north out of Palmer.¹¹² Additional high risk natural hazards in the Mat-Su Borough include wildfire and severe weather.¹¹³

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Palmer as of July 2012.¹¹⁴

Current Economy¹¹⁵

According to a survey conducted by the AFSC in 2011, community leaders reported that natural resource-based industries are not a primary component of the local economy. The surrounding Matanuska Valley has a history of agricultural production, although population growth in the region has led to conversion of much of this land to subdivisions, and Palmer has evolved from rural, to bedroom community, to an independent commercial and employment center.¹¹⁶ In the 2011 AFSC survey, community leaders indicated that although Palmer is not a port city, fishing vessels are owned by residents. In 2010, 39 Palmer residents were the primary owner of a fishing vessel, and 92 residents held commercial fishing permits (see *Commercial Fishing* section of this profile).

In 2010, top employers in Palmer included the State of Alaska, the Mat Su Borough School District, retail and other services, the City and the Borough.¹¹⁷ Many Palmer residents also commute to Anchorage for employment. Some light manufacturing occurs locally. In addition, Palmer is also home to 200 musk oxen whose underwool (qiviut) is knitted into garments by Alaska Native women from several rural villages. Between 2,500 and 3,500 garments are created each year by these women and sold by an Anchorage cooperative. The 75-acre musk ox farm is a tourist attraction. The university has an Agricultural and Forestry Experiment Station Office and a district Cooperative Extension Service office in Palmer. The University's Matanuska Research Farm is also located in Palmer.¹¹⁸

Based on household surveys conducted for the 2006-2010 ACS,¹¹⁹ in 2010, the per capita income in Palmer was estimated to be \$22,709 and the median household income was estimated

¹¹¹ Adler, B. 2008. *Mat-Su Borough All-Hazards Mitigation Plan: Phase One – Natural Hazards*. Mat-Su Borough Department of Emergency Services. Retrieved March 13, 2012 from http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Mat_Su_Boro_HMP.pdf.

¹¹² City of Palmer, Palmer Planning Team and Agnew:Beck Consulting. 2006. *City of Palmer Comprehensive Plan*. Retrieved March 12, 2012 from <http://www.commerce.state.ak.us/dca/plans/Palmer-CP-2006.pdf>.

¹¹³ See footnote 111.

¹¹⁴ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹¹⁵ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁶ See footnote 112.

¹¹⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF)

to be \$54,706. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$17,203 and \$45,571, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,¹²⁰ the per capita income is shown to have remained stable (real per capita income was \$22,622 in 2000), and median household income is shown to have decreased (real median household income was \$59,925 in 2000). In 2010, Palmer ranked 129th of 305 Alaskan communities with per capita income data that year, and 103rd in median household income, out of 299 Alaskan communities with household income data.

However, Palmer's small population size may have prevented the ACS from accurately portraying economic conditions.¹²¹ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Palmer in 2010 is \$13,301.¹²² This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Palmer between 2000 and 2010. Palmer was not recognized as "distressed" by the Denali Commission in 2010.¹²³ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a lower percentage of Palmer residents were estimated to be in the civilian labor force (54.2%) than were estimated to be in the civilian labor force statewide (68.8%). In the same year, 18.1% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 7.7%, compared to a statewide unemployment rate of 5.9%. In contrast, an unemployment estimate based on the ALARI database indicates that the unemployment rate in 2010 was 13.2%, slightly higher than the statewide unemployment rate estimate of 11.5% derived from that source.¹²⁴

Also based on the 2006-2010 ACS, a majority of Palmer's workforce was estimated to be employed in the private sector (69.5%), along with 25.1% in the public sector, and 5.4% estimated to be self-employed. Of the 2,308 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in educational services, health care, and social assistance (25.2%), arts, entertainment, recreation, and accommodation and food services (11.8%), and retail trade (10.9%). That year, 4.2% of the employed civilian labor force in Palmer was estimated to work in agriculture, forestry, fishing and hunting, and mining. However, the number of individuals employed in

Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²² See footnotes 117 and 119.

¹²³ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹²⁴ See footnote 117.

farming, fishing, and forestry industries is likely underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Palmer (U.S. Census).

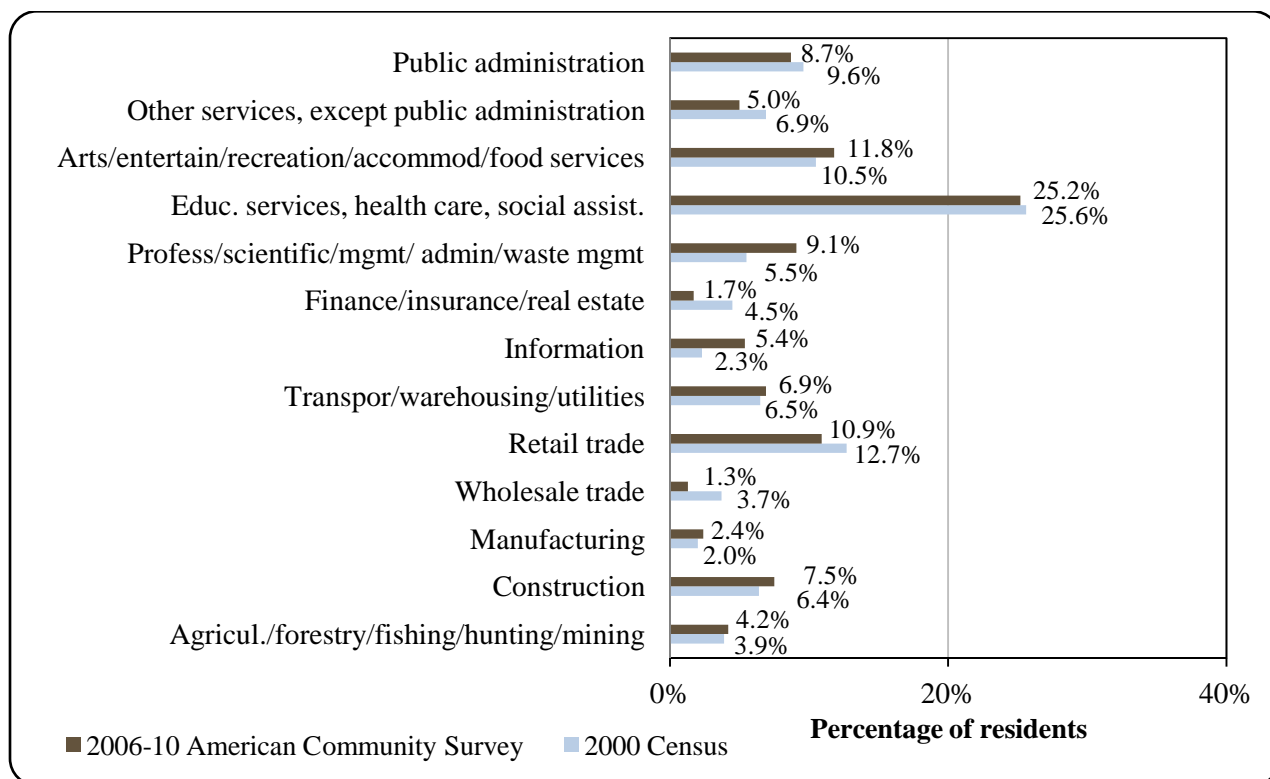
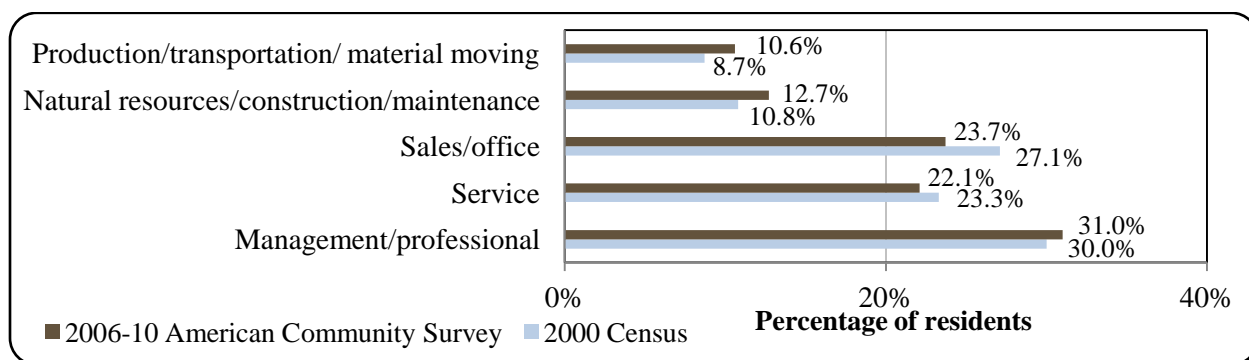


Figure 4. Local Employment by Occupation in 2000-2010, Palmer (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 2,423 employed residents in Palmer in 2010, of which 21% were employed in trade, transportation, and utilities, 15.4% in education and health services, 12.8% in leisure and hospitality, 10.2% in local government, 9% in construction, 8.8%

in professional and business services, 6.9% in state government, 4.5% in natural resources and mining, 3.5% in information, 3.3% in financial activities, 0.9% in manufacturing, 0.2% in unknown industries, and 3.5% in other industries.¹²⁵ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Governance

Palmer is a Home Rule City in the Mat-Su Borough. The City was incorporated in 1951 and has a Strong Mayor form of government, with a seven-person city council including the Mayor, a seven-person advisory school board, a seven-person planning and zoning commission, and a number of municipal employees. The City administers a 3% sales tax, and the Borough administers a 5% Bed Tax and 5.74% Tobacco and Cigarette Tax. Together, the City and Borough require a 12.961 mills property tax.¹²⁶ In addition to local tax revenues, other locally-generated income sources in Palmer between 2000 and 2010 included license and permit fees and charges for services including fire protection and police dispatch, equipment and building rentals, community center and library fees, planning and zoning, and public safety. Outside revenue sources included state maintenance contracts, state and federal grants, and various sources of shared revenue. The City received State Revenue Sharing contributions of between \$110,000 and \$134,000 each year from 2000 to 2003, and Community Revenue Sharing contributions of approximately \$375,000 per year in 2009 and 2010. Other sources of shared revenue included state electric and telephone co-op tax refund and state fish tax refunds in some years (see the *Fisheries-Related Revenue* section). No information was reported regarding fisheries-related grants received by Palmer between 2000 and 2010. Information about selected aspects of Palmer's municipal revenue is presented in Table 2.

Palmer was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.¹²⁷ Offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Natural Resources are located in Palmer. The nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Commerce, Community, and Economic Development and the U.S. Bureau of Citizenship and Immigration Services are located in Anchorage.

¹²⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁷ Ibid.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Palmer from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$6,641,064	\$2,464,268	\$134,124	n/a
2001	\$6,103,523	\$2,760,798	\$112,231	n/a
2002	\$6,225,911	\$2,914,417	\$110,887	n/a
2003	\$6,616,419	\$3,066,089	\$116,537	n/a
2004	\$7,107,856	\$3,640,723	n/a	n/a
2005	\$8,117,491	\$3,829,234	n/a	n/a
2006	\$8,498,171	\$3,980,530	n/a	n/a
2007	\$10,611,832	\$4,416,002	n/a	n/a
2008	\$11,590,345	\$4,818,801	n/a	n/a
2009	\$12,122,507	\$4,946,081	\$379,588	n/a
2010	\$11,443,914	\$5,207,143	\$373,439	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Palmer lies 42 miles northeast Anchorage on the Glenn Highway. Commercial airlines serve the Ted Stevens Anchorage International Airport in Anchorage, but the Palmer Municipal Airport supports private and chartered services with two paved airstrips, one at 6,009 ft long by 100 ft wide and the other at 3,617 ft long by 75 ft wide.¹²⁸ The Alaska State Division of Forestry bases its wildland firefighting operations out of the Palmer Municipal Airport.¹²⁹ There are also several privately-owned airstrips in the vicinity. Float planes may land at nearby Finger Lake and Wolf Lake. The Alaska Railroad connects Palmer to Whittier, Seward, and Anchorage for ocean freight delivery.¹³⁰

¹²⁸ Ibid.

¹²⁹ Adler, B. 2008. *Mat-Su Borough All-Hazards Mitigation Plan: Phase One – Natural Hazards*. Mat-Su Borough Department of Emergency Services. Retrieved March 13, 2012 from http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Mat_Su_Boro_HMP.pdf.

¹³⁰ See footnote 126.

Facilities

Water in Palmer is derived from three deep wells, treated, and stored in a million-gallon reservoir. Individual wells are also in use. All homes are completely plumbed, and the City operates a piped water and sewer system. Sewage is collected and treated in a sewage lagoon. Some individual septic tanks are also in use. The Borough operates a landfill outside the City, and a sludge disposal site is also available.¹³¹ Solid waste collection services are provided by the City.¹³² The Matanuska Electric Association Inc. (MEA) provides electric utility service to the entire City of Palmer, generating 85% by gas turbine and 15% hydroelectric. MEA purchases virtually all of the electricity it distributes from Chugach Electric Association Inc., pursuant to a contract expiring January 1, 2015. Piped natural gas, provided by Enstar, is used to heat homes.¹³³

Public safety services are provided by the City of Palmer Police Department and a state troopers post in Palmer. Palmer is also the seat of the State Superior Court District Court Magistrate. Palmer has a city jail, a correctional center, and a pre-trial facility. The Borough Public Safety Building is also located in Palmer. Rescue and fire fighting services are provided by the Victory and Wolverine volunteer fire departments, and the Palmer and Borough ambulance services.¹³⁴

Additional community facilities include the Palmer Community Center, a senior citizen's center, a Pioneer's Home, the Borough swimming pool, an Elks Lodge, Moose Lodge, two museums, and a variety of libraries. Telephone, internet, cable services are available in Palmer.¹³⁵ According to a survey conducted by the AFSC in 2011, community leaders reported that Palmer also has a food bank, publicly subsidized housing, and job placement services, and that plans are under way to build a new community center within the next 10 years. Community leaders also indicated that no fisheries-related facilities are present in Palmer, given it is not a port city, and that local residents typically travel to Anchorage, Seward or Homer to access fisheries-related businesses and services not available in Palmer.

Medical Services

Medical services are provided at the Mat-Su Regional Medical Center in Palmer, located between Wasilla and Palmer, approximately 7 miles from downtown Palmer. The hospital is a privately owned qualified Acute Care facility. Long term care is provided in Palmer at the Veterans' Home and Palmer Pioneers' Home. Emergency services have highway, air, floatplane, and helicopter access. Emergency service is provided by 911 Telephone Service and volunteers.¹³⁶

¹³¹ Ibid.

¹³² City of Palmer, Palmer Planning Team and Agnew:Beck Consulting, 2006. *City of Palmer Comprehensive Plan*. Retrieved March 12, 2012 from <http://www.commerce.state.ak.us/dca/plans/Palmer-CP-2006.pdf>.

¹³³ See footnote 126.

¹³⁴ Ibid.

¹³⁵ Ibid.

¹³⁶ Ibid.

Educational Opportunities

Six active school facilities are present in Palmer, including one primary school, one intermediate school, one middle school, two high schools, and one K-12 school. Swanson Elementary School serves grades preschool through 2, and as of 2011 had 465 students and 28 teachers; Sherrod Elementary School serves grades 3 through 5, and as of 2011 had 460 students and 26 teachers; Palmer Middle School serves grades 6 through 8, and as of 2011 had 575 students and 37 teachers; Palmer High School serves grades 9 through 12, and as of 2011 had 774 students and 45 teachers; Valley Pathways serves grades 9 through 12, and as of 2011 had 199 students and 11 teachers; and Academy Charter School serves grades Kindergarten through 12, and as of 2011 had 231 students and 19 teachers.¹³⁷

In addition to these six active schools, Mat-Su Secondary School is located in Palmer. It is a secure detention unit school, which offers students a way to continue earning high school credits while they transition back into the Palmer School District or into/out of treatment programs.¹³⁸ However, as of 2011, Mat-Su Secondary School was reported to not have any enrolled students or current teaching staff.¹³⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historically, Athabascan Indians moved seasonally through the Palmer region to pursue subsistence fishing, hunting, and trapping activities.¹⁴⁰ Today, Palmer residents are most engaged in fisheries for salmon and halibut. In addition to local Cook Inlet fisheries, Palmer fishermen participate in fisheries around the state. For example, in 2010, 25% of Palmer salmon permits were held in Cook Inlet gillnet fisheries, while 41% were held in Bristol Bay gillnet fisheries, and the remaining permits were held in other salmon fisheries ranging from Southeast Alaska to Norton Sound. In addition to salmon and halibut, Palmer residents were most highly engaged in fisheries for herring and groundfish during the 2000-2010 period (see *Commercial Fishing* section).

Commercial salmon and herring fisheries began to develop shortly after the purchase of Alaska by the U.S. in 1867. The earliest herring harvest was for human consumption, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.^{141,142} Commercial exploitation of halibut and groundfish first extended into the Gulf of

¹³⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹³⁸ Mat-Su Secondary School. 2008. *Homepage*. Retrieved March 12, 2012 from <http://www.matsuk12.us/myf/site/default.asp/>.

¹³⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁰ Alaska Native Heritage Center. 2008 *Athabascans - Who We Are*. Retrieved January 9, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/athabascan/.

¹⁴¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹⁴³

Cook Inlet is the closest marine area to Palmer. ADF&G manages the Cook Inlet salmon and herring fisheries.¹⁴⁴ The marine waters bordering Cook Inlet are encompassed by Federal Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Groundfish fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction.

Palmer is not eligible to participate in either the Community Development Quota (CDQ) program or the Community Quota Entity (CQE) program. According to a survey conducted by the AFSC in 2011, community leaders reported that Palmer does not participate in fisheries management processes in Alaska.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Palmer. However, numerous processing facilities are located in nearby Anchorage.

Fisheries-Related Revenue

Between 2000 and 2010, revenue was reported in Palmer in two different years from the Shared Fisheries Business Tax. In 2003, \$15 of revenue was reported, and in 2010, \$3,128 of revenue was reported. No other information was reported regarding fisheries-related revenue in Palmer between 2000 and 2010 (Table 3).¹⁴⁵

Commercial Fishing

Although Palmer is not a port city, local residents are involved in the commercial fishing industry as crew license holders, quota share account and permit holders, and vessel owners. In 2010, 88 Palmer residents held commercial fishing crew permits and 39 fishing vessels were primarily owned by residents. These numbers represent decreases since the year 2000, when 107 Palmer residents held crew licenses, and 74 fishing vessels were primarily owned by residents. The number of vessels reported as homeported in Palmer has also decreased over the period, from 26 in 2000 to 7 as of 2010 (Table 5).

In 2010, 92 Palmer residents held a total of 117 state-issued Commercial Fisheries Entry Commission (CFEC) permits. Of these, 75 were held in salmon fisheries, 15 in halibut fisheries,

¹⁴² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁴³ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹⁴⁴ Alaska Dept. of Fish and Game. 2012. *Commercial Fisheries Overview*. Retrieved June 27, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=fishingcommercialbyarea.main>.

¹⁴⁵ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

9 in crab fisheries, and the rest in fisheries for ‘other shellfish’ (4), herring (3), sablefish (5), and groundfish (6). In the same year, the greatest number of salmon CFEC permits were held in the Bristol Bay drift gillnet fishery (20 permits), Cook Inlet set gillnet fishery (15), Bristol Bay set gillnet fishery (11), Prince William Sound drift gillnet fishery (5), Cook Inlet drift gillnet fishery (4), and Kodiak purse seine fishery (3). One or two CFEC permits were also held in 12 additional salmon fisheries around the State, in areas including Chignik, Peninsula-Aleutians, Yakutat, Lower Yukon, Upper Yukon, Kuskokwim, Kotzebue, and Norton Sound, using fishing gear including set and drift gillnet, purse seine, hand troll, and fishwheel. Salmon permit numbers remained relatively stable between 2000 and 2010, although the percentage of permits that were actively fished decreased from 82% in 2000 to 67% in 2010.

Of the 15 halibut CFEC permits held by Palmer residents, 12 were held in the statewide longline fishery using vessels under 60 ft, 2 were held in the statewide longline fishery using vessels over 60 ft, and 1 was held in the statewide mechanical jig fishery. Of these, 10 were actively fished that year, including 9 in the statewide longline fishery using vessels under 60 ft and 1 using vessels over 60 ft. The number of halibut permits held stayed relatively stable between 2000 and 2010, although the percentage of active permits decreased from 92% in 2000 to 67% in 2010.

Crab CFEC permits held in Palmer in 2010 were for Dungeness crab (one of three permits actively fished in the Cook Inlet pot gear fishery, one of one permit active in the Southeast 150 pots fishery), king crab (one of one permit actively fished in the Bering Sea pot gear, vessels 60 ft or over fishery, and zero of one permit active in the Bristol Bay pot gear, vessels 60 ft or over fishery in 2010), and Tanner crab (one of one permit active in the Peninsula-Aleutians pot gear, vessel under 60 ft fishery, one of one permit active in the Bering Sea pot gear, vessels 60 ft or over fishery, and zero of one permit active in the Kodiak pot gear, vessel under 60 ft fishery).

The number of groundfish and herring CFEC permits held by Palmer residents decreased markedly between 2000 and 2010. In the case of groundfish, 18 permits were held in 2000, decreasing to 6 by 2010. The percentage of groundfish permits actively fished also decreased over the period, from 50% in 2000 to 17% by 2010. In 2010, groundfish permits were held in statewide groundfish fisheries targeted miscellaneous saltwater finfish, using longline, pot gear, or mechanical jig, along with one Gulf of Alaska permit for pot gear. In the case of herring, 3 of 13 CFEC permits were actively fished in 2000 (23%), decreasing to 0 of 3 total herring permits actively fished in 2010 (0%). In 2010, herring permits were held in roe herring gillnet fisheries in Prince William Sound and Goodnews Bay. Earlier, in 2000, herring permits had also been held in roe herring gillnet fisheries in Bristol Bay and Security Cove, the herring gillnet fishery in Norton Sound, and the Prince William Sound herring spawn on kelp fishery. CFEC permit information is presented in Table 4.

In addition to CFEC permits, three Palmer residents held License Limitation Program permits (LLP) in federal groundfish fisheries, of which one was actively fished in 2010. One Palmer resident held an inactive LLP in a federal crab fishery in 2010, and three Palmer residents held Federal Fisheries Permits (FFP) in 2010, of which one was actively fished that year. Between 2000 and 2010, the number of quota share account holders in the federal halibut catch share fishery in Palmer decreased from 17 to 15. The number of halibut quota shares held initially decreased from 911,606 to 578,308, and then increased to over 1 million shares between 2008 and 2010. Also between 2000 and 2010, the number of Palmer residents holding quota share accounts in the federal sablefish catch share fishery varied between 2 and 4, and the

amount of quota shares held increased from 473,306 in 2000 to 665,340 in 2010. With respect to both halibut and sablefish catch share fisheries, annual individual fishing quota (IFQ) allotments remained relatively stable between 2000 and 2010. No quota shares were held in federal crab catch share fisheries by Palmer residents during the 2000-2010 period. Information about LLP and FFP permits is presented in Table 4, while information about federal catch share participation is presented in Tables 6 through 8.

Given that no fish buyers or shore-side processors were present in Palmer between 2000 and 2010 (Table 5), no landings or ex-vessel revenue were generated in the community (Table 9). Rather, Palmer vessel owners delivered landings in other locations. Information was available for all years between 2000 and 2010 regarding salmon harvest by Palmer vessel owners, and for some years during the period for harvest of halibut, Pacific cod, sablefish, and ‘other groundfish.’ Information about harvest in other years and for other species is considered confidential due to the small number of participants. On average between 2000 and 2010, 3,056,909 net lbs of salmon were harvested by Palmer vessel owners, valued at an average of \$1,537,949 in ex-vessel revenue. For those years in which information can be reported regarding halibut, landings averaged 65,262 net lbs valued at an average of \$175,418 in ex-vessel revenue. For those years in which information can be reported regarding Pacific cod harvest, landings averaged 421,454 net lbs valued at an average of \$116,702. Finally, for those years in which ‘other groundfish’ information can be reported, Palmer vessel owners harvested an average of 18,922 net lbs valued at an average of \$10,650. Sablefish landings and revenue information can be reported for one year between 2000 and 2010. That year (2004), Palmer vessel owners landed a total of 56,692 net lbs of sablefish, valued at \$154,028 in ex-vessel revenue. Landings and ex-vessel revenue earned by Palmer vessel owners are presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Palmer: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	\$15	n/a	n/a	n/a	n/a	n/a	n/a	\$3,128
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$15</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$3,128</i>
<i>Total municipal revenue⁵</i>	<i>\$6.6 M</i>	<i>\$6.1 M</i>	<i>\$6.2 M</i>	<i>\$6.6 M</i>	<i>\$7.1 M</i>	<i>\$8.1 M</i>	<i>\$8.4 M</i>	<i>\$10.6 M</i>	<i>\$11.6 M</i>	<i>\$12.1 M</i>	<i>\$11.4 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Palmer: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	4	4	4	4	4	4	4	4	4	3	3
	Active permits	3	3	3	3	3	3	3	2	2	1	1
	% of permits fished	75%	75%	75%	75%	75%	75%	75%	50%	50%	33%	33%
	Total permit holders	3	3	3	3	3	3	3	3	4	3	3
Crab (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	5	6	6	6	7	7	4	4	4	3	3
	Fished permits	0	0	0	3	2	2	2	2	1	2	1
	% of permits fished	0%	0%	0%	50%	29%	29%	50%	50%	25%	67%	33%
	Total permit holders	5	6	6	5	6	6	4	4	4	3	3
Crab (CFEC) ²	Total permits	3	5	2	3	3	3	5	5	7	6	9
	Fished permits	0	3	0	0	0	0	0	0	0	0	3
	% of permits fished	0%	60%	0%	0%	0%	0%	0%	0%	0%	0%	33%
	Total permit holders	3	5	2	3	3	3	5	5	7	6	7
Other shellfish (CFEC) ²	Total permits	1	3	1	3	2	2	2	1	1	1	4
	Fished permits	0	1	0	1	0	1	1	0	0	0	0
	% of permits fished	0%	33%	0%	33%	0%	50%	50%	0%	0%	0%	0%
	Total permit holders	1	2	1	3	2	2	2	1	1	1	4
Halibut (CFEC) ²	Total permits	12	12	11	11	16	17	16	13	12	14	15
	Fished permits	11	9	9	11	13	14	12	11	10	11	10
	% of permits fished	92%	75%	82%	100%	81%	82%	75%	85%	83%	79%	67%
	Total permit holders	12	12	11	11	16	17	16	13	12	14	14
Herring (CFEC) ²	Total permits	13	10	11	11	6	7	6	4	4	3	3
	Fished permits	3	5	3	2	0	2	1	1	0	0	0
	% of permits fished	23%	50%	27%	18%	0%	29%	17%	25%	0%	0%	0%
	Total permit holders	8	7	8	8	5	6	5	4	5	3	3

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Table 4 cont'd. Permits and Permit Holders by Species, Palmer: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	3	2	2	4	7	5	3	4	4	4	5
	Fished permits	3	2	2	4	7	5	3	4	4	3	3
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	100%	75%	60%
	Total permit holders	2	1	1	3	6	4	2	3	4	4	5
Groundfish (CFEC) ²	Total permits	18	15	14	13	7	7	5	5	4	5	6
	Fished permits	9	5	1	1	1	1	2	2	3	1	1
	% of permits fished	50%	33%	7%	8%	14%	14%	40%	40%	75%	20%	17%
	Total permit holders	10	9	9	9	6	6	4	4	4	5	5
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	72	70	71	65	66	67	68	64	71	74	75
	Fished permits	59	51	44	44	40	42	44	43	51	52	50
	% of permits fished	82%	73%	62%	68%	61%	63%	65%	67%	72%	70%	67%
	Total permit holders	70	64	67	63	64	68	69	63	71	72	76
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>122</i>	<i>117</i>	<i>112</i>	<i>110</i>	<i>107</i>	<i>108</i>	<i>105</i>	<i>96</i>	<i>103</i>	<i>107</i>	<i>117</i>
	<i>Fished permits</i>	<i>85</i>	<i>76</i>	<i>59</i>	<i>63</i>	<i>61</i>	<i>65</i>	<i>63</i>	<i>61</i>	<i>68</i>	<i>67</i>	<i>67</i>
	<i>% of permits fished</i>	<i>70%</i>	<i>65%</i>	<i>53%</i>	<i>57%</i>	<i>57%</i>	<i>60%</i>	<i>60%</i>	<i>64%</i>	<i>66%</i>	<i>63%</i>	<i>57%</i>
	<i>Permit holders</i>	<i>84</i>	<i>78</i>	<i>78</i>	<i>75</i>	<i>76</i>	<i>80</i>	<i>85</i>	<i>76</i>	<i>84</i>	<i>86</i>	<i>92</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Palmer: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Palmer ²	Total Net Pounds Landed in Palmer ^{2,5}	Total Ex-Vessel Value of Landings in Palmer ^{2,5}
2000	107	0	0	74	26	0	0	\$0
2001	76	0	0	72	28	0	0	\$0
2002	51	0	0	65	27	0	0	\$0
2003	74	0	0	65	25	0	0	\$0
2004	83	0	0	64	23	0	0	\$0
2005	86	0	0	42	6	0	0	\$0
2006	77	0	0	34	6	0	0	\$0
2007	95	0	0	33	7	0	0	\$0
2008	98	0	0	32	6	0	0	\$0
2009	85	0	0	34	6	0	0	\$0
2010	88	0	0	39	7	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Palmer: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	17	911,606	126,517
2001	17	874,836	140,775
2002	16	804,350	127,205
2003	16	795,005	117,916
2004	17	743,778	117,431
2005	16	578,308	93,060
2006	16	687,880	109,576
2007	15	996,425	146,289
2008	15	1,306,655	182,096
2009	15	1,353,518	174,276
2010	15	1,068,187	135,083

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Palmer: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	3	473,306	50,974
2001	2	431,948	44,612
2002	2	431,948	43,070
2003	2	431,948	48,599
2004	3	455,829	55,398
2005	3	455,829	53,197
2006	4	455,829	50,846
2007	3	455,829	48,925
2008	2	522,041	45,115
2009	2	522,041	40,818
2010	3	665,340	47,843

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Palmer: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Palmer: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Palmer Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	88,863	65,806	89,865	66,224	87,514	64,030	28,979	-	-	30,818	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	20,476	80,632	4,757	5,293	9,064	6,529	5,705	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	499,250	360,145	-	-	-	404,968	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	56,692	-	-	-	-	-	-
Salmon	2,674,051	2,624,960	2,067,885	2,426,783	3,508,582	3,553,695	3,690,623	4,382,922	3,150,151	3,241,081	2,305,268
Total²	3,282,640	3,131,543	2,162,507	2,498,300	3,661,852	4,029,222	3,725,307	4,382,922	3,150,151	3,271,899	2,305,268
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$229,250	\$134,157	\$202,564	\$192,743	\$261,996	\$192,554	\$106,352	-	-	\$83,726	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$14,079	\$37,477	\$3,969	\$4,004	\$6,418	\$4,535	\$4,071	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	\$158,152	\$85,790	-	-	-	\$106,163	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	\$154,028	-	-	-	-	-	-
Salmon	\$1,288,742	\$893,497	\$762,541	\$902,529	\$1,394,776	\$1,608,120	\$1,690,601	\$2,208,236	\$1,902,734	\$2,201,206	\$2,064,461
Total²	\$1,690,223	\$1,150,921	\$969,074	\$1,099,276	\$1,817,218	\$1,911,373	\$1,801,024	\$2,208,236	\$1,902,734	\$2,284,932	\$2,064,461

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to ADF&G, the number of active sport fish guides registered in Palmer remained relatively stable over the 2000-2010 period, varying between four and eight active businesses per year. In contrast, the number of licensed sport fish guides present in the community declined substantially over the decade, from 63 in 2000 to 29 in 2010. Despite this decline, these numbers represent a significant sport fishing infrastructure in Palmer. The presence of this infrastructure suggests that sport fishing is a tourism draw to the area. However, according to a survey conducted by the AFSC in 2011, community leaders indicated that a majority of sport fishing activity in the Palmer area is done by local residents using their private boats.

Between 2000 and 2010, the number of Palmer residents that purchased sport fishing licenses (irrespective of point of sale) varied between 6,825 and 8,724, generally increasing over the period. The number of fishing licenses sold in Palmer was slightly smaller, varying between 4,831 and 6,340 between 2000 and 2010. These numbers suggest that local residents may travel to nearby communities such as Anchorage or Wasilla to purchase licenses and fishing gear. Information about sport fishing activity in Palmer is presented in Table 11.

According to the 2011 AFSC survey, community leaders indicated that salmon and halibut are the most commonly targeted sport species in Palmer. The Alaska Statewide Harvest Survey,¹⁴⁶ conducted by ADF&G between 2000 and 2010, noted additional species known to be targeted by private anglers in Palmer. In freshwater, additional species included landlocked salmon, rainbow trout, Dolly Varden, whitefish, burbot, Arctic grayling, northern pike, and smelt. In saltwater, additional species targeted by sport fishing included Dolly Varden, rockfish, lingcod, Pacific cod, sablefish, shark, and smelt. The survey also noted sport harvest of razor clams, hardshell clams, shrimp, and ‘other shellfish’ by anglers in Palmer.¹⁴⁷ No kept/release log book data were reported for fishing charters out of Palmer between 2000 and 2010.¹⁴⁸

Palmer is located within Alaska Sport Fishing Survey Area K – Knik Arm. Between 2000 and 2010, freshwater sport fishing activity was more important than saltwater sport fishing at this regional level, and Alaska residents consistently fished a greater number of angler days than non-Alaska residents. In 2010, Alaska residents logged 95,285 freshwater and 124 saltwater angler days, while non-Alaska resident logged 10,872 freshwater days and no saltwater angler days. This information about regional sport fishing activity in Palmer is presented in Table 11.

¹⁴⁶ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G/ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁴⁷ The Alaska Statewide Harvest Survey includes separate categories for Dungeness crab, Tanner crab, razor clams, hardshell clams and shrimp. Remaining species fall into the ‘other shellfish’ category.

¹⁴⁸ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G/ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Palmer: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Palmer ²
2000	4	63	6,825	4,979
2001	4	64	7,082	4,831
2002	4	53	7,194	5,067
2003	6	60	7,547	5,162
2004	7	56	7,721	6,148
2005	7	28	8,003	6,351
2006	8	31	8,158	5,935
2007	5	30	8,217	6,340
2008	6	27	8,504	5,896
2009	5	22	8,724	5,729
2010	6	29	8,688	5,412

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	130	317	13,308	106,880
2001	345	277	14,933	94,862
2002	464	754	17,367	106,163
2003	49	386	15,626	87,000
2004	33	151	11,681	101,663
2005	378	424	14,284	100,677
2006	89	234	12,239	107,233
2007	117	473	13,524	106,567
2008	17	308	14,080	122,167
2009	37	122	10,678	111,462
2010	0	124	10,872	95,285

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Palmer is located in the traditional territory of two groups of Athabascan Indians, the Ahtna and Dena'ina people.¹⁴⁹ Historically, Athabascans migrated seasonally, traveling in small groups to pursue subsistence fishing, hunting, and trapping activities.¹⁵⁰ Today, the economy of Palmer is based primarily on government services, retail, and manufacturing,¹⁵¹ but some local residents continue to participate in subsistence activities. According to a survey conducted by the AFSC in 2011, community leaders reported that the most important subsistence resources for Palmer residents include herring and littleneck clams harvested in Cook Inlet, and salmon harvested in the Matanuska River and its tributary streams.

No information was reported by ADF&G regarding per capita subsistence harvest or the percentage of households in Palmer utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, information is available during the 2000-2010 period regarding total subsistence harvest of salmon and halibut. Between 2000 and 2008, the number of subsistence salmon permits issued to Palmer households varied between 371 and 608. Sockeye salmon were the most heavily harvested species during this period, averaging 10,796 sockeye harvested for subsistence per year. Several hundred Chinook and coho salmon were also harvested on average each year between 2000 and 2008, along with a small number of chum salmon each year and pink salmon in some years during the period. This information about subsistence salmon harvest is presented in Table 13. Between 2003 and 2010, the number of Subsistence Halibut Registration Certificates (SHARC) issued to Palmer residents increased from 3 to 12 in 2009. In 2010, 10 cards were issued, 1 was returned, and a total of 24 lbs of halibut were reported harvested for subsistence purposes by Palmer residents. This information about subsistence harvest of halibut is presented in Table 14.

No information was reported by management agencies regarding subsistence harvest of marine invertebrates, non-salmon fish (not including halibut), or marine mammals between 2000 and 2010 (Tables 13 and 15).

Additional Information

The Matanuska Valley is famous statewide and nationally for the extremely large vegetables produced by local farmers. These vegetables frequently win prizes as the Alaska State Fair, which is held in Palmer every fall. More than 250,000 people attend the 12-day event, which generates more than \$2 million for the local economy.¹⁵²

¹⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁰ Alaska Native Heritage Center. 2008 *Athabascans - Who We Are*. Retrieved January 9, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/athabaskan/.

¹⁵¹ See footnote 149.

¹⁵² Metiva, M., and D. Hanson. 2008. *Mat-Su Comprehensive Economic Development Strategy: December 2008 Update*. Mat-Su Resource Conservation & Development Center and Mat-Su Borough. Retrieved March 13, 2012 from <http://www.matsugov.us/>.

Table 12. Subsistence Participation by Household and Species, Palmer: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Palmer: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	567	537	389	16	260	13	9,409	n/a	n/a
2001	608	572	327	5	306	n/a	12,198	n/a	n/a
2002	437	408	379	50	165	4	8,936	n/a	n/a
2003	371	344	284	20	174	3	8,123	n/a	n/a
2004	574	515	532	29	224	10	11,793	n/a	n/a
2005	538	476	266	25	221	9	12,298	n/a	n/a
2006	549	464	338	48	159	n/a	11,827	n/a	n/a
2007	569	508	601	31	81	n/a	14,616	n/a	n/a
2008	543	494	332	9	148	3	7,961	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Palmer: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	3	n/a	n/a
2004	3	n/a	n/a
2005	4	n/a	n/a
2006	5	3	n/a
2007	6	3	118
2008	5	2	158
2009	12	2	91
2010	10	1	24

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Palmer: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Petersville



People and Place

*Location*¹⁵³

Petersville is located on Petersville Road, at mile 114.9 of the George Parks Highway, west of Trapper Creek. Petersville Road is 17 miles north of the junction to Talkeetna Spur Road. Peters Creek and the Deshka River flow through the community. Petersville is located in the Talkeetna Recording District and the Matanuska-Susitna Borough Census Area.

*Demographic Profile*¹⁵⁴

According to the 2010 Decennial Census, there were four inhabitants in Petersville, making it the 348th largest of 352 total Alaskan communities with populations recorded that year. However, the Alaska Department of Labor and Workforce Development (DOLWD) recorded 12 residents age 16 and over living in the community in 2010.¹⁵⁵ Petersville first appeared in U.S. Census records in 2000, with 27 individuals (Table 1). Although no population was recorded in Petersville by the U.S. Census in 1990, an estimate was provided regarding a sparsely populated U.S. Census block including Petersville. In this area, which included some areas of little or no population beyond the community council boundaries of Petersville, the 1990 population estimate was 84, with 37 households.¹⁵⁶ Between 2000 and 2009, Alaska Department of Labor estimates indicate that the population of permanent residents in Petersville decreased by 77.8%, with an average annual growth rate of -5.72%.

In 2010, a majority of Petersville residents identified themselves as White (75%), while 25% identified with two or more races (Figure 1). That year, no Petersville residents identified themselves as Hispanic. Several racial and ethnic groups appeared to have been present in the year 2000 but were not represented in 2010, such as American Indians and Alaska Natives and Native Hawaiian and Other Pacific Islanders. Some of these individuals may have moved away, and some may be represented among those who identified with two or more races in 2010.

¹⁵³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵⁵ Alaska Department of Labor and Workforce Dev. 2011. *Alaska Local and Regional Information Database*. Retrieved May 30, 2012 from <http://live.laborstats.alaska.gov/alari>.

¹⁵⁶ *Petersville Road Corridor Management Plan*. 1998. Retrieved May 23, 2012 from <http://www.southdenali.alaska.gov/includes/pvcorridormp.pdf>.

Table 1. Population in Petersburg from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ³
1990	0 ²	-
2000	27	-
2001	-	25
2002	-	19
2003	-	14
2004	-	15
2005	-	16
2006	-	21
2007	-	12
2008	-	9
2009	-	6
2010	4	12 ⁴

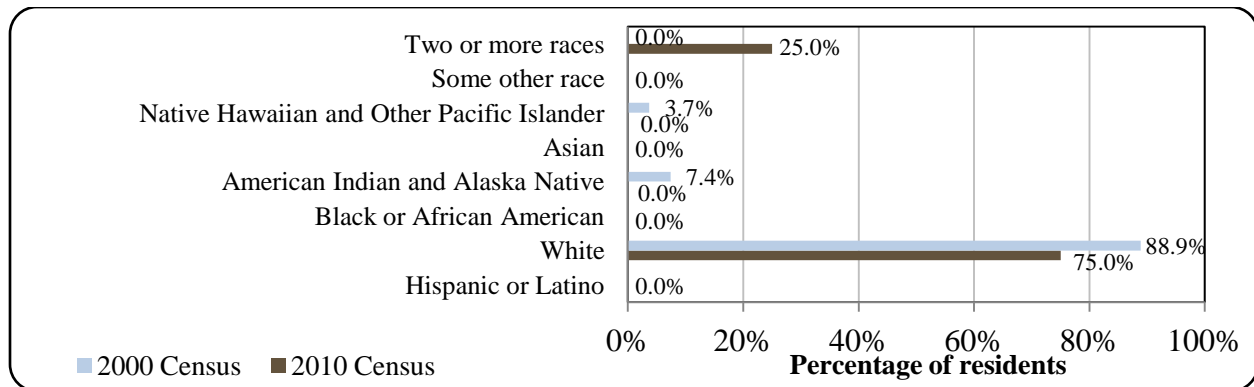
¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² The U.S. Census Bureau recorded a population of zero for Petersburg in 1990, a population estimate of 84 was generated for the U.S. Census Block that includes Petersburg and surrounding areas. Source: *Petersville Road Corridor Management Plan*. 1998. Retrieved May 23, 2012 from <http://www.southdenali.alaska.gov/includes/pvcorridormp.pdf>.

³ Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

⁴ This estimate refers only to the population of residents age 16 and over. Source: Alaska Department of Labor and Workforce Dev. 2011. Alaska Local and Regional Information Database. Retrieved May 30, 2012 from <http://live.laborstats.alaska.gov/alari>.

Figure 1. Racial and Ethnic Composition, Petersburg: 2000-2010 (U.S. Census).

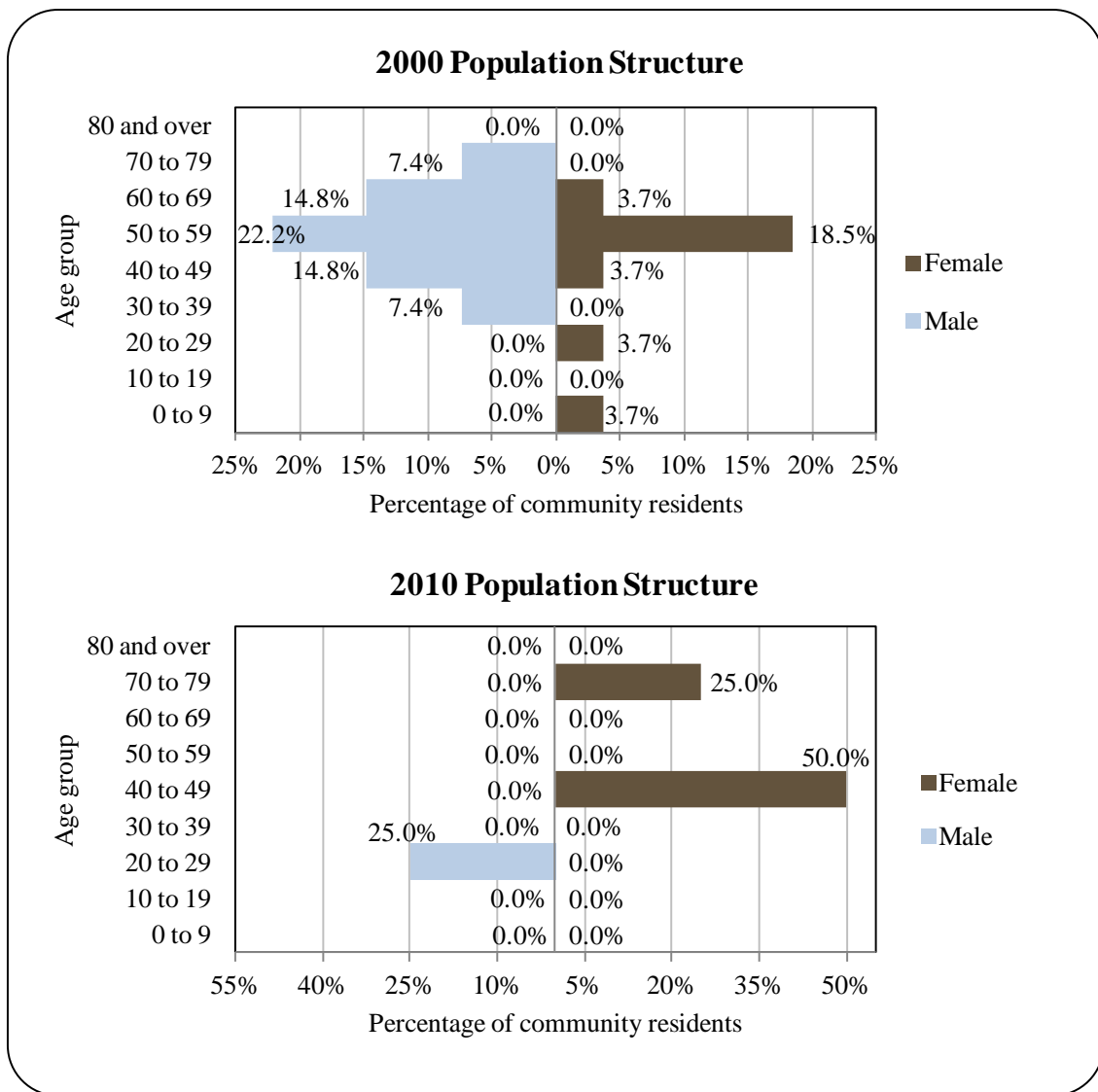


In 2010, there were four occupied housing units in Petersburg, with an average of one person living in each of these households. This represents a decrease from the year 2000, when there were 17 total households in Petersburg, with an average of 1.59 persons per household. Of the 179 total housing units surveyed for the 2010 U.S. Decennial Census, three (1.7%) were owner-occupied, one (0.6%) was rented, and the remaining 175 housing units were vacant. A

majority of these (174) were vacant at the time of the survey due to their seasonal use. From 2000 to 2010, no residents of Petersville were recorded as living in group quarters.

In 2010, the gender makeup of Petersville’s population (25% male and 75% female) was much more weighted toward females than the population of the state as a whole, which had more men than women overall (52% male and 48% female). In 2010, the median age of Petersville residents was 46.5 years, older than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, one Petersville resident (25% of the population) was over the age of 60. It is important to keep in mind that these numbers reflect a population of only four individuals. With such a small population, the difference of several individuals can affect percentages, averages, and median scores greatly. The overall population structure of Petersville in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Petersville Based on the 2000 and 2010 U.S. Decennial Census.



It is also useful to examine the population structure of Petersville in 2000, when the population was somewhat higher. In 2000, the gender ratio in the Petersville (52.8% male and 47.2% female) was slightly more weighted toward males than the state population as a whole, which was 51.7% male and 48.3% female. The age groups particularly skewed toward males included 10-19 and 70-79 years, while there were more females than males in the age groups 20-29 and 40 to 69 years. The median age in 2000, 14 years, was much younger than the 2000 national average of 36.5 years and the 2000 Alaska median age of 32.4 years. In 2000, 61.6% of the population was under the age of 20, and 5.4% of the population was age 60 or older. The population structure of Petersville in 2000 and 2010 is shown in Figure 2.

The 2006-2010 American Community Survey (ACS) did not provide any information regarding educational attainment in Petersville in 2010. Although the U.S. Decennial Census recorded four individuals as permanent residents in Petersville in 2010, the ACS estimated a population of zero.^{157,158} Given the small population of Petersville in 2010, it is useful to look back at education statistics in the year 2000 as well, when the population was slightly higher (27 residents). That year, 12 Petersville residents were aged 25 or older, all of whom held high school diplomas, as well as Bachelor's degrees (100%), compared to 27.9% of the population that held high school diplomas and 16.1% that held Bachelor's degrees in 2000. No Petersville residents held graduate or professional degrees in 2000, compared to 8.6% of Alaskans overall.¹⁵⁹

History, Traditional Knowledge, and Culture

Dena'ina Athabascans historically inhabited the Petersville area, and used the region for subsistence hunting and fishing.¹⁶⁰ In 1905, gold was discovered on Cache Creek and upper Peters Creek. In 1917, a freighting trail was built by the Alaska Road Commission from Talkeetna. The crossing of the Susitna River was by ferry during summer and over ice in the winter. Petersville became home to a district post office as a result of the road construction. By 1921, there were 24 mining operations in the Yentna Mining District, most with large-scale hydraulic plants. World War II caused a shutdown of nearly all mining operations. Federal homesteading began here in 1948 and continued through the 1960s. In the late 1970s, many of the previously idle mining sites were brought back into production.¹⁶¹ There is no community

¹⁵⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁵⁹ U.S. Census Bureau (n.d.). *Profile of Selected Social Characteristics of all places within Alaska: 2000*. Retrieved December 31, 2012 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁶⁰ Fall, James and Dan Foster. 1987. *Fish and Game Harvest and Use in the Middle Susitna Basin*. Retrieved May 23, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp143.pdf>.

¹⁶¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

center in Petersville. Residents are dispersed throughout the area.¹⁶² Today, most residences in Petersville are seasonal homes.¹⁶³ Year-round residents are typically involved in caretaking the historic Petersville mining camp.¹⁶⁴

Natural Resources and Environment

Petersville is located in a transitional climatic zone, influenced both by marine and continental climate patterns. January temperatures range from -30 to 33 °F, and temperatures in July can vary from 42 to 83 °F. Annual rainfall ranges from 16 to 27 inches, along with 48 to 150 inches of snowfall.¹⁶⁵

There is currently relatively little mining activity in the Petersville area, although large gold reserves exist within the upper base of the Peters Creek area.¹⁶⁶ Several mining claims are located in the area immediately south and west of Petersville. Each year, three or four small mines are under operation, with approximately half a dozen miners actively working between mid-May and mid-October.¹⁶⁷ In addition, in 2010, Diamond Gold Corporation reported development activity in the Yentna (Petersville) mining district, including construction of five miles of pioneer road for its Sable–Kahiltna Mine.¹⁶⁸ This area is being developed as “a new world-class gem field,” with known gemstones including opal, sapphire, ruby, garnet, and diamond, and stones including emerald, agate, jade, red and green jasper, and opalized wood.¹⁶⁹

Land in the Petersville area is owned by the Matanuska-Susitna Borough, the State of Alaska, the University of Alaska, as well as some private ownership.¹⁷⁰ Two public use areas have been designated in the vicinity of Petersville, including one for recreational mining and one for general public recreation. The Petersville Recreational Mining Area allows for gold panning, mineral prospecting, or mining using portable, non-electric field equipment. No new mining claims may be granted within the area.¹⁷¹ The Trapper Creek – Petersville Winter Trails system offers 12.5 miles of trail for snowmobiling, dog mushing, cross-country skiing and skijoring.¹⁷²

Natural hazards that have been identified as highly likely to occur in the Matanuska-Susitna Borough include floods, wildfire, earthquake and volcanic activity. Avalanche and

¹⁶² National Park Service. 2006. *Denali National Park and Preserve: Final South Denali Implementation Plan and Environmental Impact Statement*. Retrieved May 23, 2012 from http://www.matsugov.us/denali/documents/proof_book_000.pdf.

¹⁶³ See footnote 161.

¹⁶⁴ Personal communication, Matanuska-Susitna Borough Cultural Resources Division, May 24, 2012.

¹⁶⁵ See footnote 161.

¹⁶⁶ *Petersville Road Corridor Management Plan*. 1998. Retrieved May 23, 2012 from <http://www.southdenali.alaska.gov/includes/pvcorridormp.pdf>.

¹⁶⁷ See footnote 162.

¹⁶⁸ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

¹⁶⁹ Ellis, Ed and Ellis, Ann. 2010. *Alaska's Yentna Country: Gemstone Deposits: 'The Making of a World-Class Gem Field.'* Retrieved May 24, 2012 from http://diamondgoldcorp.com/uploads/DGC_Yentna_gemfields_revision_1.pdf.

¹⁷⁰ See footnote 166.

¹⁷¹ Alaska Dept. of Natural Resources. 2012. *Fact Sheet: Petersville Recreation Mining Area*. Retrieved May 24, 2012 from http://dnr.alaska.gov/mlw/factsht/mine_fs/petersvi.pdf.

¹⁷² Matanuska-Susitna Borough Community Development Department. *Trapper Creek – Petersville Winter Trails*. Retrieved May 24, 2012 from http://www.alaskavisit.com/includes/media/docs/TrapperCrk_PetersvilleTrl_000.pdf.

severe weather were rated a moderately likely to occur, and drought was rated at a low probability of occurrence.¹⁷³

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Petersville as of July 2012.¹⁷⁴

Current Economy¹⁷⁵

Subsistence and sporting activities are an integral part of the lifestyle of local residents, many of whom are retired and reside in Petersville on a seasonal basis. Those who are employed work in industries including education, transportation, and construction.¹⁷⁶ Small scale farming and logging are still economically important in the area.¹⁷⁷ Tourism is also increasing in importance in Petersville. The area draws visitors to engage in recreational activities, such as hunting, dog mushing, snowmobiling, and cross-country skiing. This activity has led to development of some retail and service businesses in the region.¹⁷⁸ A lodge and several bed and breakfast businesses are located in the area.¹⁷⁹ Historically, mining was an important local industry. Today, although some small operations are under development, mining is no longer a significant employer in the Petersville area.¹⁸⁰ No additional information was available from the Alaska Department of Labor and Workforce Development regarding top employers in Petersville.¹⁸¹

Although the U.S. Decennial Census reported four residents age 16 or over in Petersville in 2010, household surveys conducted for the 2006-2010 ACS did not collect data from local residents.¹⁸² Given this, the civilian labor force was thus estimated to be zero and no earnings were reported in Petersville through the 2006-2010 ACS. In 2000, the per capita income in Petersville was \$43,200 and the median household income was \$43,750. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁸³ the real per capita income in 2000 is shown to have been \$56,807, and the real median household income in 2000 was \$57,531. In the

¹⁷³ Matanuska-Susitna Borough Dept. of Emergency Services. 2008. *All-Hazards Mitigation Plan, Phase One: Natural Hazards*. Retrieved May 24, 2012 from <http://ww1.matsugov.us/>.

¹⁷⁴ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁷⁵ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁷⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁷ See footnote 166.

¹⁷⁸ National Park Service. 2006. *Denali National Park and Preserve: Final South Denali Implementation Plan and Environmental Impact Statement*. Retrieved May 23, 2012 from http://www.matsugov.us/denali/documents/proof_book_000.pdf.

¹⁷⁹ See footnote 176.

¹⁸⁰ National Park Service. 2006. *Denali National Park and Preserve: Final South Denali Implementation Plan and Environmental Impact Statement*. Retrieved May 23, 2012 from http://www.matsugov.us/denali/documents/proof_book_000.pdf.

¹⁸¹ Alaska Dept. of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information*. Retrieved May 22, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹⁸² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁸³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

year 2000, Petersville ranked 6th of 344 Alaskan communities with per capita income data that year, and 121st in median household income, out of 341 Alaskan communities with household income data. In 2000, no Petersville residents were below the poverty level, compared to 9.4% of Alaskan residents overall.

An alternative estimate of 2010 per capita income can be generated using economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the DOLWD. The ALARI database estimated that there were 12 residents age 16 and over in the civilian labor force in 2010. Of these, six residents were estimated to be employed that year.¹⁸⁴ If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Petersville in 2010 is \$43,745.¹⁸⁵ This estimate is lower than the real per capita income reported in the year 2000, providing evidence that per capita income may have decreased in Petersville between 2000 and 2010. However, given the different data sources used to generate the 2000 and 2010 statistics, caution should be used when considering this information.

The possible decrease in per capita income is reflected in the fact that Petersville met the Denali Commission's criteria as a "distressed community" in 2010,¹⁸⁶ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both U.S. Census and DOLWD data are based on wage earnings, and these income figures do not take into account the value of subsistence within the local economy.

Given Petersville's small population size, the 2006-2010 ACS did not estimate employment statistics for 2010.¹⁸⁷ Income and employment information was reported in the 2000 decennial census, when 27 individuals resided in the community. Of 12 Petersville residents aged 16 or older in 2000, all (100%) were in the civilian labor force that year, compared to 67.6% that were in the civilian labor force statewide. Of these 12, 6 were employed and 6 were unemployed, for an unemployment rate of 50%, compared to a statewide unemployment rate of 6.1% in 2000. That year, all six employed individuals in Petersville worked in the public sector, in management/professional occupations in educational, health, and social services industries. This information from the 2000 Census about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were six employed residents in 2010, of which two were employed in leisure and hospitality, one in manufacturing, one in trade, transportation, and utilities, one in professional and business services, and one in local government.¹⁸⁸ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

¹⁸⁴ See footnote 181.

¹⁸⁵ See footnotes 181 and 182.

¹⁸⁶ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹⁸⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁸⁸ See footnote 181.

Figure 3. Local Employment by Industry in 2000-2010, Petersburg (U.S. Census).

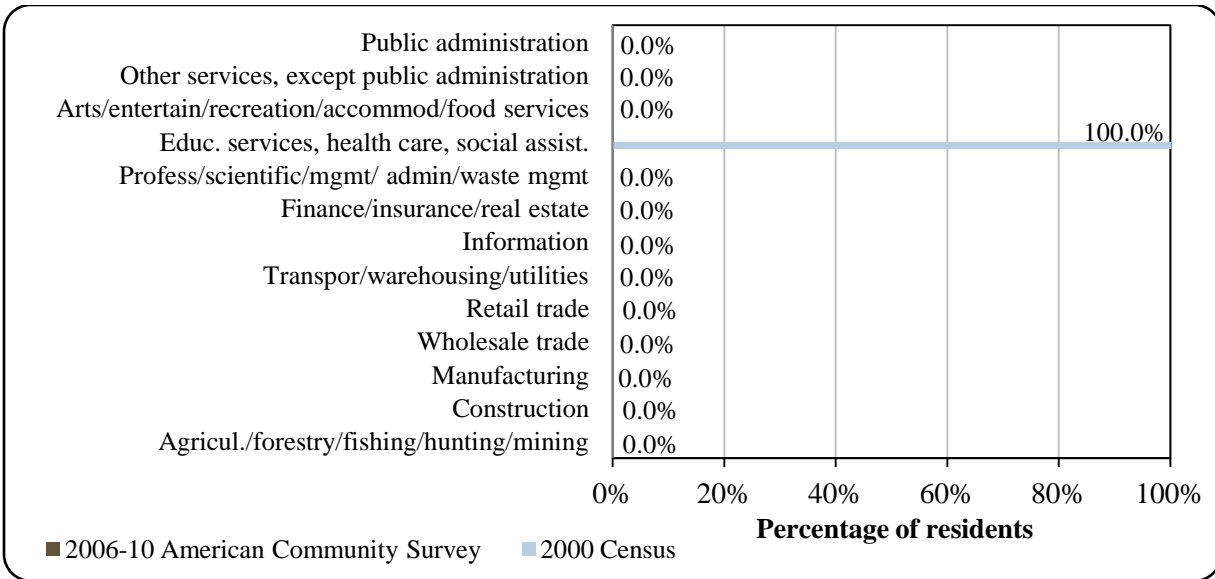
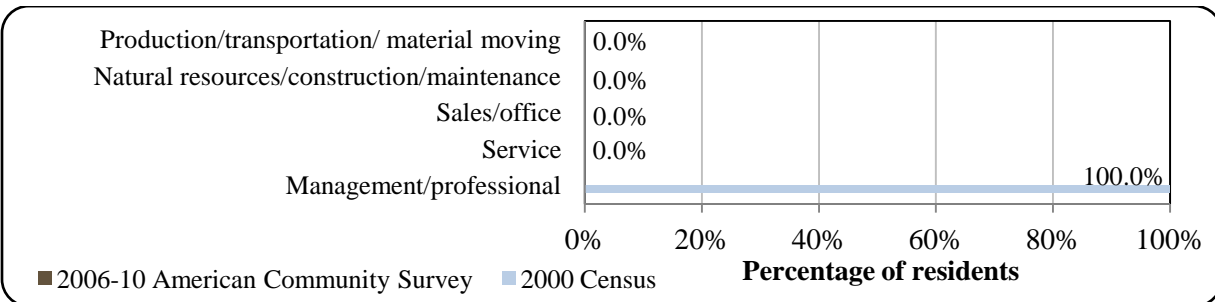


Figure 4. Local Employment by Occupation in 2000-2010, Petersburg (U.S. Census).



Governance

Petersville is an unincorporated community located in the Matanuska-Susitna Borough.¹⁸⁹ No sales tax is administered in Petersburg, although the Borough does collect a 10.35 mills property tax, a 5% Bed Tax, and a 5.29% Tobacco Excise Tax.¹⁹⁰ The community is represented by the Petersburg Community Council, an advisory body established by the Borough,¹⁹¹ which provides citizens with the opportunity for maximum community

¹⁸⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁹⁰ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

¹⁹¹ National Park Service. 2006. *Denali National Park and Preserve: Final South Denali Implementation Plan and Environmental Impact Statement*. Retrieved May 23, 2012 from http://www.matsugov.us/denali/documents/proof_book_000.pdf.

involvement.¹⁹² No municipal revenue was reported between 2000 and 2010. In addition, no information was reported regarding State and Community Revenue Sharing contributions or fisheries-related grants received by the Petersville between 2000 and 2010 (Table 2).

Petersville was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.¹⁹³ The nearest office of the Alaska Department of Fish and Game (ADF&G) is located in Palmer, and the nearest office of the Alaska Department of Natural Resources is located in Wasilla. Offices of these agencies are also located in Anchorage, along with the closest offices of the Alaska Department of Commerce, Community, and Economic Development, the National Marine Fisheries Service (NMFS), and the U.S. Bureau of Citizenship and Immigration Services.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Petersville from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Petersville is located approximately 30 miles out the state-maintained Petersville Road, which leaves the George Parks Highway at Trapper Creek. A four-wheel drive or high-clearance

¹⁹² *Petersville Road Corridor Management Plan*. 1998. Retrieved May 23, 2012 from <http://www.southdenali.alaska.gov/includes/pvcorridormp.pdf>.

¹⁹³ See footnote 189.

vehicle is recommended for travel on this road, as the second half of the trip is primitive roadway.^{194,195} The closest non-commercial airstrip is located in Talkeetna,¹⁹⁶ while a variety of transportation means are available in Wasilla and Palmer.¹⁹⁷

Facilities

The majority of year-round residents have individual wells, septic tanks, and complete plumbing. Residents of seasonal homes haul water and use outhouses. There is no central electric system in Petersville, and residents use private generators. A borough refuse transfer facility is available in Trapper Creek. Police services are provided by state troopers stationed approximately 50 miles away in Talkeetna. The nearest fire and rescue services are available from Fire Station 112, approximately 100 miles away in Wasilla. Local and long-distance telephone service is available, but no internet or cable providers offer service locally.¹⁹⁸ Except for ambulance and rescue service, no other public services are provided locally.¹⁹⁹

Medical Services

The nearest medical services are provided at the Sunshine Community Health Center in Talkeetna (approximately 50 road miles away) or the Valley Hospital in Palmer (approximately 115 road miles). Anchorage-area hospitals are also accessible to Petersville residents by road. Alternate health care is provided by Trapper Creek Ambulance Service.²⁰⁰

Educational Opportunities

No schools are located in Petersville, although the community is part of the Mat-Su Borough School District.²⁰¹ The nearest elementary school is located in Trapper Creek (30 miles away by road), while the closest combined middle/high school is the Su-Valley High School located near Talkeetna along the George Parks Highway (60 miles away). Some students may also be homeschooled through correspondence programs such as Mat-Su Central School, or other state, federal, or church correspondence programs.²⁰²

¹⁹⁴ See footnote 191.

¹⁹⁵ Alaska Dept. of Natural Resources. 2012. *Fact Sheet: Petersville Recreation Mining Area*. Retrieved May 24, 2012 from http://dnr.alaska.gov/mlw/factsht/mine_fs/petersvi.pdf.

¹⁹⁶ Airport information retrieved November 21, 2011 from www.airnav.com.

¹⁹⁷ See footnote 189.

¹⁹⁸ Ibid.

¹⁹⁹ National Park Service. 2006. *Denali National Park and Preserve: Final South Denali Implementation Plan and Environmental Impact Statement*. Retrieved May 23, 2012 from http://www.matsugov.us/denali/documents/proof_book_000.pdf.

²⁰⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁰² Personal communication, Mat-Su Borough School District administrator. July 13, 2012.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historically, Dena'ina Athabascan people had permanent village sites near Petersville, in the Susitna River drainage. In the spring, the Dena'ina established fish camps near their village sites, and during summer months they harvested and processed large quantities of Chinook, sockeye, and coho salmon. The salmon was dried and stored at permanent village sites.²⁰³

Today, residents of Petersville and the surrounding region continue to utilize salmon resources, as well as additional freshwater species, for subsistence and recreational fishing purposes. No commercial fisheries take place in the immediate vicinity of Petersville. Cook Inlet provides the nearest access to the ocean. A commercial salmon fishery takes place in Cook Inlet.²⁰⁴ Gulf of Alaska (GOA) waters beyond Cook Inlet are encompassed by Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA Sablefish Regulatory Area.

Processing Plants

The 2010 ADF&G Intent to Operate list did not list any registered processing plants in Petersville. The list did indicate that over 10 facilities were in operation in Anchorage that year, along with two in Wasilla.

Fisheries-Related Revenue

No information was reported between 2000 and 2010 regarding fisheries-related revenue earned in the community of Petersville (Table 3).

Commercial Fishing

Between 2000 and 2010, no Petersville residents were involved in commercial fisheries in Alaska. No permits were held in federal or state fisheries (Table 4), and no residents held quota share accounts or quota shares in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8). No residents held commercial crew licenses or were the primary owner of a fishing vessel during the 2000-2010 period. Further, no vessels were homeported in Petersville (Table 5). Given the lack of fish-buyers or processing facilities in the community between 2000 and 2010 (Table 5), no landings and ex-vessel revenue were generated in Petersville (Table 9). In addition, the lack of vessel owners in Petersville (Table 5) led to a lack of landings and ex-vessel revenue generated by local residents (Table 10).

²⁰³ Fall, James and Dan Foster. 1987. *Fish and Game Harvest and Use in the Middle Susitna Basin*. Retrieved May 23, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp143.pdf>.

²⁰⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Petersburg: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Petersburg: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 Cont. Permits and Permit Holders by Species, Petersburg: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Petersburg: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Petersburg ²	Total Net Lbs Landed In Petersburg ^{2,5}	Total Ex-Vessel Value Of Landings In Petersburg ^{2,5}
2000	0	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Petersburg: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Petersburg: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Petersburg: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Lbs and Ex-vessel Revenue, by Species, in Petersburg: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Lbs and Ex-vessel Revenue, by Species, by Petersville Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were registered in the community of Petersville. Further, no residents purchased sportfishing licenses during this period, and no sportfishing licenses were sold in the community. However, these numbers do not reflect the activity of the large number of individuals who reside in Petersville on a seasonal basis, and for whom sport hunting and fishing are an important part of the local lifestyle.²⁰⁵

It is important to note that recreational fishing is a popular activity in the region generally. Petersville is located within Alaska Sport Fishing Survey Area M – Susitna River drainage. Information is available about freshwater sport fishing only at this regional level. Between 2000 and 2010, non-Alaska resident anglers fished an average of 57,330 days per year, while Alaska resident anglers fished an average of 118,222 days per year. This information about sport fishing trends in Petersville and the Susitna River drainage is presented in Table 11.

Table 11. Sportfishing trends, Petersville: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Petersville ²	Freshwater Angler Days Fished – Non-residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	0	0	0	0	64,141	177,316
2001	0	0	0	0	71,249	128,658
2002	0	0	0	0	59,863	126,516
2003	0	0	0	0	56,844	131,687
2004	0	0	0	0	56,934	130,366
2005	0	0	0	0	68,753	100,803
2006	0	0	0	0	63,255	109,462
2007	0	0	0	0	58,471	115,578
2008	0	0	0	0	49,911	98,827
2009	0	0	0	0	40,797	99,404
2010	0	0	0	0	40,414	81,821

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²⁰⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

The Alaska Statewide Harvest Survey,²⁰⁶ conducted by ADF&G between 2000 and 2010, did not report on species targeted by private anglers in Petersville. However, the survey noted the following species targeted by sport fisheries downstream in the community of Willow during the 2000-2010 period. In freshwater, anglers caught all five species of salmon, rainbow trout, Dolly Varden, Arctic grayling, northern pike, burbot, and smelt. Anglers from Willow also traveled to saltwater to fish for Pacific halibut, rockfish, lingcod, and Pacific cod. The survey also noted sport harvest of razor clams, hardshell clams, and shrimp by Willow sport fishers.

Given the lack of sportfish businesses, no kept/release log book data were reported for fishing charters out of Petersville between 2000 and 2010.²⁰⁷

Subsistence Fishing

Subsistence activities are an important part of the local lifestyle in Petersville.²⁰⁸ Very little information was reported by ADF&G regarding subsistence harvest activities in Petersville between 2000 and 2010. The low population of permanent residents in the community may affect statistics reported here, as the subsistence harvest activities of seasonal residents may be reported for the community in which they make their primary residence.

In 2008, one subsistence salmon permit was issued to a Petersville household. The permit was returned that year, and the household reported harvesting 14 sockeye salmon. This information is presented in Table 13. No information was reported by management agencies regarding per capita subsistence harvest, the percentage of Petersville households participating in subsistence activities between 2000 and 2010 (Table 12), subsistence harvest of halibut (Table 14) or marine mammals (Table 15) during the 2000-2010 period.

²⁰⁶ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²⁰⁷ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁰⁸ See footnote 205.

Table 12. Subsistence Participation by Household and Species, Petersville: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Petersville: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	14	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Petersville: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Petersville: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Skwentna (SKWENT-nuh)



People and Place

*Location*²⁰⁹

Skwentna lies in the Yentna River Valley, on the south bank of the Skwentna River at its junction with Eight Mile Creek. The community is located 70 air miles northwest of Anchorage in the Matanuska-Susitna (Mat-Su) Borough. Skwentna is in the Anchorage Recording District and the Matanuska-Susitna Census Area.

*Demographic Profile*²¹⁰

In 2010, there were 37 inhabitants in Skwentna, making it the 310th largest of 352 total Alaskan communities with recorded populations that year. Overall the population has decreased since 1990, though the population rose in 2000 and then declined again according to the U.S. Decennial Census. The U.S. Decennial Census shows a much steeper rate of decline than Alaska Department of Labor estimate of permanent residents. The change in population from 1990 to 2010 is shown in Table 1. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that approximately 200 individuals come to Skwentna each year as seasonal workers or transients in addition to the population of permanent residents, and the population reaches its annual peak during the summer months.

In the 2010 U.S. Decennial Census, 100% of Skwentna residents identified themselves as White. The percentage of residents identifying themselves as White increased by 7.2% between 2000 and 2010, with corresponding decreases in the percentage of the population identifying themselves as American Indian and Alaska Native and two or more races. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Skwentna was 1.85, a decrease from 2.7 persons per household in 1990 and 2.22 in 2000. The total number of households decreased overall, from 31 in 1990 to 50 in 2000 to 20 in 2010. Of the 353 total housing units surveyed for the 2010 U.S. Decennial Census, 18 were owner-occupied, two were renter occupied, and 333 were vacant, though 325 of the units reported as vacant are used seasonally. Throughout this period, no residents of Skwentna were reported to be living in group quarters.

²⁰⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²¹⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

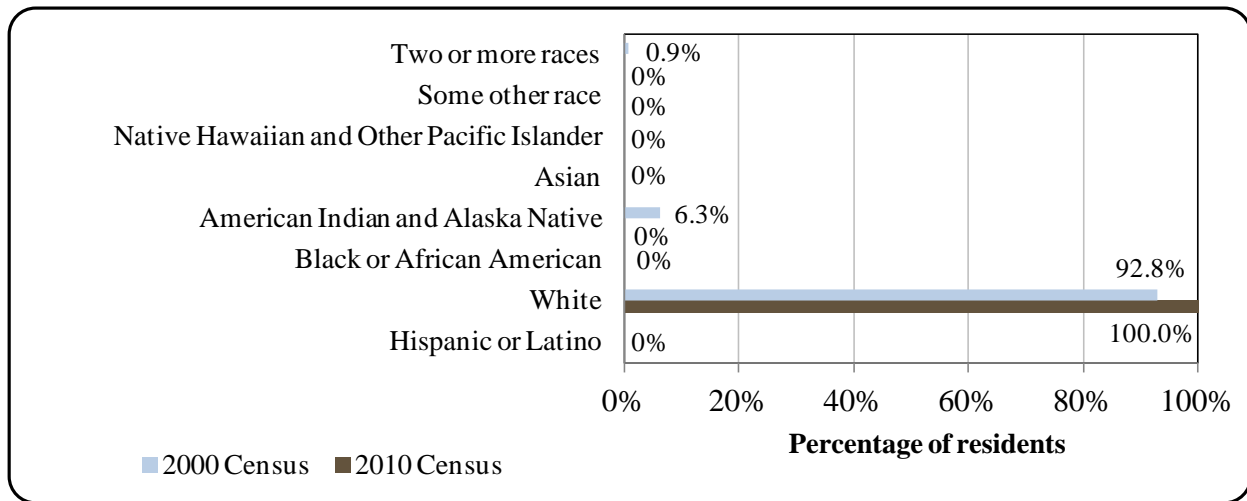
Table 1. Population in Skwentna from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	85	-
2000	111	-
2001	-	95
2002	-	88
2003	-	95
2004	-	82
2005	-	75
2006	-	73
2007	-	84
2008	-	79
2009	-	73
2010	37	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

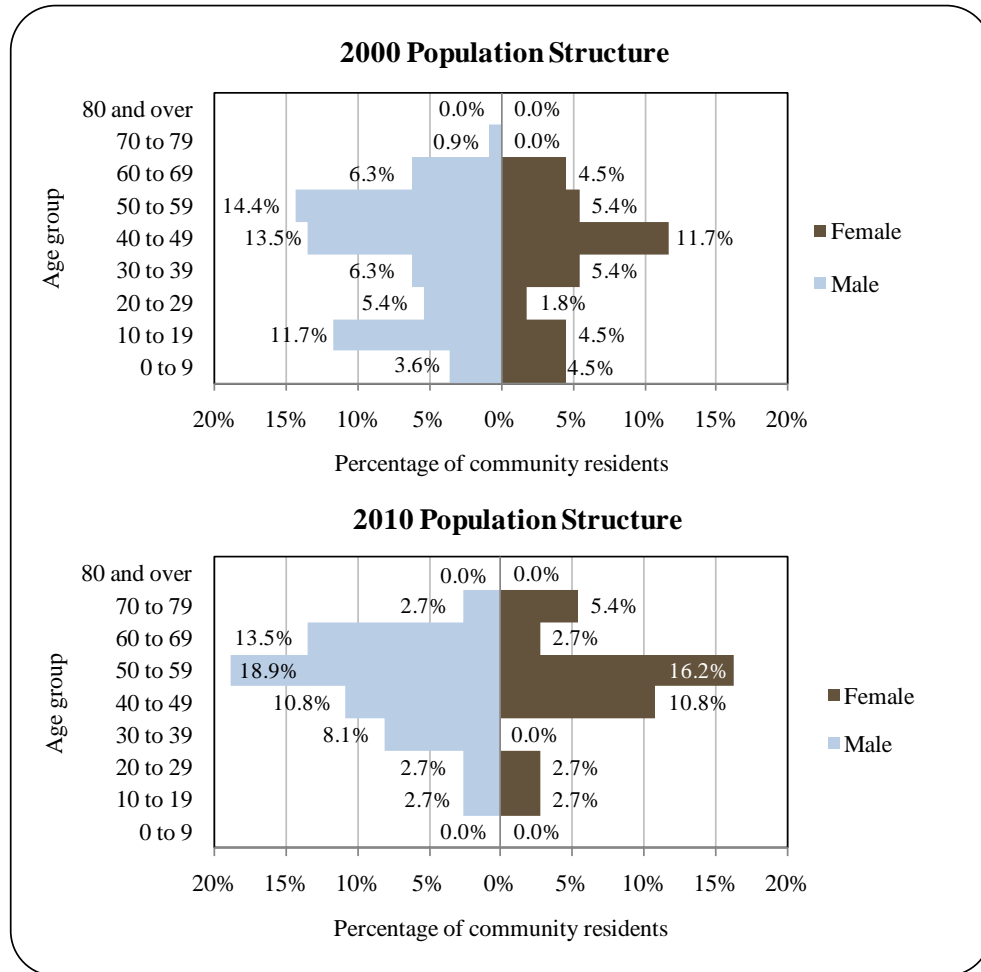
Figure 1. Racial and Ethnic Composition, Skwentna: 2000-2010 (U.S. Census).



The gender makeup in Skwentna in 2010 was 59.5% male and 40.5% female, more skewed than the state as a whole (52% male, 48% female). The median age was estimated to be 52.8 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010 the largest percentage of residents fell within the age category 50 to 59 years old, while the next largest percentage fell within the age category 40 to 49 years old. There were no Skwentna residents under age nine or over age 80 in 2010. By comparison, in

2000 a greater percentage of the population was made up of residents under the age of 20 (24.3% in 2000 compared to 11.7% in 2010), and a lower percentage of the population was made up of individuals aged 60 or older (5% in 2000 compared to 24.3% in 2010). This shift could be related to the closure of the Skwentna school in 2000 (see the *Educational Opportunities* section). The overall population structure of Skwentna in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Skwentna Based on the 2000 and 2010 U.S. Decennial Census.



The 2006-2010 American Community Survey (ACS) did not provide any information regarding educational attainment in Skwentna in 2010. Although the U.S. Decennial Census recorded 37 individuals as permanent residents in Skwentna in 2010, the ACS estimated a population of zero.^{211,212} Given the small population of Skwentna in 2010, it is useful to look

²¹¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

back at education statistics in the year 2000 as well, when the population was slightly higher (111 residents). Based on the 2000 U.S. Census,²¹³ 95% of Skwentna residents aged 25 and older held a high school diploma or higher degree, compared to 88.3% of Alaskan residents overall that year. Also based on the 2000 Census, 5% of Skwentna residents aged 25 and older had less than a ninth grade education, compared to 4.1% of Alaskan residents overall; 28.8% had a high school diploma or equivalent, compared to 27.9% of Alaskan residents overall; 7.5% had some college but no degree, compared to 28.6% of Alaskan residents overall; 22.5% had an Associate's degree, compared to 7.2% of Alaskan residents overall; and 36.3% of Skwentna residents had a Bachelor's degree, compared to 16.1% of Alaskan residents overall. No Skwentna residents held graduate or professional degrees in 2000, compared to 8.6% of Alaskans overall.

History, Traditional Knowledge, and Culture

Dena'ina Athabascans have fished and hunted along the Skwentna and Yentna Rivers for centuries. Dena'ina villages were occupied in the Yentna River Valley until the 1800s, and continued to be used as seasonal fishing and hunting camps by the Susitna Station and Kroto Creek Dena'ina until around 1930.²¹⁴ The gold rush of the late 1800s brought hundreds of prospectors to the Susitna River basin.²¹⁵ An extensive network of trails and wagon roads was established by early explorers, mining companies, and the Alaska Road Commission. Old Skwentna is located along the route of the Iditarod Trail.²¹⁶ Many roadhouses were constructed along the trail to the Innoko Mining District, including the Old Skwentna Roadhouse. Prospectors, trappers, and Natives often used sled dogs to transport goods over the trail. Max and Belle Shellabarger homesteaded and started a guide service in 1923 and later a flying service and weather station. A post office was opened in 1937. After World War II, Morrison-Knudson built an airstrip, and in 1950 the U.S. Army established a radar station at Skwentna and a recreation camp at Shell Lake, 15 air miles from Skwentna. In the 1960s, state land disposals increased settlement. Skwentna residents are scattered over a large area of land. The community has a number of seasonal-use homes. There is a small local store, and area residents use snowmobiles or aircraft to travel to the post office.²¹⁷

²¹² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²¹³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data). Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²¹⁴ Fall, J. and D. Foster. 1987. *Fish and Game Harvest and Use in the Middle Susitna Basin*. Retrieved May 23, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp143.pdf>.

²¹⁵ National Park Service, U.S. Dept. of the Interior. (2006). *Denali National Park and Preserve: Final South Denali Implementation Plan And Environmental Impact Statement*. Retrieved December 27, 2012 from http://www.matsugov.us/denali/documents/proof_book_000.pdf.

²¹⁶ Stanek, R.T. 1987. *Historical and Contemporary Trapping in the Western Susitna Basin*. Alaska Department of Fish and Game, Technical Paper No. 134. Retrieved December 21, 2012 from <http://www.arlis.org/docs/vol1/A/20704265.pdf>.

²¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment

January temperatures in Skwentna range from -30 to 33 °F (-34.4 to 0.6 °C), and July temperatures can vary from 42 to 83 °F (5.6 to 28.3 °C). Annual precipitation averages 28 inches, with 70 inches of snowfall.²¹⁸ In a survey conducted by the AFSC in 2011, community leaders reported that Skwentna's economy is reliant upon the following natural resource-based industries: mining, logging, fishing, ecotourism, and sport hunting/fishing.

Skwentna is located near Denali National Park and Preserve. The following information about Denali National Park and Preserve (National Park) is from the U.S. National Park Service. Denali, the “High One,” is the name Athabascan native people gave the massive peak that crowns the 600-mile-long Alaska Range. Denali is also the name of an immense national park and preserve created from the former Mount McKinley National Park. In 1917, Mount McKinley National Park was established as a game refuge. The park, including North America's highest peak, were named for former senator - later President - William McKinley. In 1980, the Alaska National Interest Lands Conservation Act (ANILCA) enlarged the boundary of the park by 4 million acres and redesignated it as Denali National Park and Preserve. The National Park exemplifies interior Alaska's character as one of the world's last great frontiers; its wilderness is largely unspoiled.²¹⁹

More than 650 species of flowering plants as well as many species of mosses, lichens, fungi, algae, and others grace the slopes and valleys of the National Park. Only plants adapted to long, cold winters and short growing seasons can survive in this subarctic wilderness. Permafrost ground underlies many areas of the park, where only a thin layer of topsoil is available to support life. After the continental glaciers retreated from most of the park 10,000 to 14,000 years ago, hundreds of years were required to begin building new soils and revegetation. The dynamic glaciated landscape provides large rivers, countless lakes and ponds, and unique landforms which form the foundation of the ecosystems that thrive in the National Park.²²⁰

The National Park is well-known for its diversity of wildlife. There are 39 species of mammals, 169 species of birds, 14 species of fish, and one species of amphibian known to occur in the area. There are no reptiles recorded in the National Park. Animal life and activity is dictated by the seasons. Winter is the longest season and the animals that are year-round residents are well-adapted to life in the subarctic. The brief spring season brings the return of 80% of the National Park's bird life, the waking of hibernating bears, and an increase in activity levels of wildlife. Summer is a time for raising young and preparing for migration, hibernation, or survival during the winter. Summer also brings hordes of insects, including mosquitoes. In late summer, king and chum salmon run in the multitude of streams and rivers. In autumn, migrating birds fill the skies and bull moose gather their harems of cows for the mating season.²²¹

²¹⁸ Ibid.

²¹⁹ U.S. National Park Service. 2012. *Denali National Park and Preserve: Nature and Science*. Retrieved from <http://www.nps.gov/dena/naturescience/index.htm> on March 29, 2012.

²²⁰ Ibid.

²²¹ Ibid.

Natural hazards that have been identified as highly likely to occur in the Mat-Su Borough include floods, wildfire, earthquake and volcanic activity. Avalanche and severe weather were rated a moderately likely to occur, and drought was rated at a low probability of occurrence.²²²

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in the Skwentna area as of December 2012.²²³

Current Economy²²⁴

Historically, commercial trapping and personal use harvest of fish and wildlife have played important roles in the economy of western Susitna basin communities like Skwentna, and employment patterns have been seasonal.^{225,226} Today, wage employment in Skwentna is also provided by local lodges, the post office, and the airstrip.²²⁷

Although the 2010 Decennial Census reported 37 residents age 16 or over in Skwentna in 2010, household surveys conducted for the 2006-2010 ACS did not provide similar coverage of local residents.^{228,229} Given this, the civilian labor force figure provided by the 2006-2010 ACS was estimated to be zero, and no earnings were reported in Skwentna. Due to the lack of 2010 data, only 2000 income estimates are discussed here.

Based on the 2000 Decennial Census, in 2000, the per capita income in Skwentna was \$23,994 and the median household income was \$16,250. Taking inflation into account by converting the 2000 values to 2010 dollars,²³⁰ the real per capita income in 2000 is shown to have been \$31,552, and the real median household income in 2000 was \$21,369. In the year 2000, Skwentna ranked 42nd of 344 Alaskan communities with per capita income data that year, and 322nd in median household income, out of 341 Alaskan communities with household income data. That year, 5.8% of Skwentna residents were below the poverty level, compared to 9.4% of Alaskan residents overall.

An estimate of 2010 per capita income can be generated using economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska

²²² Matanuska-Susitna Borough Dept. of Emergency Services. 2008. *All-Hazards Mitigation Plan, Phase One: Natural Hazards*. Retrieved May 24, 2012 from <http://ww1.matsugov.us/>.

²²³ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

²²⁴ Unless otherwise noted, all monetary data are reported in nominal values.

²²⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²⁶ Stanek, Ronald T. 1987. *Historical and Contemporary Trapping in the Western Susitna Basin*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 134. Retrieved December 31, 2012 from <http://www.arlis.org/docs/vol1/A/20704265.pdf>.

²²⁷ See footnote 225.

²²⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²²⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²³⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Department of Labor and Workforce Development (DOLWD). The ALARI database estimated that there were 65 residents age 16 and over in the civilian labor force in 2010. Of these, 16 residents were estimated to be employed that year.²³¹ If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Skwentna in 2010 is \$11,756.²³² In addition, an estimate based on the ALARI database indicates that the unemployment rate in 2010 was 7.7%, lower than the ALARI statewide unemployment rate estimate of 11.5%.²³³

The per capita estimate based on the ALARI database is lower than the real per capita income reported by the 2000 Census, providing evidence that per capita income may have decreased in Skwentna between 2000 and 2010. The possible decrease in per capita income is reflected in the fact that Skwentna met the Denali Commission's criteria as a "distressed community" in 2010,²³⁴ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. However, given the different data sources used to generate the 2000 and 2010 statistics, caution should be used when considering this information. It should also be noted that both U.S. Census and DOLWD data are based on wage earnings, and these income figures do not take into account the value of subsistence within the local economy.

Also due to Skwentna's small population size, the 2006-2010 ACS did not estimate employment statistics for 2010.²³⁵ Due to the lack of information for 2010, Figure 3 presents employment by industry in the year 2000, and employment is broken down by occupation for the year 2000 in Figure 4. Of 80 Skwentna residents aged 16 or older in 2000, 59 (73.8%) were reported to be the civilian labor force that year, compared to 67.6% that were in the civilian labor force statewide. No Skwentna residents were reported to be unemployed, compared to a statewide unemployment rate of 6.1% in 2000. That year, all 59 employed individuals in Skwentna worked in the private sector. The majority of residents (67.8%) in 2000 worked in tourism related industries (e.g., food services, recreation, etc.) and service occupations (45.8%). An estimated 10.2% of residents worked in natural resource based industries, which includes fishing. However, the number of individuals employed in farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and may characterize their employment accordingly.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 16 employed residents in 2010, of which 5 were employed in leisure and hospitality industries, 4 in trade, transportation, and utilities, 3 in professional and business services, 2 in construction, 1 in natural resources and mining, and 1 in information.²³⁶ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

²³¹ Alaska Dept. of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information*. Retrieved May 22, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

²³² See footnotes 228 and 231.

²³³ See footnote 231.

²³⁴ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

²³⁵ See footnote 228.

²³⁶ See footnote 231.

Figure 3. Local Employment by Industry in 2000-2010, Skwentna (U.S. Census).

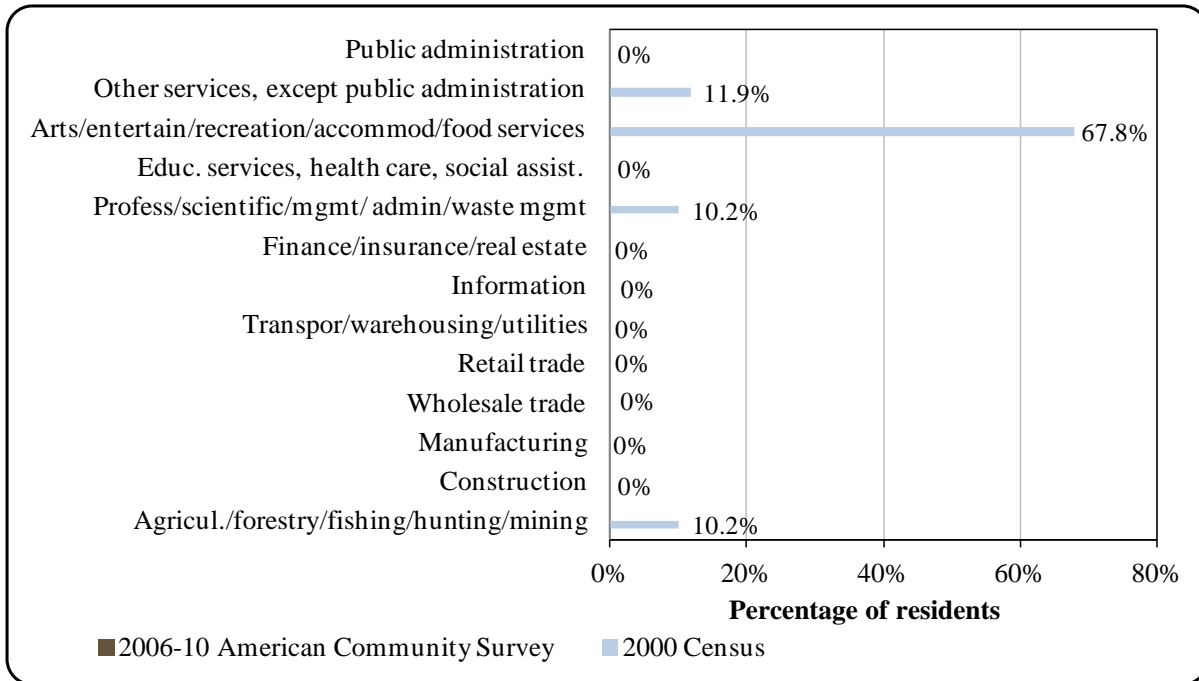
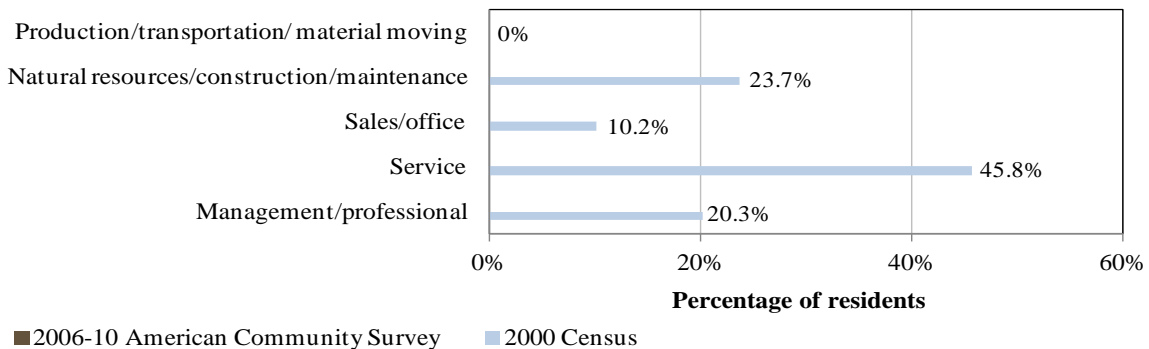


Figure 4. Local Employment by Occupation in 2000-2010, Skwentna (U.S. Census).



Governance

Skwentna is an unincorporated community located in the Mat-Su Borough.²³⁷ The community is represented by the Skwentna Community Council, but this body has been inactive in recent years. Since it is unincorporated, Skwentna does not maintain a municipal budget with community revenue and expenditures. Between 2000 and 2010, Skwentna did not receive State or Community Revenue Sharing contributions or any state or federal fisheries-related grants (Table 2). A federally-recognized tribe is not present in Skwentna.

²³⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Skwentna from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and Department of Natural Resources are located in Palmer. The nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Commerce, Community, and Economic Development, Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

There is no road access between Skwentna and the nearest state highway system, the George Parks Highway corridor, located approximately 40 miles east of the community. Residents are dependent upon air travel and snowmobiles.²³⁸ In a survey conducted by the AFSC in 2011, community leaders also indicated that water taxi service is available in the area. A state-owned 3,400 ft long by 75 ft wide gravel airstrip is available. There is also a private airstrip and float plane access, located at Alexander Lake, 15 miles to the southeast. Regularly scheduled commercial air service is not available to the Skwentna airport. Residents must reach Anchorage via private or charter aircraft.²³⁹

²³⁸ Ibid.

²³⁹ Ibid.

Facilities

A number of homes in Skwentna have individual water wells and septic systems, but very few homes are fully plumbed. Outhouses are the primary means of sewage disposal. There is no central electric system, and residents provide power via individual generator sets. A community refuse incinerator is available at an unpermitted dump site near the airport, operated by the borough. The site is currently being used by several families, but most residents burn and bury their own refuse. Law enforcement services are provided by state troopers in Talkeetna and fire and rescue services are provided by the Lake Creek/Skwentna First Responders.²⁴⁰

In a survey conducted by the AFSC in 2011, community leaders reported that, in the last ten years, Skwentna has completed a new landfill/solid waste site and a new post office. With regard to fisheries-related infrastructure, community leaders indicated that, although no dock space is available for permanent or transient vessels to moor, there is shore moorage available in the river for vessels up to 100 ft long, and Skwentna is equipped to handle fuel barges, landing craft, and water taxis. They noted that vessels basing in Skwentna are typically under 60 ft in length, and local boat traffic is primarily comprised of charter boats, private pleasure boats, barges, and landing craft. Fisheries-related services available in Skwentna include sale of boat fuel and fishing gear and tackle, boat repair (electrical, welding, and mechanical services), dry dock storage, and fishing lodges. For fisheries-related businesses and services not available in Skwentna, community leaders indicated that residents travel to Willow, Wasilla, or Anchorage.

*Medical Services*²⁴¹

Medical care is available at the Valley Hospital located in Palmer (approximately 80 miles from Skwentna). Alternate health care is provided by the Lake Creek/Skwentna First Responders. Emergency services have highway and river access and are provided by the 911 telephone service and volunteers.

Educational Opportunities

Through the 1999-2000 school year, the Mat-Su Borough administered a small school in Skwentna that offered grades kindergarten through high school, but since the school has been closed since the fall of 2000 due to lack of sufficient enrollment.^{242,243} As of 2012, the nearest elementary schools are Trapper Creek Elementary and Talkeetna Elementary, and the nearest Junior/Senior high school is Su-Valley High School, located near Talkeetna along the George Parks Highway. Some students may also be homeschooled through correspondence programs such as Mat-Su Central School, or other state, federal, or church correspondence programs.²⁴⁴

²⁴⁰ Ibid.

²⁴¹ Ibid.

²⁴² Stanek, Ronald T. 1987. *Historical and Contemporary Trapping in the Western Susitna Basin*. Alaska Department of Fish and Game, Technical Paper No. 134. Retrieved December 21, 2012 from <http://www.arlis.org/docs/vol1/A/20704265.pdf>.

²⁴³ Alaska Dept. of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁴⁴ Personal communication, Mat-Su Borough School District administrator. July 13, 2012.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historically, residents of Skwentna have mainly participated in recreational and subsistence fishing and have had limited participation in commercial fishing.^{245,246} The area drained by the Skwentna and Yentna rivers has many lakes and small streams that support all five species of salmon in Alaska. A number of fly-in fishing lodges are present in the area to taking advantage of the fine fishing opportunities. Most are located on the Talachulitna River, Lake Creek, and Fish Creek. Guests target Chinook salmon from June to mid-July, pink and sockeye salmon in July and early August, and coho salmon from August to early September. Rainbow trout, grayling, Dolly Varden, and northern pike are also important sport species.²⁴⁷ Local residents also participate in a state-managed subsistence fish wheel fishery for salmon, which has taken place in main stem of the Yentna River since 1998. Season limits of 25 salmon per head of household plus 10 salmon for each dependent are in place for the fishery, as well as a 2,500 total season limit. All Chinook salmon and rainbow/steelhead trout must be returned alive to the water.^{248,249} For more information about the fish wheel fishery, see the *Subsistence Fishing* section below.

No commercial fisheries take place in the immediate vicinity of Skwentna. The community is located approximately 50 miles inland, north of Cook Inlet, the nearest marine area. A number of state-managed commercial fisheries take place in Cook Inlet, including fisheries for salmon, Pacific halibut, and scallops, as well as commercial harvest of razor clams along the shoreline.^{250,251} Gulf of Alaska (GOA) waters beyond Cook Inlet are encompassed by Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA Sablefish Regulatory Area.

In a survey conducted by the AFSC in 2011, community leaders indicated that Skwentna actively participates in fisheries management processes in Alaska. The community participates through sending a representative to the North Pacific Fisheries Management Council committees or advisory groups and Board of Fisheries meetings, a representative that sits on regional fisheries advisory and/or working groups run by the ADF&G, and through a representative that participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council

²⁴⁵ See footnote 242.

²⁴⁶ Fall, James and Dan Foster. 1987. *Fish and Game Harvest and Use in the Middle Susitna Basin*. Retrieved May 23, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp143.pdf>.

²⁴⁷ Official State of Alaska Vacation and Travel Information. 2012. *Southcentral: Skwentna Overview*. Retrieved on May 9, 2012 from <http://www.travelalaska.com/Destinations/Communities/Skwentna.aspx>.

²⁴⁸ Alaska Dept. of Fish and Game. 2009. *Alaska Subsistence Salmon Fisheries, 2007 Annual Report*. Retrieved July 10, 2012 from <http://www.subsistence.adfg.state.ak.us/techpap/TP346.pdf>.

²⁴⁹ Holen, David and James Fall. 2011. *Overview of Subsistence Salmon Fisheries in the Tyonek Subdistrict and Yentna River, Cook Inlet, Alaska*. Alaska Dept. of Fish and Game, Division of Subsistence, Special Publication No. BOF 2011-01. Retrieved December 31, 2012 from http://www.adfg.alaska.gov/specialpubs/SP2_SP2011-001.pdf.

²⁵⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²⁵¹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

process. Skwentna is also the meeting location of the Mt. Yenlo Fish and Game Advisory Committee. Advisory committees are formed by local community members as forums to discuss fish and wildlife issues and provide recommendations to the Alaska Board of Fisheries and Board of Game.²⁵²

When asked to describe challenges facing Swentna's fishing economy, community leaders reported in the 2011 AFSC survey that declines in Chinook and sockeye salmon populations in the Swentna and Yentna Rivers are a serious concern, and have led to restrictions in both sport and subsistence salmon harvests in the area. They expressed the opinion that restoration of sockeye, chum, coho, and Chinook salmon runs in the Skwentna area will require reduced interception of salmon by commercial net fisheries in Cook Inlet. They also expressed the belief that salmon by-catch in the offshore pollock fishery is detrimental to Chinook salmon runs bound for the Skwentna River. Community leaders also observed positive results from management efforts to control northern pike populations, which they felt allowed salmon stocks to rebound.

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Skwentna does not have a registered shore-based processing plant. The nearest processing plant is located in Anchorage.

Fisheries-Related Revenue

According to the 2011 AFSC survey, community leaders reported that no revenues were received from fisheries-related taxes or fees in Skwentna in 2010. Likewise, Alaska state agencies reported no fisheries-related revenue in Skwentna between 2000 and 2010 (Table 3).

Commercial Fishing

Between 2000 and 2010, no Skwentna residents held Federal Fisheries Permits, federal License Limitation Program permits, or state-issued Commercial Fisheries Entry Commission (CFEC) permits (Table 4). In addition, there were no crew license holders, fish buyers, shore-side processing facilities, or vessels landing catch in Skwentna between 2000 and 2010. From 2000 to 2004, the number of vessels primarily owned by Skwentna residents varied between 28 and 32, and the number of vessels registered as homeported in the community ranged from 43 to 51. However, between 2005 and 2010, zero vessels were primarily owned by Skwentna residents or homeported there. Information about the characteristics of the commercial fishing sector in Skwentna is presented in Table 5. There were no Skwentna residents holding halibut (Table 6) or sablefish (Table 7) quota share accounts or quota shares in federal catch share fisheries between 2000 and 2010. There were also no Skwentna residents holding crab share accounts or quota shares between 2005 and 2010 (Table 8). There were no landings or associated ex-vessel revenue reported in Skwentna between 2000 and 2010 (Table 9), nor were there any landings or associated ex-vessel revenue reported by Skwentna residents during this period (Table 10).

²⁵² Alaska Dept. of Fish and Game. 2012. *Advisory Committees*. Retrieved December 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=process.advisory>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Skwentna: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Skwentna: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 Cont. Permits and Permit Holders by Species, Skwentna: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Skwentna: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Skwentna ²	Total Net Lbs Landed in Skwentna ^{2,5}	Total Ex-Vessel Value of Landings in Skwentna ^{2,5}
2000	0	0	0	29	51	0	0	\$0
2001	0	0	0	32	50	0	0	\$0
2002	0	0	0	31	44	0	0	\$0
2003	0	0	0	28	43	0	0	\$0
2004	0	0	0	31	46	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Skwentna: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Skwentna: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Skwentna: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Skwentna: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Skwentna Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Although between 4 and 13 active sport fish guide businesses were registered in Skwentna between 2000 and 2010, none were active during this period. The number of licensed sport fish guide present varied between 7 and 26 per year. In 2010, 52 sportfishing licenses were sold to Skwentna residents (irrespective of the point of sale), a decline from 71 licenses sold to community residents in 2010. The number of sportfishing licenses sold in Skwentna also declined over the period, from 315 in 2000 to 70 in 2010. The fact that a greater number of licenses were sold locally than the number of residents that purchased licenses suggests that sportfishing activities attract visitors to the Skwentna area.

Recreational fishing is a popular activity in the region generally. Skwentna is located within Alaska Sport Fishing Survey Area M – Susitna River drainage. Information is available about freshwater sportfishing only at this regional level. Between 2000 and 2010, non-Alaska resident anglers fished an average of 57,330 days per year, while Alaska resident anglers fished an average of 118,222 days per year. This information about sportfishing trends in Skwentna and the Susitna River drainage is presented in Table 11.

Table 11. Sport Fishing Trends, Skwentna: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Skwentna ²	Freshwater Angler Days Fished – Non-Residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	0	23	71	315	64,141	177,316
2001	0	22	54	288	71,249	128,658
2002	0	20	62	220	59,863	126,516
2003	0	17	53	234	56,844	131,687
2004	0	16	54	279	56,934	130,366
2005	0	11	42	163	68,753	100,803
2006	0	7	43	128	63,255	109,462
2007	0	18	48	115	58,471	115,578
2008	0	26	44	114	49,911	98,827
2009	0	24	49	92	40,797	99,404
2010	0	19	52	70	40,414	81,821

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

The Alaska Statewide Harvest Survey, conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Skwentna: Chinook salmon, coho salmon, sockeye salmon, rainbow trout, burbot, and northern pike.²⁵³ No kept/release log book data were reported for fishing charters out of Skwentna between 2000 and 2010.²⁵⁴

In a survey conducted by the AFSC in 2011, community leaders noted that recreational fishing in Skwentna takes place from charter boats or party boats, private boats owned by local residents, private boats owned by non-residents, shore-based or dock fishing by local residents, and shore-based or dock fishing by non-residents. Community leaders also reported that the following species are targeted by recreational fishermen that use boats based in Skwentna: all five species of salmon, Dolly Varden char, and smelt.

²⁵³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²⁵⁴ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Subsistence Fishing

Subsistence harvest activities play an important role for Skwentna-area residents. According to research by ADF&G in past decades, subsistence harvests are generally higher in remote areas of the Mat-Su Borough such as Skwentna compared to communities located along road networks.²⁵⁵ In the 2011 AFSC survey, community leaders indicated that subsistence fishing resources utilized most heavily by Skwentna residents include salmon, northern pike, whitefish, trout, and burbot. They also noted the importance of beaver and mink as local subsistence resources.

Between 2000 and 2010, no information was reported by management agencies regarding per capita subsistence harvest in Skwentna or the percentage of households utilizing various marine resources for subsistence purposes (Table 12). Likewise, no information was reported during this period regarding halibut (Table 14) or marine mammal harvests (Table 15). However, some information was reported between 2000 and 2008 regarding subsistence salmon permits issued to Skwentna households.

A personal use fish wheel fishery began in 1996 in the Upper Yentna and Skwentna Rivers. In 1998, the fishery transitioned to a subsistence designation, following a lawsuit that required the Alaska Board of Fisheries to revisit Skwentna residents' subsistence fishery proposal, and to consider new evidence of customary and traditional use of subsistence resources by residents of the Skwentna area.²⁵⁶ In 2008, the most recent year for which data were available, seven subsistence salmon permits were issued to Skwentna households, an overall decline from 12 subsistence salmon permits issued in 2000. All seven of the permits issued in 2008 were reported to have been fished. While the amount of each species of salmon harvested under subsistence permits was variable from year to year during the 2000-2008 period, sockeye salmon were consistently harvested in greater numbers than other species. Data were not available regarding harvest of marine invertebrates and non-salmon fish between 2000 and 2010. This information regarding salmon, marine invertebrates, and non-salmon fish is presented in Table 13.

²⁵⁵ Fall, James and Dan Foster. 1987. *Fish and Game Harvest and Use in the Middle Susitna Basin*. Retrieved May 23, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp143.pdf>.

²⁵⁶ Holen, David and James Fall. 2011. *Overview of Subsistence Salmon Fisheries in the Tyonek Subdistrict and Yentna River, Cook Inlet, Alaska*. Alaska Dept. of Fish and Game, Division of Subsistence, Special Publication No. BOF 2011-01. Retrieved December 31, 2012 from http://www.adfg.alaska.gov/specialpubs/SP2_SP2011-001.pdf.

Table 12. Subsistence Participation by Household and Species, Skwentna: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Skwentna: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	12	12	n/a	3	61	4	227	n/a	n/a
2001	10	9	n/a	1	28	7	309	n/a	n/a
2002	10	9	n/a	13	46	3	242	n/a	n/a
2003	11	9	n/a	6	64	n/a	331	n/a	n/a
2004	20	16	n/a	6	116	46	430	n/a	n/a
2005	11	11	n/a	25	34	24	155	n/a	n/a
2006	11	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	9	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	7	7	n/a	2	43	15	125	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Skwentna: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Skwentna: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and Suydam, R.S. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *Journal of Cetacean Research and Management* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage

Talkeetna (towl-KEET-nuh)



People and Place

*Location*²⁵⁷

Located at the junction of the Talkeetna and Susitna Rivers, Talkeetna lies 115 mi north of Anchorage at mi 226.7 of the Alaska Railroad. The paved Talkeetna Spur Road runs 14 mi east from the George Parks Highway at milepost 98.7. Talkeetna is located in the Talkeetna Recording District, the Matanuska-Susitna (Mat-Su) Census Area, and the Mat-Su Borough.

*Demographic Profile*²⁵⁸

In 2010, there were 876 inhabitants in Talkeetna, making it the 74th largest of 352 total Alaskan communities with recorded populations that year. Overall since 1990, the population of Talkeetna has increased substantially. The change in population from 1990 to 2010 is provided in Table 1. According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that an estimated 300 people come to Talkeetna each year as seasonal workers or transients between May and September.

A majority of Talkeetna residents identified themselves as White in 2010 (91.4%). Other ethnic groups present in Talkeetna that year included American Indian and Alaska Native (3.7%), two or more races (3.4%), some other race (0.2%), Native Hawaiian and Other Pacific Islander (0.5%), Asian (0.5%), Black or African American (0.3%), and Hispanic or Latino (1.8%). The percentage of residents identifying themselves as White, Hispanic or Latino, Asian, Native Hawaiian and Other Pacific Islander, and Black or African American increased between 2000 and 2010, with corresponding decreases in the percentage of the population identifying themselves as two or more races, some other race, and American Indian and Alaska Native. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Talkeetna in 2010 was 1.95, a decrease from 2.1 persons per household in 1990 and 2.16 in 2000. The total number of households in Talkeetna increased from 114 in 1990 to 358 in 2000 to 449 in 2010. Of the 744 total housing units surveyed for the 2010 Decennial Census, 318 were owner-occupied, 131 were renter-occupied, and 295 were vacant or used only seasonally. Throughout this period no residents of Talkeetna were reported to be living in group quarters.

In 2010, the gender distribution in Talkeetna was 51.7% male and 48.3% female, very similar to the state as a whole (52% male, 48% female). The median age was estimated to be 45.4 years, higher than both the U.S. national average of 36.8 years and the median age for

²⁵⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Alaska, 33.8 years. In 2010, the largest percentage of residents fell within the age group 50 to 59 years old, with the next largest percentage falling within the age group 40 to 49 years old. Relatively few residents fell within the age group 20 to 29 years old or the 70 years old and older age group. The overall population structure of Talkeetna in 2000 and 2010 is shown in Figure 2.

Table 1. Population in Talkeetna from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	250	-
2000	772	-
2001	-	796
2002	-	867
2003	-	855
2004	-	846
2005	-	859
2006	-	834
2007	-	833
2008	-	857
2009	-	894
2010	876	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Talkeetna: 2000-2010 (U.S. Census).

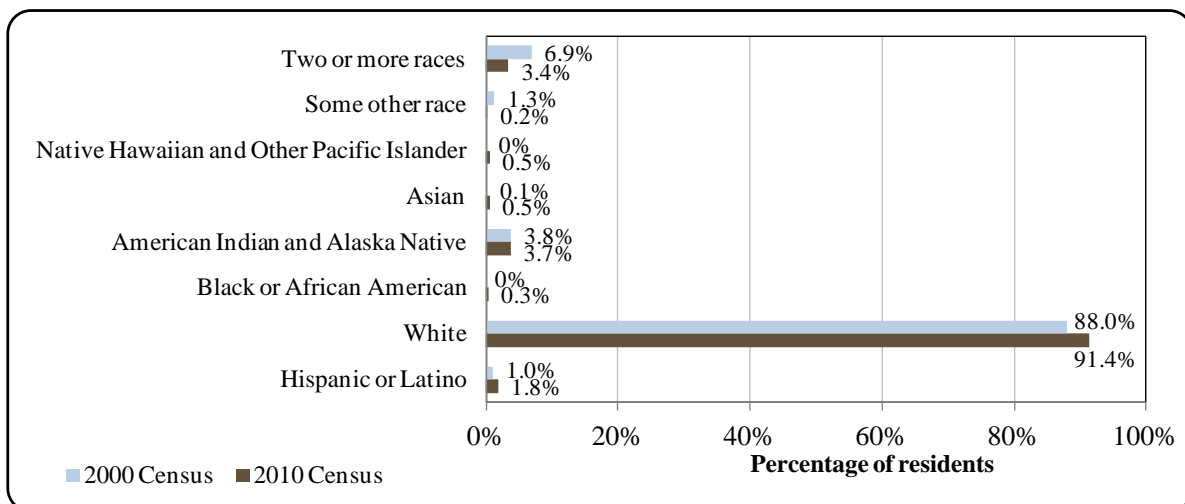
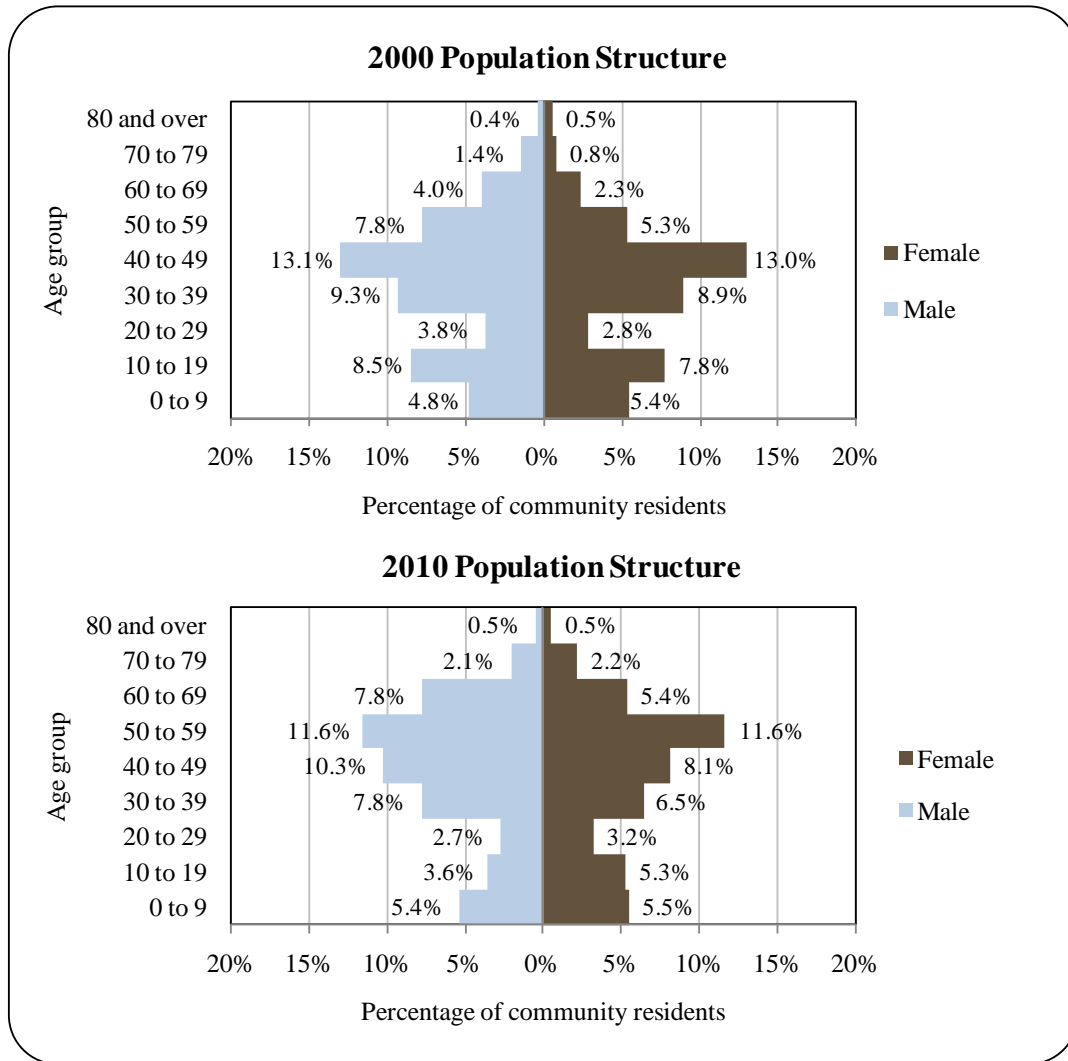


Figure 2. Population Age Structure in Talkeetna Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey (ACS),²⁵⁹ in terms of educational attainment, 91.3% of Talkeetna residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, there were no residents of Talkeetna aged 25 and older that were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; 8.8% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 33.3% were estimated to hold a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; 31.8% were estimated to have some college but no degree,

²⁵⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

compared to 28.3% of Alaska residents overall; 3% were estimated to hold an Associate's degree, compared to 8% of Alaska residents overall; and 23.3% were estimated to hold a Bachelor's degree, compared to 17.4% of Alaska residents overall. No Talkeetna residents aged 25 and over were estimated to hold a graduate or professional degree in 2010, compared to 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*²⁶⁰

The Talkeetna and Chulitna Rivers join the Susitna River at Talkeetna, a Dena'ina (Tanaina) word meaning "river of plenty." Talkeetna was settled as a mining town and Alaska Commercial Company trading post in 1896. A gold rush to the Susitna River brought prospectors to the area, and by 1910 Talkeetna was a riverboat steamer station, supplying miners and trappers in the Cache Creek, Iron Creek, and Broad Creek districts. In 1915, Talkeetna was chosen as the headquarters for the Alaska Engineering Commission, who built the Alaska Railroad, and the community population peaked near 1,000. World War I and completion of the railroad in 1919 dramatically decreased the population. Talkeetna has since developed as an aviation and supply base for expeditions to Mt. McKinley and Denali National Park. Several of its old log buildings are now historical landmarks, and Talkeetna was placed on the National Register of Historic Places in April 1993. State land disposals and homestead programs helped the community grow. Talkeetna is popular for its recreational fishing, hunting, boating, flightseeing, skiing, and dog mushing. Local businesses provide services to climbers visiting the National Park.

Natural Resources and Environment

January temperatures range from -33 to 33 °F (-36.1 to 0.6 °C); July can range from 42 to 83 °F (5.6 to 28.3 °C). Annual precipitation averages 28 inches, with 70 inches of snowfall.²⁶¹

Talkeetna is the gateway to Denali National Park for people who wish to climb Mt. McKinley. The following information about Denali National Park and Preserve (National Park) is from the U.S. National Park Service.²⁶²

Denali, the "High One," is the name Athabascan native people gave the massive peak that crowns the 600-mi-long Alaska Range. Denali is also the name of an immense national park and preserve created from the former Mount McKinley National Park. In 1917, Mount McKinley National Park was established as a game refuge. The park, including North America's highest peak, were named for former senator - later President - William McKinley. In 1980, the Alaska National Interest Lands Conservation Act (ANILCA) enlarged the boundary of the park by 4 million acres and redesignated it as Denali National Park and Preserve. The National Park exemplifies interior Alaska's character as one of the world's last great frontiers; its wilderness is largely unspoiled.

²⁶⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶¹ Ibid.

²⁶² U.S. National Park Service. 2012. *Denali National Park and Preserve: Nature and Science*. Retrieved from <http://www.nps.gov/dena/naturescience/index.htm> on March 29, 2012.

More than 650 species of flowering plants as well as many species of mosses, lichens, fungi, algae, and others grace the slopes and valleys of the National Park. Only plants adapted to long, cold winters and short growing seasons can survive in this subarctic wilderness. Permafrost ground underlies many areas of the park, where only a thin layer of topsoil is available to support life. After the continental glaciers retreated from most of the park 10,000 to 14,000 years ago, hundreds of years were required to begin building new soils and revegetation. The dynamic glaciated landscape provides large rivers, countless lakes and ponds, and unique landforms which form the foundation of the ecosystems that thrive in the National Park.

The National Park is well-known for its diversity of wildlife. There are 39 species of mammals, 169 species of birds, 14 species of fish, and 1 species of amphibian known to occur in the area. There are no reptiles recorded in the National Park. Animal life and activity is dictated by the seasons. Winter is the longest season and the animals that are year-round residents are well-adapted to life in the subarctic. The brief spring season brings the return of 80% of the National Park's bird life, the waking of hibernating bears, and an increase in activity levels of wildlife. Summer is a time for raising young and preparing for migration, hibernation, or survival during the winter. Summer also brings hordes of insects, including mosquitoes. In late summer, king and chum salmon run in the multitude of streams and rivers. In autumn, migrating birds fill the skies and bull moose gather their harems of cows for the mating season.

In a survey conducted by the AFSC in 2011, community leaders reported that Talkeetna's economy relies upon the following natural resource-based industries: logging, fishing, ecotourism, and sport hunting.

Current Economy²⁶³

As the take-off point for fishing and flightseeing trips and a staging area for Denali climbing expeditions, Talkeetna provides air taxis, helicopters, outfitters, and related services. Numerous air taxis provide transport to Kahiltna Glacier Base Camp. All climbers must register for Mount McKinley and Mount Foraker. In 2010, nine area residents held commercial fishing permits.²⁶⁴ Top employers in 2010²⁶⁵ included Mat-Su Borough Schools, Ciri Alaska Tourism Corp., Sunshine Community Health CTR, Latitude 62 LLC, Alaska Railroad Corp., Talkeetna Air Taxi Inc., Nagley Store, K2 Aviation, Old Talkeetna Roadhouse LLC, and State of Alaska.

According to the 2006-10 ACS, in 2010, the per capita income in Talkeetna was estimated to be \$19,187 and the median household income was estimated to be \$31,087, compared to \$23,695 and \$38,289 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,²⁶⁶ the real per capita income in 2000 is shown to have been \$31,159 and the real 2000 median household income was \$50,350. This shows that both per capita income and household income decreased between 2000 and 2010. In 2010, Talkeetna ranked 160th of 305 Alaskan communities with per capita income that year, and 240th

²⁶³ Unless otherwise noted, all monetary data are reported in nominal values.

²⁶⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶⁵ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²⁶⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

out of 299 Alaskan communities with household income data. However, Talkeetna's small population size may have prevented the ACS from accurately portraying economic conditions.²⁶⁷ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Talkeetna in 2010 was \$15,362, which indicates an even further decrease compared to the real per capita income values reported by the U.S. Census in 2000.²⁶⁸

Based on the 2006-2010 ACS, 64.9% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 14.4%, compared to the statewide unemployment rate of 5.9%. Approximately 16.1% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Talkeetna are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Talkeetna. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 19.7%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the private sector (64.2%), while 30.6% were self-employed and 5.2% were employed in the public sector. Out of 268 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in retail trade (39.2%), construction (16.9%), and professional, scientific, management, administration, and waste management (11.8%). Smaller percentages of the population were estimated to be employed in other services, except public administration (2.5%), arts, entertainment, recreation, accommodation, and food services (4.9%), educational services, health care, and social assistance (7.4%), finance, insurance, and real estate (4.7%), information (2.5%), transportation, warehousing, and utilities (2.5%), and agriculture, forestry, fishing, hunting, and mining (7.8%). However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

²⁶⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁶⁸ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 3. Local Employment by Industry in 2000-2010, Talkeetna (U.S. Census).

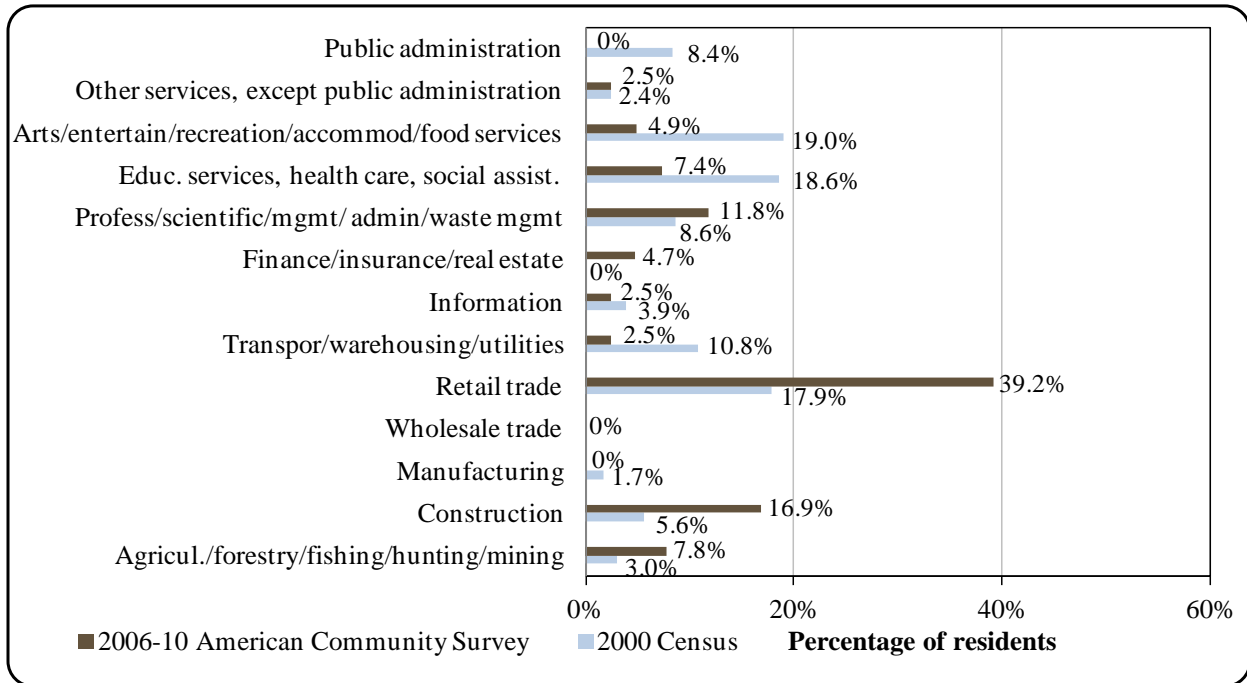
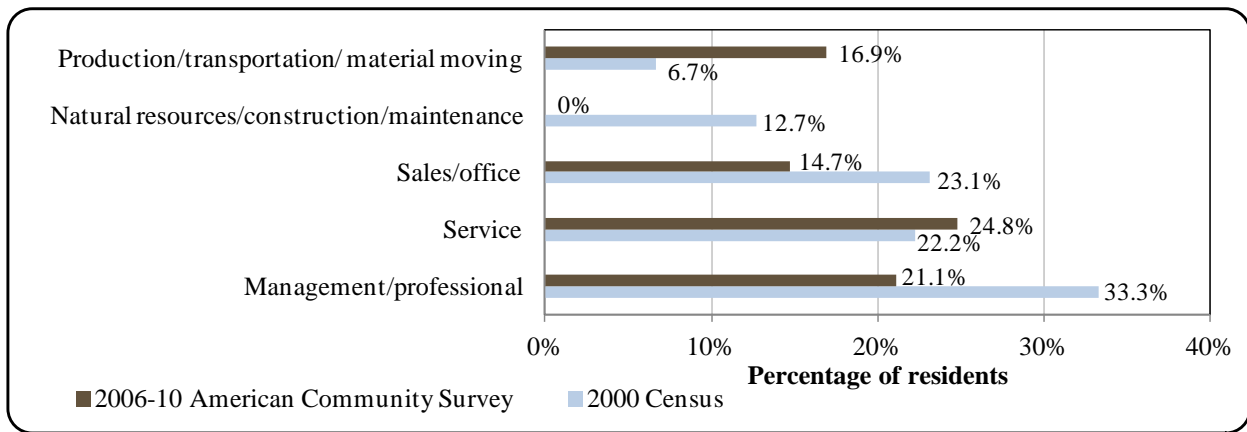


Figure 4. Local Employment by Occupation in 2000-2010, Talkeetna (U.S. Census).



Governance

Talkeetna is an unincorporated town located in the Mat-Su Borough. Because of Talkeetna’s unincorporated status, no municipal taxes were administered between 2000 and 2010. Talkeetna did not receive any Community Revenue Sharing contributions or fisheries-related grants between 2000 and 2010. Information about selected aspects of Talkeetna’s community revenue is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Talkeetna from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Talkeetna was not included in the Alaska Native Claims Settlement Act (ANCSA) and is not federally recognized as a Native village. Talkeetna is a member of Cook Inlet Region, Incorporated (CIRI), a regional Native corporation. CIRI is one of 12 Alaska-based regional corporations established ANCSA to benefit Alaska Natives who had ties to the Cook Inlet region. The Company is owned by more than 7,300 Alaska Native shareholders of Athabascan and Southeast Indian, Inupiat, Yupik, Alutiiq (Sugpiaq) and Aleut (Unangax) descent. It is based in Anchorage and has interests across Alaska, the lower 49 and abroad. CIRI's well-diversified portfolio of business operations and investments includes: traditional and alternative energy and resource development, oilfield and construction services, environmental services, real estate investment and management, tourism and hospitality, telecommunications, aerospace defense, private equity and venture capital investments. CIRI also created a family of nonprofit service organizations that provide needed health care, housing, employment, education and other social and cultural enrichment services for Alaska Natives and others.²⁶⁹

The nearest offices of the Alaska Department of Fish and Game (ADF&G) is located in Palmer. The nearest offices of the Alaska Department of Natural Resources (DNR), Department of Commerce, Community, and Economic Development (DCCED), National Marine Fisheries Service, Bureau of Citizenship and Immigration Services (BCIS), and U.S. Immigration and Customs Enforcement (US ICE) are all located in Anchorage.

²⁶⁹ Cook Inlet Region, Incorporated. 2012. *CIRI Company Overview*. Retrieved on May 10, 2012 from <http://www.ciri.com/content/company/business.aspx>.

Infrastructure

*Connectivity and Transportation*²⁷⁰

Talkeetna is accessible by road, air, and train. The Talkeetna Spur Road connects to the George Parks Highway, which connects to Fairbanks and Anchorage. There are two state-owned runways. One is a paved asphalt runway and is 3,500 ft long by 75 ft wide; the other is a 480 ft long by 85 ft wide gravel strip. There are several additional airstrips in the vicinity, including one owned by the U.S. Bureau of Land Management. There is an Alaska Railroad depot located in Talkeetna. While Talkeetna is accessible to charter and private aircraft, there is no regularly scheduled service between Talkeetna and Anchorage, which can be reached by road.

*Facilities*²⁷¹

The majority of residents have individual wells, septic tanks, and complete plumbing. A piped water and sewer system is maintained by the Mat-Su Borough. The high school operates its own water system. A borough-operated refuse transfer station is located at mi 11.5 on the Talkeetna Spur Road. A sludge disposal site is available locally. Law enforcement services are provided by a state troopers post that is located at mi 97.8 on the George Parks Highway. Fire and rescue services are provided by the Borough, with the station located at mi 14 on the Talkeetna Spur Road, and by Talkeetna Ambulance Service. The following visitor attractions are located in Talkeetna: Denali/Talkeetna Visitor Center, Talkeetna Ranger Station, Talkeetna Historical Society Museum, Museum of Northern Adventure, riverboat services guides, McKinley flight tours, and fishing charters. Talkeetna has a number of accommodations for visitors, as well as two school libraries and one public library.

*Medical Services*²⁷²

Medical services are provided by the Sunshine Community Health Center and the Mat-Su Regional Hospital which is located between Palmer and Wasilla on the George Parks Highway. The community health center is privately owned and operated. Alternate health care is provided by the Talkeetna Ambulance Service and by Valley Hospital in Palmer. The community health center is a qualified Emergency Care Center. Emergency services have highway, air, and helicopter access and are provided by a 911 telephone service and volunteers.

²⁷⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁷¹ Ibid.

²⁷² Ibid.

*Educational Opportunities*²⁷³

Talkeetna Elementary School provides instruction to students from pre-school through sixth grade. In 2011, the school had 96 students and 9 teachers. Middle and high school students are bused to Sustina North, at milepost 98, in the Susitna Valley.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Talkeetna's participation in North Pacific fisheries is rooted in its recent development as a tourist destination. Susitna River drainages produce large coho runs in the late summer which attract many Alaskan and non-Alaska resident anglers to the area.²⁷⁴ Clear Creek is a popular spot for landing Chinook salmon starting in July.²⁷⁵ Recreational fisheries in the area are managed by ADF&G Division of Sportfish in Palmer.

Talkeetna is located at the intersection of the Talkeetna and Susitna Rivers. Due to its inland location, Talkeetna is not located within a Federal Statistical and Reporting Area, a Pacific Halibut Fishery Regulatory Area, or a Sablefish Regulatory Area. However, the nearest Federal Statistical and Reporting Area is Area 630, the nearest Pacific Halibut Fishery Regulatory Area is Area 3A, and the nearest Sablefish Regulatory Area is the Central Gulf of Alaska.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Talkeetna does not have a registered processing plant. The nearest processing plant is located in Anchorage.

Fisheries-Related Revenue

No fisheries-related revenue was reported for Talkeetna between 2000 and 2010 (Table 3).

Commercial Fishing

In 2010, there were 10 Talkeetna residents holding a total of 10 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for herring, sablefish, and salmon. While the number of herring and sablefish CFEC permits and permit holders remained relatively stable during this period, none of those permits were reported as fished (with the exception of sablefish permits in 2000 and 2001). The sablefish CFEC permit issued in 2010

²⁷³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁷⁴ Alaska Department of Fish and Game (n.d.). *Matanuska-Susitna Valley & West Cook Inlet Silver Salmon*. Retrieved July 10, 2012 from: http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/mat-su_silvers.pdf.

²⁷⁵ Alaska Department of Fish and Game. (n.d.). *Matanuska-Susitna Valley & West Cook Inlet King Salmon*. Retrieved July 10, 2012 from: <http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/MatSuKingSalmon.pdf>.

was for the fixed gear fishery using vessels under 35 ft in Prince William Sound, while the herring CFEC permits were issued for the gill net fishery in Norton Sound. The number of salmon CFEC permits and permit holders increased before decreasing again between 2000 and 2010, while the number of those permits reported as fished decreased before increasing again during the same period. The majority of the salmon CFEC permits issued in 2010 were for the set gill net fishery in Cook Inlet, with the remainder issued for the drift gill net fishery in Bristol Bay, the gill net fishery in Kotzebue, and the statewide hand troll fishery. Information on permits and permit holders by species between 2000 and 2010 is presented in Table 4.

Between 2000 and 2010, the number of commercial crew license holders in Talkeetna varied considerably, from 13 in 2000 to one in 2006. In 2010, there were eight crew license holders in Talkeetna. Between 2000 and 2010, there were no fish buyers or shore-side processing facilities located in Talkeetna. The number of vessels owned primarily by Talkeetna residents and the number of vessels homeported in Talkeetna both decreased substantially between 2000 and 2010. There were no commercial vessels landing catch in the community between 2000 and 2010. Information about the characteristics of the commercial fishing sector in Talkeetna is provided in Table 5.

There were no individuals in Talkeetna holding quota share accounts or quota shares for federal halibut (Table 6), sablefish (Table 7), or crab (Table 8) fisheries between 2000 and 2010. As previously stated, there were no vessels landing catch in Talkeetna between 2000 and 2010, and therefore there are no landings or associated ex-vessel revenue to report between 2000 and 2010 (Table 9). Landings of all species by Talkeetna residents between 2000 and 2010 are considered confidential due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Talkeetna: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Talkeetna: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	1	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	1	1	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	1	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	1	1	1	1	1	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	1	1	1	1	1	0	0	0	0
Herring (CFEC) ²	Total permits	2	2	2	2	1	1	2	2	2	2	2
	Fished permits	1	1	0	0	0	0	0	0	0	0	0
	% of permits fished	50%	50%	-	-	-	-	-	-	-	-	-
	Total permit holders	2	2	2	2	1	1	2	2	2	2	2

Table 4 Cont. Permits and Permit Holders by Species, Talkeetna: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	8	10	10	10	10	9	8	7	7	7	7
	Fished permits	7	4	3	4	6	5	5	5	5	5	5
	% of permits fished	88%	40%	30%	40%	60%	56%	63%	71%	71%	71%	71%
	Total permit holders	9	10	10	10	10	9	9	8	7	7	7
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>12</i>	<i>15</i>	<i>14</i>	<i>14</i>	<i>13</i>	<i>12</i>	<i>12</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>10</i>
	<i>Fished permits</i>	<i>8</i>	<i>5</i>	<i>3</i>	<i>4</i>	<i>6</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>33%</i>	<i>21%</i>	<i>29%</i>	<i>46%</i>	<i>42%</i>	<i>42%</i>	<i>50%</i>	<i>50%</i>	<i>50%</i>	<i>50%</i>
	<i>Permit holders</i>	<i>11</i>	<i>12</i>	<i>12</i>	<i>12</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>10</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Talkeetna: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Talkeetna ²	Total Net Pounds Landed In Talkeetna ^{2,5}	Total Ex-Vessel Value Of Landings In Talkeetna ^{2,5}
2000	13	0	0	24	21	0	0	\$0
2001	7	0	0	28	27	0	0	\$0
2002	8	0	0	27	23	0	0	\$0
2003	4	0	0	30	21	0	0	\$0
2004	3	0	0	27	19	0	0	\$0
2005	5	0	0	8	2	0	0	\$0
2006	1	0	0	8	2	0	0	\$0
2007	7	0	0	6	1	0	0	\$0
2008	11	0	0	6	1	0	0	\$0
2009	8	0	0	7	1	0	0	\$0
2010	8	0	0	6	1	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sportfish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Talkeetna: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Talkeetna: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Talkeetna: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Talkeetna: 2000-2010.

	<i>Total Net Lb¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Talkeetna Residents:
2000-2010.

	<i>Total Net Lb¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, the number of sport fish guide business varied, from 10 in 2000, to 9 in 2010. However, no registered sport fish guide businesses were active during those years. During the same period, the number of sport fish guide licenses in Talkeetna decreased substantially from 35 in 2000, to 19 in 2010. The number of sportfishing licenses sold to Talkeetna residents (irrespective of the location of the point of sale) varied only slightly between 2000 (596) and 2010 (678). The number of sportfishing licenses sold in Talkeetna, in contrast, varied widely and was higher than the number of licenses sold in the community in each year during this period. This indicates the potential that visitors to Talkeetna were pursuing recreational fishing during this period. Overall, the number of freshwater days fished in the Susitna River Drainage region has declined by roughly half, from a total of 241,457 in 2000 to 122,235 in 2010. During this period, the proportion of angler days fished by non-Alaska residents in the region increased only slightly, from 26.6% in 2000 to 33.1% in 2010. Information on sportfishing trends in Talkeetna between 2000 and 2010 is presented in Table 11.

The Alaska Statewide Harvest Survey,²⁷⁶ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Talkeetna: all five species of Pacific salmon, landlocked salmon, rainbow trout, Dolly Varden, whitefish, burbot, Arctic grayling, northern pike, Pacific halibut, rockfish, Pacific cod, razor clam, hardshell clam, and shrimp. No kept/released log book data were reported for fishing charters out of Talkeetna between 2000 and 2010.²⁷⁷

In a survey conducted by the AFSC in 2011, community leaders reported that recreational fishing in Talkeetna takes place from charter boats or party boats, private boats owned by local residents, and private boats owned by non-residents. In the same survey, community leaders noted that all five Pacific salmon species are targeted by recreational fishermen that use boats based in Talkeetna.

Table 11. Sport Fishing Trends, Talkeetna: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Talkeetna ²	Freshwater Angler Days Fished – Non-residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	0	35	596	1,533	64,141	177,316
2001	0	37	618	2,765	71,249	128,658
2002	0	35	670	2,495	59,863	126,516
2003	0	31	594	2,369	56,844	131,687
2004	0	36	676	3,523	56,934	130,366
2005	0	30	633	2,975	68,753	100,803
2006	0	41	646	3,217	63,255	109,462
2007	0	39	660	3,609	58,471	115,578
2008	0	33	663	2,596	49,911	98,827
2009	0	34	680	3,032	40,797	99,404
2010	0	19	678	1,764	40,414	81,821

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²⁷⁶ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey Results, 2000-2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²⁷⁷ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000-2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Subsistence Fishing

Data were not reported between 2000 and 2010 for subsistence participation by household and species (Table 12), subsistence halibut fishing participation (Table 14), and subsistence harvest of various marine mammal resources (Table 15). In years for which data were reported between 2000 and 2010, an average of 19 subsistence salmon fishing permits were issued to Talkeetna residents, with an average of 18.5 of those permits reported as fished during the same period. Although limited harvest of salmon occurred overall, sockeye salmon were the primary species harvested under subsistence permits, along with smaller numbers of Chinook salmon, chum salmon, coho salmon, and pink salmon. Information about subsistence harvest of salmon, marine invertebrates, and non-salmon fish (not including halibut) is presented in Table 13.

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Talkeetna during this period: abalone, Dungeness crab, king crab, mussels, razor clams, shrimp, Tanner crab, and unknown clams. Marine mammals reported as harvested for subsistence use included bowhead and harbor seal. Non-salmon fish reported as harvested for subsistence use included: burbot, cod, cutthroat trout, Dolly Varden, eulachon (hooligan candlefish), flounder, grayling, herring, lake trout, pike, rainbow trout, red rockfish, sheefish, unknown char, and whitefish.²⁷⁸

Table 12. Subsistence Participation by Household and Species, Talkeetna: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

²⁷⁸ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Talkeetna: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	19	18	36	7	0	1	413	n/a	n/a
2001	28	28	16	2	33	1	687	n/a	n/a
2002	15	18	7	2	6	2	253	n/a	n/a
2003	15	16	3	1	n/a	n/a	298	n/a	n/a
2004	15	14	2	n/a	n/a	n/a	248	n/a	n/a
2005	23	22	5	n/a	10	n/a	520	n/a	n/a
2006	25	20	11	n/a	4	2	324	n/a	n/a
2007	18	17	3	n/a	n/a	n/a	253	n/a	n/a
2008	17	14	1	n/a	n/a	n/a	116	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Talkeetna: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Talkeetna: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

Talkeetna is home to a number of annual festivals, including Miner’s Day, a Fourth of July Celebration, a Moose Dropping Festival, the Talkeetna Bluegrass Festival, Talkeetna Winterfest, and a Bachelor’s Auction/Society Ball/Wilderness Women’s Contest.²⁷⁹

²⁷⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Wasilla (WAH-sill-ah)



People and Place

*Location*²⁸⁰

Wasilla is located midway between the Matanuska and Susitna Valleys, on the George Parks Highway. It lies between Wasilla and Lucille Lakes, 43 miles north of Anchorage. The area encompasses 13 sq mi of land and 0.7 sq mi of water. Residents of the community enjoy a rural lifestyle while in close proximity to the urban amenities of Anchorage. Wasilla was incorporated in 1974 as a Second-class city, and became a First-class city in 1984.

*Demographic Profile*²⁸¹

Wasilla first appeared in the 1930 Census with a population of 51 and grew steadily in size over the next 40 years, reaching 300 residents in 1970. Over the next several decades, the community experienced rapid growth as a commuter suburb of Anchorage, with its population reaching 5,469 in 2000. From 2000 to 2010, the population grew by 43.19%, and the City's average annual growth rate from 2000 to 2009 was 1.46%. In 2010, Wasilla's population was 7,831, making the city the 12th largest community in Alaska out of 352 total communities. Information regarding trends in Wasilla's population size can be found in Table 1.

The racial and ethnic composition of Wasilla remained relatively unchanged between 2000 and 2010, as shown in Figure 1. In 2010, 83.4% of residents identified themselves as White, compared to 85.5% in 2000. Also in that year, 5.2% identified themselves as American Indian or Alaska Native, compared to 5.2% in 2000; 2.1% identified themselves as Asian, compared to 1.3% in 2000; 1.4% identified themselves as Black or African American, compared to 0.6% in 2000; 0.2% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.1% in 2000; 6.5% identified themselves as two or more races, compared to 5.9% in 2000; and 1.2% identified themselves as some "other" race, compared to 1.3% in 2000.

In 2010, the average household size in Wasilla was 2.61, representing a notable decrease from the 3.27 in 2000 and 2.80 in 1990. In that year, there were a total of 3,277 housing units, compared to 2,119 in 2000 and 1,723 in 1990. Of the households surveyed in 2010, 48% were owner-occupied, compared to 52% in 2000; 43% were renter-occupied, compared to 41% in 2000; 8% were vacant, compared to 5% in 2000; and 1% were occupied seasonally, compared to 2% in 2000. In addition, 95 residents were living in group quarters, compared to 5 in 2000.

²⁸⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

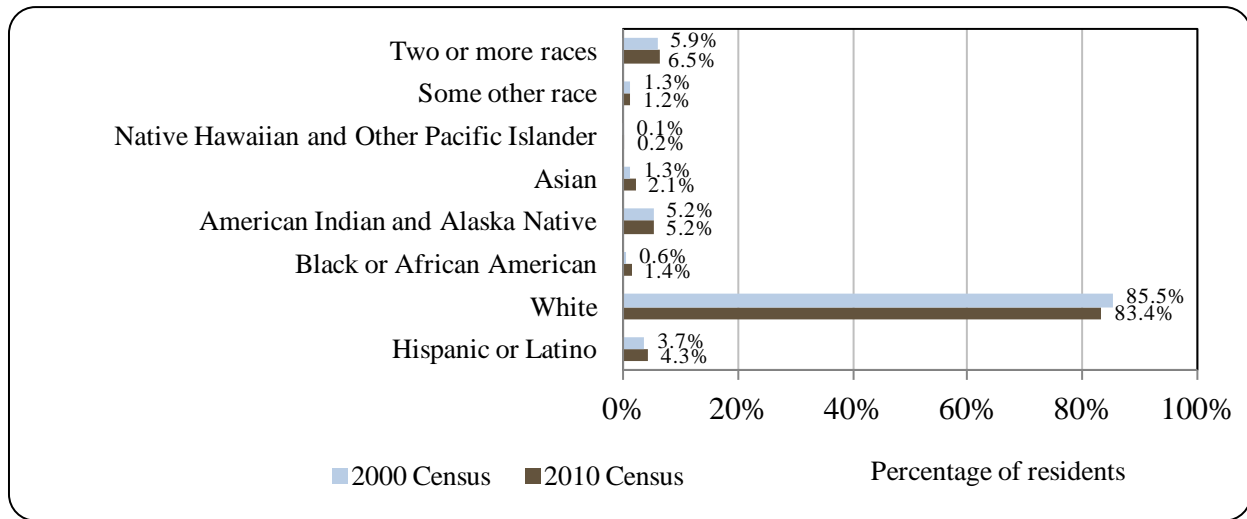
Table 1. Population in Wasilla from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimates of Permanent Residents ²
1990	4,028	-
2000	5,469	-
2001	-	5,516
2002	-	5,949
2003	-	6,381
2004	-	6,146
2005	-	6,372
2006	-	6,486
2007	-	6,927
2008	-	6,932
2009	-	7,245
2010	7,831	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

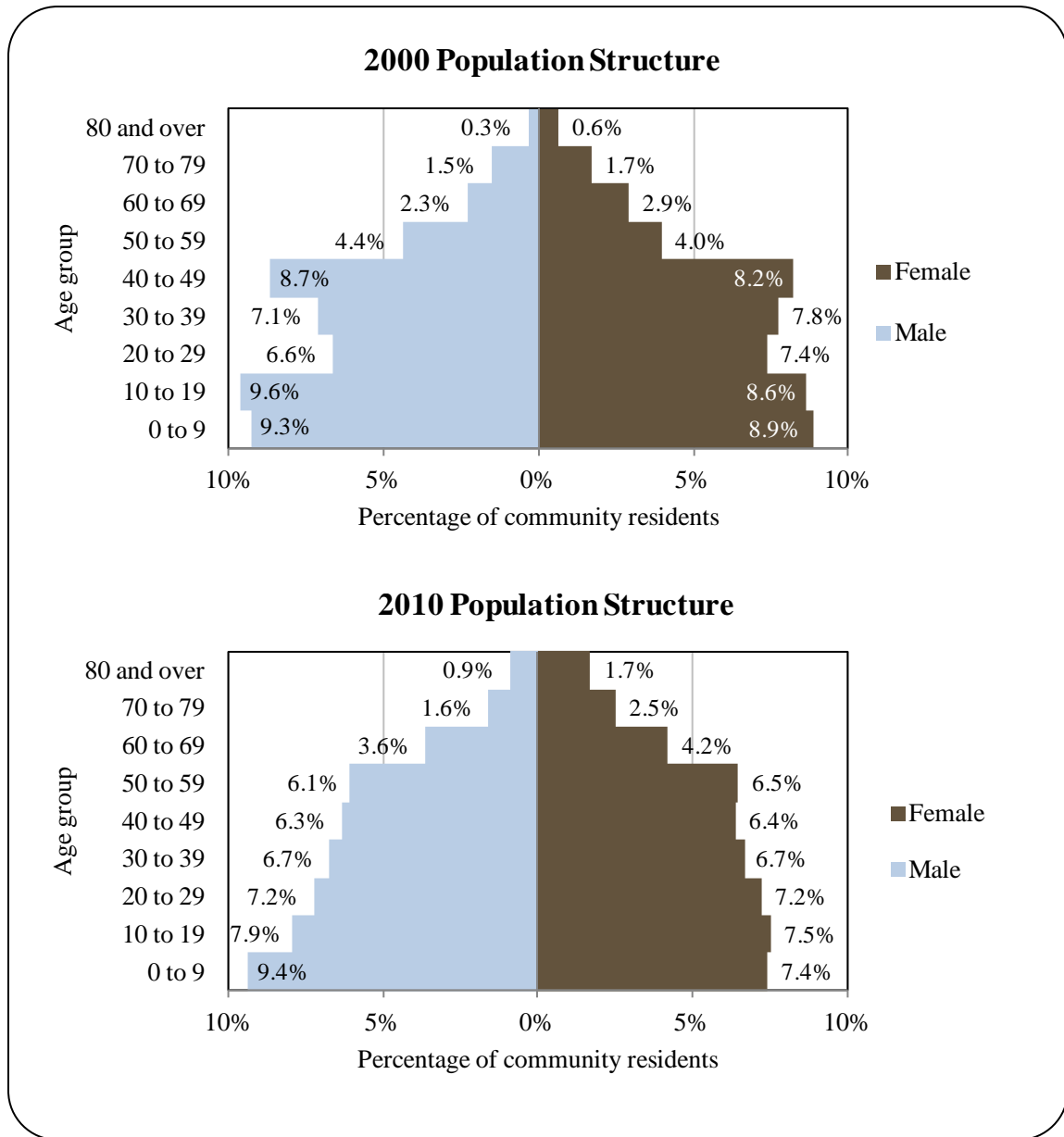
Figure 1. Racial and Ethnic Composition, Wasilla: 2000-2010 (U.S. Census).



Wasilla experienced population aging between 2000 and 2010 as the percentage of residents aged 50 and over increased from 17.8% to 27.1% of the population. The median age of Wasilla residents during this same period increased from 29.7 to 32.2 years, though the community’s 2010 median age was still lower than both the U.S. national median age of 36.5 years and Alaska’s state median age of 33.8 years. Wasilla’s gender composition in 2000 and 2010 was roughly equal, with females slightly outnumbering males in both years (50.1% to

49.9%). In 2010, gender distribution within the 20-29, 30-39, and 40-49 age groups were roughly equal, while the population aged 50 and over was skewed toward females and the population aged 19 and under, toward males. Females aged 50 and over made up 14.9% of Wasilla’s population, compared to the 12.2% represented by males in this age category. Males aged 19 and younger made up 17.3% of Wasilla’s population, compared to the 15.0% represented by females in this age category. Figure 2 shows the population and gender structure of Wasilla in 2000 and 2010.

Figure 2. Population Age Structure in Wasilla in 2000 and 2010.



In terms of educational attainment, the 2006-2010 American Community Survey (ACS)²⁸² estimated that 91.8% of Wasilla residents aged 25 had earned a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 2.6% had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 5.6% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 30.5% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 7.6% held an Associate's degree, compared to an estimated 8.0% of Alaska residents overall; an estimated 16.0% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 5.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture^{283,284,285}

Wasilla is named after Chief Wasilla, a respected local Dena'ina Indian. In the Athabascan Indian dialect, "Wasilla" is said to mean "breath of air." However, other sources claim that, given the Russian trading post influences in the Lower Cook Inlet during the 18th and 19th centuries, Chief Wasilla may have actually derived his name from the Russian name "Vassily."

Prior to the founding of the Wasilla township, the Dena'ina Athabascan Indians who inhabited the area called it "Benteh," meaning "among the lakes." Ample fishing was available in nearby freshwater lakes and streams, and the area became a popular wintering ground for semi-permanent Native villages. These villages were connected by various trails to hunting grounds in the Susitna Valley and Talkeetna Mountains and to the Ahtna Indians residing east of the Matanuska Valley.

The founding and initial development of Wasilla owes much to the early twentieth Alaskan gold rush and mining boom. The town site was established in 1917 at the intersection of the Carle Wagon Road, now Wasilla-Fishhook Road, which linked the coastal community of Knik with the Willow Creek mining district, and the newly-constructed Alaska Railroad. Given its advantageous location, Wasilla quickly replaced the older settlement of Knik as the most important distribution point for mining activities in the Valley. Until the latter part of World War II, which brought the gold mining boom to a halt, Wasilla prospered as the self-proclaimed "Gateway to the Willow Creek Mining District."

Agriculture also helped to shape Wasilla's role in the region. The founding of the Matanuska Colony in 1935 under President Roosevelt's New Deal created the nearby town of Palmer and brought over 200 families from the Midwest to the region as colony homesteaders.

²⁸² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁸³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸⁴ City of Wasilla. (2011). *Comprehensive Plan*. Retrieved November 28, 2011 from <http://www.cityofwasilla.com>.

²⁸⁵ City of Wasilla. (2011). *Wasilla History*. Retrieved November 28, 2011 from <http://www.cityofwasilla.com>.

Though several farms were located near Wasilla, Palmer emerged as the regional commercial center and remained so until the 1960s.

Construction of the George Parks Highway through Wasilla in the early 1970s shifted population growth and development from the Palmer area to Wasilla and its surrounding area. The Parks Highway enabled workers to reside in Wasilla and commute to Anchorage for employment, thus bringing the first wave of the community's "suburbanite" settlement. The Alaska oil boom and pipeline construction in the 1970s and 80s brought an influx of oil workers and additional growth of the community. Since the mid-1980s, Wasilla has served as the retail and commercial hub of the central Matanuska-Susitna ("Mat-Su") Valley, the fastest growing region in Alaska. Wasilla was incorporated in 1974 as a second class city and became a first class city in 1984.

Natural Resources and Environment

Located at a latitude of 61.58 °N, Wasilla has a climate that is transitional between the extreme weather of Interior Alaska and the wet maritime conditions of the coastal areas. The city is sheltered from extreme conditions by the Alaska Range and the Chugach and Talkeenta Mountains, although high winds in excess of 60 mph are a frequent occurrence in the region during the fall and winter months. The average annual precipitation is 17 inches, with 50 inches of snowfall, with temperatures ranging from -33 °F to 33 °F in January and from 42 °F to 83 °F in July. On average, Wasilla is frost-free in spring and summer for 115 days, with first frost usually arriving by September 1st.²⁸⁶

Wasilla's topography consists of undulating ridges of glacial till and flat benches of sand gravel, features left by glacial advances and retreats during the last ice age. Elevation varies from 300 ft to 500 ft above sea level within the city boundaries. Prominent water features in the community are Wasilla Lake and Lake Lucille; Cottonwood Creek, Lucille Creek, and several small streams traverse the city.²⁸⁷ Most vegetation communities are consistent with interior taiga. Lowland vegetation consists of mixed stands of willow, birch, cottonwood, and aspen.²⁸⁸

Terrestrial wildlife in the area include moose, small rodents, fox, rabbit, brown bear, black bear, coyote, mink, weasel, muskrat, and beaver. Wasilla's numerous water bodies provide habitat for all five species of Pacific salmon, as well as steelhead, Dolly Varden, and cutthroat trout.²⁸⁹

Gold mining in the Willow Creek mining district contributed to the growth of Wasilla from its founding in 1917 through the latter part of World War II. Independence Mine was actively mined from 1938 to 1943 and in its peak year employed over 200 workers and had gold production worth over \$17 million in 2010 dollars. Though the mine closed permanently in 1951 when gold mining became unprofitable, a state historical park was established at the site in the

²⁸⁶ Wasilla Planning Commission. (n.d.). *City of Wasilla Hazard Mitigation Plan*. Retrieved November 26, 2011 from <http://www.cityofwasilla.com>.

²⁸⁷ Ibid.

²⁸⁸ See footnote 284.

²⁸⁹ Ibid.

1970s.²⁹⁰ As of 2010, mining activities in the region included sand and gravel mining and exploratory drilling at the historic Lucky Shot gold mine property.²⁹¹

Natural hazards which have the potential to threaten Wasilla include earthquakes, high winds, severe weather, wildfire, volcanism, erosion, and flooding. Major fault zones in close proximity include the Castle Mountain fault to the north, the Bruin Bay fault to the northwest, and the Border Ranges fault along the south. Most fault structures in the area are of sufficient size to produce earthquakes of magnitude 6.0 and above. Wind events can produce localized gusts up to 100 mph. These events are associated with severe weather events, and are often associated with extreme cold (-40 to -60 °F). Winter storms can cause freezing fog and icing which carries the potential to damage property and public infrastructure. As with many areas influenced by interior Alaska's continental weather, frostbite and hypothermia pose public health risks. Wasilla is located within an area designated as *Critical Protection Level*, which carries a high level of suppression action in terms of wildland fires. Large wildland fire complexes occurred within the vicinity of Wasilla in 1979, 1980, and 1996. The most likely source of hazards related to volcanism come from Hays, Redoubt, and Mount Spurr. Heavy ashfall can produce thick layers of acidic silt which pose threat to property, infrastructure, and transportation systems. Impacts to local wildlife and vegetation can also be devastating. Active volcanoes are at a sufficient distance that impacts from debris flows and lateral blasts are unlikely. Most erosion in Wasilla is wind-driven, as exposed topsoils are removed by high winds. In addition, fugitive dust particles can reduce visibility and impact residents with sensitive respiratory systems. No major river systems lie within City boundaries, so potential flooding events are limited to rainfall runoff, rapid snowmelt, and groundwater saturation.²⁹²

According to the Alaska Department of Environmental Conservation, no significant environmental remediation projects were active within Wasilla as of 2010.²⁹³

Current Economy²⁹⁴

Wasilla serves as the retail and commercial hub of the central Matanuska-Susitna Valley. In addition to a growing service and retail sector, the community's economy also supports such industrial activities as steel fabrication, agriculture, and manufacture of concrete and wood products. A significant percentage of Wasilla's labor force works outside the community: approximately 30% of the workforce of the Matanuska-Susitna Borough commutes to Anchorage; and in 2008, 8% of the Borough's residents worked on the North Slope and another 5% held jobs in other distant locations around the state.²⁹⁵ Mean travel time to work in 2009 for Wasilla's labor force was estimated at almost 30 minutes.²⁹⁶

²⁹⁰ Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation. (2010). *Independence Mine State Historical Park*. Retrieved November 28, 2011, from <http://dnr.alaska.gov/parks/units/indmine.htm>.

²⁹¹ Alaska Department of Natural Resources, Division of Geological & Geophysical Surveys. (2011). *Alaska's Mineral Industry 2010*. Retrieved November 28, 2011 from <http://www.dggs.dnr.state.ak.us/pubs/id/22822>.

²⁹² See footnote 286.

²⁹³ Alaska Dept. of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved March 5, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

²⁹⁴ Unless otherwise noted, all monetary data are reported in nominal values.

²⁹⁵ See footnote 284.

²⁹⁶ Ibid.

In 2010,²⁹⁷ the estimated per capita income was \$28,449 and the estimated median household income was \$52,014; compared to \$21,127 and \$48,226 in 2000, respectively. After adjusting for inflation by converting 2000 values to 2010 dollars,²⁹⁸ the real per capita income (\$27,782) and real median household income (\$63,417) indicate that while individual earnings changed little, household earnings dropped somewhat. In 2010, Wasilla ranked 74th of 305 communities from which per capita income was estimated, and 117th of 299 communities from which median household income was estimated.

It should be noted that Wasilla's small population size may have prevented the ACS from accurately portraying economic conditions.²⁹⁹ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database,³⁰⁰ total wages based on state and private employers in 2010 was \$129 million.³⁰¹ When compared with the 2010 Census population, the per capita income equals \$16,483, indicating an extreme decrease compared to the real per capita income values reported by the U.S. Census in 2000.³⁰² However, Wasilla was not determined to be "distressed" by the Denali Commission.³⁰³

Based on 2006-2010 ACS estimates, 8.0% of the civilian labor force was unemployed, which represents a decrease from the 2000 unemployment rate of 11.2%. Additionally, an estimated 13.9% of individuals were below the poverty line, compared to an estimate 9.6% statewide. In 2010, an estimated 67.5% of residents aged 16 years and older were part of the civilian labor force. Of those employed in the civilian labor force, an estimated 71.8% were employed in the private sector, an estimated 20.8% were employed in the public sector, an estimated 7.0% were self-employed, and the remaining 0.4% were estimated to be unpaid family workers. Major industries in terms of employment were educational services, healthcare, and social assistance (an estimated 22.0% of workers); construction (an estimated 14.5%); retail trade (an estimated 14.1%); and public administration (an estimated 10.6%). The 2010 ALARI estimates provide similar estimates for educational and health services (16.8%) and construction (11.5%), but also indicate a high percentage of people employed in trade, transportation and utilities industries (22%).

²⁹⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁹⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁹⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁰⁰ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁰¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

³⁰² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁰³ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

Top employers in 2010 were the Mat-Su Borough Schools; the State of Alaska; Wal-Mart; and Arctic Slope Regional Corporation Energy Services, an oil and gas service company headquartered in Anchorage. Occupations in farming and natural resource extraction (fishing and hunting, forestry, and mining) accounted for 5.2% of employment in Wasilla.³⁰⁴ However, the number of individuals employed in the fishing industry is probably underestimated in Census statistics given the seasonality of commercial fishing activities; individuals often combine other employment with fishing. Figures 3 and 4 below show additional statistics on employment by industry and by occupation.

Figure 3. Local Employment by Industry in 2000-2010, Wasilla (U.S. Census).

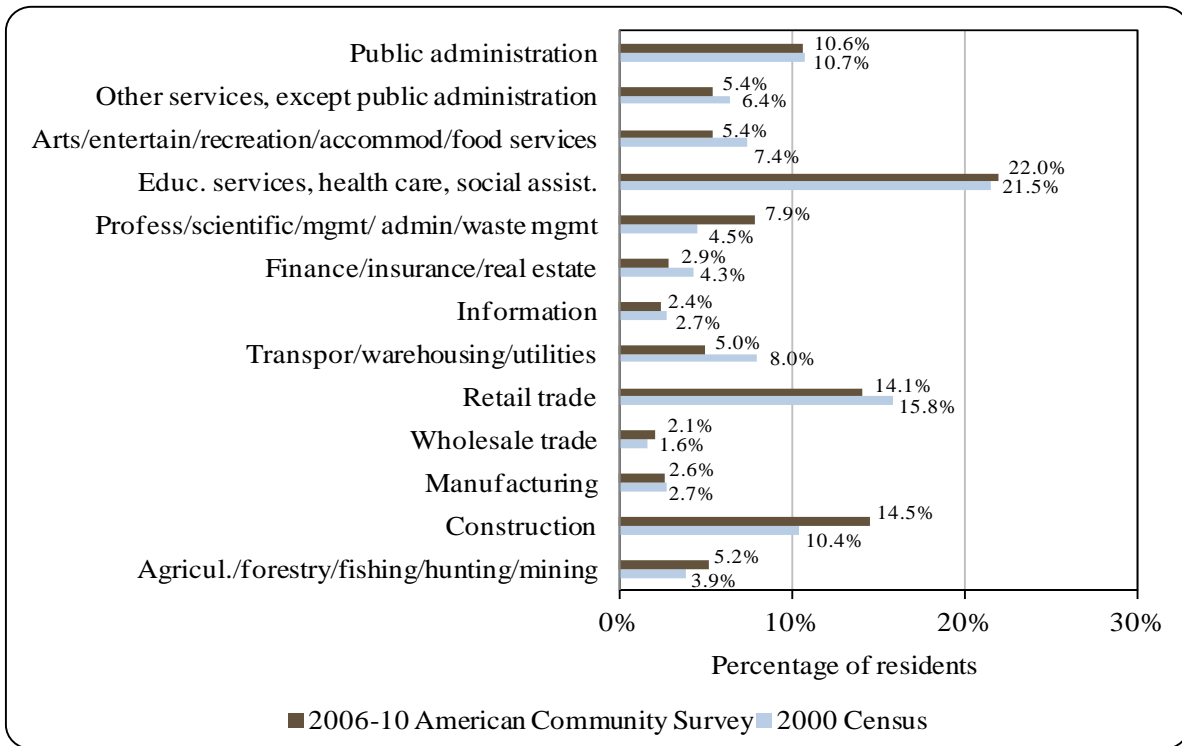
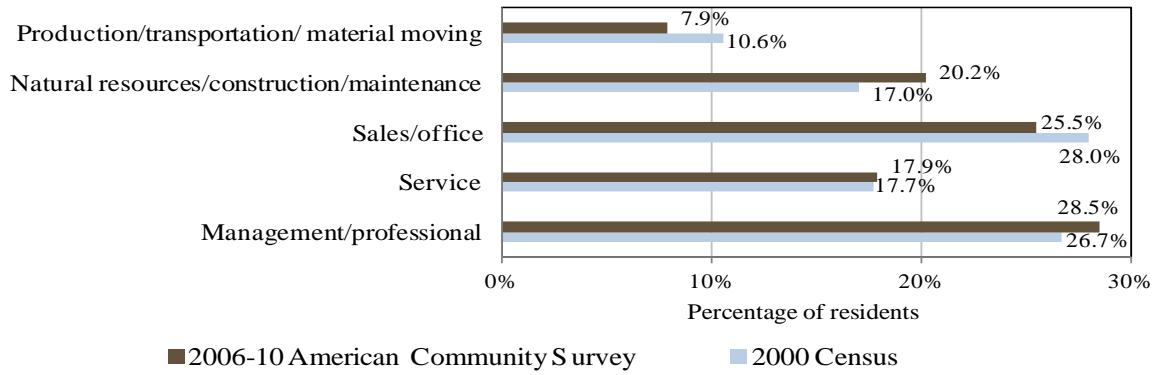


Figure 4. Local Employment by Occupation in 2000-2010, Wasilla (U.S. Census).

³⁰⁴ See footnote 302.

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Governance

Wasilla is a First-class city located in the Matanuska-Susitna Borough. The City was not included in the Alaska Native Claims Settlement Act (ANCSA) of 1971, and is not represented by a Native Traditional Council or ANCSA chartered village corporation. The nearest Alaska Department of Fish and Game (ADF&G) offices are located in Anchorage and Palmer, while the regional NOAA Fisheries (NMFS), Bureau of Citizenship and Immigration Services (BCIS), and Department of Natural Resources (DNR) offices are located in Anchorage. Wasilla residents can access some institutions that have offices in neighboring Palmer, including headquarters for the Matanuska-Susitna (Mat-Su) Borough and a USDA Rural Development office.

The City of Wasilla Police Department was established in 1993 and currently employs 24 commissioned officers.³⁰⁵ The local detachment of Alaska State Troopers is headquartered in Anchorage.

As of 2010, the city administered a 2.5% sales tax, while the Borough administered a 5.5% tobacco excise tax and a 5% bed tax. Property taxes included a 1.42 mill (0.14%) fire service area tax administered by the City of Wasilla and a 9.65 mill (0.96%) tax administered by the Borough.³⁰⁶ Municipal revenue figures were taken from financial audits.³⁰⁷ Total revenues increased at a steady rate between 2000 and 2010. When adjusted for inflation,³⁰⁸ total municipal revenues increased by 45.4% from \$9.19 million in 2000, to \$17.28 million in 2010. In 2010, most (74.9%) general fund revenues were collected from local taxes; followed by intergovernmental revenues (11.9%) and service charges (9.6%). In total, general fund revenues accounted for 87.3% of total municipal revenues for Wasilla. Other sources included capital project funds (2.9%) and non-major funds (9.9%). In that year, sales taxes accounted for 5.8% of total municipal revenues, compared to 5.8% in 2000. In addition, state allocated Community Revenue Sharing and State Revenue Sharing accounted for less than one-percent of total revenues in both 2010 and 2000, respectively. Information regarding municipal finances can be found in Table 2.

Fisheries-related grants received by Wasilla between 2000 and 2010 are also shown in Table 2. In 2003, Wasilla was awarded \$50,000 to restore juvenile fish passage and habitat in Swiftwater Creek.³⁰⁹ In 2010, the Wasilla Soil & Conservation District was awarded approximately \$26,000 for urban salmon habitat restoration projects undertaken as part of the Mat-Su Basin Salmon Habitat Partnership.³¹⁰

³⁰⁵ City of Wasilla. (2011). *Police*. Retrieved November 28, 2011 from <http://www.cityofwasilla.com>.

³⁰⁶ Alaska Dept. of Comm. And Econ. Dev. (2011). *Alaska Taxable 2010*.

³⁰⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³⁰⁸ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

³⁰⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

³¹⁰ Wasilla Soil & Water Conservation District. (2011). Annual Report. Retrieved December 2011 from <http://www.wasillaswcd.org/linked/2011%20annual%20report.pdf>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Wasilla Municipal Government from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$9,190,997	\$529,535	\$74,738	n/a
2001	\$8,974,430	\$557,810	\$65,962	n/a
2002	\$9,231,543	\$573,876	\$66,679	n/a
2003	\$9,745,658	\$688,496	\$65,426	\$50,000
2004	\$12,487,572	\$754,994	--	n/a
2005	\$14,722,717	\$827,909	--	n/a
2006	\$14,212,673	\$893,218	--	n/a
2007	\$14,254,770	\$912,455	--	n/a
2008	\$15,704,300	\$952,296	--	n/a
2009	\$15,937,928	\$981,573	\$103,009	n/a
2010	\$17,284,820	\$998,206	\$103,040	\$25,954

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

As with most of the communities located at the end of the Knik Arm, Wasilla is well connected by road to surrounding communities. The George Parks Highway and Glenn Highway connect Wasilla to Anchorage, Fairbanks, Denali National Park, and Palmer, as well as a number of smaller communities. The Alaska Railroad serves Wasilla on the Anchorage to Fairbanks route, while Mat-Su Valley Public Transportation provides bus service between Wasilla, Palmer, and Anchorage.

Commercial air service is available at Anchorage International Airport, located 45 miles away. Wasilla's municipal airport, which has a paved 3,700 ft long by 75 ft wide runway, provides scheduled commuter and air taxi services. Numerous additional private airstrips also operate in the vicinity. Float planes land at Wasilla Lake, Jacobsen Lake, and Lake Lucille.

Facilities

The majority of homes in Wasilla use individual water wells and septic systems, although the city operates a piped water and sewer system. Water is provided by a well at Spruce Avenue and two wells at Iditarod School; there is a 2.3 million gal storage capacity. Refuse collection is provided by a private company for disposal in the borough landfill. Residents also drop refuse at

the borough landfill in Palmer. Matanuska Electric Association is part owner of the Alaska Electric Generation & Transmission Cooperative, Inc., which purchases electricity from Chugach Electric and the Bradley Lake Hydroelectric Project. Piped natural gas, provided by Enstar, is used to heat homes. Wasilla provides an array of visitor accommodations and visitor attractions. Local public safety services are provided by the Wasilla Police Department. Fire and rescue services are provided by borough fire department, Wasilla Lake Fire and Emergency Medical Services, and Wasilla Ambulance Service. Additional public facilities include local youth center, community hall, senior services, swimming pool, local arena, movie theater, three museums, and 15 libraries. Communication services include local and long distance telephone, broadband internet, local and cable television, and local radio.³¹¹

Medical Services

A variety of medical care services are available at the Mat-Su Regional Medical Center (MSRMC), a privately-owned, qualified Acute Care facility located between Palmer and Wasilla. Opened in 2006 to replace the aging Valley Hospital, MSRMC contains 50 medical/surgical beds and eight each of intensive, care, progressive, and obstetric beds. Urgent care services are also available at a MSRMC outpatient clinic in Wasilla.

Educational Opportunities

Wasilla is served by the Mat-Su borough School District. As of 2011, there are 21 schools located within the community, including 8 elementary schools, 4 high schools, and 3 each of K-12, middle, and mixed-grade schools. There are a total of 10,106 students and 550 teachers in Wasilla schools.

Matanuska-Susitna College, located between Palmer and Wasilla, is part of the University of Alaska Anchorage system and offers two-year associate degree programs. Total enrollment is approximately 1,650 students. Wasilla also hosts a campus of Charter College, an independently-accredited private college offering both associate and bachelor degree programs.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Extensive populations of freshwater fish, as well as of all five salmon species, are supported in the waters of the Mat-Su basin, which include the Matanuska, Knik, and Little Susitna Rivers, as well as the Nancy Lake Recreational Area and numerous river drainages and smaller lakes. Historically, the abundance of fish locally made the area a popular wintering ground for Dena'ina Athabascan Indians. Today, the area around Wasilla provides diverse opportunities for recreational freshwater fishing. The Susitna River, a popular salmon sportfishing location, supports the fourth largest run of Chinook salmon in the state.³¹²

³¹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹² Mat-Su Basin Salmon Habitat Partnership. (2008). *Conserving Salmon Habitat in the Mat-Su Basin*. Retrieved November 28, 2011 from <http://conserveonline.org/workspaces/MatSuSalmon>.

Additionally, the Alaska Department of Fish and Game (ADF&G) oversees an aggressive lake stocking program in the Northern Cook Inlet Sport Fishing Management Area, with over 90 area lakes stocked with rainbow trout, Arctic grayling, arctic char, landlocked coho, and Chinook salmon.³¹³

Rapid growth and development in the last two decades have stressed the region's fish habitats, especially those in urban waters. In 2010, Lake Lucille and Cottonwood Creek in Wasilla were classified as "impaired" by the Alaska Department of Environmental Conservation.³¹⁴ The Wasilla Soil & Water Conservation District represents the community within the Matanuska-Susitna Basin Salmon Habitat Partnership, which formed in 2005 to address increasing impacts of salmon from human use and development in the Mat-Su basin. With respect to federal fisheries regulatory areas, Wasilla is located nearest to Federal Reporting Area 630 (Central Gulf of Alaska), Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. With respect to State of Alaska fisheries management, the community is located nearest to the ADF&G Upper Cook Inlet commercial fisheries management area and within the Northern Cook Inlet sport and subsistence fisheries management area. Wasilla is not eligible to participate in either the Community Development Quota or the Community Quota Entity Program.

Processing Plants

As of 2011, at least two businesses in Wasilla were involved in fish processing activities. Smoked Alaska Seafoods, a family-owned business that has been in operation over 30 years, produces smoked sockeye, coho, and Chinook salmon products.^{315, 316} Mat Valley Meats is located on the East Palmer-Wasilla highway and began operations in 2008, specializing in custom processing for game hunters and sport fishermen.³¹⁷

Fisheries-Related Revenue

Wasilla earned little to no revenue from fisheries-related sources between 2000 and 2010. As shown in Table 3, a negligible amount of the community's revenue was derived from the Shared Fisheries Business Tax from 2006 to 2009.

Commercial Fishing

As Wasilla is an inland community, its involvement in North Pacific commercial fisheries stems primarily from the numerous residents who own, operate, and crew on vessels in the North Pacific fishery fleet, in addition to those holding quota in federal individual fishing quota (IFQ) fisheries.

³¹³ Alaska Department of Fish & Game. (2011). *Northern Cook Inlet Management Area*. Retrieved December 2, 2011 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaSouthcentralNorthCookInlet.main>.

³¹⁴ Alaska Dept. of Environmental Conservation. (2010). *Alaska's impaired waters – 2010*. Retrieved November 28, 2011 from <http://www.dec.state.ak.us/>.

³¹⁵ Smoked Alaska Seafoods (n.d.). *Homepage*. Retrieved from: <http://www.smokedalaska.com/about.htm>.

³¹⁶ Alaska Seafood Marketing Institute. 2011. *Directory of Alaska Seafood Suppliers*. Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

³¹⁷ AFSC Processing Plant Survey 2011.

From 2000 to 2010, the number of crew license holders indicating Wasilla as their community of residence increased from 199 to 265. During the same time period, there was a decrease in the number of vessels owned primarily by Wasilla residents and the number of vessels homeported in the community, with a sharp decline between 2004 and 2005. Table 5 presents 2000 to 2010 data on crew and fleet statistics.

In 2010, 219 residents of Wasilla held a total of 279 permits issued by the Commercial Fisheries Entry Commission (CFEC). This represents an increase from the 141 residents holding 185 permits in 2000. Salmon permits made up the majority of CFEC permits issued to Wasilla residents from 2000 to 2010—from 65% in 2000 to 71% in 2007 and 2009. Most salmon permits held by Wasilla residents are for Bristol Bay-area fisheries; permits for Prince William Sound and Cook Inlet salmon fisheries are held in smaller amounts.³¹⁸ A small number of residents also participate in federal groundfish and crab limited license permit (LLP) program fisheries. Table 4 shows CFEC and federal fishing permits issued to Wasilla residents from 2000 to 2010. Holdings by Wasilla residents in the three catch share fisheries (sablefish, halibut, and crab) have increased significantly from 2000 to 2010. In 2010, 24 Wasilla residents held halibut quota shares amounting to an allocation of 235,998 lbs. Sablefish and crab quota share holdings by Wasilla residents in the same year amounted to approximately 40,000 and 30,000 lbs, respectively. Tables 6 to 8 present quota holdings by Wasilla residents in the three catch share programs over the 2000 to 2010 period.

In spite of a decline from 2000 to 2010 in the number of commercial vessels owned primarily by Wasilla residents, the volume and real ex-vessel value of landings by residents' vessels has more than doubled during this period. In 2010, commercial fishery landings by Wasilla vessels totaled 12.5 million lbs and had an ex-vessel value of \$11.0 million; in 2000 dollars, ex-vessel value in 2000 was \$3.6 million.³¹⁹ Salmon accounts for the largest volume of landings out of all species landed by Wasilla vessels. This species group is also the most lucrative for Wasilla vessels, accounting for 68% of total ex-vessel value from 2000 to 2010. Other species landed by Wasilla's fleet between 2000 and 2010 were sablefish, pollock, Pacific cod, crab, herring, halibut, and other shellfish. Table 10 presents 2000-2010 commercial fishery landing statistics for vessels owned by community residents.

³¹⁸ Alaska Commercial Fishery Entry Commission. (2011). Fishery Statistics – Participation & Earnings. Permit & Fishing Activity by Year, State, Census Area or Alaskan City. Retrieved January 24, 2012 from http://www.cfec.state.ak.us/fishery_statistics/earnings.htm.

³¹⁹ Inflation was adjusted using the Bureau of Labor Statistics Producer Price Index for processed unprocessed and packaged fish, retrieved December 1, 2011 from <http://www.bls.gov/ppi/#data>.

Table 3. Fisheries-Related Revenue (in U.S. dollars) Received by the Community of Wasilla: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$5	\$103	\$128	\$29	n/a
Fisheries											
Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue ⁴	n/a	n/a	n/a	n/a	n/a	n/a	\$5	\$103	\$128	\$29	n/a
Total municipal revenue (in millions of dollars) ⁵	\$9.19 M	\$8.97 M	\$9.23 M	\$9.75 M	\$12.49 M	\$14.72 M	\$14.21 M	\$14.25 M	\$15.70 M	\$15.94 M	\$17.28 M

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Wasilla: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	7	7	8	11	12	13	13	14	13	14	12
	Active permits	2	2	2	2	3	3	2	1	1	3	3
	% of permits fished	28%	28%	25%	18%	25%	23%	15%	7%	7%	21%	25%
	Total permit holders	7	7	7	9	10	11	11	12	11	12	10
Crab (LLP) ¹	Total permits	0	0	0	0	0	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	1	0	0	1
	% of permits fished	--	--	--	--	--	0%	0%	100%	0%	0%	100%
	Total permit holders	0	0	0	0	0	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	7	8	9	8	9	10	10	10	11	9	9
	Fished permits	0	0	0	2	3	2	6	5	6	5	5
	% of permits fished	0%	0%	0%	25%	33%	20%	60%	50%	55%	56%	56%
	Total permit holders	6	7	8	6	7	8	9	9	10	8	8
Crab (CFEC) ²	Total permits	3	1	2	3	4	11	9	8	7	8	10
	Fished permits	1	0	1	2	3	5	2	4	4	2	4
	% of permits fished	33%	0%	50%	67%	75%	45%	22%	50%	57%	25%	40%
	Total permit holders	3	1	2	3	3	7	8	7	6	7	9
Other shellfish (CFEC) ²	Total permits	2	1	2	2	4	4	6	5	5	5	12
	Fished permits	1	1	1	1	2	1	3	1	2	2	4
	% of permits fished	50%	100%	50%	50%	50%	25%	50%	20%	40%	40%	33%
	Total permit holders	2	1	2	2	4	4	5	4	4	4	11
Halibut (CFEC) ²	Total permits	16	17	20	19	17	19	19	22	19	18	20
	Fished permits	13	14	18	19	15	17	19	22	18	17	20
	% of permits fished	81%	82%	90%	100%	88%	89%	100%	100%	95%	94%	100%
	Total permit holders	16	17	20	19	15	18	18	21	18	17	20
Herring (CFEC) ²	Total permits	11	9	9	6	6	7	7	9	9	10	11
	Fished permits	4	3	3	1	0	3	1	1	1	1	1
	% of permits fished	36%	33%	33%	17%	0%	43%	14%	11%	11%	10%	9%
	Total permit holders	7	5	5	4	6	5	6	8	8	9	10

Table 4 cont'd. Permits and Permit Holders by Species: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	8	11	6	9	11	9	10	12	12	10	14
	Fished permits	4	7	5	8	10	4	10	11	11	10	14
	% of permits fished	50%	64%	83%	89%	91%	44%	100%	92%	92%	100%	100%
	Total permit holders	7	8	6	7	9	8	9	11	10	8	11
Groundfish (CFEC) ²	Total permits	25	18	13	17	17	16	11	12	17	14	16
	Fished permits	10	4	3	8	5	5	5	5	8	8	11
	% of permits fished	40%	22%	23%	47%	29%	31%	45%	42%	47%	57%	69%
	Total permit holders	15	14	12	12	12	12	9	10	15	13	15
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	0%	--	--
	Total permit holders	0	0	0	0	0	0	0	0	1	0	0
Salmon (CFEC) ²	Total permits	120	126	122	123	135	136	148	165	163	158	196
	Fished permits	94	88	64	74	84	92	101	116	111	100	130
	% of permits fished	78%	70%	52%	60%	62%	68%	68%	70%	68%	63%	66%
	Total permit holders	125	126	125	128	136	141	153	172	169	161	191
Total CFEC Permits ²	Permits	185	183	174	179	194	202	210	233	233	223	279
	Fished permits	127	117	95	113	119	127	141	160	155	140	184
	% of permits fished	69%	64%	55%	63%	61%	63%	67%	69%	67%	63%	66%
	Permit holders	141	145	146	152	159	163	177	199	196	184	219

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center (AFSC), Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Wasilla: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Wasilla ²	Total Net Lbs Landed In Wasilla ^{2,5}	Total Ex-Vessel Value Of Landings In Wasilla ^{2,5}
2000	199	0	1	180	54	0	0	\$0
2001	172	0	0	178	60	0	0	\$0
2002	129	0	1	171	62	0	0	\$0
2003	158	0	0	150	55	0	0	\$0
2004	181	1	0	135	52	--	--	--
2005	177	0	0	64	16	0	0	\$0
2006	203	0	2	82	15	0	0	\$0
2007	245	0	1	97	15	0	0	\$0
2008	263	0	1	94	13	0	0	\$0
2009	267	0	1	89	15	0	0	\$0
2010	265	0	1	106	18	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Wasilla: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
2000	30	1,546,948	175,580
2001	30	1,452,584	194,766
2002	31	1,240,373	163,687
2003	28	1,607,141	220,084
2004	25	1,648,660	247,317
2005	29	1,812,022	269,389
2006	28	1,921,575	275,691
2007	26	2,583,338	379,924
2008	25	2,200,949	339,989
2009	25	2,066,982	262,189
2010	24	2,066,232	235,998

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Wasilla: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
2000	3	11,214	892
2001	4	12,471	1,045
2002	2	7,115	733
2003	4	40,881	4,292
2004	4	40,881	4,819
2005	4	37,709	4,362
2006	5	51,979	5,248
2007	6	631,682	68,292
2008	4	35,857	3,354
2009	4	494,095	43,169
2010	4	494,095	40,111

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Wasilla: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
2005	1	105,222	2,514
2006	1	139,200	2,365
2007	1	139,200	3,365
2008	1	139,200	3,163
2009	2	1,282,241	30,399
2010	2	1,282,241	30,283

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-Vessel Revenue, by Species, in Wasilla: 2000-2010.

	Total Net Pounds ¹										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	--	0	0	0	0	0	0
Finfish	0	0	0	0	--	0	0	0	0	0	0
Halibut	0	0	0	0	--	0	0	0	0	0	0
Herring	0	0	0	0	--	0	0	0	0	0	0
Other Groundfish	0	0	0	0	--	0	0	0	0	0	0
Other Shellfish	0	0	0	0	--	0	0	0	0	0	0
Pacific Cod	0	0	0	0	--	0	0	0	0	0	0
Pollock	0	0	0	0	--	0	0	0	0	0	0
Sablefish	0	0	0	0	--	0	0	0	0	0	0
Salmon	0	0	0	0	--	0	0	0	0	0	0
Total ²	0	0	0	0	--	0	0	0	0	0	0
	Ex-vessel Value (nominal U.S. dollars)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Total ²	\$0	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Wasilla Residents: 2000-2010.

	Total Net Pounds¹										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	114,488	116,617	126,932	123,397	42,105	54,825	169,627	276,407	290,157	606,399	641,435
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	4,385	5,019	5,353	10,016	1,865	1,535	3,317	19,275	34,945	25,668	156,451
Other Shellfish	--	--	--	--	--	--	53,162	--	--	--	51,400
Pacific Cod	251,455	202,575	388,318	19,355	25,735	--	721,474	847,222	1,114,459	1,916,415	4,629,569
Pollock	--	--	--	--	--	--	--	--	--	--	7,546
Sablefish	--	11,874	--	--	--	--	35,091	142,512	194,718	168,322	225,912
Salmon	5,437,045	5,354,672	3,495,257	2,659,008	3,529,949	3,956,577	5,252,055	7,787,589	7,282,150	7,685,767	6,755,456
Total²	5,807,373	5,690,757	4,015,860	2,811,776	3,599,654	4,012,937	6,234,726	9,073,005	8,916,429	10,402,571	12,467,769
Ex-vessel Value (nominal U.S. dollars)											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$284,876	\$233,468	\$277,663	\$351,632	\$127,008	\$167,935	\$638,398	\$1,216,284	\$1,243,906	\$1,614,590	\$2,936,226
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$2,222	\$2,088	\$2,856	\$5,785	\$1,353	\$999	\$1,305	\$9,466	\$17,730	\$13,690	\$60,111
Other Shellfish	--	--	--	--	--	--	\$295,710	--	--	--	\$193,797
Pacific Cod	\$77,230	\$51,217	\$81,853	\$5,065	\$6,759	--	\$264,200	\$403,571	\$637,739	\$525,597	\$1,288,405
Pollock	--	--	--	--	--	--	--	--	--	--	\$661
Sablefish	--	\$37,676	--	--	--	--	\$91,929	\$391,037	\$605,218	\$583,649	\$954,293
Salmon	\$2,259,535	\$1,705,063	\$1,239,186	\$1,153,289	\$1,840,523	\$2,296,569	\$3,051,943	\$4,360,923	\$4,731,505	\$4,563,103	\$5,539,095
Total²	\$2,623,863	\$2,029,511	\$1,601,558	\$1,515,771	\$1,975,643	\$2,465,503	\$4,343,485	\$6,381,281	\$7,236,097	\$7,300,628	10,972,589

Note: Not Reported indicates that no data were reported for that year. Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Wasilla residents actively participate in Alaska recreational fisheries as anglers and guides. As shown in Table 11, there were a total of 6 registered sport fish guide businesses active in 2010, compared to 8 in 2000. Overall, the number of active sport fish guide businesses remained steady between 2000 and 2010, peaking in 2001 at 9, and bottoming out in 2006 at 4. The number of sport fish guide licensees held within the community declined between 2000 and 2010, from 106 to 66. The number of sport fish guide licenses held peaked in 2003 at 126 and was at its lowest in 2005 at 56. Though the numbers of sport fish guide businesses and licenses in the community have generally declined since 2000, the number of Wasilla residents purchasing licenses (irrespective of location of purchase) steadily increased from 12,417 in 2000 to 18,789 in 2010. Sportfishing licenses sold in Wasilla also increased significantly from 13,216 in 2000 to 28,511 in 2010.

With respect to recreational fishing in the surrounding Knik Arm region, survey data on private anglers indicate that fished species include Chinook, coho, pink, and sockeye salmon, as well as smelt and Dolly Varden.³²⁰ As shown in Table 11, in 2009 an estimated 33,865 private anglers fished in the region for a total of 122,299 estimated fishing days; freshwater recreational fishing accounted for nearly all of the activity reported (122,140 estimated days).³²¹ Resident anglers in 2009 accounted for 76% of estimated saltwater fishing days and 91% of estimated freshwater fishing days. No kept/released log book data was reported for fishing charters out of Wasilla between 2000 and 2010³²², although a number of guides in the community offer charter fishing opportunities in the surrounding Mat-Su Valley region.

³²⁰ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³²¹ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results database. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Retrieved November 28, 2011 from <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>.

³²² Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Wasilla: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Wasilla ²
2000	8	106	12,417	13,216
2001	9	110	12,723	13,113
2002	6	122	13,224	13,615
2003	4	126	14,063	18,512
2004	7	113	14,874	19,163
2005	6	56	15,777	19,689
2006	4	61	16,340	19,648
2007	7	67	17,211	19,231
2008	8	66	17,473	24,028
2009	7	63	18,840	25,730
2010	6	66	18,789	28,511

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler days fished – Non-residents ³	Angler days fished – Alaska residents ³
2000	130	317	13,308	106,880
2001	345	277	14,933	94,862
2002	464	754	17,367	106,163
2003	49	386	15,626	87,000
2004	33	151	11,681	101,663
2005	378	424	14,284	100,677
2006	89	234	12,239	107,233
2007	117	473	13,524	106,567
2008	17	308	14,080	122,167
2009	37	122	10,678	111,462
2010	n/a	124	10,872	95,285

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Wasilla is legally designated a non-subsistence area for the purpose of state and federal subsistence fisheries management. Residents, however, may participate in state subsistence fisheries located outside the community; and residents who are members of certain Alaska Native Tribes are eligible to harvest halibut for subsistence purposes.

Of the marine species documented by the ADF&G Division of Subsistence, sockeye salmon is estimated to account for a significant majority of subsistence harvest by Wasilla’s residents; Chinook and coho salmon are estimated to be harvested in smaller amounts. In 2008, the most recent year for which data is available, Wasilla residents harvested an estimated 16,180 sockeye salmon, down from the estimated high of 22,799 fish in 2005 as well as from the 2000-2007 estimated average of 18,000 fish. Average estimated harvests of Chinook and coho salmon from 2000 to 2008 were 650 and 325 fish, respectively.

For the small number of Wasilla residents who hold a Subsistence Halibut Registration Certificate (SHARC), estimated harvest of subsistence halibut from 2003 to 2009 averaged 2,093 lbs annually. However, reported halibut harvests declined significantly in 2010 to 80 pounds on two SHARC; a relatively small number of active permits compared to total SHARC held. Residents of Wasilla have not been documented as harvesting any marine mammal species for subsistence purposes. Tables 12 through 15 show additional statistics on participation by Wasilla residents in subsistence fishing activities.

Table 12. Subsistence Participation by Household and Species, Wasilla: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Wasilla: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	854	822	689	7	411	n/a	15,722	n/a	n/a
2001	913	833	625	n/a	319	1	18,350	n/a	n/a
2002	654	582	722	7	285	15	13,890	n/a	n/a
2003	611	541	517	n/a	136	2	12,318	n/a	n/a
2004	829	709	765	10	472	7	17,316	n/a	n/a
2005	886	761	412	n/a	246	n/a	22,799	n/a	n/a
2006	930	794	685	14	432	24	21,719	n/a	n/a
2007	957	832	1,204	43	311	n/a	26,616	n/a	n/a
2008	971	836	728	33	174	58	16,180	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Wasilla: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	18	4	761
2004	26	11	3,428
2005	28	3	1,069
2006	24	6	3,988
2007	37	7	2,225
2008	37	6	1,016
2009	33	6	2,169
2010	43	2	80

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2010. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Wasilla: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

Wasilla is home to the annual 1,000-mile Iditarod Trail Sled Dog Race from Anchorage to Nome. The community served as the official starting location of the race until 2008, when urban growth and lack of snow forced officials to permanently move the start location north to Willow.³²³

³²³ White, Rindi. 2008. Iditarod home more than just restart point. *Alaska Daily News*. Retrieved December 2, 2011 from <http://www.adn.com/2008/01/28/296206/itarod-home-more-than-just-restart.html>.

Willow (WILL-oh)



People and Place

*Location*³²⁴

Willow is located in the Mat-Su Borough, between mile 60.0 and 80.7 of the George Parks Highway, 37 mi north of Anchorage. Its western boundary is the Susitna River. The area encompasses 684.8 sq mi of land and 8.0 sq mi of water. Willow is not incorporated into a municipality and is under the jurisdiction of Matanuska-Susitna (Mat-Su) Borough.

*Demographic Profile*³²⁵

In 2010, there were 2,102 residents living in Willow, ranking it 45th of 352 communities in terms of population size. Between 1990 and 2010, the population grew by 637.5%. Between 2000 and 2009, the population grew by 33.8% with an average annual growth rate of 2.1%, which was much higher than the statewide average of 0.75% and indicative of steady growth. Information regarding population trends can be found in Table 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there are seasonal workers living in Willow year-round for lodging, fishing, and dog mushing. The population typically reaches its annual peak in June, and is thought to be driven mostly by employment in fisheries sectors.

The racial and ethnic composition of Willow is predominately White. In 2010, 90.8% of residents identified themselves as White, compared to 92.4% in 2000; 5.2% identified themselves as American Indian or Alaska Native, compared to 3.1% in 2000; and 2.9% identified themselves as two or more races, compared to 3.9% in 2000. In addition, 1.3% of residents identified themselves as Hispanic or Latino in both 2000 and 2010. All other races each represented less than 1% of the population in both 2000 and 2010 (Figure 1).

In 2010, the average household size was 2.34, compared to 2.90 in 1990 and 2.54 in 2000. In that year, there were 1,912 total housing units, compared to 244 in 1990 and 1,530 in 2000. Of the households surveyed in 2010, 40% were owner-occupied, compared to 37% in 2000; 7% were renter-occupied, compared to 5% in 2000; 5% were vacant, compared to 4% in 2000; and 48% were occupied seasonally, compared to 53% in 2000. There were 11 residents living in group quarters in 2010, compared to 0 in both 1990 and 2000.

The gender distribution in 2010 was somewhat skewed at 53.4% male and 46.6% female. This was slightly less even than the statewide distribution (52% male, 48% female), and similar to the distribution in 2000 (53.3% male, 46.7% female). The median age in 2010 was 46.4 years,

³²⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³²⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

which was significantly higher than the statewide median of 33.8 years and moderately higher than the 2000 median of 40.1 years.

When compared with 2000, the population structure in 2010 was less expansive. In addition, age cohorts above 39 showed characteristics consistent with a stable population, meaning that cohorts aged while still mostly retaining their structural character. However, age cohorts 30 and under did not retain their structure, possibly indicating low youth retention. In 2010, 23.4% of residents were under the age of 20, compared to 29.8% in 2000; 22.5% were over the age of 59, compared to 13.7% in 2000; 46.4% were between the ages of 30 and 59, compared to 50.1% in 2000; and 7.7% were between the ages of 20 and 29, compared to 6.5% in 2000.

Table 1. Population in Willow from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	285	-
2000	1,658	-
2001	-	1,667
2002	-	1,719
2003	-	1,814
2004	-	1,863
2005	-	1,898
2006	-	1,964
2007	-	2,046
2008	-	2,136
2009	-	2,218
2010	2,102	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Willow: 2000-2010 (U.S. Census).

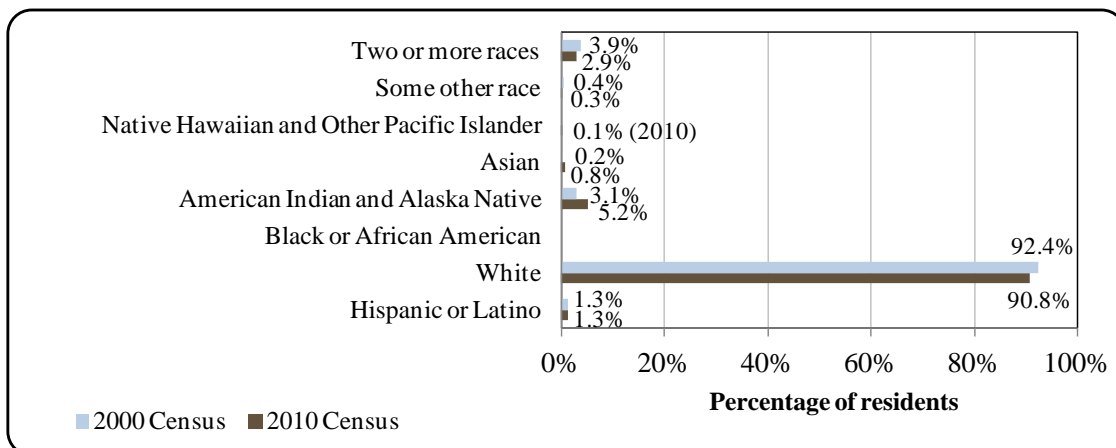
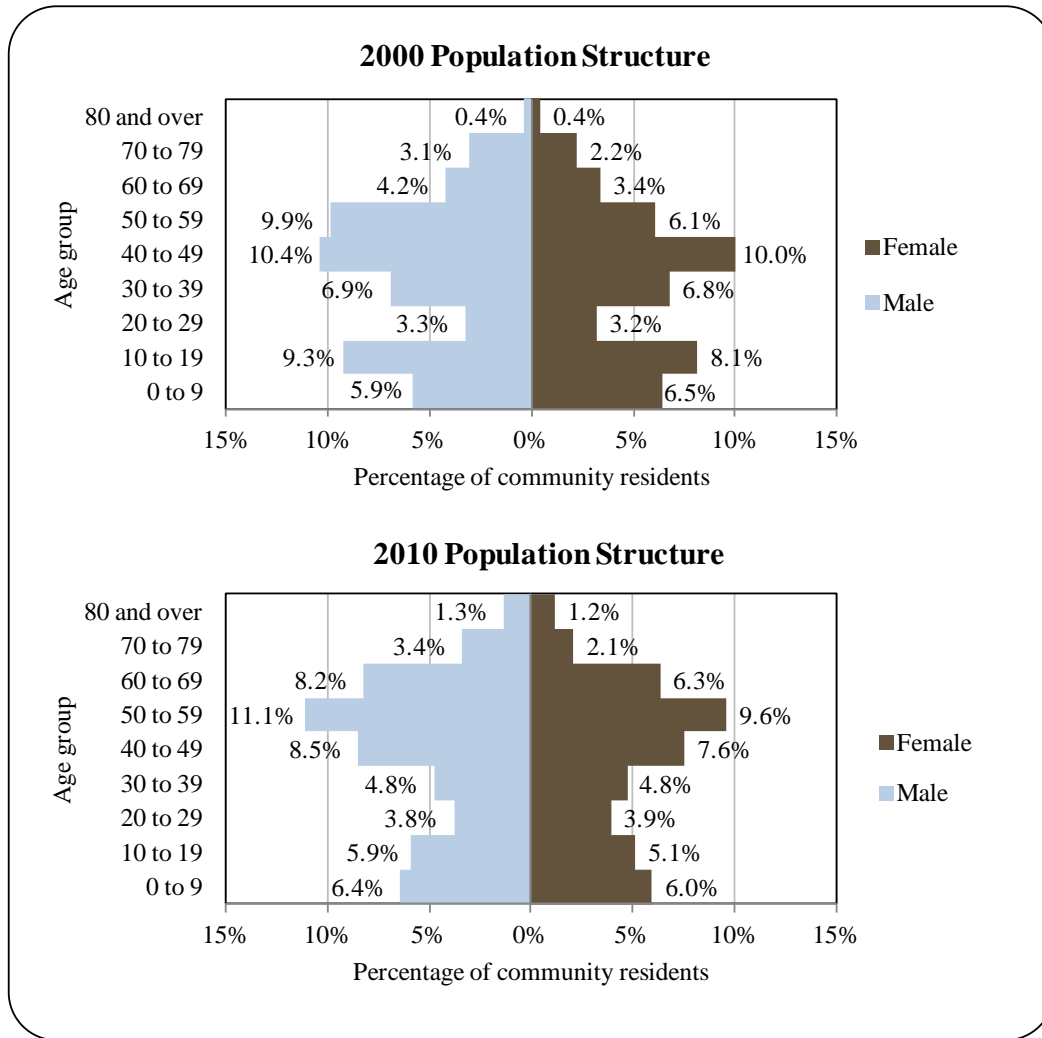


Figure 2. Population Age Structure in Willow Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution by age cohort was slightly more even in 2010 than in 2000 with slight male biases along most age ranges. In that year, the greatest absolute gender difference occurred in the 60 to 69 range (8.2% male, 6.3% female), followed by the 50 to 59 (11.1% male, 9.6% female) and 70 to 79 (3.4% male, 2.1%) ranges. Of those three, the greatest relative difference occurred in the 70 to 79 range. Information regarding Willow’s population structure can be found in Figure 2.

In terms of education attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)³²⁶ estimated that 89.3% of residents aged 25 years and older held a high school

³²⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 2.7% of residents had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 8% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 33.9% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 9.9% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 18% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; an estimated 5.4% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*³²⁷

Historically, Dena'ina Athabascan Indians occupied the area; living in semi-permanent villages. The community got its start when gold was discovered on Willow Creek in 1897. Supplies and equipment were brought in by boat to Knik. From there, a 26 mi summer trail went northwest, up Cottonwood Creek, and across Bald Mountain to Willow Creek. The winter sled trail went north, crossing the present line of the Alaska Railroad at Houston, Alaska, and up the west end of Bald Mountain for 30 mi. This trail, dubbed the "Double Ender Sled Trail," is still being used by skiers, hunters, backpackers, and snowmobile enthusiasts. The sleds then followed a trail, now Hatcher Pass Road, along Willow Creek in an easterly direction. The Talkeetna Trail also passed through Willow and was used by dog teams and pack horses. Cabins to accommodate freighters and mail carriers were located at Nancy Lake, Willow, and other points north. This route was the forerunner of the Parks Highway. During construction of the Alaska Railroad, surveyors, construction crews, homesteaders, and other settlers came to Willow. A railroad station house was constructed in 1920. During World War II, a radar warning station and airfield were built. The Trail's End Lodge was built in 1947; it subsequently became a post office in 1948. By 1954, Willow Creek was Alaska's largest gold mining district, with total production approaching \$18 million. Land disposals, homestead subdivisions, and completion of the George Parks Highway in 1972 fueled growth in the area. In 1976, Alaskans selected Willow for their new state capital site. However, funding to enable the capital move was defeated in the November 1982 election.

³²⁷ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment

January temperatures range from -33 to 33 °F (-36 to 56 °C); July can range from 42 to 83 °F (6 to 28 °C). Annual rainfall varies from 16 to 27 inches, with 48 to 150 inches of snowfall.³²⁸

The topography surrounding Willow was shaped by glaciers which retreated in a north and northeastern direction approximately 9,000 years ago. As they retreated, a series of low hills and ridges were left behind. Numerous lakes occupy areas between the ridges. Underlying geology in the area consists of coal-bearing bedrock. As the glaciers retreated, thick deposits of sandy and gravelly moraine remained, which were later covered by silt loess. Topsoil is generally well-drained, with the exception of pockets of poorly drained peat. Vegetation is consistent with most of southcentral Alaska. Woody vegetation consists of mixed paper birch and white spruce stands. Black spruce is common on north facing slopes, poorly drained soils, and areas where permafrost may exist below the surface. Low-lying alluvial plains support cottonwood and quaking aspen populate some well-drained areas. Understory vegetation consists generally of low shrubs, devils club and high grasses. Poorly drained areas consist of alder and willow thickets. Muskeg areas are covered with sphagnum mosses. Other plants include Labrador-tea, cotton grass, bog birch, dwarf willow, bog blueberry, cloudberry, and low and high bush cranberry. Aquatic wildlife in the area includes coho, sockeye, and Chinook salmon, rainbow trout, Dolly Varden, whitefish, northern pike, burbot, long nose suckers, and three-spined stickleback. The nearby Nancy Lake State Recreation Area (NLSRA) has stocked rainbow trout and landlocked coho salmon. Terrestrial mammals include moose, black bear, beaver, otter, mink, muskrat, lynx, wolverine, martin, rabbits, and fox. Birds include ravens, loons, magpies, ducks, owls, eagles, and spruce hens.³²⁹

Coal, timber, and gravel make up the majority of exploitable natural resources in the Willow area. Coal deposits studied in the Houston area are sub-bituminous and characterized as low to medium grade.³³⁰ Chuitna Coal Project, located to the southwest of Willow, produces 12 million tons of coal annually and is expected to have a productive lifespan of 25 years.³³¹ The NLSRA and Susitna Flats State Game Refuge provide scenic and recreational resources, as well as environmental services which support wildlife and quality of life. Oil and gas sources are known to exist in the area.³³² There are several shallow gas leases within the Willow area and additional exploration licenses have been issued within the Susitna Valley.³³³ Other coal gasification developments are focused primarily within the Beluga River area to the southwest. Gas storage was approved for the Ivan River area outside of Beluga.³³⁴ Geothermal energy

³²⁸ Ibid.

³²⁹ Alaska Department of Natural Resources (1983). *Nancy Lake State Recreation Area*. Retrieved April 26, 2012 from: <http://www.dnr.alaska.gov/parks/plans/nancylake/nancylk83/nancylakesramasplan.pdf>.

³³⁰ City of Houston (2003). *City of Houston Comprehensive Plan*. Retrieved April 26, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Houston-CP-2003.pdf>.

³³¹ Alaska Department of Natural Resources (n.d.) *Chuitna Coal Project*. Retrieved April 26, 2012 from: <http://www.dnr.state.ak.us/mlw/mining/largemine/chuitna/>.

³³² See footnote 329.

³³³ Alaska Department of Natural Resources (n.d.). *Exploration License Areas*. Retrieved April 26, 2012 from: <http://dog.dnr.alaska.gov/Programs/ExplorationLicenseAreas.htm#susitna>.

³³⁴ Alaska Department of Natural Resources (n.d.). *Cook Inlet Maps*. Retrieved April 26, 2012 from: <http://dog.dnr.alaska.gov/Publications/CookInlet.htm#cimaps>.

sources are also thought exist in the area.³³⁵ The State of Alaska owns most of the 1.8 million acres of identified timber lands in the Mat-Su Valley.³³⁶

Borough-wide natural hazards include flooding, earthquakes, avalanches, wildfire, severe weather, and extreme cold. Wildfires throughout the Mat-Su Borough typically present little risk to people and property because they often occur in sparsely populated areas. However, fire risk has been increasing in recent years due to urban development and spruce bark beetle infestations. The Mat-Su Borough is subject to seismic hazards which can trigger earthquakes, landslides, avalanches, ground uplift or subsidence, infrastructure failures, and soil liquefaction. Severe weather hazards can bring extreme cold, heavy snow, high winds, ice, flooding, landslides, and erosion. Overall, the Susitna Valley is most susceptible to wildfire, river flooding, erosion, and earthquakes.³³⁷

According to the Alaska Department of Environmental Conservation, there were no notable environmental remediation sites active in Willow as of 2010.³³⁸

Current Economy³³⁹

Many Willow residents are self-employed in a variety of businesses, including lodging, guiding and charter services, and retail stores. There are two saw mills and one prefabricated wood-building manufacturer. Some residents are employed in Palmer, Wasilla, or Anchorage. Capitol Speedway attracts stockcar racing enthusiasts from the entire state.³⁴⁰ In a survey conducted by the AFSC in 2011, community leaders reported that Willow's economy is reliant on mining, fishing, sportfishing, hunting, and dog mushing. Top employers³⁴¹ in 2010 included: Mat-Su Borough Schools, State of Alaska, Mat-Su Borough, ASRC Energy Services O&M Inc., Newman's Hilltop Service, Palmer-Wasilla Health System LLC, Job Ready Inc., Fishhook/Halfrack/Townsite, BP Exploration Alaska Inc.; and VECO Alaska Inc.

In 2010,³⁴² the estimated per capita income was \$27,981 and the estimated median household income was \$58,438, compared to \$22,323 and \$38,906 in 2000, respectively. However, after accounting for inflation by converting 2000 values into 2010 dollars,³⁴³ the real per capita income (\$29,354) and real median household income (\$51,161) indicate a decline in both individual and household earnings. In that year, Willow ranked 79th of 305 communities from which per capita income was estimated and 83rd of 299 communities from which median household income was estimated.

³³⁵ See footnote 329.

³³⁶ Metiva, M. and D. Hanson. (2008). *Mat-Su Comprehensive Economic Development Strategy*. Retrieved April 26, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Matanuska-Susitna%20Borough-EDP-2008.pdf>.

³³⁷ Adler, B. (2008). *All-Hazards Mitigation Plan*. Retrieved April 26, 2012 from: <http://www.matsugov.us>.

³³⁸ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved April 26, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

³³⁹ Unless otherwise noted, all monetary data are reported in nominal values.

³⁴⁰ See footnote 327.

³⁴¹ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved April 23, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

³⁴² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁴³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

It should be noted that ACS survey methods sample a relatively small percentage of the population, and as such, may not capture accurate economic conditions within communities with small populations. Data compiled in the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (ADOLWD) reported \$29.49 million in total wages earned by private sector and state employees, indicating a per capita income of \$14,030 when compared to 2010 U.S. Census population figures.³⁴⁴ In addition, the Denali Commission identified Willow as a “distressed” community in 2011, meaning that over 70% of residents were estimated to have incomes of less than \$16,120 in 2010. Overall, ALARI estimates indicate significantly lower incomes than what was reported by the Census Bureau in both 2000 and 2010.

According to 2006-2010 ACS estimates,³⁴⁵ 53.5% of residents aged 16 and over were part of the civilian labor force and an estimated 0.8% were part of the armed forces in 2010. In that year, unemployment was estimated at 1.2%, compared to an estimated 5.9% statewide; and an estimated 6.1% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. It should be noted that these estimates seem to conflict with Willow’s designation as a “distressed community.” ALARI estimates in 2010 estimated that unemployment was approximately 12.9% based on unemployment insurance claimants. Of those employed in 2010, an estimated 64.2% worked in the private sector, an estimated 16.2% worked in the public sector, an estimated 17.9% were self-employed, and an estimated 1.7% were unpaid family workers.

By industry, most employed residents were estimated to work in construction sectors (28.3%) in 2010;³⁴⁶ followed by education, health care, and social assistance (15.2%) and retail trade (13.8%) sectors. Employment by industry was relatively diverse in both 2000 and 2010; however, it should be noted that many Willow residents commute to Wasilla, Palmer, and Anchorage for work. Because of this, employment figures may not necessarily be reflective of Willow’s local economy. Residents estimated to be employed in agriculture, forestry, fishing, hunting, and mining sectors declined from 6.1% in 2000 to 3.2% in 2010. Since agriculture, forestry, and mining are dominant industries in the Mat-Su Valley, it is difficult to determine the level at which fisheries sectors contributed to these figures. It should also be noted that much of Willow’s fisheries employment is related to recreational fishing sectors, which may not be captured in agriculture, forestry, fishing, hunting, and mining sector estimates. According to 2010 ALARI estimates,³⁴⁷ most (23.0%) employed residents worked trade, transportation, and utilities sectors; followed by education and health (13.2%); local government (12.2%); and construction (11.7%) sectors.

By occupation type, most employed residents were estimated to hold management or professional positions in 2010 (38.3%);³⁴⁸ followed by natural resources, construction, or maintenance positions (19.5%); production, transportation, or material moving positions

³⁴⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁴⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁴⁶ See footnote 342.

³⁴⁷ See footnote 344.

³⁴⁸ Ibid.

(18.0%); sales or office positions (17.1%); and service positions (7.1%). Overall, there were significant changes in both employment by industry, and employment by occupation type between 2000 and 2010. Most notably, there was a significant increase in construction sector employment. Other notable increases occurred in education services, health care, social assistance, professional, scientific, management, administrative, and waste management sectors. In terms of occupation type, there were notable increases in the amount of management and professional positions, while there were notable declines in sales and office positions.

Overall, while variation in employment between 2000 and 2010 may be attributed to economic changes, although it is also possible that ACS survey methods were unable to capture accurate employment conditions due to a relatively small sample size. Information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Willow (U.S. Census).

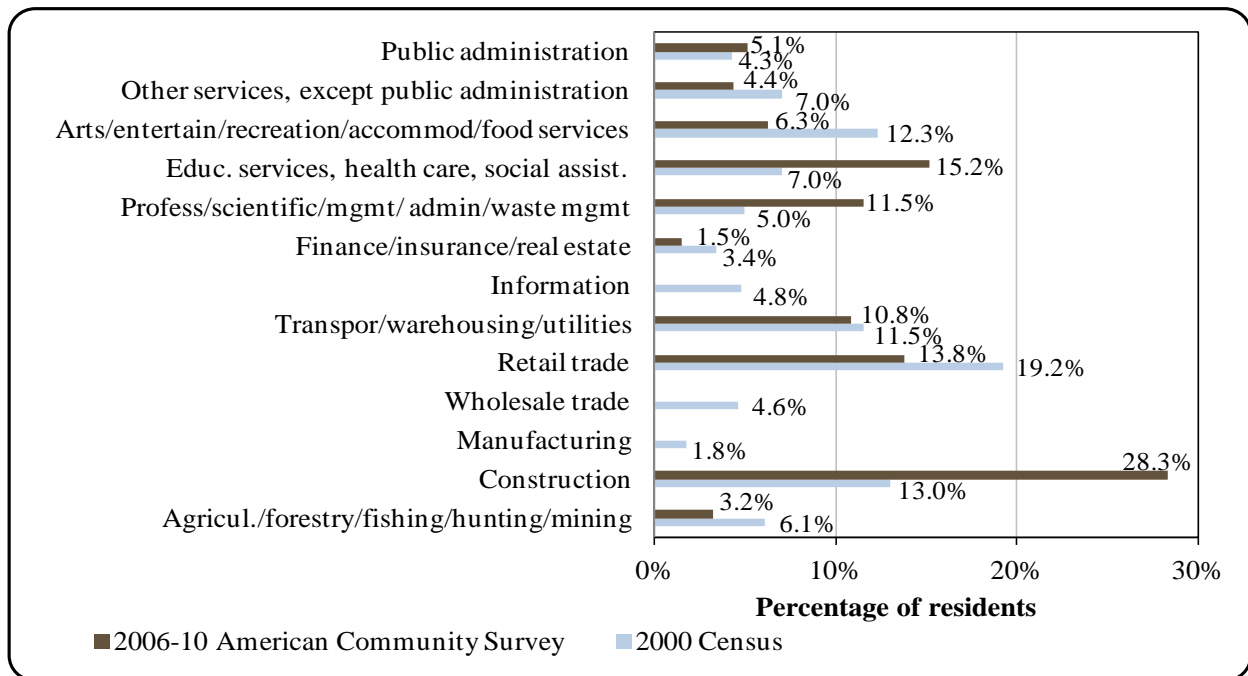
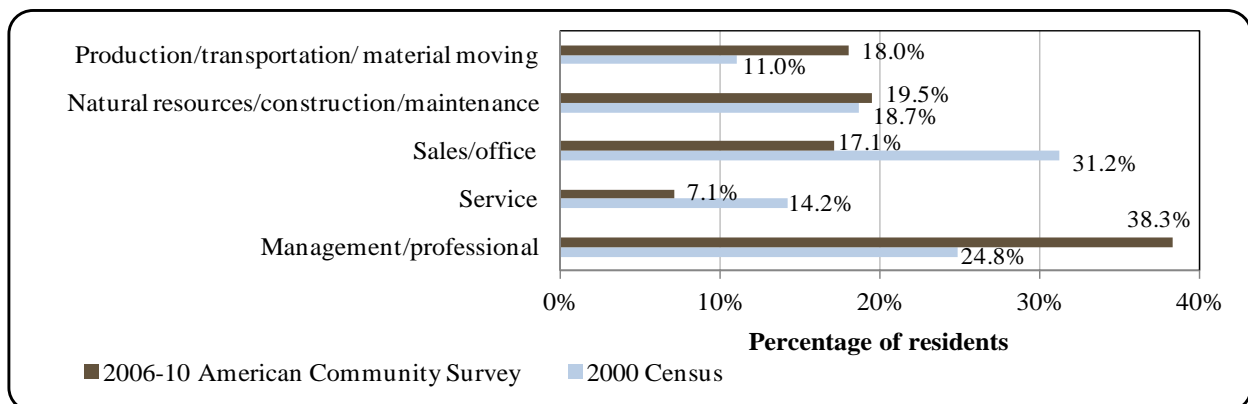


Figure 4. Local Employment by Occupation in 2000-2010, Willow (U.S. Census).



Governance

Willow is considered a Census Designated Place and is not incorporated into a municipality. Instead it is under the jurisdiction of the Mat-Su Borough, which is seated in Palmer. The community was not included in the Alaska Native Claims Settlement Act (ANCSA) of 1971 and is not represented by a Native Traditional Council. The closest Alaska Department of Fish and Game (ADF&G) office is located in Palmer, 34 mi southeast. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage, 37 mi south.

Since Willow is not an incorporated municipality, it is unable to collect revenue through municipal taxes or fees (Table 2). All finances are handled on a borough level. The Borough administers a 9.956 mill base property tax, 5% accommodations tax, and 5.5% tobacco excise tax.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Willow from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*³⁴⁹

From the George Parks Highway, the area has access to the statewide highway system and the transportation facilities of Wasilla, Palmer, and Anchorage. There are two public airstrips: one is a state-owned 4,400 ft long by 75 ft wide gravel airstrip at mile 69.7 Parks Highway and the other is at Deshka Landing and owned by the Alaska Department of Natural Resources. There are five additional private strips and a seaplane base at Kashwitna Lake.

*Facilities*³⁵⁰

Nearly all of the occupied homes in Willow are fully plumbed and use individual water wells and septic tanks. The school operates its own water system. Seasonal-use homes haul water and use outhouses. A borough-operated refuse transfer site is available on Willow-Fishhook Road, about 2 mi off the Parks Highway. Electricity is provided by hydroelectric generator. Visitor accommodations include Willow Trading Post Lodge, Ruth Lake Pioneer Lodge, Willow Island Resort, Sheep Creek Lodge, Chandalar RV Park, Cline's Lake Bed & Breakfast, Camp Caswell, Susitna Landing & Campground, Alaska Host Bed & Breakfast, Giggewood Inn, Nancy Lake Bed & Breakfast, and Willow Park Bed & Breakfast. Public safety services are provided by state troopers based in Talkeetna. Fire and rescue services are provided by Mat-Su Borough and Willow Ambulance Service. Additional public facilities include a community center and library. Communications services include local and long distance telephone, local television, and local radio.

In a survey conducted by the AFSC in 2011, community leaders reported that local public infrastructure includes a fish cleaning station, a barge landing area/marina at Deshka Landing on the Susitna River. There are no permanent public mooring facilities located in Willow. Vessels which can use facilities in Willow include jet boats, small vessels, fuel barges, and vessels containing hazardous materials. Fisheries-related businesses and services available in Willow include fishing gear sales, boat repair (electrical, mechanical, machining), tackle sales, bait sales, commercial cold storage, fish lodges, fishing related bookkeeping, boat fuel sales, fishing gear repair, fishing gear storage, ice sales, water taxi, seaplane services, and air taxi. Additional public services include a food bank and publically subsidized housing. Residents typically travel to Anchorage, Palmer, or Wasilla for businesses and services not available in Willow.

*Medical Services*³⁵¹

There are no medical services located in Willow. Sunshine Community Health Center in Talkeetna provides basic health care. Valley Hospital in Palmer provides acute, specialized, and long-term care. Willow Ambulance Service provides alternative care.

³⁴⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵⁰ Ibid.

³⁵¹ Ibid.

*Educational Opportunities*³⁵²

Beryozova School offers Kindergarten through 12th grade instruction. In 2011, there were 22 students enrolled and one teacher employed. Willow Elementary School offers preschool through 6th grade instruction. In 2011, there were 130 students enrolled and 12 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Soon after glaciers receded some 9,000 years ago, Tanaina Athabascans, and possibly Yup'ik Eskimos move into the Susitna River Valley. Two archaeological sites found within the NLSRA have been confirmed, and evidence shows that inhabitants of those sites relied on subsistence fishing, hunting, and trapping. The Alaska Railroad brought homesteaders into the Willow area around 1917, who built a life around mining, logging, and farming.³⁵³ Since then, Willow's participation in North Pacific fisheries has been tied primarily to recreational fishing. The lower Susitna River, Little Susitna River, and various lakes in the region are popular among local anglers, as well as anglers from throughout the state. Willow has become a popular area with residents from the greater Mat-Su region and Anchorage, and the community has grown as a bedroom community centered on sportfishing and hunting. Although commercial fishing is not a central component of Willow's fisheries participation, several residents have commercial fishing permits.

In a survey conducted by the AFSC in 2011, community leaders reported that Willow participates in the fisheries management process in Alaska through a representative who sits on regional fisheries advisory and/or working groups run by ADF&G. Willow is not eligible for participation in either the Community Development Quota (CDQ) or Community Quota Entity (CQE) programs.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Willow did not have a registered processing plant operating in 2010. The closest seafood processor is located in Wasilla.

Fisheries-Related Revenue

Willow did not receive any fisheries-related revenue from taxes or fees between 2000 and 2010 (Table 3).

³⁵² Alaska Department of Education and Early Development (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³⁵³ Alaska Department of Natural Resources (n.d.). *Nancy Lake State Recreation Area*. Retrieved April 27, 2012 from: <http://dnr.alaska.gov/parks/units/nancylk/nancylk.htm>.

Commercial Fishing

In 2010, 18 residents, or less than one-percent of the population, held 30 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 19 residents held 44 CFEC permits. Of the CFEC permits held in 2010, 50% were for salmon, compared to 36% in 2000; 20% were for groundfish, compared to 32% in 2000; 7% were for sablefish, compared to 11% in 2000; 3% were for herring, compared to 7% in 2000; and 20% were for halibut, compared to 14% in 2000. Of the CFEC permits held in 2010, 73% were actively fished, compared to 73% in 2000. This varied by fishery from 100% of halibut permits, to 80% of salmon, 67% of groundfish, and 0% of herring and sablefish permits. Fisheries prosecuted by Willow residents in 2010 included: statewide longline halibut, statewide longline and mechanical jig miscellaneous saltwater finfish, Prince William Sound drift gillnet salmon, Cook Inlet drift and set gillnet salmon, Alaska Peninsula drift gillnet salmon, and Bristol Bay drift and set gillnet salmon.³⁵⁴

In addition, 7 residents held 8 License Limitation Program (LLP) groundfish permits, one resident held one LLP crab permit, and 3 residents held 3 Federal Fisheries Permits (FFP) that year. Approximately 50% of groundfish LLP, 0% of crab LLP, and 100% of FFP were actively fished in 2010. Finally, 470,466 shares of halibut quota were held through 7 accounts in 2010, compared to 155,692 shares held through 3 accounts in 2000. No residents held sablefish quota in 2010, although 143,794 shares were held on one account in 2006. No residents held crab quota between 2010 and when the program began.

Residents held 23 commercial crew licenses in 2010, compared to 16 in 2000. In that year, residents held majority ownership of 11 vessels, compared to 32 in 2000. Given that no shore-based processing plants are located in Willow, no commercial landings were reported in Willow between 2000 and 2010. However, residents of Willow did participate in the state's commercial fisheries by making landings in other communities. However, landings reported by Willow residents at other locations are considered confidential in 2010 with the exception of salmon. In that year, 695,046 lbs of salmon valued at \$668,183 were landed, compared to 387,574 lbs valued at \$296,558 in 2000; a decrease of \$0.09 per lb after adjusting for inflation³⁵⁵ and without considering the species composition of landings. Halibut landings in 2008 totaled 58,355 lbs valued at \$260,112, compared to 51,523 lbs valued at \$104,800 in 2001; an increase of \$1.73 after adjusting for inflation.³⁵⁶ Other groundfish landings totaled 32,413 lbs valued at \$12,478 in 2007, compared to 184,426 lbs valued at \$70,268 in 2001. Pacific cod landings totaled 1.07 million lbs valued at \$320,352, compared to 901,249 lbs valued at \$356,323 in 2000; a decrease of \$0.08 per lb after adjusting for inflation.³⁵⁷ Pollock landings in 2002 totaled 3,659 lbs valued at \$231. Sablefish landings in 2001 totaled 49,605 lbs valued at \$157,306. Information regarding commercial fishing trends can be found in Tables 4 through 10.

³⁵⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁵⁵ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

³⁵⁶ Ibid.

³⁵⁷ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Willow: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Willow: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	7	9	10	10	8	8	7	7	7	8	8
	Active permits	4	7	6	7	4	4	3	4	4	4	4
	% of permits fished	57%	77%	60%	70%	50%	50%	42%	57%	57%	50%	50%
	Total permit holders	5	6	7	7	6	6	6	6	6	7	7
Crab (LLP) ¹	Total permits	0	0	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	1	0	1	0	0	1	0	0
	% of permits fished	n/a	n/a	0%	100%	0%	100%	0%	0%	100%	0%	0%
	Total permit holders	0	0	1	1	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	9	9	9	3	3	3	4	4	4	3	3
	Fished permits	0	0	0	2	3	2	3	4	2	3	3
	% of permits fished	0%	0%	0%	67%	100%	67%	75%	100%	50%	100%	100%
	Total permit holders	7	7	7	3	3	3	4	4	4	3	3
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	6	7	6	6	7	7	8	7	7	6	6
	Fished permits	4	5	6	6	7	7	8	6	7	6	6
	% of permits fished	67%	71%	100%	100%	100%	100%	100%	86%	100%	100%	100%
	Total permit holders	6	7	6	6	7	7	8	7	7	6	6
Herring (CFEC) ²	Total permits	3	3	3	2	1	1	1	1	2	1	1
	Fished permits	2	0	0	0	0	0	0	0	1	0	0
	% of permits fished	67%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	2	1	1

Table 4 cont'd. Permits and Permit Holders by Species, Willow: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	5	5	5	1	0	0	1	2	1	1	2
	Fished permits	2	5	2	0	0	0	1	0	1	1	0
	% of permits fished	40%	100%	40%	0%	n/a	n/a	100%	0%	100%	100%	0%
	Total permit holders	5	5	5	1	0	0	1	2	1	1	2
Groundfish (CFEC) ²	Total permits	14	20	16	9	11	8	8	8	9	11	6
	Fished permits	9	10	8	3	4	5	5	5	6	9	4
	% of permits fished	64%	50%	50%	33%	36%	63%	63%	63%	67%	82%	67%
	Total permit holders	6	7	7	5	5	4	6	6	6	7	5
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	16	17	18	18	16	18	19	17	18	18	15
	Fished permits	15	10	12	12	11	13	13	12	13	14	12
	% of permits fished	94%	59%	67%	67%	69%	72%	68%	71%	72%	78%	80%
	Total permit holders	16	17	18	18	16	18	19	17	18	17	15
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>44</i>	<i>52</i>	<i>48</i>	<i>36</i>	<i>35</i>	<i>34</i>	<i>37</i>	<i>35</i>	<i>37</i>	<i>37</i>	<i>30</i>
	<i>Fished permits</i>	<i>32</i>	<i>30</i>	<i>28</i>	<i>21</i>	<i>22</i>	<i>25</i>	<i>27</i>	<i>23</i>	<i>28</i>	<i>30</i>	<i>22</i>
	<i>% of permits fished</i>	<i>73%</i>	<i>58%</i>	<i>58%</i>	<i>58%</i>	<i>63%</i>	<i>74%</i>	<i>73%</i>	<i>66%</i>	<i>76%</i>	<i>81%</i>	<i>73%</i>
	<i>Permit holders</i>	<i>19</i>	<i>20</i>	<i>21</i>	<i>21</i>	<i>21</i>	<i>22</i>	<i>24</i>	<i>20</i>	<i>23</i>	<i>20</i>	<i>18</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Willow: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Willow ²	Total Net Lbs Landed in Willow ^{2,5}	Total Ex-Vessel Value of Landings in Willow ^{2,5}
2000	16	0	0	32	16	0	0	\$0
2001	16	0	0	32	25	0	0	\$0
2002	12	0	0	37	32	0	0	\$0
2003	12	0	0	43	29	0	0	\$0
2004	14	0	0	35	21	0	0	\$0
2005	17	0	0	11	0	0	0	\$0
2006	15	0	0	13	1	0	0	\$0
2007	22	0	0	15	2	0	0	\$0
2008	19	0	0	14	0	0	0	\$0
2009	26	0	0	12	0	0	0	\$0
2010	23	0	0	11	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Willow: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
2000	3	155,692	15,415
2001	5	420,053	49,728
2002	8	443,922	54,339
2003	8	443,922	54,322
2004	8	445,329	60,346
2005	9	457,690	64,255
2006	9	468,438	64,993
2007	7	455,606	64,554
2008	9	404,674	53,004
2009	7	400,974	47,055
2010	7	470,466	56,039

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Willow: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
2000	0	0	0
2001	2	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	1	143,794	19,030
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Willow: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Willow: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Willow Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	51,523	75,809	--	--	--	80,931	--	58,355	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	184,426	20,326	179,285	--	--	--	32,413	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	901,249	1,354,036	1,074,270	--	--	--	--	--	--	--	--
Pollock	--	--	3,659	--	--	--	--	--	--	--	--
Sablefish	--	49,605	--	--	--	--	--	--	--	--	--
Salmon	387,574	237,939	419,273	424,551	562,215	383,970	635,315	563,243	481,537	497,825	695,046
<i>Total²</i>	<i>1,288,823</i>	<i>1,877,529</i>	<i>1,593,337</i>	<i>603,836</i>	<i>562,215</i>	<i>383,970</i>	<i>716,246</i>	<i>595,656</i>	<i>539,892</i>	<i>497,825</i>	<i>695,046</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	\$104,800	\$169,360	--	--	--	\$312,334	--	\$260,112	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	\$70,268	\$7,780	\$42,552	--	--	--	\$12,478	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$356,323	\$441,241	\$320,352	--	--	--	--	--	--	--	--
Pollock	--	--	\$231	--	--	--	--	--	--	--	--
Sablefish	--	\$157,306	--	--	--	--	--	--	--	--	--
Salmon	\$296,558	\$128,519	\$186,821	\$231,734	\$326,150	\$292,183	\$444,844	\$448,268	\$364,850	\$422,273	\$668,183
<i>Total²</i>	<i>\$652,881</i>	<i>\$902,133</i>	<i>\$684,544</i>	<i>\$274,286</i>	<i>\$326,150</i>	<i>\$292,183</i>	<i>\$757,178</i>	<i>\$460,746</i>	<i>\$624,962</i>	<i>\$422,273</i>	<i>\$668,183</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is an important part of Willow’s fisheries-related economy. Many throughout the state maintain residences in Willow, which they use part-time.³⁵⁸ According to the 2010 U.S. Census, 47% of total households were occupied full-time. Many streams and lakes in the area are stocked with rainbow trout, arctic grayling, char, and landlocked coho salmon.³⁵⁹ In a survey conducted by the AFSC in 2011, community leaders reported that sportfishing takes place on charter or party boats, private boats owned by local residents, private boats owned by non-local residents, and from shore or docks. In addition, “fly-in” (remote destination) sportfishing is a popular local activity. Species targeted by local private anglers include all five species of Pacific salmon and hooligan.

In 2010, there were no registered sport fish guide businesses active in Willow, compared to one in 2000. The number of sport fish guide licenses held in the community declined steadily between 2000 and 2010, from 40 to 15. The number of sport fish guide licenses held in the community peaked at 46 in 2004. Also in 2010, 1,109 sportfishing licenses were sold to Willow residents, compared to 896 in 2000; and 817 sportfishing licenses were sold within the community, compared to 421 in 2000. Sportfishing license sales within the community peaked in 2005 at 1,321 licenses.

Willow is located within the Susitna River Drainage ADF&G Harvest Survey area which includes all drainages of the Susitna River. In 2010, there was a total of 122,235 freshwater angler days fished, compared to 241,457 in 2000. In that year, non-Alaska residents accounted for 33% of angler days fished, compared to 27% in 2000. Between 2000 and 2010, there were declines in both Alaska resident and non-Alaska resident angler days fished although the decline in Alaska resident angler days fished was relatively more significant. Information regarding recreational fishing trends can be found in Table 11. According to ADF&G Harvest Survey records,³⁶⁰ private anglers in Willow target all five species of Pacific salmon, landlocked coho, rainbow trout, Dolly Varden char, whitefish, burbot, Arctic grayling, northern pike, Pacific halibut, rockfish, lingcod, Pacific cod, smelt, razor clams, hardshell clams, shrimp and other shellfish, and other finfish. Kept/released charter information is not available in Willow.

Subsistence Fishing

Willow is not considered a subsistence-dependent community, and traditional subsistence activities are generally not practiced by local residents. In a survey conducted by the AFSC in 2011, community leaders reported that subsistence harvesting is not done by residents of Willow. However, residents do harvest salmon as a personal use fishery, through sportfishing. Subsistence data compiled by ADF&G is limited; and information on subsistence participation by household and on subsistence halibut, marine invertebrate, other non-salmon fish and marine

³⁵⁸ Alaska Department of Natural Resources (1983). *Nancy Lake State Recreation Area*. Retrieved April 26, 2012 from: <http://www.dnr.alaska.gov/parks/plans/nancylake/nancylk83/nancylakesramasplan.pdf>.

³⁵⁹ Alaska Department of Fish and Game (n.d.). *Matanuska-Susitna Valley Small Lakes Management Plan*. Retrieved April 27, 2012 from: <http://www.adfg.alaska.gov/Static/fishing/pdfs/hatcheries/12region2.pdf>.

³⁶⁰ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

mammal harvests is unavailable. Minimal harvests of salmon for subsistence have been reported by residents. Sockeye salmon are harvested most by residents, followed by coho and Chinook salmon. In 2008, residents reported harvesting 564 salmon, compared to 960 in 2000. Reported subsistence salmon harvests peaked in 2007 at 1,225 fish. Between 2003 and 2008, one resident held a Subsistence Halibut Registration Certificate (SHARC) although no halibut harvests were reported in that time. Two residents held SHARC in 2009 and 2010; again, there were no reported harvests. Information regarding subsistence trends can be found in Tables 12 to 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders were asked their opinions on impacts that fisheries-related management and policies have had on their communities. Community leaders were concerned over poor salmon returns to Willow Creek, Little Willow Creek, Lake Creek, and Deshka River, and their impacts on recreational fishing. When asked about current challenges for the portion of Willow’s economy that is based on fishing, community leaders expressed concern over overharvesting and poaching of salmon. Specifically, there were concerns regarding Cook Inlet netting and its affect on Susitna River salmon runs. When asked about the effects fisheries policies or management actions have had on Willow, community leaders expressed concerns over emergency openings for Kenai sockeye impacting northbound salmon stocks. In addition, coho and Chinook salmon bycatch in the Cook Inlet is of chief concern. Overall, there is concern over poor salmon returns and equitable management on a region-wide level.

Table 11. Sport Fishing Trends, Willow: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Willow ²	Freshwater Angler Days Fished – Non-residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	1	40	896	421	64,141	177,316
2001	1	44	945	449	71,249	128,658
2002	1	38	973	1,114	59,863	126,516
2003	0	43	1,010	1,117	56,844	131,687
2004	0	46	1,021	1,237	56,934	130,366
2005	0	17	1,050	1,321	68,753	100,803
2006	1	13	1,074	1,272	63,255	109,462
2007	1	18	1,047	1,240	58,471	115,578
2008	0	25	1,108	1,070	49,911	98,827
2009	0	19	1,112	1,001	40,797	99,404
2010	0	15	1,109	817	40,414	81,821

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Willow: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Willow: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	49	45	22	n/a	5	n/a	933	n/a	n/a
2001	57	52	20	n/a	14	n/a	820	n/a	n/a
2002	35	30	9	n/a	17	n/a	641	n/a	n/a
2003	38	31	6	2	16	2	692	n/a	n/a
2004	43	40	28	n/a	2	8	570	n/a	n/a
2005	36	29	10	n/a	30	n/a	309	n/a	n/a
2006	48	37	23	n/a	3	n/a	876	n/a	n/a
2007	48	47	23	4	35	n/a	1,163	n/a	n/a
2008	51	48	10	n/a	20	n/a	534	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Willow: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	1	n/a	n/a
2009	2	n/a	n/a
2010	2	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2010. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Willow: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

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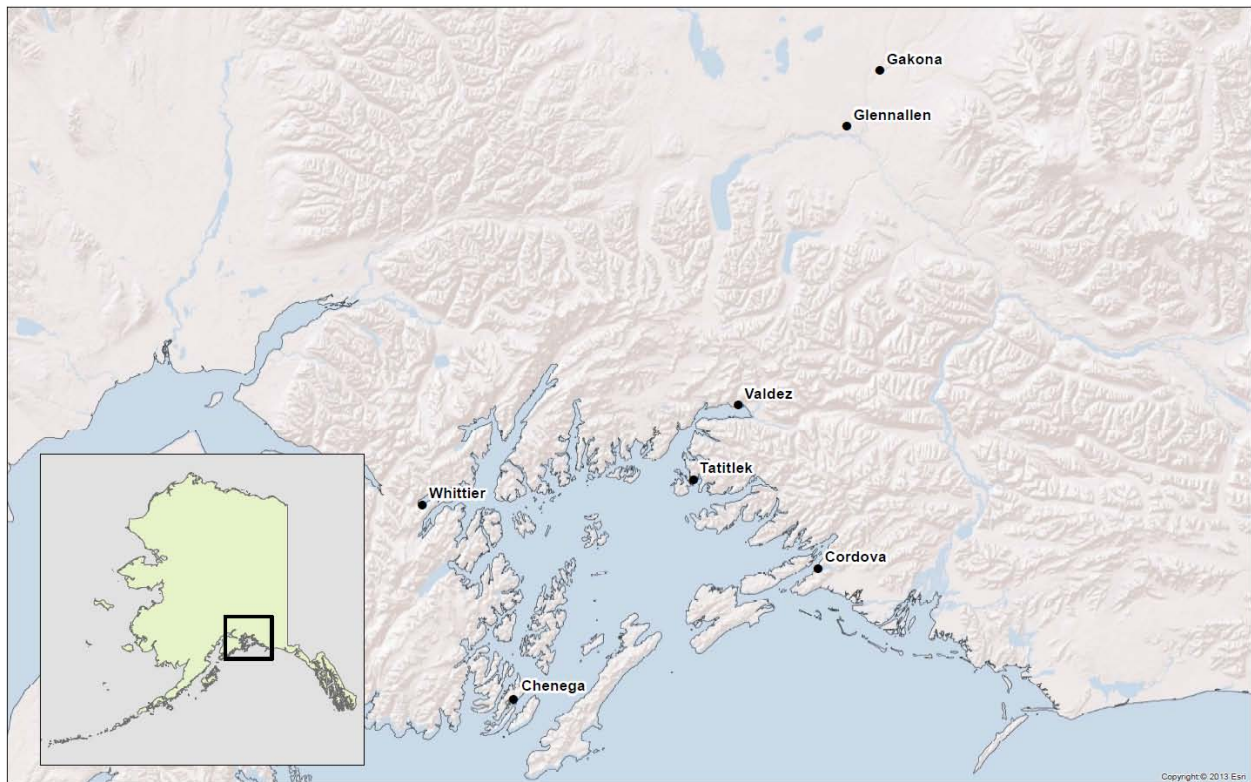
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Regional Introduction: Prince William Sound

Communities

Chenega
Cordova
Gakona
Glennallen

Tatitlek
Valdez
Whittier



People and Place

Location

The communities profiled in this section are located along the shores of Prince William Sound (PWS) and inland in the Copper River basin. All are located in the Valdez-Cordova Census Area. PWS is situated between the Kenai Peninsula to the west and Southeast Alaska to the east. PWS consists of a labyrinth of fjords at roughly 61° N. latitude. The Copper River valley stretches northeast from PWS, bordered by the Alaska Range and Talkeetna, Chugach, and Wrangell mountains.¹ The Copper River has its outlet just southeast of the City of Cordova, at the southeastern corner of PWS.

The climate of PWS is influenced by its coastal location. Temperatures are mild with average highs in the summer around 60° F and average winter lows around 20° F. Precipitation in the sound is quite heavy, averaging around 60 inches of rain annually. Valdez, located at the north edge of PWS, receives an incredible 325 inches (roughly 27 feet) of snow each year.²

Demographic Profile

In 2010, the total population of the Valdez-Cordova Census Area was 9,636. Of the seven PWS communities profiled in this document, two (Valdez and Cordova) had populations of greater than 2,000 in 2010, while the remaining five communities had between 76 and 485 residents. The population of Valdez accounted for 41.3% of the total regional population that year, while 23.3% resided in Cordova.³

In 2010, a majority of the residents of the Valdez-Cordova Census Area identified themselves as White (74%), along with 13.6% who identified as American Indian or Alaska Native, 3.7% who identified as Asian, 0.6% as Native Hawaiian or Other Pacific Islander, 0.5% as Black or African American, 0.5% as 'Some Other Race', and 7.2% that identified as two or more races. In addition, 3.6% of PWS residents identified themselves as Hispanic or Latino. Because of Cordova's robust seafood processing sector, the community has a more highly diversified population in terms of race or ethnicity than other PWS communities. In 2010, 64% of residents identified themselves as White, 19% as Asian, 18% as Filipino, and 13% as Alaska Native or American Indian. It is also important to note that a majority of residents in both Tatitlek and Chenega identified themselves as Alaska Native or American Indian in 2010.⁴

¹ Copper River Native Association. 2009. *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴ Ibid.

In 2010, the overall regional per capita income of the Valdez-Cordova Census Area was estimated at \$30,703, while the estimated median household income was \$76,625, compared to statewide estimates of \$30,726 and \$77,886, respectively.⁵

History

PWS has been the home of Alutiiq (Sugpiaq) people for approximately 5,000 years. Athabascan and Tlingit groups, who migrated into the sound from other areas, have also been present since prehistory. Since the late 1700s, the region has been a crossroads for explorers, miners, fishermen, and the Native inhabitants of the region. In particular, the presence of a protected, deep-water port at Valdez has been a key ingredient in the development of the region, culminating in the construction of the Trans-Alaska oil pipeline terminus in the 1970s.^{6,7}

Today, most residents live within the larger communities of Valdez and Cordova; the other residents are scattered throughout a few dozen small communities. The demographics of the region have changed quite dramatically through time. The construction of the Trans-Alaska oil pipeline, the build-up and withdrawal of U.S. military personnel, particularly in Whittier, and the 1989 *Exxon Valdez* oil spill—all these factors have influenced the dramatic flux in the composition of PWS.⁸ Today, some 13% of residents are all or part Alaska Native.⁹

Natural Resources and Environment

Five of the communities profiled in this section lie on the shores of PWS, from Chenega Bay in the coastal islands to the southwestern, Whittier in the west, Valdez and Tatitlek on the northeastern shores, and Cordova in the southeastern portion of the Sound. This section also includes Gakona and Glennallen, inland communities in the heart of the Copper River Valley, northeast of PWS. The five communities directly bordering the Sound are located within the boundaries of the Chugach National Forest (except Valdez, which is just outside the border), while the communities in the Copper River Valley are located on the western border of Wrangell St. Elias National Park and Preserve.

The coastal communities profiled here are located within a maritime climate zone, characterized by cool summers and mild winters, while the climate of the inland communities is continental, with long, cold winters and relatively warm summers.¹⁰ The PWS region is characterized by complex coastlines, peninsulas and small islands, and glacial carved valleys and fjords. Uplands host coniferous forest and muskeg.¹¹ The Copper River Valley is surrounded by

⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶ Chugachmiut. (2009). *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

⁷ Valdez, AK website. (n.d.). *Short History of Valdez*. Retrieved May 3, 2012 from <http://www.valdezalaska.org/discover-valdez-history/short-history-of-valdez>.

⁸ Prince William Sound Economic Development District. (2006). *Comprehensive Economic Development Strategy, Executive Summary*. Retrieved November 26, 2012 from <http://www.commerce.state.ak.us/dca/plans/PrinceWilliamSound-EDP-2006.pdf>.

⁹ See footnote 3.

¹⁰ See footnote 2.

¹¹ U.S. Forest Service. (2008). *East Prince William Sound Landscape Assessment*. Retrieved May 3, 2012 from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5151500.pdf.

the mountains of the Alaska Range and Talkeetna, Chugach, and Wrangell Mountains. Forests of aspen, spruce, and balsam poplar cover much of the valley. Permafrost is found throughout the valley at varying depths.¹²

PWS and the Copper River Valley are located in a highly active tectonic zone, with high risk of earthquake and tsunami activity. The Denali Fault runs through the Copper River Valley, and more than 12 volcanoes are recognized in the Wrangell Mountains. Mt. Wrangell is considered to be an active volcano, with steam still venting from near its summit. There are 11 major active fault systems within 150 miles that are capable of producing earthquakes that can be felt in PWS.¹³ The Good Friday earthquake of 1964, or “Great Alaska Earthquake”, was the largest recorded earthquake in the country, with a magnitude of 9.2 on the Richter scale. It struck PWS on Good Friday, March 28th, 1964. The maximum wave height recorded was 67 m at Valdez Inlet.¹⁴ Shoup Bay near Valdez became infamous for the 150-foot tidal wave that surged in and out of the bay three times during the earthquake.¹⁵ In Cordova, tectonic uplifts were recorded from 6.5 to 7.5 feet.¹⁶ The tsunami generated by the earthquake destroyed the village of Chenega and killed 23 people.¹⁷ Other regional hazards include coastal erosion, avalanches, landslides, sea level rise, land subsidence, volcanoes, coastal flooding, and storm surges.¹⁸

Oil development plays a large role in the PWS region. Valdez hosts the terminus of the Trans-Alaska Pipeline, which carries crude oil south from oil fields on Alaska’s North Slope. As of 2006, Alyeska Pipeline Service Company employed approximately 300 people in Valdez. Oil industry jobs are concentrated in Valdez, while oil spill response has become an important economic driver throughout PWS. Following the 1989 *Exxon Valdez* Oil Spill, a Ship Escort/Response Vessel System was created. This System is the largest oil spill organization in the Western Hemisphere, and as of 2006, employed approximately 300 people, including staff, response specialists, vessel crews, material handlers, and mechanics. In 2006, approximately 325 private fishing vessels were also on contract by Alyeska Pipeline Service Company to provide response assistance in the event of an oil spill.¹⁹

In addition to oil, industries that provide employment in this region include fishing, tourism, and timber harvesting. Sporadic mining activity has also taken place in the region over the past century.²⁰ Valdez played a role in the history of mining in Alaska both as a launching point for gold prospectors bound for the Klondike or Copper River Basin in the late 1800s and early years of the 1900s, and later miners prospected for gold, copper and silver locally on the

¹² Copper River Native Association. (2009). *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

¹³ City of Valdez. (2004). *Local Hazards Mitigation Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dera/planning/nfip/Hazard_Mitigation_Plans/Valdez_LHMP.pdf.

¹⁴ U.S. Geological Survey (n.d.). Historic Earthquakes: Prince William Sound, Alaska, 1964 March 28 03:36 UTC, Magnitude 9.2. Retrieved December 5, 2011 from <http://earthquake.usgs.gov/earthquakes/states/>.

¹⁵ Alaska Dept. of Natural Resources. 2010. *State Marine Parks near Valdez*. Retrieved May 3, 2012 from <http://dnr.alaska.gov/parks/units/pwssmp/smpvald.htm>.

¹⁶ City of Cordova. (1995). *Cordova Comprehensive Development Plan*. Retrieved February 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Cordova-CP-1994.pdf>.

¹⁷ Mason, R.. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

¹⁸ Alaska Dept. of Natural Resources. (n.d.). *Statewide Coastal Hazards*. Retrieved January 17, 2012 from: http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

¹⁹ See footnote 8.

²⁰ Ibid.

islands and shores of PWS. The most profitable mines in the vicinity of Valdez were the Cliff Gold Mine and the Midas Mine. The Cliff Mine extracted about 51,740 ounces of gold and 8,153 ounces of silver. The Midas Mine, in nearby Solomon Gulch on the south shore of the Port, was the fourth largest producer of copper in the PWS area. Ellamar Mine, located near Tatitlek, was a large copper producer, and almost as much gold was produced as a byproduct of copper mining, as was produced at the Cliff Mine.²¹ Today, the Midas and Ellamar Mines still work some of the most significant copper deposits in Alaska, along with extracting some gold, zinc, lead, and silver.²² Copper and gold deposits were also found in the Copper River basin at the end of the 19th Century, and a copper mine was active there between 1910 and 1938.²³ Today, communities located inland in the Copper River valley, further from commercial fishing activity, depend largely on tourism, including visitors passing by on the Glenn Highway.²⁴

Governance

Communities in PWS belong to the Valdez-Cordova Census Area but are not under the jurisdiction of an organized borough. As a result, the communities themselves are responsible for basic services and tax administration. Of the seven communities profiled for the PWS region, three have incorporated city governments (Cordova, Valdez, and Whittier), and three are governed by federally-recognized tribal councils, including the Native Village of Tatitlek, Native Village of Chenega (Chenega Bay), and the Mount Sanford Tribal Consortium in Gakona. This Consortium is made up of the Tribal Councils of Chistochina and Mentasta Lake. Glennallen is unincorporated, and does not have a Tribal Council.²⁵ However, despite a lack of municipal governance in Glennallen, the community serves as a regional hub of state and federal administration offices.²⁶

The communities profiled in this section are divided between two regional Native corporations. The offices of the Ahtna, Inc., the regional Native corporation for the Copper River region, are headquartered in Glennallen.²⁷ The Copper River Native Association, with offices 16 miles south in Copper Center, provides health and tribal community services in the Copper Valley basin.²⁸ Tribal communities located on the shores of PWS and in Lower Cook Inlet are represented by the Chugach Alaska Corporation,²⁹ and are members of Chugachmiut, a tribal 501(c)(3) non-profit organization with the goal of advancing the overall economic, social, and cultural development of the people of the Chugach Region.³⁰

²¹ Valdez, AK website. (n.d.). *Short History of Valdez*. Retrieved May 3, 2012 from <http://www.valdezalaska.org/discover-valdez-history/short-history-of-valdez>.

²² Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

²³ See footnote 12.

²⁴ Alaska Dept. of Transportation and Public Facilities. 2010. Interior Alaska Transportation Plan. Retrieved October 22, 2012 from <http://dot.alaska.gov/nreg/studies/iatp/documents.shtml>.

²⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶ See footnote 23.

²⁷ Ahtna, Incorporated. 2012. *Welcome to Ahtna, Incorporated*. Retrieved October 23, 2012 from <http://www.ahtna-inc.com/>.

²⁸ See footnote 23.

²⁹ See footnote 25.

³⁰ Chugachmiut (2011). *About Us*. Retrieved December 26, 2011 from <http://www.chugachmiut.org/about.html>.

Involvement in North Pacific Fisheries

Fisheries resources provide a strong foundation for the regional economy in PWS, although variability in both the health of fish stocks and global markets has led to concerns about the stability of this industry.³¹ Vessel owners and permit holders residing in PWS communities have the highest rates of involvement in fisheries for salmon, halibut, shrimp, sablefish and other groundfish species, including lingcod, Pacific cod, and pollock.^{32,33} Cordova is a regional fisheries hub, with a fleet of 645 vessels and 7 shore-side processing facilities in 2010.³⁴ That year, almost half of Cordova households had at least one person working in commercial harvesting or processing.³⁵ Valdez serves as a smaller fisheries hub in northern PWS, with 80 vessels homeported and 3 shore-side processing facilities in 2010. Whittier also offers several processing facilities and hosts a small fishing fleet, and residents of each of the communities profiled in this document have participated to some degree in local PWS fisheries as well as fisheries around the State.^{36,37}

Salmon is the most important regional fishery resource in terms of participation, landings volume, and ex-vessel revenue.³⁸ The success of Copper River Chinook and sockeye salmon in international markets has provided for relatively high prices in this local fishery.^{39,40} In 2010, approximately 400 residents of the seven communities profiled in this document held state-issued Commercial Fisheries Entry Commission (CFEC) permits in PWS salmon fisheries. A majority of these (just over 350) were held by Cordova residents, while just under 40 were held in Valdez, and several were held by residents of Whittier and Tatitlek.⁴¹

Relatively high numbers of state permits are also held by residents of the profiled communities in PWS fisheries for herring and shrimp; however, in 2010, no PWS herring permits were actively fished. Although PWS historically had a productive herring fishery, in 1993, 4 years after the *Exxon Valdez* oil spill, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The

³¹ Prince William Sound Economic Development District. (2006). *Comprehensive Economic Development Strategy, Executive Summary*. Retrieved November 26, 2012 from

<http://www.commerce.state.ak.us/dca/plans/PrinceWilliamSound-EDP-2006.pdf>.

³² Alaska Dept. of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³³ Alaska Dept. of Fish and Game. (2012). *Commercial Fisheries Overview: Prince William Sound Management Area*. Retrieved November 28, 2012 from

<http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyareapws.main>.

³⁴ Alaska Dept. of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁵ See footnote 25.

³⁶ Alaska Dept. of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁷ See footnote 34.

³⁸ Ibid.

³⁹ Knapp, G., C. Roheim, J. Anderson. 2007. *The Great Salmon Run: Competition Between Wild and Farmed Salmon*. TRAFFIC North America, World Wildlife Fund. Retrieved November 27, 2012 from http://www.iser.uaa.alaska.edu/people/knapp/personal/pubs/TRAFFIC/The_Great_Salmon_Run.pdf.

⁴⁰ See footnote 31.

⁴¹ See footnote 34.

relationship between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.^{42,43} In contrast, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after two decades of closure due to low abundance.⁴⁴

Sport fishing is also an important component of regional fishery involvement. Sport license sales for the communities profiled in this section totaled more than the population of the communities combined. More than half of the sport fish licenses were sold to sport fishermen from outside the region. Major sport species include all five species of Pacific salmon, halibut, rockfish, and lingcod.^{45,46} Between 2000 and 2010, the greatest number of sport fish guide businesses and licensed sport fish guides were located in Valdez. A large number of guide businesses were also located in Cordova, Glennallen, and Gakona in 2000, but steep declines were evident in all three communities through the decade.⁴⁷ In Glennallen and Gakona, participation by local residents in sport fishing was relatively more important than participation in commercial fisheries compared to communities located on the coastline. The number of sport fishing licenses sold to local residents in these inland communities was equivalent to a higher percentage of the total local population compared to Cordova and Valdez between 2000 and 2010, while a much smaller percentage held commercial crew licenses, owned a fishing vessel, or held a state-issued commercial fishing permit.^{48,49}

Subsistence harvest of marine resources is important in communities throughout PWS and the Copper River basin, and particularly in communities located farther from major transportation networks, including Tatitlek and Chenega. In 2003, subsistence harvest surveys conducted by ADF&G found that 96% of Tatitlek households participated in halibut subsistence and 89% participated in salmon subsistence, with a per capita harvest of marine and terrestrial subsistence resources of 290 pounds. In Chenega, 94% of Chenega households were estimated to participate in halibut subsistence and 86% in salmon subsistence, with a per capita harvest of 406 pounds of marine and terrestrial resources in 2003. In addition to halibut and salmon, common marine invertebrate species utilized for subsistence purposes in PWS communities include Pacific littleneck, horse, razor, butter, and pinkneck clams, cockles, mussels, shrimp, chitons, limpets, Dungeness, Tanner, and king crab, snails, and octopus. Common species of non-salmon

⁴² Ibid.

⁴³ Alaska Dept. of Fish and Game. (2012). *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

⁴⁴ Alaska Dept. of Fish and Game. (2012). *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

⁴⁵ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁶ Alaska Dept. of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴⁷ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁸ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁹ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

fish (not including halibut) harvested for subsistence purposes include herring, eulachon (hooligan candlefish), red and black rockfish, smelt, Dolly Varden, lingcod, sablefish, Pacific cod, rainbow, cutthroat, and lake trout, Pacific tomcod, skates, flounder, sea bass, greenling, shark, walleye pollock, grayling, whitefish, and burbot. Herring roe is also an important subsistence resource. Marine mammals harvested for subsistence purposes include harbor seal and Steller sea lion, as well as porpoise harvested by residents of Tatitlek.⁵⁰ Harvest of sea otters was also reported in Cordova, Valdez, Chenega, and Tatitlek between 2000 and 2010.⁵¹

Regional Challenges

This region faces several challenges, largely resulting from the March 1989 *Exxon Valdez* oil spill, which leaked some 11 million gallons of oil into PWS. Living marine resources were negatively impacted and continue to show effects of the spill. The spill affected the food chain that supports the PWS commercial fishery, and impacted shore birds, waterfowl, sea otters, harbor porpoises, harbor seals, Steller sea lions, and several species of whale, among other species.⁵² Harvest of shellfish declined dramatically due to petrochemical contamination. Sea otter mortality was as high as 40% immediately following the spill. The 50% decline in the PWS orca population in the decades following the spill has been attributed to direct oil exposure and consumption of oiled marine mammals. Many other fish, marine mammal, and bird populations declined following the spill, including marbled murrelets and black oyster catchers. Impacts on habitat and forage fishes created continued difficulties for recovery of many species.⁵³ In particular, the 1993 collapse of the PWS herring fishery has made recovery for many species difficult, as it is a primary food source for harbor seal, Steller sea lion, and marbled murrelet, among others. The relationship between the herring collapse and the oil spill remains unclear.^{54,55}

Tourism revenues were also impacted by the *Exxon Valdez* oil spill. Ecological damages and economic losses due to declines in fishing and tourism revenues were significant. Today, a major funding source for tourism development projects is the Exxon Valdez Oil Spill Trustee Council, which has contributed to the construction of museums and cultural centers in PWS.⁵⁶

Variability in fish stocks and market value of fisheries resources is another challenge faced by communities in PWS and throughout Alaska. With the importance of the salmon fishery

⁵⁰ Alaska Dept. of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵¹ U.S. Fish and Wildlife Service. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

⁵² U.S. Environmental Protection Agency (n.d.). *Exxon Valdez*. Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

⁵³ Chugachmiut. (2009). *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

⁵⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁵⁵ See footnote 43.

⁵⁶ Prince William Sound Economic Development District. (2006). *Comprehensive Economic Development Strategy, Executive Summary*. Retrieved November 26, 2012 from <http://www.commerce.state.ak.us/dca/plans/PrinceWilliamSound-EDP-2006.pdf>.

in PWS, a downward trend in salmon prices in the 1990s and early 2000s caused economic hardship,⁵⁷ although salmon ex-vessel prices and value have rebounded since 2002.⁵⁸ A number of salmon hatcheries are in operation in PWS to supplement wild runs. Declines in the statewide pollock fishery are of concern to PWS fishermen.⁵⁹

In addition to commercial fisheries, concerns about localized overharvest of Pacific halibut have led to limitations on the halibut charter industry.⁶⁰ In 2007, the North Pacific Fishery Management Council (NPFMC) approved implementation of a limited entry program for halibut charter fleets in Areas 2C and 3A (Southeast and Southcentral Alaska) and a daily halibut bag limit for each charter vessel angler of two halibut of any size per day per person. The limited entry program was implemented in 2010.^{61,62} Declining halibut availability and harvest limitations are reflected in steep declines in the number of sport fish guide businesses and licensed sport fish guides residing in PWS communities between 2000 and 2010.⁶³

⁵⁷ Gilbertson, Neal. (2003). "The global salmon industry and its impacts in Alaska." *Alaska Economic Trends*, October 2003, 3-11.

⁵⁸ Knapp, Gunnar. (2012). *Trends in Alaska Salmon Markets*. Institute of Social and Economic Research, University of Alaska Anchorage. Power Point presentation prepared for the Northwest Fisheries Association meeting in Seattle, WA, March 7, 2012. Retrieved November 19, 2012 from http://www.iser.uaa.alaska.edu/Publications/presentations/2012_03-GunnarKnapp-TrendsInAlaskaSalmonMarkets.pdf.

⁵⁹ See footnote 56.

⁶⁰ Dean, Michael R. and Allen L. Howe. (1999). *Alaska Dept. of Fish and Game Sportfishing Guide and Business Registration and Saltwater Sportfishing Charter Vessel Logbook Program, 1998*. ADF&G Special Publication No. 99-1. Retrieved May 2, 2012 from <http://www.sf.adfg.state.ak.us/fedaidpdfs/Sp99-01.pdf>.

⁶¹ North Pacific Fishery Management Council. (2007). *News and Notes* Volume 2-07. Retrieved May 2, 2012 from <http://www.alaskafisheries.noaa.gov/npfmc/PDFdocuments/newsletters/NEWS407.pdf>.

⁶² Federal Register. March 22, 2012. Dept. of Commerce, NOAA, 50 CFR Part 300, Pacific Halibut Fisheries; Catch Sharing Plan. Retrieved May 2, 2012 from <http://www.fakr.noaa.gov/frules/77fr16740.pdf>.

⁶³ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]



Chenega Bay (chuh-NEE-guh)

People and Place

Location ⁶⁴

Chenega Bay is located on Evans Island at Crab Bay, 42 mi southeast of Whittier in Prince William Sound (PWS). It is 104 mi southeast of Anchorage and 50 mi east of Seward. The community occupies 28.8 sq mi of land and 0.3 sq mi of water. Chenega Bay is unincorporated, located in the Valdez-Cordova Census Area, and is not under the jurisdiction of a borough.

Demographic Profile ⁶⁵

In 2010, there were 76 residents ranking Chenega Bay 273rd of 352 Alaskan communities in terms of population size. Overall since 1990, the population has declined by 19.1%. Between 2000 and 2009, the population declined by 17.44% with an average annual growth rate of -0.23%; lower than the statewide average of 0.75% and indicative of a downward trend despite the large variation in annual Alaska Department of Labor (DOL) estimates.

In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were 60 permanent and 10 to 15 seasonal or transient residents living in Chenega Bay according to a 2010 head count. On average, the number of seasonal workers living in the community peaks between April and September; however, the peak is only slightly driven by employment in the fishing sectors. Information regarding population trends can be found in Table 1.

Chenega Bay is predominately an Alutiiq community; however, in 2010 only 52.6% of the population identified themselves as American Indian or Alaska Native, compared to 73.3% in 2000. Also in 2010, 39.5% of the population identified themselves as White, compared to 22.1% in 2000; and 7.9% identified themselves as two or more races, compared to 4.7% in 2000. In addition, 2.6% of residents identified themselves as Hispanic or Latino, compared to 0.0% in 2000. The marked change in racial composition between 2000 and 2011 could coincide with the highly variable population, and might not reflect a long term trend. Information regarding trends in Chenega Bay's racial and ethnic composition can be found in Figure 1.

⁶⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

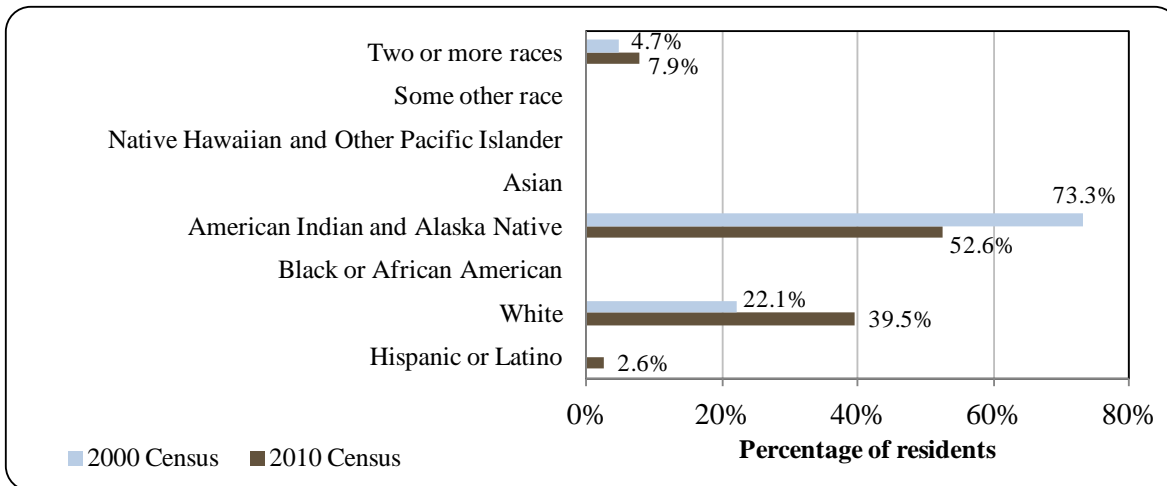
Table 1. Population in Chenega Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	94	-
2000	86	-
2001	-	50
2002	-	59
2003	-	77
2004	-	49
2005	-	43
2006	-	85
2007	-	69
2008	-	77
2009	-	71
2010	76	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Chenega Bay: 2000-2010 (U.S. Census).



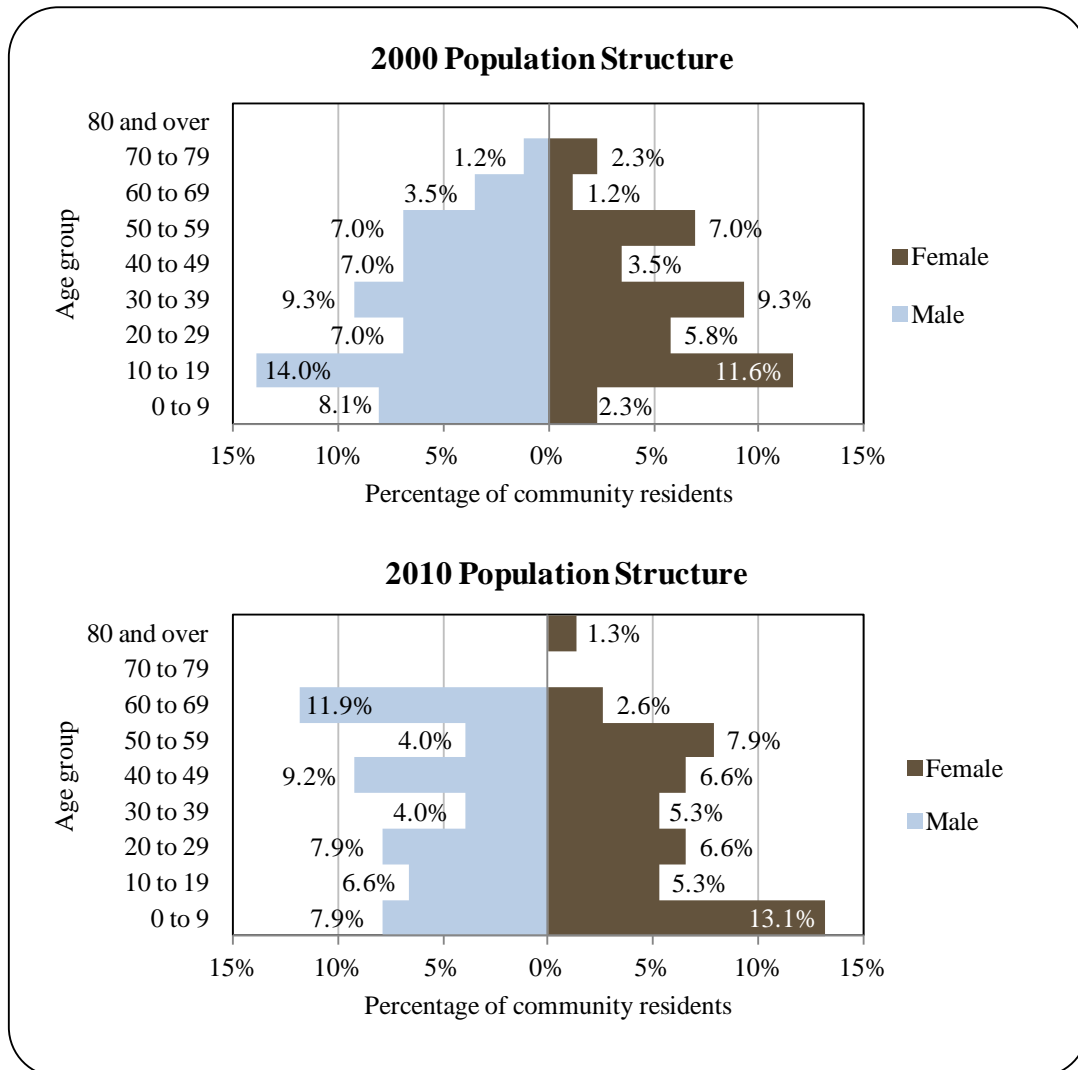
In 2010, the average household size was 2.45, compared to 3.0 in 1990 and 3.55 in 2000. In that year there were 51 total housing units, compared to 30 in 1990 and 27 in 2000. Of the households surveyed in 2010, 23.5% were owner-occupied, compared to 55.6% in 2000; 37.3% were renter-occupied, compared to 26% in 2000; 11.8% were vacant, compared to 11.1% in 2000; and 27.5% were occupied seasonally, compared to 7.4% in 2000. In 2010, there were no residents reported to be living in group quarters, compared to eight in 2000.

The gender distribution in 2010 was relatively even at 51.3% male and 48.7% female. This was similar to the statewide distribution (52.0% male, 48.0% female) and more even than the distribution in 2000 (57.0% male, 43.0% female). The median age was 35.0 years, which similar to the statewide median of 33.8 years, and older than the 2000 median of 30.6 years.

Because of the small and variable population, the population structure was irregular in both 2000 and 2010 making it difficult to discern a trend. In 2010, 32.9% of residents were under the age of 20, compared to 26.0% in 2000; 15.8% were over the age of 59, compared to 8.2% in 2000; 37.0% were between the ages of 30 and 59, compared to 43.1% in 2000; and 14.5% were between the ages of 20 and 29, compared to 12.8% in 2000.

Gender distribution by age cohort was significantly less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 60 to 69 range (11.9% male, 2.6% female), followed by the 0 to 9 (13.1% female, 7.9% male) and 50 to 59 (7.9% female, 5.0% male) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range. Information regarding Chenega Bay’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Chenega Bay Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the 2006-10 American Community Survey (ACS)⁶⁶ estimated that 100% of Chenega Bay residents aged 25 years and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, and estimated 33.3% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 59.3% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall, and an estimated 7.4% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*⁶⁷

Founded before Russian contact in the late eighteenth century, Chenega was the longest occupied community in PWS, before the original community was destroyed by a tsunami resulting from the 1964 “Good Friday” Earthquake. In that event, all of the buildings in the community were destroyed with the exception of a single house and the community school. Over a third of the residents lost their lives, and survivors were evacuated initially to Cordova and later resettled in the community of Tatitlek by the U.S. Bureau of Indian Affairs (BIA).

With the passage of the Alaska Native Claims Settlement Act (ANCSA), former residents of Chenega formed the Chenega Corporation, which selected 76,093 acres around the original Chenega township as part of the ANCSA lands settlement. This land was acquired in order to one day re-establish the community of Chenega. Shareholders selected their new community site at Crab Bay on Evans Island in March of 1977. The Chenega Corporation and the Chenega Indian Reorganization Act (IRA) Council worked to find funds for roads, water and sewer systems, electric generators, a boat and floatplane dock, and a school. The new Chenega “Chenega Bay” was finally occupied in 1984 after the construction of 21 Housing and Urban Development homes.

On March 24, 1989 Chenega Bay was impacted by another disaster. The *Exxon Valdez* Oil Spill released approximately 11 million gallons of crude oil into the waters of PWS and Chenega Bay became a major center for cleanup operations. The Chenega Corporation participated in cleanup of the oil spill, and in 1997, sold a large portion of its land holdings to the U.S. Forest Service and State of Alaska for \$34 million in hopes of using the funds to diversify its business plan following the spill.

Today, the community of Chenega Bay still relies on some subsistence and/or commercial fishing resources, but a cash economy has become more important in the wake of the oil spill and many jobs in the community are dependent on cleanup.

Natural Resources and Environment

Chenega Bay is located in dense coastal rain forests which extend from southeastern Alaska to Kodiak Island. The climate is marine influenced, with cool cloudy summers and relatively mild winters. Annual precipitation averages 66 in of rain and 80 in of snowfall.

⁶⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁷ GDM Inc. (2008). *Chenega Bay Masterplan*. Retrieved January 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChenegaBay-MP-2008.pdf>.

Summer temperatures range from 49 to 63 °F (9 to 17 °C) and winter temperatures range from 17 to 28 °F (-8 to -2 °C).⁶⁸

Chenega Bay is located in the Chugach National Forest, which covers 5.4 million acres of south-central Alaska. The surface soils and geology surrounding the community are characterized by exposed and peat-covered bedrock. Tree stands are typically found in areas where peat is relatively shallow; while areas of deeper poorly drained peat tends to form bogs or muskegs.⁶⁹ Coastal forest vegetation includes mixed stands of Sitka spruce and western hemlock. Woodland lodge pole pine communities can be found in muskegs. Tidal areas and deltas are dominated by sedges and grass wet meadows.⁷⁰ The PWS area provides habitat for a wide range of aquatic and terrestrial wildlife. Coastal areas host seals, sea lions, sea otters, whales, and an abundance of waterfowl. Fisheries include all five species of Pacific salmon, halibut, rockfish, lingcod, sablefish, cutthroat trout, and Dolly Varden char. The Chugach National Forest and Kenai Fjords National Park host Dall sheep, moose, mountain goats, deer, wolves, brown and black bears, and a small caribou herd. Other resources in the area include an inactive copper/silver mine on Latouche Island to the east, as well as several salmon hatcheries in PWS.⁷¹

No offshore oil and gas lease sales were scheduled in the Gulf of Alaska (GOA) for the 2012-2017 leasing program.⁷² A 2000 assessment of conventionally recoverable oil and gas estimated the presence of between 360 million to 3.27 billion barrels of oil and gas in the GOA region. This was slightly higher than estimates in Cook Inlet. The Pacific Margin Subregion (including Cook Inlet, GOA and Shumagin-Kodiak) was estimated to hold only 6.3% of all conventionally recoverable oil and gas in Alaska's offshore regions, while the Arctic Subregion was estimated to hold 84.6% and the Bering Shelf subregion was estimated to hold 9.1%.⁷³

The community of Chenega Bay does not have a hazard mitigation plan; however, earthquakes and tsunamis have been hazards in the past and continue to impact the region as a whole. Other regional hazards include coastal erosion, avalanches, landslides, sea level rise, land subsidence, volcanoes, coastal flooding, and storm surges. Susceptibility and vulnerability to any one of these hazards on a community-specific level is not known.⁷⁴

Living marine resources in the Valdez area were negatively impacted and continue to show affects of the March 1989 *Exxon Valdez* Oil Spill, when 11 million gallons of crude oil spilled into PWS. The spill affected the food chain that supports the PWS commercial fishery, and impacted shorebirds, waterfowl, sea otters, harbor porpoises, harbor seals, Steller sea lions and several species of whale, among other species.⁷⁵ Harvest of shellfish declined dramatically

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ U.S Forest Service. (1992). *Alaska Vegetation Classification*. Retrieved January 17, 2012 from <http://www.treesearch.fs.fed.us/pubs/6941>

⁷¹ Aurora Consulting. (2008). *Community of Chenega Bay Comprehensive Economic Development Strategies*. Retrieved January 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChenegaBay-EDP-2008.pdf>.

⁷² U.S. Department of the Interior, Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

⁷³ Bureau of Ocean Energy Management, Regulation and Enforcement. 2000. *Undiscovered Oil and Gas Resources, Alaska Federal Offshore, December 2000 Update*. Retrieved May 3, 2012 from <http://alaska.boemre.gov/re/uogr/uogr.pdf>.

⁷⁴ Alaska Department of Natural Resources. (n.d.). *Statewide Coastal Hazards*. Retrieved January 17, 2012 from: http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

⁷⁵ United States Environmental Protection Agency. "Exxon Valdez." Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

due to petrochemical contamination. Sea otter mortality was as high as 40% immediately following the spill. The 50% decline in the PWS orca population in the decades following the spill has been attributed to direct oil exposure and consumption of oiled marine mammals. Many other fish, marine mammals and bird populations declined following the spill, including harbor seals, Steller sea lions, marbled murrelets and black oyster catchers. Impacts on habitat and forage fishes created continued difficulties for recovery of many species.⁷⁶ In particular, the 1993 collapse of the PWS herring fishery has made recovery for many species difficult, as it is a primary food source for harbor seal, Steller sea lion, and marbled murrelet, among other species. The relationship between the herring collapse and the oil spill remains unclear.^{77,78}

Current Economy⁷⁹

Most residents of Chenega Bay still rely on some subsistence and commercial fishing resources; however, in the wake of the *Exxon Valdez* Oil Spill, fishing has declined and employment has shifted towards opportunities created by the spill.⁸⁰ In a survey conducted by the AFSC in 2011, community leaders reported that the local economy was dependant on sport hunting and fishing. Top employers in 2010⁸¹ included Chenega IRA Council, Chugachmiut, PWS Aquaculture Corp., Native Village of Chenega Bay Public Health, Chugach School District, and Chenega Corp.

In 2010,⁸² the estimated per capita income in Chenega Bay was \$26,092 and the estimated median household income was \$46,458, compared to \$13,382 and \$53,750 in 2000, respectively. After accounting for inflation by converting 2000 values into 2010 dollars,⁸³ the real per capita income (\$17,597) and real median household income (\$70,681) indicate that individual earnings increased while household earnings decreased. In 2010, Chenega Bay ranked 95th of 305 communities reporting per capita income, and 155th of 299 communities reporting median household income. It should be noted that ACS estimates are based on wage income and do not account for the value subsistence resources have within the community.

Chenega Bay's small population size may have prevented the ACS from accurately portraying economic conditions.⁸⁴ Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development.

⁷⁶ Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

⁷⁷ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁷⁸ Alaska Department of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

⁷⁹ Unless otherwise noted, all monetary data are reported in nominal values.

⁸⁰ See footnote 71.

⁸¹ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸⁴ See footnote 66.

According to the ALARI database, residents earned \$740,349 in total ages in 2010.⁸⁵ When matched with the population in 2010, the per capita income equals \$9,741, suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census.⁸⁶ However, it should be noted that Chenega Bay was not recognized as “distressed” by the Denali Commission indicating that less than 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁸⁷

Based on 2006-10 ACS estimates,⁸⁸ 62.3% of residents aged 16 years and over were in the civilian labor force in 2010. In the same year, unemployment was estimated at 0.0%, compared to an estimated 5.9% statewide; and no residents were estimated to be living below the poverty line, compared to 9.5% statewide. There is a possibility that these figures are inaccurate, as they conflict with ALARI wage estimates; however, DOLWD did estimate a low unemployment rate of 6.7% for that year.

Of those employed in 2010, an estimated 39.5% worked in the private sector, an estimated 36.8% worked in the public sector; and an estimated 23.7% were self-employed; which possibly explains the significant variation between ACS and ALARI estimates as DOLWD does not include self-employed workers in their estimates. By industry, most (26.3%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by other services sectors, other than public administration (26.3%); public administration sectors (23.7%); and agriculture, forestry, fishing, hunting, and mining sectors (10.5%). By occupation type, most (78.9%) employed residents were estimated to hold management or professional positions; followed by sales or office positions (13.2%); and service positions (7.9%). Overall, there was significant variation in employment by industry sector and occupation type between 2000 and 2010. Most notably, there was a significant decline in the public administration sector, and significant increase in management and professional positions. These variations may be attributed to either the significantly volatile population or sampling errors within the ACS. Information regarding employment trends can be found in Figures 3 and 4.

⁸⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁸⁶ See footnote 81.

⁸⁷ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

⁸⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 3. Local Employment by Industry in 2000-2010, Chenega Bay (U.S. Census).

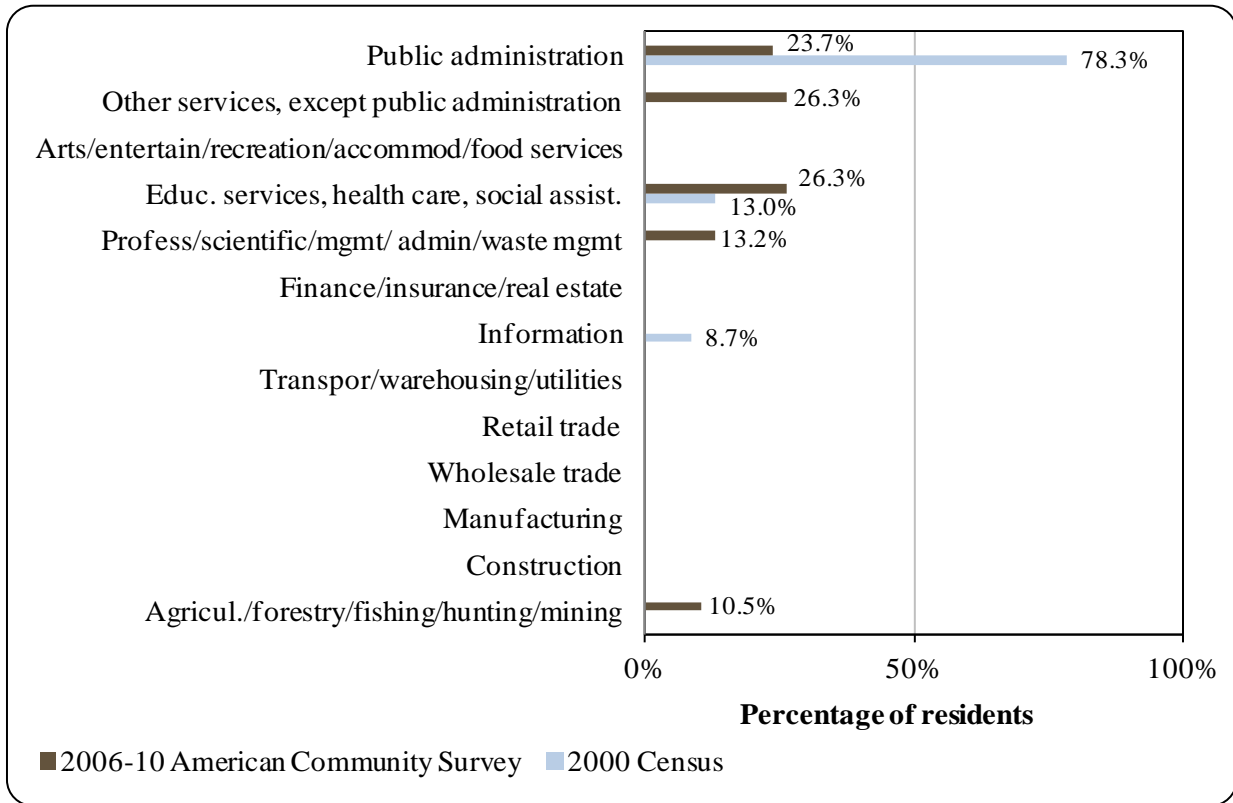
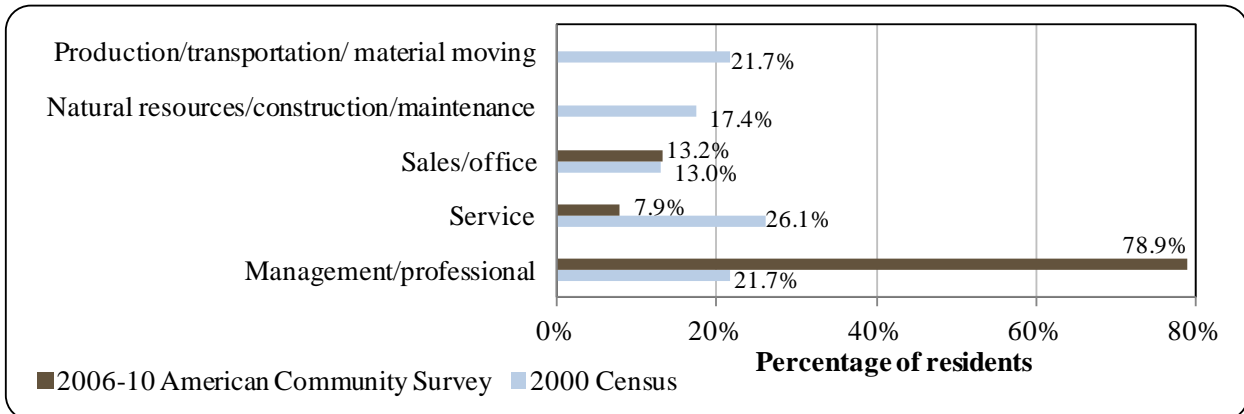


Figure 4. Local Employment by Occupation in 2000-2010, Chenega Bay (U.S. Census).



Governance

Chenega Bay is unincorporated and not under the jurisdiction of a municipal or borough government. There is however, a BIA recognized Tribal government (Native Village of Chenega), as well as an ANCSA chartered Native village corporation (Chenega Corporation). The regional ANCSA corporation representing Chenega Bay is the Chugach Alaska Corporation. The closest Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Service (NMFS) offices are located in Seward, 46 mi west. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage, 104 mi northwest.

Since the community is unincorporated, the community is unable to collect revenue through taxes. However, there were several state and federal fisheries-related grants awarded to the community between 2000 and 2010 including \$109,402 for harbor upgrades in 2005 and \$1.1 million for a small boat harbor rehabilitation project in 2009. Information regarding community revenue streams can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Chenega Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	\$109,402
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	\$1,138,813
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*⁸⁹

Chenega Bay has a state-owned 3,000-ft gravel airstrip and floatplane landing area in the harbor. Charter flights are available from Anchorage, Cordova, Seward, and Valdez. The community has a small boat harbor and dock and freight is brought in by air or barge. The Alaska Maine Highway System maintains a dock facility in the community. Ferry service departing from Seward arrives in Chenega Bay monthly during the winter and three times a month in the summer. Ferry service from Valdez arrives in Chenega Bay once a month. Skiffs, cars, trucks, ATVs, and snow machines are used for local transportation. Alaska Air Transit operates scheduled flights between Anchorage and Chenega Bay for \$225 one-way.⁹⁰

*Facilities*⁹¹

Chenega Bay Utilities operates three diesel generators which distribute power via underground powerlines at a maximum capacity of 217 kW. As of 2008, the residential rate was 19 cents per kW hour and the commercial rate was 40 cents per kW hour. Piped water service is provided via a surface water collection system with dam, treatment, and 50,000 gal storage capacity. Sewage is piped to a 20,000 gal community septic tank, and some homes maintain private septic systems. In 2001, a new landfill was completed and refuse is collected twice a week. Fuel is typically purchased twice annually from Valdez and distributed to households directly as well as the local tank farm. Internet is only provided at the school. Visitor accommodations include the Chenega Bay Hotel. Public safety services are provided by state troopers based in Seward. Fire and rescue services are provided by Chenega Bay Emergency Medical Services. Additional public facilities include a youth center, community center, school gym, and school library. Communications services include state and long distance telephone, internet (at the school only), local television, and local radio.

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed between 2000 and 2010 included new dock space, existing dock improvements, dockside water and power service, port road access, pilings, airport improvements, water treatment improvements, and landfill improvements. Projects which were under development in 2010 included broadband internet infrastructure and road improvements. There is 20 ft of public dock space available for permanent moorage. Regulated vessels which Chenega Bay is capable of handling include ferries and fuel barges. During the fishing season, vessels using the community as a base of operations are typically less than 60 ft in length. The community has seen a lot less vessels over 60 ft in length since 2005, while seeing more private vessels, commercial fishing vessels, and vessels less than 60 ft in length. Fisheries-related businesses and services include a machine shop, and commercial and recreational fishing moorage.

⁸⁹ Aurora Consulting. (2008). *Community of Chenega Bay Comprehensive Economic Development Strategies*. Retrieved January 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChenegaBay-EDP-2008.pdf>.

⁹⁰ Alaska Air Transit. (n.d.). Retrieved June 21, 2012 from: <http://www.alaskaairtransit.com/>.

⁹¹ Ibid.

Medical Services

Arch Priest Nicholas Kompkoff Clinic is a Primary Health Care facility and Community Health Aid Program (CHAP) site. Acute, long-term, and specialized care is provided in Seward and Anchorage.

Educational Opportunities

Chenega Bay School provides preschool through 12th grade instruction. As of 2011, there were 24 students enrolled and three teachers employed.⁹²

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Chenega Bay's character as a fishing-based community dates back thousands of years; however, both the 1964 Good Friday Earthquake and 1989 *Exxon Valdez* Oil Spill have dramatically reshaped the community and its participation in North Pacific Fisheries. Although local participation in commercial fishing has been in decline in recent years, participation in subsistence and sport fisheries is still an important part of Chenega Bay's identity. In a survey conducted by the AFSC in 2011, community leaders reported that Chenega Bay is not involved nor does it advocate for itself in the fishery management process in Alaska.

However, the community is eligible to participate in the Community Quota Entity (CQE) program, and its interests are represented by the non-profit Chenega Heritage Incorporated. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf. As of Fall 2013, Chenega Heritage Incorporated had not yet purchased any commercial halibut Individual Fishing Quota (IFQ) or non-trawl groundfish License Limitation Program permits. However, the non-profit had acquired seven halibut charter permits for lease to community members.⁹³

⁹² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁹³ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

ADF&G manages the PWS salmon fishery. The PWS salmon management area is divided into 11 commercial fishing districts, covering the coastal area from Cape Suckling (northwest of Yakutat) to Cape Fairfield (east of Seward), and the inland waters of PWS. Valdez is located in the Eastern district. Purse seine gear is the most common gear type, and is allowed in eight of the nine inland fishing districts. Drift gillnet gear is allowed in three districts, and set gillnet gear is only allowed in the Eshamy District. It is important to note that a salmon hatchery program was initiated in PWS in the early 1970s, and hatchery returns have consistently contributed to harvests since the 1980s.⁹⁴

Groundfish and crab fisheries that occur within 3 nmi of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. PWS is located in Federal Statistical and Reporting Area 649 and Pacific Halibut Fishery Regulatory Area 3A. The outlet of PWS is at the boundary between the Central GOA and Eastern GOA federal Sablefish Regulatory Areas.

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of PWS for rockfish, lingcod, pollock, sablefish, and Pacific cod. The PWS Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in PWS. A pelagic trawl fishery for pollock began in PWS in 1995, and is managed under a guideline harvest limit (GHL) determined by ADF&G, and is not conducted as a parallel fishery. Typically, state-waters fisheries are opened once federal and parallel fisheries close. The PWS limited entry sablefish fishery is also managed separately under a GHL.⁹⁵

A majority of lingcod are found in nearshore rocky reef habitat from 10-100 m in depth. ADF&G manages all lingcod fisheries in state and EEZ waters off Alaska. Lingcod in PWS are primarily harvested as incidental catch in longline fisheries, although lingcod fisheries have increased in importance in recent decades. The state manages rockfish harvest in PWS, and since 1998 also has jurisdiction of blue and black shelf rockfish in the western GOA, and all rockfish in the eastern GOA.⁹⁶

PWS historically had a productive herring fishery. However, in 1993, 4 years after the Exxon Valdez, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus and the stock collapse remain unclear, and the population has shown little sign of recovery.^{97,98} PWS was also a historical center for Dungeness crab fisheries, but this stock has also collapsed. Possible causes for the Dungeness collapse include overfishing, sea otter

⁹⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” Alaska Fisheries Research Bulletin 12(1):1-146. Alaska Department of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Alaska Department of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

predation, and adverse climatic changes. Red king crab and Tanner crab fisheries in PWS are also closed due to low stock abundance.⁹⁹ In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.¹⁰⁰

Chenega Bay is located in Federal Reporting Area 649, International Pacific Halibut Commission (IPHC) regulatory area 3A, and the Central GOA Sablefish Regulatory District.

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Chenega Bay does not have a registered processing plant. The closest seafood processor is located in Whittier.

Fisheries-Related Revenue

Between 2000 and 2010, there was no reported fisheries-related revenue collected in Chenega Bay.

Commercial Fishing

In 2010, no residents held crew licenses or owned majority share of any vessels. In addition, no vessels made landings in Chenega Bay that year. Participation in commercial fisheries has declined in recent years with no residents holding any fisheries permits between 2007 and 2010. In 2006, 1 resident held 1 salmon permit issued by the Commercial Fisheries Entry Commission (CFEC); however, that permit was not fished. Permit activity peaked in 2000 when 3 residents held 3 CFEC salmon permits, all of which were fished that year. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. Between 2000 and 2010, 1 account held 628 halibut quota shares. No residents held sablefish or crab quota between 2010 and when the programs began. In a survey conducted by the AFSC in 2011, community leaders reported that commercial vessels that use Chenega Bay as a base of operations typically use pots, longline, gill net, purse seine, and troll gear types.

Between 2000 and 2010, no landings were made in the community. Landings were made by residents between 2000 and 2005; however, reports for these landings are considered confidential. No landings were made by residents between 2006 and 2010. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁹⁹ See footnote 95.

¹⁰⁰ Alaska Department of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Chenega Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Chenege Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	1	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

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Table 4 cont'd. Permits and Permit Holders by Species, Chenega Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	1	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	1	1	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	3	4	3	2	2	2	1	0	0	0	0
	Fished permits	3	3	2	1	1	1	0	0	0	0	0
	% of permits fished	100%	75%	67%	50%	50%	50%	0%	n/a	n/a	n/a	n/a
	Total permit holders	3	5	3	2	2	3	1	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>3</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>4</i>	<i>2</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>100%</i>	<i>75%</i>	<i>67%</i>	<i>33%</i>	<i>25%</i>	<i>50%</i>	<i>0%</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
	<i>Permit holders</i>	<i>3</i>	<i>5</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Chenega Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Chenega Bay ²	Total Net Lbs Landed In Chenega Bay ^{2,5}	Total Ex-Vessel Value Of Landings In Chenega Bay ^{2,5}
2000	0	0	0	6	5	0	0	\$0
2001	2	0	0	4	4	0	0	\$0
2002	1	0	0	3	3	0	0	\$0
2003	1	0	0	3	3	0	0	\$0
2004	1	0	0	3	3	0	0	\$0
2005	1	0	0	2	2	0	0	\$0
2006	1	0	0	0	0	0	0	\$0
2007	2	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	1	0	0	0	1	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Chenega Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	628	62
2001	1	628	74
2002	1	628	76
2003	1	628	76
2004	1	628	85
2005	1	628	86
2006	1	628	85
2007	1	628	88
2008	1	628	82
2009	1	628	73
2010	1	628	67

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Chenega Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Chenega Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Chenega Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Chenega Bay Residents: 2000-2010.

	<i>Total net pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	0	0	0	0	0
Finfish	--	--	--	--	--	--	0	0	0	0	0
Halibut	--	--	--	--	--	--	0	0	0	0	0
Herring	--	--	--	--	--	--	0	0	0	0	0
Other Groundfish	--	--	--	--	--	--	0	0	0	0	0
Other Shellfish	--	--	--	--	--	--	0	0	0	0	0
Pacific Cod	--	--	--	--	--	--	0	0	0	0	0
Pollock	--	--	--	--	--	--	0	0	0	0	0
Sablefish	--	--	--	--	--	--	0	0	0	0	0
Salmon	--	--	--	--	--	--	0	0	0	0	0
<i>Total²</i>	--	--	--	--	--	--	0	0	0	0	0
	<i>Ex-vessel value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Halibut	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Herring	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Groundfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Shellfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Pacific Cod	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Pollock	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Sablefish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Salmon	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Chenega Bay is located in North Gulf Coast/PWS ADF&G Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there was 41 sport fishing licenses sold in the community and 30 sold to residents, compared to 0 and 5 in 2000, respectively. The number of sport fishing licenses sold to both the community and residents increased steadily between 2000 and 2010, with each peaking in 2010. There was never more than one active sport fish guide businesses registered in Chenega Bay at any given year between 2000 and 2010. During 2000 and 2009 there were no active sport fish guide businesses registered. In addition, there was never more than one sport fish guide license held in the community during those years, with the exception of 2007 when there were two.

In 2010, there were a total of 212,793 saltwater angler days fished, compared to 122,459 in 2000; representing a 74% increase. Non-Alaska residents accounted for 30.4% of total saltwater angler days fished in 2010, compared to 32.3% in 2000. Saltwater angler days fished peaked at 300,205 in 2007. There was a total of 22,979 freshwater angler days fished in 2010, compared to 12,108 in 2000; an increase of 90%. Non-Alaska residents accounted for 57% of freshwater angler days fished in 2010, compared to 26% in 2000. Total freshwater angler days fished peaked in 2010.

According to ADF&G Harvest Survey data, species targeted by private anglers in Chenega Bay include coho, sockeye, and pink salmon, rainbow trout, Dolly Varden char, Pacific halibut, rockfish, lingcod, hardshell clams, and shrimp. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers target all five species of Pacific salmon, halibut, rockfish, crab, sablefish, shrimp, clams, and octopus.

Chenega Bay hopes to boost its sport fishing and tourism economy through the development of lodging facilities, cultural activities, and improvements to recreational fishing infrastructure, businesses, and services.¹⁰¹ Information regarding sport fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Chenega Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Chenega Bay ²
2000	0	1	5	0
2001	1	1	14	0
2002	1	1	13	5
2003	1	1	17	19
2004	1	1	16	18
2005	1	1	14	14
2006	1	1	19	16
2007	1	2	18	40
2008	1	1	17	31
2009	0	0	21	18
2010	1	1	30	41

¹⁰¹ Ibid.

Table 11 cont'd. Sport Fishing Trends, Chenega Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence hunting, fishing, and gathering are essential components to Chenega Bay’s economy and culture. The community’s participation in subsistence fisheries was severely impacted following the 1989 *Exxon Valdez* Oil Spill, and residents continue to be concerned over the long- term impacts on subsistence resources. In a survey conducted by the AFSC in 2011, community leaders expressed concern over the impacts commercial fishing has on local access to subsistence resources. Community leaders also reported that residents depend mostly on deer, salmon, crab, and shrimp for subsistence purposes. According to the ADF&G *Community Subsistence Information System*,¹⁰² species which residents of Chenega Bay harvest or use include chitons, butter clams, Dungeness crab, horse clams, king crab, limpets, octopus, littleneck clams, razor clams, shrimp, snails, Tanner crab, harbor seal, Steller sea lion, rockfish, Dolly Varden, eel, eulachon, grayling, herring, lake trout, lingcod, Pacific cod, tom cod, rainbow trout, sablefish, sea bass, skates, flounder, greenling, Irish lord, shark, whitefish, and walleye pollock.

Information on subsistence participation is limited; however, in a 2003 ADF&G household survey, 86% of households participated in subsistence salmon activities, 94%

¹⁰² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

participated in subsistence halibut activities, 44% participated in subsistence marine mammal activities, 60% participated in subsistence marine invertebrate activities, and 39% participated in subsistence non-salmon fish activities; totaling approximately 406 lbs harvested per capita.

In 2008, ADF&G¹⁰³ reported 277 salmon harvested by residents, a significant decrease from 722 in 2004. Of the species documented, sockeye salmon was harvested most often, although the number of fish harvested dropped significantly between 2004 and 2008. In 2010, an estimated 3,440 lbs of halibut was harvested using 6 Subsistence Halibut Registration Certificates (SHARC), compared to an estimated 5,644 lbs harvested using 13 SHARC in 2003. Subsistence halibut harvests peaked in 2006 at an estimated 8,260 lbs harvested on 11 SHARC. Between 2000 and 2010, an estimated 23 sea otters were harvested. Sea otter harvests peaked in 2000 at an estimated 11 otters. Finally, an estimated 180 harbor seals and 4 Steller sea lions were harvested between 2000 and 2008. Estimated harbor seal harvests peaked in 2003 at 45 seals. Estimated Steller sea lion harvests peaked in 2007 at 3 sea lions. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Chenega Bay: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	86%	94%	44%	60%	39%	406.12
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁰³ Ibid.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Chenega Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	353	2,282
2004	8	5	3	84	44	56	535	n/a	n/a
2005	9	5	6	174	84	124	469	n/a	n/a
2006	5	5	n/a	111	1	28	155	n/a	n/a
2007	3	3	2	55	27	4	293	n/a	n/a
2008	10	3	4	30	75	70	97	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Chenega Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	13	13	5,644
2004	17	14	5,434
2005	18	13	6,237
2006	19	11	8,260
2007	19	15	5,134
2008	11	8	5,462
2009	8	4	959
2010	8	6	3,440

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Chenega Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	11	n/a	n/a	n/a	15	n/a
2001	n/a	n/a	n/a	n/a	1	13	n/a
2002	n/a	n/a	n/a	n/a	n/a	9	n/a
2003	n/a	n/a	n/a	n/a	n/a	45	n/a
2004	n/a	7	n/a	n/a	n/a	21	n/a
2005	n/a	n/a	n/a	n/a	n/a	5	n/a
2006	n/a	n/a	n/a	n/a	n/a	21	n/a
2007	n/a	n/a	n/a	n/a	3	40	n/a
2008	n/a	2	n/a	n/a	n/a	11	n/a
2009	n/a	3	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Cordova (*core-DOH-vuh*)



People and Place

*Location*¹⁰⁴

Cordova is located at the southeastern end of Prince William Sound (PWS) in the Gulf of Alaska. The community was built on Orca Inlet at the base of Eyak Mountain. It lies 52 mi southeast of Valdez and 150 mi southeast of Anchorage. The area encompasses 61.4 sq mi of land and 14.3 sq mi of water. Cordova is a Home Rule city and was first incorporated in 1909. It is located in the Valdez-Cordova Census Area and is not under the jurisdiction of a borough.

*Demographic Profile*¹⁰⁵

In 2010, there were 2,239 residents, ranking Cordova 42nd of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population increased by 6.1%. Between 2000 and 2009, the population fell by 13.4% with an average annual growth rate of -1.03%, which was less than the statewide average of 0.75% and indicative of a steady rate of decline in those years. In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that 1,800 seasonal or transient workers lived in Cordova in 2010. On average, seasonal workers live in the city from April to September, and annual peaks in seasonal population is typically seen from May through August. Peaks in population are thought to be mostly driven by employment in fishing and construction sectors. Information regarding population trends can be found in Table 1.

Cordova is a racially diverse community. In 2010, 70.3% of residents identified themselves as White, 10.9% as Asian, 8.8% as American Indian or Alaska Native, 0.4% as Black or African American, and 0.5% as some other race. In addition, 9% identified themselves as two or more races. Residents identifying themselves as Hispanic or Latino made up 4.2% of the population that year. Between 2000 and 2010, there was very little change in the racial and ethnic composition of Cordova. The most significant change was in those identifying themselves as two or more races (2.3 percentage points). Information regarding trends in race and ethnicity can be found in Figure 1.

¹⁰⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

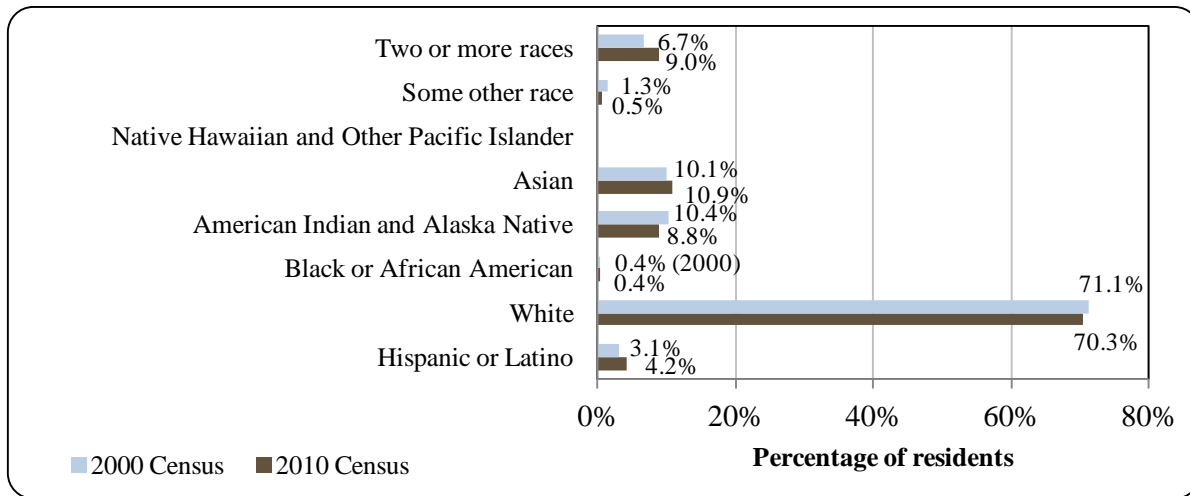
Table 1. Population in Cordova from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	2,110	-
2000	2,454	-
2001	-	2,382
2002	-	2,302
2003	-	2,291
2004	-	2,300
2005	-	2,292
2006	-	2,236
2007	-	2,180
2008	-	2,155
2009	-	2,126
2010	2,239	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Cordova: 2000-2010 (U.S. Census).



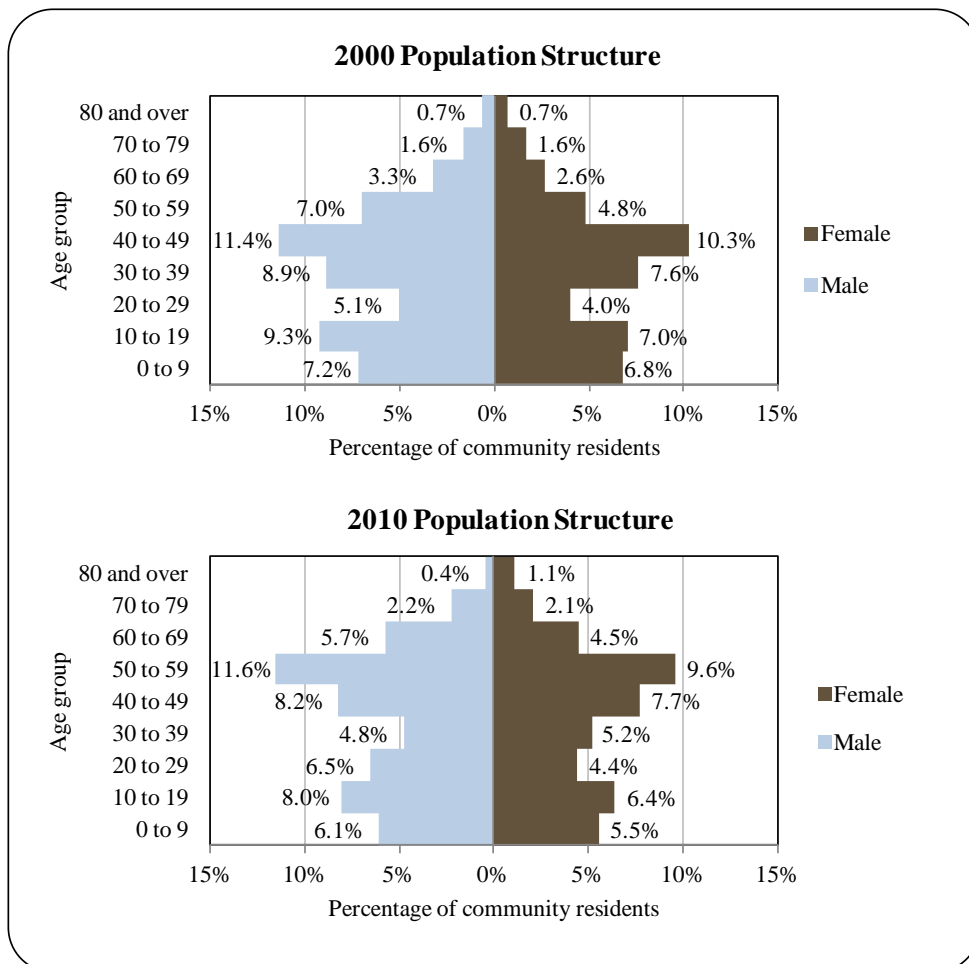
In 2010, the average household size was 2.41, compared to 2.6 in 1990 and 2.48 in 2000. In that year, there were a total of 1,100 housing units, compared to 883 in 1990 and 1,099 in 2000. Of the households surveyed in 2010, 52% were owner-occupied, compared to 52% in 2000; 32% were renter-occupied, compared to 35% in 2000; 10% were vacant, compared to 7% in 2000; and 7% were occupied seasonally, compared to 6% in 2000. There were a total of 18 residents living in group quarters in 2010, compared to 77 in 2000.

The gender distribution in 2010 was slightly skewed at 53.6% male and 46.4% female. This was similar to both the statewide distribution (52% male, 48% female) and 2000 distribution (54.4% male, 45.6% female). The median age that year was 42.2 years, which was somewhat older than both the statewide median of 33.8 years and 2000 median of 36.9 years.

Compared with 2000, the 2010 population structure showed age transitions consistent with a stable population, meaning that cohorts aged while still mostly retaining their structural character. In 2010, 26% of residents were under the age of 20, compared to 30.3% in 2000; 16% were over the age of 59, compared to 10.5% in 2000; 47.1% were between the ages of 30 and 59, compared to 50% in 2000; and 10.9% were between the ages of 20 and 29, compared to 9.1% in 2000. In 2010, the population aged 50 to 59 represented the largest (21.2%) proportion of the population; while those aged 30 to 39 represented the smallest proportion (10%).

Overall gender distribution by age cohort was similar in both 2000 and 2010. In 2010, the greatest absolute gender difference occurred within the 20 to 29 range (6.5% male, 4.4% female), followed by the 50 to 59 (11.6% male, 9.6% female) and 10 to 19 (8.0% male, 6.4% female) ranges. Of those three, the greatest relative gender difference occurred within the 20 to 29 range. Information regarding trends in Cordova’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Cordova Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census 2006-2010 American Community Survey (ACS)¹⁰⁶ estimated that 87.9% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 6.2% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 5.9% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 33.7% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 8.8% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 16.4% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 7% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹⁰⁷

Historically, the area around Cordova was populated by Alutiiq and migrating Athabascan and Tlingit Natives who called themselves Eyaks. The most prominent Native group in the area was the Chugachigmuit, who occupied most of PWS to the west of Cordova. The Eyaks, while never numerous in recorded times, occupied the nearby village sites of Alakganik and Eyak, as well as a site on what is now Old Town in Cordova. Both Alakganik and the historic village of Eyak were abandoned by the end of the nineteenth century, and many moved to what would later become Cordova.

Kayak Island, southeast of the Copper River Delta, was the first point of Alaska sighted by Vitus Bering in 1741. Bering was followed in 1778 by Captain James Cook, who anchored in Snug Corner Cove northwest of Cordova. No major settlements were established by the Russians in the PWS area, although a fur gathering post was established west of Cordova, on Hinchinbrook Island in 1793. After the purchase of Alaska by the U.S. Government, oil was discovered in the Katalla area in 1902, which became Alaska's first producing well. By 1905, a port and facilities were needed to serve 5,000 oil workers, as well as developers of the nearby Bering River coal fields. An attempt to build a deep-water port at Katalla was unsuccessful, and the site of present day Cordova was chosen instead. At the same time, the Kennecott Copper Company was organized to develop new copper claims in the Chitina River valley. Before development could begin, a transportation link to the coast was needed and Cordova was selected as the coastal terminus of the Copper River and Northwestern railroads.

By 1908, the city of Cordova was incorporated and by the time of the 1910 Census, the city had a population of 1,152 people. At that time, Cordova was the fifth largest community in Alaska, exceeded in population only by Nome, Fairbanks, Juneau, and Ketchikan. In the years between 1910 and 1938, Cordova primarily served as a transportation and service center for the Kennecott copper mines. However, as the city grew, its economy diversified. Although there had been canneries in the PWS area since 1889, it was after its establishment as a company town that fishing and fish processing gained in economic importance in Cordova. The 1907 establishment

¹⁰⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁷ City of Cordova. (1995). *Cordova Comprehensive Development Plan*. Retrieved February 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Cordova-CP-1994.pdf>.

of the Chugach National Forest also encouraged a local timber industry. The local Kennecott mines, arguably the largest economic contributor of its time, had produced approximately \$175 million worth of copper by 1925. However, by 1927 production began to decline and by 1938 the mines closed. The Katalla oil fields also closed in the 1930s after their refinery burned in 1933. By 1940, Cordova's economy switched to fishing and fish processing to replace lost mining jobs. With the exception of a brief spike in construction during World War II, including the construction of the city's airport, fishing has remained a main economic driving force in Cordova to this day. The population of Cordova has steadily grown since 1940 as the commercial fishing industry has become more community-based. The Cordova post office and courthouse are listed on the National Register of Historic Places (NRHP) as significant properties.¹⁰⁸

Natural Resources and Environment

Cordova has a maritime climate which is characterized by cool summers and mild winters. Winter temperatures average from 17 to 28 °F (-8 to -2 °C). Summer temperatures average from 49 to 63 °F (9 to 17 °C). Average annual precipitation is 167 inches, and average annual snowfall is 80 inches.¹⁰⁹

Cordova is located in the Chugach National Forest and is backed by the Chugach Mountains, characterized by rugged peaks from 7,000 to 13,000 ft high and expansive icefields which feed valley and piedmont glaciers. Inundated glacial valleys create steep coastlines, and much of the level surfaces comprise of glacial outwash and alluvial plains. The 1964 "Good Friday" earthquake dramatically altered the physical landscape with tectonic uplifts ranging from 6.5 to 7.5 ft in areas around Cordova. Mudflats, beaches, and reefs that were formally only exposed during low tides became permanently exposed. Several canneries were forced to extend their docks and extensive dredging and harbor repairs were needed to make port facilities usable again. Essentially, Cordova lost its deep-water port capabilities following the earthquake.¹¹⁰

Vegetation surrounding Cordova is dominated by mixed Sitka spruce and western hemlock stands, with limited amounts of mountain hemlock, yellow cedar, and black cottonwood. Pure Sitka spruce stands occur along river banks and on glacier flats. The Copper River Delta flats consist of brackish marsh vegetation populated by a mix of grasses, willow, alder, and scattered Sitka spruce and cottonwood.¹¹¹

The 700,000 acre Copper River Delta Game Management Area serves as important habitat for a wide range of wildlife. Local large terrestrial animals include black and brown bear, mountain goat, deer, and moose. Furbearers present in the area include wolf, wolverine, lynx, beaver, mink, muskrat, marten, land otter, and coyote. The waters of PWS support all five species of Pacific salmon, Pacific halibut, rockfish, herring, lamprey, lingcod, Atka mackerel, walleye pollock, and sablefish.¹¹² Marine mammals present in the area include harbor seal, Steller sea lion, porpoise, and whales.¹¹³

¹⁰⁸ U.S. National Park Service. (n.d.). *National Register of Historic Places*. Retrieved February 28, 2012 from: <http://www.nps.gov/nr/research/>.

¹⁰⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁰ See footnote 107.

¹¹¹ Ibid.

¹¹² Alaska Department of Fish and Game. (n.d.). *Species: Animals*. Retrieved February 23, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=animals.main>.

¹¹³ Ibid.

Economically important fish resources in the Cordova Coastal District include all five species of Pacific salmon, Dolly Varden char, rainbow trout, Pacific herring, halibut, Pacific cod, rockfish, sablefish, Tanner crab, Dungeness crab, king crab, shrimp, mussels, razor clams, and hardshell clams. While timber and mineral resources were of importance in Cordova's past, currently there are no large-scale developments for either. The Eyak Corporation holds timber interests in the area and may begin harvests once timber becomes profitable. In addition, Chugach Alaska Corporation and Eyak Corporation both hold mineral rights on lands they own in the area, and both have indicated an intention to continue exploration activities. Finally, coastal habitats provide a range of ecosystem services to Cordova and the region as a whole. Estuaries, barrier islands, wetlands, tidal flats, and coastlines throughout the Copper River Delta area provide important habitat for a wide range of aquatic and terrestrial wildlife. The Copper River is one of the most productive salmon habitats in Alaska, producing salmon which have become a globally recognized brand. Deeper offshore areas provide important halibut rearing habitat while coastal estuaries, wetlands, and sea cliffs are important to seabird nesting.¹¹⁴

According to the City of Cordova's Hazard Mitigation Plan¹¹⁵, potential natural hazards include severe weather, flooding, earthquake, tsunami, erosion, avalanches, and wildfires. Flood hazards can occur from storm surges, heavy rainfall, heavy snowmelt, and glacial outbursts. Flood events can in turn, contribute to local sediment deposition and erosion. Eyak Lake and River present the greatest flood risk to Cordova, as the River does not have the capacity to handle seasonal flows. In addition, outburst floods occasionally occur on the Scott Glacier, although these are not thought to contribute significantly to flooding. Major coastal flooding events in the Cordova Coastal District occur every 60 to 100 years. Severe weather comes in the form of heavy snowfall and high winds. Cordova gets an average of 80 inches of snow per year, and heavy and potentially damaging snowfall events are common. Cordova has a moderate probability of wildfire occurrence; however, the city is located in a critical protection area and wildfires can potentially threaten high-value properties, as well as natural and cultural resource sites. Cordova has a moderate vulnerability to tsunami damage, with the most serious threat coming from earthquakes occurring in the Gulf of Alaska. All coastal areas are less than 100 ft in elevation and should a tsunami occur, port and harbor facilities, public works facilities, transportation facilities, and public equipment would be affected. Finally, the area surrounding Cordova has a high probability of avalanche or landslide occurrence due to high relief topography, coupled with high levels of precipitation.

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation sites active in 2010.¹¹⁶

¹¹⁴ Alaska Department of Natural Resources. (2008). *Cordova Coastal District Management Plan*. Retrieved February 24, 2012 from:

http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cordova/Final_Draft_Plan_February20.pdf.

¹¹⁵ City of Cordova, WHPacific, and Bechtol Planning and Development. (2008). *City of Cordova Local Hazards Mitigation Plan*. Retrieved February 23, 2012 from:

http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Cordova_LHMP.pdf.

¹¹⁶ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 27, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹¹⁷

In a survey conducted by the AFSC in 2011, community leaders reported that Cordova's economy is dependent on commercial and recreational fishing, eco-tourism, and mineral exploration. Since the decline of the oil and mineral industries in the mid-twentieth Century, Cordova has strived to develop a diverse economy, supporting year-round employment. This has centered on commercial fishing, recreational fishing, tourism, and entrepreneurship. While the *Exxon Valdez* oil spill in 1989 contributed to a decline in PWS commercial fisheries, the salmon drift and gill net fisheries recovered quite well, and Copper River salmon are now in high demand. Robust growth has led to strong construction, transportation, and materials service industries as well as growth in professional and retail services. Tourism has been growing at a heightened pace since focus was turned to developing tourism services and infrastructure in the late 1990s. These services included sportfishing charter operations, sightseeing businesses, visitor accommodations, and other visitor related industries. Finally, state and federal agencies are strong employers given Cordova's involvement in resource extraction, relatively high population size, and proximity to publically managed lands.¹¹⁸ Top employers in 2010 included:¹¹⁹ Trident Seafoods Corp., Cordova School District, City of Cordova, Native Village of Eyak, State of Alaska, Cordova Community Medical Center, AK Commercial Co., Reluctant Fisherman LLC., Ocean Beauty Seafoods LLC., and Cordova Electric Coop Inc.

In 2010,¹²⁰ the estimated per capita income was \$30,630 and the estimated median household income was \$72,125, compared to \$25,256 and \$50,114 in 2000, respectively. After accounting for inflation by converting 2000 values to 2010 dollars,¹²¹ the real per capita income (\$33,211) and real median income (\$65,899) indicate a slight decrease in individual earnings and moderate increase in household earnings. In 2010, Cordova ranked 58th of 305 communities from which per capita income was estimated, and 41st of 299 communities from which median household income was estimated.

Cordova's small population size may have prevented the ACS from accurately portraying economic conditions.¹²² Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$31.96 million in total wages in 2010.¹²³ When matched with the population in 2010, the per capita income equals \$14,275, which is

¹¹⁷ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁸ City of Cordova. (2008). *City of Cordova Comprehensive Plan*. Retrieved February 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Cordova-CP-2008.pdf>.

¹¹⁹ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹²⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²³ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

significantly less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.¹²⁴

According to the 2006-10 ACS estimates,¹²⁵ 67.9% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 9.9%, compared to 5.9% estimated statewide; and an estimated 1.8% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in 2010, an estimated 49.7% worked in the private sector, an estimated 35.6% worked in the public sector, an estimated 13.0% were self-employed, and an estimated 1.6% were unpaid family workers. If accurate, the high proportion of self-employed residents estimated by the 2010 ACS may have impacted the accuracy of ALARI estimates, which do not account for self-employed workers.

By industry, sector employment was relatively diverse in 2010. In that year, most (24.4%) employed residents were estimated to be working in education services, health care, and social assistance sectors; followed by agriculture, forestry, fishing, hunting, and mining sectors (14.2%); and arts, entertainment, recreation, accommodation, and food service sectors (10.8%). Compared with 2000, significant increases occurred in education services, health care, and social assistance sectors while significant decreases occurred in public administration and non-public administrative service sectors. By occupation type, most (29.7%) residents held management or professional positions in 2010; followed by natural resources, construction, or maintenance positions (25.5%); service positions (18.3%); sales or office positions (15.9%); and production, transportation, or material moving positions (10.7%). Compared with 2000, production, transportation, material moving, sales, and office positions declined, while all other occupation types increased in 2010. According to 2010 ALARI estimates, most (27.2%) employed residents worked in local government sectors; followed by trade, transportation, and utilities sectors (18.7%); and manufacturing sectors (15.1%).¹²⁶ Information regarding employment trends can be found in Figures 3 and 4.

¹²⁴ See footnote 119.

¹²⁵ See footnote 122.

¹²⁶ See footnote 119.

Figure 3. Local Employment by Industry in 2000-2010, Cordova (U.S. Census).

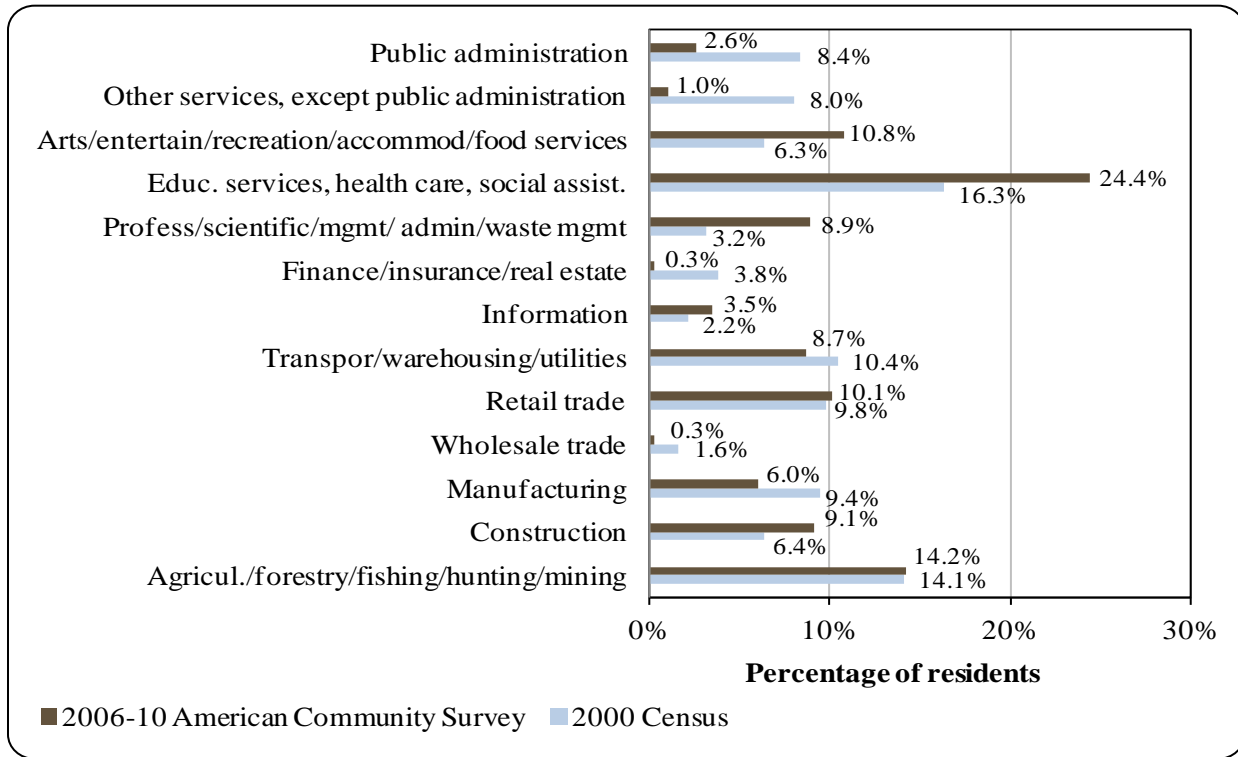
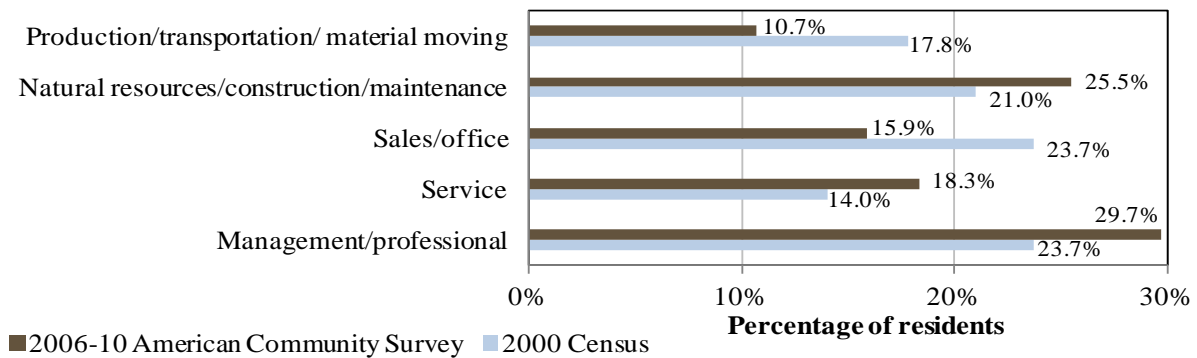


Figure 4. Local Employment by Occupation in 2000-2010, Cordova (U.S. Census).



Governance

Cordova is a Home Rule city with a mayoral form of government. The city has a seven-member city council, five-member school board, seven member planning and zoning commission, and six municipal employees. Cordova was not included in the Alaska Native Claims Settlement Act (ANCSA) and does not a U.S. Bureau of Indian Affairs recognized Tribal government. The Alaska Department of Fish and Game (ADF&G) has a field office located in Cordova. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage, 150 mi northwest.

In 2010, Cordova administered a 6% sales tax, 13.9 mills property tax, 6% accommodations tax, and 6% car rental tax. Total municipal revenues for 2010 were \$10.31 million, compared to \$5.75 million in 2000; a 38.7% increase after accounting for inflation.¹²⁷ Total sales tax revenue that year accounted for 27.9% of total municipal revenues; compared to 37.5% in 2000. State allocated Community Revenue Sharing accounted for 2.0% of total municipal revenues in 2010, compared to 2.2% in 2000 from State Revenue Sharing. Sales and use taxes accounted for most locally generated tax revenue, followed by property taxes and payments in lieu of taxes (federal). Outside revenues came primarily from forest service receipts and raw fish taxes. State and federal fisheries-related grants awarded to Cordova include \$1.2 million for a breakwater expansion project, \$9.75 million for harbor repair and renovation, \$16 million for improvements to the old Coast Guard dock, \$924,000 for a boat haulout facility, and \$1 million for marine pollution abatement for the haul-out facility. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, and Federal Revenue Streams for the Community of Cordova from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$5,747,827	\$2,157,441	\$129,078	\$9,176,000
2001	\$5,683,228	\$2,348,268	\$109,686	\$9,176,000
2002	\$5,660,755	\$2,320,200	\$110,767	\$4,300,000
2003	\$5,035,346	\$2,124,800	\$106,714	\$4,335,000
2004	\$5,746,680	\$2,033,859	-	n/a
2005	\$6,437,229	\$2,325,235	-	n/a
2006	\$6,456,225	\$2,469,977	-	n/a
2007	\$6,666,635	\$2,605,167	-	n/a
2008	\$7,363,347	\$2,745,924	-	n/a
2009	\$9,508,883	\$2,669,455	\$206,242	\$1,889,000
2010	\$10,307,738	\$2,875,479	\$202,622	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹²⁷ Inflation calculated using the 2010 Anchorage CPI from the Alaska Department of Labor: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

*Connectivity and Transportation*¹²⁸

Cordova is accessible by plane and boat. It is linked directly to the North Pacific Ocean shipping lanes through the Gulf of Alaska. It receives year-round barge services and state ferry service. The Merle K. "Mudhole" Smith Airport is state-owned and -operated, with a 7,500-ft long by 150-ft wide asphalt runway and 1,899-ft long by 30-ft wide gravel crosswind runway. The state-owned and city-operated Cordova Municipal Airport has a 1,800 ft-long by 60-ft wide gravel runway. Daily scheduled jet flights and air taxis are available. Float planes land at the Lake Eyak seaplane base or the boat harbor. Harbor facilities include a breakwater, dock, small boat harbor with 850 berths, boat launch, boat haulout, ferry terminal, and marine repair services. A 48-mi gravel road provides access to the Copper River Delta to the east. The price of roundtrip airfare between Anchorage and Cordova in June 2012 was \$208.¹²⁹

Facilities

Cordova utilizes water from Murcheson Falls, Heney Creek Dam, Meals Reservoir, Orca Reservoir, and Eyak Lake. The water is treated, but only the Eyak Lake water is filtered. Water storage capacity is 2.1 million gal. The city operates a piped water and sewer system. Sewage is treated before discharge. Over 90% of homes are fully plumbed. Some homes use individual wells and septic systems. A class 2 landfill and sludge disposal is available. The community participates in recycling and a household hazardous waste program. Cordova Electric Cooperative operates the Humpback Creek Hydro Facility and two diesel-powered plants at Eyak and Orca.

Public safety is provided by the local police department, state troopers, and state fish and wildlife protection. Fire and rescue services are provided by the local volunteer fire department, Emergency Medical Services (EMS), and local search and rescue services. Broadband internet, cable, local television, and long distance telephone services are all available. Additional public infrastructure includes a youth center, local gym and pool, museum and cultural center, moose lodge, jail, several libraries, and numerous visitor accommodations and attractions.¹³⁰

Cordova's existing port facilities include three docks for large vessels, two boat ramps, a three-tier dock, a small boat harbor, and a few piers associated with local canneries. All three docks are city-owned, as are the small boat harbor facilities. The Municipal Dock (Ocean Dock) is Cordova's main commercial port facility. The outside face of the dock is 408 ft long and the inside face is 325 ft long. The dock is equipped with water, gasoline, and diesel services. The dock is primarily used for cargo, freight, and ferry passengers. Next to the Ocean Dock is a staging and container storage area, as well as a 150-ton haulout and maintenance facility. The City Dock is used for the transfer of fishing gear and light cargo. The outside face is 280 ft long and is equipped with electricity and water utilities. The North Containment Dock is used primarily for Coast Guard moorage. The outside face is 213 ft long. The Cordova Small Boat Harbor has 727

¹²⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁹ Airfare was calculated using lowest fare available from www.travelocity.com. Retrieved November 22, 2011.

¹³⁰ See footnote 128.

slips available and covers approximately 30 acres. Electricity, telephone, and water are provided to all floats.¹³¹

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed or in progress as of 2010 included a fish cleaning station, new dock space, dock improvements, dockside electrical and water utilities, sewage and water treatment facilities, a new landfill, a new community center, school improvements, and telephone improvements. As of 2010 there were plans to construct additional dock space, expand dockside utilities, construct new pilings and a breakwater, build more dry dock space, expand haulout facilities, and improve police and fire services by 2020. According to community leaders, there is 900 ft of dock space available for transient vessel moorage, and vessels up to 90 ft long can use moorage in Cordova. Coast Guard regulated vessels which Cordova is capable of handling include rescue vessels, cruise ships, ferries, fuel barges, and hazardous materials (HAZMAT). Fisheries support businesses and services located in Cordova include fish processing plants, fishing gear sales, boat repair (electrical, welding, mechanical services, machine shop, hydraulics), small vessel haulout (<60 tn), large vessel haulout (>60 tn), tidal grid for small vessels (<60 tn), tidal grid for large vessels (>60 tn), commercial fishing vessel moorage, recreational fishing vessel moorage, tackle sales, bait sales, commercial cold storage facilities, dry dock storage, marine refrigeration, fish lodges, fishing business attorneys, fishing related bookkeeping, boat fuel sales, fishing gear repair, fishing gear storage, ice sales, water taxi, seaplane service, and air taxi. Public services available include medical services, food bank, publicly subsidized housing, public library, and mental health services.

Medical Services

Cordova Community Medical Center provides acute care, emergency care, laboratory and radiology services, physical therapy, mental health services, crisis support, long-term care, and a wide range of specialized services.¹³² Ilanka Community Health Center provides elder care, alcohol and substance abuse, youth, and wellness programs.¹³³

*Educational Opportunities*¹³⁴

Mount Eccles Elementary provides preschool through 6th grade instruction. As of 2011, there were 173 students enrolled and 13 teachers employed. Cordova Junior and Senior High School provides 7th through 12th grade instruction. As of 2011 there were 173 students enrolled and 15 teachers employed. An extension of PWS Community College is located in Cordova, offering opportunities for Associate's and Bachelor's degrees.

¹³¹ City of Cordova. (2008). *City of Cordova Comprehensive Plan*. Retrieved February 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Cordova-CP-2008.pdf>.

¹³² Cordova Community Medical Center. (n.d.). Retrieved June 27, 2012 from: <http://www.cdvcmc.com/>.

¹³³ Native Village of Eyak. (n.d.). *Ilanka Community Health Center*. Retrieved June 27, 2012 from: <http://www.nveyak.com/pages/ilankahealthclinic.html>.

¹³⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial fishing started at the mouth of the Copper River in 1887 when the region's first cannery was built by the Pacific Packing Company near the village of Eyak. Early fishing at the mouth of the Copper River was done by essentially barricading the mouth, which although very efficient, did not allow enough salmon through to spawn. Soon after Alaska became a territory in 1912, measures were taken to regulate gear types in the Cooper River area due to a proliferation of many different catch methods, and subsequent concerns of local Native groups regarding decreased subsistence harvests. Between 1914 and 1923, 14 new canneries were established in the PWS area. In the 1930s, the Alaska Fish Cannery Workers Union was formed, representing cannery workers, clam diggers, and fishermen in Cordova. That organization eventually evolved into present day Cordova District Fishermen United. Herring, which had been fished in the PWS since 1914, peaked in 1936 at over 56,000 tn landed.

By the 1940s, over 40 fish traps were built in the PWS area which operated 6 days a week for 24 hours a day during seasons. Canneries processed not only salmon, but also crab, clams, and shrimp. Fish stocks began to crash in the late 1940s and early 1950s because of the overuse of fishtraps. Upon gaining statehood, Alaska was given the authority to manage its fisheries, including gear types used in prosecuting them, which lead to the abolishment of commercial traps in the Copper River Delta.

The 1964 “Good Friday” earthquake radically changed the landscape of Cordova, causing coastal uplift of 6.5 to 7.5 ft in some areas. This event, coupled with over-exploitation and an expanding sea otter population, essentially ended the commercial clamming industry in Cordova which had previously been renowned for its razor clams. The 1989 *Exxon Valdez* Spill had lasting impacts on PWS, particularly on the herring fishery. The perception of tainted fish by consumers along with a flood of cheap farm raised fish resulted in steep declines in local incomes, boat values, and permit values. Since then, salmon, halibut, and sablefish have lead in the recovery of the local commercial fishing economy.¹³⁵

In a survey conducted by the AFSC in 2011, community leaders reported that Cordova currently participates in the fisheries management process in Alaska through representatives that participate in North Pacific Fisheries Management Council (NPFMC) committees or advisory groups, ADF&G regional fisheries advisory groups or working groups, and Federal Subsistence Board or Federal Subsistence Regional Advisory Council processes. In addition, Cordova relies on regional organizations including the Cordova District Fishermen United and other industry related organizations. Current challenges for the portion of Cordova's economy based on fishing include current state management of fisheries, resource allocation, other user groups on the Copper River, fish farming, and international competition.

Cordova is located in Federal Reporting Area 649, International Pacific Halibut Commission (IPHC) Regulatory Area 3A, and the Central Gulf of Alaska (GOA) Sablefish Regulatory District.

¹³⁵ Cordova District Fishermen United. (n.d). *A Historical Narrative of Fishing in the PWS/Copper River Area*. Retrieved February 24, 2012 from: <http://www.cdfu.org>.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, a number of processing plants are operating in Cordova.

Copper River Seafoods was formed in 1996 by three Alaska fishermen with three formerly competing companies. Beginning in May, the facility in Cordova processes Copper River king and sockeye salmon. The plant shuts down for the year after the Copper River coho salmon season comes to an end in late September. Copper River Seafood has 10 year-round employees who work at their two offices in Cordova and Anchorage and the Cordova plant employs a maximum of 120 seasonal workers (including foreign students with J-1 visas) during the salmon season.¹³⁶ The plant relies on public docks, water services, power/electricity, and waste management services.¹³⁷

Ocean Beauty's Cordova production facility is located on the waterfront in Orca Inlet, and began operations in 1978. The plant operates from February to September and is one of the largest producers and shippers of Copper River king and sockeye salmon. In addition to Copper River king and sockeye salmon, the facility also processes pink, chum and coho salmon, as well as halibut, black cod, Pacific cod and herring. Ocean Beauty's Cordova facility provides free laundry machines and work-related clothing to its fish processing workers, as well as room and board at a nominal fee if workers fulfill their contractual obligations.¹³⁸

The Prime Select Seafoods facility in Cordova opened in 2011 and is a small family company that processes various fish species from the Copper River, PWS and the Gulf of Alaska. Beginning in early May, Prime Select Seafoods begins processing Copper River king salmon. Throughout the summer and into early fall the facility processes Copper River king, sockeye and coho as well as pink and chum salmon caught in PWS. During this time halibut is also processed at the facility. During the winter the plant receives deliveries of lingcod, rockfish, Pacific cod, and Pollock from boats fishing in PWS and the Gulf of Alaska.¹³⁹ The plant mostly smokes fish and purchases from fisherman that have IFQs. The plant relies on public docks, water services, power/electricity, and waste management services. There are between 3 and 15 employees each year.¹⁴⁰

Trident Seafoods Corporation has two processing facilities in Cordova. Trident was founded in 1973, and by the year 2000 was employing 4,000 people annually throughout Alaska and the Pacific Northwest. The Cordova plants combined employ a maximum of 560 workers during the summer months.¹⁴¹ According to its website, throughout Alaska Trident processes cod, pollock and crab in the winter and herring and salmon in the summer. Both Cordova facilities provides room and board at a nominal cost, as well as air transportation to Cordova from Seattle and back, to its seafood processors.¹⁴² Both plants also rely on public water

¹³⁶ Copper River Seafoods. (n.d.). *Homepage*. Retrieved from: <http://www.copperriverseafood.com>.

¹³⁷ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

¹³⁸ Ocean Beauty Seafoods. (n.d.). *About: Production Locations – Cordova, Alaska*. Retrieved from: <http://www.oceanbeauty.com/about/cordova.htm>.

¹³⁹ Prime Select Seafoods. (n.d.). *Wholesale: Fishermen specializing in Copper River wild salmon*. Retrieved from: <http://www.pssifish.com/wholesale.html>.

¹⁴⁰ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

¹⁴¹ *Ibid*.

¹⁴² Trident Seafoods. (n.d.). *Homepage*. Retrieved from: <http://tridentseafoods.com/>.

services, power/electricity, gas (only the Cordova North facility), and waste management services.¹⁴³

Wild by Nature is a seafood processing plant in Cordova which is owned and operated by two husband and wife teams. Between mid-May and October they catch and process fresh, frozen and smoked Copper River salmon (Chinook, sockeye and coho) that they sell on the Internet.¹⁴⁴

Fisheries-Related Revenue

Between 2000 and 2010, Cordova raised fisheries-related revenue through raw fish taxes, Shared Fisheries Business Taxes, Fisheries Resource Landing Taxes, harbor usage fees, and port/dock usage fees. In 2010, \$1.81 million was collected in fisheries-related revenue, compared to \$1.59 million in 2000, representing an approximate 12% decline in revenues after accounting for inflation.¹⁴⁵ Fisheries-related income peaked in 2009 at \$4.68 million. In a survey conducted by the AFSC in 2011, community leaders reported that there are not any fishing-related fee programs charged to the fishing industry that specifically support public services or infrastructure. Information regarding fisheries-related income trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that on average, Pacific cod season starts in February, salmon season runs from May through September, and halibut and sablefish seasons run from March through November. Gear types used by locals in Cordova include purse seines, pots, long lines, and gill nets.

In 2010, 392 residents, or 15.5% of the population, held 654 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC); which represented 3.1% of statewide CFEC permit holders and 3.7% of total CFEC permits issued that year. In 2000, 406 residents held 692 CFEC permits, which represented 3% of statewide CFEC permit holders and 3.3% of CFEC permits issued that year. Of the CFEC permits issued in 2010, 60% were for salmon, compared to 62% in 2000; 13% were for herring, compared to 18% in 2000; 9% were for “other” shellfish, compared to less than 1% in 2000; 8% were for halibut, compared to 9% in 2000; 4% were for groundfish, compared to 8% in 2000; 3% were for sablefish, compared to 2% in 2000; and 1% were for crab, compared to less than 1% in 2000. Also in 2010, 34 residents held 37 License Limitation Program (LLP) groundfish permits, of which 35% were actively fished; and 4 residents held 4 LLP crab permits, of which none were actively fished. In addition, 25 residents held 27 Federal Fisheries Permits (FFP), of which 70% were actively fished. In 2000, 34 residents held 35 LLP groundfish permits, of which 37% were actively fished; 6 residents held 6 LLP crab permits, of which 16% were actively fished; and 23 residents held 24 FFP, of which none were active. In 2010, 63 halibut quota share accounts held 7.88 million

¹⁴³ See footnote 140.

¹⁴⁴ Wild By Nature. (n.d.). Retrieved from: <http://www.wild-by-nature.com/WhoAreWe.htm>.

¹⁴⁵ Inflation calculated using the 2010 Anchorage CPI from the Alaska Department of Labor: <http://labor.alaska.gov/research/cpi/cpi.htm>.

shares or 3.8% of total halibut quota statewide. Also in that year, 10 sablefish quota share accounts held 3.39 million shares or 2.6% of total sablefish quota statewide, and one crab quota share account held 382,422 shares or 1% of state crab quota statewide.

There were 320 residents who held commercial crew licenses in 2010, compared to 409 in 2000. In addition, residents held majority ownership of 448 vessels that year, compared to 520 in 2000. Of the CFEC permits issued in 2010, 72% were actively fished, compared to 67% in 2000. This varied by fishery ranging from 100% of sablefish permits to 3% of herring permits. Fisheries prosecuted by residents of Cordova in 2010 include Bristol Bay pot king crab, Bering Sea pot Tanner crab, Kodiak pot Tanner crab, statewide longline halibut, Kodiak purse seine herring roe, statewide longline ling cod, statewide and GOA longline miscellaneous finfish, GOA pot miscellaneous finfish, southeast Alaska dive geoduck, PWS pot shrimp, southeast Alaska dive sea cucumber, statewide longline sablefish, PWS fixed gear sablefish, statewide pot sablefish, southeast Alaska purse seine salmon, PWS purse seine salmon, Kodiak purse seine salmon, southeast Alaska drift gillnet salmon, Bristol Bay drift gillnet salmon, PWS set gillnet salmon, Cook Inlet set gillnet salmon, and Bristol Bay set gillnet salmon.¹⁴⁶

In 2010, a total of 162.1 million pounds of fish were landed in Cordova with an ex-vessel value of \$92 million, compared to 160.1 million pounds landed in 2000, which was valued at \$46.8 million ex-vessel. This represented a 43% increase in total ex-vessel revenues between 2000 and 2010, after accounting for inflation.¹⁴⁷ In that year, Cordova ranked 4th of 67 communities in terms of total pounds landed, and 3rd of 67 communities in terms of ex-vessel revenue derived from landings. By fishery, salmon was the most profitable species landed in Cordova in 2010, with 157.7 million pounds landed valued at \$82.8 million ex-vessel, compared to 151.3 million pounds valued at \$39.8 million in 2000. After accounting for inflation,¹⁴⁸ this represented an increase of approximately \$0.16 per overall pound landed.¹⁴⁹ Halibut landings in Cordova totaled slightly over 1.0 million pounds in 2010, and were valued at \$4.7 million, compared to 1.1 million pounds valued at \$2.8 million in 2000; which represented an approximate increase of \$1.01 per pound landed after accounting for inflation.¹⁵⁰ Sablefish landings totaled 862,622 lb valued at \$3.6 million ex-vessel, compared to 739,402 lb valued at \$2.8 million in 2000; representing a decrease of \$1.07 per pound landed after accounting for inflation.¹⁵¹ Finally, 1.9 million pounds of Pacific cod was landed in 2010, valued at \$684,639, compared to 640,455 lb valued at \$242,481 in 2000; which represented a decrease of \$0.17 per pound landed after accounting for inflation.¹⁵² Other groundfish landings in 2010 totaled 549,991 and were valued at \$211,545 total, compared to 71,547 lb valued at \$47,441 in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹⁴⁶ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁴⁷ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics. Retrieved March 15, 2011 from <http://www.bls.gov/ppi/#data>.

¹⁴⁸ Ibid.

¹⁴⁹ Does not account for individual species composition.

¹⁵⁰ See footnote 147.

¹⁵¹ Ibid.

¹⁵² Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Cordova: 2000-2010.

Revenue Source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$516,438	\$549,830	\$437,955	\$386,605	\$448,958	\$591,749	\$610,916	\$631,642	\$750,000	\$900,000	n/a
Shared Fisheries Business Tax ¹	\$510,169	\$525,236	\$570,167	\$462,409	\$409,256	\$487,516	\$617,209	\$658,137	\$654,039	\$954,629	\$1.11 M
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$78	\$61	\$46	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$549,429	\$540,856	\$587,202	\$620,618	\$699,455	\$766,673	\$843,614	\$800,000	\$830,000	\$2.82 M	\$700,000*
Port/dock usage ²	\$13,565	\$14,000	\$14,000	n/a	n/a	\$45	\$620	\$420	\$600	\$600	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$1.59 M	\$1.63 M	\$1.61 M	\$1.47 M	\$1.56 M	\$1.85 M	\$2.07 M	\$2.09 M	\$2.23 M	\$1.86 M	\$1.81 M
Total municipal revenue⁵	\$5.75 M	\$5.68 M	\$5.66 M	\$5.04 M	\$5.75 M	\$6.44 M	\$6.46 M	\$6.67 M	\$7.36 M	\$9.51 M	\$10.31 M

Note: n/a indicates that no data were reported for that year.

*Source: AFSC 2011 Community Survey

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Cordova: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	35	33	33	33	35	34	35	36	36	36	37
	Active permits	13	12	11	9	11	10	9	9	12	10	13
	% of permits fished	37%	36%	33%	27%	31%	29%	25%	25%	33%	27%	35%
	Total permit holders	34	31	31	31	32	30	31	32	33	32	34
Crab (LLP) ¹	Total permits	6	6	6	5	5	4	4	4	4	4	4
	Active permits	1	1	1	1	1	0	0	0	0	0	0
	% of permits fished	16%	16%	16%	20%	20%	0%	0%	0%	0%	0%	0%
	Total permit holders	6	6	6	5	5	4	4	4	4	4	4
Federal Fisheries Permits ¹	Total permits	24	28	28	31	37	38	29	30	32	24	27
	Fished permits	0	0	0	14	16	15	16	18	17	15	19
	% of permits fished	0%	0%	0%	45%	43%	39%	55%	60%	53%	63%	70%
	Total permit holders	23	25	25	27	33	34	27	28	29	22	25
Crab (CFEC) ²	Total permits	2	7	8	2	5	4	5	4	4	5	7
	Fished permits	0	4	4	2	3	1	3	2	2	1	3
	% of permits fished	0%	57%	50%	100%	60%	25%	60%	50%	50%	20%	43%
	Total permit holders	2	6	6	2	4	4	5	4	4	5	6
Other shellfish (CFEC) ²	Total permits	3	2	2	6	7	4	5	4	4	4	62
	Fished permits	0	0	1	2	4	3	2	1	2	3	34
	% of permits fished	0%	0%	50%	33%	57%	75%	40%	25%	50%	75%	54%
	Total permit holders	3	2	2	4	5	3	3	3	3	3	58
Halibut (CFEC) ²	Total permits	65	67	66	69	67	64	65	61	62	54	54
	Fished permits	51	55	56	58	59	59	58	58	55	48	47
	% of permits fished	78%	82%	85%	84%	88%	92%	89%	95%	89%	89%	87%
	Total permit holders	63	65	65	68	65	64	64	61	62	54	54
Herring (CFEC) ²	Total permits	127	117	98	99	95	91	90	88	88	82	88
	Fished permits	14	14	2	3	2	2	2	2	2	2	3
	% of permits fished	11%	12%	2%	3%	2%	2%	2%	2%	2%	2%	3%
	Total permit holders	96	90	85	86	84	80	81	77	78	74	78

Table 4 cont'd. Permits and Permit Holders by Species, Cordova: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	13	18	20	20	22	21	19	21	19	20	19
	Fished permits	11	16	19	20	22	19	17	20	18	19	19
	% of permits fished	85%	89%	95%	100%	100%	90%	89%	95%	95%	95%	100%
	Total permit holders	15	17	20	21	23	20	18	21	18	19	18
Groundfish (CFEC) ²	Total permits	55	49	32	28	30	27	29	26	36	31	29
	Fished permits	19	7	5	8	10	11	11	15	13	12	14
	% of permits fished	35%	14%	16%	29%	33%	41%	38%	58%	36%	39%	48%
	Total permit holders	42	38	26	25	27	26	24	22	27	26	25
Other Finfish (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	426	412	401	412	408	401	407	410	404	390	395
	Fished permits	368	353	325	321	329	319	327	338	344	332	351
	% of permits fished	86%	86%	81%	78%	81%	80%	80%	82%	85%	85%	89%
	Total permit holders	364	348	334	343	339	344	346	346	348	340	350
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>692</i>	<i>672</i>	<i>627</i>	<i>636</i>	<i>634</i>	<i>612</i>	<i>620</i>	<i>614</i>	<i>617</i>	<i>586</i>	<i>654</i>
	<i>Fished permits</i>	<i>463</i>	<i>449</i>	<i>412</i>	<i>414</i>	<i>429</i>	<i>414</i>	<i>420</i>	<i>436</i>	<i>436</i>	<i>417</i>	<i>471</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>67%</i>	<i>66%</i>	<i>65%</i>	<i>68%</i>	<i>68%</i>	<i>68%</i>	<i>71%</i>	<i>71%</i>	<i>71%</i>	<i>72%</i>
	<i>Permit holders</i>	<i>406</i>	<i>394</i>	<i>377</i>	<i>387</i>	<i>387</i>	<i>388</i>	<i>386</i>	<i>387</i>	<i>388</i>	<i>375</i>	<i>392</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Cordova: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Cordova ²	Total Net Pounds Landed in Cordova ^{2,5}	Total Ex-Vessel Value of Landings in Cordova ^{2,5}
2000	409	50	9	520	656	729	160,147,624	\$46,809,522
2001	406	28	6	528	655	682	51,874,135	\$26,457,165
2002	328	30	9	492	632	658	44,584,549	\$23,415,751
2003	347	34	7	471	611	608	48,174,542	\$27,082,150
2004	298	33	7	464	602	607	28,869,503	\$26,365,226
2005	299	44	6	438	597	610	84,467,984	\$37,500,795
2006	317	38	6	428	592	586	46,411,757	\$38,945,950
2007	300	39	7	438	610	610	157,340,858	\$67,065,004
2008	299	29	7	453	628	659	117,520,444	\$71,121,072
2009	294	34	8	435	636	685	61,472,264	\$45,703,878
2010	320	33	7	448	645	704	162,097,746	\$92,042,916

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Cordova: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	80	5,623,735	557,379
2001	80	6,087,501	721,176
2002	80	7,342,002	1,048,053
2003	82	7,518,562	1,085,642
2004	83	8,034,178	1,192,368
2005	78	7,929,008	1,169,054
2006	75	7,594,327	1,087,058
2007	69	7,373,086	1,067,573
2008	64	7,586,522	1,043,332
2009	60	7,681,844	949,051
2010	63	7,881,097	898,079

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Cordova: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	5	1,326,901	109,319
2001	6	1,427,724	110,049
2002	7	3,275,765	282,077
2003	8	3,916,780	414,401
2004	11	4,016,274	451,458
2005	11	3,410,553	352,649
2006	11	3,581,073	344,849
2007	10	3,384,441	325,799
2008	10	3,403,025	301,292
2009	10	3,415,732	267,305
2010	10	3,386,595	249,802

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Cordova: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	1	382,422	16,512
2008	1	382,422	15,351
2009	1	382,422	12,493
2010	1	382,422	13,502

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Cordova: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	1,056,499	1,384,370	1,386,819	1,506,774	1,521,775	1,559,652	1,421,806	1,423,412	1,317,887	1,074,648	1,024,207
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	71,547	250,384	121,324	774,059	431,624	571,616	95,833	96,015	221,360	638,792	549,991
Other Shellfish	--	--	--	--	--	--	--	--	--	--	1,337
Pacific Cod	640,455	20,125	6,261	19,282	49,673	--	73,673	135,939	609,139	--	1,941,890
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	739,402	--	921,463	1,165,656	1,256,076	1,631,763	920,719	796,531	838,224	1,043,699	862,622
Salmon	151,319,856	45,217,421	38,577,807	41,873,232	25,600,347	80,600,506	43,899,726	154,888,961	114,532,272	56,986,019	157,717,461
<i>Total²</i>	<i>153,827,759</i>	<i>46,872,300</i>	<i>41,013,674</i>	<i>45,339,003</i>	<i>28,859,495</i>	<i>84,363,537</i>	<i>46,411,757</i>	<i>157,340,858</i>	<i>117,518,882</i>	<i>59,743,158</i>	<i>162,097,508</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$2,767,688	\$2,796,373	\$3,165,427	\$4,230,817	\$4,542,426	\$4,725,364	\$5,062,496	\$6,106,469	\$5,769,152	\$3,529,300	\$4,720,658
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$47,441	\$45,139	\$38,930	\$92,132	\$97,508	\$132,313	\$60,981	\$52,035	\$117,300	\$279,586	\$211,545
Other Shellfish	--	--	--	--	--	--	--	--	--	--	\$6,193
Pacific Cod	\$242,481	\$4,113	\$1,022	\$4,965	\$13,798	--	\$28,059	\$72,202	\$391,971	--	\$684,639
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$2,831,533	--	\$2,942,234	\$4,332,028	\$4,034,664	\$4,532,524	\$2,885,472	\$2,527,437	\$2,760,678	\$4,021,245	\$3,620,401
Salmon	\$39,839,520	\$19,650,950	\$16,874,081	\$18,212,285	\$17,670,155	\$27,815,915	\$30,908,942	\$58,306,861	\$62,073,991	\$37,257,972	\$82,799,478
<i>Total²</i>	<i>\$45,728,661</i>	<i>\$22,496,576</i>	<i>\$23,021,693</i>	<i>\$26,872,226</i>	<i>\$26,358,551</i>	<i>\$37,206,116</i>	<i>\$38,945,950</i>	<i>\$67,065,004</i>	<i>\$71,113,092</i>	<i>\$45,088,103</i>	<i>\$92,042,914</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Cordova Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	122,994	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	565,235	926,224	1,038,636	1,150,133	1,140,947	1,015,823	996,844	1,115,460	1,048,164	911,938	844,830
Herring	1,969,308	2,276,120	--	--	--	--	--	--	--	674,696	-
Other Groundfish	33,786	33,362	49,674	95,863	179,066	97,709	50,049	72,711	142,390	106,643	87,426
Other Shellfish	--	--	--	--	42,882	--	--	--	--	14,005	34,192
Pacific Cod	979,010	40,212	8,443	149,646	625,314	543,882	41,607	63,097	480,533	508,525	751,426
Pollock	3,860	--	--	--	--	--	--	--	--	--	898
Sablefish	133,184	191,982	302,817	437,949	421,487	329,704	306,461	416,516	499,532	401,287	347,967
Salmon	58,690,739	47,591,133	31,152,859	41,240,800	29,700,792	68,897,205	27,883,608	78,113,796	55,489,635	26,532,977	86,814,305
<i>Total²</i>	<i>62,375,122</i>	<i>51,182,027</i>	<i>32,552,429</i>	<i>43,074,391</i>	<i>32,110,488</i>	<i>70,884,323</i>	<i>29,278,569</i>	<i>79,781,580</i>	<i>57,660,254</i>	<i>29,150,071</i>	<i>88,881,044</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	\$317,763	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$1,482,991	\$1,847,227	\$2,361,924	\$3,261,898	\$3,406,680	\$3,071,916	\$3,575,754	\$4,781,383	\$4,565,577	\$2,899,675	\$3,900,495
Herring	\$194,524	\$218,415	--	--	--	--	--	--	--	\$187,433	-
Other Groundfish	\$22,503	\$18,344	\$29,294	\$49,133	\$46,257	\$39,337	\$36,040	\$47,464	\$81,668	\$58,704	\$43,355
Other Shellfish	--	--	--	--	\$82,420	--	--	--	--	\$28,931	\$102,556
Pacific Cod	\$357,229	\$13,849	\$1,289	\$45,115	\$166,675	\$168,688	\$12,424	\$30,308	\$301,518	\$174,530	\$201,964
Pollock	\$283	--	--	--	--	--	--	--	--	--	\$77
Sablefish	\$510,494	\$607,488	\$968,614	\$1,565,101	\$1,215,838	\$760,465	\$972,175	\$1,179,881	\$1,547,865	\$1,394,254	\$1,392,832
Salmon	\$18,168,465	\$16,340,140	\$12,247,396	\$15,909,820	\$14,278,794	\$18,894,602	\$17,966,454	\$30,406,059	\$32,212,101	\$19,123,615	\$45,392,516
<i>Total²</i>	<i>\$20,736,490</i>	<i>\$19,363,226</i>	<i>\$15,608,517</i>	<i>\$20,831,067</i>	<i>\$19,196,664</i>	<i>\$22,935,008</i>	<i>\$22,562,847</i>	<i>\$36,445,095</i>	<i>\$38,708,729</i>	<i>\$23,867,142</i>	<i>\$51,033,796</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Although not connected to a highway system, Cordova’s developed tourism infrastructure and location make it very appealing to recreational fishermen. Recreational fishing based from Cordova fish by charter boats, private boats owned by local residents, private boats owned by non-residents, and by shore and dock. In 2010, there were a total of 3 active sportfishing businesses registered in Cordova, and 13 residents had sport fish guide licenses; a decrease from 9 and 32 in 2000, respectively. Also in that year, 2,966 sportfishing licenses were sold in the community, compared to 2,275 in 2000; and 1,010 sportfishing licenses were issued to residents, compared to 1,199 in 2000.

Cordova is located in North Gulf Coast/PWS Statewide Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there were a total of 212,793 saltwater angler days fished in the region, compared to 122,459 in 2000, representing a 74% increase. Non-residents made up 30.4% of total saltwater angler days fished in 2010 in the region, compared to 32.3% in 2000. Regional saltwater angler days fished peaked at 300,205 in 2007. Total freshwater angler days fished was 22,979 in 2010, compared to 12,108 in 2000; an increase of 90%. Non-residents made up 57% of freshwater angler days fished in 2010 in the region, compared to 26% in 2000. Total freshwater angler days fished in the region peaked in 2010. Information regarding these sportfishing trends can be found in Table 11.

According to harvest survey data,¹⁵³ local private anglers target all five species of Pacific salmon, rainbow trout, Dolly Varden char, cutthroat trout, Pacific halibut, rockfish, lingcod, Pacific cod, shark, smelt, Dungeness crab, Tabber crab, razor clams, hardshell clams, and other finfish. According to 2010 harvest survey records, charter boats kept 3 king salmon, 66 coho salmon, 304 halibut, 47 lingcod, and 410 rockfish. In a survey conducted by the AFSC in 2011, community leaders reported that recreational fishermen based in Cordova target all five species of Pacific salmon, halibut, rockfish, shrimp, and clams.

Table 11. Sport Fishing Trends, Cordova: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Cordova ²
2000	9	32	1,199	2,275
2001	10	37	1,187	2,870
2002	9	57	1,227	3,901
2003	8	44	1,147	3,611
2004	7	44	1,158	3,629
2005	8	21	1,143	3,607
2006	7	19	1,083	3,470
2007	7	19	1,088	3,182
2008	4	15	965	3,012
2009	3	10	990	2,674
2010	3	13	1,010	2,966

¹⁵³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Cordova: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Although Cordova’s economy and culture are not dependent on subsistence activities like many other rural communities, subsistence harvesting is still widely practiced by residents. In a survey conducted by the AFSC in 2011, community leaders reported that the three most important marine subsistence resources to residents in Cordova are sockeye, coho, and king salmon. In a 2003 survey by ADF&G measuring household subsistence participation, 74% of households surveyed were found to be harvesting salmon, 74% were harvesting halibut, 9% were harvesting marine mammals, 17% were harvesting marine invertebrates, and 17% were harvesting non-salmon fish. In that year, surveyed residents were harvesting 112.89 lbs of those resources per capita. Of the species listed by ADF&G, sockeye salmon was harvested the most often between 2000 and 2008, followed by king and coho salmon (Table 12). According to ADF&G’s *Community Subsistence Information System*,¹⁵⁴ species which Cordova residents harvest or use include: chitons, butter clams, Dungeness crab, limpets, octopus, littleneck clams,

¹⁵⁴ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

pinkneck clams, razor clams, shrimp, cockles, king crab, mussels, Tanner crab, harbor seal, Steller sea lion, black rockfish, cutthroat trout, Dolly Varden, eulachon, grayling, herring, lake trout, lingcod, Pacific cod, Pacific tom cod, rainbow trout, red rockfish, sablefish, sea bass, skates, starry flounder, steelhead, greenling, Irish lord, smelt, sole, sturgeon, and wolf fish.

In 2003, residents reported that 35,047 lbs of non-salmon fish were harvested, which exceeded harvests for all salmon species combined between 2000 and 2008. However, information is only available for that year and it is unknown whether other years result in similar harvest sizes. In 2008, residents reported harvesting 3,799 salmon total, a significant increase from 94 in 2000. Reported salmon harvests peaked in 2007 at 5,959 fish. In 2010, 557 residents were issued Subsistence Halibut Registration Certificates (SHARC) by NMFS, compared to 358 residents in 2003. In that year, and estimated 28,339 lbs of halibut was harvested on 167 SHARC, compared to 15,498 lbs on 102 SHARC in 2003. Halibut subsistence harvests peaked in 2005 at 45,751 lbs harvested on 281 SHARC.

In 2010, 134 sea otters were reported harvested, compared to 213 in 2000. In that decade, an estimated total of 1,747 sea otters were harvested. Reported sea otter harvests peaked in 2004 at 298. Finally, an estimated 602 harbor seals and 15 Steller sea lions were harvested between 2000 and 2008. Estimated harbor seal harvests peaked in 2001 and 2002 at 103 seals each year. Estimated Steller sea lion harvests peaked in 2001 and 2002 at four sea lions each year (Table 15).

Table 12. Subsistence Participation By Household And Species, Cordova: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	74%	74%	9%	17%	17%	112.89
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Cordova: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	3	2	32	n/a	n/a	n/a	62	n/a	n/a
2001	5	6	15	n/a	n/a	n/a	443	n/a	n/a
2002	4	7	10	n/a	n/a	n/a	403	n/a	n/a
2003	323	315	583	n/a	37	n/a	1,502	3,596	35,047
2004	426	407	989	5	48	3	1,797	n/a	n/a
2005	216	205	222	n/a	15	1	805	n/a	n/a
2006	349	332	668	10	1	n/a	3,549	n/a	n/a
2007	390	368	1,005	2	11	6	4,935	n/a	n/a
2008	406	388	378	n/a	49	21	3,318	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Cordova: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	358	102	15,498
2004	526	262	54,186
2005	602	281	45,751
2006	607	248	29,027
2007	615	282	28,716
2008	587	254	27,547
2009	599	234	23,364
2010	557	167	28,339

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Cordova: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	213	n/a	n/a	n/a	88	n/a
2001	n/a	108	n/a	n/a	4	103	n/a
2002	n/a	171	n/a	n/a	4	103	n/a
2003	n/a	96	n/a	n/a	3	78	n/a
2004	n/a	298	n/a	n/a	3	78	n/a
2005	n/a	294	n/a	n/a	n/a	57	n/a
2006	n/a	174	n/a	n/a	n/a	31	n/a
2007	n/a	68	n/a	n/a	1	32	n/a
2008	n/a	173	n/a	n/a	n/a	32	n/a
2009	n/a	138	n/a	n/a	n/a	n/a	n/a
2010	n/a	134	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Gakona (guh-KOH-nuh)



People and Place

*Location*¹⁵⁵

Gakona is at the confluence of the Copper and Gakona Rivers, 15 miles northeast of Glennallen. It lies at mile 2 on the Tok cutoff to the Glenn Highway, just east of the Richardson Highway. Gakona is located in the Valdez-Cordova Census Area and the Chitina Recording District.

*Demographic Profile*¹⁵⁶

In 2010, there were 218 residents in Gakona, ranking it the 189th largest community in Alaska. Overall, between 1990 and 2010, the population has increased by 772%, yet since 2000 the population has changed very little (Table 1). The majority (79.4%) of Gakona residents identified themselves as White, compared to 74.3% in 2000. Also in that year, 0.9% identified themselves as Hispanic or Latino, compared to 1.4% in 2000. The biggest changes over this decade included an increase in the population of Native Alaskans and a decrease in the population with two or more races (Figure 1; 19.7% as American Indian or Alaskan Native, compared to 12.1% in 2000; and 0.9% identified themselves as two or more races, compared to 10.7% in 2000).

The overall population structure of Gakona in 2000 and 2010 is shown in Figure 2. In 2010, there was a relatively even spread of males and females across each age category, though the 70 to 79, 20 to 29, and 0 to 9 age groups show the greatest difference in the spread of males and females. For example, in 2010, the 70 to 79 age group was 5.1% males and 0.9% females, and the 20 to 29 age group was 4.6% males and 2.3% females. In 2000, there were relatively few residents in the 50 to 59 age range (13%), whereas in 2010, 22.9% of residents were in this age category. Further changes in population and in racial and ethnic composition from 2000 to 2010 can be found in Table 1 and Figures 1 and 2.

In 2010, the gender makeup was 52.2% male and 47.7% female, and somewhat similar to the gender makeup of the state as a whole (52% male, 48% female; see Figure 2). The median age was 40.7 years, which is slightly higher than the U.S. national average of 36.8 years and significantly higher than the median age for Alaska, 33.8 years.

¹⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

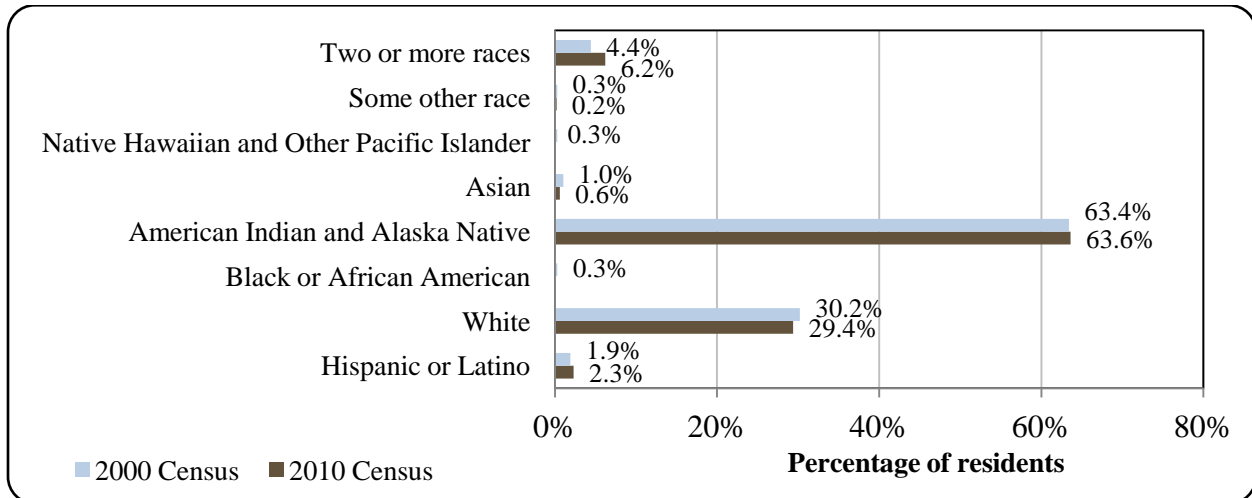
Table 1. Population in Gakona from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	25	-
2000	215	-
2001	-	218
2002	-	241
2003	-	222
2004	-	228
2005	-	218
2006	-	240
2007	-	231
2008	-	216
2009	-	202
2010	218	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

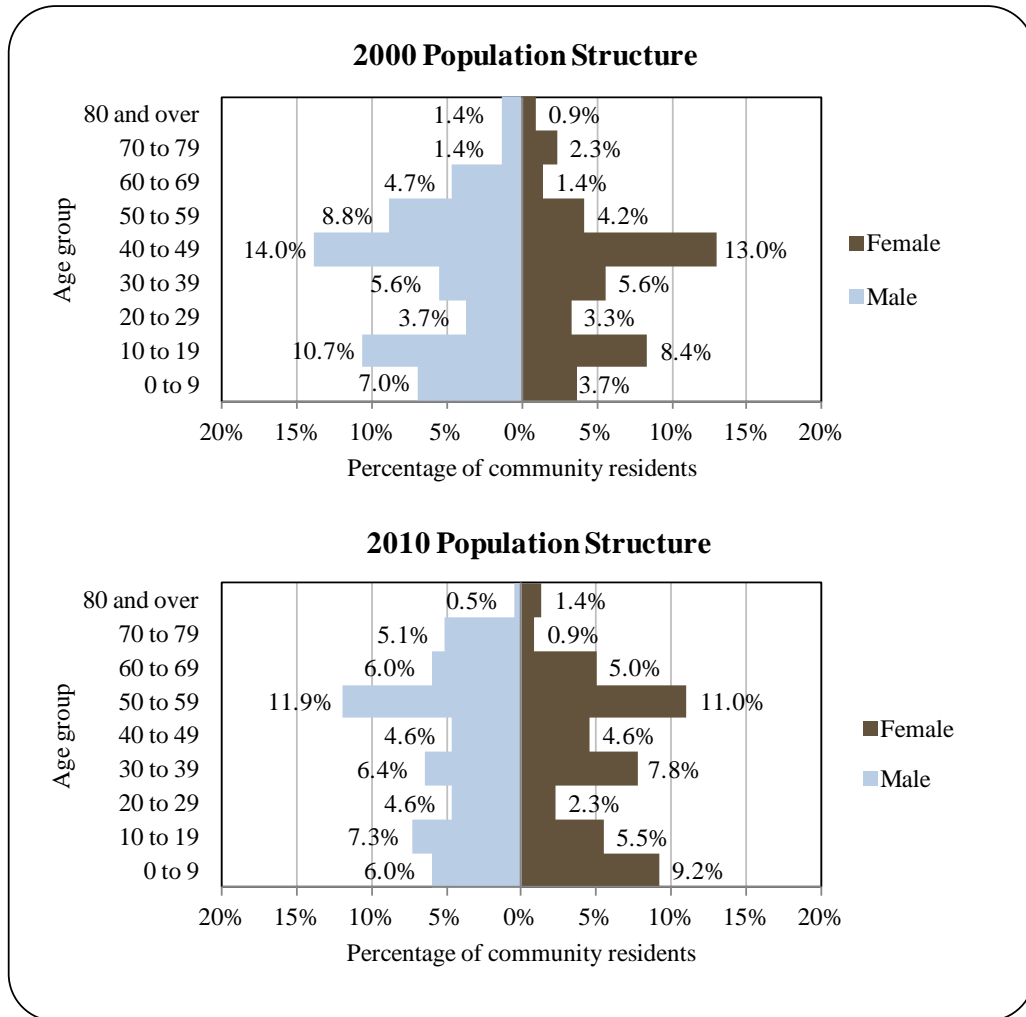
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Gakona: 2000-2010 (U.S. Census).



In 2010, the average household size was 2.5, a significant decline from 3.5 in 1990 and about the same when compared to 2000 (2.6). There has been an increase in occupied households, from seven in 1990 to 84 in 2000 to 86 in 2010. Of those occupied households surveyed in 2010, 75.6% were owner-occupied and of the 86 housing units reported in Gakona, 52.3% were considered vacant, compared to 71.4% in 2000. Of those households surveyed in 2010, 24.4% were renter-occupied. There are no records of residents living in group quarters in 2000 and 2010.

Figure 2. Population Age Structure in Gakona Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-2010 American Community Survey (ACS),¹⁵⁷ in terms of educational attainment, 92.1% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to 91% of Alaskan residents overall. Also in 2010, 3.9% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 3.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 13.8% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 1.3% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 36.8% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 20.4% were

¹⁵⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Ahtna Athabascans have lived in the Copper River basin for thousands of years. “Ahtna” is the Athabaskan name for the Copper River. Most settlements along the river were either fish camps, winter villages, or hunting and trapping camps. Gakona served as a wood and fish camp and later became a permanent village.¹⁵⁸ In 1904, Doyle’s Roadhouse was constructed at the junction of the Valdez-Eagle and Valdez-Fairbanks Trails and became an essential stopping point for travelers. There was also a post office, stagecoach station, and blacksmith shop here. Some buildings are still standing, like the Gakona Lodge which was built in 1929 and is on the National Register of Historical Places. The lodge contains many old relics of the gold rush era in the late 1890s.¹⁵⁹

Natural Resources and Environment

Gakona is located in the center of Copper Valley, surrounded by mountains and the famous Copper River. Gakona is located adjacent the Copper, Gakona and Gulkana Rivers allowing access to world class Chinook salmon, sockeye salmon and rainbow trout fishing. Gakona is located in the continental climate zone, with long, cold winters and relatively warm summers. Temperature extremes have been recorded from -62 to 91 °F. Annual snowfall averages 61 inches, with total precipitation of 13 inches.¹⁶⁰

Between 1910 and 1938, the Kennecott Copper Company operated in Gakona. The company also built the railroad between Cordova and Kennecott/McCarthy, and today the mine site is a National Historic Landmark managed by the National Park Service. During the gold rushes in 1898 and 1899, the Copper River Basin was a staging area for thousands of prospectors traveling to Alaska’s interior, including Gakona.¹⁶¹

The Copper River or Ahtna River is a 300 mile river in south-central Alaska. It drains a large region of the Wrangell Mountains and Chugach Mountains into the Gulf of Alaska. It is known for its extensive delta ecosystem, as well as for its prolific runs of wild salmon, which are among the most highly prized stocks in the world. It is the tenth largest river in the United States, as ranked by average discharge volume at its mouth. The Copper River Delta, which extends for roughly 700,000 acres is the considered the largest contiguous wetlands along the Pacific coast of North America. It is used annually by 16 million shorebirds, including the world's entire population of western sandpipers. It is also home to the world's largest population of nesting trumpeter swans and is the only known nesting site for the dusky Canada goose. Over 20,000

¹⁵⁸ Simeone, William E. and James Kari. (2002). *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. Technical Paper No. 270. Alaska Department of Fish and Game. Division of Subsistence. Juneau, Alaska. July.

¹⁵⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁰ See footnote 159.

¹⁶¹ Ibid.

years ago, the area now drained by the great Copper River was a massive lake, covering nearly 2,000 square miles.

The name of the river comes for the abundant copper deposits along the upper river that were used by Alaska Native population and then later by settlers from the Russian Empire and the United States. Extraction of the copper resources was rendered difficult by navigation difficulties at the river's mouth. Finalized in 1911, the construction of the Copper River and Northwestern Railway from Cordova through the upper river valley allowed widespread extraction of the mineral resources, in particular from the Kennecott Mine, as mentioned above, which was discovered in 1898. The mine was abandoned in 1938 and is now a ghost town tourist attraction. A road runs from Cordova to the lower Copper River near Child's Glacier, following the old railroad route and ending at the reconstructed "Million Dollar Bridge" across the river. The Tok Cut-Off follows the Copper River Valley on the north side of the Chugach Mountains. To the west of Gakona, is Lake Louise, where there are vast deposits of coal.¹⁶²

In August 2011, the Native Village of Gakona and the Mt. Sanford Tribal Consortium partnered to reduce solid waste in Gakona, removing 90 tons or about 180,000 pounds. This was achieved by the removal of about 110 abandoned cars and trucks from Native land in the Gakona area, many of which were removed from one large dumping ground in the community. The Native Village of Gakona began working with the Indian General Assistance Program with the Environmental Protection Agency in 2004 on a number of environmental projects.¹⁶³ However, according to the Alaska Department of Environmental Conservation (DEC), there were no notable environmental remediation sites active in 2010.¹⁶⁴

Current Economy¹⁶⁵

The 2006-2010 ACS estimated 107 residents as employed in that time period and 77.6% of residents aged 16 years and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 11.6%, almost twice the statewide rate of 5.9%. However, an estimated 5.7% of residents were living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed in 2010, an estimated 28.8% worked in the private sector and an estimated 71.2% worked in the public sector.

In 2010,¹⁶⁶ the estimated per capita income was \$32,829 and the estimated median household income was \$104,375, compared to \$18,143 and \$33,750 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,¹⁶⁷ the real per capita income (\$23,858) and real median household income (\$44,381) indicate that both individual earnings and household earnings increased significantly during this time period. In 2010, Gakona ranked

¹⁶² Alaska Department of Natural Resources and Division of Geological and Geophysical Surveys (n.d.). *Department Homepage*. Retrieved August 1, 2012 from <http://www.dggs.dnr.state.ak.us/>

¹⁶³ Native Village of Gakona (n.d.). *Native Village of Gakona Homepage*. Retrieved December 13, 2011 from http://www.nvgakona.com/Native_Village_of_Gakona/Welcome.html

¹⁶⁴ Alaska Dept. of Environmental Conservation (n.d.). *List of contaminated site summaries by region*. Retrieved July 31, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁶⁵ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁶⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁶⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

46th of 305 communities from which per capita income was estimated, and 7th of 299 communities for which median household income was estimated.

However, Gakona's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁶⁸ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development.¹⁶⁹ According to the ALARI database, residents earned \$2,845,759 million in total wages in 2010.¹⁷⁰ When paired with the 2010 Decennial Census population, the per capita income is \$13,053, which was significantly less than the 2010 ACS estimate and suggests that caution should be used when using ACS data.

In 2010, the greatest number of workers was employed in the public sector (67.3%), while 16.8% were employed in the private sector, while no residents reported themselves as self-employed. As seen in Figure 3, by industry, slightly over half (52.3%) of the employed residents were estimated to work in education services, health care, and social assistance sectors; followed by public administration sectors (14.0%) and arts, entertainment, recreation, accommodation, and food service sectors (14.0%). Compared with 2000, significant proportional increases occurred in education services, health care, and social assistance sectors, as well as information and public administration sectors. However, there was a significant drop in the percentage of those estimated to be employed in retail trade sectors from 12.7% in 2000 to an estimated 8.4% in 2010. A significant drop was seen in the percentage of those estimated to be employed in scientific/professional/management sectors from 9.5% in 2000 to an estimated 2.8% in 2010.

By occupation type, most (69.2%) employed residents were estimated to hold management or professional positions in 2010; followed by service positions (16.8%); sales or office positions (11.2%); and natural resources, construction, or maintenance positions (2.8%). Compared to 2000, significant proportional decreases occurred in natural resources, construction, or maintenance positions sales and office occupations, and significant proportional increases occurred in service and management and professional occupations. As an additional source of occupational information, according to ALARI estimates, in 2010, accommodation and food service, and construction workers made up the majority of occupations.¹⁷¹ Further trends for employment by industry and occupation can be found in Figures 3 and 4.

¹⁶⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁶⁹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁷⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁷¹ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Gakona (U.S. Census).

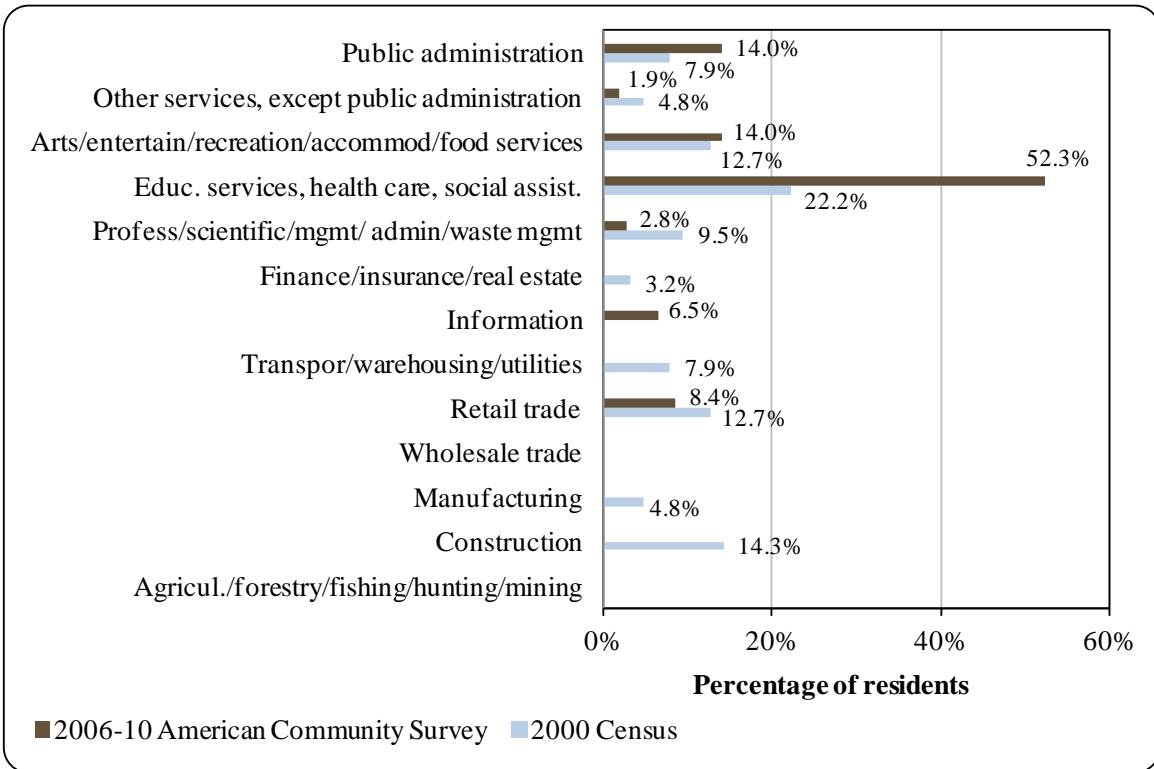
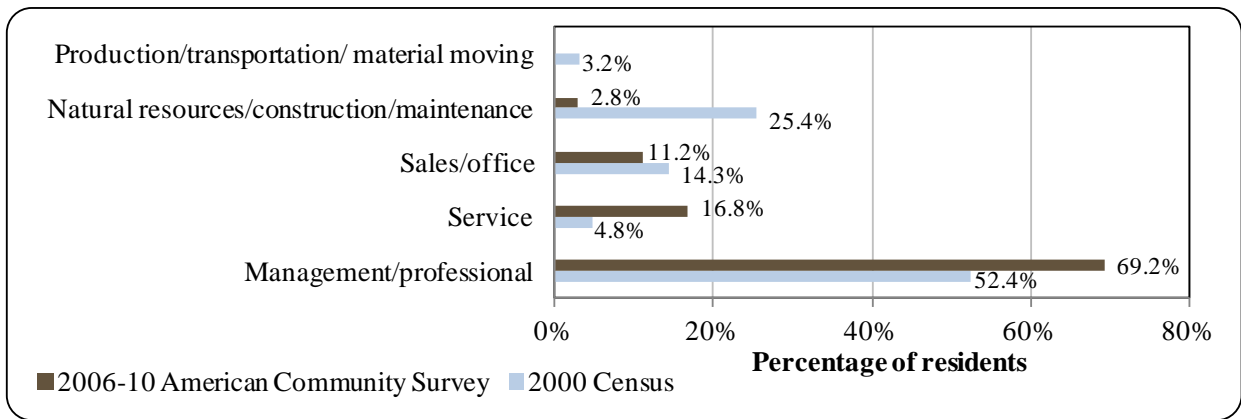


Figure 4. Local Employment by Occupation in 2000-2010, Gakona (U.S. Census).



Governance

Gakona is an unincorporated city and is not located in an organized borough, so there are no city or borough officials in the community. Given this, there is no local authority to set a municipal budget or collect taxes or revenue (Table 2). However, the Native Village of Gakona is a U.S. Bureau of Indian Affairs (BIA) recognized tribe and serves as the governing body for the village.¹⁷²

The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Gakona is Ahtna, Incorporated, and the local ANCSA chartered non-profit is the Cooper River Native Association. The ANCSA chartered village corporation is Ahtna, Inc.

Gakona is home to the Mount Sanford Tribal Consortium (Kelt'aeni), a tribal consortium made up of two federally recognized Tribal Councils of Chistochina and Mentasta Lake.¹⁷³

The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and Bureau of Citizenship and Immigration Services offices are all located in Cordova.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Gakona from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

¹⁷² Native Village of Gakona (n.d.). *Native Village of Gakona Homepage*. Retrieved December 13, 2011 from http://www.nvgakona.com/Native_Village_of_Gakona/Welcome.html.

¹⁷³ Mount Sanford Tribal Consortium (n.d.). *Mount Sanford Tribal Consortium Homepage*. Retrieved December 13, 2011 from <http://www.mstc.org/mstc.html>.

Infrastructure¹⁷⁴

Connectivity and Transportation

The Glenn/Tok cutoff and Richardson Highway provides road access to the Anchorage, Fairbanks, and the Lower 48. The Richardson Highway connects Valdez to Gakona. There is a 5,000' paved runway in nearby Gulkana. The nearest airport to Gakona is approximately 130 miles away in Valdez, where, as of June 2012, roundtrip airfare from Anchorage to Valdez costs \$314.¹⁷⁵

Facilities

Electricity in Gakona is provided by Copper Valley Electric Association, Inc and operated by REA Co-op. The local communication service infrastructure is provided by Copper Valley Telephone Cooperative, AT&T Alascom GCI, and local radio stations include KCAM-AM and KUAC-FM. All residences have individual wells and septic systems and complete plumbing. The school uses its own well-water system. Refuse collection services are available from Copper Basin Sanitation, which hauls waste to the Glennallen landfill.

Medical Services

The Gakona Clinic, which is a designated Community Health Aid Program site, is operated by the Mt. Sanford Tribal Consortium and owned by the Village Council. Emergency Services have highway and air access and are within 30 minutes of a higher-level satellite health care facility. Emergency service is provided by 911 Telephone Service and volunteers. The nearest hospital to Gakona is the Mat-Su Regional Medical Center in Palmer, Alaska, about 132 miles away.

Educational Opportunities

Gakona is located in the Copper River School District. In 2011, there was one school, the Gakona Elementary School, which had no students or teachers.¹⁷⁶

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Copper River and Bering River districts are located on the Gulf of Alaska east of Prince William Sound. Covering over 1,100 square miles, the Copper River District is the largest district in Prince William Sound. By contrast, Bering River District is approximately one-sixth the size with an open area greater than 200 square miles. The Copper River drains over 27,000

¹⁷⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved December 12, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁵ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

¹⁷⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

square miles of interior Alaska while the Bering River has a drainage area of only a few hundred square miles. Together, these systems provide spawning and rearing habitat for all five species of Pacific salmon. Sockeye, coho and Chinook salmon runs are harvested by approximately 500 drift gillnet commercial permit holders and managed by the local Alaska Department of Fish and Game office in Cordova.

The sockeye and Chinook salmon runs that have been commercially fished since the late 1800s are among the earliest and most prized in the state.¹⁷⁷ Ahtna Athabascans have long fished along the Copper River¹⁷⁸ and Gakona itself continues to be a popular salmon and trout fishing destination. Early research on the Copper River salmon is related to the development of the commercial fishery at the mouth of the river. Between 1889 and 1905, a commercial fishery targeting Copper River stocks of salmon was developed on the Copper River delta. In 1915, the fishery expanded into the lower Copper River up to Baird Canyon and in 1924 Congress passed the White Act, which prohibits commercial fishing in the main stem of the Copper River. After the passage of the White Act, the federal government conducted periodic harvest surveys on the upper river and monitored escapement into the river. Following statehood in 1959, the State of Alaska took over management of the Copper River salmon fishery.¹⁷⁹

Ahtna oral tradition indicates that every 30 or 40 years the salmon runs on the Copper River failed¹⁸⁰ and there Ahtna stories of starvation and hard times when people had to rely upon resources other than salmon support this claim. Today, there are indications that certain wild stocks of sockeye and Chinook salmon may have declined from historical levels. The Ahtna have identified 14 different species of fish and 21 different salmon runs or stocks in the Copper River Basin, and sockeye salmon are the most culturally valued fish of the Ahtna.¹⁸¹ The cultural significance of sockeye salmon is shaped by the fact that this species of salmon has been critical to the Ahtna's economic and cultural survival for at least 1,000 years.¹⁸²

Given that Gakona is more than 50 miles from the coast, no federal fisheries regulatory areas are located within the immediate vicinity. Gakona is not eligible for the Community Quota Entity (CQE) program. The community is also not eligible to participate in the Community Development Quota (CDQ) program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Gakona does not have a registered shoreside processing plant. The nearest shoreside processing plant is located in Cordova.

¹⁷⁷ Alaska Department of Fish and Game (n.d.). *Commercial Fisheries Overview: Copper River Management Area*. Retrieved August 1, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyareacopperriver.main>

¹⁷⁸ Simeone, William E. and James Kari (2002). *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. Technical Paper No. 270. Alaska Department of Fish and Game. Division of Subsistence. Juneau, Alaska. July.

¹⁷⁹ Ibid.

¹⁸⁰ See footnote 178.

¹⁸¹ Ibid.

¹⁸² Workman, William (1977). Ahtna archaeology: a preliminary statement. In *Problems in the Prehistory of the North American Subarctic: the Athapaskan Question*. Pp.22-39. J.W. Helmer, S. Van Dyke, and F. Kense, eds. Calgary: University of Calgary Archeological Association.

Fisheries-Related Revenue

Given the lack of an incorporated governance structure, there was no reported fisheries-related municipal revenue for Gakona between 2000 and 2010.

Commercial Fishing

Commercial fishing plays a small role in the economy of Gakona. In 2010, five permits were held by four permit holders and of these, 100% were actively fished. Since 2000, when there were three permits issued and three permit holders, there has only been a slight increase in the number of permits issued. Between 2000 and 2010, residents held permits issued by the Commercial Fisheries Entry Commission (CFEC). In that time period, the number of salmon CFEC permit holders ranged from two to four, there was one herring CFEC permit holder between 2005 and 2007, and one halibut CFEC permit holder between 2000 and 2008. Residents holding CFEC permits participated in Bristol Bay salmon drift and set gillnet fisheries.

No residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits between 2000 and 2010. Finally, no residents participated in the sablefish or crab catch share programs between 2000 and 2010. In this same time period, limited participation was seen in the halibut catch share program where participation was non-existent until 2006 when 32,154 were held by one resident. In 2007, no halibut quota shares were held and then from 2008 to 2010 only 489 shares were held each year, again by one account holder (see Table 6).

Although no landings were made in Gakona, local residents did make commercial landings elsewhere. For example, ex-vessel revenue earned by Gakona residents landing catch outside of Gakona totaled \$721,322 in 2010, a significant increase compared to the \$497,668 earned from landings in 2009, and all of which was based on salmon landings. All data on ex-vessel revenue earned by Gakona residents between 2000 and 2008 is confidential, so reporting trends for this time period is not possible. Since 2004, there has been an 84.2% decrease (from 19 to 3) in the number of vessels homeported and a 66.7% decrease (from 15 to 5) in the number of vessels primarily owned by Gakona residents. Between 2000 and 2010 the number of crew license holders has ranged from one to three. As of 2010, there are no fish buyers or shoreside processors in Gakona. Further trends for commercial fishing in Gakona between 2000 and 2010 can be found in Tables 4 through 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Gakona: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Gakona: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	1	1	1	0	0	0
	Fished permits	0	0	0	0	0	1	1	1	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	100%	100%	100%	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	1	1	1	0	0	0
Herring (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	n/a	n/a
	Total permit holders	1	1	1	1	1	1	1	1	1	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Gakona: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	2	2	2	2	2	2	4	5	5
	Fished permits	2	2	2	2	2	2	2	2	4	5	5
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	2	2	2	2	2	2	2	2	3	4	4
<i>Total CFEC Permits²</i>	<i>Permits</i>	3	3	3	3	3	4	4	4	5	5	5
	<i>Fished permits</i>	2	2	2	2	2	3	3	3	4	5	5
	<i>% of permits fished</i>	67%	67%	67%	67%	67%	75%	75%	75%	80%	100%	100%
	<i>Permit holders</i>	3	3	3	3	3	3	3	3	4	4	4

Note: n/a indicates that no data were reported for that year.

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Gakona: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Gakona ²	Total Net Pounds Landed in Gakona ^{2,5}	Total Ex-Vessel Value of Landings in Gakona ^{2,5}
2000	3	0	0	22	19	0	0	\$0
2001	3	0	0	20	20	0	0	\$0
2002	2	0	0	15	15	0	0	\$0
2003	2	0	0	15	19	0	0	\$0
2004	2	0	0	15	19	0	0	\$0
2005	2	0	0	2	1	0	0	\$0
2006	3	0	0	2	1	0	0	\$0
2007	2	0	0	3	2	0	0	\$0
2008	1	0	0	3	2	0	0	\$0
2009	1	0	0	5	2	0	0	\$0
2010	3	0	0	5	3	0	0	\$0

Note: n/a indicates that no data were reported for that year.

¹ (ADF&G) Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² (ADF&G) Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Gakona: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	1	32,154	4,315
2007	0	0	0
2008	1	489	0
2009	1	489	0
2010	1	489	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Gakona: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Gakona: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Gakona: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: n/a indicates that no data were reported for that year.

Source: (ADF&G) Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Gakona Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	624,264	767,636
<i>Total²</i>	--	--	--	--	--	--	--	--	--	624,264	767,636
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	\$497,668	\$721,322
<i>Total²</i>	--	--	--	--	--	--	--	--	--	\$497,668	\$721,322

Note: Cells showing -- indicate that the data are considered confidential.

Source: (ADF&G) Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Copper River is a major sportfishing destination in Alaska and many Gakona residents participate in recreational fishing. The Upper Copper/Upper Sustina Sport Fish Management Area (UCUSMA), offers a unique blend of freshwater fishing opportunities to sport anglers and subsistence participants. Three species of North Pacific salmon (Chinook, coho, and sockeye) are available to anglers fishing upper Copper River drainage waters. A resident-only, personal use dip net fishery and a subsistence fishery takes place in the mainstem Copper River. The upper Sustina River drainage has no anadromous salmon. A velocity barrier in Devil's Canyon prevents upstream migration in the Sustina River. Anglers can also target coho salmon stocked in several landlocked lakes of the region. Popular fisheries also occur on the area's resident stocks of Arctic grayling, Burbot, Dolly Varden, rainbow and steelhead trout, and lake trout. Smaller fisheries occur on the area's resident stocks of whitefish. Currently 29 lakes in the UCUSMA are stocked with Arctic grayling, rainbow trout, coho salmon and Arctic char. The

stocked fish are reared at state-owned hatcheries on Fort Richardson and Elmendorf Air Force Base in Anchorage.¹⁸³

In 2010, 324 sportfishing licenses were sold in the community, of which 190 were sold to Gakona residents, representing 87% of the population. Since 2000, the number of sport fish guide licenses has steadily declined, with 20 licenses issued in 2000 and 5 in 2010. Between 2004 and 2010, the number of sport fish guide licenses issued decline by 70.6%. The number of locally registered sport fish guide business averaged around seven between 2000 and 2005, while declining to an average of five between 2006 and 2010. However, only one locally registered sport fish guide business was in operation in any given year, and none operated between 2005 and 2007. The number sport fish guide licenses hit a 10-year high in 2000 at 21, and declined steadily in years following. In 2010, eight sport fish guide licenses were held in the community. According to the ADF&G harvest survey data, local charters are fishing in both freshwater and saltwater, and catch primarily coho, burbot, grayling, rockfish, Pacific cod, and razor clams.

Gakona is located within Alaska Sport Fishing Survey Area I – Upper Copper River Drainage. Information is available about freshwater sportfishing activity only at this regional scale. In general, freshwater fishing in the region surrounding Gakona was significant. Between 2000 and 2010, freshwater angler days fished varied considerably for both Alaska residents and non-Alaska residents. Alaska residents fished consistently more angler days in freshwater in this region between 2000 and 2010, averaging 31,555 angler days fished per year compared to an average of 14,109 angler days fished by non-Alaska residents. Further information about the sportfishing sector in and near Gakona is presented in Table 11.

Table 11. Sport Fishing Trends, Gakona: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Gakona ²
2000	1	21	187	204
2001	1	17	199	195
2002	1	15	176	248
2003	1	16	191	224
2004	1	17	202	339
2005	0	10	191	348
2006	0	10	191	337
2007	0	5	201	328
2008	1	10	211	349
2009	1	8	181	300
2010	1	8	190	324

¹⁸³ Alaska Department of Fish and Game. (n.d.). *Upper Copper and Sustina River Management Area*. Retrieved August 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorUpperCopperSustina.main>.

Table 11 cont'd. Sport Fishing Trends, Gakona: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	0	0	14,806	32,769
2001	0	0	12,212	31,506
2002	0	0	13,069	27,978
2003	0	0	10,901	32,550
2004	0	0	12,248	27,454
2005	0	0	11,659	25,529
2006	0	0	12,516	21,448
2007	0	0	16,970	27,658
2008	0	0	11,959	27,940
2009	0	0	11,071	33,493
2010	0	0	13,683	27,229

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Ahtna have historically engaged in subsistence fishing along the Copper River, with a particular focus on salmon.¹⁸⁴ Between 2000 and 2010, subsistence fishing by residents of Gakona targeted almost exclusively salmon (Table 13). Sockeye salmon made up the bulk of subsistence harvests between 2000 and 2008, followed by Chinook, coho, and chum. Salmon are harvested using either a dip net or a fish wheel, but only one type of gear can be used for each permit. Subsistence fishing opens in the Glennallen district of the Copper River opens June 1 and closes September 30. In 2008, the most recent year in which data are available, 33 subsistence salmon permits were issued, representing 15% of the population. In that same year, 2,300 sockeye salmon were reported as harvested, in addition to 153 Chinook salmon and 21 coho salmon. The largest harvest of Sockeye salmon occurred in 2001, when 7,188 were harvested, and the lowest harvest occurred in 2003, when 1,377 were harvested. Between 2000 and 2008, Chinook harvests were at their lowest in 2003, when 52 Chinook were harvested, and were at their highest in 2000, when 309 were harvested (Table 13).

¹⁸⁴ Simeone, William E. and James Kari (2002). *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. Technical Paper No. 270. Alaska Department of Fish and Game. Division of Subsistence. Juneau, Alaska. July.

In 2010, one halibut Subsistence Halibut Registration Certificate (SHARC) was issued, but there was no reported harvest (Table 14). Based on household surveys conducted by ADF&G, there appears to be no reliance on marine mammals for subsistence by local residents (Table 15). While the ADF&G's Community Subsistence Information System (CSIS) reports no data on the percentage of households using subsistence resources in Gakona in particular, non-salmon fish species are harvested by subsistence users on the Copper River, including: rainbow and lake trout, burbot, grayling, whitefish, steelhead, and Dolly Varden.

Table 12. Subsistence Participation by Household and Species, Gakona: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Gakona: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	65	64	309	n/a	67	n/a	6,395	n/a	n/a
2001	62	60	263	17	126	n/a	7,188	n/a	n/a
2002	43	40	186	n/a	n/a	n/a	2,474	n/a	n/a
2003	30	24	52	n/a	n/a	n/a	1,377	n/a	n/a
2004	39	34	148	n/a	n/a	n/a	3,865	n/a	n/a
2005	60	57	155	n/a	n/a	n/a	6,565	n/a	n/a
2006	53	50	145	n/a	4	n/a	4,471	n/a	n/a
2007	53	50	145	n/a	4	n/a	4,471	n/a	n/a
2008	33	31	153	n/a	21	n/a	2,300	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Gakona: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	1	n/a	n/a
2008	1	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Gakona: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Glennallen (gleh-NAL-len)



People and Place

*Location*¹⁸⁵

The community of Glennallen lies along the Glenn Highway at its junction with the Richardson Highway, 189 road miles east of Anchorage. Glennallen is located in the Valdez-Cordova Census Area and the Chitina Recording District. The community is located just west of Wrangell-St. Elias National Park.

*Demographic Profile*¹⁸⁶

In 2010, there were 483 residents in Glennallen, ranking it the 120th largest community in Alaska terms of population size. Overall, between 1990 and 2010, the population increased by 7.09%. Between 2000 and 2010, the population decreased by 12.8% and the average annual growth rate during that time was -2.3%, representing a greater decline than the statewide average of 0.75% (Table 1).

In 2010, the majority of Glennallen residents identified themselves as White (77.4%), compared to 85.2% in 2000. Additionally, 7.7% identified themselves as American Indian and Alaska Native in 2010, compared to 5.1% in 2000; 11.4% identified themselves as of two or more races in 2010, compared to 7.9% in 2000; 2.1% identified themselves as Native Hawaiian and Other Pacific Islander in 2010, compared to 1.4% in 2000; 1.4% identified themselves as Hispanic or Latino in 2010, compared to 0.5% in 2000; 0.4% identified themselves as Black or African American in 2010, compared to 0.2% in 2000; 0.6% identified themselves as Asian in 2010, compared to 0.2% in 2000; and 0.4% identified themselves as of some other race, compared to 0.0% in 2000. The largest changes were seen in the White population, which decreased over the time period, and the Alaska Native population, which increased a corresponding amount over the time period (Figure 1).

In 2010, the average household size in Glennallen was 2.29, compared to 3.31 in 2000 and 2.7 in 1990. Also in 2010, there were a total of 203 occupied housing units, compared to 204 in 2000. Of those households surveyed in 2010, 30.9% were owner-occupied and 29.5% were renter-occupied. In that same year, 39.6% were vacant, compared to 24.2% in 2000. There were 17 residents living in group quarters in 2000 and 18 in 2010.

¹⁸⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

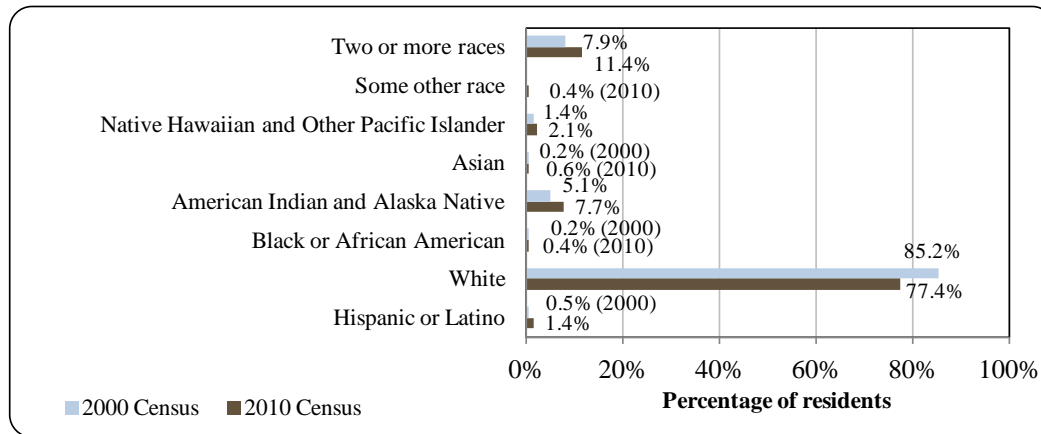
Table 1. Population in Glennallen from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	451	-
2000	554	-
2001	-	546
2002	-	527
2003	-	585
2004	-	549
2005	-	587
2006	-	519
2007	-	504
2008	-	455
2009	-	473
2010	483	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Glennallen: 2000-2010 (U.S. Census).

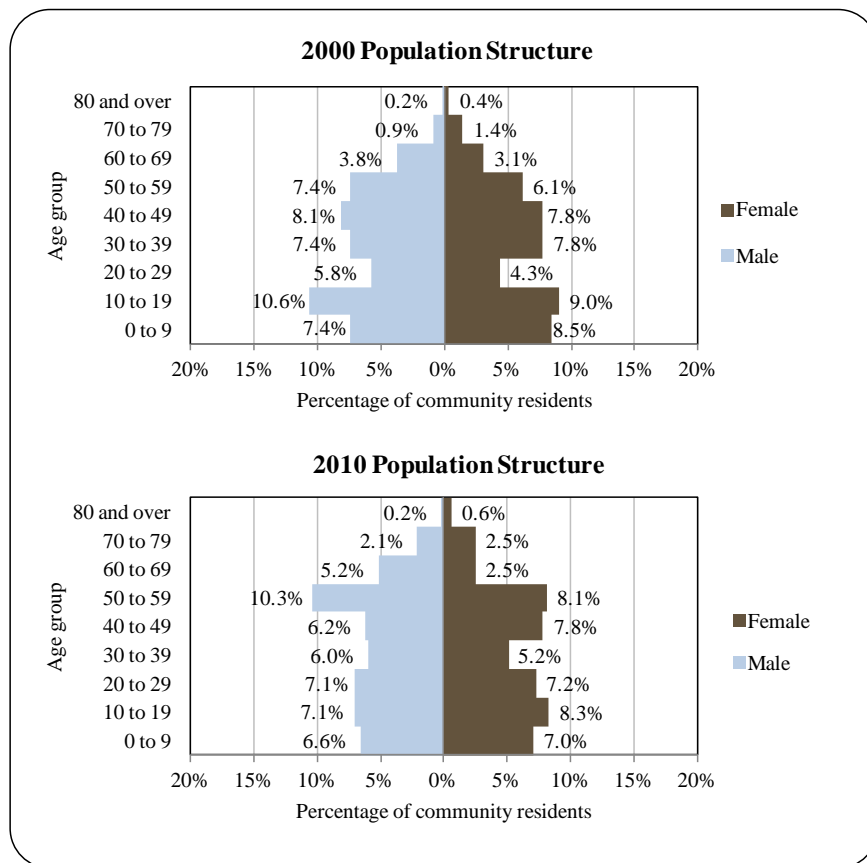


In 2010, the gender makeup in Glennallen was 50.7% male and 49.3% female, very similar to the state as a whole (52% male, 48% female). The median age was estimated to be 35.8 years, lower than the U.S. national average of 36.8 years and higher than the median age for Alaska, 33.8 years. In 2010, females outnumbered males in most age groups but 60-69 years, 50-59 years, and 30-39 years. The age groups that experienced the greatest change between 2000 and 2010 were the 50-59 and 10-19 age groups, when in 2010 the male population increased by 2.9% and decreased by 3.5% when compared to 2000. In 2010, 13.1% of the Glennallen

population was age 60 or older, compared to 9.8% in 2000. The overall population structure of Glennallen in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹⁸⁷ an estimated 97% of Glennallen residents aged 25 and over held a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 0% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 3% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 30.6% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 11% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 11.3% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 15.1% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.¹⁸⁸

Figure 2. Population Age Structure in Glennallen Based on the 2000 and 2010 U.S. Decennial Census.



¹⁸⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁸⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

History, Traditional Knowledge, and Culture

The area has historically been occupied by the Ahtna Athabaskan people, although Glennallen is currently predominantly a White community.¹⁸⁹ Most historical settlements along the Copper River were either fish camps, winter villages, or hunting and trapping camps in the uplands. The Native Alaskan residents were divided into clans and the various groups had their own hunting, fishing and berry picking areas.¹⁹⁰ While historical records show Russian contact in this area as early as the 18th century, it was not until the late 1800s that the Ahtna had their first true involvement with outside explorers. Several years after the U.S. purchase of Alaska from Russia in 1867, Lt. Henry Allen traveled the Copper River as far north as the Tanana River. With his exploration came the word of the large concentrations of copper found in this volcanic valley.¹⁹¹ The community received its modern name from Henry Allen and another early American explorer named Major Edwin Glenn.¹⁹² The settlement of Glennallen grew in the 1940s with the construction of the Glenn Highway.¹⁹³ It is one of the few communities in the Copper River region that was not built on the site of a Native village.¹⁹⁴

Natural Resources and Environment

Just outside the western boundary of Wrangell-St. Elias National Park, Glennallen is located in the continental climate zone, with long, cold winters, and relatively warm summers. The mean temperature in January is -10°F and 56°F in July. Temperature extremes can reach -50°F in winter and 80°F in summer. Snowfall averages 39 inches, with total precipitation of 9 inches per year.¹⁹⁵ The Copper River Valley is surrounded by the mountains of the Alaska Range and Talkeetna, Chugach, and Wrangell Mountains. The Denali Fault runs through the region, and more than 12 volcanoes are recognized in the Wrangell Mountains. Mt. Wrangell is considered to be an active volcano, with steam still venting from near its summit.¹⁹⁶

Forests of aspen, spruce, and balsam poplar cover much of the Valley. Permafrost is found throughout the Valley at varying depths. Common wildlife in the Valley includes moose, bison, Dall sheep, mountain goats, black bear, grizzly bear, porcupines, and many furbearers such as coyote, red fox, martin, mink, lynx, muskrat, and beaver. In addition, about 135 species of birds are present during summer months in interior Alaska, along with an approximately 3 dozen migratory species that pass through the area in spring and fall. Resident species include trumpeter swans, bald eagle, and spruce, sharptail, and ruffed grouse.¹⁹⁷

¹⁸⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁹⁰ Copper River Native Association Website. (n.d.). *About Us*. Retrieved September 6, 2012 from <http://crnative.org/company/about-us/>

¹⁹¹ Greater Copper Valley Chamber of Commerce. (n.d.). *About the Copper Valley*. Retrieved February 10, 2012 from <http://www.coppervalleychamber.com/aboutthecoppervalley.htm>.

¹⁹² See footnote 189.

¹⁹³ Alaska Tour and Travel. (n.d.). *Destinations: Glennallen Alaska*. Retrieved October 22, 2012 from <http://www.alaskatravel.com/alaska/glennallen.html>.

¹⁹⁴ See footnote 189.

¹⁹⁵ Ibid.

¹⁹⁶ Copper River Native Association. 2009. *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

¹⁹⁷ Ibid.

The Wrangell–St. Elias National Park and Preserve is a U.S. National Park and National Preserve jointly managed by the National Park Service in southeastern Alaska established in 1980 by the Alaska National Interest Lands Conservation Act. This protected area is included in an International Biosphere Reserve and is part of a UNESCO World Heritage Site. This Park and Preserve is the largest protected area managed by the National Park Service, with a total of 13,175,799 acres. Nearly 66% of the Park and Preserve is designated as wilderness, also ranking as the largest designated wilderness in the country.¹⁹⁸

As a community within the greater Copper River Basin, Glennallen has a rich natural resource harvesting history. In 1898, the U.S. Geological Survey published reports on the geology of the Copper River basin region, and several copper and gold deposits were found. For example, in 1900 the great copper deposit was staked on a ridge just north of what is now the community of McCarthy. The Kennecott Copper Company developed the mine and built the railroad between Cordova and Kennecott/McCarthy, which was active from 1910 until it shut down in 1938. Discovery of gold in 1898 and 1899 in the Klondike resulted in the creation of the Valdez-Eagle trail as an alternate route for gold miners. This resulted in Copper Basin becoming a major staging area for thousands of prospectors who were traveling to the interior regions of Alaska from the coast at Valdez. It later became an important stage coach and mail route for those people who, under the Homestead Act, had settled through the Copper Valley region.¹⁹⁹

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Glennallen as of October 2012.²⁰⁰

Current Economy²⁰¹

Glennallen is a hub of the Copper River region, acting as a center of commerce, medical services, administration, and education and community services.²⁰² The economy of Glennallen and other communities along the Glenn Highway also depends on tourism, including visitation resulting from passing traffic.²⁰³ Various state, federal, and local government offices located in Glennallen provide additional employment opportunities, including an administrative office of the Alaska Department of Fish and Game (ADF&G), a U.S. Bureau of Land Management (BLM) field office, an Alaska Department of Labor and Workforce Development (DOLWD) job center, offices of the Copper River School District, and an Alaska State Troopers post.²⁰⁴ The offices of the Ahtna, Inc., the regional Native corporation for the Copper River region, is also headquartered in Glennallen.²⁰⁵ In addition, there are several small farms in the area that provide

¹⁹⁸ National Park Service. (n.d.). *Wrangell-St. Elias National Park and Preserve*. Retrieved September 6, 2012 from <http://www.nps.gov/wrst/parkmgmt/index.htm>.

¹⁹⁹ Ibid.

²⁰⁰ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved October 9, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

²⁰¹ Unless otherwise noted, all monetary data are reported in nominal values.

²⁰² Copper River Native Association. 2009. *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

²⁰³ Alaska Dept. of Transportation and Public Facilities. 2010. *Interior Alaska Transportation Plan*. Retrieved October 22, 2012 from <http://dot.alaska.gov/nreg/studies/iatp/documents.shtml>.

²⁰⁴ See footnote 202.

²⁰⁵ Ahtna, Incorporated. 2012. *Welcome to Ahtna, Incorporated*. Retrieved October 23, 2012 from <http://www.ahtna-inc.com/>.

employment, and a number of residents hold commercial fishing permits (see *Commercial Fishing* section).²⁰⁶

Based on household surveys conducted for the 2006-2010 ACS,²⁰⁷ in 2010, the per capita income in Glennallen was estimated to be \$26,858 and the median household income was estimated to be \$49,000. These numbers represent increases from the per capita reported in 2000 (\$17,084) and a slight increase from the median household income reported in 2000 (\$38,846). If inflation is taken into account by converting the 2000 values to 2010 dollars,²⁰⁸ per capita is shown to have increased slightly, from a real per capita income figure of \$22,465 in 2000, and median household incomes appear to have decreased slightly over the decade, from a real per capita income in 2000 of \$51,082. In 2010, Glennallen ranked 88th of 305 Alaskan communities with per capita income data, and 137th in median household income, out of 299 Alaskan communities with household income data that year.

However, Glennallen's small population size may have prevented the ACS from accurately portraying economic conditions.²⁰⁹ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the DOLWD. If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Glennallen in 2010 is \$13,199.^{210,211} This estimate is lower than per capita income reported in 2000, suggesting that caution is warranted when citing an increase in per capita income in Glennallen based on 2006-2010 ACS estimates. This lower ALARI income estimate is reflected in the fact that the community was recognized as "distressed" by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²¹² It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly higher percentage of Glennallen residents was estimated to be in the civilian labor force (71.6%) compared to the civilian labor force statewide (68.8%). In the same year, 0% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was also estimated to be 0%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment, based on the ALARI database, indicates that the unemployment rate in Glennallen was much higher in 2010 (12.6%), slightly higher than the

²⁰⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved August 4, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁰⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁰⁹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²¹⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²¹¹ See footnote 207.

²¹² Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

statewide unemployment rate estimate of 11.5%.²¹³ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Also based on the 2006-2010 ACS, a majority of the Glennallen workforce was estimated to be employed in the private sector (61.8%), along with 24.7% in the public sector, and 13.4% estimated to be self-employed. Of the 283 people aged 16 and over that were estimated to be employed in the civilian labor force, almost half were estimated to be working in retail trade (48.8%), while 12.7% were estimated to be working in public administration and 11.7% in educational services, health care and social assistance industries. Smaller numbers were estimated to be working in transportation, warehousing, and utilities (6.4%), information (5.3%), arts, entertainment, recreation, accommodation, and food services (5.3%), construction (4.9%), and finance, insurance, real estate, rental and leasing (4.9%) industries. Between 2000 and 2010, employment in retail trade appears to have increased by almost 5 times, while employment in education, health care, and social assistance industries declined by over 70% (Figure 3). These shifts in employment by industry are reflected in changes in employment by occupation. Compared to 2000, approximately 42% more of the workforce was employed in sales and office occupations in 2010, while 18.7% less of the workforce was employed in management and professional occupations (Figure 4). It is also important to note that no Glennallen residents were estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries in 2010, compared to 2% of the civilian labor force in 2000 (Figure 3). The number of individuals employed in fishing industry is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

Data reported in the ALARI database conflicts somewhat with 2006-2010 ACS employment estimates, with the highest percentage of workers estimated to be employed in trade, transportation, and utilities industries (25.5%), and a higher percentage estimated to be employed in public administration (16.8% in local government and 10.9% in state government). In addition, the ALARI database suggests that 15% were employed in education and health services, 10.5% in leisure and hospitality, 5% in construction, 2.7% in natural resources and mining, 2.7% in financial activities, 2.7% in professional and business services, and 7.3% in other industries.²¹⁴

²¹³ See footnote 210.

²¹⁴ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Glennallen (U.S. Census).

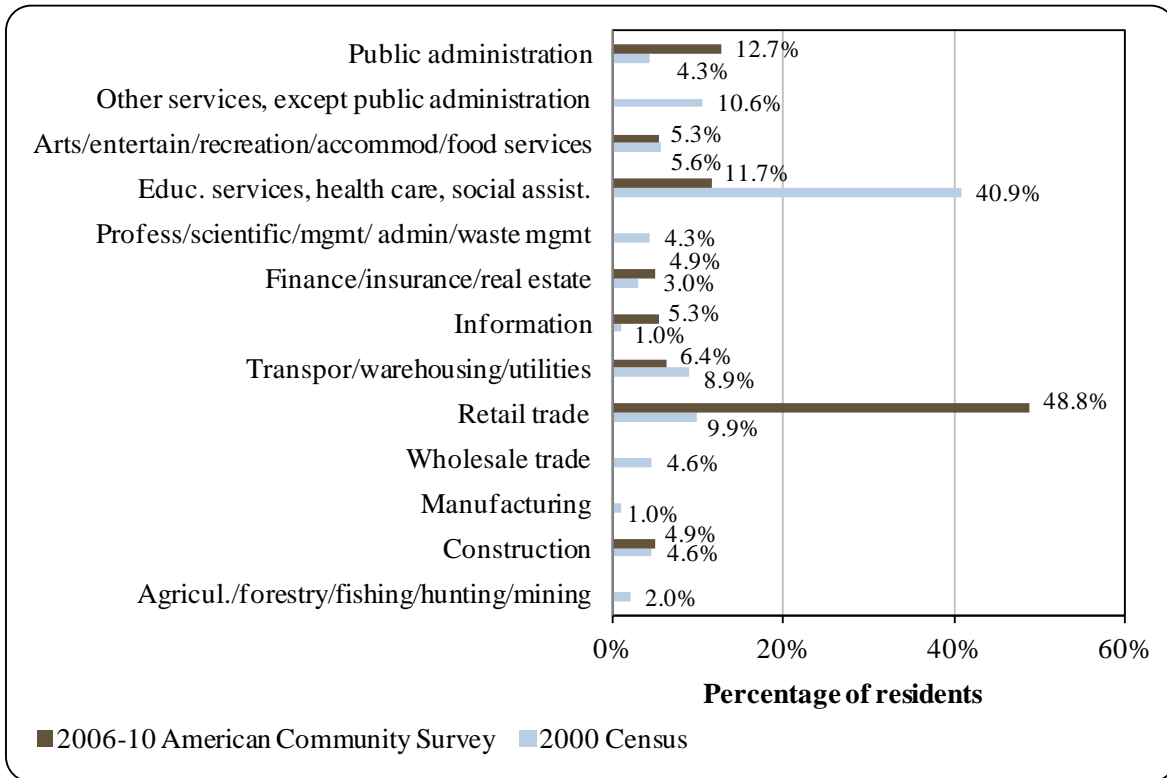
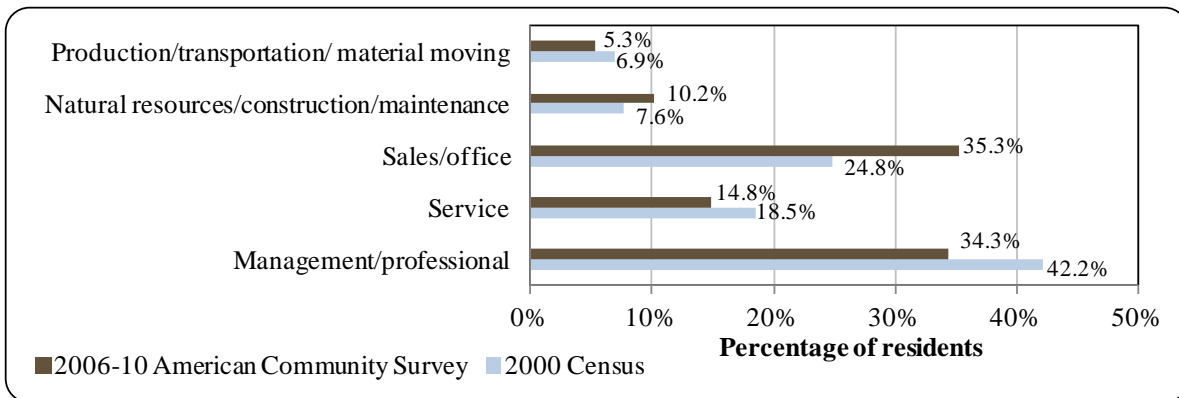


Figure 4. Local Employment by Occupation in 2000-2010, Glennallen (U.S. Census).



Governance

Glennallen is an unincorporated city located in an unorganized borough. Therefore, no information about municipal, state, or federal revenue is reported for this community (Table 2). Glennallen was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.²¹⁵

²¹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved August 4, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Although there is no Tribal Council or Native village corporation in Glennallen, many Natives living in the area are shareholders in Ahtna, Incorporated, the regional Native corporation for the Copper River region. Ahtna, Inc. is headquartered in Glennallen.²¹⁶ In addition, the Copper River Native Association (CRNA), with offices 16 miles south in Copper Center, provides health and tribal community services in the region.²¹⁷ The CRNA is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.²¹⁸

An office of the ADF&G is located in Glennallen. The closest office of the Alaska Department of Natural Resources is located in Palmer, and the nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Commerce, Community, and Economic Development, and the U.S. Bureau of Citizenship and Immigration Services are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Glennallen from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

²¹⁶ Ibid.

²¹⁷ Copper River Native Association. (n.d.). *Departments*. Retrieved October 23, 2012 from <http://crnative.org/departments/>.

²¹⁸ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

Infrastructure

Connectivity and Transportation

Glennallen is accessible by highway year-round. The Glen/Tok cutoff connects Glennallen to Palmer and Anchorage to the west and to Tok to the east. The Richardson Highway provides access south to Valdez and north to Delta Junction and further to Fairbanks.²¹⁹ Glennallen is also accessible via air. Brenwick's Airport provides public air access, and scheduled services are available. The 2,070 foot turf airstrip is owned and operated by Copper Basin District, Inc.²²⁰ The nearest commercial airport is the Gulkana airport, located approximately 6 miles northeast of Glennallen. As of 2012, roundtrip airfare from Anchorage to the Gulkana airport was \$390.²²¹

Facilities

A majority of homes in Glennallen source water from private wells, and several community wells are also available. Well water is not treated.²²² Water in the area is highly mineralized and sometimes iron-rich, and wells drilled in the Glennallen area sometimes produce somewhat saline water.²²³ All year-round homes are fully plumbed. For those homes not connected to the piped water system or a well, a local business offers water-delivery to fill home water tanks. Many homes also use private septic tanks, and a community septic tank and sewage lagoon are also in use. A non-profit organization called the Glennallen Improvement Corporation operates the local sewer system, which serves 52 homes and businesses. A majority of the downtown area is connected to a piped sewage system, while other homes use private septic tanks. Copper Basin Sanitation operates a landfill, and also provides refuse collection services. Electricity in Glennallen is provided by the Copper Valley Electric Association, Inc., which purchases power from the state-owned Solomon Gulch Hydro Facility. The utility company also owns diesel plants in Glennallen and Valdez.²²⁴

Glennallen is an administration hub for the Copper River region, and a number of state, federal, local, and tribal offices are present in the community. These include a local state trooper post, state highway maintenance, Copper River School District administrative offices, an office of the ADF&G, a BLM field office,²²⁵ and the headquarters of Ahtna, Incorporated.²²⁶

²¹⁹ Alaska Dept. of Transportation and Public Facilities. 2010. *Interior Alaska Transportation Plan*. Retrieved October 22, 2012 from <http://dot.alaska.gov/nreg/studies/iatp/documents.shtml>.

²²⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved February 9, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²¹ Information retrieved October 23, 2012 from the Copper Valley Air website:

<http://www.coppervalleyairservice.com/Bi-Weekly-Direct-Flights-from-Anchorage-Gulkana-McCarthy.php>

²²² See footnote 220.

²²³ Copper River Native Association. 2009. *Comprehensive Economic Development Strategy, Copper River Region, Alaska, 2009 Update*. Retrieved October 22, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/CVDA-CEDS2009-2011.pdf>.

²²⁴ See footnote 220.

²²⁵ See footnote 223.

²²⁶ Ahtna, Incorporated. 2012. *Welcome to Ahtna, Incorporated*. Retrieved October 23, 2012 from <http://www.ahtna-inc.com/>.

Additional facilities are located in nearby Copper Center, 16 miles to the south, such as the National Park Service’s Wrangell-St. Elias Visitor Center²²⁷ and officers of the CRNA.²²⁸

Police services are provided by the state trooper post, as well as a Village Public Safety Officer stationed in Glennallen. Fire and rescue services are provided by Copper River Emergency Medical Services and GlennRich Fire/Rescue. Additional community facilities in Glennallen include several public libraries (one public, three at schools, and one special library), the Greater Copper River Valley Visitor Information Center, the Frontier Museum, Wrangell-St. Elias National Park Repertory Theater, and a number of hotels, bed and breakfasts, lodges, and campgrounds. Telephone and internet service is available in Glennallen, but no cable provider offers local service.²²⁹

Medical Services

Medical services are available in Glennallen at the Cross Road Medical Center, which is a qualified Emergency Care Center. The facility provides Critical Care Air Ambulance Services. Emergency Services have highway and helicopter access. Emergency service is provided by 911 Telephone Service and volunteers.²³⁰ In addition, the Glennallen Health Center is operated by the Alaska Department of Public Health. The Center offers preventative health services, family planning, well-child screening, immunizations and TB tests, STD and HIV screenings and counseling, and offers some educational programs related to health and parenting.²³¹ The nearest hospitals are located in Valdez (120 road miles away) and Palmer (140 road miles away).

Educational Opportunities

There are three schools in Glennallen. Glennallen Elementary offers preschool through 6th grade), Glennallen Jr./Sr. High School instructs 7th through 12th grade, and the Upstream Learning correspondence program offers Kindergarten through 12th grade via a correspondence program. As of 2011, the elementary school had 118 students and 9 teachers, and the high school had 135 students and 11 teachers. Also that year, the Upstream Learning program (formerly known as Copper River Correspondence Studies) had 54 students and 1 teacher.²³² The Upstream Learning program serves home-educated students. In its early years the service was offered to residents of the Copper River Valley only, but in the 1990s services were expanded to enroll correspondence students throughout Alaska. Program officers are located in Glennallen.²³³

It is important to note that the main office of the Copper River School District is located in Glennallen. In addition to K-12 education, campuses of the Alaska Bible College and Prince William Sound Community College are both located in Glennallen.²³⁴

²²⁷ See footnote 220.

²²⁸ Copper River Native Association. (n.d.). *Departments*. Retrieved October 23, 2012 from <http://crnative.org/departments/>.

²²⁹ See footnote 220.

²³⁰ Ibid.

²³¹ See footnote 223.

²³² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²³³ Upstream Learning. (n.d.). *About Us*. Retrieved October 23, 2012 from <http://www.upstreamlearning.org/about-us.html>.

²³⁴ See footnote 223.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Ahtna Athabascan people have engaged in subsistence fishing in the Copper Valley Basin for at least the past 1,000 years. Salmon have long been one of the species critical to survival of indigenous peoples of the region, and major settlements have long been located along the Copper River in order to make use of this resource. Sockeye salmon were particularly important in the area, and Chinook and coho salmon also spawn and rear in the Copper River. Historically, dip nets were the most common salmon harvest method used by the Athna, along with additional harvest methods including use of weirs, basket traps, gaffs, spears, and snares. Whitefish and Arctic grayling were also important subsistence species.²³⁵ Ahtna oral tradition indicates that every 30 or 40 years the salmon runs on the Copper River have failed²³⁶ and other stories of starvation and hard times when people had to rely upon resources other than salmon support this claim.²³⁷ Subsistence fishing remains important along the Copper River today. Copper River subsistence and personal use fisheries are managed by the ADF&G. The River is divided into two management subdistricts. The Glennallen subdistrict is classified as a subsistence fishery, in which both fishwheels and dipnets can be used for harvest. Further downriver, the Chitina subdistrict is managed as a personal use fishery, and only dipnets are allowed.²³⁸ The Copper River and its tributaries also attract a large number of sport fishers each year.²³⁹

Commercial fishing for salmon takes place in marine waters near the mouth of the Copper River. The Copper River commercial salmon fishery began in 1887 when Prince Williams Sound's (PWS) first cannery was built by the Pacific Packing Company near the village of Eyak. Early fishing at the mouth of the Copper River was done by essentially barricading the mouth, which although very efficient, did not allow enough salmon through to spawn. Soon after Alaska became a territory in 1912, measures were taken to regulate gear types in the Copper River area due to a proliferation of many different catch methods, and subsequent concerns of local Native groups regarding decreased subsistence harvests. Between 1914 and 1923, 14 new canneries were established in the PWS area. By the 1940s, over 40 fish traps were built in the PWS area which operated six days a week for 24 hours a day during seasons. Canneries processed not only salmon, but also crab, clams, and shrimp. Fish stocks began to crash in the late 1940s and early 1950s because of the overuse of fish traps. Upon gaining statehood, Alaska was given the authority to manage its fisheries, including gear types used in

²³⁵ Simeone, William E. and Kari, James. 2002. *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. U.S. Fish and Wildlife Service, Technical Paper No. 270. In collaboration with the Copper River Native Association. Retrieved October 23, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/00-040finalpart1.pdf>.

²³⁶ Reckford, Holly. (1983). *That's the Way We Live: Subsistence in the Wrangell-St. Elias National Park and Preserve*, Occasional Paper No. 34, Anthropology and Historic Preservation, Cooperative Park Studies Unit, University of Alaska Fairbanks, Fairbanks, Alaska.

²³⁷ See footnote 235.

²³⁸ Alaska Dept. of Fish and Game. 2012. *Chitina Personal Use Salmon Fishery Overview*. Retrieved October 23, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=PersonalUsebyAreaInteriorChitina.main>.

²³⁹ Copper River Chamber of Commerce. 2011. *Welcome to the Greater Copper Valley*. Retrieved October 23, 2012 from <http://www.coppervalleychamber.com/>.

prosecuting them, which lead to the abolishment of commercial traps in the Copper River Delta.²⁴⁰

Today, the Copper River salmon fishery is managed by the ADF&G. The PWS salmon management area is divided into 11 commercial fishing districts, covering the coastal area from Cape Suckling (northwest of Yakutat) to Cape Fairfield (east of Seward), and the inland waters of PWS. The Copper River empties into marine waters just east of the entrance to PWS. Drift gillnet is the only fishing gear utilized in this salmon district, as well as the adjacent Bering River district east of the Copper River. It is important to note that a sockeye hatchery program augments Copper River returns.²⁴¹

Along with salmon, herring harvest developed into one of the earliest commercial fisheries in Alaska, during the period when the product was salted for storing and shipment. PWS historically had a productive herring fishery. However, in 1993, four years after the Exxon Valdez oil spill, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.^{242,243}

The commercial fishery for Pacific halibut expanded north to the Gulf of Alaska (GOA) by the 1920s, after diesel engines expanded the range of fishing trips.²⁴⁴ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission (IPHC). In 1995, management of the Pacific halibut fishery shifted from limited entry to a catch share program.²⁴⁵

In addition to salmon, herring, and halibut, one Glennallen resident was involved in a fishery for ‘freshwater fish’ during the 2000-2010 period (see the *Commercial Fishing* section below). Commercial freshwater fish fisheries may target species such as Arctic char, northern pike, rainbow trout, Dolly Varden char, and sheefish.²⁴⁶

Given that Glennallen is more than 50 miles from the coast, no federal fisheries regulatory areas are located within the immediate vicinity. Glennallen is not eligible for the Community Quota Entity program or to participate in the Community Development Quota program. The Copper River empties into marine waters encompassed by Federal Reporting Area 649, IPHC Regulatory Area 3A, and the Central GOA Sablefish Regulatory District.

²⁴⁰ Cordova District Fishermen United. (n.d). *A Historical Narrative of Fishing in the PWS/Copper River Area*. Retrieved February 24, 2012 from: <http://www.cdfu.org>.

²⁴¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²⁴² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²⁴³ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

²⁴⁴ International Pacific Halibut Commission. 1978. *The Pacific Halibut: Biology, Fishery, and Management*. Technical Report No. 16 (Revision of No. 6).

²⁴⁵ Fina, Mark. 2011. “Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific.” *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

²⁴⁶ Alaska Dept. of Fish and Game (2006). *Our Wealth Maintained: A Strategy for Conserving Alaska’s Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=species.wapview>.

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Glennallen does not have a registered processing plant. The closest processing facilities are located in Anchorage.

Fisheries-Related Revenue

Between 2000 and 2010, no known fisheries-related revenue was recorded in Glennallen (Table 3).

Commercial Fishing

Between 2000 and 2010, Glennallen residents participated in commercial fisheries as state permit holders, crew license holders, and vessel owners. The number of state-issued Commercial Fisheries Entry Commission (CFEC) permits held by residents varied between four and nine per year over the period (Table 4), while the number of crew licenses holders varied between three and six. The number of Glennallen residents who were the primary owners of a fishing vessel showed a declining trend over the period, from 14 in 2001 and 2002 to 0 by 2010, and the number of vessels homeported in the community declined from 10 to 0. No fish buyers or shore-side processors were present in Glennallen during the 2000-2010 period, and no landings or ex-vessel revenue were generated locally (Table 5).

Glennallen residents held CFEC permits in fisheries for salmon, herring, halibut, and freshwater fish between 2000 and 2010. Several salmon and herring permits were held in all years during the period, while an 'other finfish' permit was held from 2000 to 2006, and one halibut permit was held in 2002 only. In 2010, salmon permits were held in the Bristol Bay drift gillnet fishery (1 permit held, 1 actively fished), the Lower Yukon gillnet fishery (1 permit held, 0 actively fished), and the statewide hand troll fishery (1 permit held, 0 actively fished). Earlier in the decade, a small number of salmon permits were also held by Glennallen residents in the Prince William Sound, Bristol Bay, and Cook Inlet set gillnet fisheries, and in the Prince William Sound purse seine fishery. The 'other finfish' permit was held in the statewide freshwater fish permit, and was not actively fished in any year during the period. One herring permit was held each year in the Prince William Sound spawn on kelp fishery, and was not actively fished in any year between 2000 and 2010. Two additional herring permits were held in 2005 in the Security Cove and Bristol Bay roe herring gillnet fisheries, and both of these permits were actively fished that year. Finally, the halibut permit held in 2002 was held in the statewide longline fishery, and was actively fished that year. Information about CFEC permits is presented in Table 4.

Additionally, no residents held federal fishery permits (Table 4) or participated in federal catch share programs for halibut, sablefish, or crab between 2000 and 2010 (Tables 6-8). Given the lack of fish buyers and shore-side processors in Glennallen (Table 5), no landings were reported in the community during this time period (Table 9). In addition, information about landings and ex-vessel revenue generated by Glennallen vessel owners, including all delivery locations, is considered confidential due to the small number of participants engaged in commercial fishing between 2000 and 2008 (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Glennallen: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a refers to data that was not available at the time of printing.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Glennallen: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	1	0	0	0	0	0	0	0	0
	% of permits fished	-	-	100%	-	-	-	-	-	-	-	-
	Total permit holders	0	0	1	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	2	1	1	1	1	3	1	1	1	1	1
	Fished permits	0	0	0	0	0	2	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	67%	0	0	0	0	0
	Total permit holders	2	1	1	1	1	2	1	1	1	1	1

Table 4 cont'd. Permits and Permit Holders by Species, Glennallen: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	1	1	1	1	1	1	1	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
	Total permit holders	1	1	1	1	1	1	1	0	0	0	0
Salmon (CFEC) ²	Total permits	3	3	3	3	4	5	7	7	8	5	3
	Fished permits	2	1	1	1	3	3	5	2	3	3	1
	% of permits fished	67%	33%	33%	33%	75%	60%	71%	29%	38%	60%	33%
	Total permit holders	4	3	3	3	4	5	7	7	8	5	3
<i>Total CFEC Permits²</i>	<i>Permits</i>	6	5	6	5	6	9	9	8	9	6	4
	<i>Fished permits</i>	2	1	2	1	3	5	5	2	3	3	1
	<i>% of permits fished</i>	33%	20%	33%	20%	50%	56%	56%	25%	33%	50%	25%
	<i>Permit holders</i>	7	5	5	5	6	7	9	8	9	6	4

¹National Marine Fisheries Service. (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Glennallen: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Glennallen ²	Total Net Pounds Landed In Glennallen ^{2,5}	Total Ex-Vessel Value Of Landings In Glennallen ^{2,5}
2000	4	0	0	8	10	0	0	\$0
2001	6	0	0	14	13	0	0	\$0
2002	5	0	0	14	13	0	0	\$0
2003	6	0	0	11	10	0	0	\$0
2004	3	0	0	8	7	0	0	\$0
2005	3	0	0	3	0	0	0	\$0
2006	4	0	0	3	0	0	0	\$0
2007	3	0	0	3	0	0	0	\$0
2008	3	0	0	1	0	0	0	\$0
2009	5	0	0	0	0	0	0	\$0
2010	4	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ National Marine Fisheries Service. (2011). Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Glennallen: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Glennallen: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Glennallen: 2000-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Glennallen: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Glennallen Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Copper River is a major sportfishing destination in Alaska and many Glennallen residents participate in recreational fishing. Two tributaries of the Copper River – the Gulkana and Klutina Rivers – are particularly well known for their Chinook and sockeye sport fisheries.²⁴⁷ Excellent sportfishing opportunities are also available in the main stem of the Copper River. Three species of salmon (Chinook, coho, and sockeye) are present in the Upper Copper/Upper Susitna Sport Fish Management Area. Anglers can also target coho salmon stocked in several landlocked lakes of the region. Twenty-nine lakes in the area are also stocked with Arctic grayling, rainbow trout, and Arctic char, providing for popular sport fisheries for these species. Other freshwater sport fish species in the local Sport Fish Management Area include burbot, Dolly Varden, steelhead, lake trout, and whitefish.²⁴⁸

Although there was an active sport fish guide business in one year of the 2000-2010 period only, the number of licensed sport fish guides present in Glennallen was more significant. The number of licensed sport fish guides declined over the period, from a high of 31 guides in 2003 to a low of 3 guides in 2009. Over the same period, the number of sportfishing licenses sold locally in Glennallen increased substantially over the decade, from 0 in 2000 to 1,113 sold in 2010. However, the number of licenses sold to Glennallen residents remained relatively stable over the period (averaging 570 per year), suggesting that Glennallen residents have access to additional license sale locations.

Glennallen is located within Alaska Sport Fishing Survey Area I – Upper Copper River Drainage. Information is available about freshwater sportfishing activity only at this regional scale. Between 2000 and 2010, Alaska residents fished consistently more angler days in freshwater than non-Alaska residents, averaging 31,555 angler days fished per year compared to an average of 14,109 angler days fished by non-Alaska residents. No saltwater fishing was recorded in this region given its inland location. Further information about the sportfishing sector in and near Glennallen is presented in Table 11.

²⁴⁷ Copper River Chamber of Commerce. 2011. *Welcome to the Greater Copper Valley*. Retrieved October 23, 2012 from <http://www.coppervalleychamber.com/>.

²⁴⁸ Alaska Dept. of Fish and Game. 2012. *Upper Copper River & Susitna River Management Area Overview*. Retrieved October 23, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorUpperCopperSusitna.main>.

Table 11. Sport Fishing Trends, Glennallen: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Glennallen ²
2000	1	22	561	0
2001	0	23	599	117
2002	0	26	573	0
2003	0	31	572	8
2004	0	24	558	132
2005	0	7	632	186
2006	0	6	592	145
2007	0	6	557	1,192
2008	0	7	546	1,127
2009	0	3	521	1,068
2010	0	5	554	1,113

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	0	0	14,806	32,769
2001	0	0	12,212	31,506
2002	0	0	13,069	27,978
2003	0	0	10,901	32,550
2004	0	0	12,248	27,454
2005	0	0	11,659	25,529
2006	0	0	12,516	21,448
2007	0	0	16,970	27,658
2008	0	0	11,959	27,940
2009	0	0	11,071	33,493
2010	0	0	13,683	27,229

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

The Ahtna people have historically engaged in subsistence fishing along the Copper River, with a particular focus on salmon.²⁴⁹ Today, salmon harvests continue to be a primary subsistence resource in the Glennallen area. The Copper River is divided into two management subdistricts. The Glennallen subdistrict is classified as a subsistence fishery, in which both fishwheels and dipnets can be used for harvest. Further downriver, the Chitina subdistrict is managed as a personal use fishery, and only dipnets are allowed.²⁵⁰ Between 2000 and 2010, the number of Glennallen households that were issued subsistence salmon permits varied between 116 and 239 per year. Sockeye salmon were by far the most heavily harvested salmon species, with an average of 6,908 sockeye harvested per year. Several hundred Chinook and coho salmon were also reported as harvested using subsistence salmon permits between 2000 and 2010 (Table 13).

During this period, no data were reported by ADF&G regarding harvest of marine invertebrates or non-salmon fish (not including halibut) (Table 13). However, an earlier subsistence harvest survey by ADF&G provides some information about harvest of marine invertebrates and non-salmon fish by Glennallen households in 1987. That year, the species of non-salmon fish harvested by the greatest number of Glennallen households were Arctic grayling (27% of households reported participation in harvest activity), rainbow trout (16% of households), Dolly Varden (14%), whitefish (6%), lake trout (5%), pike (2%), steelhead (2%), and red rockfish (2%). In addition, 1% of Glennallen households were estimated to harvest clams in 1987.²⁵¹

According to data reported by ADF&G, four Subsistence Halibut Registration Certificates (SHARC) were issued to Glennallen residents in 2004 and again in 2005, while one was issued in 2010. No data were reported regarding the number of SHARC cards returned or pounds of halibut harvested between 2003 and 2010 (Table 14). In addition, no data were reported by management agencies regarding harvest of marine mammals by Glennallen residents between 2000 and 2010 (Table 15).

²⁴⁹ Simeone, William E. and James Kari. (2002). *Traditional Knowledge and Fishing Practices of the Ahtna of the Copper River, Alaska*. Technical Paper No. 270. Alaska Department of Fish and Game. Division of Subsistence. Juneau, Alaska. July.

²⁵⁰ Alaska Dept. of Fish and Game. 2012. *Chitina Personal Use Salmon Fishery Overview*. Retrieved October 23, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=PersonalUsebyAreaInteriorChitina.main>.

²⁵¹ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Retrieved February 2011 from <http://www.adfg.alaska.gov/sb/CSIS/>.

Table 12. Subsistence Participation by Household and Species, Glennallen: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Glennallen: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	152	146	1,028	n/a	79	n/a	8,065	n/a	n/a
2001	161	154	413	n/a	376	n/a	8,753	n/a	n/a
2002	151	135	462	n/a	175	n/a	6,620	n/a	n/a
2003	123	108	169	n/a	96	n/a	4,112	n/a	n/a
2004	132	115	408	n/a	38	n/a	5,386	n/a	n/a
2005	194	160	391	n/a	26	n/a	9,069	n/a	n/a
2006	187	163	578	n/a	24	n/a	8,355	n/a	n/a
2007	239	203	523	n/a	135	n/a	8,551	n/a	n/a
2008	116	96	185	n/a	145	n/a	3,257	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011). Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Glennallen: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	4	n/a	n/a
2005	4	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Glennallen: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Tatitlek (*tuh-TIT-leck*)



People and Place

*Location*²⁵²

Tatitlek is located on the northeast shore of Tatitlek Narrows, on the Alaska Mainland in Prince William Sound (PWS). It lies near Bligh Island, southwest of Valdez by sea and 30 air miles northwest of Cordova. Tatitlek is located in the Valdez Recording District and the Valdez-Cordova Census Area and is not located within an organized Borough.

*Demographic Profile*²⁵³

In 2010, there were 88 inhabitants in Tatitlek, making it the 257th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Tatitlek decreased by 22.43%, with an average annual growth rate of -3.01%. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, a majority of Tatitlek residents identified themselves as American Indian and Alaska Native (60.2%). Other ethnic groups present in Tatitlek that year included White (30.7%), two or more races (5.7%), Hispanic or Latino (3.4%), some other race (1.1%), Native Hawaiian or Other Pacific Islander (1.1%), and Asian (1.1%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaska Native decreased by 23.9%, with corresponding increases in the percentage of the population identifying themselves as White, two or more races, some other race, Native Hawaiian and Other Pacific Islander, and Hispanic or Latino. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Tatitlek was 2.44, a decrease from 3.6 persons per household in 1990 and 2.82 in 2000. The total number of households increased from 33 in 1990 to 38 in 2000, then decreased slightly to 36 occupied housing units in 2010. Of the 75 total housing units surveyed for the 2010 Decennial Census, 22 were owner-occupied, 14 were renter occupied, and 39 were vacant or used only seasonally. Throughout this period no residents of Tatitlek were reported to be living in group quarters.

²⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

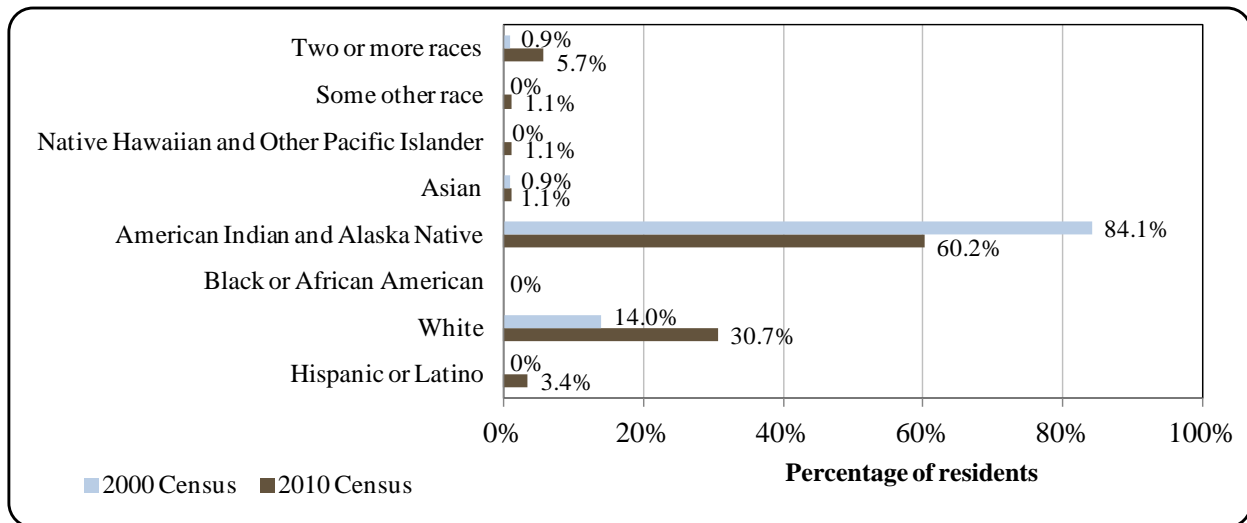
Table 1. Population in Tatitlek from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	119	-
2000	107	-
2001	-	96
2002	-	103
2003	-	105
2004	-	107
2005	-	102
2006	-	117
2007	-	110
2008	-	102
2009	-	83
2010	88	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

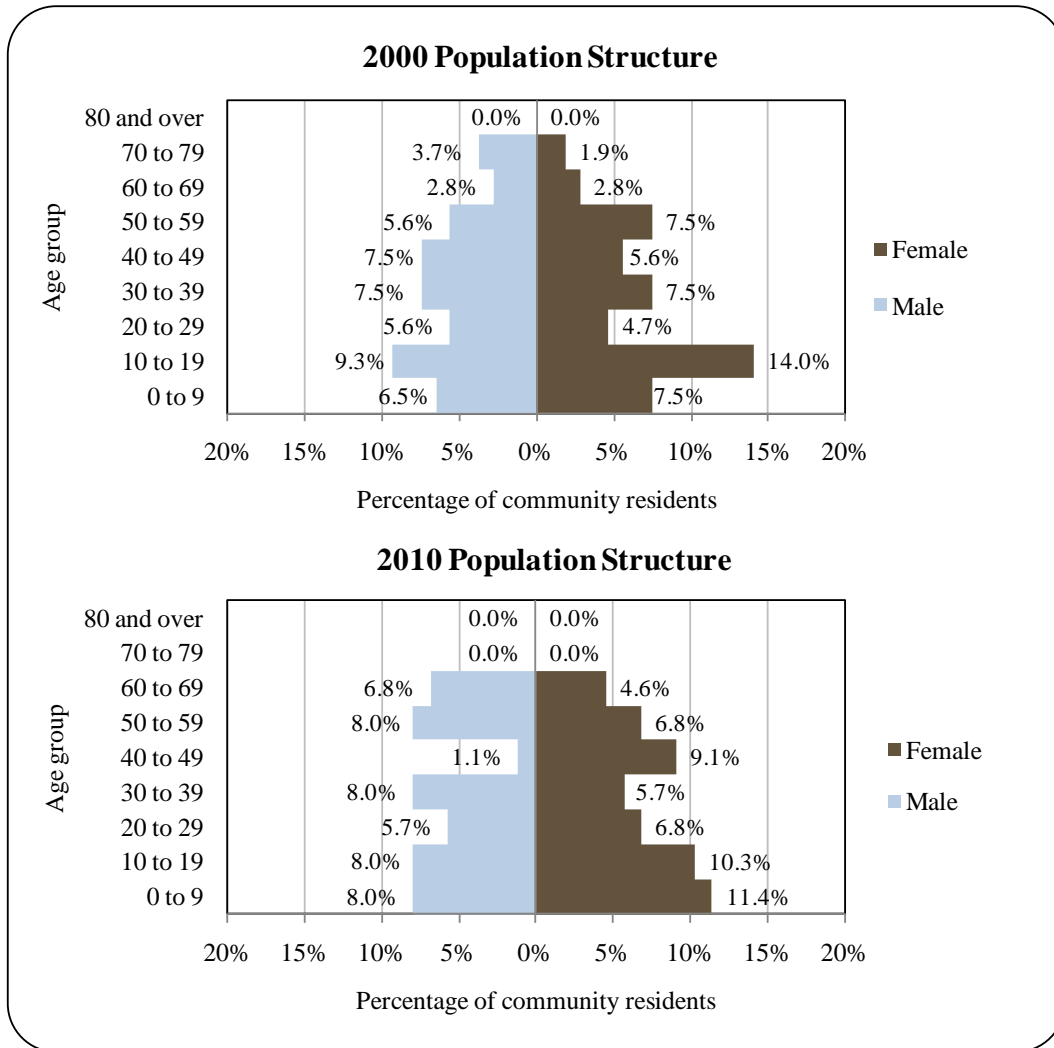
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Tatitlek: 2000-2010 (U.S. Census).



The gender makeup in Tatitlek in 2010 was 45.5% male and 54.5% female, more heavily skewed towards females than the state as a whole (52% male, 48% female). The median age was estimated to be 29.5 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of the population fell within the age group zero to 9 years old, with the next largest percentage falling within the age group 10 to 19 years old. There were no residents of Tatitlek that were age 70 or over in 2010. The overall population structure of Tatitlek in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Tatitlek Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey (ACS),²⁵⁴ in terms of educational attainment, 87.8% of Tatitlek residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 4.1% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 8.2% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 42.9% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 26.5% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; and 18.4% were estimated to have a Bachelor’s degree, compared

²⁵⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

to 17.4% of Alaskan residents overall. In 2010, there were no residents of Tatitlek that were estimated to have an Associate’s degree or a graduate or professional degree.

*History, Traditional Knowledge, and Culture*²⁵⁵

Tatitlek is an Alutiiq village first reported in the 1880 U.S. Census as “Tatikhlek,” with a population of 73. The present spelling was published in 1910 by the U.S. Geological Survey, which wrote that the village originally stood at the head of Gladhaugh Bay but was moved to its present site in the shadow of Copper Mountain around 1900. A post office was established in 1946. Many residents of Chenega moved to Tatitlek following its destruction by tsunami after the 1964 Good Friday Earthquake. The dominant feature in the village is the blue-domed Russian Orthodox church.

Today, Tatitlek is a coastal Alutiiq village with a fishing- and subsistence-based culture. The sale and importation of alcohol is banned in the village.

Natural Resources and Environment

Winter temperatures range from 17 to 28 °F (-8.3 to -2.2 °C); summers average 49 to 63 °F (9.4 to 17.2 °C). Annual precipitation averages 28 inches of rain and 150 inches of snowfall.²⁵⁶

Tatitlek is located within the Chugach National Forest, an area that is administered by the U.S. Department of Agriculture (USDA) Forest Service.²⁵⁷ The Chugach National Forest is America’s most northerly National Forest. This stunning landscape stretches across south-central Alaska, from the salty waters and snowy peaks of PWS to the fabulous salmon and trout streams of the Kenai Peninsula, covering an area the size of New Hampshire. It is one of the few places left in the world where glaciers still grind valleys into the hard rock of the earth. Its geographic diversity is unique among national forests. The three distinct landscapes of the Copper River Delta, the Eastern Kenai Peninsula, and PWS are destinations for adventurers and nature enthusiasts the world over. The forest is home to wild lands, wildlife, wild fish, and wild ice. Visitors in kayaks, cruise ships, small boats, ferries, and float planes explore the Sound’s 3,500 miles of coastline and 3 million acres of ocean and land.

Historically, the Chugach region was one of the foremost mining regions in Alaska. The Beatson mine on Latouche Island and the Ellamar mine near Tatitlek yielded over 200 million pounds of copper, 52,000 ounces of gold and 1.7 million ounces of silver before closing down in the 1930’s.²⁵⁸

²⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁶ Ibid.

²⁵⁷ United States Department of Agriculture Forest Service. Chugach National Forest: About the Forest. Retrieved from <http://www.fs.usda.gov/main/chugach/about-forest> on April 2, 2012.

²⁵⁸ Chugach Alaska Corporation. 2012. Our Lands. Retrieved on May 11, 2012 from <http://www.chugach-ak.com/lands/Pages/default.aspx>.

Current Economy²⁵⁹

Fish processing and oyster farming provide some employment in Tatitlek. In 2010, one resident held a commercial fishing permits. Subsistence activities provide the majority of food items. A coho salmon hatchery, supporting subsistence activities, is located at Boulder Bay. The community has a store.²⁶⁰ Top employers in 2010 included Tatitlek Village IRA Council, Chugach School District, The Tatitlek Corp., Chugachmiut, Native Village of Chenega Bay Public Health, and North Pacific Rim Housing Authority.

In 2010, the per capita income in Tatitlek was estimated to be \$17,068 and the median household income was estimated to be \$38,750, compared to \$13,015 and \$36,875 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,²⁶¹ the real per capita income in 2000 is shown to have been \$17,115 and the real 2000 median household income was \$48,490. This shows that per capita income stayed stable over the period, while there was a real decrease in median household income. In 2010, Tatitlek ranked 176th of 305 Alaskan communities with per capita income that year, and 197th of 299 Alaskan communities with household income data. However, Tatitlek's small population size may have prevented the American Community Survey from accurately portraying economic conditions.²⁶² In addition, the Alaska Department of Labor and Workforce Development (DOLWD) reported \$7,692 in per capita income, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.^{263,264} This data is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. However, it should be noted that American Community Survey and DOLWD data is based on wage earnings and does not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in the same year, 59.3% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 8.6%, compared to the statewide rate of 5.9%. Approximately 5.4% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Tatitlek are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Tatitlek. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 3.4%.

Also based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the private sector (53.1%), while 37.5% were employed in the

²⁵⁹ Unless otherwise noted, all monetary data are reported in nominal values.

²⁶⁰ See footnote 255.

²⁶¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁶² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁶³ Calculated as the total wages earned by those employed in the community divided by the total population. The wages earned do not include income collected by residents that are self employed.

²⁶⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

public sector and 9.4% were self-employed. Out of 32 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (57.6%), public administration (12.1%), transportation, warehousing, and utilities (12.1%), and construction (12.1%). Only 6.1% of the workforce was employed in retail trade. No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Tatitlek (U.S. Census).

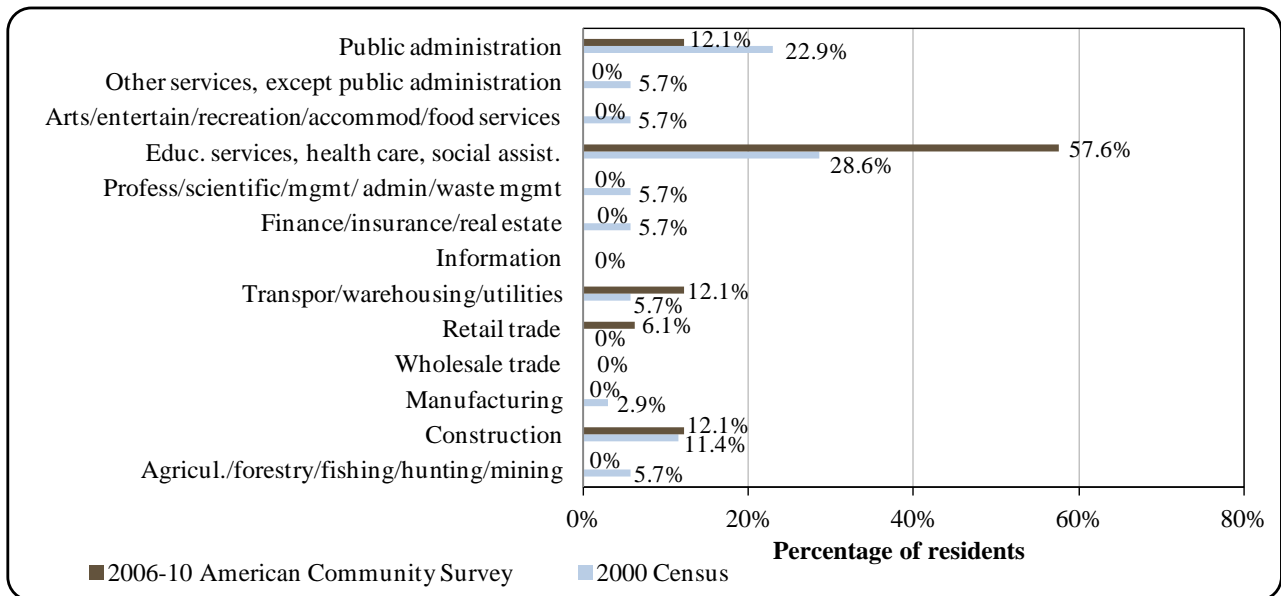
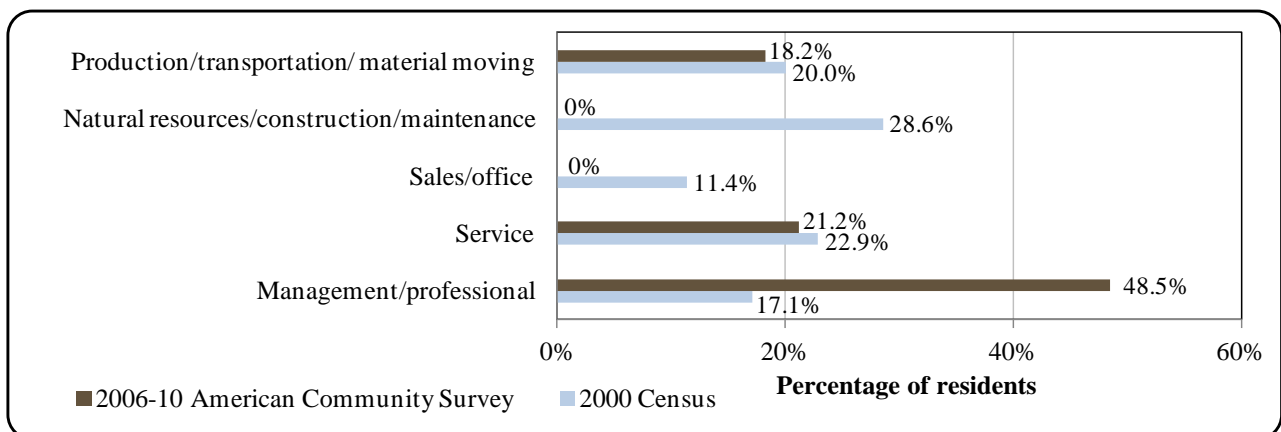


Figure 4. Local Employment by Occupation in 2000-2010, Tatitlek (U.S. Census).



Governance

Tatitlek is an unincorporated town located in the Valdez-Cordova Borough. Because of Tatitlek’s unincorporated status, no municipal taxes were administered between 2000 and 2010, nor is there any total municipal revenue to report. Likewise, no information was available regarding revenue sharing contributions from the State Revenue Sharing and Community Revenue Sharing programs during the 2000-2010 period. However, community entities in Tatitlek did receive a number of fisheries-related grants for projects including small boat harbor and breakwater design and construction, small boat harbor construction, construction of the Tatitlek Community Dock, and an Alaska King Crab Research and Rehabilitation Contract. This information about selected revenue streams in Tatitlek is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Tatitlek from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	\$7,500,000
2003	n/a	n/a	n/a	\$7,500,000
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	\$367,000
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	\$68,000
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Tatitlek was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is The Tatitlek Corporation. The regional Native corporation to which Tatitlek belongs is the Chugach Alaska Corporation (Chugach). Chugach is one of the thirteen regional Alaska Native corporations created by ANCSA as amended by the Alaska National Interest Land Conservation Act (ANILCA). The Chugach Region comprises some 10 million acres in South-central Alaska. Chugach is entitled to 928,000 acres, of which approximately 378,000 acres are full fee entitlement and 550,000 acres of subsurface estate. At

this time, Chugach has received 94% of its total entitlement. Chugach has selected lands that have potential for economic development including commercial timber land, mineral estates as well as lands that have potential for tourism, and lands of cultural and historical importance to the Chugach people.²⁶⁵

The closest office of the Alaska Department of Fish and Game (ADF&G) is located in Cordova. The closest offices of the Alaska Department of Natural Resources (DNR), Department of Commerce, Community, and Economic Development, the National Marine Fisheries Service (NMFS), the Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Tatitlek has a state-owned 3,701 foot long by 75 foot wide lighted gravel airstrip and a seaplane landing area; air charters are available from Valdez and Cordova. Boats are the primary means of local transportation. In 1996, the Alaska Marine Highway began "whistle stop" service.²⁶⁶ After a short charter flight, direct commercial service is available to Anchorage from Valdez and Cordova. In June 2012, round-trip airfare between Valdez and Anchorage was \$298, and round-trip airfare between Cordova and Anchorage was \$208.²⁶⁷

*Facilities*²⁶⁸

A dam provides water, which is treated and stored in a 170,000-gallon tank. A piped water and sewer system serves all 34 homes. The piped community septic tank system discharges via an ocean outfall. There is an operating oil and hazardous waste recycling center. Law enforcement services are provided by state troopers in Valdez, and fire/rescue services are provided by the Tatitlek Emergency Medical Service. Tatitlek also has a teen center and a community center.

*Medical Services*²⁶⁹

Medical care is provided by the Tatitlek Clinic, which is owned by the Village Council and operated by Chugachmiut. The clinic is a Community Health Aid Program site. Alternate health care is provided by the Tatitlek Emergency Medical Service. Emergency services have coastal air, floatplane, and helicopter access and are provided by a health aide.

²⁶⁵ Chugach Alaska Corporation. 2012. Our Lands. Retrieved on May 11, 2012 from <http://www.chugach-ak.com/lands/Pages/default.aspx>.

²⁶⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶⁷ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

²⁶⁸ See footnote 266.

²⁶⁹ Ibid.

*Educational Opportunities*²⁷⁰

The Tatitlek Community School provides instruction to students from pre-school through 12th grade. In 2011 the school had 18 students and two teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Groundfish and crab fisheries that occur within 3 nautical miles (nm) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. PWS is located in Federal Statistical and Reporting Area 649 and Pacific Halibut Fishery Regulatory Area 3A. The outlet of PWS is at the boundary between the Central Gulf of Alaska (GOA) and Eastern GOA federal Sablefish Regulatory Areas.

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of PWS for rockfish, lingcod, pollock, sablefish, and Pacific cod. The PWS Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in PWS. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, a pelagic trawl fishery for pollock began in PWS in 1995. It is managed under a guideline harvest limit (GHL) determined by ADF&G, and is not conducted as a parallel fishery. The PWS limited entry sablefish fishery is also managed separately under a GHL.²⁷¹

A majority of lingcod are found in nearshore rocky reef habitat from 10-100 meters in depth. ADF&G manages all lingcod fisheries in state and EEZ waters off Alaska. Lingcod in PWS are primarily harvested as incidental catch in longline fisheries, although lingcod fisheries have increased in importance in recent decades. The state manages rockfish harvest in PWS, and since 1998 also has jurisdiction of blue and black shelf rockfish in the western GOA, and all rockfish in the eastern GOA.²⁷²

PWS historically had a productive herring fishery. However, in 1993, four years after the Exxon Valdez oil spill, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.^{273,274} PWS was also a historical center for Dungeness crab fisheries, but this stock has also collapsed. Possible causes for the Dungeness collapse include

²⁷⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁷¹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²⁷² Ibid.

²⁷³ Ibid.

²⁷⁴ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

overfishing, sea otter predation, and adverse climatic changes. Red king crab and Tanner crab fisheries in PWS are also closed due to low stock abundance.²⁷⁵ In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.²⁷⁶

Tatitlek is located on the northeast shore of Tatitlek Narrows, on the Alaska Mainland in PWS.²⁷⁷ The area is included in Federal Statistical and Reporting Area 640, Pacific Halibut Fishery Regulatory Area 3A, and Sablefish Regulatory Area Eastern Gulf of Alaska/ West Yakutat. The community is eligible for the Community Quota Entity (CQE) program; however, it has not yet formed a non-profit entity that can purchase quota share.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Tatitlek does not have a registered processing plant. The nearest processing plants are located in Cordova and Valdez.

Fisheries-Related Revenue

Tatitlek did not receive any fisheries-related revenue between 2000 and 2010 (Table 3).

Commercial Fishing

In 2010, there was one permit holder that held one commercial salmon fishing permit issued by the Commercial Fisheries Entry Commission (CFEC) for the drift gill net fishery in PWS. Overall between 2000 and 2010, the number of CFEC salmon permits and permit holders, as well as the number of permits fished, as declined. In previous years, Tatitlek residents have also held groundfish and sablefish CFEC permits, though the permits were not reported as fished in all years between 2000 and 2010. During this period, there was one groundfish License Limitation Program (LLP) permit issued to a Tatitlek resident, though that permit was not reported as fished between 2000 and 2010. Information on commercial fishing permits and permit holders by species is provided in Table 4.

There were six crew license holders in Tatitlek in 2010, a number which varied considerably between 2000 and 2010. During this period, there were no fish buyers or shore-side processing facilities located in Tatitlek. Also in 2010, there was one commercial fishing vessel primarily owned by a Tatitlek resident, a number which declined from a high of seven vessels owned primarily by Tatitlek residents in 2000. There were three commercial fishing vessels homeported in Tatitlek in 2010, a number which varied between one and three vessels between 2000 and 2010. During this period, there were no vessels landing catch in the community, and as such there are no landings or associated ex-vessel revenue to report. Information on characteristics of the commercial fishing sector in Tatitlek between 2000 and 2010 is provided in Table 5.

²⁷⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²⁷⁶ Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

²⁷⁷ Ibid.

Between 2000 and 2010, there were no quota share account holders in Tatitlek for federal halibut (Table 6), sablefish (Table 7), or crab fisheries (Table 8). As previously stated, there were no landings recorded in Tatitlek between 2000 and 2010, and no associated ex-vessel revenue reported during this period (Table 9). Landings by Tatitlek residents, as well as associated ex-vessel revenue between 2000 and 2010, are considered confidential due to a small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Tatitlek: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Tattilek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	1	1	1
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Tattilek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	0	0
	Fished permits	1	1	1	1	0	1	1	1	1	0	0
	% of permits fished	100%	100%	100%	100%	0%	100%	100%	100%	100%	-	-
	Total permit holders	1	1	1	1	1	1	1	1	1	0	0
Groundfish (CFEC) ²	Total permits	2	2	1	1	1	1	1	1	2	0	0
	Fished permits	2	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	0%	0%	0%	0%	0%	0%	0%	0%	-	-
	Total permit holders	2	2	1	1	1	1	1	1	1	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	4	3	3	4	3	4	3	3	3	1	1
	Fished permits	3	2	3	4	3	4	2	3	2	1	1
	% of permits fished	75%	67%	100%	100%	100%	100%	67%	100%	67%	100%	100%
	Total permit holders	4	3	3	4	3	4	3	3	3	1	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	7	6	5	6	5	6	5	5	6	1	1
	<i>Fished permits</i>	6	3	4	5	3	5	3	4	3	1	1
	<i>% of permits fished</i>	86%	50%	80%	83%	60%	83%	60%	80%	50%	100%	100%
	<i>Permit holders</i>	5	4	3	4	3	4	3	3	3	1	1

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Tatitlek: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Tatitlek ²	Total Net Pounds Landed In Tatitlek ^{2,5}	Total Ex-Vessel Value Of Landings In Tatitlek ^{2,5}
2000	15	0	0	7	3	0	0	\$0
2001	12	0	0	5	2	0	0	\$0
2002	8	0	0	4	1	0	0	\$0
2003	7	0	0	4	1	0	0	\$0
2004	2	0	0	4	2	0	0	\$0
2005	8	0	0	4	2	0	0	\$0
2006	10	0	0	4	2	0	0	\$0
2007	6	0	0	4	2	0	0	\$0
2008	4	0	0	3	2	0	0	\$0
2009	11	0	0	1	3	0	0	\$0
2010	6	0	0	1	3	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Tatitlek: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Tatitlek: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Tatitlek: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Tattilek: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Tatitlek Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

There were no sport fish guide businesses or community residents holding sport fish guide licenses in Tatitlek between 2000 and 2010. In 2010, there were 16 sportfishing licenses sold to community residents (irrespective of the location of the point of sale), a number which varied between 2000 and 2010. In contrast, no sportfishing licenses were sold within the community in 2010, indicating the potential that Tatitlek residents pursue recreational fishing in other communities.

Tatitlek is located in the North Gulf Coast/PWS Alaska Sport Fishing Survey Area. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 39,551 and 90,002 during this period, while Alaska resident angler days fished varied between 82,908 and 210,203 days. Alaska resident anglers fished consistently more angler days than non-Alaska residents during

this period. Information about the sportfishing sector in and near Tatitlek is displayed in Table 11.

The Alaska Statewide Harvest Survey,²⁷⁸ conducted by ADF&G between 2000 and 2010, noted that coho salmon and sockeye salmon are targeted by private anglers in Tatitlek.

Table 11. Sport Fishing Trends, Tatitlek: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Tatitlek ²	Saltwater Angler Days Fished – Non-Residents ³	Saltwater Angler Days Fished – Alaska Residents ³
2000	0	0	17	8	39,551	82,908
2001	0	0	17	5	66,450	135,248
2002	0	0	30	17	67,698	133,508
2003	0	0	28	19	70,549	150,086
2004	0	0	11	0	76,173	184,492
2005	0	0	32	23	87,033	165,559
2006	0	0	37	0	79,313	157,194
2007	0	0	22	0	90,002	210,203
2008	0	0	17	4	67,410	181,381
2009	0	0	16	0	59,505	189,563
2010	0	0	16	0	64,776	148,017

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence activities provide the majority of food items for Tatitlek residents. A coho salmon hatchery, supporting subsistence activities, is located at Boulder Bay, which is less than a mile from the center of the community.²⁷⁹ In 2003, the only year that a subsistence survey was conducted by ADF&G in Tatitlek between 2000 and 2010, 89% of households were recorded as using salmon for subsistence, 96% of households used halibut, 46% of households used marine mammal, 58% of households used marine invertebrates, and 57% of households used non-salmon fish (other than halibut). Per capita, the residents of Tatitlek harvested 262.32 pounds of

²⁷⁸ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

marine subsistence resources. Information about per capita subsistence harvest and household participation in subsistence activities is presented in Table 12.

In years for which data were reported between 2000 and 2010, an average of nine subsistence salmon permits were issued to Tatitlek residents, with an average of six of those permits being reported as fished in any given year. Coho salmon were the primary species harvested under subsistence permits (an average of 217 coho per year), along with Chinook salmon, chum salmon, pink salmon, and sockeye salmon in much smaller quantities. In 2003, total harvest of marine invertebrates was 61 pounds, and total harvest of non-salmon fish was 4,270 pounds. According to the ADF&G Division of Subsistence, marine invertebrate species harvested for subsistence in Tatitlek included black (small) chitons, butter clams, octopus, Pacific littleneck clams (steamers), and unknown cockles. The ADF&G Division of Subsistence also reported that non-salmon fish species harvested for subsistence included: black rockfish, eel, eulachon (hooligan candlefish), herring, herring roe/unspecified, lake trout, lingcod, Pacific cod (gray), red rockfish, sablefish (black cod), sea bass, starry flounder, unknown sole, and wolf fish. Information about subsistence harvest of salmon, marine invertebrates, and non-salmon fish (not including halibut) is presented in Table 13.

Between 2003 and 2010, an average of 24 Subsistence Halibut Registration Certificates (SHARC) were issued to Tatitlek residents each year, representing 28.4% of the total households. In 2010, 15 SHARC were issued, 6 were reported as fished, and 1,525 pounds of subsistence halibut were reported as harvested. This represents a substantial decline from 2007, in which 28 SHARC cards were issued, 26 were returned, and 12,782 pounds of subsistence halibut were reported as harvested. Information about subsistence halibut harvest is presented in Table 14.

Information about subsistence harvest of marine mammals was reported between 2000 and 2008, with the exception of 2005 and 2007. Sea otters were among the marine mammals harvested by Tatitlek residents during this period. No information was reported regarding harvest of beluga whales or walrus. Information about the subsistence harvest of marine mammals is presented in Table 15. Between 2000 and 2008, Steller sea lions and harbor seals were also reported harvested for subsistence in Tatitlek. The number of Steller sea lions harvested for subsistence varied from year to year, from two in 2000 to 41 in 2007, and the number of harbor seals harvested for subsistence also varied from 13 in 2002 to 219 in 2006. No information was reported regarding harvest of spotted seals during this period. Information regarding the subsistence harvest of seals and sea lions is presented in Table 16.

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Tatitlek during this period: black (small) chitons, butter clams, octopus, Pacific littleneck clams (steamers), and unknown cockles. Marine mammals reported as harvested for subsistence use included harbor seal, harbor seal (saltwater), porpoise, and Steller sea lion. Non-salmon fish reported as harvested for subsistence use included: black rockfish, eel, eulachon (hooligan candlefish), herring, herring roe/unspecified, lake trout, lingcod, Pacific cod (gray), red rockfish, sablefish (black cod), sea bass, starry flounder, unknown sole, and wolf fish.²⁸⁰

²⁸⁰ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Tatitlek: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	89%	96%	46%	58%	57%	262.32
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Tatitlek: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	1	n/a	n/a	n/a	n/a	10	n/a	n/a
2001	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	7	7	11	n/a	n/a	n/a	12	61	4,270
2004	19	14	8	23	355	99	379	n/a	n/a
2005	8	7	15	n/a	186	n/a	23	n/a	n/a
2006	10	3	3	n/a	n/a	n/a	85	n/a	n/a
2007	17	7	6	n/a	n/a	n/a	1	n/a	n/a
2008	7	6	15	n/a	n/a	n/a	73	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Tatitlek: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	19	17	4,516
2004	26	25	7,034
2005	30	14	6,458
2006	30	21	6,490
2007	28	26	12,782
2008	24	20	5,621
2009	17	6	1,814
2010	15	6	1,525

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Tatitlek: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	16	n/a	n/a	2	46	n/a
2001	n/a	n/a	n/a	n/a	6	62	n/a
2002	n/a	n/a	n/a	n/a	n/a	13	n/a
2003	n/a	n/a	n/a	n/a	12	91	n/a
2004	n/a	n/a	n/a	n/a	26	90	n/a
2005	n/a	n/a	n/a	n/a	39	138	n/a
2006	n/a	n/a	n/a	n/a	16	219	n/a
2007	n/a	n/a	n/a	n/a	41	133	n/a
2008	n/a	n/a	n/a	n/a	17	125	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	2	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Valdez (val-DEEZ)

People and Place

Location



Valdez is located on the north shore of Port Valdez, a deep water fjord in Prince William Sound. By water, Valdez is 1,239 miles northwest of Seattle, 170 miles northeast of Seward, 80 miles northeast of Whittier, and some 45 miles northwest of Cordova. Anchorage is 120 air miles northwest of Valdez, and 305 road miles. Valdez is the southern terminus of the Trans-Alaska oil pipeline. It is located in the Valdez Recording District and the Valdez-Cordova Census Area. The City encompasses 222 square miles of land and 55.1 square miles of water.^{281,282}

*Demographic Profile*²⁸³

In 2010, there were 3,976 residents in Valdez, making it the 29th largest of 352 Alaskan communities with populations recorded that year. From 1990 to 2010, the population decreased by 2.3%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population fell by 13.9% with an average annual growth rate of -1.65%, indicative of a steady rate of decline in those years.

In 2010, a majority of Valdez residents identified themselves as White (81.5%), 8.2% identified as American Indian or Alaska Native, 1.9% as Asian, 0.8% as Native Hawaiian or Other Pacific Islander, 0.6% as Black or African America, 0.7% as ‘some other race’, and 6.3% identified with two or more races. In addition, 4.7% of Valdez residents also identified themselves as Hispanic in 2010. The percentage of the population made up of each of these racial and ethnic groups remained relatively stable between 2000 and 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Valdez decreased over time, from 2.9 persons per household in 1990 to 2.66 per household in 2000, and 2.43 in 2010. During the same period, the number of households increased, from 1,277 occupied households in 1990 and 1,494 in 2000, to 1,573 occupied housing units in 2010. Of the 1,763 total housing units surveyed for the 2010 Decennial Census, 61.3% were owner-occupied, 28% were rented, and 10.8% were vacant or used only seasonally. In 1990, 281 Valdez residents lived in group quarters. This number decreased to 56 in 2000, then rose again to 149 by 2010.

²⁸¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸² City of Valdez. 2007. *Valdez Comprehensive Development Plan*. Retrieved April 30, 2012 from <http://www.commerce.state.ak.us/dca/plans/Valdez-CP-2007.pdf>.

²⁸³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

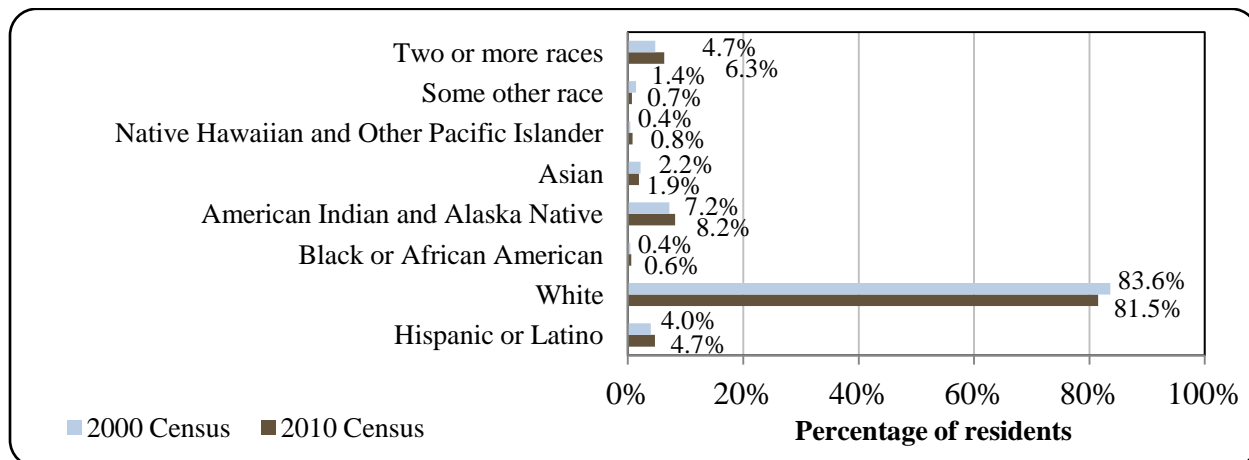
Table 1. Population in Valdez from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	4,068	-
2000	4,036	-
2001	-	3,825
2002	-	3,952
2003	-	3,897
2004	-	3,719
2005	-	3,754
2006	-	3,675
2007	-	3,580
2008	-	3,628
2009	-	3,475
2010	3,976	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

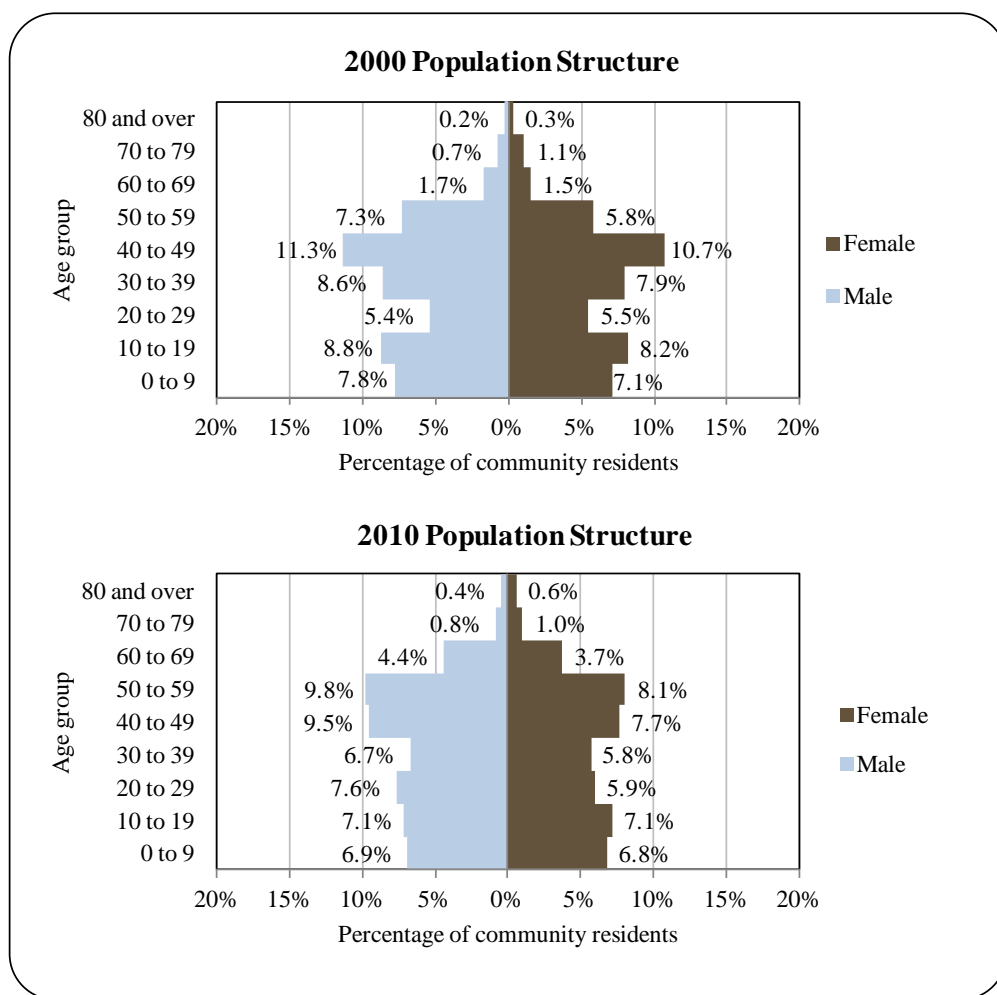
Figure 1. Racial and Ethnic Composition, Valdez: 2000-2010 (U.S. Census).



The gender distribution in 2010 (53.3% male and 46.7% female) was slightly more skewed toward males than the statewide distribution (52% male, 48% female). The median age of Valdez residents that year was 36.7 years, close to the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 10.9% of Valdez’s population was age 60 or older. The overall population structure of Valdez in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),²⁸⁴ 96.1% of Valdez residents over the age of 16 were estimated to hold a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 0% had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 3.9% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 40.6% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 13.2% held an Associate’s degree, compared to an estimated 8% of Alaskan residents overall; an estimated 15.1% held a Bachelor’s degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 5.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

Figure 2. Population Age Structure in Valdez Based on the 2000 and 2010 U.S. Decennial Census.



²⁸⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Archaeological evidence suggests that Chugach Eskimos (Chugachmiut) were present in the Valdez region starting in the early Holocene period. Port Valdez was likely used for foraging and hunting activities, but probably did not contain permanent settlements, as the Chugachmiut preferred to reside along protected shorelines with unobstructed views of all approaches, and avoided closed bays. Of eight sub-groups of Chugachmiut, the Tatitlek group was the nearest to Valdez.²⁸⁵

The Port of Valdez was named in 1790 by Don Salvador Fidalgo for the celebrated Spanish naval officer Antonio Valdes y Basan. Due to its excellent ice-free port, a town developed in 1898 as a debarkation point for men seeking a route to the Eagle Mining District and the Klondike gold fields. Valdez soon became the supply center of its own gold-mining region and incorporated as a City in 1901. Fort Liscum was established in 1900, and a sled and wagon road was constructed to Fort Egbert in Eagle by the U.S. Army. The Alaska Road Commission further developed the road for automobile travel to Fairbanks.²⁸⁶ By 1920, the Richardson Highway was completed, and was Alaska's first road connecting Fairbanks in the interior with the coast. Today, the Highway (Alaska Route 4) is a paved, two-lane highway open year-round to traffic.²⁸⁷

Valdez prospered for a time as a commercial center, especially after gold and copper were discovered nearby.²⁸⁸ However, the community's population declined by half between 1910 and 1920 as mining activity decreased and Fort Liscum was closed. In addition, completion of the Alaska Railroad from Seward to Fairbanks in 1923 led to a decline in the importance of Valdez as a transportation center.²⁸⁹ As mining declined in importance to the local economy, commercial fishing began to grow in importance in the region. The first salmon cannery was built in Valdez in 1917. Between 1917 and 1955, several additional canneries opened and closed. Fur farming was briefly an important industry in the 1920s, and mining retained a small presence in the local economy through the early 1940s.²⁹⁰

The Great Alaska Earthquake of 1964 caused significant damage in Valdez. Shock waves from the 9.2 magnitude quake ripped streets apart, damaged homes and destroyed buildings in town. An underwater landslide followed the earthquake that caused a tsunami, further destroying the waterfront and much of the community. Two docks in town were completely destroyed. Several residents were killed. In total, \$15 million dollars in damage was reported. Following this disaster, community leaders moved the City four miles west to a safer location.²⁹¹ The economy of Valdez rebounded after the City was selected as the terminus of the Trans-Alaska Pipeline, and construction of a terminal and other cargo transportation facilities brought rapid growth.²⁹² The Exxon Valdez oil spill disaster of March, 1989 also led to a population boom, as

²⁸⁵ City of Valdez. 2007. *Valdez Comprehensive Development Plan*. Retrieved April 30, 2012 from <http://www.commerce.state.ak.us/dca/plans/Valdez-CP-2007.pdf>.

²⁸⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸⁷ See footnote 285.

²⁸⁸ City of Valdez. 2004. *Local Hazards Mitigation Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dcra/planning/nfip/Hazard_Mitigation_Plans/Valdez_LHMP.pdf.

²⁸⁹ See footnote 285.

²⁹⁰ Ibid.

²⁹¹ See footnotes 286 and 288.

²⁹² See footnotes 285 and 286.

thousands of workers came to Valdez to work in clean-up efforts.²⁹³ The oil spread outward and did not reach the shores of the community, but commercial, recreational, and subsistence fisheries in Valdez continue to be affected by the impacts of the spill.²⁹⁴

Natural Resources and Environment

Valdez has a maritime climate which is characterized by cool summers and mild winters. January temperatures range from 21 to 30 °F, and July temperatures are from 46 to 61 °F. Annual precipitation averages 62 inches. The average snowfall is 325 inches (27 feet) annually.²⁹⁵ The Prince William Sound area is characterized by complex coastlines, peninsulas and small islands, and glacial carved valleys and fjords.²⁹⁶ Valdez is surrounded by the Chugach mountains, with close peaks as high as 4,000 feet, and Mt. Marcus Baker, located 55 miles northwest, rising to 13,250 feet. High mountain ridges to the north of the community provide a barrier to the flow of cold air from the interior, but the mountains also channel local winds, bringing cold air down from snowfields and the Valdez glacier. The City of Valdez is built on an alluvial fan of Mineral Creek.²⁹⁷ Uplands host coniferous forest and muskegs.²⁹⁸

The City of Valdez is located just north and east of the boundary of the Chugach National Forest, the western and northern-most National Forest in the U.S., comprising 5.5 million acres. The area of the National Forest adjacent to Prince William Sound makes up 48% of its total acreage. Within this region of the National Forest there are 3,500 miles of shoreline, and 20 active tidewater glaciers.²⁹⁹ Marine protected areas near Valdez include Shoup Bay, Jack Bay, and Sawmill Bay State Marine Parks (SMPs) and the Copper River Delta Critical Habitat Area.³⁰⁰ SMPs are intended to protect natural habitat, and do not restrict fishing activity.³⁰¹ All three of these SMPs are important recreational areas for residents of Valdez. Additional recreational areas include Mineral Creek Flats and Canyon, the Valdez Glacier, Valdez Lake and Stream, Robe Lake, Keystone Canyon and associated trail system, Solomon Gulch, the Old Valdez townsite, and Valdez Duck Flats.³⁰²

Valdez hosts the terminus of the Alaska Pipeline, which carries crude oil south from oil fields in Alaska's North Slope. Living marine resources in the Valdez area were negatively impacted and continue to show affects of the March 1989 Exxon Valdez Oil Spill, when 11 million gallons of crude oil spilled into Prince William Sound. The spill affected the food chain

²⁹³ See footnote 288.

²⁹⁴ Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

²⁹⁵ See footnote 286.

²⁹⁶ U.S. Forest Service. 2008. *East Prince William Sound Landscape Assessment*. Retrieved May 3, 2012 from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5151500.pdf

²⁹⁷ See footnote 285.

²⁹⁸ See footnote 296.

²⁹⁹ National Park Service (n.d.). *Chugach National Forest: Forest Facts*. Retrieved December 14, 2011 from <http://www.fs.usda.gov/chugach/>.

³⁰⁰ Alaska Dept. of Natural Resources. 2010. *State Marine Parks near Valdez*. Retrieved May 3, 2012 from <http://dnr.alaska.gov/parks/units/pwssmp/smpvald.htm>.

³⁰¹ Alaska Dept. of Fish and Game Marine Protected Area Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Regional Information Report 5J02-08. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

³⁰² City of Valdez. 2006. *Coastal Management Plan, 2006 Plan Amendment*. Retrieved May 3, 2012 from http://www.alaskacoast.state.ak.us/District/FinalFinalPlans/Valdez/Valdez2006PlanAmendment_081306.pdf.

that supports the Prince William Sound commercial fishery, and impacted shore birds, waterfowl, sea otters, harbor porpoises, harbor seals, Steller sea lions, and several species of whale, among other species.³⁰³ Harvest of shellfish declined dramatically due to petrochemical contamination. Sea otter mortality was as high as 40% immediately following the spill. The 50% decline in the Prince William Sound orca population in the decades following the spill has been attributed to direct oil exposure and consumption of oiled marine mammals. Many other fish, marine mammal, and bird populations declined following the spill, including harbor seals, Steller sea lions, marbled murrelets, and black oyster catchers. Impacts on habitat and forage fishes created continued difficulties for recovery of many species.³⁰⁴ In particular, the 1993 collapse of the Prince William Sound herring fishery has made recovery for many species difficult, as it is a primary food source for harbor seal, Steller sea lion, and marbled murrelet, among other species. The relationship between the herring collapse and the oil spill remains unclear.^{305,306}

No offshore oil and gas lease sales were scheduled in the Gulf of Alaska for the 2012-2017 leasing program.³⁰⁷ A 2000 assessment of conventionally recoverable oil and gas estimated the presence of between 360 million to 3.27 billion barrels of oil and gas in the Gulf of Alaska region. This was slightly higher than estimates in Cook Inlet. The Pacific Margin Subregion (including Cook Inlet, Gulf of Alaska and Shumagin-Kodiak) was estimated to hold only 6.3% of all conventionally recoverable oil and gas in Alaska's offshore regions, while the Arctic Subregion was estimated to hold 84.6% and the Bering Shelf subregion was estimated to hold 9.1%.³⁰⁸ On state lands, acreage is available in the Valdez area for oil and gas exploration, but no current leases were active as of 2011, and no exploration licenses were proposed in the area for the 2012-2017 lease period.³⁰⁹

Valdez played a role in the history of mining in Alaska both as a launching point for gold prospectors bound for the Klondike or Copper River Basin in the late 1800s and early years of the 1900s, and later miners prospected for gold, copper and silver locally on the islands and shores of Prince William Sound. The most profitable mines in the vicinity of Valdez were the Cliff Gold Mine and the Midas Mine. The Cliff Mine resulted in about 51,740 ounces of gold and 8,153 ounces of silver. The Midas Mine, in nearby Solomon Gulch on the south shore of the Port, was the fourth largest producer of copper in the Prince William Sound area. Ellamar Mine, located near Tatitlek, was a large copper producer, and almost as much gold was produced as a by-product of copper mining as was produced at the Cliff Mine.³¹⁰ Today, the Midas and

³⁰³ U.S. Environmental Protection Agency (n.d.). *Exxon Valdez*. Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

³⁰⁴ See footnote 294.

³⁰⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁰⁶ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

³⁰⁷ Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

³⁰⁸ Bureau of Ocean Energy Management. 2000. *Undiscovered Oil and Gas Resources, Alaska Federal Offshore, December 2000 Update*. Retrieved May 3, 2012 from <http://alaska.boemre.gov/re/uogr/uogr.pdf>.

³⁰⁹ State of Alaska. January 2011. *Five-Year Program of Proposed Oil and Gas Lease Sales*. Retrieved May 3, 2012 from http://dog.dnr.alaska.gov/Leasing/Documents/5YearReports/2011/5Year_Leasing_Program_01012011.pdf.

³¹⁰ Valdez, AK website. (n.d.). *Short History of Valdez*. Retrieved May 3, 2012 from <http://www.valdezalaska.org/discover-valdez-history/short-history-of-valdez>.

Ellamar Mines are still considered to be some of the most significant copper deposits in Alaska, along with some gold, zinc, lead, and silver.³¹¹

Natural hazards identified in Valdez include high risk of flooding, avalanche, landslides, erosion, and severe weather, and medium risk of earthquake, tsunami and seiche, and wildfire. The risk of volcanic activity and drought was unknown.³¹² Avalanche areas in Valdez include steep slopes north of the Valdez airport and along Mineral Creek. Flood hazards are posed by tsunamis, storm surges, heavy rainfall, snow and glacial melt, and potential for release of glacier-dammed lakes.³¹³ Earthquake hazards are high in this region of Alaska. There are 11 major active fault systems within 150 miles that are capable of producing earthquakes that can be felt in the Valdez.³¹⁴ According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Valdez as of July 2012.³¹⁵

Current Economy³¹⁶

In a survey conducted by the AFSC in 2011, community leaders reported that Valdez's economy is dependent on commercial and recreational fishing, sport hunting, and oil and natural gas exploration and drilling. Valdez is the southern terminus and off-loading point of oil extracted from Prudhoe Bay on Alaska's North Slope, and as a result has one of the highest municipal tax bases in the state. Valdez is a major seaport, with a \$48 million cargo and container facility. City, state, and federal agencies provide significant employment. In addition, in 2010, 62 residents held state commercial fishing permits. Several fish processing plants operate in Valdez. The Valdez Fisheries Development Association operates the Valdez Fish Hatchery as well as a seasonal processing plant during harvest season. Several cruise ships dock in Valdez each year. Valdez is a foreign free trade zone. In addition, 98 uniformed U.S. Coast Guard personnel were stationed in Valdez in 2011.³¹⁷ As of 2010, top local employers included pipeline services (design, construction, maintenance, and operation), schools, the City of Valdez, health services, oil spill cleanup and prevention services, the State of Alaska, University of Alaska, and police/security services.³¹⁸

Based on household surveys conducted for the 2006-2010 ACS,³¹⁹ in 2010, the per capita income in Valdez was estimated to be \$34,822 and the median household income was estimated

³¹¹ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

³¹² City of Valdez. 2004. *Local Hazards Mitigation Plan*. Retrieved April 30, 2012 from http://www.commerce.state.ak.us/dcra/planning/nfip/Hazard_Mitigation_Plans/Valdez_LHMP.pdf.

³¹³ City of Valdez. 2006. *Coastal Management Plan, 2006 Plan Amendment*. Retrieved May 3, 2012 from http://www.alaskacoast.state.ak.us/District/FinalFinalPlans/Valdez/Valdez2006PlanAmendment_081306.pdf.

³¹⁴ See footnote 312.

³¹⁵ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³¹⁶ Unless otherwise noted, all monetary data are reported in nominal values.

³¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³¹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

to be \$69,536. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$27,341 and \$66,532, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,³²⁰ per capita income is shown to have decreased very slightly, from a real per capita income of \$35,953 in 2000, while household income is shown to have decreased more substantially, from a real median household income of \$87,489 in 2000. In 2010, Valdez ranked 30th of 305 Alaskan communities with per capita income data, and 48th in median household income, out of 299 Alaskan communities with household income data that year.

Although Valdez's small population size may have prevented the ACS from accurately portraying economic conditions,³²¹ additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Valdez in 2010 is \$24,105.³²² This is lower than the 2006-2010 ACS estimate, thus providing additional evidence that per capita may have declined between 2000 and 2010. Despite this, Valdez did not meet the Denali Commission's 2011 criteria as a "distressed" community.³²³ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the potential value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly higher percentage of Valdez residents were estimated to be in the civilian labor force (74%) than in the civilian labor force statewide (68.8%). In the same year, 4.7% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 3.6%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 9.7%, compared to a statewide unemployment rate estimate of 11.5%.³²⁴

Also based on the 2006-2010 ACS, a majority of the Valdez workforce (71.6%) was estimated to be employed in the public sector, along with 22.1% in the public sector, and 6.3% estimated to be self-employed. Of the 547 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number was estimated to be working in educational services, health care, and social assistance (25.1%) and transportation, warehousing, and utilities (12.5%). Between 2006 and 2010, only 5.9% of the Valdez civilian labor force was estimated to be employed in agriculture, forestry, fishing, hunting, and mining (Figures 3 and 4). However, given the known information on Valdez residents' contribution to state fisheries, the number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

³²⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³²¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³²² See footnotes 318 and 319.

³²³ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

³²⁴ See footnote 318.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 1,960 employed residents in Valdez in 2010, of which 26.3% were employed in trade, transportation, and utilities, 15.9% in local government, 12.8% in leisure and hospitality, 11.8% in education and health services, 8% in professional and business services, 6% in state government, 5.5% in natural resources and mining, 4.1% in manufacturing, 3.5% in construction, 2.7% in information, 1.5% in financial activities, 0.1% in unknown industries, and 1.9% in other industries.³²⁵ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Valdez (U.S. Census).

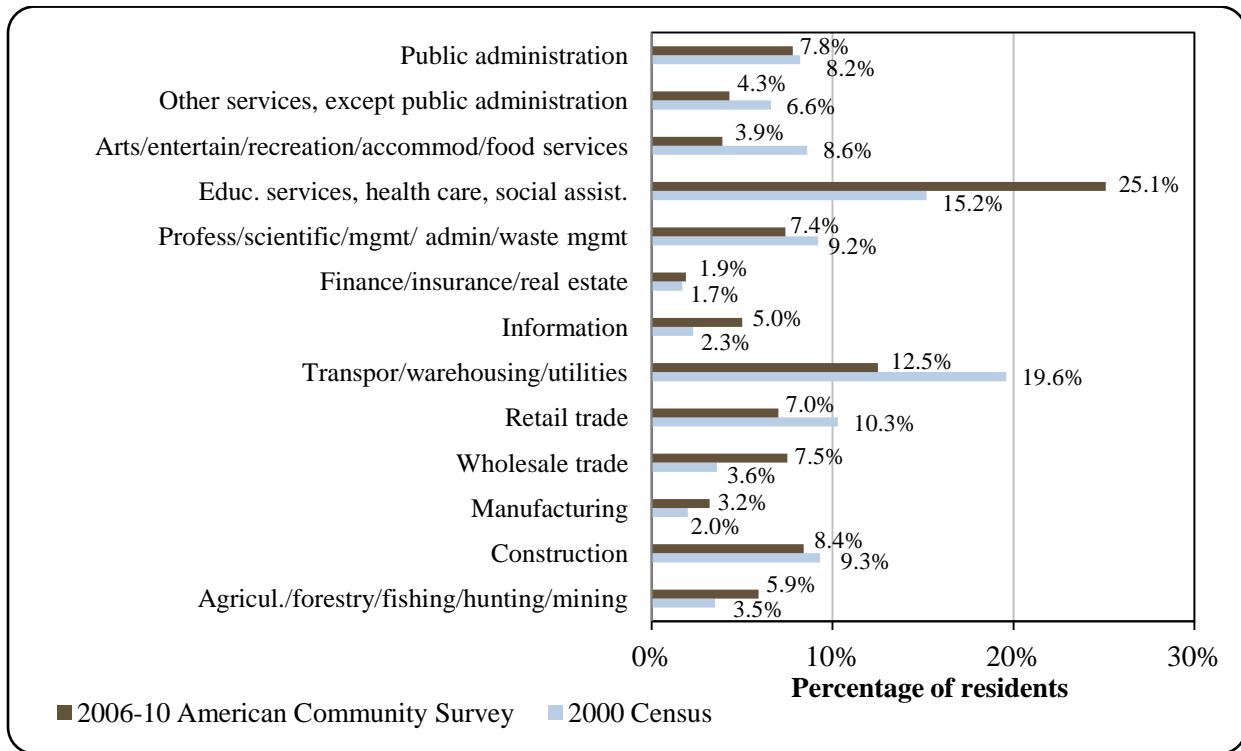
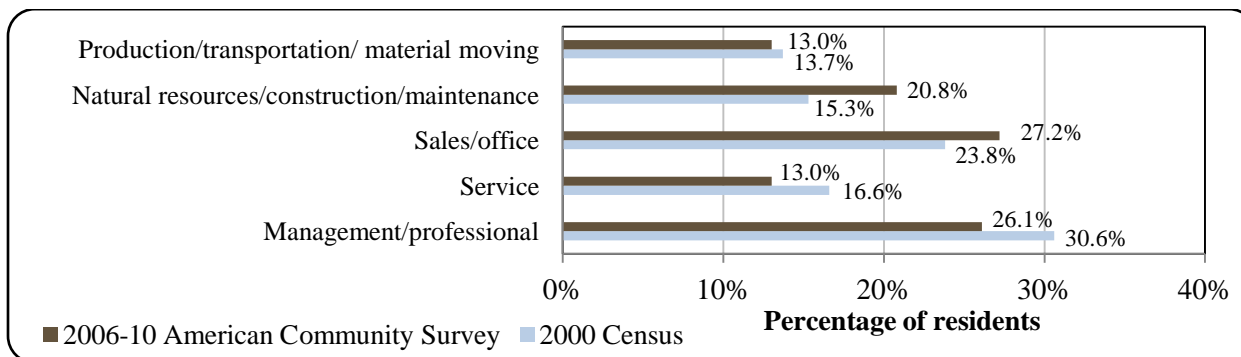


Figure 4. Local Employment by Occupation in 2000-2010, Valdez (U.S. Census).



³²⁵ Ibid.

Governance

Valdez is a Home Rule City, and is not located in an organized borough. The City was incorporated in 1901 and has a Strong Mayor form of government, including a seven-person city council including the Mayor, a seven-person advisory school board, a seven-person planning and zoning commission, and a number of municipal employees. The City administers a 20.0 mills property tax and a 6% Bed Tax. No sales tax is administered in the City of Valdez.³²⁶ Municipal revenue in Valdez more than doubled between 2000 and 2010, from just over \$20,000,000 in 2000 to over \$50,000,000 in 2009 and 2010. This increase can be attributed in part to an increase in tax revenues over the period.

Shared revenues from state and federal sources provided another important revenue source for the City during this period. Valdez received contributions from the State Revenue Sharing program from 2000 to 2003 (approximately \$100,000 per year), from the Community Revenue Sharing program in 2009 and 2010 (just over \$320,000 per year), as well as shared funds from state fish tax refunds (see the *Fisheries-Related Revenue* section for more information).

Grants also accounted for a sizeable portion of municipal revenues, including multiple fisheries-related grants. Federal funding came from the U.S. Economic Development Administration, including \$3,000,000 toward harbor improvements or the cruise ship dock in 2004, and \$558,000 for a smoker and cold storage in 2006. In addition, Valdez received federal disaster assistance totaling \$2,825,267 between 2000 and 2006, and a federal ‘marine first responder’ grant of \$7,756 in 2008. State funding included \$12,174,427 from the Alaska Department of Commerce, Community, and Economic Development’s (DCCED) Division of Community and Regional Affairs (DCRA) between 2000 and 2010. DCRA-funded projects included design of a dried fish processing plant, City Dock repair, revitalization, and fendering, improvements to the small boat harbor including installation of a ramp, development of a new harbor, cruise ship dock renovation, and uplands repair, other dock and harbor improvements and maintenance, and funding for chum salmon fisheries development granted to the Prince William Sound Aquaculture Corporation. Alaska DEC – Municipal Grants and Loans contributed \$56,700 toward the small boat harbor in 2002. The Alaska Department of Transportation and Public Facilities provided \$762,998 in 2001 for replacement of the ferry terminal building, and \$424,623 in 2002 for staging of the Valdez Ferry Terminal. In addition, the State of Alaska provided \$310,473 between 2000 and 2004 for repairs the old City Dock including addition of fenders, and \$140,117 from 2000 to 2003 for construction of a new cruise ship dock. Information about selected aspects of Valdez’s municipal revenue is presented in Table 2.

Valdez was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.³²⁷ The Native population of Valdez is represented by the Valdez Native Tribe, a non-profit organization that formed in 1974. The Tribe’s mission is to “promote the unity, self-determination, and empowerment of the Alaska Native and American Indian beneficiaries residing in the Valdez area, by providing services that will strengthen, increase opportunities, and enhance the mental, physical and spiritual well being of

³²⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³²⁷ Ibid.

our people, in harmony with our land and traditional values.”³²⁸ The organization provides health, social, educational, and cultural services.³²⁹

The closest office of the Alaska Department of Fish and Game (ADF&G) is located in Cordova, though ADF&G’s Anchorage office may be more accessible to residents of Valdez because Cordova is not connected to the road system. Anchorage also hosts the nearest offices of the Alaska Department of Natural Resources, the National Marine Fisheries Service (NMFS), the DCCED, and the U.S. Bureau of Citizenship and Immigration Services.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Valdez from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$21,679,852	n/a	\$114,675	\$868,727
2001	\$23,193,808	n/a	\$102,453	\$1,877,490
2002	\$23,759,150	n/a	\$92,373	\$3,109,197
2003	\$23,727,809	n/a	\$95,657	\$3,194,194
2004	\$31,483,980	n/a	n/a	\$4,053,772
2005	\$23,793,604	n/a	n/a	\$352,700
2006	\$30,417,694	n/a	n/a	\$1,084,600
2007	\$32,583,668	n/a	n/a	\$3,565,000
2008	\$48,560,552	n/a	n/a	\$7,756
2009	\$50,839,699	n/a	\$325,462	\$4,175,000
2010	\$54,036,827	n/a	\$321,582	\$3,325,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

The Richardson Highway connects Valdez to Alaska’s road system. Valdez is 305 road miles southeast of Anchorage. The Port of Valdez is ice-free throughout the year, and is navigated by hundreds of ocean-going oil cargo vessels each year. Valdez has the largest floating concrete dock in the world, with a 1,200-foot front and water depth exceeding 80 feet. Numerous cargo and container facilities are present in Valdez, as well as boat harbors. Both barges and

³²⁸ Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

³²⁹ Chugachmiut. 2012. *Valdez Native Tribe*. Retrieved April 27, 2012 from <http://www.chugachmiut.org/tribes/valdez.html>.

trucking services deliver cargo to the City.³³⁰ The Alaska Marine Highway Ferry System provides transport to Cordova, Tatitlek, Whittier, and Chenega Bay in Prince William Sound, to Kodiak, Ouzinke, Port Lions, and Old Harbor on Kodiak Island, and to Seward, Seldovia, and Homer on the Kenai Peninsula.³³¹ The Valdez airport is operated by the State, with a 6,500 feet long by 150 feet wide paved runway.³³² As of early June 2012, roundtrip airfare between Valdez and Anchorage was \$298.³³³ In addition, a seaplane base is located at Robe Lake, approximately 8 road miles southeast of town.³³⁴

Facilities

Water in Valdez is derived from four primary wells and is stored in five 750,000-gallon reservoirs. The City operates a piped water distribution system, and also operates the sewage system. The sewage treatment plant is capable of processing 1.25 million gallons a day. Sewage is deposited in a secondary treatment lagoon. Over 95% of homes are fully plumbed, and many homes use individual wells and septic tanks. The City operates a landfill and provides refuse collection services in Valdez. An oil and hazardous waste recycling center is also available. Electricity is provided by the Copper Valley Electric Association which purchases hydroelectric power from the Four Dam Pool Power Agency and diesel electricity from the Petro Star Refinery. The electric utility also owns a backup diesel plant. Police services are provided by the City Police Department and a local state troopers post. Fire and rescue services are provided by the City Fire Department and Emergency Medical Service (EMS), as well as the Robe River Fire Hall, Alyeska Marine Terminal Fire Response, and Civil Air Patrol. A State District Court and State Jail are both located in Valdez.³³⁵

Additional community facilities and services include Valdez Senior Citizens housing, a convention and civic center which houses a movie theater, a teen center, two museums and a historical archive, one academic/public library and three school libraries, a high school pool and gymnasium, and bingo offered by the Valdez Native Tribe.³³⁶ According to a survey conducted by the AFSC in 2011, Valdez also has a food bank. Internet, cable, and telephone service are all available in Valdez.³³⁷

With regard to fisheries-related facilities, a small harbor is present in Valdez that accommodates 546 commercial fishing boats and recreational vessels. Boat launches and haul-out services are available.³³⁸ According to the 2011 AFSC, community leaders indicated that dry dock storage is also available, along with sales of ice, boat fuel, bait, and tackle. They also noted that fish processing plants are present in Valdez (see *Processing Plants* section).

³³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³³¹ Route information retrieved April 27, 2012 from <http://www.dot.state.ak.us/amhs/routes.shtml>.

³³² See footnote 330.

³³³ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on November 16, 2011.

³³⁴ See footnote 330.

³³⁵ Ibid.

³³⁶ Ibid.

³³⁷ Ibid.

³³⁸ Ibid.

Medical Services

Local health care is provided by the Valdez Community Hospital and the Valdez Native Tribe Clinic. The hospital is owned by the City, and the clinic is owned and operated by the Valdez Native Tribe. The hospital is a qualified Acute Care facility. Emergency Services have helicopter, marine, and airport access. Emergency service is provided by 911 Telephone Service and paid EMS. Alternative health care is provided by the Valdez Fire Department. Long-term care is also available in Valdez at Sourdough Place.³³⁹

Educational Opportunities

Three schools are present in Valdez, including Hermon Hutchens Elementary School (preschool through 6th grade), George H. Gilson Junior High School (7th and 8th grade), and Valdez High School (9th through 12th grade). As of 2011, 354 students were enrolled at the elementary school, 112 at the junior high school, and 222 at the high school. That year, there were 26 elementary school teachers, 13 junior high school teachers, and 19 high school teachers. A correspondence school is also in operation in Valdez – the Chugach Extension Correspondence School – which offered preschool through 12th grade. As of 2011, 203 students were enrolled in the correspondence program, and there were 6 teachers.³⁴⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The original inhabitants of the Valdez area, the Chugachmiut, were marine hunters and fishers. In summer, they moved from permanent winter settlements to temporary fish camps. Salmon were a dietary staple, and large quantities were dried for winter use. The Chugachmiut also caught other fish, gathered intertidal resources, and hunted sea mammals, such as whales, seals, sea lions, and sea otters. Hunting was done with harpoons and clubs, and fish were speared, gaffed, harpooned, or hooked. Salmon were often caught in weirs built across rivers.³⁴¹

The community of Valdez was originally founded as a debarkation point for miners in the late 1800s. Commercial fishing began to gain importance as mining activity declined in the early 1900s. The first salmon cannery was built in Valdez in 1917.³⁴² Prior to construction of the Valdez cannery, one salmon cannery was in operation in the Prince William Sound (PWS) region, and fishing took place primarily along the Copper River delta. Salmon fishing continued to expand to other regions of PWS as additional canneries were constructed.³⁴³ Salmon and herring were two of the earliest commercial fisheries in Alaska, during the period when the

³³⁹ Ibid.

³⁴⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³⁴¹ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

³⁴² City of Valdez. 2007. *Valdez Comprehensive Development Plan*. Retrieved April 30, 2012 from <http://www.commerce.state.ak.us/dca/plans/Valdez-CP-2007.pdf>.

³⁴³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

product was salted for storing and shipment.³⁴⁴ By the 1920s, commercial fisheries for Pacific halibut and groundfish expanded north to the Gulf of Alaska (GOA) and west as far as Unimak Pass.³⁴⁵

Today, ADF&G manages the PWS salmon fishery. The PWS salmon management area is divided into 11 commercial fishing districts, covering the coastal area from Cape Suckling (northwest of Yakutat) to Cape Fairfield (east of Seward), and the inland waters of PWS. Valdez is located in the Eastern district. Purse seine gear is the most common gear type, and is allowed in eight of the nine inland fishing districts. Drift gillnet gear is allowed in three districts, and set gillnet gear is only allowed in the Eshamy District. It is important to note that a salmon hatchery program was initiated in Prince William Sound in the early 1970s, and hatchery returns have consistently contributed to harvests since the 1980s.³⁴⁶

Groundfish and crab fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. PWS is located in Federal Statistical and Reporting Area 649 and Pacific Halibut Fishery Regulatory Area 3A. The outlet of PWS is at the boundary between the Central GOA and Eastern GOA federal Sablefish Regulatory Areas.

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of PWS for rockfish, lingcod, pollock, sablefish, and Pacific cod. The PWS Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod began in PWS. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, a pelagic trawl fishery for pollock began in PWS in 1995, managed under a guideline harvest limit (GHL) determined by ADF&G, and is not conducted as a parallel fishery. The PWS limited entry sablefish fishery is also managed separately under a GHL.³⁴⁷

A majority of lingcod are found in nearshore rocky reef habitat from 10-100 meters in depth. ADF&G manages all lingcod fisheries in state and EEZ waters off Alaska. Lingcod in PWS are primarily harvested as incidental catch in longline fisheries, although lingcod fisheries have increased in importance in recent decades. The state manages rockfish harvest in PWS, and since 1998 also has jurisdiction of blue and black shelf rockfish in the western GOA, and all rockfish in the eastern GOA.³⁴⁸

PWS historically had a productive herring fishery. However, in 1993, four years after the Exxon Valdez oil spill, the stock collapsed in conjunction with an outbreak of hemorrhagic septicemia virus. Since 1998, the PWS herring fishery has been closed. The relationships between the oil spill, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery.^{349,350} PWS was also a historical center for Dungeness crab

³⁴⁴ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁴⁵ International Pacific Halibut Commission. 1978. *The Pacific Halibut: Biology, Fishery, and Management*. Technical Report No. 16 (Revision of No. 6).

³⁴⁶ See footnote 343.

³⁴⁷ See footnote 344.

³⁴⁸ Ibid.

³⁴⁹ Ibid.

fisheries, but this stock has also collapsed. Possible causes for the Dungeness collapse include overfishing, sea otter predation, and adverse climatic changes. Red king crab and Tanner crab fisheries in PWS are also closed due to low stock abundance.³⁵¹ In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.³⁵²

Valdez is not eligible to participate in the Community Quota Entity program or the Community Development Quota program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, three shore-side processing plants are in operation in Valdez. Information about and history of these facilities is presented below.

Peter Pan Seafoods owns and operates the only fresh/frozen/cannery facility in Valdez. The facility operates between April and September, processing salmon – including Copper River salmon – as well as sablefish and halibut.³⁵³ According to a survey of plant managers conducted by the AFSC in 2011, the Valdez plant began operations in 1988, and in 2010 employed up to 352 workers in the months of July and August.

Silver Bay Seafoods LLC processes salmon at its “Northern Reach Seafoods” facility in Valdez, which it acquired in early 2010. During the first winter, the company made large-scale investments in the old plant, including expanding freezer capacities by four times and purchasing new equipment for cutting salmon and preserving salmon roe. The daily processing capacity of the facility was increased from 250,000 round pounds of salmon to one million round pounds. The plant was operational during the 2010 summer season. In 2011, the Valdez facility employed 197 workers during the summer season.³⁵⁴

The Solomon Falls Seafoods facility in Valdez processes pink and coho salmon. Solomon Falls Seafoods is a subsidiary of the Valdez Fisheries Development Association, which was started in 1978 and is one of the biggest producers of pink salmon in Alaska.³⁵⁵ According to the 2011 survey of plant managers conducted by the AFSC, in 2010, the Solomon Falls plant employed up to 20 workers from June through September.

Fisheries-Related Revenue

In 2010, the City of Valdez received \$1,868,658 from fisheries-related taxes and fees. These revenue sources include the Shared Fisheries Business Tax and fees for harbor and port/dock usage. Table 3 presents details of selected aspects of community finances between 2000 and 2010.³⁵⁶

³⁵⁰ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

³⁵¹ See footnote 344.

³⁵² Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

³⁵³ Peter Pan Seafoods. 2011. *Facilities*. Retrieved July 6, 2012 from <http://www.ppsf.com/facilities/index.aspx>.

³⁵⁴ Silver Bay Seafoods. 2011. *Facilities*. Retrieved July 6, 2012 from <http://silverbayseafoods.com/>.

³⁵⁵ Solomon Fall. 2012. *About*. Retrieved July 6, 2012 from <http://www.solomonfalls.com/about/>.

³⁵⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Between 2000 and 2010, Valdez residents were active in commercial fisheries as permit and quota share account holders, crew license holders, and vessel owners. They were most involved in fisheries for salmon, halibut, and sablefish. Inactive permits were held in a number of other fisheries throughout the period, and a number of shrimp permits were acquired in 2010 (Table 4). In addition to fisheries participation, the community of Valdez is one of the leading processing communities in Alaska, ranking 9th in landings and 14th in ex-vessel revenue, out of 67 Alaskan ports that received landings in 2010. That year, 20 fish buyers were present locally, and 3 shore-side processing facilities were in operation. In total, 72,812,837 net pounds were landed in Valdez in 2010, generating a total of \$31,530,772 in ex-vessel revenue (Table 5).

Between 2000 and 2010, the number of Valdez residents holding commercial crew licenses varied between a low of 56 in 2009 and a high of 93 in 2003. In 2010, 78 crew licenses were held. During the same period, the number of residents that were the primary owner of a fishing vessel varied between a low of 46 in 2006 and a high of 88 in 2000 and 2004, with 69 fishing vessels primarily owned by Valdez residents in 2010. Also in 2010, 80 vessels were listed as homeported in Valdez, and 275 vessels delivered landings locally. Further information about the commercial fishing sector in Valdez is presented in Table 5.

In 2010, 62 Valdez residents held a total of 97 state Commercial Fisheries Entry Commission (CFEC) permits. Of these, 44 were held for salmon fisheries, 25 were held for ‘other shellfish’ (shrimp), 13 were held for halibut, 6 were held for herring, 5 for sablefish, and 4 for groundfish. Additional information about CFEC permits is presented in Table 4, and further details regarding these permits are included below.

Of 44 salmon CFEC permits, 28 were held in the PWS purse seine fishery, 10 in the Prince William Sound drift gillnet fishery, 2 for Upper Yukon River fishwheel, 1 in the Cook Inlet drift gillnet fishery, 1 for Bristol Bay drift gillnet, and 1 was a statewide hand troll permit. In addition, one PWS ‘special harvest area’ (hatchery) permit was held in 2010. Overall, 57% of salmon permits held in Valdez were actively fished in 2010. Of the purse seine permits, 61% were actively fished that year, and 80% of PWS drift gillnet permits were actively fished. No statewide troll or Upper Yukon River fishwheel permits were actively fished by Valdez residents during the 2000-2010 period. The number of salmon permit holders and the total salmon permits held increased slightly between 2000 and 2010, and the percentage of permits actively fished also increased slightly over the period.

In 2010, 25 ‘other shellfish’ permits were held in Valdez. All 25 of these permits were held for shrimp fisheries using pot gear, and 11 of the permits were actively fished that year (44%). This represents a sudden increase in the number of ‘other shellfish’ permits held in Valdez, from one inactive permit held in 2000 and 2001 and no permits held between 2002 and 2009. The sudden increase reflects the reopening of the spot shrimp fishery in PWS in 2010. The fishery had previously been closed since the early 1990s due to low stock abundance.³⁵⁷

All 13 halibut CFEC permits held in 2010 were for the statewide longline fishery on vessels under 60 feet in length. That year, 11 (85%) of halibut permits were actively fished. Between 2000 and 2010, the number of halibut permit holders and the total number of permits held decreased slightly, while the percentage of permits actively fished increased.

³⁵⁷ Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

Sablefish CFEC permits were actively fished at the highest rate of any fishery in Valdez between 2000 and 2010, with 100% of permits fished in 8 years during the period. The number of sablefish permits held by Valdez residents rose from a low of two held in 2001 to a peak of eight held in 2004. From 2007 to 2010, five Valdez residents held five sablefish CFEC permits.

The number of groundfish CFEC permits held by Valdez residents also peaked in 2004, with 12 permits held by 9 permit holders. That year was also the only year during the 2000-2010 period in which a groundfish permit was actively fished. Between 2004 and 2010, the number of permit holders declined to three, and the number of permits held declined to four.

Although the PWS herring fishery has been closed since 1998, several Valdez residents held inactive herring permits in PWS herring fisheries between 2000 and 2010. The number of permit holders and permits held during this period varied from four to six per year. In 2010, six residents held a total of six herring permits. Three of these were held in the PWS herring purse seine fishery, one was held in the PWS roe herring gillnet fishery, and two were held in the PWS closed-pound herring spawn on kelp fishery. A “closed-pound” is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.³⁵⁸

Local PWS fisheries for Dungeness, red king, and Tanner crab are currently closed due to low stock abundance of these species.³⁵⁹ However, from 2001 to 2004, one permit was held by one Valdez resident in the Southeast Alaska Tanner crab pot gear fishery. The only years during the 2000-2010 that the permit was actively fished were 2002 and 2003.

In addition to CFEC permits, Valdez residents also held Federal Fisheries Permits (FFP) and federal License Limitation Program (LLP) permits between 2000 and 2010. The number of FFPs held increased from five to nine from 2000 to 2006, and then declined to seven by 2010. The first year that an FFP was actively fished during the 2000-2010 period was 2003, and the number of active permits varied from two to four between 2003 and 2010. The number of Valdez residents holding groundfish LLPs declined from nine in 2000 to seven in 2010, and the number actively fished varied from zero to two during this period. No LLP permits were held for federal crab fisheries between 2000 and 2010. Federal permit information is presented in Table 4.

Between 2000 and 2010, Valdez residents held quota share accounts and quota shares in federal catch share fisheries for halibut, sablefish, and crab, with the highest level of participation in the halibut fishery. The number of halibut quota share account holders in Valdez was 26 in the year 2000, declining to 16 by 2010. It is interesting to note that the number of quota shares held did not decrease at the same rate as the number of quota share accounts. On average, the number of quota shares held in each quota share account increased from 24,464 in 2000 to 44,320 in 2008, then declined slightly to 37,107 by 2010. The annual halibut individual fishing quota (IFQ) allotment increased to 41% higher than 2000 levels by 2007, before decreasing to 8% above 2000 levels in by 2010. Information about federal halibut catch share participation is presented in Table 6.

The number of sablefish quota share account holders varied from two to four between 2000 and 2010. The maximum amount of quota shares were held in 2005 (711,077), declining to

³⁵⁸ Alaska Dept. of Fish and Game. 2011. *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

³⁵⁹ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

389,073 in 2010. Annual sablefish IFQ allotment followed a similar pattern as the halibut IFQs described above. The value increased to 28% above 2000 levels in 2005, before decreasing to approximately 22% below 2000 levels in 2010. Information about federal sablefish catch share participation is presented in Table 7.

Between 2005 and 2010, one crab quota share account was held each year by a Valdez resident. The number of quota shares held decreased from 65,056 in 2005 to a stable 8,951 from 2006 to 2010. From 2006 to 2008, no IFQ allotment was associated with these quota shares. From 2009 to 2010, the annual crab IFQ allotment increased by 37%. This information is about crab catch share participation is presented in Table 8.

Of the landings reported between 2000 and 2010, the species landed in the greatest volume in Valdez were salmon and halibut. On average between 2000 and 2010, 38,318,995 net pounds of salmon were landed in Valdez, valued on average at \$11,070,777 in ex-vessel revenue. Salmon landings can be reported for all years except 2006 and 2008, for which the information is considered confidential due to the small number of participants. For the 4 years in which halibut landings and revenue were reported, landings averaged 119,942 net pounds, valued at \$281,186 in ex-vessel revenue on average. Landings and revenue information for halibut is considered confidential in years other than 2000-2003 due to low participant numbers. In addition, ‘other groundfish’ landings were reported from 2000 to 2002, averaging 4,096 net pounds landed per year, and an average ex-vessel revenue of \$1,021, while ‘other groundfish’ landings are considered confidential from 2003 to 2010. In the 2000-2010 period, landings and revenue were reported in 2010 only for ‘other shellfish’. All of the 4,668 net pounds were landings from the PWS shrimp pot gear fishery, valued at \$29,132. Landings and revenue in ‘other shellfish’ fisheries are considered confidential in 2000 and 2001, and no permits were held from 2002 to 2009. Information about landings and ex-vessel revenue in Valdez is presented in Table 9.

In addition to the landings delivered in Valdez by fishermen from many communities, landings and ex-vessel revenue earned by Valdez vessel owners, irrespective of port of landing, is of note. Valdez vessel owners made deliveries in many locations around Alaska between 2000 and 2010. Information can be reported in all years during this period for salmon and halibut, and for all years except 2006 for ‘other groundfish’ landings, when the information is considered confidential due to the small number of participants. On average between 2000 and 2010, Valdez vessel owners landed 10,144,922 net pounds of salmon, valued at \$2,323,243 in ex-vessel revenue on average over the period. The next greatest volume of deliveries was in the halibut fishery, with an average of 50,243 net pounds landed per year, and average ex-vessel revenue of \$158,722. For those years in which data can be reported, Valdez residents landed an average of 3,609 net pounds of ‘other groundfish’ during the 2000-2010 period, with an average ex-vessel revenue of \$1,472. In addition, ‘other shellfish’ landings in 2010 totaled 2,531 net pounds for a total ex-vessel revenue of \$14,471 that year. Data for other fisheries, with the exception of crab, are considered confidential between 2000 and 2010 due to low participant numbers. Information about landings by Valdez vessel owners is presented in Table 10.

Of the species landed between 2000 and 2010, shrimp (‘other shellfish’) landings were the most valuable per pound, and halibut were the second most valuable species per pound.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Valdez: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries											
Business Tax ¹	\$233,241	\$283,114	\$278,716	\$269,826	\$150,203	\$254,135	\$191,693	\$272,340	\$223,389	\$360,592	\$413,239
Fisheries Resource											
Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$78	\$61	\$46	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$561,000	\$587,500	\$649,550	\$646,680	\$621,571	\$642,250	\$755,305	\$733,386	\$751,267	\$1,003,422	\$1,089,460
Port/dock usage ²	\$443,217	\$259,851	\$289,906	\$292,444	\$294,182	\$379,991	\$441,204	\$320,524	\$295,946	\$324,034	\$365,959
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$1,237,458</i>	<i>\$1,130,465</i>	<i>\$1,218,172</i>	<i>\$1,208,950</i>	<i>\$1,065,956</i>	<i>\$1,276,376</i>	<i>\$1,388,202</i>	<i>\$1,326,329</i>	<i>\$1,270,663</i>	<i>\$1,688,094</i>	<i>\$1,868,658</i>
<i>Total municipal revenue⁵</i>	<i>\$21,679,852</i>	<i>\$23,193,808</i>	<i>\$23,759,150</i>	<i>\$23,727,809</i>	<i>\$31,483,980</i>	<i>\$23,793,604</i>	<i>\$30,417,694</i>	<i>\$32,583,668</i>	<i>\$48,560,552</i>	<i>\$50,839,699</i>	<i>\$54,036,827</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Valdez: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	9	9	8	8	8	8	8	7	8	8	7
	Active permits	1	1	2	2	1	1	1	1	1	0	2
	% of permits fished	11%	11%	25%	25%	12%	12%	12%	14%	12%	0%	28%
	Total permit holders	9	9	8	8	8	8	8	7	8	8	7
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	5	6	8	7	7	7	9	9	9	6	7
	Fished permits	0	0	0	4	2	3	2	4	4	2	3
	% of permits fished	0%	0%	0%	57%	29%	43%	22%	44%	44%	33%	43%
	Total permit holders	5	6	8	7	7	7	8	8	8	6	6
Crab (CFEC) ²	Total permits	0	1	1	1	1	0	0	0	0	0	0
	Fished permits	0	0	1	1	0	0	0	0	0	0	0
	% of permits fished	-	0%	100%	100%	0%	-	-	-	-	-	-
	Total permit holders	0	1	1	1	1	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	25
	Fished permits	0	0	0	0	0	0	0	0	0	0	11
	% of permits fished	0%	0%	-	-	-	-	-	-	-	-	44%
	Total permit holders	1	1	0	0	0	0	0	0	0	0	24
Halibut (CFEC) ²	Total permits	16	16	16	16	14	13	12	14	15	14	13
	Fished permits	9	11	11	12	12	11	11	13	14	12	11
	% of permits fished	56%	69%	69%	75%	86%	85%	92%	93%	93%	86%	85%
	Total permit holders	16	15	16	16	14	13	12	14	15	14	13
Herring (CFEC) ²	Total permits	4	4	6	4	4	4	4	4	4	5	6
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	6	4	4	4	4	4	4	5	6

Table 4 cont'd. Permits and Permit Holders by Species, Valdez: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	3	2	3	5	8	7	6	5	5	5	5
	Fished permits	1	2	3	5	7	7	5	5	5	5	5
	% of permits fished	33%	100%	100%	100%	88%	100%	83%	100%	100%	100%	100%
	Total permit holders	2	2	3	5	7	6	6	5	5	5	5
Groundfish (CFEC) ²	Total permits	8	9	9	9	12	10	5	3	3	3	4
	Fished permits	0	0	0	0	1	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	8%	0%	0%	0%	0%	0%	0%
	Total permit holders	7	7	7	7	9	8	4	2	2	2	3
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	41	34	42	44	42	43	39	35	37	39	44
	Fished permits	26	21	22	27	24	22	21	19	23	25	28
	% of permits fished	63%	62%	52%	61%	57%	51%	54%	54%	62%	64%	64%
	Total permit holders	38	33	40	40	40	43	39	34	36	35	38
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>73</i>	<i>67</i>	<i>77</i>	<i>79</i>	<i>81</i>	<i>77</i>	<i>66</i>	<i>61</i>	<i>64</i>	<i>66</i>	<i>97</i>
	<i>Fished permits</i>	<i>36</i>	<i>34</i>	<i>37</i>	<i>45</i>	<i>44</i>	<i>40</i>	<i>37</i>	<i>37</i>	<i>42</i>	<i>42</i>	<i>55</i>
	<i>% of permits fished</i>	<i>49%</i>	<i>51%</i>	<i>48%</i>	<i>57%</i>	<i>54%</i>	<i>52%</i>	<i>56%</i>	<i>61%</i>	<i>66%</i>	<i>64%</i>	<i>57%</i>
	<i>Permit holders</i>	<i>51</i>	<i>45</i>	<i>55</i>	<i>55</i>	<i>56</i>	<i>58</i>	<i>50</i>	<i>47</i>	<i>48</i>	<i>47</i>	<i>62</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Valdez: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Valdez ²	Total Net Pounds Landed In Valdez ^{2,5}	Total Ex-Vessel Value Of Landings In Valdez ^{2,5}
2000	59	13	5	88	122	427	24,965,242	\$6,046,269
2001	75	14	5	76	116	504	42,378,441	\$10,478,676
2002	60	11	5	82	115	497	34,281,839	\$9,132,464
2003	93	9	4	86	114	442	37,597,226	\$12,072,309
2004	85	6	3	88	118	436	27,065,424	\$9,129,339
2005	92	7	4	52	55	432	52,692,909	\$13,947,640
2006	68	6	3	46	56	285	22,116,940	\$9,769,723
2007	76	5	3	47	60	336	47,109,130	\$18,052,449
2008	82	3	2	48	60	287	-	-
2009	56	7	3	53	63	262	11,360,811	\$7,630,134
2010	78	20	3	69	80	275	72,812,837	\$31,530,772

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Valdez: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	26	636,077	63,772
2001	24	640,157	76,614
2002	26	744,454	91,986
2003	27	721,470	89,139
2004	25	647,796	88,453
2005	25	647,796	89,689
2006	23	771,519	105,424
2007	23	771,519	109,440
2008	18	797,761	104,800
2009	18	638,199	75,263
2010	16	593,722	64,512

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Valdez: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	3	3,696	334
2001	2	2,172	185
2002	4	390,004	33,441
2003	4	459,041	46,667
2004	4	459,041	52,897
2005	4	711,077	82,528
2006	3	458,156	46,063
2007	3	458,156	44,764
2008	3	389,073	33,779
2009	3	389,073	30,640
2010	3	389,073	27,693

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Valdez: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	1	65,065	1,345
2006	1	8,951	0
2007	1	8,951	0
2008	1	8,951	0
2009	1	8,951	310
2010	1	8,951	425

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Valdez: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	-	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	111,556	81,227	158,838	128,150	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	2,496	2,500	7,292	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	4,668
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	24,833,627	42,279,813	34,038,074	37,284,478	26,594,542	51,758,342	-	45,703,090	-	10,395,126	71,983,869
<i>Total²</i>	<i>24,947,679</i>	<i>42,363,540</i>	<i>34,204,204</i>	<i>37,412,628</i>	<i>26,594,542</i>	<i>51,758,342</i>	<i>22,116,940</i>	<i>45,703,090</i>	<i>-</i>	<i>10,395,126</i>	<i>71,988,537</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$254,020	\$149,270	\$343,785	\$377,669	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$879	\$590	\$1,594	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	\$29,132
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$5,735,925	\$10,276,681	\$8,541,840	\$11,041,647	\$7,690,721	\$11,114,466	-	\$12,431,839	-	\$4,634,736	\$28,169,136
<i>Total²</i>	<i>\$5,990,824</i>	<i>\$10,426,541</i>	<i>\$8,887,219</i>	<i>\$11,419,316</i>	<i>\$7,690,721</i>	<i>\$11,114,466</i>	<i>\$9,769,723</i>	<i>\$12,431,839</i>	<i>-</i>	<i>\$4,634,736</i>	<i>\$28,198,268</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Valdez Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	44,264	43,491	63,929	54,137	54,814	46,395	53,920	57,877	51,646	45,095	37,105
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	1,039	1,659	3,120	1,230	2,611	1,965	-	2,521	10,211	6,347	5,390
Other Shellfish	-	-	-	-	-	-	-	-	-	-	2,531
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	10,818,753	7,439,614	3,912,503	14,311,549	6,405,203	18,980,831	5,387,279	15,086,172	11,151,013	2,242,878	15,858,346
<i>Total²</i>	<i>10,864,056</i>	<i>7,484,764</i>	<i>3,979,552</i>	<i>14,366,916</i>	<i>6,462,628</i>	<i>19,029,191</i>	<i>5,441,199</i>	<i>15,146,570</i>	<i>11,212,870</i>	<i>2,294,320</i>	<i>15,903,372</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$77,363	\$79,437	\$140,721	\$159,555	\$161,081	\$139,396	\$190,896	\$245,177	\$231,084	\$144,829	\$176,405
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$396	\$190	\$1,106	\$163	\$828	\$1,071	-	\$1,577	\$3,668	\$2,718	\$2,998
Other Shellfish	-	-	-	-	-	-	-	-	-	-	\$14,471
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$1,998,371	\$1,157,543	\$605,984	\$2,628,378	\$894,042	\$2,739,561	\$1,267,912	\$3,022,695	\$4,481,575	\$790,792	\$5,968,824
<i>Total²</i>	<i>\$2,076,130</i>	<i>\$1,237,169</i>	<i>\$747,812</i>	<i>\$2,788,096</i>	<i>\$1,055,951</i>	<i>\$2,880,028</i>	<i>\$1,458,808</i>	<i>\$3,269,449</i>	<i>\$4,716,327</i>	<i>\$938,340</i>	<i>\$6,162,698</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In 2010, there were 19 active sport fish guide businesses and 31 licensed sport fish guides located in Valdez (Table 11). These numbers remained relatively stable over the 2000-2010 period, although there was a peak of 45 licensed guides present in 2003 and 2004. During this period, the number of sportfishing licenses sold to Valdez residents (irrespective of point of sale) varied from 1,470 to 1,813 per year, and the number of licenses sold in Valdez varied from 2,207 to 7,509 per year (Table 11). The greater number of licenses sold locally than sold to residents reflects the fact that sportfishing draws tourism to the Valdez area.

Valdez is located in North Gulf Coast/PWS Statewide Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there were a total of 212,793 saltwater angler days fished in the region, compared to 122,459 in 2000, representing a 74% increase. Non-Alaska residents made up 30.4% of total saltwater angler days fished in 2010 in the region, compared to 32.3% in 2000. Regional saltwater angler days fished peaked at 300,205 in 2007. Total freshwater angler days fished increased 90% from 22,979 in 2010 to 12,108 in 2000. Non-Alaska residents made up 57% of freshwater angler days fished in 2010 in the region, compared to 26% in 2000. Total freshwater angler days fished in the region peaked in 2010. Information regarding these regional trends can also be found in Table 11.

Table 11. Sport Fishing Trends, Valdez: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Valdez²
2000	15	33	1,813	2,207
2001	13	29	1,745	3,689
2002	16	42	1,635	3,582
2003	18	45	1,683	3,793
2004	22	45	1,720	3,782
2005	24	33	1,812	4,793
2006	22	34	1,624	4,721
2007	20	35	1,539	5,073
2008	18	30	1,470	7,509
2009	18	31	1,498	5,782
2010	19	31	1,671	5,043

Table 11 cont'd. Sport Fishing Trends, Valdez: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

According to a survey conducted by the AFSC in 2011, community leaders indicated that private anglers in Valdez target all five species of salmon, halibut, rockfish, sablefish, crab, and shrimp. They also noted that sportfishing activity takes place using private boats and charter boats, and through shore-based fishing. The Alaska Statewide Harvest Survey,³⁶⁰ conducted by ADF&G between 2000 and 2010, also noted species harvested by Valdez sport fishermen. In freshwater, the survey indicated that Valdez recreational anglers harvest chinook, coho, and sockeye salmon, rainbow trout, cutthroat trout, Dolly Varden, burbot, whitefish, and Arctic grayling. In saltwater, the survey noted sport harvest of all five Pacific salmon species, Dolly Varden char, Pacific halibut, rockfish, lingcod, Pacific cod, and smelt. In addition, the survey noted sport harvest of Dungeness crab, hardshell and razor clams, and shrimp.

Kept/released statistics from charter logbook data reported by ADF&G³⁶¹ show that coho salmon, Pacific halibut, rockfish, and lingcod were the most important species caught by volume

³⁶⁰ Alaska Dept. of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁶¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

during fishing charter trips out of Valdez, with an average of 11,682 coho, 8,873 halibut, 4,632 rockfish (yelloweye, pelagic, and ‘other’ rockfish), and 1,692 lingcod kept between 2000 and 2010. In addition, 978 pink, 79 sockeye, 53 chinook and 45 chum salmon, 70 sharks, and 20 sablefish were kept per year, on average. It is important to note that the species with the highest numbers of releases were Pacific halibut (6,600 released per year on average), lingcod (1,190 per year), rockfish (480 released per year, including yelloweye, pelagic, and ‘other’ rockfish), coho salmon (343 per year), sharks (156 per year), and Chinook salmon (83 released per year, on average).

Subsistence Fishing

Residents of Valdez, including members of the Valdez Native Tribe, continue to practice a subsistence lifestyle.³⁶² In 1992, an ADF&G household survey of subsistence activity found that 97% of Valdez households used subsistence resources that year.³⁶³ Health concerns after the 1989 Exxon Valdez oil spill led to a decline in subsistence activity in PWS communities. In the nearby village of Tatitlek, oil contamination led to an 89% reduction in subsistence harvest in the years following the spill.³⁶⁴ According to the Exxon Valdez Oil Spill Trustee Council, subsistence resources are recovering, although harvest levels in most PWS communities are still below pre-spill levels.³⁶⁵

According to Chugachmiut, a Tribal consortium serving Native communities in the Chugach region, chum salmon have historically been important to subsistence users who dry fish for winter use; halibut are important in subsistence diets; clams remain an important component of subsistence harvests in the region, although commercial harvest of clams has been restricted following the Exxon Valdez oil spill; use of mussels has declined significantly due to high concentrations of petrochemicals still present in mussel beds following the oil spill; and Native Alaskans harvest some sea otters, harbor seals, and Steller sea lions. Populations of harbor seals and Steller sea lions are both depressed in PWS. The collapse of the PWS herring population in the 1990s, one of the primary food sources for both species, is thought to have contributed to population declines.³⁶⁶

Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of households participating in subsistence harvest of various marine resources, or per capita harvest of subsistence resources by Valdez residents (Table 12). In addition, no information is available about the use of marine invertebrates or non-salmon fish (not including halibut) between 2000 and 2010 (Table 13). However, earlier information is available from an ADF&G study of 1992 subsistence harvest. The survey identified species of marine invertebrates and non-salmon fish harvested by Valdez households that year. The species of marine invertebrates harvested by the greatest percentage of Valdez households in 1992 included shrimp (17% of households reported harvest), razor clams (6%), butter clams (5%), Tanner crab (3%),

³⁶² Chugachmiut. 2009. *Chugach Region Comprehensive Economic Development Strategy*. Retrieved April 30, 2012 from <http://www.chugachmiut.org/services/enterprise/Chugach%20Region%20CEDS%20draft%20v5.pdf>.

³⁶³ U.S. Forest Service, Cordova Ranger District, Chugach Ranger District. 2008. *East Prince William Sound Landscape Assessment*. Retrieved May 3, 2012 from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5151500.pdf

³⁶⁴ See footnote 362.

³⁶⁵ Exxon Valdez Oil Spill Trustee Council. (n.d.). *Subsistence*. Retrieved May 2, 2012 from http://www.evostc.state.ak.us/recovery/status_human_subsistence.cfm.

³⁶⁶ See footnote 362.

mussels (2%), Dungeness crab (1%), and octopus (1%). Additional marine invertebrate species harvested in 1992 included black chitons, red chitons, cockles, horse clams, pinkneck clams, Pacific littleneck clams, scallops, sea cucumber, sea urchin, Dungeness crab, and king crab. The species of non-salmon fish harvested by the greatest percentage of Valdez households included Dolly Varden (20% of households reported harvest), grayling (14%), rainbow trout (13%), lingcod (11%), black rockfish (9%), and herring (9%). Valdez residents also harvested lake trout, Pacific cod, sablefish, flounder, eulachon (hooligan candlefish), cutthroat trout, pike, sea bass, sole, steelhead, sturgeon, Irish lord, red rockfish, burbot, salmon shark, skates, greenling, whitefish, pollock, and wolf fish. In addition, Valdez residents harvested herring sac roe and spawn on kelp roe.³⁶⁷ It is important to note than in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Valdez.

Data are available for the 2000-2010 period regarding annual subsistence salmon and halibut harvest. The number of Valdez households that were issued subsistence salmon permits varied from 181 to 306 between 2000 and 2008. In 2008, the last year for which data were reported, 227 permits were issued and 197 were returned. Sockeye was the most heavily utilized salmon species during this period, averaging 5,919 harvested per year. An average of 193 Chinook were also harvested each year, as well as a small number of pink, coho, and chum salmon. This information about subsistence harvest of salmon is presented in Table 13.

Between 2003 and 2010, the number of Valdez residents that participated in the Subsistence Halibut Registration Certificate (SHARC) program increased from 22 to 38. The greatest subsistence harvest of halibut was reported in 2009, when 4,778 pounds of halibut were harvested on 33 SHARC cards. In 2010, only 6 SHARC cards were reported to have been active. This information about the subsistence halibut fishery is presented in Table 14.

In addition, information was reported by the various management agencies regarding marine mammal harvest by residents of Valdez between 2000 and 2010. According to data reported by the U.S. Fish and Wildlife Service, the number of sea otters harvested varied between 40 and 101 per year, while ADF&G reported harvest of harbor seal varying between 18 and 63 animals per year (for those years in which information was available). No information was reported regarding harvest of beluga whale, walrus, Steller sea lion, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals by Valdez residents is presented in Table 15.

Additional Information

The Good Friday earthquake of 1964, or “Great Alaska Earthquake,” was the largest recorded earthquake in the U.S., with a magnitude of 9.2 on the Richter scale. It struck Prince William Sound on Good Friday, March 28th, 1964. A tsunami with a maximum wave height recorded was 67 meters at Valdez Inlet.³⁶⁸ Shoup Bay near Valdez became famous for the 150-foot tidal wave that supposedly surged in and out of the bay three times during the earthquake.³⁶⁹

³⁶⁷ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

³⁶⁸ U.S. Geological Survey (n.d.). Historic Earthquakes: Prince William Sound, Alaska, 1964 March 28 03:36 UTC, Magnitude 9.2. Retrieved December 5, 2011 from <http://earthquake.usgs.gov/earthquakes/states/>.

³⁶⁹ Alaska Dept. of Natural Resources. 2010. *State Marine Parks near Valdez*. Retrieved May 3, 2012 from <http://dnr.alaska.gov/parks/units/pwssmp/smpvald.htm>.

Table 12. Subsistence Participation by Household and Species, Valdez: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Valdez: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	245	229	167	n/a	85	n/a	5,731	n/a	n/a
2001	306	278	254	n/a	43	n/a	7,061	n/a	n/a
2002	210	179	223	n/a	1	n/a	4,973	n/a	n/a
2003	181	155	113	n/a	29	n/a	4,319	n/a	n/a
2004	263	228	214	5	179	6	6,391	n/a	n/a
2005	278	229	147	n/a	77	n/a	6,670	n/a	n/a
2006	292	227	290	n/a	3	n/a	7,489	n/a	n/a
2007	234	197	237	n/a	8	n/a	6,801	n/a	n/a
2008	227	197	91	n/a	41	n/a	3,835	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Valdez: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	22	16	1,611
2004	28	12	2,956
2005	26	20	3,589
2006	27	10	1,909
2007	37	17	2,990
2008	35	14	4,374
2009	37	33	4,778
2010	38	6	1,750

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Valdez: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	69	n/a	n/a	n/a	n/a	n/a
2001	n/a	75	n/a	n/a	n/a	18	n/a
2002	n/a	45	n/a	n/a	n/a	44	n/a
2003	n/a	100	n/a	n/a	n/a	60	n/a
2004	n/a	63	n/a	n/a	n/a	58	n/a
2005	n/a	60	n/a	n/a	n/a	63	n/a
2006	n/a	40	n/a	n/a	n/a	63	n/a
2007	n/a	50	n/a	n/a	n/a	n/a	n/a
2008	n/a	55	n/a	n/a	n/a	24	n/a
2009	n/a	81	n/a	n/a	n/a	n/a	n/a
2010	n/a	101	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Whittier (WIT-ee-er)



People and Place

*Location*³⁷⁰

Whittier is on the northeast shore of the Kenai Peninsula, at the head of Passage Canal. It is on the west side of Prince William Sound, 60 miles southeast of Anchorage. The area encompasses 12.5 square miles of land and 7.2 square miles of water. Whittier was incorporated in 1969 and is now a Second-class city. It is located in the Valdez-Cordova Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*³⁷¹

In 2010 there were 220 residents ranking Whittier 185th of 352 communities in terms of population size. Between 1990 and 2010, the population declined by 9.5%. Between 2000 and 2009, the population declined by 12.6% with an average annual growth rate of -1.37%, which was much lower than the statewide average of 0.75% and indicative of steady decline. Information regarding population trends can be found in Table 1.

The racial composition of Whittier is predominately White, although there is some diversity. In 2010, 69.5% of residents identified themselves as White, compared to 79.1% in 2000; 13.2% identified themselves as two or more races, compared to 8.2% in 2000; 7.7% identified themselves as Asian, compared to 7.1% in 2000; 5.5% identified themselves as American Indian or Alaska Native, compared to 5.5% in 2000; 3.2% identified themselves as Native Hawaiian or Pacific Islander, compared to 0% in 2000; 0.5% identified themselves as Black or African American, compared to 0% in 2000; and 0.5% identified themselves as some other race, compared to 0% in 2000. In addition, 5.0% of residents identified themselves as Hispanic or Latino, compared to 1.1% in 2000 (Figure 1).

In 2010, the average household size was 1.93, which was a decrease from 2.10 in 1990 and 2.12 in 2000. In that year, there were a total of 280 housing units, compared to 265 in 1990 and 213 in 2000. Of the households surveyed in 2010, 15% were owner-occupied, compared to 16% in 2000; 25% were renter-occupied, compared to 24% in 2000; 22% were vacant, compared to 23%; and 37% were occupied seasonally, compared to 37% in 2000.

The gender distribution in 2010 was somewhat skewed at 56.8% male and 43.2% female, which was more uneven than the statewide distribution (52.0% male, 48.0% female) and distribution in 2000 (52.7% male, 47.3% female). The median age that year was 48.0 years, which was significantly older than the statewide median of 33.8 years and 2000 median of 39.3 years.

³⁷⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

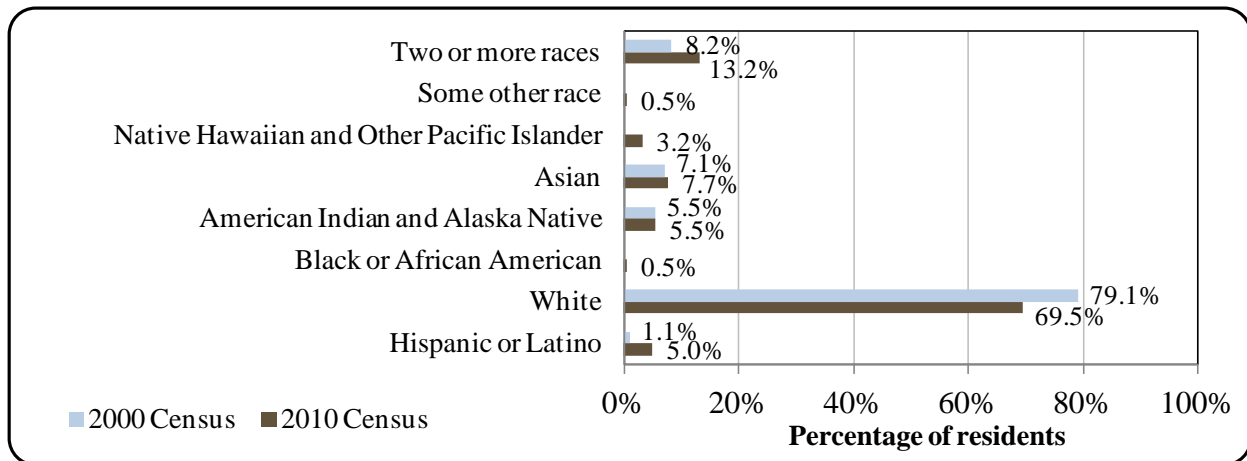
Table 1. Population in Whittier from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	243	-
2000	182	-
2001	-	170
2002	-	161
2003	-	172
2004	-	172
2005	-	188
2006	-	189
2007	-	173
2008	-	159
2009	-	159
2010	220	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Whittier: 2000-2010 (U.S. Census).

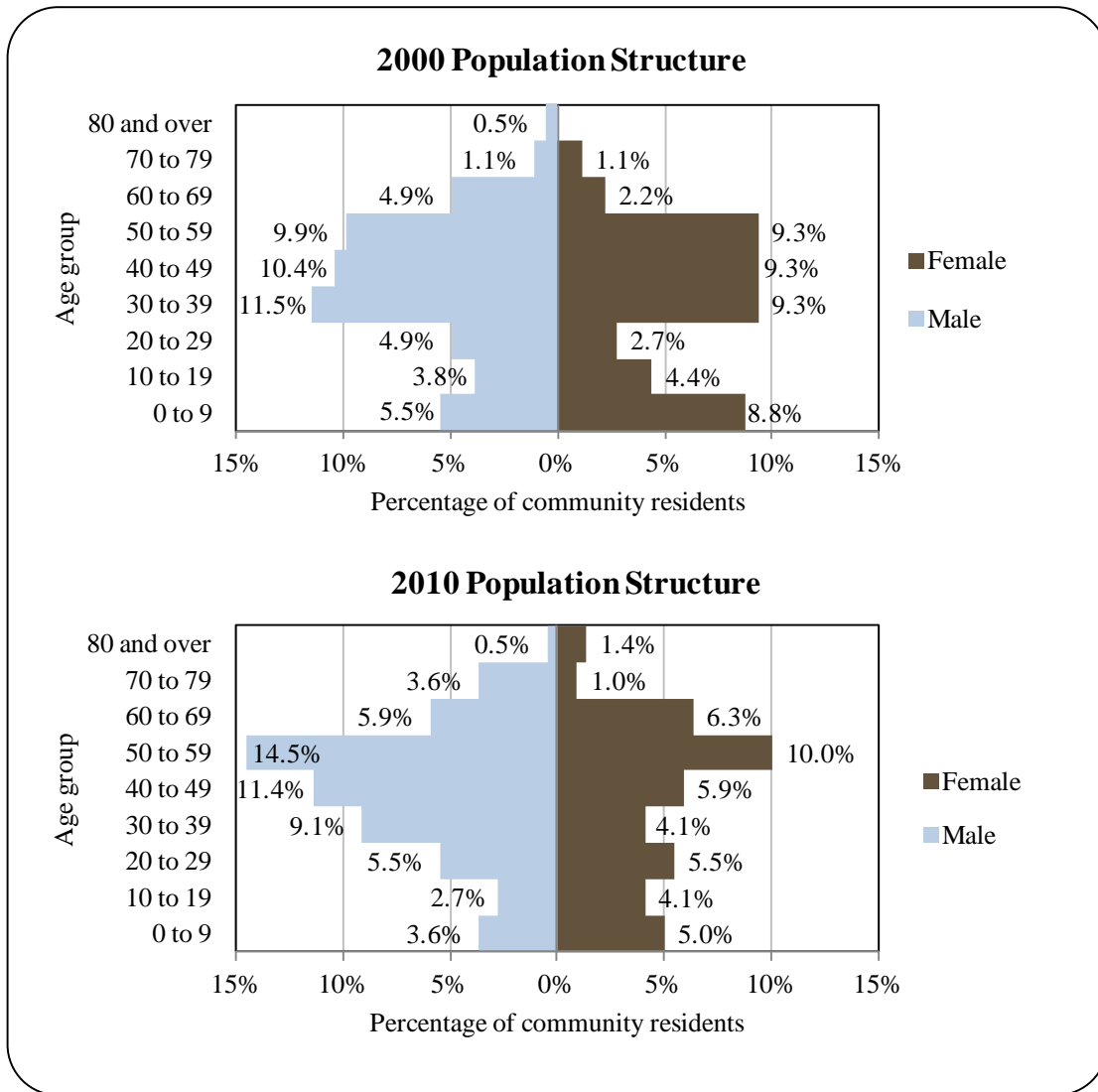


When compared to 2000, the population structure was somewhat less expansive in 2010 (Figure 2). In that year, 15.4% of residents were under the age of 20, compared to 22.5% in 2000; 18.7% were over the age of 59, compared to 9.8% in 2000; 55.0% were between the ages of 30 and 59, compared to 59.7% in 2000; and 11.0% were between the ages of 20 and 29, compared to 7.6% in 2000.

Gender distribution by age cohort was less even in 2010 and in 2000, with relatively equal numbers of male and female biases along age ranges. The greatest absolute gender

difference that year occurred in the 40 to 49 range (11.4% male, 5.9% female), followed by the 30 to 39 (9.1% male, 4.1% female) and 50 to 59 (14.5% male, 10% female) ranges. Of those three, the greatest proportional gender difference occurred in the 30 to 39 range. Information regarding Whittier’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Whittier Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³⁷² estimated that 95.7% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 1.4% had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 2.9% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 30.6% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 7.7% held an Associate's degree, compared to an estimated 8.0% of Alaskan residents overall; an estimated 25.4% of residents held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 3.3% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*³⁷³

The Whittier townsite was platted by the U.S. Department of the Interior in 1942 as a terminal for the Alaska Railroad. The U.S. Army selected Whittier as a focal point for several of its operations in Alaska and built a port and rail-tunnel in 1942 and 1943. These facilities were built for the purpose of transporting service-members and materials to Fort Richardson in Anchorage, and Fort Wainwright in Fairbanks.

In 1949, the Army constructed an extensive complex to provide long term support facilities for petroleum-rail operations as well as other military interests throughout Alaska. At the height of military activity in the late 1950s, there were approximately 1,000 people stationed in Whittier. At the time, the military complex there boasted the largest building in Alaska. The now vacant Buckner Building consisted of 1,000 apartments, a hospital, bowling alley, theater, library, two firing ranges, and a host of shops. The building was damaged and abandoned after the 1964 Good Friday earthquake and has since fallen into considerable disrepair. Other structures, most notably the Begich Towers, currently serve as housing and commercial space.

In 1960, the Army declared that Whittier was no longer necessary to its operations in Alaska. Most buildings were abandoned, although many were maintained until 1968.

The 1964 Good Friday earthquake caused considerable damage to Whittier. The ground shook for three to four minutes and land subsidence measured over eight feet. Three massive tsunamis, the largest being over 40 feet in height, struck the town. After it ended, 13 people had died and many port facilities were destroyed.

In 1969, the City was incorporated with a population of approximately 140. Shortly after incorporation, a small boat harbor was built and the newly formed city sought to acquire additional land for development. In 1973, the Shotgun Cove area was annexed to the city. In 1980, the small boat harbor was expanded, and in 1984, freight services in Whittier were improved.

³⁷² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁷³ City of Whittier (1986). *City of Whittier Community Comprehensive Plan*. Retrieved April 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Whittier-CP-1986.pdf>.

Natural Resources and Environment

Winter temperatures range from 17 to 28 °F (-8 to -4 °C) and summer temperatures average 49 to 63 °F (9 to 17 °C). Average annual precipitation includes 197 inches of rain and 241 inches of snowfall. High winds are common.³⁷⁴

Whittier is located in the Chugach National Forest, which occupies 5.5 million acres of Southcentral Alaska. Subsurface geology consists mostly of slate and greywacke. Bedrock is overlain by unconsolidated glacial materials and stream gravel. Topography is characterized by steep relief slopes rising abruptly from sea level at 30-60% grades. Mountain altitudes range from 3,500 to 4,500 feet. The Bay Delta and Shotgun Cove areas provide the only shallow relief suitable for development. The Passage Canal connects Whittier to Prince William Sound (PWS). The deep-water port is ice free all year, although subject to strong winds, fog, and precipitation. Seas can reach six feet around the port during poor weather. Ground cover consists of a thick layer of topsoil. Vegetation is mostly comprised of mixed Sitka Spruce and Western Hemlock stands. Undergrowth consists of lichens, grasses, wildflowers, and high-bush blueberries. Disturbed land is covered in scrub alder, blueberry, and salmonberry bushes.³⁷⁵

PWS and surrounding areas are home to a variety of terrestrial and aquatic wildlife. Common fish include rockfish, flounder, all five species of Pacific salmon, lingcod, and Pacific halibut. Salmon sharks, crab, shrimp, and clams are also in the area. Marine mammals include whales, porpoises, seals, sea otters, and sea lions. Terrestrial mammals include black bears, wolves, coyotes, mountain goats, moose, snowshoe hares, porcupines, beavers, river otters, mink, marmots, squirrels, and weasels. Migratory birds such as geese, ducks and cranes frequent the Portage Pass.³⁷⁶

Fishery and recreational resources make up the majority of natural resources utilized locally. Timber is a potential resource; however, commercial timber leases in the PWS area have been halted in order to aid environmental recovery following the 1989 *Exxon Valdez* oil spill.³⁷⁷ As of 2011, there were no active mineral projects in the area; however, the Mineral King and Granite gold/arsenic mines occupy the east and west banks of College Fjord, north of Whittier.³⁷⁸

Environmental hazards present in the community include coastal flooding, wildfire, earthquake, snow avalanche, tsunami, severe weather, landslides, and erosion. Flooding and erosion are primarily caused by storm surges, although rainfall, snowmelt, and glacier outwash flooding contributes as well. In addition, there is the possibility of levee failure as the Whittier Creek Levee is over 50 years old and levee protection has eroded. The last major flooding event occurred in 2006. Severe weather can bring high winds, extreme cold and heavy snow. These hazards can potentially impact local infrastructure, particularly the local small boat harbor. Wildfire potential in the Whittier area has been determined as moderate, although there has been no history of catastrophic wildfires affecting the community. Whittier is located in a potentially damaging seismic area, as evidenced by the 1964 Good Friday earthquake. The area itself is

³⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷⁵ ASCG Inc. (2005). *Whittier Comprehensive Plan Update 2005*. Retrieved April 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Whittier-CP-2005.pdf>.

³⁷⁶ Ibid.

³⁷⁷ U.S. Forest Service (n.d.). *ROD for FEIS Revised Land and Resource Management Plan – Alaska Region*. Retrieved April 19, 2012 from: http://www.fs.fed.us/outernet/r10/chugach/forest_plan/rod.pdf.

³⁷⁸ Alaska Department of Natural Resources (n.d.). *Minerals Development*. Retrieved April 19, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

prone to tsunami inundation, land subsidence, liquefaction, and landslides. Finally, high relief slopes combined with high levels of precipitation in forms of both rain and snow create hazardous conditions for landslides and avalanches on steep slopes behind the West Delta and partway out Shotgun Cove.³⁷⁹

According to the Alaska Department of Environmental Conservation (DEC), there are no notable active environmental cleanup sites located in or around Whittier.³⁸⁰

Current Economy³⁸¹

Whittier's origins as a military outpost led to an emphasis on commercial-industrial port and railroad land uses and dense residential style housing. Although relatively diverse, the community's economy is focused on commercial and recreational fishing and boating in PWS. Tourism is another important industry and the community is connected to other regions of Alaska via the Anton Memorial Tunnel. Cruise ships and the Alaska Railroad bring visitors to the city each summer. Cruise ships dock in Whittier several times per week during summer months and visitors have a range of accommodations and attractions to choose from during their stay.³⁸² Top employers³⁸³ in 2010 included: City of Whittier, Chugach School District, Anchor Inn, Southeast Stevedoring Corporation, Great Pacific Seafoods Inc., VMS Inc., State of Alaska, Begich Towers Condo Association Inc., Shoreside Petroleum Inc., and VECO Alaska Inc.

in 2010,³⁸⁴ the estimated per capita income was \$37,135 and the estimated median household income was \$47,969, compared to \$25,700 and \$47,500 in 2000, respectively. However, after accounting for inflation by converting 2000 values into 2010 dollars,³⁸⁵ the real per capita income (\$33,795) and real median household income (\$62,462) indicate that individual earnings grew while household earnings declined. In 2010, Whittier ranked 21st of 305 communities from which per capita income was estimated, and 142nd of 299 communities from which median household income was estimated.

Whittier's small population size may have prevented the ACS from accurately portraying economic conditions.³⁸⁶ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$3.09 million in total wages in 2010,³⁸⁷ resulting in a per capita income of \$14,024 when matched with the population in 2010. Overall, comparative differences between the ACS and ALARI estimates indicate significantly a lower per capita income than what was reported in both 2000 and 2010.

³⁷⁹ City of Whittier. (2008). *City of Whittier Local Hazards Mitigation Plan*. Retrieved April 19, 2012 from: http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Whittier_HMP.pdf.

³⁸⁰ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved April 23, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Kenai>.

³⁸¹ Unless otherwise noted, all monetary data are reported in nominal values.

³⁸² See footnote 379.

³⁸³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁸⁴ See footnote 372.

³⁸⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³⁸⁶ See footnote 372.

³⁸⁷ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

According to 2006-2010 ACS estimates, 75.9% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 13.2%, compared to an estimated 5.9% statewide; and an estimated 13.7% of residents were living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed, an estimated 37.8% worked in the private sector, an estimated 46.9% worked in the public sector, and an estimated 15.4% were self-employed.

By industry, most employed residents were estimated to work in public administration sectors (23.8%) in 2010; followed by arts, entertainment, recreation, accommodation, and food service sectors (21.7%); and other services, except public administration (11.2%). By occupation type, most employed residents were estimated to hold management or professional positions (35%) that year; followed by service positions (26.6%); sales or office positions (18.2%); natural resources, construction, or maintenance positions (14.7%); and production, transportation, or material moving positions (5.6%). Overall, there was significant growth in public administration and other service, except public administration sectors. Most other sectors saw declines during those years. In addition, there was moderate growth in the number of employed residents estimated to hold service positions, while there was a decline in the number of employed residents estimated to hold production, transportation, and material moving positions. No residents were estimated to work in agriculture, forestry, fishing, hunting, or mining sectors in 2010. However, it should be noted that many resource based sectors, including commercial fishing, are seasonal or transient in nature. This makes tracking them by conventional ACS survey methods difficult in some instances. Information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Whittier (U.S. Census).

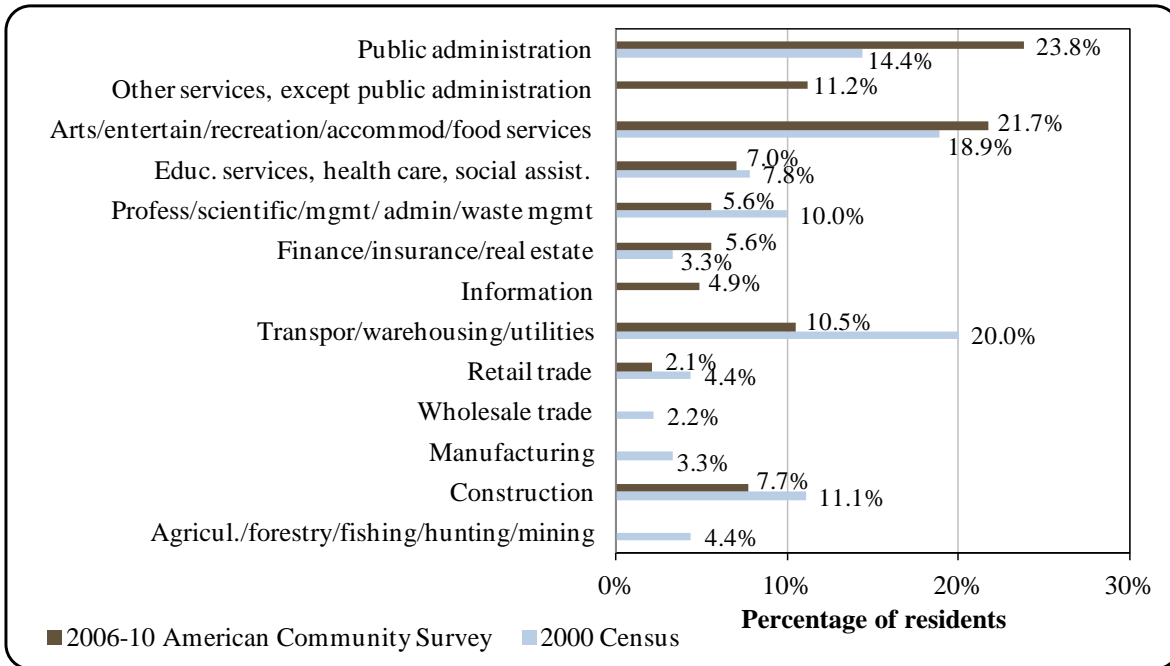
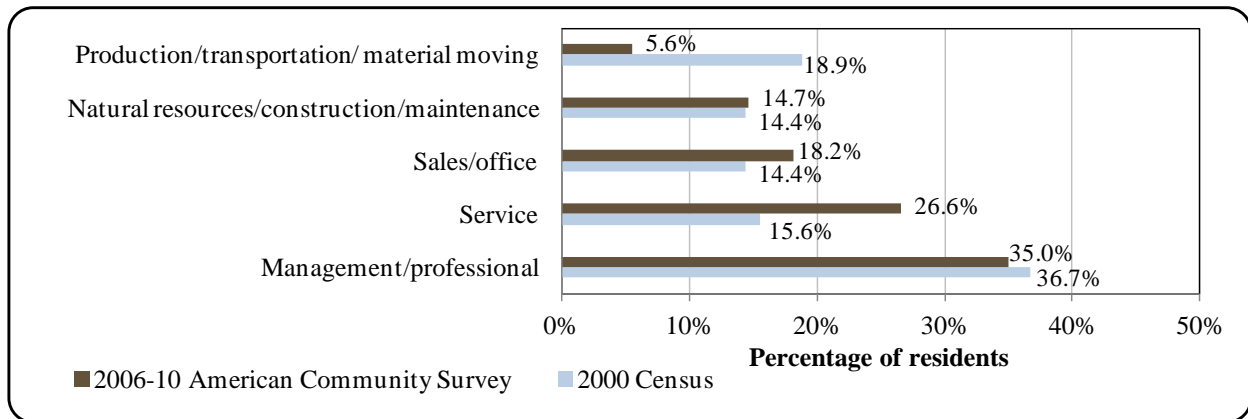


Figure 4. Local Employment by Occupation in 2000-2010, Whittier (U.S. Census).



Governance

Whittier is a Second-class city with a mayoral form of government. There is a seven-member city council, five-member school board, five-member planning commission, and six municipal employees. The community was not included in the Alaska Native Claims Settlement Act (ANCSA) and does not possess a U.S. Bureau of Indian Affairs (BIA) recognized Tribal council. The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and U.S. Bureau of Citizenship and Immigration Services (BCIS) offices are located in Anchorage, 60 miles northwest.

In 2010, the city administered a 5% sales tax between April and September, a 5 mill property tax, and a \$2.50 Passenger Transportation Tax. Municipal revenue figures were taken from financial audits, and report total governmental funds.³⁸⁸ When adjusted for inflation,³⁸⁹ total municipal revenues increased by 36.4% between 2000 and 2010 from \$2.62 million, to \$4.63 million. In 2010, general funds accounted for 37.3% of total municipal revenues. In that year, most (62.7%) general funds were collected from local taxes, followed by rental and lease revenues (15.0%), state revenue sharing (8.0%), and federal revenues (5.9%). Cruise ship tax revenues accounted for 22.6% of total municipal revenues, while several capital projects accounted for 38.8%.

Sales taxes accounted for 12.1% of total municipal revenues in 2010, compared to 6.6% in 2000. In addition, state allocated Community Revenue Sharing accounted for 2.9% of revenues, compared to 2.5% from State Revenue Sharing in 2000. Between 2000 and 2010, Whittier was awarded over \$7.94 million in federal and state fisheries-related grants. These grants went to harbor and dock expansion and maintenance and a new breakwater. Information regarding community finances can be found in Table 2.

³⁸⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

³⁸⁹ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Whittier from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$2,624,125	\$173,103	\$24,129	\$20,000
2001	\$1,130,183	\$182,867	\$23,260	\$31,994
2002	\$1,437,296	\$196,871	\$23,256	\$2,746,296
2003	\$1,211,161	\$176,461	\$23,377	\$2,522,100
2004	\$2,227,148	\$265,355	-	n/a
2005	\$2,485,148	\$321,797	-	n/a
2006	\$2,383,603	\$258,102	-	\$625,400
2007	\$4,631,466	\$422,755	-	\$1,000,000
2008	\$3,437,822	\$597,638	-	n/a
2009	\$4,052,992	\$512,365	\$107,080	n/a
2010	\$4,630,110	\$560,254	\$105,743	\$990,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*³⁹⁰

Whittier has an ice-free port and two city docks (70-foot cargo dock and 60-foot floating passenger dock). A small boat harbor has slips for 360 fishing, recreation, and charter vessels. It is served by road, rail, the state ferry, boat, and aircraft. Since 2000, a tunnel has provided a road connection to Anchorage and the rest of the Alaska highway system. The Anton Anderson Memorial Tunnel was reconstructed to accommodate both rail and road vehicles. The railway carries passengers, vehicles, and cargo 12 miles from the Portage Station east of Girdwood. The state-owned 1,480-foot long by 58-foot wide gravel airstrip accommodates charter aircraft, and a city-owned seaplane dock is available for passenger transfer.

Facilities

Water is derived from wells and a reservoir. Water storage capacity is 1.2 million gallons. The entire community is served by a piped water and sewer system, and over 95% of homes are fully plumbed. Refuse is hauled out by a private contractor to Anchorage - the local landfill has been closed. An oil and hazardous waste recycling center is available. Electricity is provided by

³⁹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

hydroelectric and natural gas generators. Visitor accommodations include June’s Whittier Bed & Breakfast, The Anchor Inn, The Inn at Whittier, and Sportsman’s Inn. Public safety is provided by city police and state troopers based in Girdwood. Fire and rescue services are provided by city volunteer fire department, Anton Anderson Memorial Tunnel Fire Department, and local Emergency Medical Services. Additional public facilities include a community hall, school gym, museum, and library. Communications services include local and long distance telephone, internet, and local and cable television.³⁹¹

Most residents rent or own condominiums in the Begich Towers or Whittier Manor. The six-unit Anchor Annex and several single family homes contribute addition housing. Although most units in the Begich Towers are reserved for living space, several floors are zoned for commercial uses.

Whittier acts as a freight exchange hub for barge service between Alaska and the rest of the contiguous United States and Canada. Several barge services and transport agencies move freight through Whittier including Lynden Transport, Alaska Railroad Corporation, Alaska Railroad Marine Services, and Canadian National. As of 2010, berth capacity of public mooring facilities was insufficient, and unmet demand was estimated at between 1,500 and 2,000 berths for recreational vessels. A private marina was completed in 2004. Fisheries-related businesses and services include marine fuel, marine repair and welding, dry-dock storage, haulout facilities, self-storage facilities, and charter services. Cruise ship facilities include a dock and 20,000 square-foot terminal capable of accommodating one cruise ship visit per day. Whittier acts as a “turnaround” point for cruise ships rather than a port of call. Visitors embarking or disembarking rely on the Alaska Railroad for transportation to and from Anchorage. The airport is non-towered and not maintained in the winter. High winds and poor weather common to Whittier often make landing difficult and there is no scheduled air service.³⁹²

*Medical Services*³⁹³

The Whittier Medical Clinic is located in the Begich Towers. The facility provides basic health care and has a nurse practitioner and community health practitioner on staff. Emergency medical staff tends to a range of local and regional medical-related issues and are often tasked with addressing issues aboard cruise ships

*Educational Opportunities*³⁹⁴

Whittier Community School offers preschool through 12th grade instruction. In 2011, 19 students were enrolled and there were 4 teachers employed.

³⁹¹ Ibid.

³⁹² ASCG Inc. (2005). *Whittier Comprehensive Plan Update 2005*. Retrieved April 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Whittier-CP-2005.pdf>.

³⁹³ Ibid.

³⁹⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Whittier's history as a military and transportation hub predates its involvement in North Pacific fisheries and much of PWS's extensive fisheries history is tied to Cordova and the Copper River. However, after military operations ceased the community became increasingly dependent on commercial and recreational fishing. Today, Whittier is one of the most popular sportfishing communities in the state as evidenced by the overcrowding of small vessel berths and constant summer influx of tourists.

Fish targeted in Whittier include all five species of Pacific salmon, cod, halibut, herring, rockfish, eel, trout, char, king crab, tanner crab, and Dungeness crab. Great Pacific Seafoods constructed a commercial seafood processor and in 2003, 11 million pounds of seafood was processed at the facility. Fish are pumped from tenders at the Alaska Railroad Corporation dock. Minimally processed fish is primarily transported to Anchorage for secondary processing. All five species of Pacific salmon from the Copper River and PWS make up the majority of landings. The remainder includes halibut and black cod. Most of Whittier's commercial fishing fleet consists of gillnetters, followed by purse-seiners and long-liners.

Built in 1985, the Wally Noerenberg Hatchery is the closest hatchery to Whittier; located 20 miles east in Lake Bay. The hatchery is the largest pink salmon production facility in North America. In 2001, 7.2 million pink and 2.4 million chum salmon returned to the facility. Additional PWS hatcheries are located in Valdez, Main Bay, Sawmill Bay, and Cannery Creek.

Whittier is located in Federal Reporting Area 649, International Pacific Halibut Commission (IHPC) Regulatory Area 3A, and the Central Gulf of Alaska (GOA) Sablefish Regulatory District. As of 2010, Whittier was ineligible for participation in the Community Quota Entity (CQE) program for GOA communities.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there are two active shore-based processing plants in Whittier. Fee's Custom Seafoods provides custom processing for sport fishermen in Whittier. The plant began operations in 2003.³⁹⁵ The facility, located "on the Triangle" in Whittier, is open during the summer in conjunction with the Prince William Sound salmon (sockeye, coho, chum) runs. Fee's Custom Seafoods also processes halibut, spot prawns and side stripe shrimp.³⁹⁶ Employees are on an "on call" basis and the plant processes mostly for charter businesses.³⁹⁷

Great Pacific Seafoods was founded in 1977 and has a small seafood processing facility in Whittier that began operations in 1993.³⁹⁸ Its salmon season is from May to September, during which it employs up to 130 workers.³⁹⁹

³⁹⁵ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

³⁹⁶ Fee's Custom Seafoods. (n.d.). *Fee's Custom Seafoods*. Retrieved from: <http://www.feescustomseafoods.com/>.

³⁹⁷ See footnote 395.

³⁹⁸ Ibid.

³⁹⁹ Ibid.

Fisheries-Related Revenue

Whittier receives fisheries-related revenue from both Shared Fisheries Business Taxes and harbor usage fees. In 2010, \$1.17 million was collected in fisheries-related revenue, compared to \$776,566 in 2001. Fisheries-related revenue totals are incomplete for 2000 and 2005 because of missing harbor fees data. Fisheries-related revenue peaked in 2009 at \$1.25 million. Information regarding fisheries-related revenue trends can be found in Table 3. It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 12 residents, or 5.5% of the population, held 18 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 9 residents held 18 CFEC permits. Of the CFEC permits held in 2010, 17% were for salmon, compared to 11% in 2000; 17% were for groundfish, compared to 61% in 2000; 6% were for sablefish, compared to 6% in 2000; 6% were for halibut, compared to 6% in 2000; and 56% were for other shellfish, compared to 17% in 2000. Of the CFEC permits held in 2010, 61% were actively fished, compared to 11% in 2000. This varied by fishery from 100% of salmon, sablefish, and halibut permits; to 50% of other shellfish and 33% of groundfish permits. Fifty-percent of FFP were actively fished and 0% of LLP were fished in 2010. Fisheries prosecuted by Whittier residents in 2010 included: statewide longline halibut, statewide hand troll ling cod, PWS pot shrimp, PWS fixed gear sablefish, PWS drift gillnet salmon, and Cook Inlet drift gillnet salmon.⁴⁰⁰

In addition, two residents held two Federal Fisheries Permits (FFP) and three residents held three License Limitation Program (LLP) groundfish permits that year. Residents held 8,474 shares of halibut quota on two accounts in 2010, compared to 77,054 shares held on four accounts in 2000. No residents held sablefish or crab quota between 2010 and when the programs began.

Residents held 27 commercial crew licenses in 2010, compared to 17 in 2000. In addition residents held majority ownership of 13 vessels, compared to 13 in 2000. In 2010, 330 vessels landed 15.94 million pounds of fish valued at \$10.10 million in Whittier, compared to 5.30 million pounds valued at \$3.67 million landed by 326 vessels in 2000. Salmon landings totaled 15.65 million pounds valued at \$9.34 million in 2010, compared to 4.85 million pounds valued at \$2.65 in 2000; a decrease of approximately \$0.15 per pound landed after adjusting for inflation⁴⁰¹ and without considering the species composition of landings. Halibut landings totaled 78,990 pounds valued at \$320,445 in 2010, compared to 303,961 pounds valued at \$787,381 in 2000; an increase of approximately \$0.50 per pound after adjusting for inflation.⁴⁰² Shrimp landings totaled 68,855 pounds valued at \$321,664 in 2010. Sablefish landings totaled 11,662 pounds valued at \$59,059 in 2010, compared to 29,957 pounds valued at \$70,183 in 2003; an

⁴⁰⁰ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁰¹ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

⁴⁰² Ibid.

increase of \$1.79 per pound after adjusting for inflation.⁴⁰³ Other groundfish landings totaled 36,573 pounds valued at \$20,375, compared to 29,526 pounds valued at \$19,555 in 2000. All other 2010 landings in Whittier are considered confidential. In addition, landings by Whittier residents between 2000 and 2010 are considered confidential for most years. However, in 2010 residents landed 3,006 pounds of Pacific cod valued at \$23,973 and 180,990 pounds of salmon valued at \$148,038. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁴⁰³ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Whittier: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	\$87,608	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$74,790	\$63,716	\$87,608	\$70,903	\$79,913	\$76,978	\$61,016	\$93,517	\$79,337	\$130,050	\$130,006
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$78	\$61	\$46	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	\$712,850	\$727,000	\$777,936	\$815,000	n/a	\$1.09 M	\$1.03 M	\$1.02 M	\$1.12 M	\$1.04 M
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$74,790</i>	<i>\$776,566</i>	<i>\$902,216</i>	<i>\$848,839</i>	<i>\$894,913</i>	<i>\$76,978</i>	<i>\$1.15 M</i>	<i>\$1.13 M</i>	<i>\$1.10 M</i>	<i>\$1.25 M</i>	<i>\$1.17 M</i>
<i>Total municipal revenue⁵</i>	<i>\$2.62 M</i>	<i>\$1.13 M</i>	<i>\$1.44 M</i>	<i>\$1.21 M</i>	<i>\$2.23 M</i>	<i>\$2.49 M</i>	<i>\$2.38 M</i>	<i>\$4.63 M</i>	<i>\$3.44 M</i>	<i>\$4.05 M</i>	<i>\$4.63 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

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Table 4. Permits and Permit Holders by Species, Whittier: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	5	4	4	4	3	3	4	4	3	3	3
	Active permits	0	0	0	0	0	0	1	1	1	1	0
	% of permits fished	0%	0%	0%	0%	0%	0%	25%	25%	33%	33%	0%
	Total permit holders	5	4	4	4	3	3	4	4	3	3	3
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	1	1	1	1	1	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	1
	% of permits fished	n/a	n/a	n/a	n/a	0%	0%	0%	0%	0%	0%	50%
	Total permit holders	0	1	2	3	1	1	1	1	1	2	2
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	3	1	1	2	2	1	1	0	0	0	10
	Fished permits	0	1	0	0	0	0	0	0	0	0	5
	% of permits fished	0%	100%	0%	0%	0%	0%	0%	n/a	n/a	n/a	50%
	Total permit holders	2	1	1	2	2	1	1	0	0	0	10
Halibut (CFEC) ²	Total permits	1	1	1	1	2	2	3	3	2	1	1
	Fished permits	1	1	1	1	1	2	3	3	2	1	1
	% of permits fished	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%	100%
	Total permit holders	1	1	1	1	2	2	3	3	2	1	1
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Whittier: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	2	2	1	1	0	1	1	1	1	1
	Fished permits	0	0	1	0	1	0	1	1	1	1	1
	% of permits fished	0%	0%	50%	0%	100%	n/a	100%	100%	100%	100%	100%
	Total permit holders	1	2	2	1	1	0	1	1	1	1	1
Groundfish (CFEC) ²	Total permits	11	14	7	8	2	2	3	2	2	2	3
	Fished permits	0	0	0	0	0	0	1	1	1	0	1
	% of permits fished	0%	0%	0%	0%	0%	0%	33%	50%	50%	0%	33%
	Total permit holders	6	9	5	6	2	2	2	1	1	1	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	2	2	0	0	0	1	2	2	3
	Fished permits	1	2	2	2	0	0	0	1	2	2	3
	% of permits fished	50%	100%	100%	100%	n/a	n/a	n/a	100%	100%	100%	100%
	Total permit holders	2	2	3	3	0	0	0	1	2	2	3
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>18</i>	<i>20</i>	<i>13</i>	<i>14</i>	<i>7</i>	<i>5</i>	<i>8</i>	<i>7</i>	<i>7</i>	<i>6</i>	<i>18</i>
	<i>Fished permits</i>	<i>2</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>5</i>	<i>6</i>	<i>6</i>	<i>4</i>	<i>11</i>
	<i>% of permits fished</i>	<i>11%</i>	<i>20%</i>	<i>31%</i>	<i>21%</i>	<i>29%</i>	<i>40%</i>	<i>63%</i>	<i>86%</i>	<i>86%</i>	<i>67%</i>	<i>61%</i>
	<i>Permit holders</i>	<i>9</i>	<i>12</i>	<i>10</i>	<i>10</i>	<i>4</i>	<i>3</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>4</i>	<i>12</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Whittier: 2000-2010.

Year	Crew License Holders ¹	Count of All fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Whittier ²	Total Net Pounds Landed in Whittier ^{2,5}	Total Ex-Vessel Value of Landings in Whittier ^{2,5}
2000	17	20	2	13	42	326	5,298,212	\$3,672,639
2001	18	19	2	14	40	335	8,145,909	\$4,544,962
2002	17	17	2	12	44	377	9,504,882	\$4,779,782
2003	15	26	2	15	49	248	12,687,901	\$4,484,097
2004	14	22	2	11	43	374	7,795,375	\$4,004,739
2005	9	17	2	3	23	281	14,190,996	\$4,379,854
2006	9	14	2	6	21	229	8,728,698	\$5,227,804
2007	9	10	2	4	22	184	14,439,711	\$7,237,001
2008	11	11	2	5	20	285	11,402,482	\$8,029,641
2009	14	12	2	4	24	249	9,532,993	\$5,491,971
2010	27	26	2	13	42	330	15,939,417	\$10,098,779

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Whittier: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	4	77,054	7,629
2001	4	157,765	18,677
2002	5	206,697	34,781
2003	5	158,169	19,355
2004	5	254,088	44,657
2005	5	254,088	40,464
2006	5	314,166	49,154
2007	5	309,212	45,512
2008	2	8,474	1,109
2009	2	8,474	994
2010	2	8,474	916

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Whittier: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Whittier: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Whittier: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	303,961	294,016	331,283	293,435	292,446	263,808	220,738	206,862	204,053	173,275	78,990
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	29,526	18,829	26,070	17,761	144,154	18,899	18,361	20,033	16,795	--	36,573
Other Shellfish	--	--	--	--	--	--	--	--	--	--	68,855
Pacific Cod	51,196	18,759	33,018	2,058	--	--	1,481	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	29,957	20,969	--	10,337	19,370	16,789	--	11,662
Salmon	4,849,220	7,764,599	--	12,299,388	7,275,157	--	--	--	11,109,820	9,268,021	15,650,990
<i>Total²</i>	<i>5,233,903</i>	<i>8,096,203</i>	<i>390,371</i>	<i>12,642,599</i>	<i>7,732,726</i>	<i>282,707</i>	<i>250,917</i>	<i>246,265</i>	<i>11,347,457</i>	<i>9,441,296</i>	<i>15,847,070</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$787,381	\$545,699	\$725,238	\$883,079	\$905,074	\$811,940	\$809,430	\$890,735	\$940,909	\$532,399	\$320,445
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$19,555	\$11,077	\$17,617	\$8,142	\$35,026	\$12,536	\$14,239	\$12,900	\$10,541	--	\$20,375
Other Shellfish	--	--	--	--	--	--	--	--	--	--	\$321,664
Pacific Cod	\$20,434	\$7,129	\$11,371	\$732	--	--	\$828	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	\$70,183	\$41,892	--	\$31,063	\$53,397	\$62,708	--	\$59,059
Salmon	\$2,645,564	\$3,826,627	--	\$3,389,145	\$2,839,946	--	--	--	\$6,822,998	\$4,682,953	\$9,343,674
<i>Total²</i>	<i>\$3,472,933</i>	<i>\$4,390,531</i>	<i>\$754,225</i>	<i>\$4,351,282</i>	<i>\$3,821,938</i>	<i>\$824,476</i>	<i>\$855,559</i>	<i>\$957,032</i>	<i>\$7,837,155</i>	<i>\$5,215,351</i>	<i>\$10,065,217</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Whittier Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	3,006
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	180,990
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	183,996
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	\$23,973
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	\$148,038
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	\$172,011

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Whittier's position as an embark/disembark port for cruise ships contributes substantially to its recreational fishing industry, as does the City's access to Alaska's highway system. As of 2005, fishing and hunting guide businesses outnumbered all other local tourism related businesses at 15 providers. Sightseeing came second at 10 providers.⁴⁰⁴ The Whittier Chamber of Commerce listed 15 local charter, guide service, and cruise service companies as of 2012.⁴⁰⁵ In 2010, there were five registered sport fish guide businesses active, compared to two in 2000. In addition, five sport fish guide licenses were held that year, compared to three in 2000. Charter log records kept by ADF&G report that in 2010, charter operators in Whittier kept 1,428 coho salmon, 4,497 halibut, 571 lingcod, 1,271 rockfish, one shark, 16 sablefish, and 276 unidentified salmon.⁴⁰⁶

In 2010, 76 sportfishing licenses were sold to Whittier residents and 1,072 were sold in the community, compared to 78 and 812 in 2000, respectively. Sportfishing license sales in the community peaked in 2002 at 1,360. Whittier is located in North Gulf Coast/PWS Statewide Harvest Survey Area which includes all drainages from east of Cape Suckling, through PWS to Gore Point. In 2010, there were a total of 212,793 saltwater angler days fished in the region, compared to 122,459 in 2000, representing a 74% increase. Non-Alaskan residents made up 30.4% of total saltwater angler days fished in 2010 in the region, compared to 32.3% in 2000. Regional saltwater angler days fished peaked at 300,205 in 2007. Total freshwater angler days fished was 22,979 in 2010, compared to 12,108 in 2000; an increase of 90%. Non-Alaskan residents made up 57% of freshwater angler days fished in 2010 in the region, compared to 26% in 2000. Total freshwater angler days fished in the region peaked in 2010. Information regarding these sportfishing trends can be found in Table 11. According to ADF&G Harvest Survey data,⁴⁰⁷ local private anglers target all five species of Pacific salmon, Pacific halibut, rockfish, lingcod, Pacific cod, shark, and shrimp.

Subsistence Fishing

Subsistence harvesting is not widely practiced by residents of Whittier. Although ADF&G subsistence harvest data is limited, reports show limited involvement. Information on subsistence participation by household and sea mammal subsistence harvesting is unavailable. Of the species listed by ADF&G in Table 13, sockeye salmon was the only species residents reported harvesting between 2003 and 2008. During those years, residents reported harvesting 85 total salmon. In 2010, two residents held Subsistence Halibut Registration Certificates (SHARC), compared to one in 2003. However, between 2003 and 2010 no halibut harvests were reported. Information regarding subsistence trends can be found in Tables 12 through 15.

⁴⁰⁴ ASCG Inc. (2005). *Whittier Comprehensive Plan Update 2005*. Retrieved April 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Whittier-CP-2005.pdf>.

⁴⁰⁵ Whittier Chamber of Commerce (n.d.). *Whittier Chamber of Commerce*. Retrieved April 25, 2012 from: <http://www.whittieralaskachamber.org/cruises-charters.htm>.

⁴⁰⁶ Ibid.

⁴⁰⁷ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Whittier: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Whittier ²
2000	2	3	78	812
2001	3	7	83	1,319
2002	4	7	98	1,360
2003	4	12	97	904
2004	3	6	94	1,115
2005	4	6	94	1,058
2006	3	3	80	1,084
2007	3	6	74	914
2008	3	4	72	1,196
2009	3	4	72	1,102
2010	5	5	76	1,072

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Whittier: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Whittier: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	6	6	n/a	n/a	n/a	n/a	15	n/a	n/a
2004	3	3	n/a	n/a	n/a	n/a	15	n/a	n/a
2005	2	2	n/a	n/a	n/a	n/a	30	n/a	n/a
2006	3	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	1	n/a	n/a	n/a	n/a	25	n/a	n/a
2008	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Whittier: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	2	n/a	n/a
2005	2	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	3	n/a	n/a
2009	3	n/a	n/a
2010	2	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Whittier: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Northern Alaska

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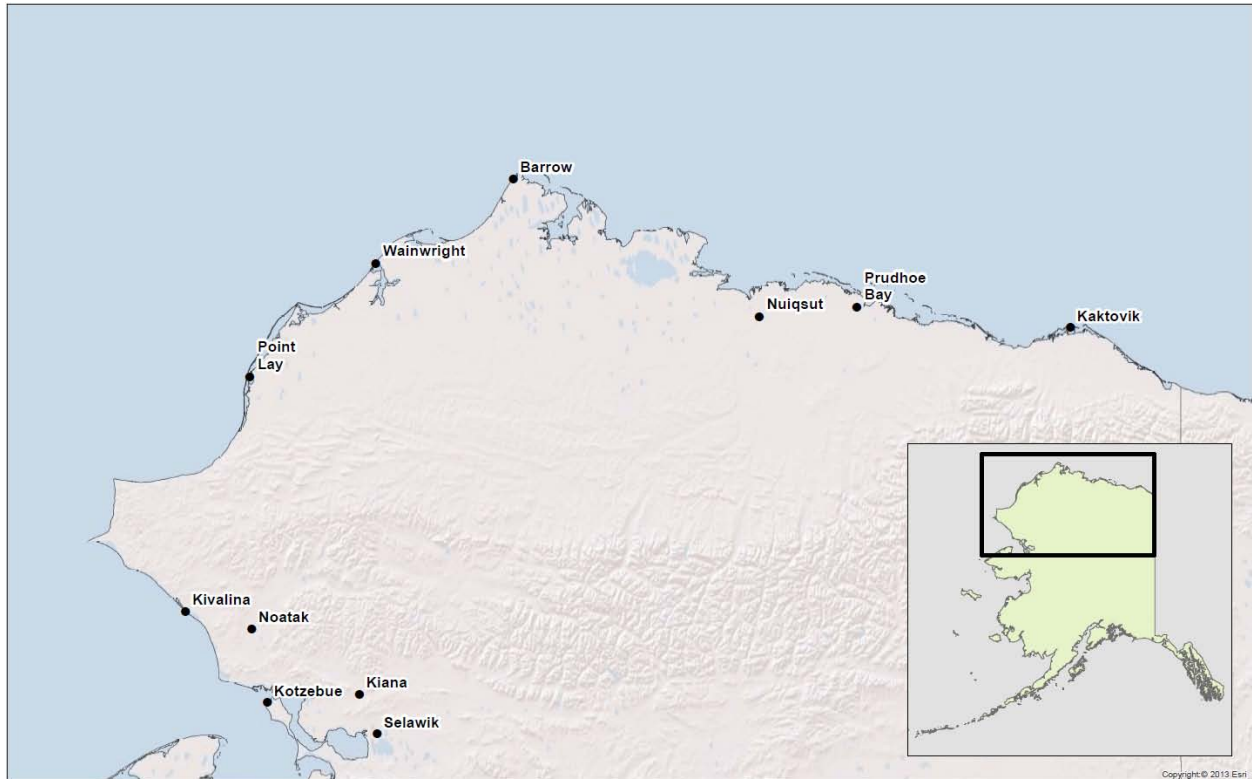
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Regional Introduction: Northern Alaska

Communities

Barrow
Kaktovik
Kiana
Kivalina
Kotzebue
Noatak
Nuiqsut
Point Lay
Prudhoe Bay
Selawik
Wainwright



People and Place

Location

Covering a total of 135,525 square miles, the Northern Alaska region is occupied by both the Northwest Arctic Borough and North Slope Borough. Selawik (66.60° N by -160.00° W) occupies the southernmost point of the region, while Barrow (71.29° N by -156.79° W) occupies the northernmost point. The region is bordered by the Chuckchi Sea to the west, Beaufort Sea to the north, and Yukon Territory, Canada, to the east. The region's largest city, Barrow, is located 725 miles from Anchorage.

Demographic Profile

A total of 11 communities met profiling criteria within the Northern Alaska region; six of which had populations over 500, including three that had populations over 2,000. The total regional population in 2010 was 16,953, 24.8% of which lived in Barrow. Almost 13% of area residents reside in Prudhoe Bay, although most of those residents are non-permanent oil workers. At 3,201 residents (19.3% of the region's population), Kotzebue is the regional center for the Kobuk River and Kotzebue Sound sub-region. It is also the center for commercial fishing within the Northern Alaska region.¹

In 2010, 71.1% of residents in the region identified themselves as at least part American Indian or Alaska Native, 23.7% identified themselves as White, 3.5% identified themselves as at least part Asian, 1.4% identified themselves as at least part Black or African American, and 1.1% identified themselves as at least part Native Hawaiian or Other Pacific Islander. In addition, 1.8% of residents identified themselves as Hispanic or Latino.² It should be noted that almost half of the residents who identified themselves as White in 2010 resided in Prudhoe Bay, whose 2010 Decennial Census population is grossly misrepresentative of the community's permanent population due to the seasonal presence of oil exploration company employees. According to Alaska Department of Labor (DOL) population estimates, Prudhoe Bay had a permanent population of three in 2009.³ DOL population estimates are based on addresses listed on Alaska Permanent Fund Dividend applications, and are likely more reliable sources of permanent residents in some instances.

The region's economy is mixed. Prudhoe Bay is entirely dependent on oil extraction and exploration, while most other communities in the area are dependent on a subsistence economy. Commercial fishing is limited for communities within the North Slope Borough. Under the current Arctic Fishery Management Plan (FMP), commercial fishing is prohibited in federal waters.⁴ Limited commercial fishing does occur in state waters however. While communities within the Kotzebue Sound region are also governed by the current Arctic FMP, commercial

¹ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Ibid.

³ Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

⁴ North Pacific Fishery Management Council. (2009). *Fishery Management Plan for Fish Resources of the Arctic Management Area*. Retrieved December 4, 2012 from: <http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

fishing in that area is more intensive due to a state regulated salmon fishery. Kotzebue is a service and transportation center for many villages in the Northwest Arctic Borough. Due to its location at the confluence of three river drainages, Kotzebue is the transfer point between ocean and inland water shipping and also the air transport center for the region. Activities related to oil and mineral exploration and development have contributed to the economy. Barrow is the economic center of the North Slope Borough, the city's primary employer, and numerous businesses provide support services to oil field operations. State and federal agencies also provide employment. The midnight sun has attracted tourism, and arts and crafts provide some cash income. Smaller villages within the region largely depend on local government and education services for wage employment.

In 2010,⁵ the estimated per capita income for the Northern Alaska region was \$21,694 and the estimated median household income was \$61,867. Broken down by community, estimated per capita and median household incomes were similar across the region. Of those aged 16 and older, an estimated 64.9% were considered part of the civilian labor force. Of those employed, most (30.5%) worked in education services, health care, and social assistance sectors; followed by public administration (18.0%) and transportation, warehousing, and utilities sectors (10.3%). Finally, an estimated 25.3% of residents were unemployed in 2010.

It should be noted that U.S. Census statistics do not represent the value of subsistence to the regional economy, and many residents who hold seasonal wage positions, including those in commercial fisheries, may have been misrepresented during Census sampling. Subsistence resources are not only consumed by individual household units, but are traded throughout the community (and the region) for other goods and services, supplying an “informal” economy that is difficult to measure using traditional survey methods. However, the informal subsistence economy is essential in communities where standard wage employment is scarce, and living expenses are high.⁶

History

Approximately 10 to 25 thousand years ago, during the Pleistocene Ice Age, the level of the ocean was up to 300 feet lower than present levels. At that time, the Seward Peninsula was connected to the Asian continent via the Bering land bridge, which formed a flat, grassy, treeless plain.⁷ The land bridge is thought to have been a primary route by which humans migrated to the North American continent from Asia. Archaeologists have identified evidence of human inhabitation in the Bering Land Bridge National Preserve dating to 12,000 years before the present.⁸ Archaeological findings in northwest Alaska indicate that people have continuously occupied the Kotzebue Sound area for the past 4,000 years. Two cultures can be linked with

⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶ Goldsmith, S. (2008). *Understanding Alaska's Remote Rural Economy*. University of Alaska Research Summary No. 10. Retrieved November 30, 2012 from: http://www.iser.uaa.alaska.edu/Publications/researchsumm/UA_RS10.pdf.

⁷ National Park Service (2010). *Shared Beringian Heritage Program*. Retrieved February 22, 2012 from <http://www.nps.gov/akso/beringia/>.

⁸ National Park Service (2009). *Bering Land Bridge National Preserve*. Retrieved February 17, 2012 from <http://www.nps.gov/bela/>.

continuous occupation of the Kotzebue Sound area: the Arctic Small Tool tradition (4,200 to 1,000 years ago) and Northern Maritime tradition (1,400 years ago to present).

Most settlements were semi-permanent as most people of the area followed migratory caribou herds. But the coastal resources of the area allowed for permanent settlement, and *Kikitaruk* (present day Kotzebue) established itself as a regional trading hub. Centuries before European contact, *Kikitaruk* was a busy center of trading activities and a stopping point for trade routes throughout the Arctic linking Siberian Chukchi and northern MacKenzie Eskimos and Canadian Athabascans. Interior peoples traded furs, jade, salmon skin clothing, and birch bark baskets for muktuk, seal oil, ivory, and walrus hides from coastal peoples. Tobacco, metal implements, and firearms reached the Kotzebue and Norton Sound region before trade routes from Russians were established.⁹

Around 1,000 years ago, the Thule culture expanded into the North Slope region, characterized by winter ice-hunting, kayak and umiaq¹⁰ open sea hunting, use of dogs and dog sleds, and settlement in large coastal villages.¹¹ Although major settlements have always occurred on the North Slope, traditionally people lived in small groups and travelled throughout the region to hunting and fishing areas. Today, most people live in permanent villages, “yet the animals still roam widely, and seasonal locations for fishing and trapping are scattered over a vast territory.”¹² The use of snowmachines and motor boats allows residents to extend the range of their subsistence use while still living in a permanent community.¹³

Exploration of the Naval Petroleum Reserve Number 4 (now National Petroleum Reserve in Alaska, NPR-A) began in 1946. The Prudhoe Bay oilfields have been heavily developed since the 1970s, following the completion of a oil pipeline connecting the North Slope with Valdez. The pipeline has 12 pump stations and a maximum capacity of 2 million barrels of crude oil per day.¹⁴

Natural Resources and Environment

The weather in the North Slope Borough is arctic with temperatures ranging from -56 to 78 °F. Precipitation is about 5 inches per year; however, snowfall averages approximately 20 inches. The coastal region of the Baldwin Peninsula, where Kotzebue is located, is in the transitional climate zone, which is characterized by long, cold winters and cool summers. The average low temperature during January is -12 °F; the average high during July is 58 °F. Temperature extremes have been measured from -52 to 85 °F. Annual snowfall averages 40

⁹ Alaska State Housing Authority. (1971). *Kotzebue, Alaska Comprehensive Development Plan*. Retrieved August 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kotzebue-CP-1971.pdf>.

¹⁰ An umiaq is a large open Inuit or Eskimo boat made of skins stretched on a wooden frame, usually propelled by paddles. (Source: <http://www.thefreedictionary.com>. Retrieved June 21, 2012.)

¹¹ National Park Service (n.d.) *Archaeology of the Tundra and Arctic Alaska*. Retrieved December 8, 2011 from <http://www.nps.gov/akso/akarc/arctic.htm>.

¹² North Slope Borough Planning Commission and Commission on History and Culture (1979). *Nuiqsut Heritage: A Cultural Plan*. Retrieved February 29, 2012 from http://www.alaska.boemre.gov/native/Nuiqsut_Guide.pdf.

¹³ Glenn Gray and Associates (2007). *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

¹⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

inches, with total precipitation of 9 inches per year. Kotzebue Sound is ice-free from early July until early October.¹⁵

The Baldwin Peninsula is composed primarily of unconsolidated Quaternary sediments. These sediments are mostly eolian, glacial, and marine in origin. Illinoian glaciers deposited till and outwash over marine sediments. Loess was deposited over the glacier sediments during glacial retreat. Sea level rose, and in some areas, marine sediments were deposited over the eolian silts. Late Wisconsin and Holocene sediments are primarily silts, clays, and fine sands; with the oldest sediments exposed on coastal bluffs. An exploratory petroleum well drill 10 miles east of Cape Blossom hit bedrock at a depth of 900 feet. The nearest bedrock outcrops at sea level are on the Choris Peninsula to the southeast, at Ekichuk Lake on Hotham Inlet to the northeast, and at Cape Krusenstern Lagoon northwest of the project site. The Baldwin Peninsula is located within a zone of continuous permafrost. The depth of the bottom of permafrost is probably between 200 and 300 feet. During the summer, the active permafrost layer extends two to four inches beneath the surface.¹⁶ The prominent vegetation type on the Baldwin Peninsula is moist coastal tundra. Continuous, uniformly developed cotton grass tussocks with sparse groups of other sedges and dwarf shrubs dominate. Few trees grow in the area, particularly near Kotzebue. However, some stands can be found in the Noatak and Kobuk River drainages, and driftwood is scattered along the coast. Kotzebue residents collected various edible plants including greens, berries (cranberries, salmon berries, blue berries, and black berries), and roots. Cotton grass, wild rhubarb, and wild onion, wild peas, willow leaves, and sprouts are also traditionally gathered.¹⁷

The primary mineral development project on the Baldwin Peninsula is the Red Dog Mine, which is the world's largest zinc and lead mine. Mineral deposits are located in the DeLong Mountains, which are part of the Brooks Range. The Kobuk River Valley contains many placer gold deposits. On Jade Creek, gold and jade deposits can be found. The Ambler Mining District, east of Kotzebue, has vast deposits of jade, copper, and other minerals. The Noatak District, north of Kotzebue, contains gold deposits at Lucky Six Creek. The Selawik District, southeast of Kotzebue, has one reported gold operation on Shovel Creek, which was mined until shortly after World War II. Finally, the Shungnak District, east of Kotzebue, contains many placer gold deposits throughout several drainages.¹⁸

The coastal landscape of the North Slope is characterized by bays and inlets, lagoons with barrier islands, gravel and sandy shores, basins, shallow lakes, and deltas. Coastal plains are characterized by low terraces, floodplains, shallow lakes, and streams. Peat bluffs run about 40 miles southwest of Barrow's coastline. Soils are generally poorly drained sandy loams, peats, and marine sediments. The permafrost layer generally ranges from 650 to 1,300 feet deep. Coastal plains ecoregions are characterized broadly as nearshore wet tundra and river floodplains. Vegetation is extremely limited within these coastal areas, where grasses prevail.

Natural resources in the area include the expansive North Slope oil and gas fields, as well as several offshore oil and gas fields in the Beaufort and Chukchi seas. Production in the North Slope area began in the 1970s and reached a production rate of 2.2 million barrels per day by

¹⁵ Ibid.

¹⁶ The City of Kotzebue, Donahue, J., McClintock, B., and Kotzebue IRA Council. (2000). *City of Kotzebue Comprehensive Plan*. Retrieved August 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kotzebue-CP-2000.pdf>.

¹⁷ Ibid.

¹⁸ Stoops, L. (2004). *Northwest Arctic Borough Comprehensive Economic Development Strategy*. Retrieved August 20, 2012 from: <http://www.commerce.state.ak.us/dca/plans/NorthwestArcticBorough-EDP-2004.pdf>.

1988. However, by 2007 production had declined to 720,000 barrels per day representing approximately 14% of U.S. domestic production at that time. By the end of 2007, the North Slope oil fields had produced 15.7 billion barrels of oil, with about 6.1 billion barrels of economically recoverable oil remaining. As of 2009, gas reserves of the North Slope were estimated at approximately 35 trillion cubic feet. However, long-term (2005 to 2050) optimistic assumptions estimate the total amount of economically recoverable oil to total 35 to 36 billion barrels and economically recoverable gas to total 137 trillion cubic feet. However, these projections are contingent on the opening of Area 1002 of the Arctic National Wildlife Refuge (ANWR) to extraction.¹⁹

Governance

The Northern Alaska region is governed by two boroughs: the Northwest Arctic Borough (Kotzebue Sound sub-region), and the North Slope Borough (North Slope sub-region). With the exception of Prudhoe Bay, all profiled communities within the region are incorporated into municipalities and have federally recognized Tribal governments and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporations. The regional ANCSA chartered Native corporation representing Northern Alaska include NANA Regional Corporation (Kotzebue Sound sub-region) and Arctic Slope Regional Corporation (North Slope sub-region). The regional ANCSA chartered non-profit corporations include Arctic Slope Native Association (North Slope sub-region), and Maniilaq Association (Kotzebue Sound sub-region).

In 2010, the North Slope Borough administered an 18.5 mills property tax. The Northwest Arctic Borough did not administer any taxes that year. No communities are eligible to participate in the federal Community Development Quota program.

Involvement in North Pacific Fisheries

As previously mentioned, the current Arctic FMP prohibits commercial fishing in federal waters. Most commercial fishing effort is concentrated on the Kotzebue Sound area in state waters, where a summer chum salmon season runs from July through August in the Noatak and Kobuk river systems. Small harvests of sockeye, Chinook, coho, and pink salmon also occur, but at a negligible level. Dolly Varden are, at times, incidentally harvested during the final weeks of the salmon season.²⁰ Commercial catches vary from year to year due to changes in migration patterns of chum salmon. Fishing usually begins in mid-July when fishermen in small outboard skiffs fish set gillnets. Kotzebue chum salmon are of high quality and are in high demand. Fish are typically dressed with heads on, iced, and transported to offshore Japanese freezer ships or shipped to Anchorage or Seattle markets. Commercial fisheries for Arctic char and inconnu (whitefish) also occur. Arctic char run later than salmon and are fished following the salmon season.

¹⁹ U.S. Dept. of Energy. (2009). *Alaska North Slope Oil and Gas: A Promising Future or an Area in Decline?* Retrieved December 30, 2011 from: http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS_Potential.pdf.

²⁰ Georgette, S. and Loon, H. (1993). *Subsistence Use of Fish and Wildlife in Kotzebue, a Northwest Alaska Regional Center*. Technical Paper No. 167. Alaska Dept. of Fish and Game. Retrieved August 22, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp167.pdf>.

Funding for the State-owned Sikusuliaq Springs Fish Hatchery on the Noatak River was discontinued in 1983. The State had invested close to \$20 million in capital improvement and operating costs of the hatchery.²¹ The hatchery closed in 1996, however runs continued until 2000.²²

A commercial fishery for sheefish has operated in the Kotzebue Sound since the 1960s, but is historically small and does not contribute significantly to the local economy. In most years, sheefish quota was not met, and the fishery remained open throughout the winter. Fishermen use gill setnets under ice, and most commercial catch is sold to local residents or kept for personal use.²³ No sheefish have been fished commercially since 2005. The Alaska Department of Fish and Game (ADF&G) permits commercial harvests of freshwater species including whitefish, sheefish, char, northern pike, blackfish, and Arctic lamprey in the Northern Region, north of Point Hope. Arctic least cisco are commercially harvested within the Colville River delta (60 miles west of Prudhoe Bay) from October through November.²⁴

As of 2010, there were no shoreside processors registered with ADF&G within the region, although several fish brokers were located in Kotzebue.²⁵ While landings were reported in Kotzebue that year, totals are considered confidential. In addition, despite commercial fishing permits being actively fished in Barrow, Kivalina, Kotzebue, and Noatak, landings were only reported by residents of Barrow. Again, landings made by residents are considered confidential.²⁶

In 2010, residents held a total of 179 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC), 82.7% of which were held by residents of Kotzebue. Of those permits, only 39.1% were actively fished. Salmon accounted for 96.6% of total CFEC permits held in 2010, while freshwater finfish, crab, “other” shellfish, and herring making up the few remaining.²⁷ No residents held quota share for halibut, sablefish, or crab fisheries.²⁸

²¹ Stoops, L. (2004). *Northwest Arctic Borough Comprehensive Economic Development Strategy*. Retrieved August 20, 2012 from: <http://www.commerce.state.ak.us/dca/plans/NorthwestArcticBorough-EDP-2004.pdf>.

²² Eggers, D. M.; and Clark, J. H. (2006). *Assessment of Historical Runs and Escapement Goals for Kotzebue Area Chum Salmon*. Fishery Manuscript No. 06-01. Retrieved August 22, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidpdfs/fms06-01.pdf>.

²³ Georgette, S. and Loon, H. (1993). *Subsistence Use of Fish and Wildlife in Kotzebue, a Northwest Alaska Regional Center*. Technical Paper No. 167. Alaska Dept. of Fish and Game. Retrieved August 22, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp167.pdf>.

²⁴ Estensen, J. L., Hayes, S., Buckelew, S., Green, D., and Bergstrom, D. J. (2012). *Annual Management Report Yukon and Northern Areas 2010*. Alaska Department of Fish and Game. Fishery Management Report No. 12-23. Retrieved December 5, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR12-23.pdf>.

²⁵ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁶ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁷ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁸ National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Tourism is a rapidly growing industry in Kotzebue, driven in large part to sport hunting and fishing. To complement this growth, tourism infrastructure has been expanding. NANA Regional Corp. opened a new 78 room hotel in Kotzebue in 2011.²⁹ Golden Eagle Outfitters provides guided sportfishing excursions, targeting Dolly Varden northern pike, sheefish, Arctic grayling, and chum salmon.³⁰ Sheefish are a popular target for private anglers on the Kobuk River, as the river supports one of the largest sheefish populations in the world. Typically, private anglers based in Kotzebue will fly to remote locations on the Upper Kobuk River to target this species. The communities of Ambler and Kobuk are seasonally inundated with recreational fishermen, many of whom originate in Kotzebue or Bettles. Dolly Varden, northern pike, Arctic grayling, burbot, lake trout, and Arctic char are also popular targets within the Kobuk River watershed.³¹ Outside the Kotzebue region, recreational fishing is less popular. For example, the communities of Point Lay, Wainwright, Nuiqsut, Prudhoe Bay, and Kaktovik did not have registered sport fish guide businesses between 2000 and 2010, and Barrow has not had one since 2005.

In 2010, there were three registered sport fish guide business in the Northern Alaska region: one in Kiana and two in Kotzebue. In that year, 730 sport fish guide licenses were sold in the region, 60.0% of which were sold in Kotzebue. In addition, 941 sportfishing licenses were held by residents; 44.7% of which were held in Kotzebue, and 33.4% of which were held in Barrow.³²

Subsistence activities are extremely important to Northern Alaska residents. In the Kotzebue Sound region, The subsistence season begins each year at spring ice breakup, usually in May. During breakup, travel becomes increasingly difficult, and many residents move to seasonal subsistence camps on the coast northwest of Kotzebue before travelling on ice becomes unsafe. When the water becomes open enough to permit boat travel, local hunters go out in search of marine mammals, particularly bearded seal, but also ringed seal and walrus. Migrating waterfowl are also hunted, and their eggs are gathered when available. Near Kotzebue, residents continue to jig for sheefish on the last remnants of shoreside ice. As the ice clears, residents fish for herring, whitefish, and Dolly Varden. Beluga whale hunting also begins at this time. From a subsistence perspective, May through July is the busiest time of year for harvesting. With cool, dry weather, oil and “black meat” (half-dried bearded seal) is produced from harvested seal.³³

Summer arrives in late June or July. At this time many residents turn their efforts towards salmon fishing for both subsistence and commercial purposes. Berry picking begins around this time, and many residents gather salmonberries, blueberries, blackberries, and cranberries. Incidental Dolly Varden harvesting begins in early August. Salmon fishing concludes around the end of August, while berry picking continues through September. Migrating caribou herds make their way through the area around the beginning of fall in late August. Both caribou and moose

²⁹ Associated Press. (2011, August 31). NANA development opens new Kotzebue hotel. *Anchorage Daily News*. Retrieved August 22, 2012 from: <http://www.adn.com/2011/08/31/2041468/nana-development-opens-new-kotzebue.html>.

³⁰ Golden Eagle Outfitters. (n.d.). *Kotzebue*. Retrieved August 22, 2012 from: <http://www.alaskawildernessexpeditions.com/kotzebue.html>.

³¹ Alaska Dept. of Fish and Game. (n.d.). *Northwest Drainages Management Area*. Retrieved August 22, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorNorthwest.moreoverview>.

³² Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³³ See footnote 23.

are hunted during this time. As sea ice begins to form in October, Kotzebue hunters pursue young bearded seals and spotted seals. Saffron cod (tomcod) are jigged on ice forming near shorelines. During the winter, caribou, moose, ptarmigan, and hare are hunted. Wolf, wolverine, and fox are also hunted or trapped for furs. In early winter, nets are set under the ice in the Hotham Inlet to fish for sheefish. In late winter, sheep hunting takes place in the Baird Mountains, and moose, caribou, seal, and fur bearer hunting continues.³⁴ Coastal communities on the North Slope rely on bowhead whale, seal, walrus, beluga whale, salmon, whitefish, and arctic grayling. Rod and reel, gill net, and jigging are techniques used to harvest fish in the summer, while gill nets and jigs are used in the winter.³⁵ Whale hunts are a central part of Barrow's identity, and a focal point of cohesion and reciprocity within the community.³⁶

In 2008, residents reported harvesting 843 salmon, 88.0% of which were reported by residents of Barrow. Sockeye accounted for 80.2% of salmon harvests reported for that year, while Chinook accounted for 18.6%.³⁷ It is important to note that reported harvests may not have occurred locally. Also in 2008, an estimated 27 walrus and 15 polar bear were harvested in the region, most by residents of Barrow.³⁸

Regional Challenges

Challenges impacting Northern Alaska residents are largely tied to climate change and oil extraction. Expansion of oil development in the ANWR, particularly within the currently closed Area 1002, has become a source of conflict between proponents of development and those concerned with potential impacts to the local ecosystem and migratory caribou herds.³⁹ In addition, drilling operations within the Beaufort Sea can potentially pose risks to aquatic subsistence resources heavily relied upon by local communities.

Climate change, particularly sea ice retreat, is already impacting the availability of subsistence resources. Marine mammals dependent on sea ice (e.g., ice seals and walrus) retreat further offshore in search of suitable haul-out locations, making them more costly for subsistence hunters to harvest. As conditions continue to change, food chain disruptions may impact the abundance of subsistence resources across trophic scales. Communities' ability to predict and adapt to impacts from climate change is both crucial and challenging. Moreover, the risks to current Traditional Ecological Knowledge systems due to rapidly changing environmental conditions pose additional challenges to local adaptation.⁴⁰

³⁴ North Pacific Fishery Management Council. (2009). *Arctic Fishery Management Plan*. Retrieved January 3, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>

³⁵ Ibid.

³⁶ Polar Field Services. (n.d.). *Polar Field Services Newsletter*. Retrieved January 3, 2012 from: <http://www.polarfield.com/blog/barrow-whaling/>.

³⁷ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³⁸ U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³⁹ U.S. Fish and Wildlife Service. *Arctic National Wildlife Refuge*. Retrieved December 5, 2012 from: <http://www.fws.gov/refuges/profiles/index.cfm?id=75600>.

⁴⁰ Chapin, F. S. III, et al. (2004). Resilience and Vulnerability of Northern Regions to Social and Environmental Change. *Ambio*, 3(6), pp. 344-349.

Some species may experience an increase in abundance as pack ice retreats. These include marine mammals such as beluga and bowhead whales, harbor and harp seals, and walrus. This may in turn have a beneficial impact on the subsistence economy. Sub-arctic fish populations, including whitefish, Northern pike, and lake trout, may experience changes to their range and availability. Depending on local conditions, these changes could come in the form of increases or declines in abundance.⁴¹

Finally, sea ice melt may alter climatic conditions in ways that could threaten community infrastructure. Changes in the seasonality of sea ice pack not only increases the frequency and intensity of fall and early winter storms, but leaves shorelines more exposed to erosion as well; as is occurring already in Kivalina.⁴² If the rate of sea ice retreat continues to the point that seasonal shipping routes become viable, a unique set of challenges and opportunities may be imposed on communities in Northern Alaska. Already limited shipping is being undertaken along Russia's Northern Sea Route.⁴³

⁴¹ Gregory, R., Failing, L., & Leiserowitz, A. (2006). *Climate change impacts, vulnerabilities, and adaptation in Northwest Alaska* (No. 06-11). Eugene: Decision Research. Retrieved December 5, 2012 from: http://www.decisionresearch.org/Projects/Climate_Change/.

⁴² Shearer, C. (2012). The Political Ecology of Climate Adaptation Assistance. *Journal of Political Ecology*, 19, pp. 174-183.

⁴³ The Arctic Institute. (2012). *The Future of Arctic Shipping*. Retrieved December 5, 2012 from: <http://www.thearcticinstitute.org/2012/10/the-future-of-arctic-shipping.html>.

Barrow (BARE-row)



People and Place

*Location*⁴⁴

Barrow, the northernmost community in the United States, is located on the Chukchi Sea coast, 10 mi south of Point Barrow, from which it takes its name; and 725 mi northwest of Anchorage. The area encompasses 18.4 sq mi of land and 2.9 sq mi of water. Barrow was incorporated as a Fourth-class city in 1958. Today, the community is a First-class city and North Slope Borough seat.

Demographic Profile^{45,46}

In 2010, there were 4,212 residents, ranking Barrow 27th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 21.4%. Between 2000 and 2009, the population fell by 10.1% with an average annual growth rate of -0.97%; which was somewhat lower than the statewide average of 0.75% and indicative of recovering growth following a steady decline between 2000 and 2007. According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the permanent population was estimated at 4,380 based on a household survey. In addition the estimated number of seasonal or transient workers living in Barrow was 30 to 50. Seasonal employment is primarily driven by construction projects in the area, and the seasonal population depends on when projects are available. Population peaks are not at all driven by employment in the fishing sectors, but rather by construction and tourism. Information regarding population trends can be found in Table 1.

Barrow's racial composition is relatively diverse, with a majority Inupiat Eskimo population. In 2010, 61.2% of residents identified themselves as American Indian and Alaska Native, compared to 57.2% in 2000. Also in that year, 16.9% the population identified themselves as White, compared to 21.8% in 2000; 9.1% identified themselves as Asian, compared to 9.4% in 2000; 8.7% identified themselves as two or more races, compared to 8.5% in 2000; 2.4% identified themselves as Native Hawaiian and Other Pacific Islander, compared to 1.4% in 2000; 1.0% identified themselves as Black or African American, compared to 1.0% in 2000; and 0.8% of the identified themselves as some other race, compared to 0.7% in 2000. In addition, 3.1% of residents identified themselves as Hispanic or Latino, compared to 3.3% in 2000. Information regarding racial and ethnic composition can be found in Figure 1.

⁴⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁶ Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

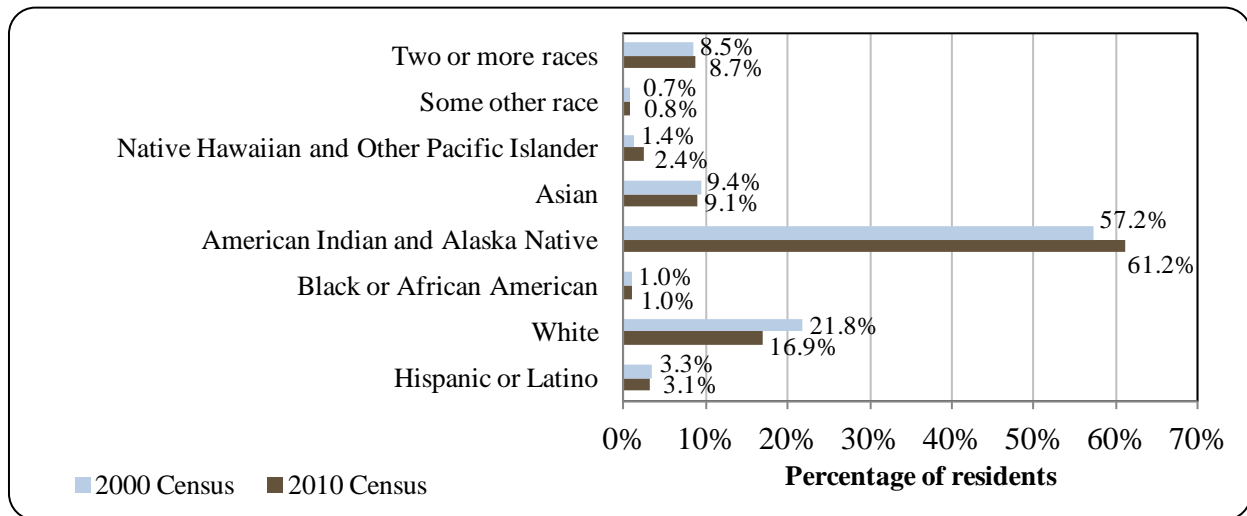
Table 1. Population in Barrow from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	3,469	-
2000	4,581	-
2001	-	4,443
2002	-	4,436
2003	-	4,412
2004	-	4,369
2005	-	4,180
2006	-	4,069
2007	-	4,036
2008	-	4,051
2009	-	4,119
2010	4,212	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Barrow: 2000-2010 (U.S. Census).

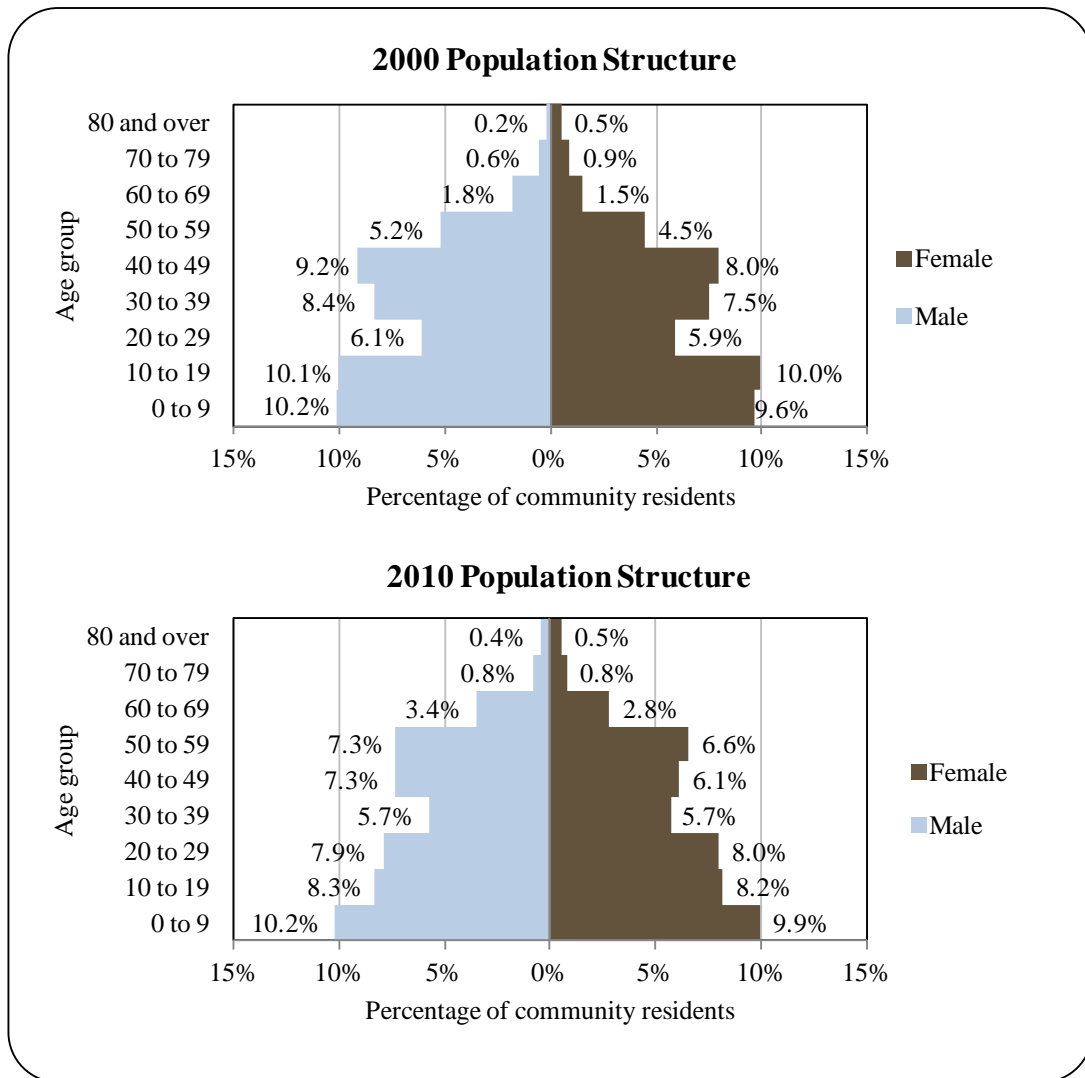


In 2010, the average household size was 3.26, compared to 3.2 in 1990 and 3.91 in 2000. In that same year there were 1,554 total housing units, compared to 1,184 in 1990 and 1,620 in 2000. Of the households surveyed in 2010, 33.8% were owner-occupied, compared to 34.5% in 2000; 48.5% were renter-occupied, compared to 50.1% in 2000; 12.3% were vacant, compared to 12.9% in 2000; and 5.3% were occupied seasonally, compared to 2.5% in 2000. In 2010, there were 34 people living in group quarters, compared to 13 in 1990 and 95 in 2000.

Gender distribution in 2010 was relatively even at 51.4% male, and 48.6% female. This was similar to both the distribution statewide (52.0% male, 48.0% female) and distribution in 2000 (51.7% male, 48.3% female). The median age that year was 28.0 years, which was somewhat younger than the statewide median of 33.8 years and similar to the 2000 median of 28.8 years.

Overall, the population structure in both 2010 and 2000 was expansive. In addition, cohorts maintained their overall structure as they aged, indicating a stable population. In 2010, 36.6% of residents were under the age of 20, compared to 39.9% in 2000; 8.7% were over the age of 59, compared to 5.5% in 2000; 38.7% were between the ages of 30 and 59, compared to 42.8% in 2000; and 15.9% were between the ages of 20 and 29, compared to 12.0% in 2000.

Figure 2. Population Age Structure in Barrow Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 40 to 49 range (7.3% male, 6.1% female), followed by the 50 to 59 (7.3% male, 6.6% female) and 60 to 69 (3.4% male, 2.8% female) ranges. Of those three, the greatest relative difference occurred in the 60 to 69 range. Information regarding trends in Barrow's population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁴⁷ estimated that 80.2% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 7.1% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 12.7% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 25.1% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 3.2% held an Associate's degree, compared to an estimated 8.0% of Alaska residents overall; an estimated 7.2% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 10.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*⁴⁸

While human habitation in the arctic can be traced to as early as 8,000 years ago, archaeological sites indicate habitation in the Barrow area from around 1,600 to 1,000 years ago. Inupiat traditionally depended on subsistence marine mammal hunting, supplemented by inland hunting and fishing. Archaeological remains of 16 dwelling mounds from the Birnirk culture exist today. Barrow was named for Sir John Barrow, the second Secretary of the British Admiralty. The city's Eskimo name is Ukpeagvik ("place where owls are hunted"). In 1881, the U.S. Army established a meteorological and magnetic research station near Barrow. The Cape Smyth Whaling and Trading Station was constructed there in 1893. A Presbyterian church was established in 1899, and a post office was opened in 1901. Exploration of the Naval Petroleum Reserve Number 4 (now National Petroleum Reserve in Alaska, NPR-A) began in 1946. The Naval Arctic Research Laboratory, 3 mi north of Barrow, soon followed. The city was incorporated in 1958. Formation of the North Slope Borough in 1972 and the Arctic Slope Regional Corporation, as well as construction of the Prudhoe Bay oilfields and Trans-Alaska Pipeline, have each contributed to the development of Barrow. Today, tax revenues from the North Slope oil fields fund borough-wide services. The sale of alcohol is prohibited.

Barrow has one property listed on the National Register of Historic Places (NRHP). The Cape Smyth Whaling and Tradition Station is a nineteenth-century American-built frame structure located around Point Barrow. In its day, it played a significant role in early commerce in the region as a whaling and fur-trading post.⁴⁹

⁴⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁹ National Park Service. (n.d.) *National Register of Historic Places*. Retrieved December 29, 2011 from: <http://nrhp.focus.nps.gov/natregsearchresult.do?fullresult=true&recordid=0>.

Archaeological sites along the coast from Kotzebue to Barrow include Walakpa, Point Hope, and Cape Krusenstern. Birnirk houses and artifacts are nearly identical to those of the historic Inupiat people. Tool assemblages include ivory harpoon heads, flakes and blades, ulus, tool handles, and composite tool parts. Dwellings include semi-subterranean winter houses.⁵⁰

Natural Resources and Environment

The climate of Barrow is arctic. Annual precipitation is light, averaging 5 inches, and annual snowfall is 20 inches. Temperatures range from -56 to 78 °F (-49 to 26 °C), with an average temperature of 40 °F (4 °C) during summer. The sun does not set between May 10th and August 2nd each summer and does not rise between Nov. 18th and January 24th each winter. The daily low temperature is below freezing for 324 days of the year. Prevailing winds are easterly and average 12 mph. The Chukchi Sea is typically ice-free from mid-June through October.⁵¹

The coastal landscape surrounding Barrow is characterized by bays and inlets, lagoons with barrier islands, gravel and sandy shores, basins, shallow lakes, and deltas.⁵² Coastal plains are characterized by low terraces, floodplains, shallow lakes, and streams. Peat bluffs run about 40 mi southwest of Barrow's coastline. Soils are generally poorly drained sandy loams, peats, and marine sediments. The permafrost layer generally ranges from 650 to 1,300 ft deep. Coastal plains ecoregions are characterized broadly as nearshore wet tundra and river floodplains. Vegetation is extremely limited within these coastal areas, where grasses prevail. Upland areas closer to the Brooks Range to the south consist of dwarf shrubs and sedges.⁵³ Wildlife present in the North Slope region include many species of freshwater and marine fish, migratory birds, and terrestrial and marine mammals. Marine and freshwater fish species include arctic cisco, burbot, broad whitefish, arctic grayling, humpback whitefish, least cisco, pink, Chinook, and chum salmon, Dolly Varden char, round whitefish, four-horned sculpin, rainbow smelt, northern pike, arctic cod, capelin, arctic char, and lake trout.⁵⁴ Terrestrial mammals on the North Slope include caribou, polar bear, arctic fox, red fox, snowshoe hare, moose, black bear, grizzly bear, beaver, muskrat, lynx, mink, marten, land otter, weasel, wolverine, coyote, wolf, and Alaska tiny shrew.^{55,56} Aquatic mammals include bowhead whales, gray whales, minke whales, humpback whales, beluga whales, narwhal, bearded seal, ringed seal, spotted seal, ribbon seal, and Pacific walrus.⁵⁷

Natural resources in the area include the expansive North Slope oil and gas fields, as well as several offshore oil and gas fields in the Beaufort and Chukchi seas. Production in the North Slope area began in the 1970s and reached a production rate of 2.2 million barrels per day by

⁵⁰ U.S. Fish and Wildlife Service. (2011). Arctic Refuge Draft Comprehensive Conservation Plan. Retrieved December 30, 2011 from: http://arctic.fws.gov/pdf/ccp/06_Arctic_CH4_050911.pdf.

⁵¹ See footnote 48.

⁵² See footnote 50.

⁵³ Ibid.

⁵⁴ George, C. (2008). *Common Subsistence Fish of the North-Slope*. Retrieved December 30, 2011 from: <http://www.north-slope.org/departments/wildlife/>.

⁵⁵ See footnote 50.

⁵⁶ City of Barrow. (1970). *Barrow Plan*. Retrieved December 30, 2011 from: <http://www.commerce.state.ak.us/dca/plans/Barrow-CP-1970.pdf>.

⁵⁷ Alaska Department of Fish and Game. (n.d.). *Wildlife Action Plan: Appendix 4 – Marine Mammals*. Retrieved December 30, 2011 from: http://www.adfg.alaska.gov/static/species/wildlife_action_plan/appendix4_marine_mammals.pdf.

1988. However, by 2007 production had declined to 720,000 barrels per day representing approximately 14% of U.S. domestic production at that time. By the end of 2007, the North Slope oil fields had produced 15.7 billion barrels of oil, with about 6.1 billion barrels of economically recoverable oil remaining. As of 2009, gas reserves of the North Slope were estimated at approximately 35 trillion cu ft. However, long-term (2005 to 2050) optimistic assumptions estimate the total amount of economically recoverable oil to total 35 to 36 billion barrels and economically recoverable gas to total 137 trillion cu ft. However, these projections are contingent on the opening of Area 1002 of the Arctic National Wildlife Refuge (ANWR) to extraction.⁵⁸

Natural hazards in the area include extensive coastal erosion due climate change and human impacts. Large amounts of gravel were removed from Barrow's shoreline during the 1960s in order to support local construction. This removal resulted in the destabilization of shorelines and subsequent erosion. In addition, shorter periods of ice-cover in the Beaufort and Chukchi seas have resulted in greater and prolonged impacts of storm surges and general tidal forces on coastlines.⁵⁹ Peat bluffs often experience the most rapid rate of erosion.⁶⁰

Current Economy⁶¹

Barrow is the economic center of the North Slope Borough (the city's primary employer) and numerous businesses provide support services to oil field operations. State and federal agencies also provide employment. The midnight sun has attracted tourism, and arts and crafts provide some cash income. Many residents rely upon subsistence food sources; whale, seal, polar bear, walrus, duck, caribou, grayling, and whitefish are harvested from the coast or nearby rivers and lakes.⁶² In a survey conducted by the AFSC in 2011, community leaders reported that Barrow's economy is reliant on oil and gas exploration and extraction. Top employers in 2010⁶³ were North Slope Borough, North Slope Borough School, Arctic Slope Native Assoc., Native Village of Barrow, Ilisagvik College, Ukpeagvik Inupiat Corp., City of Barrow, Barrow Utilities, Harpoon Construction Group, and AK Commercial Co.

In 2010,⁶⁴ the estimates per capita income was \$25,528 and the estimates median household income was \$78,250, compared to \$22,902 and \$67,097 in 2000, respectively. However, after adjusting for inflation by converting 2000 values to 2010 dollars,⁶⁵ the real per capita income (\$30,116) and real median household income (\$88,232) indicate a decline in both individual and household incomes. However, it should be noted that data are based on wage earnings and does not take into account the value of subsistence within the local economy. In

⁵⁸ U.S. Department of Energy. (2009). *Alaska North Slope Oil and Gas: A Promising Future or an Area in Decline?* Retrieved December 30, 2011 from: http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS_Potential.pdf.

⁵⁹ See footnote 56.

⁶⁰ See footnote 50.

⁶¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁶² See footnote 48.

⁶³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

2010, Barrow ranked 100th of 305 Alaskan communities from which per capita income was estimated, and 27th of 299 Alaskan communities from which median household income was estimated.

According to 2006-2010 ACS estimates, 66.8% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 14.3%, compared to 5.9% statewide; and an estimated 14.5% of residents were living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Of those employed in 2010, an estimated 37.9% worked in the private sector, an estimated 60.4% worked in the public sector, and an estimated 1.7% were self-employed.

Barrow supported a diverse economy in 2010. By industry, most (27.1%) employed residents were estimated to work in public administration sectors; followed by education services, health care, and social assistance sectors (26.4%) and transportation, warehousing, and utilities sectors (9.0%). By occupation type, most (41.6%) employed residents were estimated to hold management or professional positions; followed by sales or offices positions (24.8%); service positions (20.9%); production, transportation, or material moving positions (7.1%); and natural resources, construction, or maintenance positions (5.6%). An estimated 4.1% of employed residents worked in agriculture, forestry, fishing, hunting, and mining sectors; although the proportion of employment derived from fisheries sectors cannot be determined. Between 2000 and 2010, there was a significant proportional decline in education services, health care, and social assistance sectors; while there were increases in public administration, professional, scientific, management, administrative, waste management, arts, entertainment, recreation, accommodations, and food service sectors. Information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Barrow (U.S. Census).

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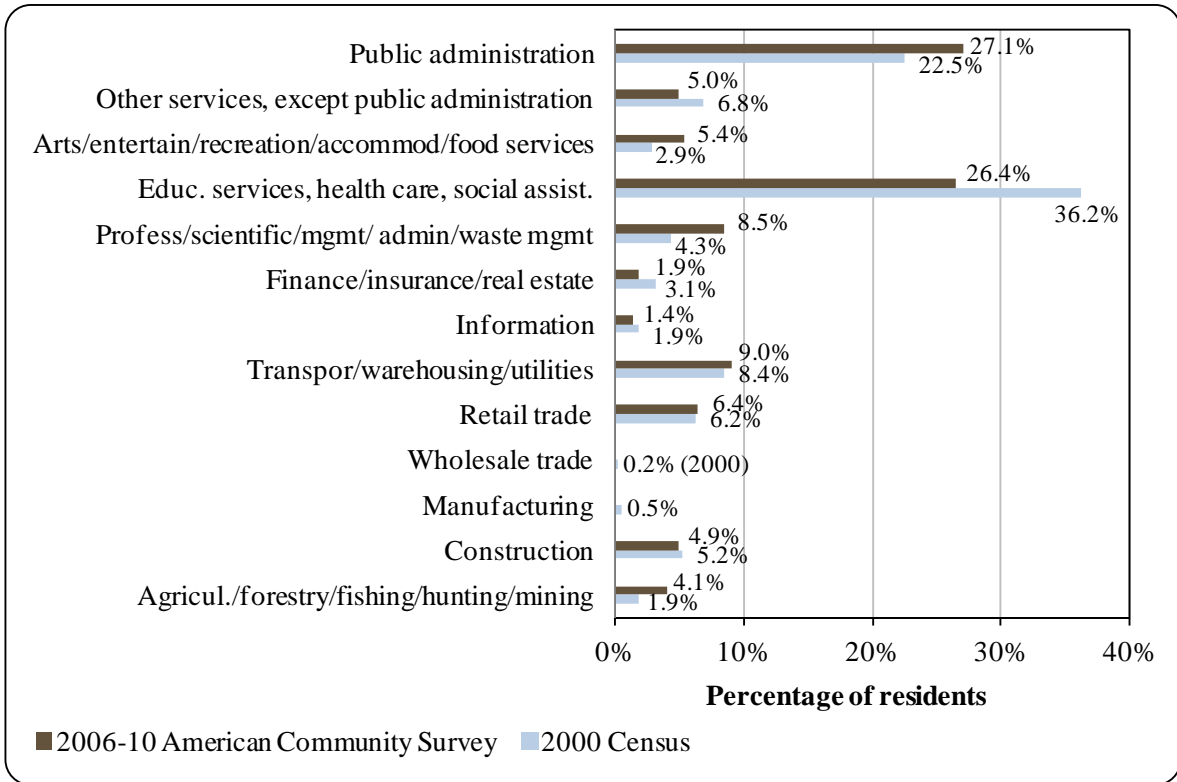
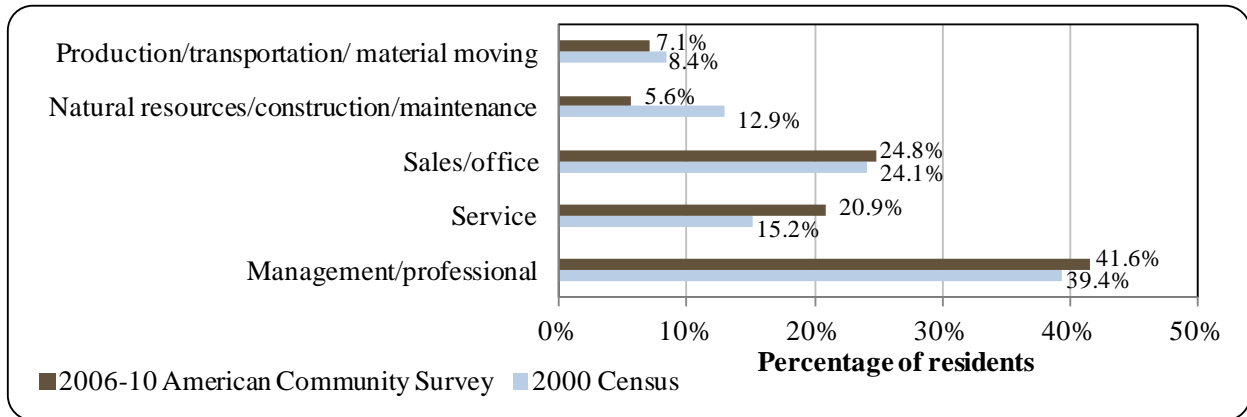


Figure 4. Local Employment by Occupation in 2000-2010, Barrow (U.S. Census).



According to the Alaska Local and Regional Information (ALARI) network compiled by the Alaska Department of Labor and Workforce Development (DOLWD),⁶⁶ most (54.1%) employed residents were estimated to work in local government sectors; followed by trade, transportation, and utilities sectors (9.0%); and professional and business service sectors (8.5%).

Governance

Barrow is a First-class city with a mayoral form of government. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal government (Native Village of Barrow), and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Ukpeagvik Inupiat Corporation). The regional ANCSA Native corporation representing Barrow is the Arctic Slope Regional Corporation. Other organizations located in the community include the Alaska Eskimo Whaling Commission, the Inupiat Community of Arctic Slope, and the North Slope Borough seat. The Alaska Department of Fish and Game (ADF&G) maintains an office in Barrow. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Fairbanks, 500 mi southeast. The closest National Marine Fisheries Service (NMFS) office is located in Anchorage 725 mi southwest.

In 2010, the borough administered an 18.5 mills property tax, and the city administered a 5% accommodations tax, \$1 tobacco tax, and 3% alcohol tax. Total municipal revenues increase by 76.3% between 2000 and 2010 (after adjusting for inflation⁶⁷), thanks in large part to increases in the city's general fund and outside grants awarded. In 2010, most locally generated revenue came from tobacco taxes, property taxes, sales taxes, property leases, Barrow sales tax distribution center, and gaming revenues. Outside revenue came chiefly from Community Revenue Sharing, grants, and payments in lieu of taxes. In that same year, the community was allocated \$301,812 in state allocated Community Revenue Sharing accounting for 8.0% of the municipal budget, compared to 1.7% from State Revenue Sharing in 2000. Between 2000 and 2010, Barrow received several state and federal fisheries-related grants including \$4.0 million for several boat ramp projects, \$1.25 million for several fish inventory, harvest, and health

⁶⁶ See footnote 63.

⁶⁷ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

monitoring projects, and \$109,000 for harbor upgrades. Information regarding community finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Barrow from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,666,477	\$0	\$28,217	\$1,250,000
2001	\$1,678,279	\$0	\$28,217	\$1,000,000
2002	\$1,643,953	\$0	\$26,500	\$209,000
2003	\$1,573,133	\$0	\$26,500	n/a
2004	\$1,381,242	\$0	-	\$956,620
2005	\$2,221,776	\$0	-	n/a
2006	\$1,521,623	\$0	-	n/a
2007	\$3,552,092	\$0	\$309,957	n/a
2008	\$4,835,833	\$0	\$265,968	n/a
2009	\$4,694,038	\$0	\$304,923	n/a
2010	\$3,799,695	\$0	\$302,812	\$2,000,000

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Regularly-scheduled jet services provide Barrow's only year-round access. The state-owned Wiley Post-Will Rogers Memorial Airport serves as the regional transportation center for the borough. The airport has a 6,500-ft long by 150-ft wide asphalt runway. Marine and land transportation provide seasonal access.⁶⁸ Roundtrip airfare between Barrow and Anchorage in June 2012 was \$566.⁶⁹

⁶⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁹ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

Facilities

Water is derived from a dam on Isatkoak Lagoon and is stored in a tank. Most residents have piped water. Funds have been requested to serve remaining houses and to construct a second water reservoir. The member-owned Barrow Utilities & Electric Cooperative operates the water and sewage treatment plants, generates and distributes electric power, and distributes piped natural gas for home heating. The North Slope Borough provides all other utilities. Refuse collection services are provided by the North Slope Borough. The Barrow Power Plant is fueled by natural gas. Businesses and services include several hotels, consulting and contracting services, internet services, community services, a church, and a restaurant.⁷⁰ Public safety services are provided by Borough policy and local state troopers. Fire and rescue services are provided by Borough volunteer fire department. Judicial services are provided by a local state magistrate. Additional public facilities include a youth center, community center, senior center, school gym, movie theater, museum, and one public and four school libraries.

In a survey conducted by the AFSC in 2011, community leaders reported that local infrastructure completed in the past 10 years includes sewage treatment facilities, and a new landfill. Infrastructure currently in progress or planned includes, harbor access roads, harbor dredging, broadband internet expansion, new dock space, community center/library expansion, and recreation center expansion. Currently there is no dock space available for permanent or temporary public moorage. Facilities are capable of handling regulated vessels including offshore rescue vessels, fuel barges, and container vessels. While there are no fisheries-related businesses or services in the community, a seafood processor is in the planning stages. Additional public services provided by the community include medical services, food bank, job placement services, public library, and a recreation center.

*Medical Services*⁷¹

There are both a hospital and a clinic in the community providing primary health care, acute care, and emergency care, and are Community Health Aid Program sites. Specialized care includes a substance abuse treatment center, and mental health services.

*Educational Opportunities*⁷²

There are four schools operated through the borough school district. Barrow High School offers 9th through 12th grade instruction, and had 218 students enrolled and 19 teachers as of 2011. Eben Hopson Middle School offers 6th through 8th grade instruction, and had 202 students enrolled and 16 teachers as of 2011. Fred Ipalook Elementary offers preschool through 5th grade instruction, and had 638 students enrolled and 34 teachers as of 2011. Kiita Learning Community offers 6th through 12th grade instruction, and had 53 students enrolled and 5 teachers as of 2011. Iisagvik College offers associate degrees and certificates in a range of vocational, health services, art, and business fields.

⁷⁰ City of Barrow. (n.d.). Retrieved December 30, 2011 from: <http://www.cityofbarrow.org/content/view/13/19/>.

⁷¹ See footnote 68.

⁷² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

History of fisheries participation in the Barrow area dates back to almost 2,000 years ago, with the early Birnirk and Thule traditions. By 1867, commercial whaling was taking place along the Barrow coast, until markets declined in 1915. The introduction of outside whaling fleets radically changed traditional subsistence practices with the introduction of repeater rifles, and subsistence harvests rapidly increased.⁷³ Today, participation is limited mostly to subsistence and recreational fisheries. Commercial fishing is extremely limited in both the Beaufort and Chukchi Seas as the current Arctic Fishery Management Plan (FMP) allows only several small fisheries occurring in state waters.⁷⁴ Barrow is located in the Arctic Management Area for federal management. In a survey conducted by the AFSC in 2011, community leaders reported while there is no commercial fishing within the community, subsistence fishing is practiced from June through September. In addition, the community participates in fisheries management through the support of research organizations including the Barrow Arctic Science Consortium (BASC) and the National Science Foundation (NSF). Other local advocacy organizations include the Barrow Whaling Captains Association and Alaska Eskimo Whaling Commission.

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Barrow does not have a registered processing plant. The closest seafood processing facility is located in Nome.

Fisheries-Related Revenue

Between 2000 and 2010, there were no reports of fisheries-related revenue being collected in either Barrow or the North Slope Borough (Table 3).

Commercial Fishing

Commercial fishing is prohibited in federally regulated waters within the Arctic Management Area. Only in state regulated waters are their limited commercial fisheries, none of which were prosecuted in 2010 by residents of Barrow.⁷⁵ In 2010, 5 residents held a total of 7 permits issued by the Commercial Fisheries Entry Commission (CFEC), compared to 7 residents holding 8 CFEC permits in 2000 (Table 4). Salmon permits made up 71% while "other" shellfish permits made up the remaining CFEC permits issued that year. In 2000, 100% of CFEC were for salmon. Of the CFEC permits issued in 2010, a total of 71% were actively fished, compared to 63% in 2000. This varied by species from 100% of shellfish permits to 60% of salmon permits

⁷³ City of Barrow. (1970). *Barrow Plan*. Retrieved December 30, 2011 from: <http://www.commerce.state.ak.us/dca/plans/Barrow-CP-1970.pdf>.

⁷⁴ North Pacific Fishery Management Council. (2009). *Arctic Fishery Management Plan*. Retrieved January 3, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>

⁷⁵ Commercial Fisheries Entry Commission. (2010). *Preliminary Permit Activity for 2010*. Retrieved January 3, 2012 from: <http://www.cfec.state.ak.us/gpbycen/2010/185392.htm>

being fished that year. In 2010, salmon CFEC permits were fished in the Yakutat, Cook Inlet, and Bristol Bay set-gillnet fisheries. “Other” shellfish CFEC permits were fished in the southeast sea cucumber fishery. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFPs) or License Limitation Program (LLP) permits (Table 4). In addition, no residents held quota share for halibut, sablefish, or crab between 2010 and when the programs began. In 2010, four residents held commercial crew licenses, compared to six in 2000. In addition, residents held majority ownership of three vessels that year, compared to two in 2000. No landings were reported in Barrow between 2000 and 2010 and landings made by residents of Barrow are considered confidential (Tables 5 through 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Barrow: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$1.67 M</i>	<i>\$1.68 M</i>	<i>\$1.64 M</i>	<i>\$1.57 M</i>	<i>\$1.38 M</i>	<i>\$2.22 M</i>	<i>\$1.52 M</i>	<i>\$3.55 M</i>	<i>\$4.84 M</i>	<i>\$4.69 M</i>	<i>\$3.80 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city brings in each year from all sources, including fisheries-related revenue streams. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Barrow: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	2
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	100%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	1
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Barrow: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	8	7	6	6	7	7	8	8	7	6	5
	Fished permits	5	3	1	2	4	4	4	4	3	5	3
	% of permits fished	63%	43%	17%	33%	57%	57%	50%	50%	43%	83%	60%
	Total permit holders	7	6	5	5	6	7	7	9	7	6	4
<i>Total CFEC Permits²</i>	<i>Permits</i>	8	7	6	6	7	7	8	8	7	6	7
	<i>Fished permits</i>	5	3	1	2	4	4	4	4	3	5	5
	<i>% of permits fished</i>	63%	43%	17%	33%	57%	57%	50%	50%	43%	83%	71%
	<i>Permit holders</i>	7	6	5	5	6	7	7	9	7	6	5

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Barrow: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Barrow ²	Total Net Pounds Landed In Barrow ^{2,5}	Total Ex-Vessel Value Of Landings In Barrow ^{2,5}
2000	6	0	0	2	0	0	0	\$0
2001	6	0	0	1	0	0	0	\$0
2002	4	0	0	2	0	0	0	\$0
2003	4	0	0	2	1	0	0	\$0
2004	6	0	0	2	0	0	0	\$0
2005	6	0	0	1	0	0	0	\$0
2006	7	0	0	3	0	0	0	\$0
2007	6	0	0	2	0	0	0	\$0
2008	6	0	0	2	0	0	0	\$0
2009	5	0	0	2	0	0	0	\$0
2010	4	0	0	3	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Barrow: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Barrow: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Barrow: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Barrow: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Barrow Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

One sport fish guide business was active in Barrow in 2000 and 2004-2005, although it is not clear whether it was the same business in each of those years. Sport fish guide licenses were held between 2000 and 2005, although numbers were low. In 2010, 108 sportfishing licenses were sold in the community and a total of 314 residents held sportfishing licenses, compared to 74 and 238 in 2000, respectively. The number of sportfishing licenses sold to residents peaked in 2010, and was at its lowest in 2008 (228).

The community is located in the North Slope-Brooks Range ADF&G Harvest Survey Area which includes all Alaskan waters, including drainages flowing into the Beaufort and Chukchi seas, north of the Brooks Range and east of Point Hope. Reports on total saltwater angler days fished between 2000 and 2010 are limited and trends are difficult to determine. In 2010, there were a total of 4,384 freshwater angler days fished, compared to 3,996 in 2000. In that year, non-Alaska residents accounted for 30.1% of freshwater angler days fished, compared to 13.1% in 2000. There is no kept/released charter information available for Barrow.

According to ADF&G Harvest Survey data, species targeted by private anglers in the area include all five species of Pacific salmon, rainbow trout, Dolly Varden char, whitefish, burbot, arctic grayling, Pacific halibut, rockfish, and razor clams. In a survey conducted by the AFSC in 2011, community leaders reported that recreational fishing within the community mainly targets Dolly Varden char, and pink and chum salmon. Sportfishing by residents is typically done by private vessel. Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Subsistence fishing is an important part of Barrow's identity, culture, and economy. In a survey conducted by the AFSC in 2011, community leaders reported that species harvested include bowhead whale, seal, walrus, beluga whale, salmon, whitefish, and arctic grayling. Rod and reel, gill net, and jigging are techniques used to harvest fish in the summer, while gill nets and jigs are used in the winter.⁷⁶ Whale hunts are a central part of Barrow's identity, and a focal point of cohesion and reciprocity within the community.⁷⁷ According to the ADF&G *Community Subsistence Information System*,⁷⁸ species which Barrow residents harvest or use include bearded seal, bowhead whale, ringed seal, spotted seal, Arctic char, Arctic cod, Bering cisco, broad whitefish, burbot, capelin, flounder, grayling, humpback whitefish, lake trout, least cisco, northern pike, rainbow smelt, round whitefish, saffron cod, and sculpin. Information on subsistence participation is limited, and data regarding the percentage of households participating in subsistence activities are unavailable.

Of the species listed by ADF&G in Table 13, sockeye salmon were harvested the most, followed by Chinook, coho, and chum salmon. In 2008, residents reported harvesting 742 salmon, compared to 231 in 2000. Salmon harvests peaked in 2005 when residents reported harvesting 780 fish. One Subsistence Halibut Registration Certificate (SHARC) between 2006 and 2010 although harvests were only reported in 2010. In that year, an estimated 800 lbs of halibut was harvested on 1 SHARC. Between 2000 and 2010, an estimated 43 beluga whales, 265 walrus, and 161 polar bears were harvested. Beluga whale harvests peaked in 2007 at an estimated 15 whales. Walrus harvests peaked in 2003 at an estimated 52 walrus. Polar bear harvests peaked in 2002 at an estimated 27 bears. Data on Steller sea lion, harbor seal, and spotted seal harvests are unavailable. Information regarding subsistence trend can be found in Tables 12 through 15.

⁷⁶ North Pacific Fishery Management Council. (2009). *Arctic Fishery Management Plan*. Retrieved January 3, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>

⁷⁷ Field Notes. (n.d.). *Barrow Whaling*. Retrieved from: <http://www.polarfield.com/blog/barrow-whaling/>.

⁷⁸ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 11. Sport Fishing Trends, Barrow: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Barrow ²
2000	1	2	238	74
2001	0	1	242	80
2002	0	1	240	58
2003	1	2	240	40
2004	1	2	240	46
2005	1	1	256	55
2006	0	0	243	50
2007	0	0	242	41
2008	0	0	228	49
2009	0	0	252	82
2010	0	0	314	108

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	n/a	743	523	3,473
2001	n/a	635	715	4,682
2002	11	547	819	3,393
2003	15	67	594	2,034
2004	n/a	96	1,131	2,084
2005	n/a	n/a	2,183	2,169
2006	18	341	495	2,609
2007	n/a	83	733	3,338
2008	140	n/a	990	4,469
2009	n/a	n/a	1,505	2,400
2010	n/a	n/a	1,319	3,065

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Barrow: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Barrow: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	15	12	10	n/a	n/a	n/a	221	n/a	n/a
2001	15	13	17	n/a	n/a	n/a	382	n/a	n/a
2002	13	7	5	n/a	n/a	n/a	343	n/a	n/a
2003	11	11	14	n/a	n/a	n/a	322	n/a	n/a
2004	21	16	34	5	n/a	n/a	340	n/a	n/a
2005	13	10	192	n/a	75	n/a	513	n/a	n/a
2006	9	6	3	n/a	5	n/a	123	n/a	n/a
2007	7	6	41	n/a	5	n/a	251	n/a	n/a
2008	11	10	154	n/a	10	n/a	578	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Barrow: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	1	n/a	n/a
2009	1	n/a	n/a
2010	1	1	800

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Barrow: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	1	n/a	17	12	n/a	n/a	n/a
2001	1	n/a	36	16	n/a	n/a	n/a
2002	1	n/a	42	27	n/a	n/a	n/a
2003	2	n/a	52	23	n/a	n/a	n/a
2004	1	n/a	48	8	n/a	n/a	n/a
2005	7	n/a	13	19	n/a	n/a	n/a
2006	1	n/a	8	19	n/a	n/a	n/a
2007	15	n/a	14	12	n/a	n/a	n/a
2008	10	n/a	24	11	n/a	n/a	n/a
2009	2	n/a	10	8	n/a	n/a	n/a
2010	2	n/a	1	6	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Kaktovik (kack-TOH-vick)

People and Place

Location

Kaktovik, also known as Qaaktugvik, lies on the north shore of Barter Island, between the Okpilak and Jago Rivers on the Beaufort Sea coast.⁷⁹ The community is 360 miles east of Barrow, 72 miles west of the U.S.-Canadian border, and 640 miles north of Anchorage. It lies on the coast of the Arctic National Wildlife Refuge (ANWR). Kaktovik is located in the North Slope Borough and the Barrow Recording District. The area encompasses 0.8 square miles of land and 0.2 square miles of water.⁸⁰

*Demographic Profile*⁸¹

In 2010, there were 239 residents in Kaktovik, ranking it as the 181st largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population increased by 6.7%. According to Alaska Department of Labor estimates, between 2000 and 2009, the average annual growth rate -0.81%, reflecting small increases and decreases and an overall stable population during the decade. In 2010, the majority of Kaktovik residents identified themselves as American Indian and Alaska Native (54.1%), while 33% identified themselves as White, and 12.8% as two or more races. In addition, 3.7% of residents identified themselves as Hispanic or Latino in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

From 1990 to 2010, the average household size in Kaktovik stayed quite stable, decreasing very slightly from 3.30 in 1990 to 3.29 in 2000 and 2010. In 2010, there were a total of 72 occupied housing units in Kaktovik, compared to 89 in 2000 and 67 in 1990. Of a total of 87 housing units surveyed for the 2010 U.S. Decennial Census, 47% were owner-occupied, 35.6% were renter-occupied, and 17.2% were vacant or used only seasonally. No residents were reported to live in group quarters in 1990 or 2000, while two were recorded to be living in group quarters in 2010.

⁷⁹ North Slope Borough Risk Management Division. 2003. *City of Kaktovik Local All Hazard Mitigation Plan*. Retrieved August 23, 2012 from

http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Kaktovik_Final_HMP.pdf.

⁸⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 1990 and 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

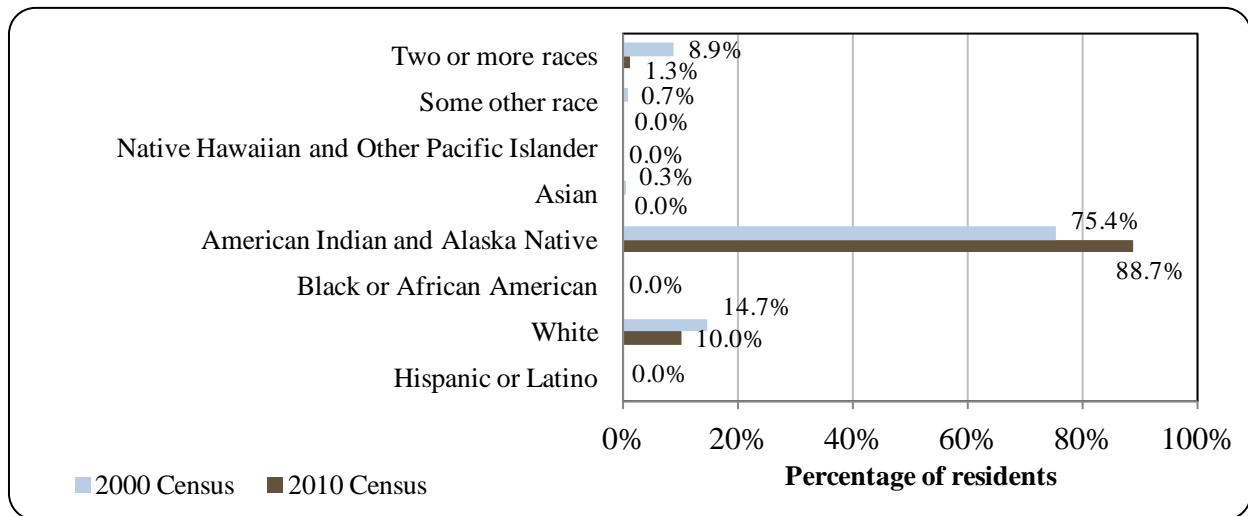
Table 1. Population in Kaktovik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	224	-
2000	293	-
2001	-	279
2002	-	306
2003	-	296
2004	-	285
2005	-	276
2006	-	288
2007	-	286
2008	-	274
2009	-	286
2010	239	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

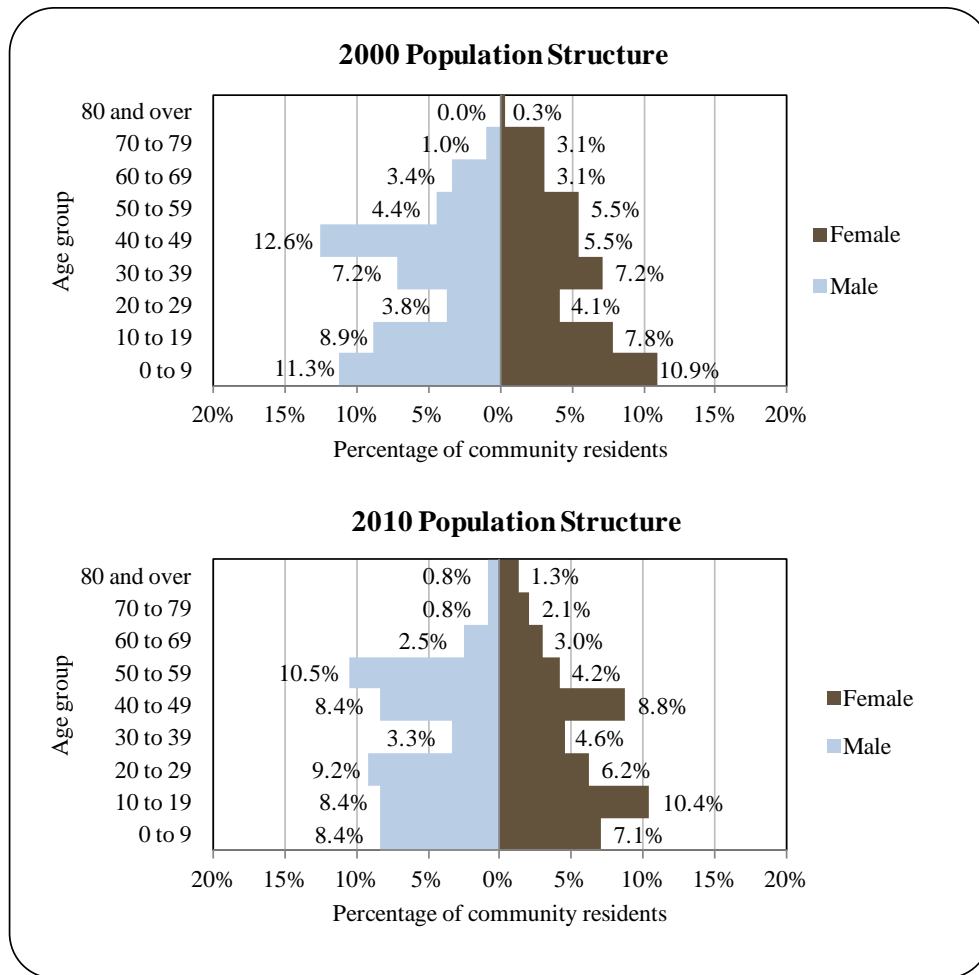
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kaktovik: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Kaktovik was 52.3% male and 47.7% female, very similar to the makeup of the state population as a whole (52% male, 48% female). The median age was estimated to be 30.5 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 10.5% of the Kaktovik population was age 60 or older. The overall population structure of Kaktovik in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Kaktovik Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁸² estimated that 58.4% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, 28.3% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 13.4% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 13.7% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 1% of residents held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall.

⁸² While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Until the late nineteenth century, the island on which Kaktovik is located – Barter Island – was a major trade center for the Inupiat. It was especially important as a bartering place for Inupiat from Alaska to trade with Inuit from Canada.⁸³ During the 1890s and early 1900s, Kaktovik was an important stop for commercial whalers, and remained a key trading point for residents of the region who came to rely on trade goods provided by the whalers such as food, utensils, firearms, and alcohol. By the 1900s, foodstuffs such as flour and molasses had become necessities for the local Inupiat people.⁸⁴

Whaling had been the first commercial industry to enter the Arctic, and when bowhead whaling came to an end around 1910, the Inupiat experienced the first in a series of boom and bust cycles. The next industry to enter the region was fur trapping, which brought a new source of income beginning in the 1920s. A permanent settlement was first established at Kaktovik in 1923, when Tom Gordon established a fur trading post at the site for the H.B. Liebes Company of San Francisco. However, the price of fox fur dropped in the late 1930s and the industry declined in importance. Another industry that was attempted during this time period involved reindeer herding within what is now the ANWR. Semi-domesticated reindeer⁸⁵ had been brought into western Alaska from Siberia in an effort to provide a stable economy for the local people and prevent food shortages. However, most of the herd starved during the severe winters of 1936 and 1937. Others were killed during that time to provide food and clothing for local residents who were also close to starvation during those years, according to a Bureau of Indian Affairs (BIA) survey conducted in the spring of 1936. In late 1937, 3,000 additional reindeer were transferred from Barrow to Barter Island in one more attempt to establish the herd, but the herd diverted course and returned back to Barrow, taking the remnants of the Barter Herd with it. Kaktovik residents were discouraged and killed the few remaining animals, bringing the era of reindeer herding in ANWR to a close.⁸⁶

Trading posts throughout the Arctic region began to shut down after the decline of the fur trade, and the last of the trading posts had closed by 1943. In the case of Barter Island, the trading post closed in 1938 following Tom Gordon's death. Without a local source of supplies, Kaktovik residents were forced to travel to Canada for trade, and some moved to Canada permanently. Some wage employment came to the region when the U.S. Coast and Geodetic Survey began mapping the Beaufort Sea coastline in 1945. Villagers were forced to relocate in the 1940s due to installation of a Distant Early Warning system and contribution of a U.S. Air force runway and hangar. They were forced to relocate again in 1951, when the area surrounding Kaktovik was made a military reserve. With another relocation in 1964, villagers finally received title to the village site, and government services began to create some stable jobs in the area.⁸⁷ The City of Kaktovik was incorporated in 1971. Today, the village maintains its Inupiat Eskimo traditions, in part due to its isolation. The possession of alcohol is banned in the village.⁸⁸

⁸³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁴ Arctic Circle, University of Connecticut. *The Inupiat Eskimo of Kaktovik, Alaska – Cultural History*. Retrieved May 14, 2012 from <http://arcticcircle.uconn.edu/ANWR/anwrculthistory.html>

⁸⁵ The semi-domesticated reindeer were the same species as the local caribou. (See footnote 84.)

⁸⁶ See footnote 84.

⁸⁷ Ibid.

⁸⁸ See footnote 83.

Natural Resources and Environment

The climate of Kaktovik is arctic. Temperatures range from -56 to 78 °F. Precipitation is light, averaging 5 inches, with snowfall averaging 20 inches.⁸⁹ Kaktovik is located at the northern boundary of the ANWR, a wilderness area that covers 19,286,722 acres and contains calving grounds for both the Central Arctic and Porcupine Caribou Herds.⁹⁰ The coastal marine region of ANWR is characterized by salt marshes, lagoons, barrier islands, beaches and river deltas that are important to polar bears, fish, and migratory birds.⁹¹ ANWR contains a diversity of ecosystems and animals and plant life, including polar, grizzly, and black bears, wolves, lynx, wolverine, red fox, moose, muskox, Dall sheep, beaver, and other small mammals.⁹² Residents of Kaktovik use areas in ANWR and adjacent waters for subsistence harvest. In particular, bowhead whale, caribou, Dall sheep, muskoxen, and various fish species are essential food sources for the Kaktovikmiut (people of Kaktovik).⁹³

ANWR is currently closed to oil and gas drilling activities under Section 1003 of the Alaska National Interest Lands Conservation Act (ANILCA).⁹⁴ Estimates of recoverable oil in ANWR range between 4.2 and 11.8 billion barrels.⁹⁵ In village meetings conducted to inform the North Slope Borough's 2004 Comprehensive Plan, Borough residents expressed concerns about current and cumulative effects of oil and gas development on subsistence resources and harvest activities. More specifically, their concerns centered on habitat fragmentation, disruption of migration routes and pathways for fish and wildlife, disturbance and deflection of wildlife from traditional harvest areas, restrictions or exclusions of Borough residents from areas traditionally used for harvest, cumulative contamination, and potential catastrophic events such as oil spills.⁹⁶

Offshore, initial oil and gas exploration in the outer continental shelf (OCS) of the Beaufort Sea began in 1981, and a total of 20 wells were drilled by 1989. The Bureau of Ocean Energy Management (formerly Minerals Management Service) held six sales in the Beaufort OCS between 1991 and 2007, resulting in the leasing of 1,742,987 acres. After reevaluation of their Beaufort Sea exploration plan due to a 2007 lawsuit, and numerous appeals by Native communities and environmental groups during the permitting process,⁹⁷ Shell began drilling exploratory wells in non-petroleum zones on October 3rd, 2012. Before Shell could receive final authorization to drill in petroleum zones, its spill response barge was required to be in place. The

⁸⁹ Ibid.

⁹⁰ U.S. Fish and Wildlife Service. 2011. *Arctic National Wildlife Refuge*. Retrieved March 2, 2012 from <http://arctic.fws.gov/>.

⁹¹ U.S. Fish and Wildlife Service. 2011. *A Sense of the Refuge – Arctic National Wildlife Refuge*. Retrieved August 23, 2012 from <http://arctic.fws.gov/pdf/senseofrefuge.pdf>.

⁹² See footnote 90.

⁹³ Arctic Slope Regional Corporation. 2012. *Communities: Kaktovik*. Retrieved August 23, 2012 from <http://www.asrc.com/Communities/Pages/Kaktovik.aspx>.

⁹⁴ Arctic Refuge Draft Comprehensive Conservation Plan. Retrieved December 30, 2011 from: http://arctic.fws.gov/pdf/ccp/06_Arctic_CH4_050911.pdf.

⁹⁵ U.S. Dept. of Energy. (2009). *Alaska North Slope Oil and Gas: A Promising Future or an Area in Decline?* Retrieved December 30, 2011 from: http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS_Potential.pdf.

⁹⁶ URS Corporation. October 2005. *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

⁹⁷ Bailey, Alan. October 2011. "One More Step for Shell: EPA Issues Shell's air permit for the Kulluk to drill in Beaufort Sea in 2012." *Petroleum News* 16(44). Retrieved March 1, 2012 from <http://www.petroleumnews.com/pntruncate/183741151.shtml>.

barge was damaged in September, but was expected to be in place in time for the 2013 drilling season.⁹⁸ The proposed 2012-2017 OCS oil and gas leasing program also schedules one additional lease sale in the Beaufort Sea planning area.⁹⁹

The impact of oil and gas development activities on marine subsistence resources has been the focus of considerable research. There is evidence that off-shore activities are disrupting migratory patterns of bowhead whales, causing difficulty for whalers from Kaktovik and other villages in the area that depend on harvest of these animals.¹⁰⁰ A 3-year study confirmed the reports of local elder and whaling captains that migrating bowhead whales deflect around seismic noise at a minimum distance of 20 kilometers (12 miles).¹⁰¹

Natural hazards that present a high risk to the community of Kaktovik coastal and river erosion, coastal storm surges, snow and avalanche, tsunami, and severe weather events. The community is also at low risk of wildland fire, earthquakes, and flooding.¹⁰² Storm surges cause almost annual flooding to the runway in Kaktovik. Storm surges, or coastal floods, occur when the sea is driven inland above the high-tide level onto land that is normally dry. Often, heavy surf conditions driven by high winds accompany a storm surge adding to the destructive force of the flooding waters. The conditions that cause coastal floods also can cause significant shoreline erosion as the floodwaters undercut roads and other structures. Storm surges have flooded the Barter Island Runway on multiple occasions, in some cases causing the airport to close for several days, blocking all transport of persons and supplies in and out of the community.¹⁰³ The community is also very vulnerable to power breakdowns associated with extreme weather events or other problems such as fuel supply. Outages during winter storms can result in significant damage and present a threat to public health and safety.¹⁰⁴

As of August, 2012, no contaminated sites were reported near Kaktovik by the Alaska Department of Environmental Conservation's Spill Prevention and Response program.¹⁰⁵ However, local communities are concerned about pollution from military and oil and gas exploration and production activities. Kaktovik and five other communities in the North Slope Borough have restoration advisory boards to work with the local community during cleanup of contaminated sites.¹⁰⁶

⁹⁸ Associated Press. October 3, 2012. "Shell Begins Beaufort Sea Drilling Off Alaska's North Coast." *Huffington Post*. Retrieved October 19, 2012 from http://www.huffingtonpost.com/2012/10/04/shell-beaufort-sea-drilling_n_1937715.html.

⁹⁹ U.S. Dept. of the Interior, Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

¹⁰⁰ See footnote 96.

¹⁰¹ Glenn Gray and Associates. June 2007. *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

¹⁰² North Slope Borough Risk Management Division. 2003. *City of Kaktovik Local All Hazard Mitigation Plan*. Retrieved August 23, 2012 from

http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Kaktovik_Final_HMP.pdf.

¹⁰³ ASGC Incorporated. August 2005. *North Slope Borough Comprehensive Transportation Plan*. Prepared for the North Slope Borough. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/information/comp_plan/TransportationPlan_Final.pdf.

¹⁰⁴ See footnote 96.

¹⁰⁵ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved August 22, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁰⁶ See footnote 101.

Current Economy¹⁰⁷

Because of Kaktovik's isolation from the rest of Alaska, economic opportunities are limited and there is high local unemployment. A majority of jobs are provided by the school district, the North Slope Borough, and the City of Kaktovik. In addition, part-time seasonal jobs provide some wage income, such as construction projects. The community relies heavily on subsistence harvest, with particular focus on caribou.¹⁰⁸ The economy of Kaktovik may drastically change in the years to come, as the community is at the epicenter of the oil drilling debate unfolding in ANWR.

Based on household surveys conducted for the 2006-2010 ACS,¹⁰⁹ in 2010, the per capita income in Kaktovik was estimated to be \$17,799 and the median household income was estimated to be \$46,458. This represents a decrease from the per capita and median household incomes reported in the year 2000 (\$22,031 and \$55,625, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,¹¹⁰ the income decrease is revealed to be even larger, falling from a real per capita income of \$28,970 and a real median household income of \$73,146 in 2000. In 2010, Kaktovik ranked 171st of 305 Alaskan communities with per capita income data that year, and 156th in median household income, out of 299 Alaskan communities with household income data.

However, Kaktovik's small population size may have prevented the ACS from accurately portraying economic conditions.¹¹¹ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Kaktovik in 2010 is \$17,192.^{112,113} This estimate is very close to the 2006-2010 ACS estimate, providing additional evidence for a decrease in per capita income between 2000 and 2010. Kaktovik was not recognized as a "distressed" community by the Denali Commission in 2011.¹¹⁴ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

¹⁰⁷ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 1990 and 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹¹¹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹¹² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

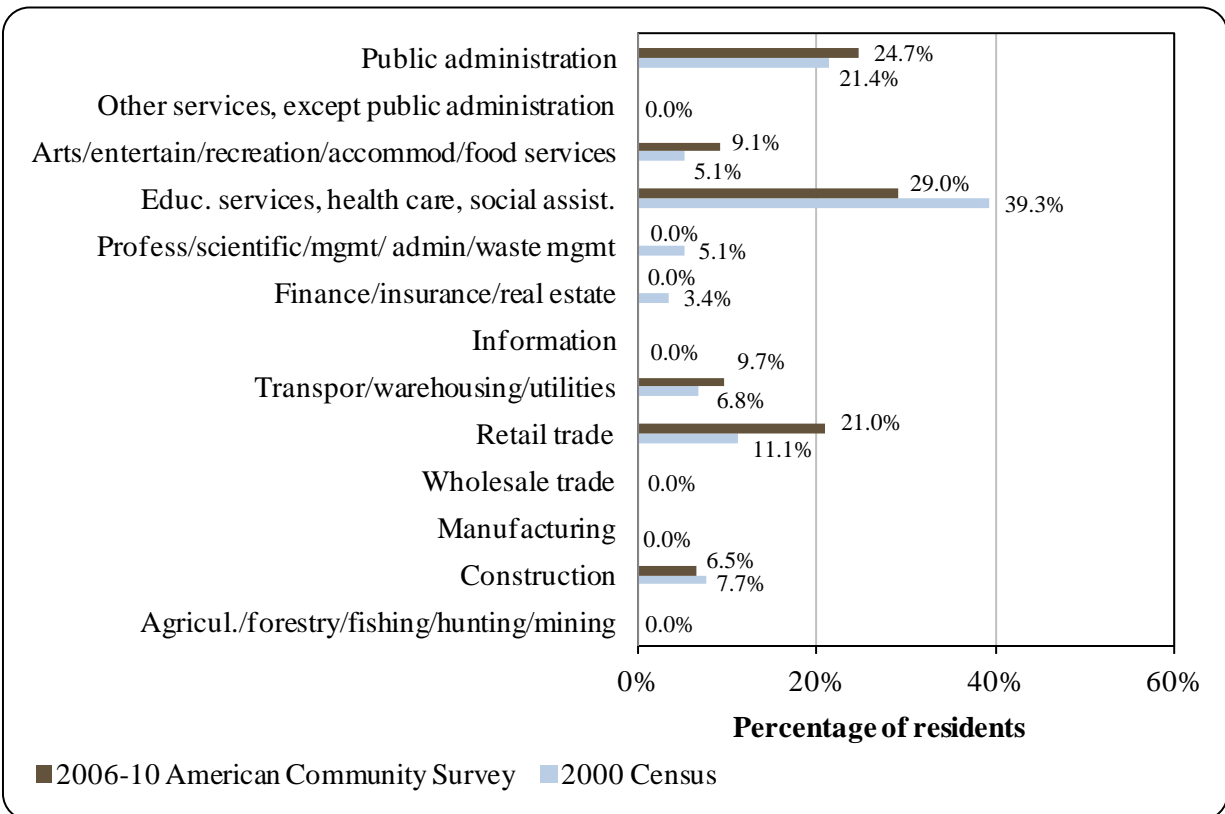
¹¹³ See footnote 109.

¹¹⁴ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Based on the 2006-2010 ACS, in 2010, a much smaller percentage of Kaktovik’s population (47.6%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). That same year, 13.3% of Kaktovik residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate in Kaktovik was estimated to be 15.5%, more than twice the state unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 9.7%, compared to a statewide unemployment rate estimate of 11.5%.¹¹⁵

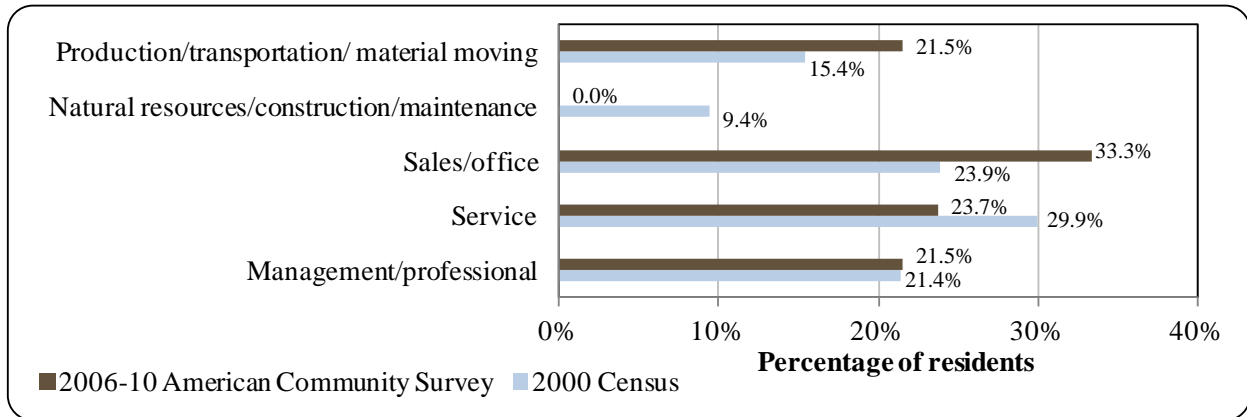
Also based on the 2006-2010 ACS, a majority of Kaktovik’s workforce was estimated to be employed in the public sector (72.6%), along with 27.4% in the private sector. Of the 224 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in educational services, health care, and social assistance (29%), public administration (24.7%), and retail trade (21%). The largest differences between 2000 and the latter part of the decade manifested as elimination of employment in the finance/insurance/real estate and professional/scientific/management industries. In addition, a comparable decrease was seen in the educational/health care/social assistance sector when compared to the increase in employment in the retail trade industry. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Kaktovik (U.S. Census).



¹¹⁵ See footnote 112.

Figure 4. Local Employment by Occupation in 2000-2010, Kaktovik (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 142 employed residents in Kaktovik in 2010, of which 67.6% were employed in local government, 15.5% in financial activities, 9.2% in professional and business services, 2.8% in trade, transportation, and utilities, 2.8% in leisure and hospitality, 0.7% in construction, 0.7% in natural resources and mining, and 0.7% in education and health services.¹¹⁶ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

Kaktovik was incorporated in 1971 as a 2nd Class City and is located in the North Slope Borough. The City has a “Strong Mayor” form of government, with a seven-person city council including the Mayor, a seven-person school board, and several municipal employees. The City does not administer any taxes, although an 18.5 mills property tax is collected by the Borough.¹¹⁷ Annual municipal revenue reported for Kaktovik stayed relatively stable from 2000 to 2010, varying from a low of \$802,154 in 2008 to a high of \$1,073,460 in 2010.

According to a 2006 Economic Review, up to 2005, the two largest sources of local revenue had been bingo operations and other local revenues including revenue from interest earnings, sale of assets, capital equipment and donations.¹¹⁸ No sales tax revenues were reported during the period, given that Kaktovik does not collect a sales tax. Locally-generated revenue sources in Kaktovik during the 2000-2010 period included building rentals, land leases, concessions and recreation sale items, gaming revenues including bingo and pull tab receipts, and revenues from local enterprises such as cable TV connection. Outside revenue sources included state grants and shared funds. from The community receive between \$31,000 and \$40,000 per year in State Revenue Sharing contributions from 2000 to 2003, as well as approximately \$110,000 per year in Community Revenue Sharing contributions in 2009 and

¹¹⁶ Ibid.

¹¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁸ Northern Economics Inc. April 2006. *North Slope Economy, 1965 to 2005, Final Draft*. Prepared for the Minerals Management Service, OCS Study MMS 2006-020. Retrieved February 29, 2012 from http://www.alaska.boemre.gov/reports/2006rpts/2006_020.pdf.

2010. In addition, Kaktovik received several fisheries-related grants between 2000 and 2010. The U.S. Army Corps of Engineers awarded the community \$250,000 in 2000 for harbor and breakwater construction, and the State of Alaska provided \$10,000 to \$20,000 per year from 2000 to 2008 for work on the Kaktovik boat dock. For more information on selected municipal, state, and federal revenue streams see Table 2.

Kaktovik was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the BIA, is Kaktovik Village. The Native village corporation is the Kaktovik Iñupiat Corporation, which manages 92,160 acres of land. All of the Village corporation’s land is within the boundaries of ANWR. The regional Native corporation to which Kaktovik belongs is the Artic Slope Regional Corporation.¹¹⁹

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kaktovik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ^{1,5}
2000	\$932,037	n/a	\$32,900	\$260,000
2001	\$792,674	n/a	\$31,322	\$10,000
2002	\$878,050	n/a	\$31,537	\$20,000
2003	\$779,785	n/a	\$40,000	\$20,000
2004	\$751,934	n/a	n/a	\$20,000
2005	\$613,529	n/a	n/a	\$20,000
2006	\$727,703	n/a	n/a	\$10,000
2007	\$828,711	n/a	n/a	\$10,000
2008	\$701,531 ⁶	n/a	n/a	n/a
2009	\$1,041,876	n/a	\$110,790	n/a
2010	\$720,534 ⁶	n/a	\$109,875	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁶ This number is drawn from the year’s budget rather than the certified financial statement.

Kaktovik is also a member of the Arctic Slope Native Association (ASNA), a tribal 501(c)(3) non-profit organization headquartered in Barrow. The ASNA is one of the 12 regional Alaska Native nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their

¹¹⁹ See footnote 117.

regions.¹²⁰ The ASNA works alongside the federal Indian Health Service to provide health and community services to Native communities in the region. In 1986, ASNA took over operation of the regional hospital in Barrow. In 2009, ASNA announced plans for a new hospital in Barrow with an expanded space and range of services, to be completed by 2013.^{121,122}

The closest office of the Alaska Department of Fish and Game (ADF&G) is located in Barrow. The closest office of the Alaska Department of Commerce, Community, and Economic Development is located in Kotzebue, and the closest office of the Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services are located in Fairbanks, although the Anchorage offices of these agencies may be equally accessible by air to people of this region. The closest office of the National Marine Fisheries Service (NMFS) is located in Anchorage.

Infrastructure

Connectivity and Transportation

Air travel provides the only year-round access to Kaktovik. In addition to serving as a crucial link for passengers and cargo, aviation is also the primary means by which Kaktovik residents receive mail. The Barter Island Airport is owned by the Air Force and operated by the North Slope Borough.¹²³ The price of a roundtrip ticket by plane from Barter Island to Anchorage in early June of 2012 was \$706.¹²⁴ The existing airport is affected by severe erosion problems. According to the 2005 Barter Island Airport Master Plan, plans were under consideration to relocate the airport to a higher site near the community landfill.¹²⁵

Kaktovik is currently isolated from regional road networks. As of 2005, 9.9 miles of gravel roadways were recorded in and around Kaktovik. At that time, the community Kaktovik requested several small road extensions and improvement projects, as well as a bridge that could provide year-round access to the mainland and provide a future possible link to the regional road network. Although there had been some discussion regarding the possibility of a road connection from Kaktovik to Prudhoe Bay or the Dalton Highway (approximately 110 miles), support for

¹²⁰ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹²¹ Samuel Simmonds Memorial Hospital website. (n.d.). *Home page*. Retrieved February 29, 2012 from <http://www.arcticslope.org/hospital.html>.

¹²² Guedel, G.. December 17, 2009. "Arctic Slope Native Association Launches Major Native Hospital Construction Project." *Native American Legal Update*. Retrieved February 29, 2012 from <http://www.nativelegalupdate.com/2009/12/articles/arctic-slope-native-association-launches-major-native-hospital-construction-project/>.

¹²³ ASGC Incorporated. August 2005. *North Slope Borough Comprehensive Transportation Plan*. Prepared for the North Slope Borough. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/information/comp_plan/TransportationPlan_Final.pdf.

¹²⁴ Airfare was calculated for early June 2012 using lowest fare from <http://www.travelocity.com> on November 22, 2011.

¹²⁵ HDL Engineering Consultants. February 2005. *Barter Island Airport Master Plan*. Prepared for the Federal Aviation Administration on behalf of the North Slope Borough. Retrieved August 22, 2012 from [http://owa.hdlalaska.com/_current_projects/Barter%20Island/Website%20Content/G2G%20Response%20to%20NVK%20\(Text\)%2011Feb05%20.pdf](http://owa.hdlalaska.com/_current_projects/Barter%20Island/Website%20Content/G2G%20Response%20to%20NVK%20(Text)%2011Feb05%20.pdf).

the road was mixed and the cost of construction was considered to be well beyond the North Slope Borough's ability to finance.¹²⁶

In addition to air and overland transportation, marine transportation provides seasonal access to Kaktovik. Barges deliver cargo to the community during the summer. Barges are beached in front of the community, and materials are unloaded there to be hauled to the village. As of 2005, no boat ramp was present in the community, and boats were stored on the beach of Kaktovik Lagoon. The community would like a boat ramp to allow safer ocean launching of boats, and also report that the current launching area is too shallow and should be relocated.¹²⁷

Facilities

The North Slope Borough provides all utilities in Kaktovik.^{128,129} Water in Kaktovik is derived from a surface source and is treated and stored in a 680,000-gallon water tank. Water is delivered by truck to holding tanks, and all homes have running water in the kitchen. A central watering point is available, and a washeteria is operated by the Borough. For the most part, homes still use water and sewage haul services. Some homes have septic tanks. Sewage is treated in the borough-managed sewage lagoon. Electricity is provided to Kaktovik by a diesel powerhouse operated by the Borough.¹³⁰ The nearest state trooper post is located in Barrow.¹³¹ The Borough provides refuse collection services and operates a landfill. Police services are provided by the Borough Department of Public Safety, and fire and rescue services are offered by the Kaktovik Volunteer Fire Department. Additional community facilities include a community hall, school gymnasium, and a library. The City of Kaktovik provides cable services, and telephone and internet service is also available locally.¹³²

Medical Services

The Kaktovik Clinic provides residents with basic medical services. The Clinic is a Community Health Aid Program site. Emergency Services have coastal and air access. Emergency service is provided by 911 Telephone Service volunteers and a health aide.¹³³ In addition to local health services, a regional hospital with a wider range of services is available in Barrow. A hospital renovation is expected to be completed by 2013, expanding space and services for people of the North Slope region.¹³⁴

¹²⁶ See footnote 123.

¹²⁷ Ibid.

¹²⁸ Northern Economics Inc. April 2006. *North Slope Economy, 1965 to 2005, Final Draft*. Prepared for the Minerals Management Service, OCS Study MMS 2006-020. Retrieved February 29, 2012 from http://www.alaska.boemre.gov/reports/2006rpts/2006_020.pdf.

¹²⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁰ Ibid.

¹³¹ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

¹³² See footnote 129.

¹³³ Ibid.

¹³⁴ Samuel Simmonds Memorial Hospital. (n.d.). *Home page*. Retrieved February 29, 2012 from <http://www.arcticslope.org/hospital.html>.

Educational Opportunities

There is one school in Kaktovik that offers preschool through 12th grade education. As of 2011, the Harold Kaveolook School had 59 students and 9 teachers.¹³⁵

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence hunting and fishing have defined the economy and culture of Inupiaq people for thousands of years, and it remains essential today.¹³⁶ Kaktovik lies on Barter Island, situated between the Okpilak and Jago Rivers along the coast of the Beaufort Sea. The Beaufort Sea is encompassed by the Arctic Management Area. Commercial fishing for all species is currently prohibited in federally regulated waters of the Arctic Management Area, “until sufficient information is available to support the sustainable management of a commercial fishery.”¹³⁷ From August to October, state waters near Kaktovik (from Anderson Point in Camden Bay to Humphrey Point, and north to the coastal zone boundary) are designated for subsistence use of bowhead whales.¹³⁸

Whaling has had a particularly strong presence and history in the North Slope region. Whales were historically and are currently a primary subsistence resource for the Inupiaq people. The commercial whaling industry entered area waters in the 1850s, and continued through the early decades of the 1900s, when the combination of overharvest and declining markets for baleen and whale oil brought the industry to an end.¹³⁹ In 1977, a NMFS study found that stocks of bowhead whale were in decline, and the International Whaling Commission (IWC) issued a ban on the Native subsistence whale hunt. However, Native whaling captains and elders reported that their estimates of population size were several times higher than the NMFS estimates. Follow-up study confirmed that the bowhead whale population was healthy and growing.¹⁴⁰

A system of co-management was established with the creation of the Alaska Eskimo Whaling Commission (AEWC) in 1977. The AEWC represents whalers from Kaktovik, Nuiqsut, Barrow, Wainwright, Point Hope, Kivalina, Little Diomedea, Wales, Savoonga, and Gambell. Other examples of co-management efforts in the North Slope region are the Eskimo Walrus Commission (formed in 1978), the Beluga Whale Committee (formed in 1988), and the Nanuuq Commission (formed in 1994 for polar bear management). In 1994, Section 119 of the reauthorization for the Marine Mammal Protection Act provided a legislative basis for these cooperative agreements with Alaska Native organizations.¹⁴¹

¹³⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹³⁶ Glenn Gray and Associates. June 2007. *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

¹³⁷ North Pacific Fishery Management Council. August 2009. *Arctic Fishery Management Plan*. Retrieved February 29, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

¹³⁸ See footnote 136.

¹³⁹ Iñupiat History and Culture website. (n.d.). *Historical Overview of the North Slope Iñupiat: Commercial Whaling and Trading*. Retrieved March 1, 2012 from <http://nsb-ihlc.com/>.

¹⁴⁰ URS Corporation. October 2005. *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

¹⁴¹ See footnote 136.

Kaktovik is located in the Arctic Management Area and thus is not located with a Federal Statistical and Reporting Area, a Pacific Halibut Fishery Regulatory Area, or a Sablefish Regulatory Area. Kaktovik is not eligible to participate in the Community Development Quota program or the Community Quota Entity program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Kaktovik does not have a registered processing plant. The closest seafood processing facility is located in Nome.

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue in Kaktovik (Table 3).

Commercial Fishing

Between 2000 and 2010, almost no Kaktovik residents were involved in commercial fishing activity. During two years of this period (2005 and 2010), one resident per year held a commercial crew license, but no Kaktovik residents were the primary owner of a fishing vessel, no fish buyers or shore-side processors were present, and no vessels were homeported in the community (Table 5). In addition, no residents of Kaktovik held permits in state or federal commercial fisheries (Table 4) or held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8), and no landings or ex-vessel revenue were generated in the community or by Kaktovik vessel owners (Tables 9 and 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kaktovik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>\$932,037</i>	<i>\$792,674</i>	<i>\$878,050</i>	<i>\$779,785</i>	<i>\$751,934</i>	<i>\$613,529</i>	<i>\$727,703</i>	<i>\$828,711</i>	<i>\$701,531</i> ⁶	<i>\$1,041,876</i>	<i>\$720,534</i> ⁶

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

⁶ This number is drawn from the year's budget rather than the certified financial statement.

Table 4. Permits and Permit Holders by Species, Kaktovik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Kaktovik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kaktovik: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kaktovik ²	Total Net Pounds Landed in Kaktovik ^{2,5}	Total Ex-Vessel Value of Landings in Kaktovik ^{2,5}
2000	0	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	1	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	1	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kaktovik: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kaktovik: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Individual Fishing Quota, Crab, Kaktovik: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kaktovik: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kaktovik Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses were located in Kaktovik, and no licensed sport fish guides resided there. Also during this period, no sportfishing licenses were sold in the community. However, a number of Kaktovik residents participated in sportfishing activities, although the number of Kaktovik residents that purchased sportfishing licenses (irrespective of point of sale) has been declining from a high of 36 in 2000 to a 14 by 2010. For more information on sportfishing trends for the community of Kaktovik between 2000 and 2010, see Table 11.

The Alaska Statewide Harvest Survey,¹⁴² conducted by ADF&G between 2000 and 2010, noted sport harvest of coho salmon and Dolly Varden by private anglers in Kaktovik. The survey also noted sport harvest of sockeye salmon in Prudhoe Bay to the west. Given the lack of charter activity in Kaktovik, no kept/release log book data were reported for fishing charters out of Kaktovik between 2000 and 2010.¹⁴³

Kaktovik is located within Alaska Sport Fishing Survey Area Z – North Slope-Brooks Range, which includes all Alaskan waters, including drainages flowing into the Beaufort and Chukchi seas, north of the Brooks Range and east of Point Hope. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, Alaska resident anglers consistently fished a greater number of days than non-Alaska resident anglers in both freshwater and saltwater, and freshwater sportfishing activity was significantly higher than in saltwater. On average between 2000 and 2010, Alaska resident anglers fished 3,065 fresh water days and 228 saltwater days, while non-Alaska resident anglers fished on average 1,001 freshwater and 17 saltwater days. This information about the sportfishing sector in and near Kaktovik is also displayed in Table 11.

Table 11. Sport Fishing Trends, Kaktovik: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kaktovik ²
2000	0	0	36	0
2001	0	0	19	0
2002	0	0	24	0
2003	0	0	21	0
2004	0	0	14	0
2005	0	0	16	0
2006	0	0	15	0
2007	0	0	13	0
2008	0	0	19	0
2009	0	0	14	0
2010	0	0	14	0

¹⁴² Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁴³ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11, cont'd. Sport Fishing Trends, Kaktovik: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	0	743	523	3,473
2001	0	635	715	4,682
2002	11	547	819	3,393
2003	15	67	594	2,034
2004	0	96	1,131	2,084
2005	0	0	2,183	2,169
2006	18	341	495	2,609
2007	0	83	733	3,338
2008	140	0	990	4,469
2009	0	0	1,505	2,400
2010	0	0	1,319	3,065

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest activities were historically the basis of life in the Kaktovik area, and continue to be fundamental to the economy and way of life today. It is important to emphasize that subsistence is much more than just a ‘way of life’:

“To many people on the North Slope, subsistence *is* their life. Subsistence defines the essence of who they are, and it provides a connection between their history, culture and spirit. An essential component of Iñupiaq values is the sharing of subsistence resources among, families, friends, elders, and those in need.”¹⁴⁴

Today, Kaktovik’s primary subsistence resources are caribou, Dall sheep, bowhead whale, fish and waterfowl, bearded and ringed seal, polar bear, walrus and furbearers. Trading relationships exist between communities, and Kaktovik is recognized for its contribution of Dall sheep.¹⁴⁵

The community of Kaktovik is located within the boundaries of ANWR. Residents use lands within ANWR, as well as the adjacent waters of the Beaufort Sea, for subsistence and other

¹⁴⁴ Glenn Gray and Associates. June 2007. *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

¹⁴⁵ Ibid.

traditional uses.¹⁴⁶ Residents of Kaktovik have traditionally used an area covering a minimum of 11,406 square miles, from the U.S.-Canadian border in the east to within 20 miles of the Colville River to the west, and from 25 miles out into the Beaufort Sea to about 85 miles inland to the continental divide of the Brooks Range.¹⁴⁷ Kaktovik residents hunt bowhead whales near the village each fall mainly during September and October. The Hula Hula River is a major spawning and over-wintering area for Arctic char, and a smaller over-wintering area is located about 19 miles inland from the river mouth. This smaller drainage is heavily used by residents of Kaktovik. Findings from a 1994 to 1995 subsistence survey, reported by the North Slope Borough in 2000, found that the majority of edible pounds harvested by Kaktovik residents were marine mammals (61%), followed by terrestrial mammals (26%), fish (11%), and birds (2%). A 2003 survey by the North Slope Borough found that almost three quarters of Iñupiat families in Kaktovik received more than 50% of their food from subsistence resources, and a majority of households shared subsistence resources.¹⁴⁸

Between 2000 and 2010, ADF&G did not report any information about the percentage of Kaktovik households participating in marine resource subsistence or regarding per capita subsistence harvest (Table 12). An earlier ADF&G subsistence survey provides species-level household participation information regarding marine mammals and non-salmon fish in 1992. That year, 28% of Kaktovik households reported harvesting bearded seal, 26% reported harvesting ringed seal, 6% reported harvest of bowhead whale, and 4% reported harvest of spotted seal. Species of non-salmon fish harvested by the greatest percentage of Kaktovik households in 1992 included Arctic char (79% of households reported involvement in harvesting), Bering cisco (62%), cod (32%), lake trout (17%), Arctic grayling (15%), and least cisco (9%). Many of these resources were shared with households that did not participate in harvest activities. A particularly important example of subsistence resource sharing is the bowhead whale. While only 6% of households in Kaktovik reported involvement in the harvest of bowhead whale in 1993, 87% of households reported using the resource that year.¹⁴⁹

Some information was reported during the 2000-2010 period regarding subsistence salmon permits. From 2000 to 2008, for those years in which data are available, the number of subsistence salmon permits issued to Kaktovik households varied between one and three per year. A majority of the permits issued were reported as returned. Sockeye salmon made up most of the catch reported, along with several Chinook salmon in some years. This information is presented in Table 13. No information was reported regarding subsistence harvest of marine invertebrates or non-salmon fish (Table 13), and no information was reported regarding subsistence halibut harvest by Kaktovik residents between 2003 and 2010 (Table 14).

Between 2000 and 2010, some information was reported regarding marine mammal harvest in Kaktovik. According to data reported by the U.S. Fish and Wildlife Service (FWS), polar bears were harvested in seven years during the 2000-2010 period, with a maximum of five harvested per year in 2002, 2003, and 2004. Harvest of one walrus was also reported by the FWS in 2001. In addition, NMFS reported a small number of beluga whales harvested in Kaktovik in 5

¹⁴⁶ URS Corporation. October 2005. *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

¹⁴⁷ Pederson, S., M. Coffing, and J. Thompson. 1985. *Subsistence Land Use and Place Name Maps for Kaktovik, Alaska*. Retrieved August 23, 2012 from <http://www.arlis.org/docs/vol11/A/15143691.pdf>.

¹⁴⁸ See footnotes 144 and 146.

¹⁴⁹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

years during the period. No information was reported by management agencies regarding sea otters,¹⁵⁰ harbor seal, spotted seal, or Steller sea lion. This information is presented in Table 15.

Additional Information¹⁵¹

According to Jenness (1914), Barter Island received its name from non-Native whaling captains who landed there to trade with the local Inupiat, although the site was never a rendezvous for the local population. The Native name for Kaktovik (Qaqtovik) means “the place where the sein (qaqto) is used”. This name relates to a story told about a boy belonging to one of the two families who lived on the island. The boy turned up missing, and after searching in vain for his son, the boy’s father discovered the arm of his son in his fish net as he pulled it from a crack in the ice to check it. He knew that his son had been killed and his body thrown into the sea through a hole in the ice.

Table 12. Subsistence Participation by Household and Species, Kaktovik: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	57%	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁵⁰ The range of the northern sea otter does not extend into the Arctic region. Source: ADF&G *Wildlife Notebook Series*. “Sea Otter Fact Sheet.” Retrieved March 1, 2012 from http://www.adfg.alaska.gov/static/education/wns/sea_otter.pdf.

¹⁵¹ See footnote 147.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kaktovik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	3	3	1	n/a	n/a	n/a	6	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	1	1	1	n/a	n/a	n/a	24	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	2	1	n/a	n/a	n/a	n/a	28	n/a	n/a
2005	1	1	n/a	n/a	n/a	n/a	40	n/a	n/a
2006	1	1	1	n/a	n/a	n/a	39	n/a	n/a
2007	2	2	2	n/a	n/a	n/a	37	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kaktovik: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kaktovik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	1	1	n/a	n/a	n/a
2002	n/a	n/a	n/a	5	n/a	n/a	n/a
2003	3	n/a	n/a	5	n/a	n/a	n/a
2004	1	n/a	n/a	5	n/a	n/a	n/a
2005	n/a	n/a	n/a	1	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	n/a	n/a	3	n/a	n/a	n/a
2009	n/a	n/a	n/a	3	n/a	n/a	n/a
2010	5	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kiana (*kai-ANN-uh*)



People and Place

Location

Kiana is located on a high bluff overlooking the confluence of the Kobuk and Squirrel Rivers. The community is 57 air miles east of Kotzebue, and 500 miles northwest of Anchorage. Kiana is located in the Northwest Arctic Borough and the Kotzebue Recording District. The area encompasses 0.2 square miles of land and zero square miles of water.^{152,153}

*Demographic Profile*¹⁵⁴

In 2010, there were 361 residents in Kiana, making it the 146th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population of Kiana remained relatively stable, falling from 385 to 361 (a decrease of 6.2%). According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased to just over 400 in the early part of the decade, before falling to just under the 1990 population level starting in 1998 (Table 1).

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Kiana's population has a yearly peak during the spring, and that population fluctuations are not at all driven by employment in fishing sectors. Community leaders estimated the seasonal workforce and transient population to be roughly 30 people.

In 2010, the majority of Kiana residents identified themselves as American Indian and Alaska Native (90.3%), along with 6.6% that identified as White and 2.8% identifying with two or more races (Figure 1). Less than 1% of the population identified as Black or African American or as Hispanic or Latino. None of Kiana's residents identified as Native Hawaiian and Other Pacific Islander, Asian, or as some other race in 2010. Between 2000 and 2010, the percentage of the population identifying as American Indian and Alaska Native decreased slightly, and the percentage of the population identifying with two or more races increased by a similar margin.

¹⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵³ Magdanz, J., D. Koster, L. Naves, and P. Fox. 2011. *Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006*. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

¹⁵⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 1990 and 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

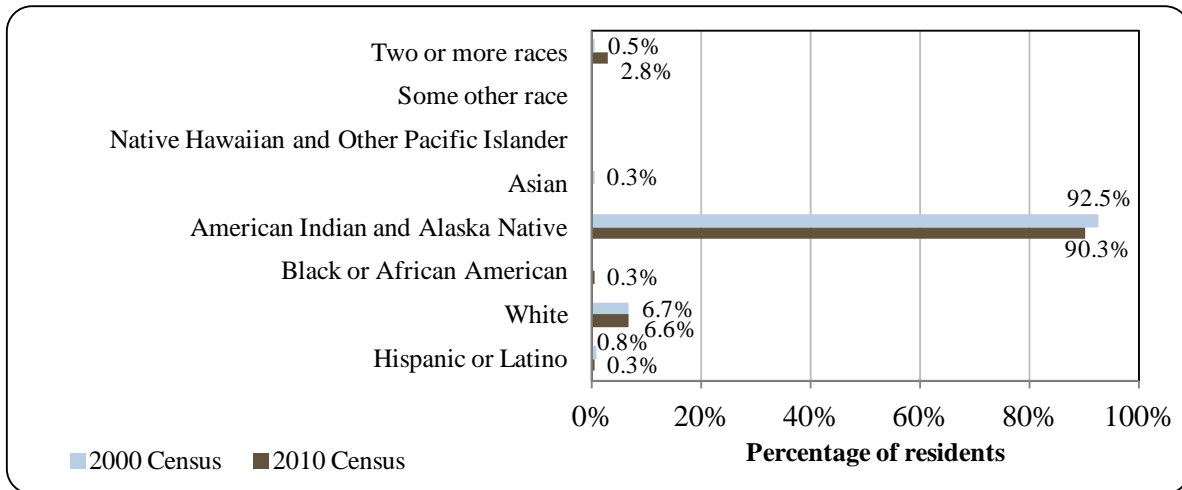
Table 1. Population in Kiana from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	385	-
2000	388	-
2001	-	404
2002	-	400
2003	-	408
2004	-	396
2005	-	381
2006	-	399
2007	-	390
2008	-	383
2009	-	374
2010	361	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kiana: 2000-2010 (U.S. Census).



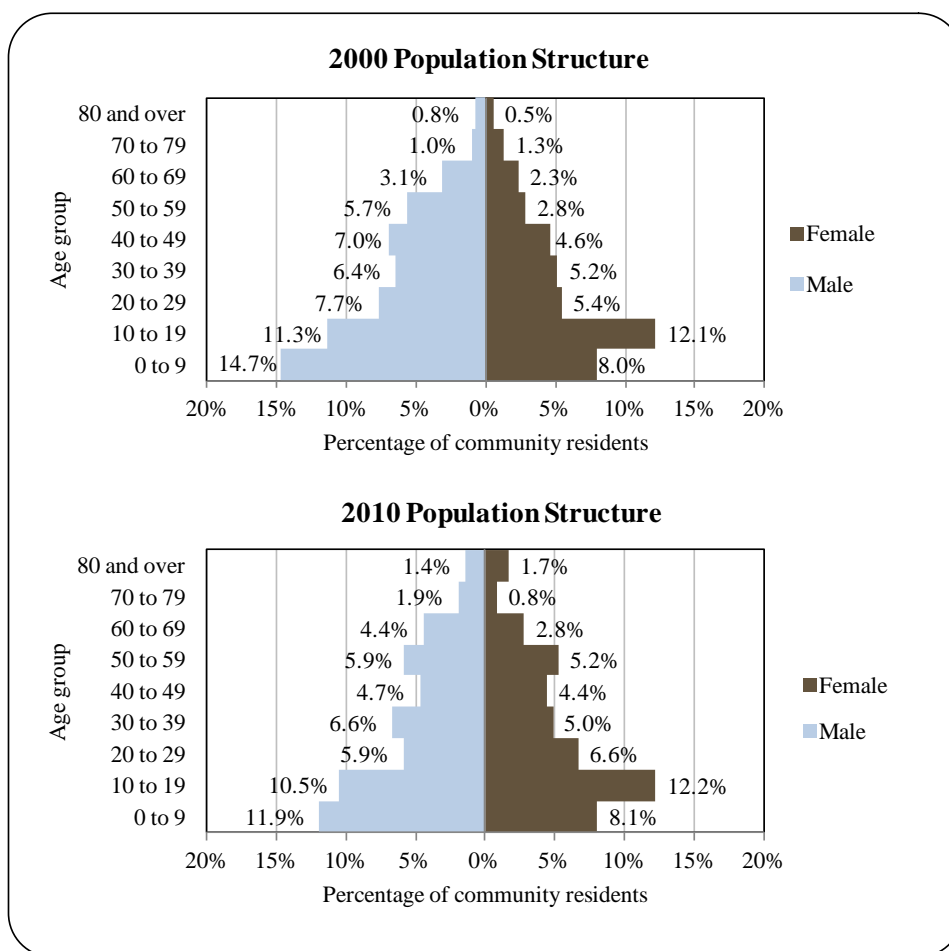
The average household size in Kiana decreased over time, from 4.2 persons per household in 1990 to 4 in 2000, and 3.57 persons per household in 2010. The decreasing number of individuals per household may be linked to an increase in the total number of occupied households over the same period, rising from 91 occupied housing units in 1990 to 97 in 2000, and 101 by 2010. The 2006 Kiana Community Comprehensive Development Plan reported that significant population increases in Kiana since the 1970s resulted in inadequate housing. The Northwest Inupiaq Housing Authority is the primary organization that has worked to construct

additional housing.¹⁵⁵ Of the 142 housing units surveyed for the 2010 Decennial Census, 39.2% were owner-occupied, 31.5% were renter-occupied, and 29.4% were vacant. Between 1990 and 2010, no Kiana residents were reported to be living in group quarters.

In 2010, the gender makeup of Kiana's population was 53.2% male and 46.8% female, slightly more weighted toward males than the gender distribution statewide (52% male, 48% female). That year, the median age in Kiana was estimated to be 26.9 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska of 33.8 years. Compared with 2000, the population structure in 2010 was slightly more evenly dispersed among age groups. For example, in 2000, 46.1% of residents were under the age of 20, compared to 42.7% in 2010, and 9% were over the age of 59 in 2000, compared to 13% in 2010. Age distribution by gender cohort was also slightly more even in 2010 than in 2000. In 2010, the greatest absolute gender difference occurred within the 0 to 9 age range (11.9% male, 8.1% female), followed by the 10 to 19 (10.5% male, 12.2% female) and 30 to 39 (6.6% male, 5.0% female) ranges. The overall population structure of Kiana in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Kiana Based on the 2000 and 2010 U.S. Decennial Census.

¹⁵⁵ Northwest Arctic Borough Planning Department. 2006. *Kiana Community Comprehensive Development Plan 2006-2016*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/kianaplan.pdf>.



In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)¹⁵⁶ estimated that 79.4% of Kiana residents aged 25 and over held a high school diploma or higher degree in 2010, significantly less than the estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 12.4% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 8.2% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 19.4% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 1.8% of resident held a Bachelor’s degree, compared to an estimated 17.4% of Alaskan residents overall; and 4.1% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

¹⁵⁶ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Kiana is a traditional Inupiat Eskimo village practicing a subsistence lifestyle. The name Kiana means “a place where three rivers meet.”¹⁵⁷ The Kobuk River was one of the last areas of Alaska explored by Westerners, with the earliest expeditions in the 1880s. In the 1800s, the traditional Inupiat society in the Kiana area was the Akunigmiut, meaning “the people in between two other things”. The ‘other things’ were the nearby Inupiat societies of Kuunmiut of the Kobuk delta and the Kuuvaum Kanjaniigmiut of the upper Kobuk River. Traditional Akugigmiut winter villages were all located upstream of the modern village of Kiana near productive subsistence areas by the Salmon and Hunt Rivers. Archaeological evidence from the eastern boundary of Akugigmiut territory suggests that the area has been inhabited for 8,500 years, with continuous Eskimo inhabitation for the past 4,000 years.¹⁵⁸ The people of the Kobuk River are also known as Kowagmiut, or ‘big river people’. Since the late 1800s, Kiana has been a central village of the Kowagmiut people.^{159,160}

With the Nome gold rush of 1898, hundreds of prospectors entered the Kobuk River. No gold was found during this first rush, and most of the prospectors left the following year. However, a small number of miners stayed and a gold deposit was later discovered in 1909 near Kiana at Klery Creek. A boom in development took place in Kiana following this discovery, including construction of a post office, hotel, saloon, jail, and restaurant. During this period, Inupiat from surrounding villages began to abandon old winter settlements and consolidate in Kiana.¹⁶¹ At its height, the Klery Creek gold mine supported as many as 200 miners, and by 1931, more than \$600,000 in gold had been removed from Klery Creek and five other creeks in the area.¹⁶² A post office was established in 1915, and the City was incorporated in 1964. Prior to the formation of the Northwest Arctic Borough in 1976, a Bureau of Indian Affairs (BIA) high school provided education for students from surrounding villages, including Noatak, Shungnak, and Ambler, who traveled to Kiana and boarded with local residents.¹⁶³

Today, the way of life in Kiana continues to revolve around subsistence. Sale of alcohol in Kiana is limited the city-owned store.¹⁶⁴

Natural Resources and Environment

Kiana is located in a transitional climate zone, influenced by both maritime and Arctic climates. Temperatures average -10 to 15 °F during winter and 40 to 60 °F during summer, and temperature extremes have been recorded from -54 to 87 °F. Snowfall averages 60 inches per year, along with 16 inches of total precipitation. The Kobuk River is ice-free from the end of

¹⁵⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁸ Magdanz, James, David Koster, Liliana Naves, and Patricia Fox. 2011. *Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006*. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

¹⁵⁹ Hodge, P. W., (ed.). 1907. *Handbook of American Indians North of Mexico, Part I*. Smithsonian Institution, Bureau of American Ethnology, Bulletin 30. Washington Government Printing Office.

¹⁶⁰ See footnote 157.

¹⁶¹ See footnote 158.

¹⁶² Reed, I. 1932. *Report on the Placer Deposits of the Squirrel River Gold Field*. Territory of Alaska, Department of Mines.

¹⁶³ See footnote 157.

¹⁶⁴ Ibid.

May to early October.¹⁶⁵ The Kobuk River is located at the northern boundary of the boreal forest, and much of the landscape is characterized by open woodlands and thick tundra.¹⁶⁶

In 1980, much of the traditional area of the Iñupiaq was protected as national parks, preserves, monuments, and wildlife areas under the Alaska National Interest Lands Conservation Act (ANILCA).¹⁶⁷ One of the goals of the legislation was to protect the viability of subsistence resources.¹⁶⁸ Kiana is located in close proximity to several of these areas, including Kobuk Valley National Park and Wilderness, Noatak National Preserve, and the Selawik National Wildlife Refuge (NWR).

Kobuk Valley National Park is 1.7 million acres stretching from the Baird Mountains in the north to the Kobuk Sand Dunes of the Kobuk River in the south.¹⁶⁹ The Noatak National Preserve is made up of 6.5 million acres. The National Preserve is surrounded by the Baird and DeLong Mountains of the Brooks Range.¹⁷⁰ The 2.15 million acre Selawik NWR, managed by the U.S. Fish and Wildlife Service, is situated east of Kotzebue Sound. Refuge lands include 240,000 acres of designated Wilderness Area. The approximately 21,000 lakes on NWR lowlands create a very large Arctic tundra lake complex that is comparable in scale and ecological significance to any found on Alaska's other NWR lands, providing important habitat for migratory waterfowl.¹⁷¹

Also under ANILCA, 330 miles of the Noatak River, 70 miles of the Salmon River, and 160 miles of the Selawik River were designated as a National Wild and Scenic Rivers.^{172,173} Historically, these rivers served as important travel corridors for local residents to access subsistence harvest areas, and they remain important travel routes for both humans wildlife today.¹⁷⁴ The Western Arctic Caribou herd – the largest caribou herd in Alaska at about 490,000 individuals – migrates between the coastal plain and the tundra of these protected areas on its way to and from calving grounds. A large variety of animals and plants are found in the region. Mammals include brown bear, black bear, wolves, lynx, Dall's sheep, moose, red fox, wolverine, and numerous other furbearers.¹⁷⁵

Gold mining began in the Kiana area in the early 1900s, and limited gold development interest is still present in the region.¹⁷⁶ Today, mining in Northwest Alaska is dominated by Red Dog Mine, the largest producer of zinc in Alaska. In 2010, the mine accounted for almost half of Alaska's mineral production value, making up 49% of the total value of mining operations in

¹⁶⁵ Ibid.

¹⁶⁶ National Park Service. 2012. *Kobuk Valley National Park*. Retrieved September 13, 2012 from <http://www.nps.gov/kova/>.

¹⁶⁷ Alaska National Interest Lands Conservation Act (ANILCA). December 2, 1980. Public Law 96-487, 96th Congress. Retrieved February 6, 2012 from <http://alaska.fws.gov/asm/nilca/toc.html>.

¹⁶⁸ See footnote 166.

¹⁶⁹ Ibid.

¹⁷⁰ National Park Service. 2011. *Noatak National Preserve*. Retrieved February 6, 2012 from <http://www.nps.gov/noat/>.

¹⁷¹ U.S. Fish and Wildlife Service website. *Selawik National Wildlife Refuge*. Retrieved February 15, 2012 from <http://selawik.fws.gov/>.

¹⁷² National Wild and Scenic Rivers System. (n.d.) *Alaska Rivers*. Retrieved September 13, 2012 from <http://www.rivers.gov/rivers/alaska.php>.

¹⁷³ See footnote 167.

¹⁷⁴ Ibid.

¹⁷⁵ See footnotes 166 and 170.

¹⁷⁶ Magdanz, James, David Koster, Liliana Naves, and Patricia Fox. 2011. *Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006*. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

Alaska that year. The mine is 100% owned by Teck Resources Ltd., a Canadian mining company, under a 1982 agreement signed with the regional Native corporation, Northwest Alaska Native Association (NANA) Regional Corporation, Inc., which owns the land.¹⁷⁷ The agreement specifies that the mine must 1) protect subsistence and the Inupiaq way of life, 2) create lasting jobs for NANA shareholders, 3) provide opportunities for NANA's youth, and 4) act as a catalyst for regional economic benefits.¹⁷⁸ In addition, jade is mined at the Jade Mountain Mine in the Kiana mining district.^{179,180}

With regard to natural hazards, Kiana is particularly susceptible to risks of erosion, flooding, wildfire, and severe weather, including cold temperatures and high winds.¹⁸¹ Warming temperatures due to climate change have exacerbated some of these risks, leading to increased erosion rates of riverbanks and thawing permafrost along rivers, under lakes, and across the tundra. Climate changes have also led to shifts in species distributions, affecting harvest of some traditional subsistence resources such as caribou.¹⁸²

According to the Alaska Department of Environmental Conservation, no active environmental cleanup sites were located near Kiana as of August 2012.¹⁸³

Current Economy¹⁸⁴

In the 2011 AFSC survey, community leaders indicated that the Kiana economy depends heavily on subsistence fishing and sport hunting and fishing. Some of the most important subsistence resources include chum salmon, freshwater fish, moose, caribou, waterfowl, and berries. In addition to subsistence harvest activities, local residents supplement their income with cash employment. Some of the top year-round employers in Kiana include the school, City, the three local general stores, and the regional Native association, the Maniilaq Association. Seasonal employment is also available on river barges, firefighting for the Bureau of Land Management.¹⁸⁵ Some mining also provides employment in the area, including jade produced from Jade Mountain Mine in the Kiana mining district,¹⁸⁶ and zinc produced at Red Dog Mine.¹⁸⁷ Between 2000 and 2010, a small number of Kiana residents were also involved in the Kotzebue salmon gillnet fishery, although no permits were actively fished during this period (see *Commercial Fishing* section). In addition, there is local interest in development of a freshwater

¹⁷⁷ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

¹⁷⁸ NANA Regional Corporation. 2010. *Red Dog Mine*. Retrieved February 6, 2012 from <http://www.nana.com/regional/resources/red-dog-mine/>.

¹⁷⁹ Mindat.org. 2011. *Jade Mountain Mine*. Retrieved September 13, 2012 from <http://www.mindat.org/loc-198197.html>.

¹⁸⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸¹ Rural Alaska Mitigation Planning. 2009. *Northwest Arctic Borough Multi-Jurisdictional All-Hazards Mitigation Plan*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/FinalPlan.pdf>.

¹⁸² ANTHC Center for Climate and Health. 2011. *Climate Change in Kiana, Alaska: Strategies for Community Health*. Retrieved September 14, 2012 from http://www.tribesandclimatechange.org/docs/tribes_412.pdf.

¹⁸³ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁸⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁸⁵ See footnote 180.

¹⁸⁶ See footnote 179.

¹⁸⁷ See footnote 177.

fish processing facility, and the City is interested in developing an ecotourism industry focused on guided river trips to the Great Kobuk Sand Dunes.¹⁸⁸

Based on household surveys conducted for the 2006-2010 ACS,¹⁸⁹ in 2010, the per capita income in Kiana was estimated to be \$15,682 and the median household income was estimated to be \$43,438. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$11,534 and \$39,688, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,¹⁹⁰ per capita income appears to have remained relatively stable, increasing only slightly from a real per capita income of \$15,167, and real median household income appears to have declined, from a \$52,189 in 2000. In 2010, Kiana ranked 197th of 305 Alaskan communities with per capita income data that year, and 171st in median household income, out of 299 Alaskan communities with household income data.

Kiana's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁹¹ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Noatak in 2010 is \$9,391,^{192,193} slightly lower than the per capita income reported for the year 2000. This suggests that caution is warranted when citing per capita income stability in Kiana between 2000 and 2010. Low per capita income levels are supported by the fact that the community was recognized as “distressed” by the Denali Commission in 2011,¹⁹⁴ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Kiana's population (60.7%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). That same year, 30.2% of Kiana residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate in Kiana was estimated to be 16.4%, more than twice the statewide unemployment rate of 5.9%. An additional estimate of unemployment is

¹⁸⁸ Northwest Arctic Borough Planning Department. 2006. *Kiana Community Comprehensive Development Plan 2006-2016*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/kianaplan.pdf>.

¹⁸⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 1990 and 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁹⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁹¹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁹² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁹³ See footnote 189.

¹⁹⁴ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

based on the ALARI database, which indicates that the unemployment rate in 2010 was 21.6%, almost double the statewide unemployment rate estimate of 11.5%.¹⁹⁵

Also based on the 2006-2010 ACS, approximately half of Kiana's workforce was estimated to be employed in the public sector (51.6%), and the other half in the private sector (48.4%). Of the 95 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in the following industries: educational services, health care, and social assistance industries (22.1%), public administration (18.9%), services other than public administration (15.8%), retail trade (12.6%), and transportation, warehousing, and utilities (11.6%). Occupations in which the greatest percentages of the civilian labor force were estimated to be employed included management, business, science and arts (44.2%), production, transportation, and material moving occupations (29.5%), and service occupations (15.8%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 182 employed residents in Kiana in 2010, of which 64.8% were employed in local government occupations, 9.9% in educational and health services, 9.3% in natural resources and mining, 4.9% in professional and business services, 1.6% in information, 1.6% in leisure and hospitality, 1.1% in financial activities, 1.1% in state government, 0.5% in construction, and 1.1% in other industries.¹⁹⁶ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

¹⁹⁵ See footnote 192.

¹⁹⁶ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Kiana (U.S. Census).

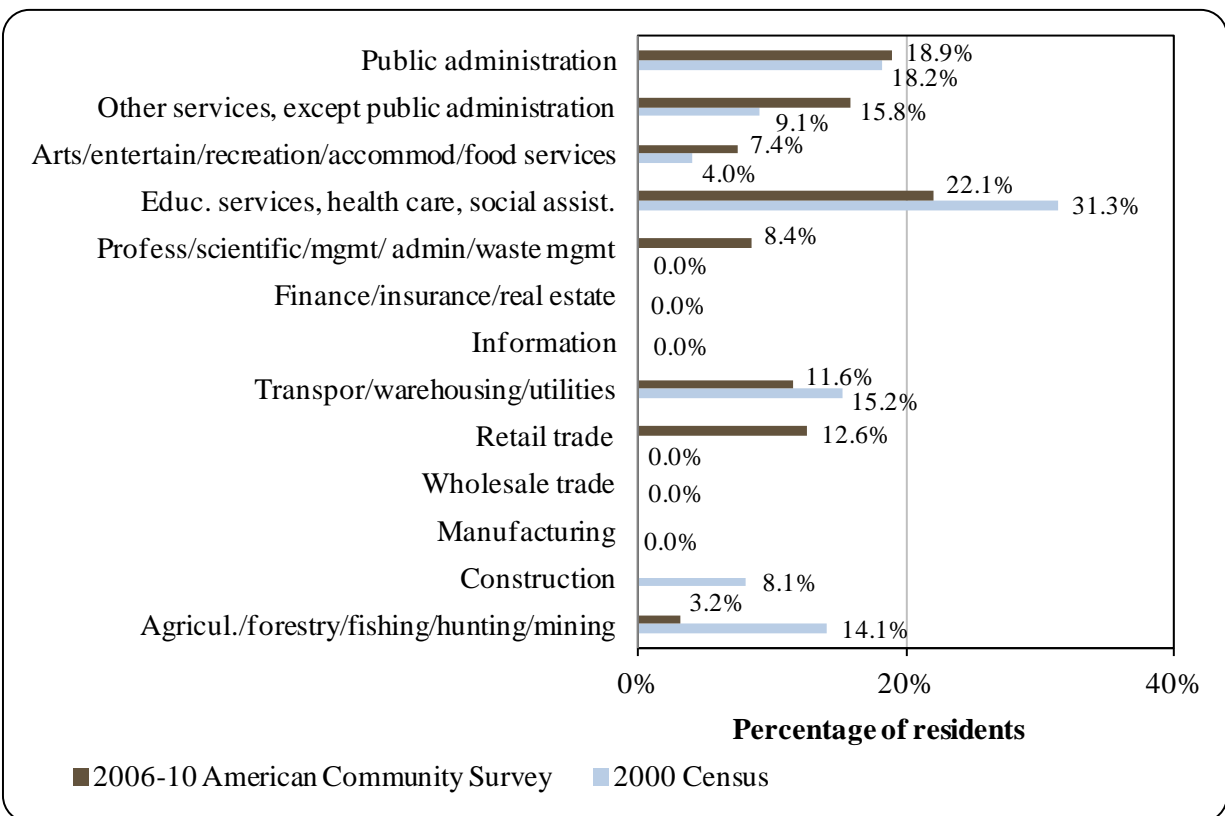
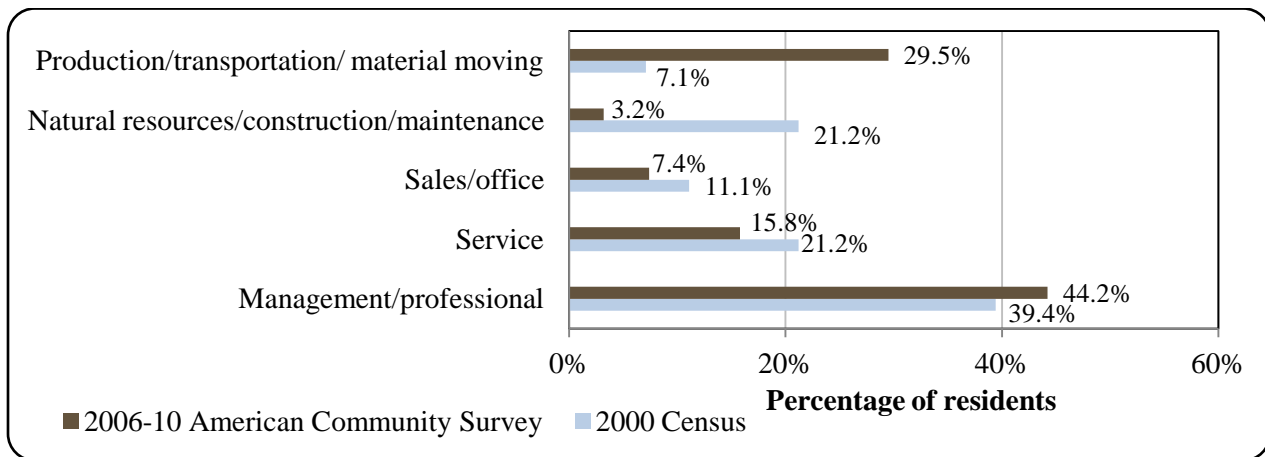


Figure 4. Local Employment by Occupation in 2000-2010, Kiana (U.S. Census).



Governance

Kiana is a 2nd Class City located in the Northwest Arctic Borough. It was incorporated in 1964, and has a “Strong Mayor” form of government, with a 6-person city council including the Mayor, an 11-person school board, 7-person planning commission, and a number of municipal employees. The City administers a 3% sales tax.¹⁹⁷ In addition to sales tax revenue, other locally-generated revenue sources in Kiana between 2000 and 2010 included leases and rentals of buildings, enterprise revenues including fees for water and sewer, cable TV, and fuel sales, property sale, and equipment rentals. Outside revenue sources included shared funds from a variety of programs and grants in some years. Shared funds came from the State of Alaska through the State Revenue Sharing program from 2000-2003 (approximately \$30,000 per year) and the Community Revenue Sharing program in 2009 and 2010 (approximately \$115,000 each year). Kiana also received state shared funds through a telephone / electric co-op tax refund and the SAFE Communities program (public safety, utilities, infrastructure, etc.). State grants provided funds toward building renovations, water and sewer line improvements, landfill cleanup, and purchase of bulk fuel. This information about selected municipal revenue streams in Kiana is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kiana from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$615,356	\$25,407	\$30,841	n/a
2001	\$740,943	\$24,797	\$30,841	n/a
2002	\$791,339	\$34,614	\$29,803	n/a
2003	\$646,463	\$24,438	\$29,679	n/a
2004	\$852,255 ⁶	\$35,000 ⁶	n/a	n/a
2005	\$732,140	\$22,810	n/a	n/a
2006	\$789,597	\$26,078	n/a	n/a
2007	\$641,159	\$48,852	n/a	n/a
2008	\$746,236	\$30,905	n/a	n/a
2009	\$483,157	\$28,279	\$116,150	n/a
2010	\$905,011	\$58,813	\$115,538	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁶ This number reflects the year’s budget estimate rather than actual figures reported in a certified financial statement.

¹⁹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Kiana was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the BIA, is the Native Village of Kiana. The regional Native corporation to which Kiana belongs is the NANA Regional Corporation. In 1972, most village corporations in the region merged with NANA Regional Corporation, with the exception of the village corporation for Kotzebue, known as Kikiktagruk Inupiat Corporation. NANA Regional Corporation now has title to 2,082,052 surface acres, including 115,200 that were originally titled to Kiana's Native village corporation.^{198,199}

Kiana is a member village of the Maniilaq Association, a tribal non-profit corporation that provides health and social services to residents of Northwest Alaska. The Maniilaq Association is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Originally called NANA, it was renamed Maniilaq when the NANA Regional Corporation was formed to avoid confusion between the names.²⁰⁰ Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.²⁰¹ The Maniilaq Association coordinates tribal and traditional assistance programs, and environmental and subsistence protection services in the region.²⁰²

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Kotzebue. The closest offices of the Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services are located in Fairbanks, although the Anchorage offices of these agencies may be more accessible by air to people of this region. The closest office of the National Marine Fisheries Service (NMFS) is located in Anchorage.

Infrastructure

Connectivity and Transportation

Kiana is primarily accessible by air, as well as small boat and snowmobile. The state-owned Bob Baker Memorial Airport has a 3,400 feet long by 100 feet wide lighted gravel runway. Daily scheduled flights and charter flights are provided by Bering Air, ERA Alaska, and Ryan Air Service.²⁰³ An air taxi service operates in Kiana. As of June 2012, roundtrip airfare from Anchorage to Kiana was \$700.²⁰⁴

Crowley Marine Services barges fuel and supplies to Kiana each summer and local store owners have large boats to bring supplies upriver. Local transportation takes place using boats, ATVs, snowmachines, and some trucks owned locally. A road connects Kiana to Kobuk camp,

¹⁹⁸ Ibid.

¹⁹⁹ NANA Regional Corporation. 2003. "Introduction." *NANA Lands website*. Retrieved February 2, 2012 from <http://www.nanalands.com/introduction.htm>.

²⁰⁰ Maniilaq Association website. 2003. *Company Information*. Retrieved February 2, 2012 from <http://www.maniilaq.org/companyInfo.html>.

²⁰¹ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

²⁰² See footnote 200.

²⁰³ See footnote 197.

²⁰⁴ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

and a network of old trading trails is still in use.²⁰⁵ Community leaders reported in the 2011 AFSC survey that there are plans to expand the road system within the next 10 years.

Facilities

In 2004, provision of city services shifted from the City of Kiana to the Village Council.²⁰⁶ The Village Council operates a piped water and sewer system which serves the clinic, school, community hall, and 73 homes. Water is sourced from two wells near the Kobuk River. A 200,000 is intermittently filled, and water is chlorinated prior to distribution. Sewage is collected via a 6-inch buried gravity sewer system, which is piped to a sewage lagoon northeast of the village for treatment. Nineteen households that are not connected to the pipe system haul water and use honeybuckets or septic tanks. Some outhouses are also in use in Kiana.²⁰⁷ In the 2011 AFSC survey, community leaders indicated that improvements to water and sewer pipelines are expected within the next 10 years. The Village Council does not provide refuse collection services, and individuals are responsible delivering their own refuse to a landfill operated by UIC Construction, Inc. The landfill is located west of the sewage disposal lagoon.²⁰⁸ Community leaders reported in the 2011 AFSC survey the relocation of the landfill should be completed within the next 10 years.

Electricity in Kiana is provided by a diesel plant operated by the Alaska Village Electric Cooperative. Safety services are provided by state troopers posted in Kotzebue as well as a Village Police Officer stationed in Kiana. The City has a public safety building that includes holding cells. Fire and rescue services are provided by the City Fire Hall, the City Volunteer Fire Department, and Project Code Red. The City also maintains its own volunteer fire department with equipment provided by Project Code Red. Additional community facilities include the City Office, the Council Building, a bingo hall, a Boys and Girls Club, a school gymnasium, a school library, and post office. Visitor accommodations are provided by Kiana Lodge. Local telephone services are provided by OTZ Telephone Co-op Inc, and long distance service is provided by four different private companies.²⁰⁹ In the 2011 AFSC survey, community leaders reported that Kiana plans to install broadband internet access within the next ten years. Community leaders also indicated that improvements are currently underway on the local fire department and emergency response system, as well as the local library. In addition, community leaders reported the presence of job placement services, publicly subsidized housing, and a food distribution program in Kiana.

Additional development priorities identified in the 2006 Kiana Community Comprehensive Plan included access to a gravel source, construction of a multi-purpose building to be used by the Village Council and post office, a bigger office complex with improved facilities, a Native Store, home construction, weatherization, renovation, and additions for tribal members, development of a new valley subdivision, and a community park for outdoor recreation.²¹⁰

²⁰⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁶ Northwest Arctic Borough Planning Department. 2006. *Kiana Community Comprehensive Development Plan 2006-2016*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/kianaplan.pdf>.

²⁰⁷ See footnote 205.

²⁰⁸ Ibid.

²⁰⁹ Ibid.

²¹⁰ See footnote 206.

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that the community is planning to build a new barge landing area in 2013, and that the construction of new dock space and improvement of existing docks is currently in progress. Currently they reported there is not public dock space for permanent and transient vessels moorage. Community leaders indicated that mechanical boat repair services are available in Kiana. In addition, they noted the presence of sport fish lodges in the community.

Medical Services

The Kiana Health Clinic, operated by the Maniilaq Association, provides residents with basic medical services. The Clinic is a Community Health Aide Program site. Emergency Services have river and air access. Emergency service is provided by volunteers and the health aide.²¹¹ The nearest hospital is located in Kotzebue.

Educational Opportunities

There is one school in Kiana. As of 2011, the school had 112 students and 13 teachers. Kiana is located in the Northwest Arctic Borough School District.²¹²

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest historically formed the basis of life for Native people living along the Kobuk River. According to one elder interviewed for an oral history project, “Before Kiana was established, there were Inupiat living along the river and fishing and hunting all through the area. For their settlements, people selected sites which were ideal for fishing and hunting.”²¹³ Historically, in summer Akunigmiut women historically operated fish camps along the main river and focused on harvest and preservation of whitefish and salmon. Akunigmiut men walked north to hunt for caribou and sheep in the Baird Mountains during the summer season. In winter, families returned to winter villages and continued subsistence harvest using fish traps, snared caribou and small game, and made preparations for the summer harvest season.²¹⁴

Subsistence remains fundamental to the economy and way of life in Kiana today.²¹⁵ According to a survey of subsistence harvest conducted by ADF&G in 2007, the most important aquatic subsistence species in Kiana, in terms of harvest volume, are chum salmon, whitefish, and sheefish. Burbot, northern pike, coho salmon, bearded seal, and other resources are also harvested in Kiana.²¹⁶ In the 2011 AFSC survey, community leaders reported that subsistence

²¹¹ See footnote 205.

²¹² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²¹³ Piquik Lee, L., R. Tatqaviñ Sampson, and E. Tennant, Eds. 1992. *Lore of the Inupiat: The Elders Speak, Volume 3*. Northwest Arctic Borough School District.

²¹⁴ Magdanz, James, David Koster, Liliana Naves, and Patricia Fox. 2011. *Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006*. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

²¹⁵ See footnote 205.

²¹⁶ See footnote 214.

harvest is the primary fishing activity in Kiana, and indicated that there are no local commercial fisheries. However, it is important to note that several Kiana residents did participate in commercial fisheries between 2000 and 2010 as permit holders, crew license holders, or vessel owners (see *Commercial Fishing* section), and some sportfishing activity was also reported in Kiana and the Northwest Arctic region (see *Recreational Fishing* section).

Kiana is located in the Arctic Management Area. A Fishery Management Plan (FMP) for the Arctic Management Area was approved by the Secretary of Commerce in August 2009. Initially, the FMP prohibits commercial fishing in the federal waters of the Beaufort and Chukchi seas until more information is available to support sustainable fisheries management.²¹⁷ In state regulated waters of the Arctic Management Area, several small fisheries occur, including a small fishery for chum salmon in the Kotzebue Sound region.²¹⁸ The Kotzebue Sound salmon fishery is the northernmost commercial salmon fishery in Alaska. Over 99% of the salmon harvested in this fishery are chum salmon returning to the Kobuk and Noatak Rivers. Commercial harvest of salmon first occurred in the Kotzebue area in 1909 when Native fishermen sold salmon to gold miners. Starting in 1914, salmon were canned and sold to miners in the upper Kobuk drainage. This small industry ceased after 1918. The modern commercial fishery began in 1962, and catch peaked in 1981 with 680,000 chum commercially harvested. Since 1995, poor market conditions and variable processing capacity and interest have caused harvests to fall short of their potential. Due to limited opportunities to sell their catch, the number of active permits in the Kotzebue salmon fishery had declined over the last 30 years. Very few of the 173 total set gillnet permits have been used in recent years.²¹⁹ Fish caught in the Kotzebue salmon fishery are primarily sold to local markets, although some are shipped to markets outside the Arctic region.²²⁰

In the 2011 AFSC survey, community leaders reported that Kiana actively participates in fisheries management processes in Alaska. This participation includes sending a representative to sit on regional fishery advisory and/or working groups run by ADF&G and a representative to participate in the Federal Subsistence Board or Federal Regional Advisory Council process. Kiana is not eligible to participate in the Community Development Quota or Community Quota Entity programs.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Kiana does not have a registered processing plant. However, between one and five fish buyers were active in the nearby City of Kotzebue between 2000 and 2010, as well as one shore-side processor in 2004 and 2005 (see the Community Profile for Kotzebue). In addition, there is local interest in Kiana to develop a freshwater fish processing facility.²²¹

²¹⁷ NOAA National Marine Fisheries Service, Alaska Regional Office. (n.d.). *Arctic Fisheries*. Retrieved February 6, 2012 from <http://www.fakr.noaa.gov/sustainablefisheries/arctic/>.

²¹⁸ North Pacific Fishery Management Council. August 2009. *Arctic Fishery Management Plan*. Retrieved February 29, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

²¹⁹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²²⁰ See footnote 218.

²²¹ Northwest Arctic Borough Planning Department. 2006. *Kiana Community Comprehensive Development Plan 2006-2016*. Retrieved September 13, 2012 from <http://www.nwabor.org/forms/kianaplan.pdf>.

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue was received by the community of Kiana (Table 3).²²² Although no information was available regarding these revenue sources, community leaders reported in the 2011 AFSC survey that a number of public services in Kiana are at least partially supported or funded by fisheries-related revenue. These services include the Kiana Health Clinic, road maintenance, the water and sewer system, police enforcement, fire protection, educational scholarships, and other social services.

Commercial Fishing

Between 2000 and 2010, Kiana residents held a small number of Commercial Fisheries Entry Commission (CFEC) permits in all years, and in some years during the period were also engaged in fisheries as crew license holders and vessel owners. The number of Kiana residents holding state CFEC permits fluctuated between two and three per year. All of these permits were held in the Kotzebue salmon gillnet fishery, and none were actively fished in any year during the 2000-2010 period. No other permits were held by Kiana residents in state or federal fisheries between 2000 and 2010, and no residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab. Permit information is presented in Table 4, and federal catch share information is presented in Tables 6 through 8.

From 2000 to 2002, two fishing vessels were primarily owned by Kiana residents, and two vessels were homeported in the community, while no vessels were owned or homeported locally from 2003 to 2010 (Table 5). Given the lack of fish buyers or processing facilities in Kiana, no vessels were recorded as delivering landings locally, and no ex-vessel revenue was generated in the community. This information about the commercial fishing sector in Kiana is presented in Table 5, and Kiana landings and revenue information is also presented in Table 9. Information about landings and ex-vessel revenue generated by Kiana vessel owners, including all delivery locations, is considered confidential from 2000 to 2002 due to the small number of participants, and given the lack of vessel owners from 2003 to 2010, no landings by Kiana vessel owners are reported in those years (Table 10).

²²² A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kiana: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$615,356</i>	<i>\$740,943</i>	<i>\$791,339</i>	<i>\$646,463</i>	<i>\$852,255⁶</i>	<i>\$732,140</i>	<i>\$789,597</i>	<i>\$641,159</i>	<i>\$746,236</i>	<i>\$483,157</i>	<i>\$905,011</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

⁶This number reflects the year's budget estimate rather than actual figures reported in a certified financial statement.

Table 4. Permits and Permit Holders by Species, Kiana: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Kiana: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	2	2	2	2	3	3	3	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	3	3	3	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	2	2	2	2	2	2	3	3	3	2	2
	<i>Fished permits</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>% of permits fished</i>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	<i>Permit holders</i>	2	2	2	2	2	2	3	3	3	2	2

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kiana: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kiana ²	Total Net Pounds Landed in Kiana ^{2,5}	Total Ex-Vessel Value of Landings in Kiana ^{2,5}
2000	0	0	0	2	2	0	0	\$0
2001	1	0	0	2	2	0	0	\$0
2002	0	0	0	2	2	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	2	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	2	0	0	0	0	0	0	\$0
2010	1	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kiana: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kiana: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Islands Crab Catch Share Program Participation by Residents of Kiana: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kiana: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kiana Residents: 2000-2010.

	<i>Total Net Pounds¹</i>											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Crab	-	-	-	0	0	0	0	0	0	0	0	0
Finfish	-	-	-	0	0	0	0	0	0	0	0	0
Halibut	-	-	-	0	0	0	0	0	0	0	0	0
Herring	-	-	-	0	0	0	0	0	0	0	0	0
Other Groundfish	-	-	-	0	0	0	0	0	0	0	0	0
Other Shellfish	-	-	-	0	0	0	0	0	0	0	0	0
Pacific Cod	-	-	-	0	0	0	0	0	0	0	0	0
Pollock	-	-	-	0	0	0	0	0	0	0	0	0
Sablefish	-	-	-	0	0	0	0	0	0	0	0	0
Salmon	-	-	-	0	0	0	0	0	0	0	0	0
<i>Total²</i>	-	-	-	0	0	0	0	0	0	0	0	0
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Crab	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing activity was minimal in Kiana between 2000 and 2010. In some years during the period, one licensed sport fish guide was present in the community, while no active sport fish guide businesses were present in any year. The number of sportfishing licenses purchased each year by residents of Kiana (irrespective of point of sale) varied between 18 and 42 per year. From 2002 to 2010, the number of sportfishing licenses sold in the community fluctuated between 14 and 50 per year. In most years, the number of sportfishing licenses sold in Kiana was slightly greater than the number sold to Kiana residents, indicating that sportfishing activities may attract a small number of visitors to the community.

According to the 2011 AFSC survey, community leaders reported that most sportfishing in Kiana takes place from private boats owned by local residents. They also indicated that chum and coho salmon are the primary species targeted by sport fishermen near Kiana. The Alaska Statewide Harvest Survey,²²³ conducted by ADF&G between 2000 and 2010, noted sportfishing activity in freshwater only, and noted the following species as targeted by private anglers in Kiana: chum salmon, Arctic grayling, northern pike, and sheefish. No kept/release log book data were reported for sportfishing charters out of Kiana between 2000 and 2010.²²⁴

Kiana is located within Alaska Sport Fishing Survey Area X – Northwest Alaska. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, Alaska resident anglers consistently fished a greater number of days than non-Alaska resident anglers in both freshwater and saltwater, and freshwater sportfishing activity was significantly higher than in saltwater. On average between 2000 and 2010, Alaska resident anglers fished 3,251 fresh water days and 582 saltwater days, while non-Alaska resident anglers fished on average 1,690 freshwater and 64 saltwater days. This information about the sportfishing sector in and near Kiana is also displayed in Table 11.

²²³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²²⁴ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Kiana: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kiana ²
2000	0	1	24	0
2001	0	1	23	0
2002	0	1	31	21
2003	0	1	22	34
2004	0	0	21	38
2005	0	0	23	14
2006	0	0	18	24
2007	0	0	42	50
2008	0	1	36	42
2009	0	1	21	28
2010	0	1	31	45

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	14	1,875	1,779	3,388
2001	296	114	2,986	2,508
2002	0	132	1,297	4,988
2003	15	1,698	1,807	2,601
2004	17	332	1,892	3,463
2005	19	35	1,309	1,755
2006	0	452	1,764	4,570
2007	65	62	1,146	3,754
2008	0	407	2,421	1,593
2009	138	815	1,160	5,318
2010	137	478	1,027	1,828

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

In the 2011 AFSC survey, community leaders reported that subsistence harvest is the primary fishing activity in Kiana, and that close to 60% of local residents participate in subsistence fishing activities. Further, an ADF&G survey of 2006 subsistence harvest activity in Kiana found only one household that did not use some type of subsistence foods.²²⁵ According to ADF&G's Community Subsistence Information System (CSIS), in 2006, 63% of households participated in salmon subsistence, 14% in marine mammals subsistence, 4% in marine invertebrate subsistence, and 51% in non-salmon fish subsistence (other than halibut). No information was reported regarding the percentage of households participating in halibut subsistence. CSIS data suggest that Kiana residents harvested 348 pounds of marine and land-based resources per capita that year. This information about household participation and per capita subsistence harvest is presented in Table 12.

Results of the 2006 ADF&G subsistence survey included species-level information about household harvest and use of marine invertebrates, non-salmon fish, and marine mammals. Kiana households reported harvesting two species of marine invertebrates: king crab and clams. Non-salmon fish species harvested by Kiana households included sheefish, whitefish, burbot, Dolly Varden char, northern pike, smelt, herring, least cisco, and saffron cod.²²⁶ According to data reported in the CSIS, a total of 1,346 lbs of marine invertebrates and 38,274 lbs of non-salmon fish were harvested by Kiana residents in 2006 (Table 13). In addition, Kiana households reported using a variety of marine mammal resources. A small percentage of Kiana households (5%) were reported to be involved in the harvest of one marine mammal species – bearded seal, while a higher percentage (14%) was reported to use bearded seal for subsistence. A number of other marine mammal species were also reported used by Kiana households, although no households were reported to participate in their harvest. These species included ringed seal, spotted seal, and bowhead whale. The fact that a significant percentage of households had access to marine mammal resources without participating directly in harvest can be explained by strong subsistence support ties between households in Kiana and the coastal communities of Kotzebue and Barrow.²²⁷

Information about subsistence salmon permits was available from ADF&G for four years of the 2000-2010 period. During these four years, Kiana households were issued an average of 90 subsistence salmon permits, and an average of 71 permits was returned. Chum were the most targeted salmon species, with an average of 3,791 chum harvested per year. A smaller number of coho, pink, sockeye, and Chinook salmon were also harvested by Kiana residents in each of the four years. Information about subsistence salmon harvest is presented in Table 13.

Between 2000 and 2010, no additional data were reported by management agencies regarding subsistence harvest of Pacific halibut (Table 14) or marine mammals (Table 15).

²²⁵ Magdanz, J., D. Koster, L. Naves, and P. Fox. 2011. Subsistence Harvests in Northwest Alaska Buckland and Kiana 2003 and 2006. Alaska Dept. of Fish and Game, Technical Paper No. 363. Retrieved September 13, 2012 from <http://www.adfg.alaska.gov/techpap/TP%20363.pdf>.

²²⁶ Ibid.

²²⁷ Ibid.

Table 12. Subsistence Participation by Household and Species, Kiana: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	63%	n/a	14%	4%	51%	348
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kiana: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	88	51	n/a	2,876	107	n/a	74	n/a	n/a
2001	88	67	n/a	5,379	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	95	90	15	3,010	68	80	n/a	n/a	n/a
2004	87	77	3	3,897	61	45	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1,346	38,274
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kiana: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kiana: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kivalina (kiv-uh-LEE-nuh)



People and Place

*Location*²²⁸

Kivalina is at the tip of an 8-mile barrier reef located between the Chukchi Sea and Kivalina River. It lies 80 miles northwest of Kotzebue, and 620 miles northwest of Anchorage. The area encompasses 1.9 square miles of land and 2.0 square miles of water. Kivalina was incorporated as a Second-class city in 1969 and is under the jurisdiction of the Northwest Arctic Borough.

*Demographic Profile*²²⁹

In 2010, there were 374 residents in Kivalina, ranking it 144th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 18.0%. Between 2000 and 2009, the population increased by 8.8% with an average annual growth rate of 0.77%, which was very similar to the statewide average of 0.75% and indicative of slow growth. Information regarding population trends can be found in Table 1.

Kivalina is a traditional Inupiat Eskimo village. In 2010, 96.3% of residents identified themselves as American Indian or Alaska Native, compared to 96.6% in 2000; 2.1% identified themselves as White, compared to 3.4% in 2000; and 1.6% identified themselves as two or more races, compared to 0.0% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

The average household size in 2010 was 4.40 individuals, compared to 4.70 in 1990 and 4.83 in 2000. In that year, there were 99 housing units, compared to 71 in 1990 and 80 in 2000. Of the households surveyed in 2010, 65% were owner-occupied, compared to 78% in 2000; 21% were renter-occupied, compared to 20% in 2000; 10% were vacant, compared to 3% in 2000; and 4% were occupied seasonally, compared to 0% in 2000. No residents lived in group quarters between 1990 and 2010.

The gender distribution in 2010 was somewhat biased towards females with 52.4% females and 47.6% male. This was in contrast to both the statewide distribution that year (52.0% male, 48.0% female), and distribution in 2000 (51.5% male, 48.5% female). The median age in 2010 was 21.3 years, which was significantly younger than the statewide median of 33.8 years, and similar to the 2000 median of 20.8 years.

The population structure was expansive in both 2000 and 2010. In 2010, 46.6% of residents were under the age of 20, compared to 48.0% in 2000; 8.8% were over the age of 59,

²²⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

compared to 8.5% in 2000; 27.2% were between the ages of 30 and 59, compared to 28.4% in 2000; and 17.4% were between the ages of 20 and 29, compared to 15.1% in 2000.

Gender distribution by age cohort was more equal in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 50 to 59 range (5.1% female, 2.4% male), followed by the 10 to 19 (10.7% female, 9.1% male) and 30 to 39 (5.1% female, 3.7% male) ranges. Of those three, the greatest relative gender difference occurred within the 50 to 59 range. Information regarding trends in Kivalina’s population structure can be found in Figure 2.

Table 1. Population in Kivalina from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	317	-
2000	377	-
2001	-	385
2002	-	383
2003	-	388
2004	-	390
2005	-	385
2006	-	392
2007	-	397
2008	-	406
2009	-	410
2010	374	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kivalina: 2000-2010 (U.S. Census).

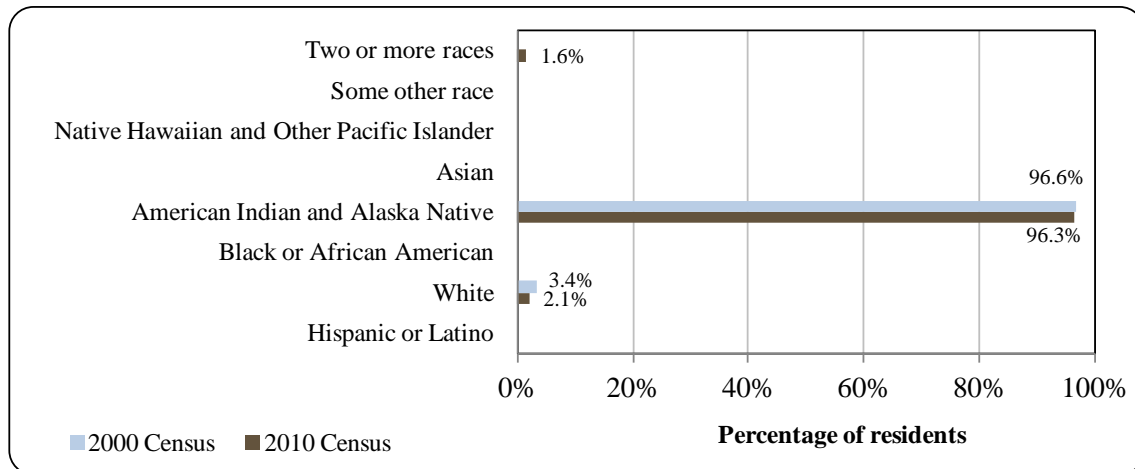
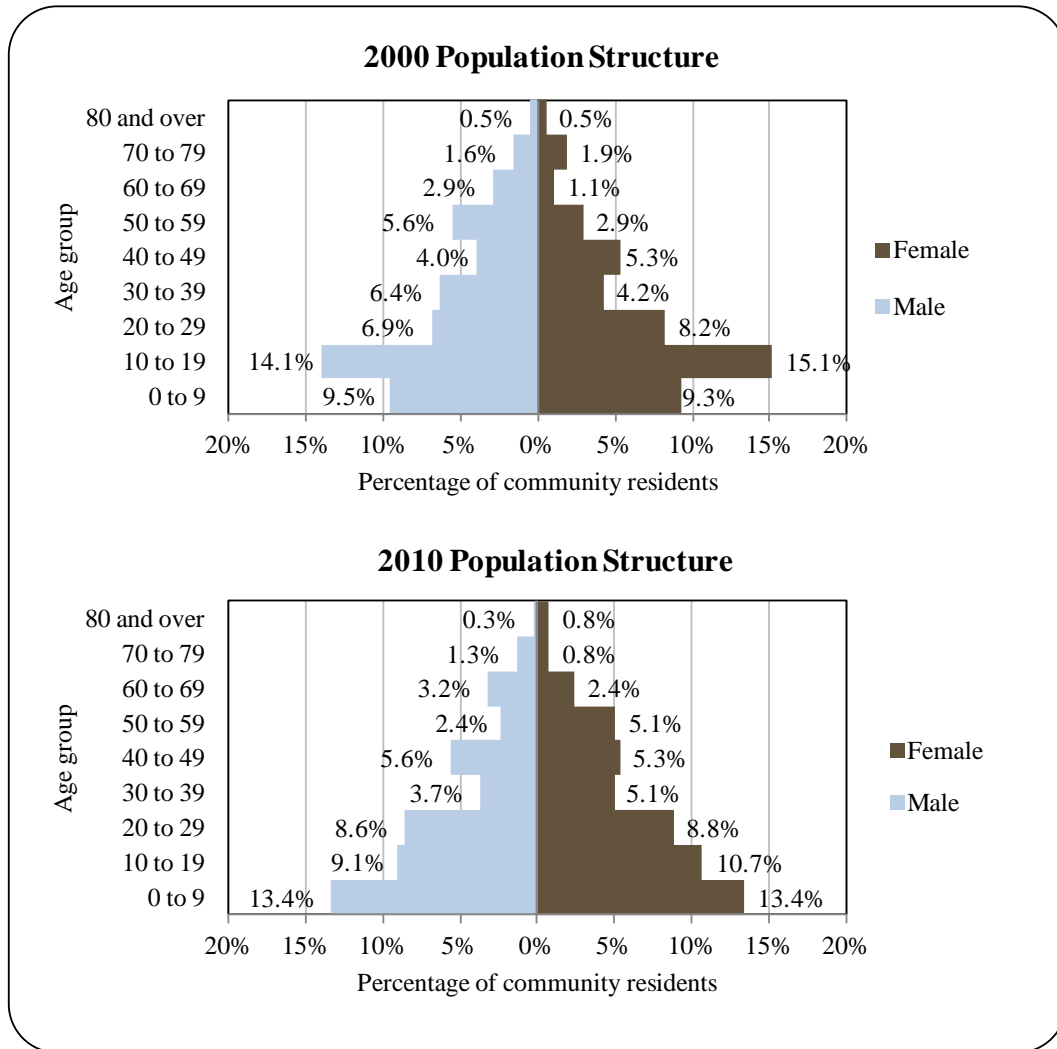


Figure 2. Population Age Structure in Kivalina Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)²³⁰ estimated that 64.1% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 14.9% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 21% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 15.5% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 2.8% of resident held a Bachelor’s degree, compared to an estimated 17.4% of Alaskan residents

²³⁰ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

overall; and an estimated 1.1% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Human occupation of the barrier island where Kivalina is located extends back 1,500 years, when the area was first populated as a stopping-off place for people travelling between Arctic coastal areas and the Kotzebue Sound region. According to oral history, the original permanent settlement known as Kivalina was located on the coast of the mainland, somewhat north of the Kivallik Channel. Originally, the people of Kivalina utilized the barrier island only as a seasonal hunting ground, making camp during summer months. Kivalina's existence was recorded in 1847 by a Russian Naval officer who mistook a seasonal subsistence camp north of the present day village as a permanent settlement. This settlement was logged as "Kivualinagmut."²³¹ A severe famine hit the area in the early 1880s, which killed or drove out most inhabitants of the Kivalina area.

From 1896 to 1902, reindeer were transported to the Kivalina area by the federal government, and locals were actively trained as herders. In 1905, Kivalina was relocated to its current location when the U.S. Bureau of Indian Affairs (BIA) repeated the error of the Russian naval officer by mistaking a seasonal camp on the barrier reef for a permanent village. Soon, the BIA established a school on the southern tip of the island and threatened any residents who did not enroll their children with imprisonment. This led to the vacating of the original Kivalina as well as surrounding communities.²³²

A post office was established in 1940, and an airstrip in 1960. During the 1970s, a new school, power system, and new houses were built. The sale and importation of alcohol is prohibited within the community.²³³

Natural Resources and Environment

Kivalina lies in the transitional climate zone, which is characterized by long, cold winters and cool summers. The average low temperature during January is -15 °F; the average high during July is 57 °F. Temperature extremes have been measured from -54 to 85 °F. Annual snowfall averages 57 inches, with 8.6 inches of precipitation per year. The Chukchi Sea is ice-free and open to boat traffic from mid-June to the first of November.

The village lies on a 5-mile long, 700-foot wide barrier reef island. Local soils are characterized by sand and gravel, which are largely unconsolidated and subject to erosion. The mainland to the east of Kivalina consists of a large coastal plain dotted with lakes, meandering streams, sloughs, and gently rolling limestone hills. In most areas, continuous permafrost underlies a tundra-covered bed of glacier till and alluvium. Lowland topography is characterized by thermokarst features which include thaw lakes, ice wedge polygons, frost mounds, and solifluction lobes. Moist and wet tundra are primary vegetation communities in lowland areas. The landscape is dominated by sedge-grasses and dwarf shrubs. Tall shrubs are present around

²³¹ NANA Corporation. (n.d.). *Kivalina*. Retrieved September 18, 2012 from: <http://www.nana.com/regional/about-us/overview-of-region/kivalina/>.

²³² Ibid.

²³³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

many drainages. Freshwater species found in drainages include four species of whitefish, northern pike, Arctic char, Dolly Varden, and Arctic grayling. Terrestrial mammals include brown bear, snowshoe hare, moose, muskoxen, fox, wolves, weasels, and wolverine. There is also habitat for a wide range of seabirds.²³⁴ Marine species within the Chukchi and East Bering seas include urchins, sea cucumbers, Snow crab, Arctic cod, sculpins, Saffron cod, shrimp, flounder, eelpouts, herring, walleye pollock, smelt, Pacific cod, king crab, sole, capelin, turbot, greenling, and a range of bivalves. All five species of Pacific salmon are found in the Kotzebue Sound region.²³⁵ Marine mammals found within the Chukchi Sea include spotted seal, bearded seal, ringed seal, ribbon seal, beluga whale, killer whale, harbor porpoise, gray whale, minke whale, bowhead whale, polar bear, and Pacific walrus.²³⁶

Mineral resources in the region include a major zinc-leader development operated by NANA Corporation and Tech Alaska Incorporated. The Red Dog mine has been in operation since 1989 and one of the world's largest producers of zinc concentrate.²³⁷

Environmental hazards manifest almost exclusively in the form of flood and erosion events caused by storm surges. Storm flooding historically occurred in early fall, before the formation of sea ice along the shore. However, Kivalina can experience storm events at any time of the year. Southwesterly storms bring 70 knot winds in the summer and early fall, while winter storms typically come from the northeast. Local observations have found that shorefast ice has formed later in recent years, increasing the effects of fall storm flooding. For two decades, steady erosion of the Kivalina shoreline has led to increased sea encroachment, and the City has decided that relocation to an inland site is necessary. Relocation inland would alleviate shoreline flooding concerns; however, the U.S. Army Corps of Engineers (USACE) estimates relocation to be 15 to 20 years away, putting the community in a difficult situation if current erosion trends continue. In addition to sediment removal, bank failure, and habitat destruction; flood and erosion hazards can damage infrastructure, leading to the potential release of toxic contaminants into the local environment. Outhouses, the school sewer, septic bunkers, and dog yards are all potential sources of contaminants which could impact community health. A significant concern of flood victims would be the lack of a reliable, clean water source. Mitigation measures in place include a large rock revetment, proposed evacuation route, public awareness programs, and structure elevation and relocation plans.²³⁸

In 2003, the Government Accountability Office reported that Kivalina faced an imminent threat from flooding and erosion, and the USACE was utilized in assessing threats and possible mitigative actions, including relocation. Storms in 2004 and 2005 caused significant damage to Kivalina's shore, and it was estimated that 70 to 80 feet of coastline was lost. The city was subsequently declared a federal disaster area by the Federal Emergency Management

²³⁴ National Park Service. (n.d.). *Final Environmental Impact Statement: Cape Krusenstern National Monument, Alaska*. Retrieved September 19, 2012 from: <http://wilderness.nps.gov/document/III-3.pdf>.

²³⁵ North Pacific Fishery Management Council. (2009). *Fishery Management Plan for Fish Resources of the Arctic Management Area*. Retrieved September 19, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

²³⁶ Angliss, R. P. and K. L. Lodge. 2004. Alaska marine mammal stock assessments, 2003. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-144. Retrieved September 20, 2012 from <http://www.nmfs.noaa.gov/pr/pdfs/sars/ak2003.pdf>.

²³⁷ See footnote 231.

²³⁸ City of Kivalina; ASCG Inc. of Alaska; and Bechtol Planning and Development. (2007). *City of Kivalina, Alaska Local Hazards Mitigation Plan*. Retrieved September 20, 2012 from: http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Kivalina_HMP.pdf.

Administration (FEMA), qualifying it for relief funding. A seawall was soon constructed; however, it failed a day before its inauguration. A storm in 2007 forced an evacuation of the community, and a large rock revetment project was planned soon after. Kivalina had selected the relocation site of *Kiniktuuraq*, which was located a mile southeast on a portion of the Chukchi Sea coast that had been used by residents as a subsistence camp. However, the site was determined as vulnerable to erosion by federal contractors, and would require riprap and armor rock to stabilize the shoreline. This determination frustrated Kivalina residents, as it conflicted with local and traditional ecological knowledge of area characteristics. However, the USACE requires that floodplain delineation and long-term shoreline stabilization plans are submitted before relocation efforts can be funded by FEMA and to qualify for federal disaster insurance. These requirements raised the cost of relocation significantly.²³⁹

In 2008, costs associated with relocation prompted the City of Kivalina and the Native Village of Kivalina to file a public nuisance suit against Exxon-Mobil Corporation and 23 other fossil fuel companies for contributing to the effects of global warming through excessive emissions of greenhouse gases. The claim stated that harm to the community was caused by anthropogenic climate changes, which was caused in part by carbon dioxide emitted by the defendants. However, a California District Court dismissed the case on grounds that the plaintiffs' claim lacked standing. It was the court's opinion that under the political question doctrine, it was inappropriate for the court system to weigh in on an issue that had not been given clear legislative or political definitions. In addition, the plaintiffs' claim that harm was linked to the defendants' emissions lacked sufficient evidence. The case was later filed in appellate court in 2010, and oral argument was held in November 2011.²⁴⁰ Ultimately, the original ruling was upheld.

According to the Alaska Department of Environmental Conservation, there are no significant environmental remediation sites active within Kivalina as of 2010. However, the nearby Red Dog Mine site consistently monitored for potential impacts to populated and subsistence use areas from fugitive dust and lead sulfide and zinc sulfide contaminants. Potential risks include respiratory problems associated with dust, and impacts to subsistence food sources from dissolved or bioaccumulated contaminants. Dust deposition from the mine site poses risks to the local environment surrounding open pits. A study conducted in 2001 found that it was safe to continue eating subsistence foods, and mitigation techniques have been put in place to control fugitive dust particles.²⁴¹

Current Economy²⁴²

Kivalina's economy is heavily dependent upon subsistence hunting and fishing. Wage employment opportunities are limited, and many jobs are either part-time or seasonal. Major employers include the City, Village Council, school, Maniilaq Association, NANA Regional

²³⁹ Shearer, C. 2012. The political ecology of climate adaptation assistance: Alaska Natives, displacement, and relocation. *J. Political Ecol.* 19, 174-183.

²⁴⁰ Abate, R. S. (2010). Public Nuisance Suits for the Climate Justice Movement: the Right Thing and the Right Time. (2010). *Washington Law Review*, 85, 197-252.

²⁴¹ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program: Red Dog Mine*. Retrieved September 20, 2012 from: <http://dec.alaska.gov/spar/csp/sites/reddog.htm>.

²⁴² Unless otherwise noted, all monetary data are reported in nominal values.

Corp., local stores, and the Red Dog Mine. Commercial fishing is another source of seasonal employment. The Native art industry is also expanding, and locals specialize in ivory carving.²⁴³

In 2010,²⁴⁴ the estimated per capita income was \$13,425 and the estimated median household income was \$59,375, compared to \$8,360 and \$30,833 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,²⁴⁵ the real per capita income (\$10,993) and real median household income (\$40,545) indicate that both individual and household earnings declined. In 2010, Kivalina ranked 220th of 305 communities from which per capita income was estimated, and 79th of 299 communities from which median household income was estimated.

However, Kivalina's small population size may have prevented the ACS from accurately portraying economic conditions.²⁴⁶ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$2.96 million in total wages in 2010.²⁴⁷ When matched with the 2010 Decennial Census population, the per capita income equals \$7,919, which is significantly less than the 2010 ACS estimate and suggests that cautions should be used when comparing 2010 ACS and 2000 Census figures.²⁴⁸ This is supported by the fact that Kivalina was recognized as "distressed" by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²⁴⁹ It should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,²⁵⁰ 66.8% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 17.1%, compared to an estimated 5.9% statewide; and an estimated 22.0% of residents lived below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Again, it should be noted that the ACS may not have accurately captured economic conditions in Kivalina due to its small population size. According to 2010 ALARI estimates, the unemployment rate was 25.8% based on unemployment insurance claimants.²⁵¹ Of those employed in 2010, the ACS estimated that 40.3% worked in the private sector and 59.7% worked in the public sector.

²⁴³ NANA Regional Corporation. (n.d.). *Kivalina*. Retrieved September 20, 2012 from: <http://www.nana.com/regional/about-us/overview-of-region/kivalina/>.

²⁴⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁴⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012) from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>.

²⁴⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁴⁷ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²⁴⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

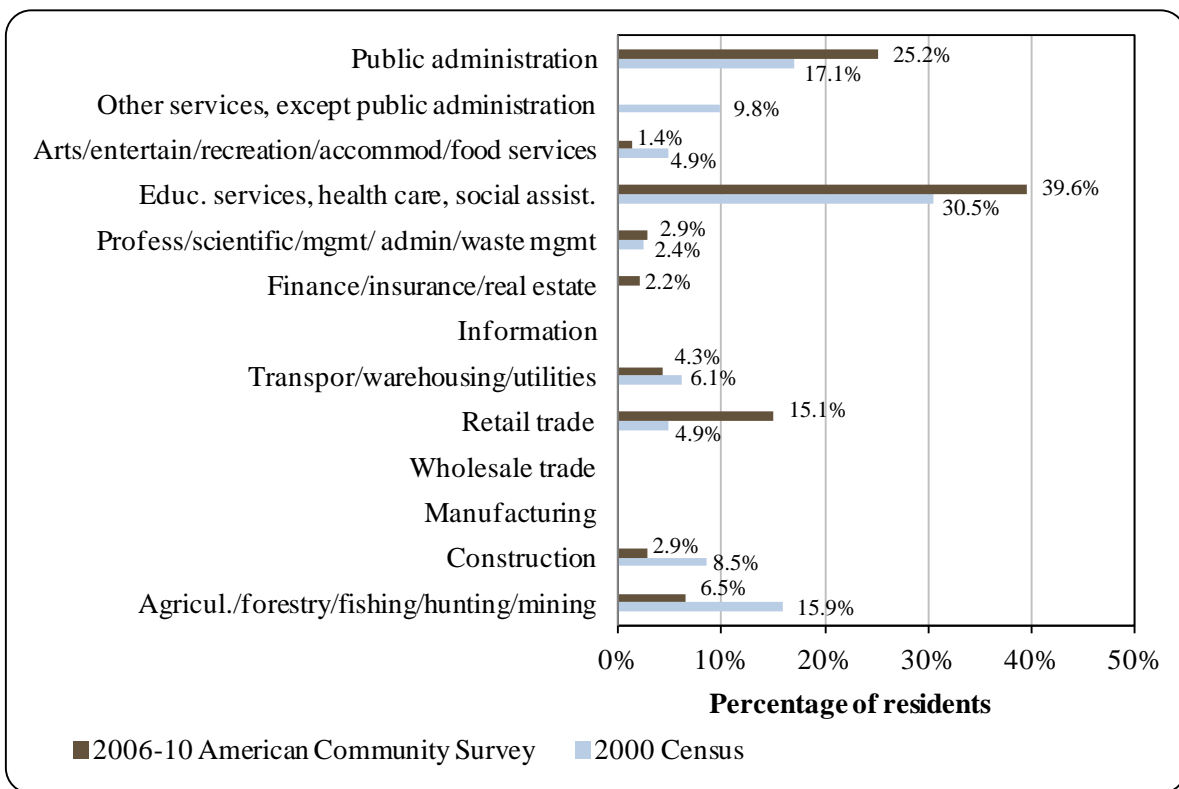
²⁴⁹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

²⁵⁰ See footnote 246.

²⁵¹ See footnote 248.

By industry, most (39.6%) employed residents were estimated to work in education services, health care, and social assistance sectors; followed by public administration (25.2%); retail trade (15.1%); and agriculture, forestry, fishing, hunting, and mining (6.5%) sectors.²⁵² According to 2010 ALARI estimates, most (66.5%) employed residents worked in local government sectors; followed by educational and health service (11.2%) and natural resources and mining (7.1%) sectors.²⁵³ Between 2000 and 2010, there was significant variation in employment by industry sector. Significant proportional increases occurred in public administration sectors; education services, health care, and social assistance sectors; and retail trade sectors. Conversely, significant proportional declines occurred in other service sectors; construction sectors; and agriculture, forestry, fishing, hunting, and mining sectors (Figure 3).

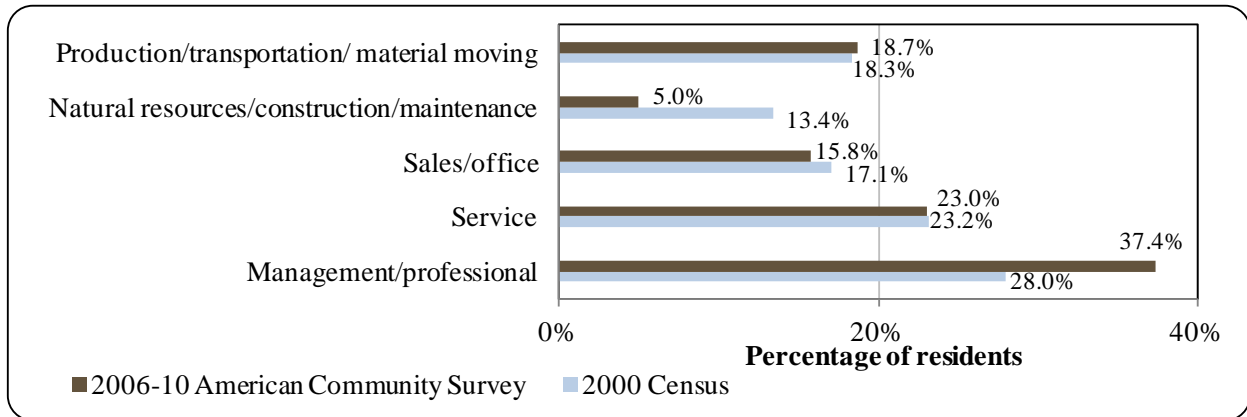
Figure 3. Local Employment by Industry in 2000-2010, Kivalina (U.S. Census).



²⁵² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁵³ Ibid.

Figure 4. Local Employment by Occupation in 2000-2010, Kivalina (U.S. Census).



By occupation type, most (37.4%) employed residents were estimated to hold management or professional positions; followed by service (23.0%); production, transportation, or material moving (18.7%); sales or office (15.8%); and natural resources, construction, or maintenance (5.0%) positions (Figure 4).²⁵⁴ According to 2010 ALARI estimates, most employed residents held construction laborer occupations; followed by stock clerks or other fillers; office or administrative support workers; and gaming service workers. ALARI listed 11 occupational categories in 2010.²⁵⁵ Between 2000 and 2010, there were significant variations in employment by occupation type. Significant proportional increases occurred in management or professional occupations. Conversely, significant proportional declines occurred in natural resources, construction, and maintenance positions.

Governance

Kivalina is a Second-class city with a mayoral form of government. There is a six-member city council, eleven-member school board, and five municipal employees. In addition, there is a U.S. Bureau of Indian recognized tribal government.

The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Kivalina is the NANA Regional Corporation, which also serves as the ANCSA-chartered village corporation. The local ANCSA chartered non-profit is the Maniilaq Association.

The closest National Marine Fisheries Service (NMFS) office is located in Anchorage, 620 miles southeast. The closest Alaska Department of Fish and Game (ADF&G) office is located in Kotzebue, 80 miles southeast. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Nome, 490 miles south.

Municipal revenues were taken from Certified Financial Statements. When adjusted for inflation,²⁵⁶ total municipal revenues declined by 2.4% between 2000 and 2010 from \$836,087, to \$1.06 million. Total municipal revenues peaked in 2009 at \$1.68 million, and were at their lowest in 2005 at \$241,479. In 2010, most (79.5%) municipal revenues were collected locally. In

²⁵⁴ Ibid.

²⁵⁵ Ibid.

²⁵⁶ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

that year most locally generated revenues were collected from gaming revenues, followed by donations, utility rents, and debt interests. Outside revenues were collected from state allocated Community Revenue Sharing and other outside grants. Sales tax revenues accounted for 2.5% of total municipal revenues in 2010, compared to less than one-percent in 2000. In addition, Community Revenue Sharing accounted for 11.1% of total municipal revenues that year, compared to 3.8% in 2000 from State Revenue Sharing. Information regarding municipal revenue can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kivalina from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$836,087	\$6,017	\$31,947	n/a
2001	\$1,257,173	\$29,411	\$32,017	n/a
2002	\$949,436	\$2,200	\$30,054	n/a
2003	\$769,776	\$3,002	\$30,054	n/a
2004	\$510,492	\$7,466	-	n/a
2005	\$241,479	\$4,066	-	n/a
2006	\$667,988	\$14,444	-	n/a
2007	\$956,968	\$21,121	-	n/a
2008	\$1,232,015	\$24,088	-	n/a
2009	\$1,683,112	\$30,731	\$116,510	n/a
2010	\$1,055,540	\$26,037	\$116,711	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation^{257,258}

Kivalina is not connected to any road systems, and basic modes of transportation to and from Kivalina are plane, small boat, and snowmobile. The state owns a 3,000-foot long by 60-foot wide gravel airstrip. There is daily service from Kotzebue and twice weekly service from Point Hope provided by Bering Air and Era Aviation. In total, roundtrip airfare between Anchorage and Kivalina in June 2012 was \$718.²⁵⁹ Air freight services between Kivalina and Kotzebue are provided by Ryan Air, Bering Air, and Era Aviation. Two main hunting trails follow the Kivalina and Wulik Rivers. Northland Services barges fuel, automobiles, groceries, household goods, and general supplies to Kivalina in July and August. Cargo is shipped in from either Anchorage or Seattle.

Facilities^{260,261}

Water is sourced from the Wulik River and pumped via a 3-mile surface line to a pair of storage tanks holding 1.17 million gallons. Water is chlorinated and fluoridated as it is pumped. Kivalina operates on a “fill-and-draw” system meaning that water is pumped and stored during July and August for use during the winter. During warm-weather months, residents haul and treat their own water individually, while during the winter water is hauled from the central tanks. A few residents have plumbing, and the school and health clinic are fully plumbed with individual water and sewer lines. Residential sewage is hauled in honeybuckets to four disposal bunkers located throughout the community. A washeteria is operated by the city within the community and offers three showers. When the water tank is down to 12 feet, the washeteria is closed to the public.

The Alaska Village Electric Co-op provides electricity via diesel generators with a peak capacity of 1,040 kilowatts. Telephone service is provided by Kotzebue-based OTZ Telephone Cooperative. Landline and cellular phone service capabilities are available. OTZ also provides DSL high speed internet services. Cable television service is provided by the City.

A community hall and Boys & Girls Club are available in the community. There is no Village Public Safety Office, and services are provided by state troopers based in Kotzebue. The City also maintains its own volunteer fire department and search and rescue group. Visitor accommodations are not available in Kivalina. Other public facilities include the City Office, Tribal Office, Kivalina Native Store, two churches, bingo hall, and three small privately owned dry goods shops.

²⁵⁷ NANA Regional Corporation. (n.d.). *Kivalina*. Retrieved September 24, 2012 from: <http://www.nana.com/regional/about-us/overview-of-region/kivalina/>.

²⁵⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁹ Airfare was calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).

²⁶⁰ See footnote 258.

²⁶¹ See footnote 257.

*Medical Services*²⁶²

The Kivalina Clinic operated by the Maniilaq Association provides residents with basic medical services. Two health aides provide services 6 days per week and are on call 24 hours. The small clinic has a waiting room, two exam rooms, an office, a communications room, and a bathroom. Acute, long-term, specialized, and emergency medical services are provided in Kotzebue.

Educational Opportunities

McQueen School provides preschool through 12th grade instruction. As of 2011, there were 139 students enrolled and 13 teachers employed.²⁶³ Opportunities for post-secondary education are available through online classes provided by Chukchi Campus, a rural division of the University of Alaska.²⁶⁴ Bachelor's degrees are offered in child development and family studies, rural development, social work, and education. Master's degrees are offered in education and rural development.²⁶⁵

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historically, the area's inhabitants used Kivalina as a seasonal subsistence camp. Important subsistence fish include Arctic char, chum salmon, sheefish, whitefish, tomcod, and smelt. Important subsistence marine mammals include bearded seals, ringed seals, spotted seals, beluga whale, and bowhead whale, and walrus. Subsistence harvests are conducted throughout the year, depending on species. Bowhead and beluga whale hunting is primarily conducted in the spring, from April through June. Walrus hunting peaks during May and June. Seal hunting peaks from April through June, and again from late January through the end of February. Fishing is done throughout the year, along coastal areas and within the Kivalina and Wulik River drainages. Arctic char and chum salmon are especially important species.²⁶⁶

With the exception of Pacific halibut, commercial fishing within the federally managed Arctic Management Area (AMA) is prohibited under the current Arctic Fishery Management Plan (FMP). Pacific salmon fisheries are managed by the State of Alaska and directed fishing is allowed in State waters within the Kotzebue Sound region. Halibut is management under the International Pacific Halibut Commission (IPHC). Halibut harvests may occur within federal waters under the management of the IPHC; however, no commercial harvests have been attempted. Experimental fishing for halibut has occurred within the AMA in the past. Directed

²⁶² Ibid.

²⁶³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁶⁴ Ibid.

²⁶⁵ University of Alaska Fairbanks. (n.d.). *Chukchi Campus*. Retrieved September 24, 2012 from: <http://www.uaf.edu/chukchi/>.

²⁶⁶ U.S. Environmental Protection Agency, U.S. Dept. of the Interior, U.S. Dept. of the Army Corps of Engineers, and Ott Water Engineers, Inc. (1984). *Final Environmental Impact Statement Red Dog Mine Project*. Retrieved September 24, 2012 from: <http://nepis.epa.gov/EPA/>.

fishing for crab in the Chukchi Sea is limited to small subsistence or personal use fisheries. The commercial harvest of crab within the AMA is prohibited under the current Arctic FMP.²⁶⁷

In terms of state water fisheries, a small crab fishery occurs in the Norton Sound area; adjacent to the AMA. While authorized under the federal crab FMP, management is largely deferred to the State. Some crab subsistence and personal use occurs within the southeastern Chukchi Sea. A commercial salmon fishery is managed by the state within the Kotzebue Sound region. Again, commercial salmon harvests are prohibited within the AMA. While prohibited within the AMA, herring harvests occur in some adjacent State waters. Dolly Varden are at times caught incidentally during salmon harvests within the Kotzebue Sound region.²⁶⁸

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Kivalina does not have a registered processing plant. The closest seafood processor is located in Kotzebue.

Fisheries-Related Revenue

Between 2000 and 2010, there was no known fisheries-related revenue reported by the community of Kivalina (Table 3).

Commercial Fishing

Overall, commercial fishing in Kivalina is somewhat limited. In both 2000 and 2010, five residents, or 1.3% of the population, held five commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Between those years, no more than five residents held CFEC permits. Salmon was the only species harvested by residents of Kivalina between 2000 and 2010. No residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits in those years, nor did any residents hold halibut, sablefish, or crab quota share. In 2010, 20% of permits held were actively fished, compared to 40% in 2000; which was also the year that local permit activity peaked.

Residents held three commercial crew licenses in 2010, compared to two in 2000. In addition, residents held majority ownership of only one commercial fishing vessel that year, compared to none in 2000. Kotzebue gillnet salmon was the only fishery prosecuted by residents of Kivalina in 2010.

No landings were reported in Kivalina between 2000 and 2010. Landings reported by residents of Kivalina during that time are considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁶⁷ North Pacific Fishery Management Council. (2009). *Fishery Management Plan for Fish Resources of the Arctic Management Area*. Retrieved September 25, 2012 from:

<http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

²⁶⁸ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kivalina: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$836,087</i>	<i>\$1.56 M</i>	<i>\$949,436</i>	<i>\$769,776</i>	<i>\$510,492</i>	<i>\$241,479</i>	<i>\$667,988</i>	<i>\$956,968</i>	<i>\$1.23 M</i>	<i>\$1.68 M</i>	<i>\$1.06 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kivalina: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Kivalina: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	5	4	4	4	5	5	5	5	5	5	5
	Fished permits	2	1	0	0	1	1	1	1	1	1	1
	% of permits fished	40%	25%	0%	0%	20%	20%	20%	20%	20%	20%	20%
	Total permit holders	5	4	4	4	5	5	5	5	5	5	5
<i>Total CFEC Permits²</i>	<i>Permits</i>	5	4	4	4	5	5	5	5	5	5	5
	<i>Fished permits</i>	2	1	0	0	1	1	1	1	1	1	1
	<i>% of permits fished</i>	40%	25%	0%	0%	20%	20%	20%	20%	20%	20%	20%
	<i>Permit holders</i>	5	4	4	4	5	5	5	5	5	5	5

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kivalina: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kivalina ²	Total Net Pounds Landed in Kivalina ^{2,5}	Total Ex-Vessel Value of Landings in Kivalina ^{2,5}
2000	2	0	0	0	0	0	0	\$0
2001	2	0	0	1	1	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	1	1	0	0	\$0
2004	3	0	0	1	1	0	0	\$0
2005	4	0	0	0	0	0	0	\$0
2006	2	0	0	0	0	0	0	\$0
2007	3	0	0	1	1	0	0	\$0
2008	2	0	0	1	1	0	0	\$0
2009	2	0	0	1	1	0	0	\$0
2010	3	0	0	1	1	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kivalina: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kivalina: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kivalina: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kivalina: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kivalina Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	--	0	--	--	0	0	--	--	--	--
Finfish	0	--	0	--	--	0	0	--	--	--	--
Halibut	0	--	0	--	--	0	0	--	--	--	--
Herring	0	--	0	--	--	0	0	--	--	--	--
Other Groundfish	0	--	0	--	--	0	0	--	--	--	--
Other Shellfish	0	--	0	--	--	0	0	--	--	--	--
Pacific Cod	0	--	0	--	--	0	0	--	--	--	--
Pollock	0	--	0	--	--	0	0	--	--	--	--
Sablefish	0	--	0	--	--	0	0	--	--	--	--
Salmon	0	--	0	--	--	0	0	--	--	--	--
<i>Total²</i>	<i>0</i>	<i>--</i>	<i>0</i>	<i>--</i>	<i>--</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
Finfish	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
Halibut	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
Herring	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
Other Groundfish	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
Other Shellfish	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
Pacific Cod	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
Pollock	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
Sablefish	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
Salmon	\$0	--	\$0	--	--	\$0	\$0	--	--	--	--
<i>Total²</i>	<i>\$0</i>	<i>--</i>	<i>\$0</i>	<i>--</i>	<i>--</i>	<i>\$0</i>	<i>\$0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing in remote areas of Northwest Alaska is extremely limited due to travel costs and a lack of visitor infrastructure. There are few recreational fisheries in the AMA and no catch and release fishery management programs. Personal use fisheries exist, although they are more closely related to subsistence fisheries. Most recreational fishing occurs near Kotzebue and within state waters.²⁶⁹

Between 2000 and 2010, there were no sport fish guide businesses registered within the community, no sport fish guide licenses issued to residents, and no sportfishing licenses sold within the community. In 2010, residents held 25 sportfishing licenses, compared to 5 in 2000. No information on species targeted by resident private anglers is available (Table 11).

Kivalina is located within the Northwest Alaska ADF&G Harvest Survey Area which includes the Selawik, Kobuk, Noatak, Wulik, and Kivalina river drainages; and all saltwater in the northern half of Kotzebue Sound. There are no saltwater angler days fished data available for 2010. In 2009, there was a total of 251 angler days fished, compared to 215 in 2000. In that year, non-Alaskan residents accounted for 100% of total angler days fished, compared to 6.5% in 2000. In 2010, there was a total of 1,088 freshwater angler days fished, compared to 1,404 in 2000. In that year, non-Alaskan residents accounted for 32.7% of total angler days fished, compared to 31.2% in 2000. Further information regarding recreational fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Kivalina: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Kivalina²
2000	0	0	5	0
2001	0	0	5	0
2002	0	0	4	0
2003	0	0	5	0
2004	0	0	6	0
2005	0	0	6	0
2006	0	0	27	0
2007	0	0	22	0
2008	0	0	19	0
2009	0	0	6	0
2010	0	0	25	0

²⁶⁹ North Pacific Fishery Management Council. (2009). *Fishery Management Plan for Fish Resources of the Arctic Management Area*. Retrieved September 25, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

Table 11 cont'd. Sport Fishing Trends, Kivalina: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	14	201	438	966
2001	44	86	509	801
2002	27	15	275	973
2003	298	17	934	939
2004	115	19	450	709
2005	35	308	408	510
2006	36	35	394	875
2007	79	27	237	763
2008	352	68	512	639
2009	251	n/a	347	913
2010	n/a	n/a	356	732

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence is essential to Kivalina’s residents, sustaining them economically, nutritionally, and culturally. Popular subsistence fishing areas include the Kivalina River and Wulik River watersheds, as well as coastal areas of the Chukchi Sea. According to ADF&G household surveys conducted in 2008, 34% of households reported participating in salmon subsistence activities in 2007, 67% reported participating in marine mammal subsistence activities, 7% reported participating in marine invertebrate subsistence activities, and 79% reported participating in non-salmon fish subsistence activities (Table 12). In terms of subsistence resource use, 98% of households reported using fish and 93% reported using marine mammals in 2007.²⁷⁰

Broken down by species, most (45%) households surveyed in 2008 reported using chum salmon in 2007, followed by pink (19%), coho (10%), and Chinook (7%) salmon. Also in that year, an estimated 2,406 pounds of chum salmon were harvested, followed by an estimated 502 pounds of Chinook, 251 pounds of pink, and 33 pounds of coho salmon. Data regarding

²⁷⁰ Magdanz, J.S., N. S. Braem,, B. C. Robbins,, and D. S. Koster. 2010. Subsistence Harvests in Northwest Alaska, Kivalina and Noatak, 2007. Alaska Dept. of Fish and Game Technical Paper No. 354. Retrieved September 25, 2012 from: <http://www.subsistence.adfg.state.ak.us/techpap/TP354.pdf>.

subsistence salmon permits issued by ADF&G are largely unavailable, with only limited data reported in 2008. In terms of non-salmon fish, 93% of households surveyed in 2008 reported using Dolly Varden in 2007, followed by saffron cod (81%), whitefish (40%), sheefish (36%), Arctic grayling (33%), Arctic cod (31%), northern pike (17%), and burbot (14%). Overall, an estimated 75,332 to 78,780 lbs of non-salmon fish were harvested in 2007.^{271,272} Between 2003 and 2010, no residents were issued Subsistence Halibut Registration Certificates (SHARC) by NMFS (Table 14).

Marine mammals accounted for the largest part of Kivalina's subsistence harvest in 2007. In that year, 126,002 lbs of marine mammals were harvested, accounting for 49% of the total community subsistence harvest reported for that year. In that year, most (88%) households reported using beluga whale, followed by bearded seal (83%), bowhead whale (64%), ringed seal (48%), walrus (45%), spotted seal (5%), and ribbon seal (2%).²⁷³ For species listed in Table 15, an estimated total of 78 beluga whales, 6 walrus, and 2 polar bears were harvested between 2000 and 2010. Most beluga whale harvests occurred in 2000 (44) and 2007 (22).

Overall, 10 species accounted for 95% of the edible weight harvested by subsistence resources (most of which were aquatic species). This included an estimated 229 bearded seals, 20,527 Dolly Varden, 268 caribou, 22 beluga whale, 25,824 saffron cod, 71 ringed seals, 490 gallons of cloudberry (salmonberry), 401 chum salmon, 357 gallons of crowberry, and 4 moose.²⁷⁴

In terms of availability of aquatic resources, 26% of households reported not "getting enough" marine mammals, specifically bearded seals, walrus, bowhead whales, and beluga whales. According to ADF&G subsistence harvest records (Tables 15), an estimated 50 beluga whales and 6 walrus were harvested between 2000 and 2010; however, these estimates were not consistent with the 2008 ADF&G household survey.

²⁷¹ Ibid.

²⁷² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

²⁷³ Ibid.

²⁷⁴ Ibid.

Table 12. Subsistence Participation by Household and Species, Kivalina: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	34%	n/a	67%	7%	79%	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kivalina: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	87	75,332
2008	1	1	1	n/a	n/a	n/a	22	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kivalina: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kivalina: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	44	n/a	1	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	3	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	1	n/a	n/a	n/a	n/a	n/a	n/a
2005	2	n/a	2	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	22	n/a	n/a	2	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	1	n/a	2	n/a	n/a	n/a	n/a
2010	5	n/a	1	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kotzebue (KAWT-zuh-byoo)



People and Place

*Location*²⁷⁵

Kotzebue is on the Baldwin Peninsula in Kotzebue Sound, on a 3-mile long spit, which ranges in width from 1,100 to 3,600 ft. It is located near the discharges of the Kobuk, Noatak, and Selawik Rivers, 549 air miles northwest of Anchorage and 26 miles above the Arctic Circle. Kotzebue is located in the Kotzebue Recording District. The area encompasses 27.0 square miles of land and 1.7 square miles of water. Kotzebue was incorporated in 1958 and is under the jurisdiction of the Northwest Arctic Borough.

*Demographic Profile*²⁷⁶

In 2010, there were 3,201 residents in Kotzebue, ranking it 34th largest of 352 total Alaskan communities with recorded populations that year (Table 1). Overall between 1990 and 2010, the population increased by 16.4%. Between 2000 and 2009, there was an average annual growth rate of 0.21%, which was slightly under the statewide average of 0.75% and indicative of slight growth over those years. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that the permanent population of Kotzebue in 2010 was 3,270. In that year, the estimated seasonal or transient population was 400. Community leaders reported that one average, seasonal residents live in Kotzebue between April and October, with the population peaking June through September. However, seasonal population peaks do not appear to be driven by employment in fisheries sectors.

Kotzebue is traditionally an Inupiat Eskimo community. In 2010, 73.6% of residents identified themselves as American Indian or Alaska Native, compared to 71.2% in 2000; 16.0% identified themselves as White, compared to 19.5% in 2000; 1.2% identified themselves as Asian, compared to 1.8% in 2000; 0.9% identified themselves as Black or African American, compared to 0.3% in 2000; 0.3% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.1% in 2000; 7.6% identified themselves as two or more races, compared to 6.4% in 2000; and 0.4% identified themselves as some other races, compared to 0.8% in 2000. In addition, 1.3% of residents identified themselves as Hispanic or Latino in 2010, compared to 1.2% in 2000. Further information regarding racial and ethnic trends can be found in Figure 1.

²⁷⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁷⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

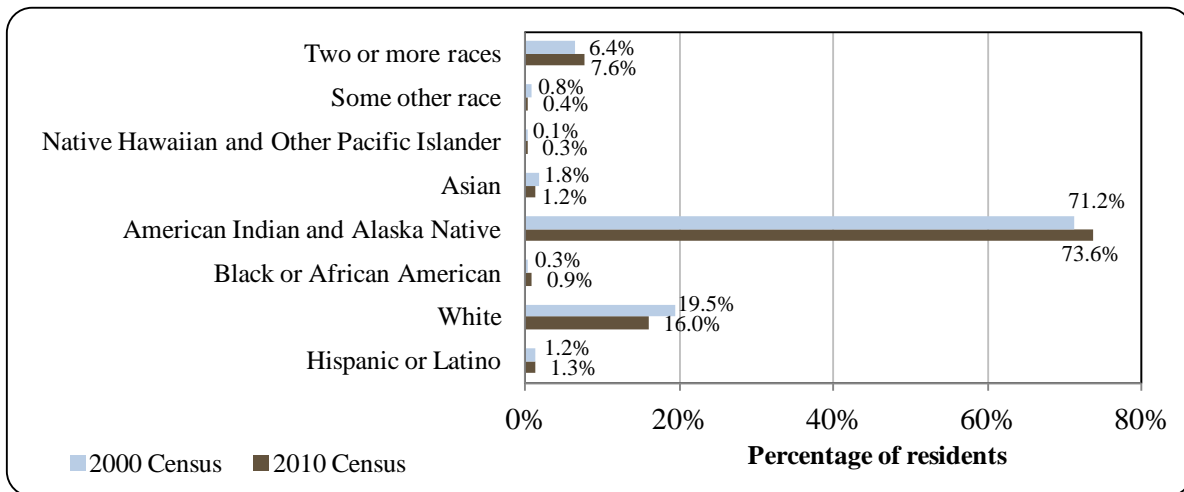
Table 1. Population in Kotzebue from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	2,751	-
2000	3,082	-
2001	-	3,059
2002	-	3,075
2003	-	3,068
2004	-	3,142
2005	-	3,123
2006	-	3,105
2007	-	3,121
2008	-	3,124
2009	-	3,154
2010	3,201	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kotzebue: 2000-2010 (U.S. Census).

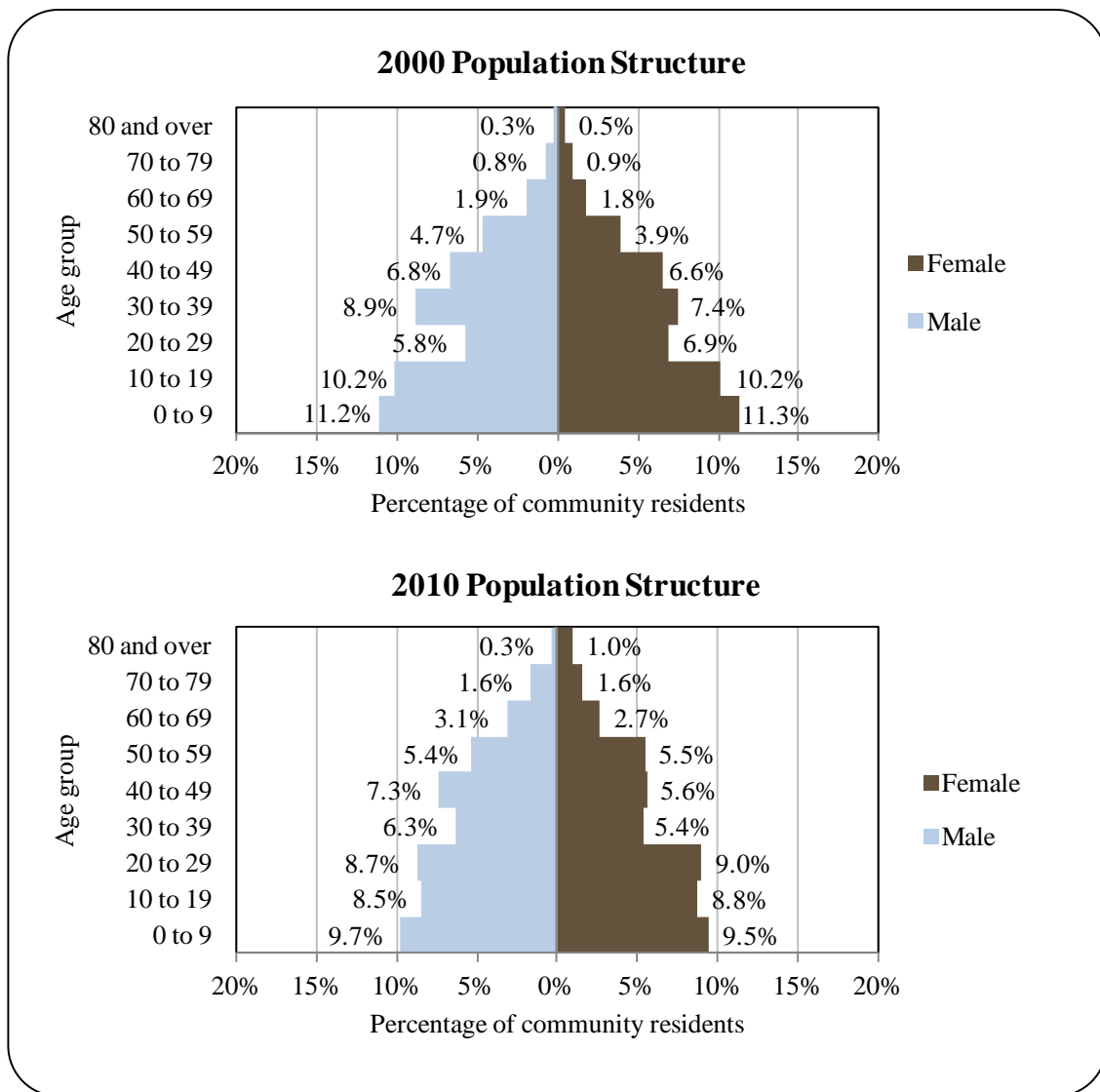


In 2010, the average household size in Kotzebue was 3.31, compared to 3.50 in 1990 and 3.40 in 2000. In that year, there were a total of 1,160 housing units, compared to 911 in 1990 and 1,007 in 2000. Of the households surveyed in 2010, 38% were owner-occupied, compared to 39% in 2000; 47% were renter-occupied, compared to 50% in 2000; 9% were vacant, compared to 7% in 2000; and 8% were occupied seasonally, compared to 5% in 2000. In addition, 47 residents were living in group quarters in 2010, compared to 62 in 2000.

In 2010, the gender distribution of Kotzebue was 51.0% male and 49.0% female. This was similar to both the gender distribution statewide (52.0% male, 48.0% female) and distribution in 2000 (50.5% male, 49.5% female). The median age that year was 27.2 years, which was lower than the statewide median of 33.8 years, but higher than the 2000 median of 25.9 years.

Compared with 2000, the population structure in 2010 was somewhat more constricted. In that year, 36.5% of residents were under the age of 20, compared to 42.9% in 2000; 10.3% were over the age of 59, compared to 6.2% in 2000; 35.5% were between the ages of 30 and 59, compared to 38.3% in 2000; and 17.7% were between the ages of 20 and 29, compared to 12.7% in 2000. The increase in older age brackets with a subsequent decrease in younger age brackets reflects an aging population.

Figure 2. Population Age Structure in Kotzebue Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution by age cohort continued to be relatively even between 2000 and 2010. In that year, the greatest absolute gender difference occurred within the 40 to 49 age range (7.3% male, 5.6% female), followed by the 30 to 39 (6.3% male, 5.4% female) and 80 and over (0.3% male, 1.0% female) age ranges. Of those three, the greatest relative gender difference occurred within the 80 and older range.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²⁷⁷ estimated that 83.2% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 6.7% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 10.1% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 24.2% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 9% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 8.6% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Archaeological findings in northwest Alaska indicate that people have continuously occupied the Kotzebue Sound area for the past 4,000 years. Evidence from the oldest sites show that humans were in the area 6,000 years ago, and perhaps as early as 8,000 to 10,000 years ago. Two cultures can be linked with continuous occupation of the Kotzebue Sound area: the Arctic Small Tool tradition (4,200 to 1,000 years ago) and Northern Maritime tradition (1,400 years ago to present). The area near present day Kotzebue has been occupied as a village for the past 600 years. The oldest excavated Kotzebue site is dated at 1400 C.E.²⁷⁸

The permanent settlement of *Kikitaruk* was unusual for its time, in that most settlements were semi-permanent as most people of the area followed migratory caribou herds. But the coastal resources of the area allowed for permanent settlement, and *Kikitaruk* established itself as a regional trading hub. Centuries before European contact, *Kikitaruk* was a busy center of trading activities and a stopping point for trade routes throughout the Arctic linking Siberian Chukchi and northern MacKenzie Eskimos and Canadian Athabascans.²⁷⁹

In the first half of the 19th century, the Kotzebue territory of *Qikiqtagrumiut* was a group of regional winter settlements, focused around a larger settlement located south of present-day Kotzebue. The estimated population of the *Qikiqtagrumiut* was 375 as of 1840. *Sisualik*, located on a spit 10 miles northwest of Kotzebue, was the site of the largest Eskimo fair in the World; attracting 2,000 or more people from throughout northwest Alaska and the Asiatic mainland. The fair, peaking in July, included feasts, dancing, games, and trade. Interior peoples traded furs, jade, salmon skin clothing, and birchbark baskets for muktuk, seal oil, ivory, and walrus hides

²⁷⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁷⁸ Georgette, S., and H. Loon. 1993. Subsistence Use of Fish and Wildlife in Kotzebue, a Northwest Alaska Regional Center. Technical Paper No. 167. Alaska Dept. of Fish and Game. Retrieved August 22, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp167.pdf>.

²⁷⁹ Alaska State Housing Authority. (1971). *Kotzebue, Alaska Comprehensive Development Plan*. Retrieved August 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kotzebue-CP-1971.pdf>.

from coastal peoples. Tobacco, metal implements, and firearms reached Sisualik through trade routes from Russian before Europeans arrived in the region. The Great Famine of 1882-84 decimated the Qikiqtagrmiut. Other factors, including introduced diseases, loss of autonomy, and Euro-American influences also contributed towards deteriorating traditional societies.²⁸⁰

The first explorer to the Kotzebue Sound was Otto von Kotzebue in 1816. Europeans continued to periodically visit the Kotzebue Sound area during the first half of the 19th century, although there was little interaction with the Qikiqtagrmiut. After 1850, foreign traffic increased in the area as commercial interests in whales, ivory, and fur intensified. The period between 1880 and 1900 was a time of significant change in the region, as famine and disease severely eroded traditional life. In 1897, the Religious Society of Friends missionaries arrived, establishing living quarters, schools, and churches in what would be present-day Kotzebue. In 1898, the discovery of hold along the Kobuk River brought thousands of prospectors to Kotzebue. Inupiaq residents earned cash from miners by building boats and dog sleds, provided meat and dried fish, hauled mail and freight, and manufactured clothing. By 1900, most of the miners had left, most without realizing their sought after fortune.²⁸¹

In 1909, the resident population of Kotzebue was 193. The community's population has grown since 1900, with rapid growth occurring immediately after World War II during the construction of the Air Base White Alice and Distant Early Warning system sites. The population went from 372 in 1939, to 623 in 1950, and 1,290 in 1960.²⁸²

The passage of the Alaska Native Claims Settlement Act (ANCSA) in 1971 greatly transformed Kotzebue. The Kikiktagruk Inupiat Corporation received title to much of the Baldwin Peninsula, as did the NANA Regional Corporation. In the late 1980s, Kotzebue continued to grow as a regional transportation and commercial hub. Nearly all goods and services in the region are supplied from the community.²⁸³

Within the core of Kotzebue, a historic district is mentioned. Official designation on the National Register of Historic Places (NRHP) has not been submitted.²⁸⁴ The Cape Krusenstern Archeological District National Monument, located in the vicinity of Kotzebue, is listed on the NRHP.²⁸⁵

Natural Resources and Environment

Kotzebue is located in the transitional climate zone, which is characterized by long, cold winters and cool summers. The average low temperature during January is -12 °F (-24 °C); the average high during July is 58 °F (14 °C). Temperature extremes have been measured from -52 to 85 °F (-47 to 29 °C). Annual snowfall averages 40 inches, with total precipitation of 9 inches per year. Kotzebue Sound is ice-free from early July until early October.

Kotzebue is surrounded by Cape Krusenstern National Monument, Noatak National Preserve, Kobuk Valley National Park, and Selawik National Wildlife Refuge. Kotzebue is

²⁸⁰ See footnote 278.

²⁸¹ Ibid.

²⁸² The City of Kotzebue, Donahue, J., McClintock, B., and Kotzebue IRA Council. (2000). *City of Kotzebue Comprehensive Plan*. Retrieved August 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kotzebue-CP-2000.pdf>.

²⁸³ See footnote 278.

²⁸⁴ See footnote 282.

²⁸⁵ National Park Service. (n.d.). *National Register of Historic Places*. Retrieved August 17, 2012 from: <http://nrhp.focus.nps.gov/natregsearchresult.do?fullresult=true&recordid=1>.

located on the northern end of the Baldwin Peninsula. The Baldwin Peninsula is composed primarily of unconsolidated Quaternary sediments. These sediments are mostly eolian, glacial, and marine in origin. Illinoian glaciers deposited till and outwash over marine sediments. Loess was deposited over the glacier sediments during glacial retreat. Sea level rose, and in some areas, marine sediments were deposited over the eolian silts. Late Wisconsin and Holocene sediments are primarily silts, clays, and fine sands; with the oldest sediments exposed on coastal bluffs. An exploratory petroleum well drill 10 miles east of Cape Blossom hit bedrock at a depth of 900 feet. The nearest bedrock outcrops at sea level are on the Choris Peninsula to the southeast, at Ekichuk Lake on Hotham Inlet to the northeast, and at Cape Krusenstern Lagoon northwest of the project site. The Baldwin Peninsula is located within a zone of continuous permafrost. The depth of the bottom of permafrost is probably between 200 and 300 feet. During the summer, the active permafrost layer extends 2 to 4 inches beneath the surface.²⁸⁶

The prominent vegetation type on the Baldwin Peninsula is moist coastal tundra. Continuous, uniformly developed cotton grass tussocks with sparse groups of other sedges and dwarf shrubs dominate. Few trees grow in the area, particularly near Kotzebue. However, some stands can be found in the Noatak and Kobuk River drainages, and driftwood is scattered along the coast. Kotzebue residents collected various edible plants including greens, berries (cranberries, salmon berries, blue berries, and black berries), and roots. Cotton grass, wild rhubarb, and wild onion, wild peas, willow leaves, and sprouts are also traditionally gathered.²⁸⁷

Terrestrial mammals in the area include moose, caribou, bear, wolves, fox, lynx, mink, marten, wolverine, land otter, beaver, and muskrat. Marine mammals include bearded seal, ringed seal, walrus, beluga whale, and other whales. There is a historic area for taking seal located near the entrance to Hotham Inlet from Kotzebue. Polar bears rarely venture as far south as Kotzebue, but they have been spotted in the area. The region is home to more than 50 species of fish, including Arctic char, whitefish, Dolly Varden, sheefish, Northern pike, grayling, herring, cod, and all five species of Pacific salmon. Birds are present in the area between May and September. Most birds are migratory because of Kotzebue's proximity to Asian and North American flyways.²⁸⁸

The primary mineral development project on the Baldwin Peninsula is the Red Dog Mine, which is the world's largest zinc and lead mine. Mineral deposits are located in the DeLong Mountains, which are part of the Brooks Range. The Kobuk River Valley contains many placer gold deposits. On Jade Creek, gold and jade deposits can be found. The Ambler Mining District, east of Kotzebue, has vast deposits of jade, copper, and other minerals. The Noatak District, north of Kotzebue, contains gold deposits at Lucky Six Creek. The Selawik District, southeast of Kotzebue, has one reported gold operation on Shovel Creek, which was mined until shortly after World War II. Finally, the Shungnak District, east of Kotzebue, contains many placer gold deposits throughout several drainages.²⁸⁹

Environmental hazards present in the community include flooding, erosion, severe weather, and earthquakes. In general, most hazards are area wide. Primary flooding and erosion hazards come from storm surge flooding, wave and slough erosion, sea ice, and permafrost melt. Kotzebue is located on the coast, and is therefore susceptible to significant storm surge flooding.

²⁸⁶ See footnote 282.

²⁸⁷ Ibid.

²⁸⁸ Ibid.

²⁸⁹ Stoops, L. (2004). *Northwest Arctic Borough Comprehensive Economic Development Strategy*. Retrieved August 20, 2012 from: <http://www.commerce.state.ak.us/dca/plans/NorthwestArcticBorough-EDP-2004.pdf>.

Permafrost and erosion place strains on transportation and utility infrastructure, as well as constraints on community expansion. Potential effects of climate change include increased flood events, sea level rise, offshore ice retreat, and more severe coastal erosion. Sea-ice poses unique hazards to submerged infrastructure. Phenomenon such as strudel scour and ice gouging can potentially damage underwater utilities. In addition, offshore drilling platforms and shoreside facilities can become susceptible to ice overrides and pressure ridging.

Climate change is expected to alter seal levels, change wind and deep-ocean circulation patterns, marine resource productivity, species distribution, and outbreaks of disease and harmful algal blooms. Permafrost melt is expected to result in land subsidence, which may impact local infrastructure; especially in poorly drained areas. Storm systems produce high winds that generate large waves and currents. Storm surges can temporarily raise water levels by as much as 23 feet, increasing the vulnerability of shorelines and floodplains to sediment and nutrient migrations. The retreat of sea ice facilities storm damage to the shorelines of the Baldwin Peninsula to the extent that communities may be forced to relocate. Deposition, resulting from storm surges, can alter drainage hydrography and reduce channel capacity; increasing flooding and bank erosion. Floodwaters pose environmental health hazards through the dispersal of harmful materials or the contamination of water sources. In addition to storms, extreme weather can also include extreme cold temperatures and heavy snow accumulations. Winter storms can produce temperatures of -40 to -60 °F. Heavy snow and ice storms impact transportation and supply networks. While the risk is present, the Kotzebue area has a relatively low risk of earthquakes. There is no historical precedence of earthquakes impacting the community. In addition, the probability of secondary impacts from earthquakes is also low.²⁹⁰

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Kotzebue as of 2010. However, Kotzebue is a regional center, transportation hub, and former military site. As such, there are many smaller, ongoing cleanup projects active in the community.²⁹¹

Current Economy²⁹²

Kotzebue is a service and transportation center for many villages in the Northwest Arctic Borough. Due to its location at the confluence of three river drainages, Kotzebue is the transfer point between ocean and inland water shipping and also the air transport center for the region. Activities related to oil and mineral exploration and development have contributed to the economy. The majority of income is directly or indirectly related to government employment, including the School District, Maniilaq Association, NANA Corporation, and City and Borough governments. In a survey conducted by the AFSC in 2011, community leaders reported that Kotzebue's resource-based economy is reliant on mining, fishing, and sport hunting/fishing.

In 2010,²⁹³ the estimated per capita income was \$23,067 and the estimated median household income was \$66,908, compared to \$18,289 and \$57,163 in 2000, respectively.

²⁹⁰ City of Kotzebue; WHPacific, Inc.; and Bechtol Planning and Development. (2008). *City of Kotzebue, Alaska Local Hazards Mitigation Plan*. Retrieved August 21, 2012 from: http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Kotzebue_LHMP.pdf.

²⁹¹ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved August 21, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

²⁹² Unless otherwise noted, all monetary data are reported in nominal values.

However, after adjusting for inflation by converting 2000 values into 2010 dollars,²⁹⁴ the real per capita income (\$24,050), and real median household income (\$75,169) indicate that while individual earnings remained unchanged, household earnings declined. In 2010, Kotzebue ranked 124th of 305 communities from which per capita income was estimated, and 55th of 299 communities from which median household income was estimated.

However, Kotzebue's small population size may have prevented the ACS from accurately portraying economic conditions.²⁹⁵ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$58.4 million in total wages in 2010.^{296, 297} When matched with the 2010 decennial population, the per capita income equals \$18,245, which is slightly less than the 2010 ACS estimate.

According to 2006-2010 ACS estimates, 70.8% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 14.7%, compared to an estimated 5.9% statewide; and an estimated 15.3% of residents lived below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. In addition, an estimated 59.3% worked in the private sector, an estimated 36.5% worked in the public sector, an estimated 3.8% were self-employed, and an estimated 0.4% were unpaid family workers. Based on unemployment insurance claimants, the DOLWD estimated that the local unemployment rate was 11.3% in 2010.

By industry, the 2006-2010 ACS estimated that most (40.7%) employed residents worked in education services, health care, and social assistance sectors in 2010; followed by retail trade sectors (11.2%); transportation, warehousing, and utilities sectors (11.2%); and public administration sectors (11.1%). Also in that year, an estimated 4.6% of employed residents worked in sectors which included fisheries. Between 2000 and 2010, significant proportion gains were seen in public administration, education services, health care and social assistance sectors. Conversely, significant proportional declines were seen in professional, scientific, management, administrative, and waste management sectors (Figure 3).

²⁹³ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁹⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁹⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁹⁶ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²⁹⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 3. Local Employment by Industry in 2000-2010, Kotzebue (U.S. Census).

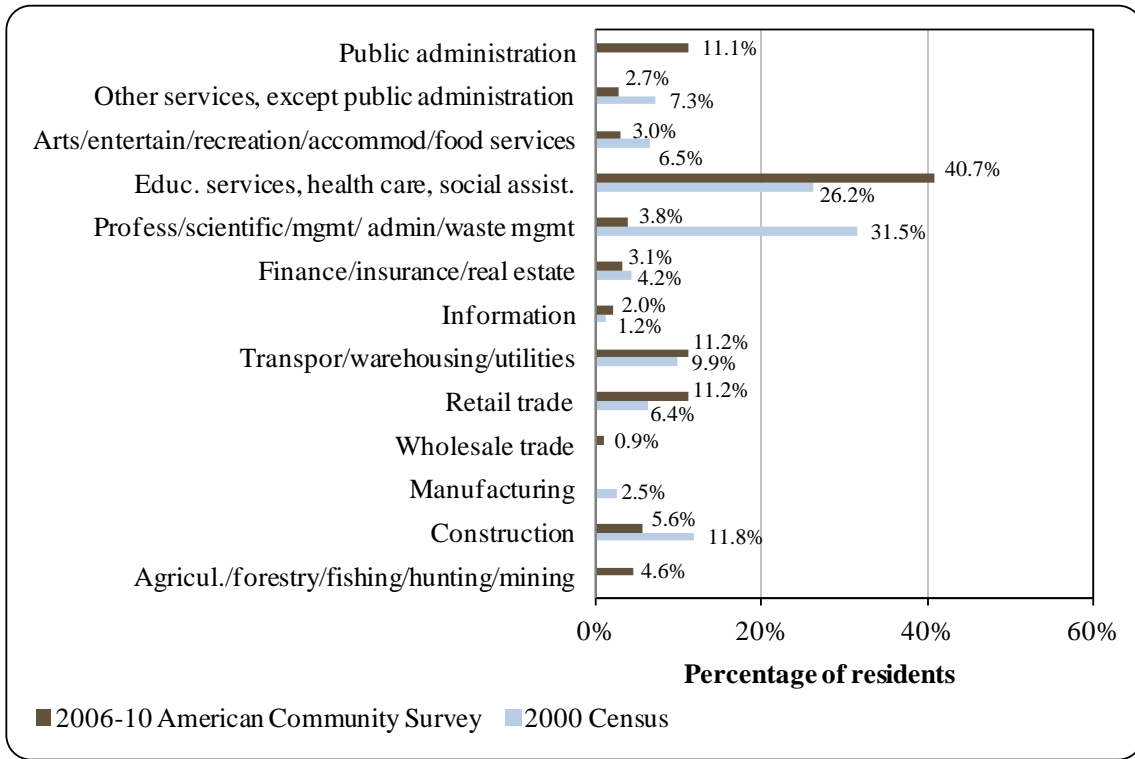
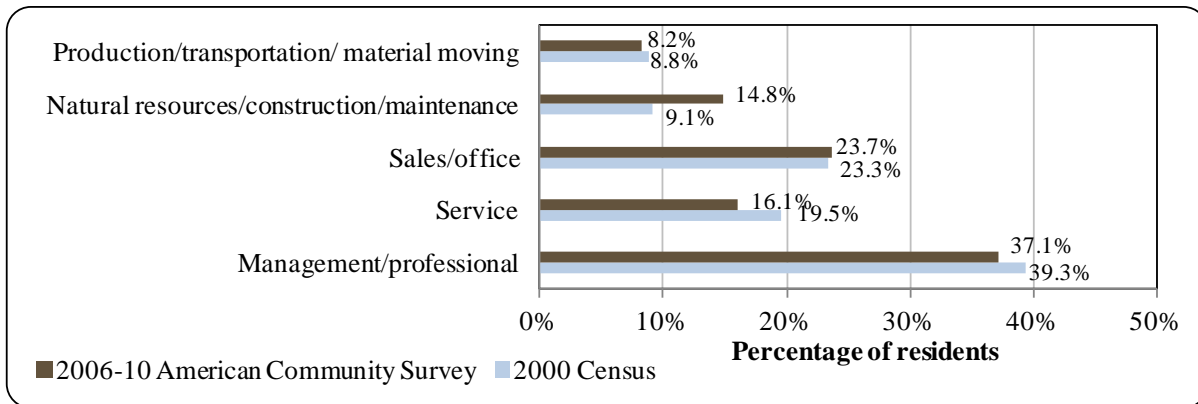


Figure 4. Local Employment by Occupation in 2000-2010, Kotzebue (U.S. Census).



By occupation type, the 2006-2010 ACS estimated that most (37.1%) employed residents held management or professional positions; followed by sales or office positions (23.7%); service positions (16.1%); natural resources, construction, or maintenance positions (14.8%); and production, transportation, or material moving positions (8.2%). For the most part, no significant proportional changes occurred between 2000 and 2010, although there was a modest proportional increase in the number of natural resources, construction, and maintenance positions. However, the proportion attributed to fisheries positions cannot be determined. Another source of occupation data is the ALARI database. According 2010 ALARI estimates,

most (26.9%) residents worked in educational and health service sectors; followed by local government sectors (23.0%); and trade, transportation, and utilities sectors (16.8%) (Figure 4).²⁹⁸

Governance

Kotzebue is a second-class city located in the Northwest Arctic Borough. Incorporated in 1958, the city has a manager, or “Strong Mayor” form of government. There is a 7-member city council, 11-member school board, 7-member planning commission, and 6 municipal employees. There is also a U.S. Bureau of Indian Affairs recognized tribal government. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Kotzebue is the NANA Regional Corporation, and the local ANCSA-chartered non-profit is the Maniilaq Association. The ANCSA-chartered village corporation is the Kikiktagruk Inupiat Corporation.

There is an Alaska Department of Fish and Game (ADF&G) office located in Kotzebue. The closest National Marine Fisheries Service (NMFS) office is located in Anchorage 549 miles southeast. The closest U.S. Bureau of Citizenship and Immigration Services is located in Nome, 181 miles southwest.

The City collects a 6% sales tax, 6% accommodations tax, 6% alcohol tax, and 6% gaming tax. In 2010, the total municipal budget was \$10.77 million, compared to \$7.63 million in 2000; an increase of 9.2% after adjusting for inflation.²⁹⁹ Municipal budgets steadily increased between 2000 and 2010, peaking in 2010. Also in that year, sales tax revenues accounted for 29.9% of the municipal budget, compared to 32.3% in 2000. In addition, state allocated Community Revenue Sharing accounted for 2.4% of the municipal budget in 2010, compared to 1.3% from State Revenue Sharing in 2000. State and federal fisheries-related grants awarded to Kotzebue between 2000 and 2010 included \$56,099 for Swan Lake Harbor improvements, \$462,000 for Kotzebue Sound chum salmon enhancement projects, \$45.2 million for DeLong Mountain Harbor construction, and \$27,000 for a fish processor business plan. Information regarding municipal finances can be found in Table 2.

Infrastructure

*Connectivity and Transportation*³⁰⁰

Air is the primary, year-round means of transportation for residents of Kotzebue. The state-owned Ralph Wien Memorial Airport supports daily jet service to Anchorage and several air taxis to the region’s villages provided by Alaska Airlines, Bering Air, ERA Alaska, and Ryan Air Service. The airport has a 5,900-ft-long by 150-ft-wide main paved runway and 3,876-ft-long by 90-ft-wide crosswind gravel runway. A seaplane base is also operated by the state in Kotzebue. As of June 2012, roundtrip airfare from Anchorage to Kotzebue costs \$462.³⁰¹

²⁹⁸ Ibid.

²⁹⁹ Inflation calculated using 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

³⁰⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁰¹ Airfare calculated using lowest fare. Retrieved November 22, 2011 from www.travelocity.com.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kotzebue from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$7,630,055	\$2,462,302	\$101,700	\$27,000
2001	\$8,245,475	\$2,438,736	\$115,000	\$12,700,000
2002	\$8,349,876	\$2,379,449	\$126,000	\$32,500,000
2003	\$7,111,582	\$2,405,615	\$127,000	\$462,000
2004	\$8,291,588	\$2,423,193	-	n/a
2005	\$7,712,663	\$2,616,005	-	n/a
2006	\$9,419,213	\$2,727,047	-	n/a
2007	\$9,429,107	\$2,790,336	-	n/a
2008	\$10,131,509	\$2,589,153	-	n/a
2009	\$10,446,645	\$2,930,225	\$257,562	n/a
2010	\$10,770,514	\$3,255,000 ⁶	\$255,470	\$56,099

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

The shipping season lasts 100 days, from early July to early October, when the sound is ice-free. Due to river sediments deposited by the Noatak River 4 miles above Kotzebue, its harbor is shallow. Deep draft vessels must anchor 15 miles out, and cargo is lightered to shore and warehoused. Crowley Marine Services operates shallow draft barges to deliver cargo to area communities. Water taxi services are not available. There are 26 miles of local gravel road used by cars, trucks, and motorcycles during the summer. Snowmobiles are preferred in winter for local transportation.

*Facilities*³⁰²

Electricity in Kotzebue is provided by a diesel plant owned by the Kotzebue Electric Association. Kotzebue also uses ten 50-kilowatt wind turbines for supplemental electrical generation. The City operates water and sewage systems. Water is supplied by the 150-million-gallon Vortac Reservoir, located one and a half miles from the city. Water is then treated and stored in a 1.5-million-gallon tank. Before circulation in the water mains, the water is heated with a waste heat recovery system at the electric plant. A washeteria is privately operated within the community. Piped sewage is treated in a 32-acre zero discharge facultative lagoon west of the airport. Around 80% of homes are fully plumbed, and 521 homes are served by the City's water

³⁰² See footnote 300.

system. A transfer station and Class 2 permitted landfill with balefill is available. Recycling and hazardous waste disposal are also provided.

A public library, recreational and entertainment center, food bank, and Boys & Girls Club are also available in the community. Safety services are provided by the city police department and the state trooper post in Kotzebue itself. The City also maintains its own volunteer fire department with additional fire and rescue services provided by the Maniilaq Air Ambulance and NANA Search and Rescue. Visitor accommodations are provided by Bibber's Bed and Breakfast, Bison's Bed and Breakfast, and the Nullagvik Hotel. The community is also home to the NANA Museum.

With regard to fisheries-related infrastructure, Alaska's Department of Community and Rural Affairs (DCRA) community profile of Kotzebue states that the harbor is shallow and cargo from deep raft vessels must be lightered to shore. DCRA also reports that no public dock space exists for permanent and transient vessels to moor at. However, in the 2011 AFSC survey, community leaders reported that a barge landing area exists in the community and there are plans to construct new dock space for permanent, transient or public moorage in the next 10 years. The current dock infrastructure is serviced by electricity and water although no fuel tanks exist at the dock. Within the next 10 years, Kotzebue hopes to make improvements to its existing dock structure and construct both dry dock space and haul out facilities, although haul out facilities for small boats (less than 60 tons) already exist in the community. Community leaders indicate that limited boat repair and fisheries-related businesses are available in Kotzebue, and that residents typically travel to nearby cities of Nome, Anchorage, and Fairbanks to access fisheries-related businesses and services.

*Medical Services*³⁰³

The Maniilaq Medical Health Center provides residents with basic medical services. The hospital is a qualified Acute Care facility. Long-term care is provided at the Kotzebue Senior Center, and specialized care is provided at the Maniilaq Alcohol Program's Maniilaq Camp and the Lake Street House, both operated by the Maniilaq Association. Emergency Services have limited highway coastal and airport access, and are provided by 911 Telephone Service and volunteers.

*Educational Opportunities*³⁰⁴

As of 2011, there were two schools in Kotzebue. The June Nelson Elementary School had 388 students enrolled and 23 teachers. The Kotzebue Middle/High School had 298 students enrolled and 24 teachers.

³⁰³ Ibid.

³⁰⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Kotzebue residents have been fishing in the regions for at least 600 years. Marine mammals such as seal and beluga are of primary importance, and their capture is always a cause for celebration. Salmon, whitefish, sheefish, and Arctic char are major fish species sought for subsistence. They are all used commercially by the Kotzebue Sound Area Fisheries Cooperative.³⁰⁵ The Cooperative owns and operates a local processing plant and acts as a catalyst for organizing local fishermen to work together in commercial fishing. In a survey conducted by the AFSC in 2011, community leaders reported that the commercial gillnet salmon season typically runs from July 12 to August 15. In addition, community leaders reported an increase in the number of vessels shorter than 35 ft, compared to 2005.

The summer chum season runs from July through August, and is focused on Noatak and Kobuk River chum. Small numbers of sockeye, Chinook, coho, and pink salmon also occur, but their contribution to commercial harvests is negligible. Dolly Varden are at times, incidentally caught in the last weeks of the commercial salmon season.³⁰⁶

From 1914 to 1918, the Midnight Sun Packing Company operated a small cannery in the Kotzebue district and processed slightly over 100,000 fish. However, between 1918 and 1961, no commercial fishing took place. The present commercial fishery began in 1962, primarily for chum salmon. Most fishing takes place along and within a 10-mile-side channel between the Baldwin Peninsula and Sheshalik Spit. Fishing is closely regulated during the early season when most of the fish are passing through the district, bound for the Kobuk River. The commercial season is set later to harvest the large run of chum salmon to the Noatak River.³⁰⁷

Commercial catches vary from year to year due to changes in migration patterns of chum salmon. Fishing usually begins in mid-July when fishermen in small outboard skiffs fish set gillnets. Kotzebue chum salmon are of high quality and are in high demand. Fish are dressed with heads on, iced, and transported to offshore Japanese freezer ships or shipped to Anchorage or Seattle markets. Commercial fisheries for Arctic char and inconnu (whitefish) also occur. Arctic char run later than salmon, and are fished following the salmon season. Funding for the State-owned Sikusuliaq Springs Fish Hatchery on the Noatak River was discontinued in 1983. The State had invested close to \$20 million in capital improvement and operating costs of the hatchery.³⁰⁸ The hatchery closed in 1996; however, runs continued until 2000.³⁰⁹

A commercial fishery for sheefish has operated in the Kotzebue Sound since the 1960s, but it is historically small and does not contribute significantly to the local economy. In most years, sheefish quota was not met, and the fishery remained open throughout the winter.

³⁰⁵ Alaska State Housing Authority. (1971). *Kotzebue, Alaska Comprehensive Development Plan*. Retrieved August 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kotzebue-CP-1971.pdf>.

³⁰⁶ Georgette, S. and Loon, H. (1993). *Subsistence Use of Fish and Wildlife in Kotzebue, a Northwest Alaska Regional Center*. Technical Paper No. 167. Alaska Dept. of Fish and Game. Retrieved August 22, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp167.pdf>.

³⁰⁷ Stoops, L. (2004). *Northwest Arctic Borough Comprehensive Economic Development Strategy*. Retrieved August 20, 2012 from: <http://www.commerce.state.ak.us/dca/plans/NorthwestArcticBorough-EDP-2004.pdf>.

³⁰⁸ Ibid.

³⁰⁹ Eggers, D. M.; and Clark, J. H. (2006). *Assessment of Historical Runs and Escapement Goals for Kotzebue Area Chum Salmon*. Fishery Manuscript No. 06-01. Retrieved August 22, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidpdfs/fms06-01.pdf>.

Fishermen use gill setnets under ice, and most commercial catch is sold to local residents or kept for personal use.³¹⁰ No sheefish have been fished commercially since 2005.

Kotzebue is located in the Arctic Management Area and thus is not located within a Federal Statistical and Reporting Area, a Pacific Halibut Fishery Regulatory Area, or a Sablefish Regulatory Area. Kotzebue is not eligible to participate in either the Community Development Quota program or the Community Quota Entity program.

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Kotzebue does not have a registered processing plant. The closest seafood processor is located in Nome.

Attracting commercial seafood processors to Kotzebue has been difficult because of the small size and unpredictability of local fisheries, as well as depressed market conditions. Chum harvests historically have been dictated largely by market conditions; which have fluctuated greatly, resulting in low harvests numbers in many years. Commercial chum salmon harvests between 1982 and 2001 ranged from 55,907 to 521,406 with a 20 year average of 220,720 fish. Between 1997 and 2001; however, chum salmon harvests decreased significantly. While many residents held commercial salmon permits, most permits remained inactive during recent years. Permit activity was likely market-driven and in 2002, the last significant local fish buyer decided to not purchase fish in Kotzebue. In 2002 and 2003, one salmon permit holder became a licensed agent for a buyer outside of Kotzebue, and worked with other permit holders to provide product for the market. In 2004, one buyer provided a limited local market for permit holders.³¹¹ In that year, there was a fish processor operated under a combined effort by the Bering Sea Fishermen's Association and NANA Regional Corp.³¹²

Fisheries-Related Revenue

Between 2000 and 2010, there was no known fisheries-related revenue received by the community of Kotzebue, with the exception of \$475 in Shared Fisheries Business Taxes in 2006 (Table 3).

Commercial Fishing

Commercial fishing effort in Kotzebue is predominately focused on Noatak River chum salmon.³¹³ Local fish are caught in Sub-district 1 of the Kotzebue Sound District. Historical chum harvests between 1962 and 2004 averaged 201,250 fish.³¹⁴ In 2000, 144 residents held 147 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). The number of CFEC permits held by residents peaked in 2005 at 157. In 2010, 155 residents, or 4.8% of the population, held 148 CFEC permits. Of the CFEC permits held in 2010, 97% were for salmon, compared to 96% in 2000; 1% were for crab, compared to 1% in 2000; 1% were for

³¹⁰ See footnote 306.

³¹¹ See footnote 309.

³¹² See footnote 307.

³¹³ Alaska Dept. of Fish and Game. (n.d.). *Northwest Drainages Management Area*. Retrieved August 22, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorNorthwest.moreoverview>.

³¹⁴ See footnote 309.

herring, compared to 0% in 2000; and 1% were for “other” finfish, compared to 3% in 2000. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. In addition, no residents participated in federal catch share fisheries for halibut, crab, or sablefish between 2000 and 2010. Fisheries prosecuted by Kotzebue residents in 2010 included: Kotzebue gillnet salmon, Norton Sound gillnet salmon, and statewide power troll salmon.³¹⁵

Residents held 98 commercial crew licenses in 2010, compared to 87 in 2000; marking a decadal peak for number of crew licenses held in the community. In addition, residents held majority ownership of four vessels that year, compared to six in 2000. Fisheries participation varied significantly between 2000 and 2010. In 2010, 40% of CFEC permits held were actively fished, compared to 38% in 2000. Permit activity was at its lowest 2001 and 2002 at 2% of permits fished. Permit activity varied by fishery in 2010, from 41% of salmon permits fished, to 0% of crab, herring, and “other” finfish permits. “Other” finfish permits were activity fished between 2001 and 2005, while crab permits were only actively fished in 2005. No herring permits were actively fished between 2000 and 2010.

No landings were reported in Kotzebue between 2000 and 2010, although there were between one and four fish buyers registered there. Landings were reported in the community in 2001, 2004, 2005, 2006, and 2007. Total landings for those years are considered confidential, with the exception of 2005. In that year, 626,418 pounds of seafood were landed, valued at \$129,304 ex-vessel. Landings by species in Kotzebue are considered confidential. Landings reported by residents between 2000 and 2010 are also considered confidential. Further information regarding commercial fishing trends can be found in Tables 4 through 10.

³¹⁵ Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kotzebue: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$475	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	n/a	n/a	n/a	n/a	n/a	n/a	\$475	n/a	n/a	n/a	n/a
Total municipal revenue⁵	<i>\$7.63 M</i>	<i>\$8.25 M</i>	<i>\$8.35 M</i>	<i>\$7.11 M</i>	<i>\$8.29 M</i>	<i>\$7.71 M</i>	<i>\$9.42 M</i>	<i>\$9.43 M</i>	<i>\$10.13 M</i>	<i>\$10.45 M</i>	<i>\$10.77 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports in its annual municipal budgets. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kotzebue: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	1	0	3	2	2	4	3	3	2	1	2
	Fished permits	0	0	0	0	0	1	0	0	0	0	0
	% of permits fished	0%	n/a	0%	0%	0%	25%	0%	0%	0%	0%	0%
	Total permit holders	1	0	3	2	2	4	3	3	2	1	2
Other shellfish (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	1	1	1	1	1	1	1	1	1

Table 4 cont'd. Permits and Permit Holders by Species, Kotzebue: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	4	5	5	6	5	6	2	3	1	1	1
	Fished permits	0	1	1	1	1	2	0	0	0	0	0
	% of permits fished	0%	20%	20%	17%	20%	33%	0%	0%	0%	0%	0%
	Total permit holders	4	5	5	6	5	5	2	3	1	1	1
Salmon (CFEC) ²	Total permits	141	142	142	143	144	146	149	147	145	149	144
	Fished permits	56	58	2	2	37	39	42	46	47	60	59
	% of permits fished	40%	41%	1%	1%	26%	27%	28%	31%	32%	40%	41%
	Total permit holders	141	148	141	143	146	145	151	150	148	152	154
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>147</i>	<i>147</i>	<i>151</i>	<i>152</i>	<i>152</i>	<i>157</i>	<i>155</i>	<i>154</i>	<i>149</i>	<i>152</i>	<i>148</i>
	<i>Fished permits</i>	<i>56</i>	<i>59</i>	<i>3</i>	<i>3</i>	<i>38</i>	<i>42</i>	<i>42</i>	<i>46</i>	<i>47</i>	<i>60</i>	<i>59</i>
	<i>% of permits fished</i>	<i>38%</i>	<i>40%</i>	<i>2%</i>	<i>2%</i>	<i>25%</i>	<i>27%</i>	<i>27%</i>	<i>30%</i>	<i>32%</i>	<i>39%</i>	<i>40%</i>
	<i>Permit holders</i>	<i>144</i>	<i>151</i>	<i>144</i>	<i>145</i>	<i>148</i>	<i>149</i>	<i>153</i>	<i>152</i>	<i>149</i>	<i>152</i>	<i>155</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kotzebue: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kotzebue ²	Total Net Pounds Landed in Kotzebue ^{2,5}	Total Ex-Vessel Value of Landings in Kotzebue ^{2,5}
2000	87	1	0	6	6	0	--	--
2001	87	3	0	5	4	7	--	--
2002	2	3	0	5	5	0	--	--
2003	3	2	0	4	3	0	--	--
2004	55	4	1	2	2	1	--	--
2005	51	5	1	8	8	4	626,418	\$129,304
2006	57	2	0	5	4	2	--	--
2007	51	2	0	5	3	1	--	--
2008	51	2	0	3	1	0	--	--
2009	91	2	0	3	1	0	--	--
2010	98	4	0	4	3	0	--	--

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kotzebue: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kotzebue: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kotzebue: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kotzebue: 2000-2010.

	<i>Total Net Pounds¹</i>											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Crab	--	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Crab	--	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kotzebue Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Tourism is a rapidly growing industry in Kotzebue, driven in large part to sport hunting and fishing. Tourism infrastructure has been expanding. NANA Regional Corp. opened a new 78 room hotel in Kotzebue in 2011.³¹⁶ Golden Eagle Outfitters provides guided sportfishing excursions, targeting Dolly Varden, northern pike, sheefish, Arctic grayling, and chum salmon.³¹⁷ Sheefish are a popular target for private anglers on the Kobuk River, as the river supports one of the largest sheefish populations in the world. Typically, private anglers based in Kotzebue will fly to remote locations on the Upper Kobuk to target this species. The communities of Ambler

³¹⁶ Associated Press. (2011, August 31). NANA development opens new Kotzebue hotel. *Anchorage Daily News*. Retrieved August 22, 2012 from: <http://www.adn.com/2011/08/31/2041468/nana-development-opens-new-kotzebue.html>.

³¹⁷ Golden Eagle Outfitters. (n.d.). *Kotzebue*. Retrieved August 22, 2012 from: <http://www.alaskawildernessexpeditions.com/kotzebue.html>.

and Kobuk are seasonally inundated with recreational fishermen, many of whom originate in Kotzebue or Bettles. Float excursions are a popular activity, and many large parties will spend days floating the Kobuk as far downriver as Kiana. Most sheefish sportfishing is conducted in August and September. By mid-September, most recreational fishermen on the Kobuk River fish for sheefish only as a secondary attraction, with most their efforts focused on hunting moose and caribou.³¹⁸ Dolly Varden, northern pike, Arctic grayling, burbot, lake trout, and Arctic char are also popular targets within the Kobuk River watershed.³¹⁹

No sport fish guide businesses actively operated in Kotzebue between 2000 and 2010 despite several being registered between those years. However, one sport fish guide license was issued in 2010. Also in that year, 438 sportfishing licenses were sold in the community, compared to 101 in 2000. The number of sportfishing licenses sold in the community peaked in 2010. In addition, Kotzebue residents held 389 sportfishing licenses in 2010, compared to 329 in 2000. The number of sportfishing licenses held by residents peaked in 2007 at 514. According to ADF&G Harvest Survey records, private anglers from Kotzebue have targeted all five species of Pacific salmon, rainbow trout, Dolly Varden, whitefish, burbot, Arctic grayling, northern pike, sheefish, Pacific halibut, smelt, and razor clams. In a survey conducted by the AFSC in 2011, community leaders reported that local anglers generally target pink and chum salmon, crab, shrimp, and clams. Species-specific harvest information from charter logbook records is not available for Kotzebue.

Kotzebue is located within Alaska Sport Fishing Survey Area X – Northwest Alaska, which include the drainages of Selawik, Kobuk, Noatak, Wulik, and Kivalina rivers and all saltwater in the northern half of Kotzebue Sound to and including Point Hope. Information on saltwater angler days fished for 2010 is unavailable. Otherwise, angler days fished on marine waters was insignificant between 2000 and 2009. Total saltwater angler days fished peaked in 2008 at 420 with non-Alaskan residents accounting for the majority of recreational fishing effort. In 2010, freshwater angler days fished totaled 1,088, compared to 1,401 in 2000. Total freshwater angler days fished peaked in 2003 at 1,873. Non-Alaskan residents accounted for 35.3% of freshwater angler days fished in 2010, compared to 31.3% in 2000. Overall, Alaskan residents comprise a larger portion of freshwater angler days fished than non-Alaskan residents. Information regarding recreational fishing trends can be found in Table 11.

³¹⁸ Georgette, S.; and Loon, H. (1990). *Subsistence and Sport Fishing of Sheefish on the Upper Kobuk River, Alaska*. Technical Paper No. 175. Retrieved August 22, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp175.pdf>.

³¹⁹ Alaska Dept. of Fish and Game. (n.d.). *Northwest Drainages Management Area*. Retrieved August 22, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorNorthwest.moreoverview>.

Table 11. Sport Fishing Trends, Kotzebue: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kotzebue ²
2000	0	1	329	101
2001	0	0	355	136
2002	0	0	356	83
2003	0	0	349	83
2004	0	0	345	260
2005	0	0	307	186
2006	0	1	432	329
2007	0	1	514	265
2008	0	4	419	290
2009	0	2	389	264
2010	0	1	421	438

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	14	201	438	966
2001	44	86	509	801
2002	27	15	275	973
2003	298	17	934	939
2004	115	19	450	709
2005	35	308	408	510
2006	36	35	394	875
2007	79	27	237	763
2008	352	68	512	639
2009	251	n/a	347	913
2010	n/a	n/a	356	732

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence activities are extremely important to Kotzebue residents, and for many residents, participation in subsistence activities supplement or replace wage employment. In many cases, unemployment statistics are often misleading since many residents are working, although not in “occupations” captured by traditional labor statistics.

The subsistence season begins each year at spring ice breakup, usually in May. During breakup, travel becomes increasingly difficult, and many residents move to seasonal subsistence camps on the coast northwest of Kotzebue before travelling on ice becomes unsafe. When the water becomes open enough to permit boat travel, local hunters go out in search of marine mammals, particularly bearded seal, but also ringed seal and walrus. Migrating waterfowl are also hunted, and their eggs are gathered when available. Near Kotzebue, residents continue to jig for sheefish on the last remnants of shoreside ice. As the ice clears, residents fish for herring, whitefish, and Dolly Varden. Beluga whale hunting also begins at this time. From a subsistence perspective, May through July is the busiest time of year for harvesting. With cool, dry weather, oil and “black meat” (half-dried bearded seal) is produced from harvested seal.³²⁰

Summer arrives in late June or July. At this time many residents turn their efforts towards salmon fishing for both subsistence and commercial purposes. Berry picking begins around this time, and many residents gather salmonberries, blueberries, blackberries, and cranberries. Incidental Dolly Varden harvesting begins in early August. Salmon fishing concludes around the end of August, while berry picking continues through September. Migrating caribou herds make their way through the area around the beginning of fall in late August. Both caribou and moose are hunted during this time. As sea ice begins to form in October, Kotzebue hunters pursue young bearded seals and spotted seals. Saffron cod (tomcod) are jigged on ice forming near shorelines. During the winter, caribou, moose, ptarmigan, and hare are hunted. Wolf, wolverine, and fox are also hunted or trapped for furs. In early winter, nets are set under the ice in the Hotham Inlet to fish for sheefish. In late winter, sheep hunting takes place in the Baird Mountains, and moose, caribou, seal, and fur bearer hunting continues.³²¹

Seasonal subsistence patterns are particularly susceptible to variations in weather, temperature, travel conditions, and species availability. Long term changes also can occur as a result of diminishing wildlife populations, climate change, and habitat regime shifts.³²²

In a 1993 survey of Kotzebue households, an estimated 23.1% harvested marine mammals (principally bearded seals), an estimated 51.3% harvested salmon, an estimated 44.8% harvested sheefish, and an estimated 38.3% harvested Dolly Varden. Overall, an estimated 75.1% of households harvested fish that year.³²³

ADF&G subsistence data are limited for 2000 through 2010. Information regarding subsistence participation by household is unavailable. Significant data on salmon harvests are only available for 2000 and 2001. In 2001, residents reported harvesting 17,713 chum salmon, compared to 36,896 in 2000. The significant decline in salmon harvests could possibly be attributed to cyclical variations in annual chum runs. Between 2000 and 2008, Chinook, pink, coho, and pink salmon were also harvested, but to a lesser degree. Subsistence Halibut Registration Certificates were held by residents in 2007 through 2009, however there were no

³²⁰ See footnote 318.

³²¹ Ibid.

³²² Ibid.

³²³ Ibid.

reports of halibut harvests. Between 2000 and 2010, an estimated 89 beluga whales, 10 sea otters, 8 walrus, and 6 polar bears were harvested. Beluga whale harvests significantly peaked in 2007 at 69 animals. No information is available regarding Steller sea lion, spotted seal, and harbor seal harvests.

According to ADF&G *Community Subsistence Information System* records, “other” species Kotzebue residents use or harvest include king crab, mussels, pinkneck calms, razor clams, shrimp, Tanner crab, bearded seal, bowhead whale, gray whale, minke whale, ribbon seal, ringed seal, spotted seal, Bering cisco, blackfish, broad whitefish, burbot, Dolly Varden, Arctic grayling, herring, humpback whitefish, least cisco, northern pike, saffron cod, sheefish, and sucker. Information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders expressed concern over a lack of funds available to develop local fisheries. Leaders expressed that the community was being adversely affected by not being able to participate in the CFQ program. They also contend that outside CDQ groups are attempting to expand their effort into Kotzebue area fisheries, and local fishermen lacks the funds to compete. Finally, the Magnuson Stevens Act prevents Kotzebue from directly negotiating with Japan and requires the community to sell product through intermediaries.

Table 12. Subsistence Participation by Household and Species, Kotzebue: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kotzebue: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	780	186	205	36,896	636	n/a	n/a	n/a	n/a
2001	793	156	7	17,713	n/a	25	35	n/a	n/a
2002	3	3	1	n/a	n/a	n/a	44	n/a	n/a
2003	1	1	1	n/a	n/a	n/a	29	n/a	n/a
2004	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	n/a	n/a	n/a	n/a	15	n/a	n/a
2006	2	2	1	n/a	n/a	n/a	8	n/a	n/a
2007	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	7	4	2	n/a	n/a	n/a	76	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kotzebue: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	1	n/a	n/a
2008	2	n/a	n/a
2009	2	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kotzebue: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	9	n/a	1	2	n/a	n/a	n/a
2002	4	n/a	1	n/a	n/a	n/a	n/a
2003	n/a	n/a	1	1	n/a	n/a	n/a
2004	1	n/a	2	n/a	n/a	n/a	n/a
2005	1	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	n/a	1	n/a	n/a	n/a	n/a
2007	69	7	2	1	n/a	n/a	n/a
2008	1	n/a	n/a	1	n/a	n/a	n/a
2009	2	n/a	n/a	1	n/a	n/a	n/a
2010	n/a	3	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Noatak (NO-uh-tack)



People and Place

*Location*³²⁴

Noatak is located on the west bank of the Noatak River, 55 miles north of Kotzebue and 70 miles north of the Arctic Circle, just west of the 66-million acre Noatak National Preserve. This community is the only settlement on the 396 mile-long Noatak River. Noatak is in the Kotzebue Recording District and the Northwest Arctic Borough Census Area.

*Demographic Profile*³²⁵

In 2010, there were 514 residents in Noatak, ranking it as the 115th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Noatak increased by 54.4%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 21.3%. The average annual growth rate during this period was 0.68%, reflecting an overall positive population trend with small decreases in population in some years.

In 2010, the majority of the population of Noatak identified themselves as American Indian or Alaska Native (94.7%), while 2.5% identified as White, 1.1% as Asian, 0.4% as Black or African American, and 2.3% identified with two or more races. No residents of Noatak identified themselves as Hispanic in 2010. The percentage of the population identifying as White decreased over time, from 3.3% in 1990 and 3.7% in 2000, to 2.5% in 2010. The percentage of the population identifying as American Indians and Alaska Natives decreased between 1990 and 2000, from 96.7% to 93.7%, then increased again to 94.7% in 2010. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

Based on household surveys conducted for the U.S. Census, the average household size in Noatak was fairly consistent between 1990 and 2010, with 4.5 persons per household in 1990, 4.23 in 2000, and 4.51 in 2010. The number of households in Noatak increased over time, from 74 households in 1990 to 100 in 2000, and 114 in 2010. All 114 of the total available housing units in Noatak were occupied in 2010. Of these, 69.3% were owner-occupied and 30.7% were rented. Between 1990 and 2010, no residents of Noatak were reported to be living in group quarters.

³²⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³²⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

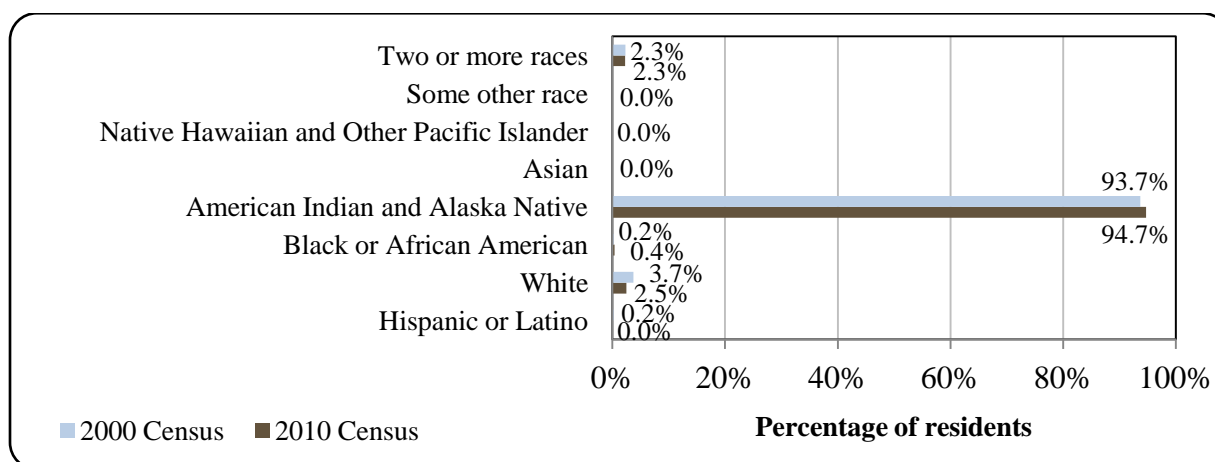
Table 1. Population in Noatak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	333	-
2000	428	-
2001	-	438
2002	-	455
2003	-	468
2004	-	450
2005	-	474
2006	-	470
2007	-	488
2008	-	512
2009	-	486
2010	514	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

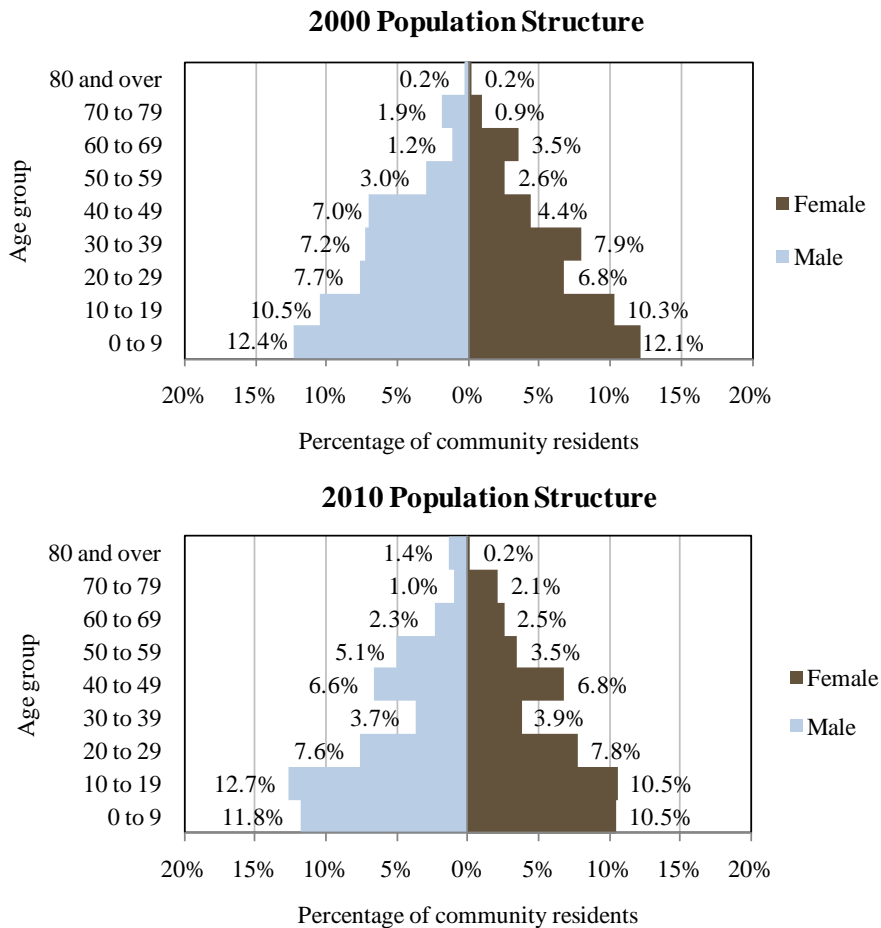
Figure 1. Racial and Ethnic Composition, Noatak: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Noatak’s population (52.1% male and 47.9% female) was very close to the balance of the state population as a whole, which was 52% male and 48% female. The median age of Noatak residents was 21.3 years in 2010, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 9.8% of Noatak’s population was 60 or older. The overall population structure of Noatak in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),³²⁶ 78.5% of Noatak residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 13% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 8.5% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 4.9% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 3.1% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 3.1% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 0.9% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

Figure 2. Population Age Structure in Noatak Based on the 2000 and 2010 U.S. Decennial Census.



³²⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Archaeological surveys conducted by the National Park Service have identified evidence of human habitation in the Noatak area dating back at least 11,000 years.³²⁷ Noatak is located in the traditional territory of the Napaaqtugmiut, meaning “tree people,” who inhabited the lower Noatak River area. The name Noatak means “inland river people,”³²⁸ and is derived from the name of the traditional inhabitants of the upper Noatak River, the Nuataagmiut.³²⁹ The present Village of Noatak is home to descendants of both of these Iñupiaq societies, along with the Nunamuit, or “treeless land people.”³³⁰

In the early 1800s, there were an estimated 10 Napaaqtugmiut villages and 22 Nuataagmiut villages scattered along the Noatak River. The Napaaqtugmiut suffered from famine in the early 1800s, and many fled north or to the Kobuk River area. Many Nuataagmiut also relocated to the north in the 1880s due to the decline of the Western Arctic Caribou herd.³³¹ In the 1890s, missionaries asked families living in sod houses in different settlements along the river to select a permanent village site where they would construct a school and place of worship. Elders selected Noatak, previously a fishing and hunting camp, for the site of the settlement, due to the plentiful resources of the area and strategic location for access to other camp sites.³³² Construction of a mission and school was completed by 1908.³³³

The Native Village of Noatak was established in 1939 under the Indian Reorganization Act (IRA). A post office was established in 1940. In 1994, a 50-year flood event created a large shoal on the Noatak River downstream from the Village of Noatak, preventing barge access to the Village. Since then, all fuel, groceries, and other supplies must be flown in to the community.³³⁴ Today, subsistence activities remain the central focus of the culture in Noatak. Families travel to coastal seasonal subsistence camps of Nuvguruk and Sisualik, as well as inland camps.³³⁵ Noatak is a dry village; the sale and importation of alcohol is banned.³³⁶

Natural Resources and Environment

Noatak is located in the transitional climate zone. Winter temperatures average between -21 and 15 °F, and average summer temperatures vary between 40 and 60 °F. Temperature extremes have been recorded from -59 to 75 °F. Annual snowfall averages 48 inches, with 10 to 13 inches

³²⁷ National Park Service (2011). *Noatak National Preserve*. Retrieved February 6, 2012 from <http://www.nps.gov/noat/>.

³²⁸ Alaska Native Tribal Health Consortium (ANTHC) (2011). *Climate Change in Noatak, Alaska: Strategies for Community Health* (2011). Retrieved February 2, 2012 from http://www.anthc.org/chs/ces/climate/upload/Climate_Change_in_Noatak_Strategies_for_Community_Health.pdf.

³²⁹ Magdanz, James S., Nicole S. Braem, Brad C. Robbins, and David S. Koster (2007). *Subsistence Harvests in Northwest Alaska, Kivalina and Noatak, 2007*. Alaska Department of Fish and Game, Technical Paper No. 354. Retrieved February 3, 2012 from <http://www.subsistence.adfg.state.ak.us/techpap/TP354.pdf>.

³³⁰ NANA Regional Corporation, Inc (2010). *Noatak Village Profile*. Retrieved February 2, 2012 from <http://www.nana.com/regional/about-us/overview-of-region/noatak/>.

³³¹ See footnote 329.

³³² See footnote 330.

³³³ See footnote 329.

³³⁴ Ibid.

³³⁵ See footnote 328.

³³⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

of total precipitation. The Noatak River is navigable by shallow-draft boats from early June to early October.³³⁷

In 1980, much of the traditional area of the Iñupiaq was protected as national parks, preserves, monuments, and wildlife areas under the Alaska National Interest Lands Conservation Act (ANILCA).³³⁸ One of the goals of the legislation was to protect subsistence uses of both Native and non-Native rural residents.³³⁹ Noatak is located in close proximity to several of these protected areas. The closest are Cape Krusenstern National Monument, less than 10 miles west, and Noatak National Preserve, approximately 5 miles east of the Village. Also under ANILCA, 330 miles of the Noatak River were designated as a National Wild and Scenic River, from the River's source in Gates of the Arctic National Park to the Kelly River in Noatak National Preserve.^{340,341}

The Noatak National Preserve is made up of 6.5 million acres. The National Preserve is surrounded by the Baird and DeLong Mountains of the Brooks Range. Within the area of the National Preserve, the boreal forest transitions into treeless tundra.³⁴² Cape Krusenstern National Monument stretches for 70 miles along the coast of the Chukchi Sea. The area is a coastal plain, characterized by sizeable lagoons along the coast and rolling tundra moving inland. Migratory birds use the system of wetlands. Many important archaeological sites are found within the National Monument, including a series of beach ridges that provide evidence of an estimated 9,000 years of human settlement. The outer beaches of the National Monument are an important location for subsistence hunting of marine mammals by local rural residents.³⁴³

The Western Arctic Caribou, numbering almost 500,000, migrates between the coastal plain of Cape Krusenstern National Monument and the tundra of Noatak National Preserve on its way to and from calving grounds. Many other animals, including hare, moose, fox, wolves, brown bear, and various birds and fish species are found in the Noatak area.^{344,345} Bearded seals, an important subsistence resource, are present along the coast for a short period in June.³⁴⁶ In addition, muskoxen were reintroduced to the area in 1970 as part of an Alaska-wide recovery effort. In 1934, 34 muskoxen were captured in East Greenland and transported to Nunivak Island. By 1968, the Nunivak Island herd numbered 750, and was used as a seed population to reintroduce muskoxen to areas around northern Alaska. By 2000, there were at least 450 muskoxen in northwestern Alaska.^{347,348}

Many Arctic communities, including Noatak, are experiencing significant changes and increased risk as a result of climate change. Key among these changes are subsidence due to

³³⁷ Ibid.

³³⁸ Alaska National Interest Lands Conservation Act (ANILCA). December 2, 1980. Public Law 96-487, 96th Congress. Retrieved February 6, 2012 from <http://alaska.fws.gov/asm/nilca/toc.html>.

³³⁹ See footnote 327.

³⁴⁰ National Wild and Scenic Rivers (n.d.) *Noatak River, Alaska*. Retrieved February 6, 2012 from <http://www.rivers.gov/wsr-noatak.html>.

³⁴¹ See footnote 338.

³⁴² See footnote 327.

³⁴³ National Park Service (2011). *Cape Krusenstern National Monument*. Retrieved February 6, 2012 from <http://www.nps.gov/cakr/>.

³⁴⁴ Ibid.

³⁴⁵ See footnote 327.

³⁴⁶ See footnote 343.

³⁴⁷ Ibid.

³⁴⁸ Alaska Dept. of Fish and Game (2008). *Muskox – Wildlife Notebook Series*. Retrieved December 15, 2011 from <http://www.adfg.alaska.gov/static/education/wns/muskox.pdf>.

thawing permafrost, erosion of river banks, changing water level in the river, increasing frequency and intensity of storm events, and warming temperatures. Infrastructure in Noatak, including building foundations and the water distribution system, is damaged or threatened by subsidence and erosion. Low water levels in the river reduce access to the community and increase the cost of living. Coastal subsistence camps are at increased risk of flooding due to increased storm activity along a shoreline made increasingly vulnerable due to reduced ice cover during fall storms. Higher temperatures bring increasing wildfires and impacted air quality, as well as instances of heat-related illness. Food security is also an increasing concern, as climate change affects both distribution of wildlife and access to resources. Changing water level in the Noatak River, as well as increased sediment discharge into Kotzebue Sound, has led to increasing boat groundings on the way to and from subsistence camps. Poor sea ice conditions have increased the risk of injury for subsistence hunters.³⁴⁹

Mining in Northwest Alaska is dominated by Red Dog Mine, the largest producer of zinc in Alaska. In 2010, the mine accounted for almost half of Alaska's mineral production value, making up 49% of the total value of mining operations in Alaska that year. The mine is 100% owned by Teck Resources Ltd., a Canadian mining company, under a 1982 agreement signed with the regional Native corporation, NANA³⁵⁰ Regional Corporation, Inc., which owns the land.³⁵¹ The agreement specifies that the mine must 1) protect subsistence and the Inupiaq way of life, 2) create lasting jobs for NANA shareholders, 3) provide opportunities for NANA's youth, and 4) act as a catalyst for regional economic benefits.³⁵²

Compared to the Beaufort Sea, very little oil and gas exploration has taken place in the Chukchi Sea Outer Continental Shelf (OSC) area to date. Some exploration took place in the late 1980s, and several lease sales in the early 1990s allowed for follow-up exploration. In 2008, 488 tracts totaling 2,758,408 acres were leased during Lease Sale 193, primarily by Shell and ConocoPhillips, as well as international companies including StatoilHydro USA, Repsol, and Ente Nazionale Idrocarburi (ENI).³⁵³ Following the Deepwater Horizon event in the Gulf of Mexico, Lease Sale 193 was remanded to the Department of the Interior for further National Environmental Protection Act (NEPA) analysis regarding the potential for a very large oil spill (VLOS) and its potential consequences for the Chukchi Sea ecosystem, local economy, and subsistence harvest patterns. In late 2011, Secretary of the Interior Ken Salazar affirmed the original Lease Sale 193.^{354,355} This sale is expected to initiate a large-scale exploration effort in

³⁴⁹ Alaska Native Tribal Health Consortium (ANTHC) (2011). *Climate Change in Noatak, Alaska: Strategies for Community Health* (2011). Retrieved February 2, 2012 from

http://www.anthc.org/chs/ces/climate/upload/Climate_Change_in_Noatak_Strategies_for_Community_Health.pdf.

³⁵⁰ The name of the regional Native corporation for the Northwest Arctic was originally derived from a pre-existing non-profit organization known as the Northwest Alaska Native Association (NANA). To avoid confusion, the non-profit was renamed Mauneluk, and later the Manillaq Association, and the corporation is known as NANA Regional Corporation. Source: Manillaq Association website (2003). *Company Information*. Retrieved February 2, 2012 from <http://www.manillaq.org/companyInfo.html>.

³⁵¹ Szumigala, D.J., L.A. Harbo, and J.N. Adleman (2011). *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

³⁵² NANA Regional Corporation (2010). *Red Dog Mine*. Retrieved February 6, 2012 from <http://www.nana.com/regional/resources/red-dog-mine/>.

³⁵³ U.S. Dept. of Energy (2009). *Alaska North Slope Oil and Gas: A Promising Future or an Area in Decline?* Retrieved December 30, 2011 from: http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS_Potential.pdf.

³⁵⁴ Minerals Management Service (2010). *Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/RP.pdf>.

the Chukchi Sea.³⁵⁶ Given the controversy surrounding Lease Sale 193, Secretary Salazar removed Chukchi Sea Sales 212 and 221 from the 2007-2012 program.³⁵⁷ The Proposed 2012-2017 program schedules one sale in the Chukchi Sea, deliberately set late in the program (2016) to allow time for further study and infrastructure development.³⁵⁸

According to the Alaska Department of Environmental Conservation (DEC), no active environmental cleanup sites were located near Noatak as of August 2012.³⁵⁹

Current Economy³⁶⁰

The economy of Noatak is heavily tied to subsistence activities, with a focus on chum salmon, whitefish, caribou, moose, and waterfowl.³⁶¹ Cash employment is also available with the school district, local government, local and regional Native corporations and non-profit organizations, the health clinic, mining and oil industries, Noatak Search and Rescue, the local Lion's Club, and retail stores.^{362,363} Some residents work as commercial fishermen. Many travel to fish camps at Sheshalik during the summer, and some find seasonal work in Kotzebue or working as firefighters.³⁶⁴

Based on household surveys conducted for the 2006-2010 ACS,³⁶⁵ in 2010, the per capita income in Noatak was estimated to be \$15,803 and the median household income was estimated to be \$68,000. This represents a large increase from the per capita and median household incomes reported in the year 2000 (\$9,659 and \$30,833, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,³⁶⁶ this income increase remains large, from a real median household income of \$40,545 and real per capita income of \$12,701 in 2000. In 2010, Noatak ranked 191st of 305 Alaskan communities with per capita income data that year, and 51st in median household income, out of 299 Alaskan communities with household income data.

³⁵⁵ Bureau of Ocean Energy Management (2011). *Chukchi Sea OCS Oil & Gas Lease Sale 193: Record of Decision*. Retrieved February 28, 2012 from <http://www.boemre.gov/pdfs/sale193rodwofinal.pdf>.

³⁵⁶ See footnote 353.

³⁵⁷ See footnote 354.

³⁵⁸ Minerals Management Service (2011). *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

³⁵⁹ Alaska Dept. of Environmental Conservation (2012). *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³⁶⁰ Unless otherwise noted, all monetary data are reported in nominal values.

³⁶¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁶² Ibid.

³⁶³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁶⁴ See footnote 361.

³⁶⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

³⁶⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Noatak's small population size may have prevented the ACS from accurately portraying economic conditions.³⁶⁷ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Noatak in 2010 is \$9,796,³⁶⁸ similar to the per capita income reported for the year 2000. This suggests that caution is warranted when citing an increase in per capita income in Noatak between 2000 and 2010, but provides additional evidence for income stability in the community during this period. Despite stable per capita income levels, the community was recognized as "distressed" by the Denali Commission in 2011,³⁶⁹ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly smaller percentage of Noatak's population (65.3%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). That same year, 3.7% of Noatak residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate in Noatak was estimated to be 25.7%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 23.3%, compared to a statewide unemployment rate estimate of 11.5%.³⁷⁰

Also based on the 2006-2010 ACS, the majority of Noatak's workforce was estimated to be employed in the private sector (67.2%), along with 28.1% in the public sector and 4.7% estimated to be self-employed. Of the 36 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in the following industries: agriculture, forestry, fishing and hunting, and mining (26.6%), educational services, health care, and social assistance (14.8%), and public administration (13.3%). Occupations in which the greatest percentages of the workforce were employed were natural resources/construction/maintenance (28.1%) and sales and office occupations (27.3%). It is important to note that, although the percentages of the workforce involved in natural resource-related industries and occupations are relatively high in Noatak, they do not reflect employment in the fishing industry. A breakdown of the natural resource/construction/maintenance occupation category reveals that 0% of the workforce is employed in farming, fishing, and forestry occupations. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 51 employed residents in Noatak in 2010, of which 36.6% were employed in local government, 15.2% in leisure and hospitality, 11.1% in natural resources and mining, 9.5% in professional and business services, 9.5% in education and

³⁶⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁶⁸ See footnotes 363 and 365.

³⁶⁹ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

³⁷⁰ See footnote 363.

health services, 4.9% in trade, transportation, and utilities, 3.3% in construction, 1.2% in financial activities, 0.8% in information, and 7.8% in other industries.³⁷¹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Noatak (U.S. Census).

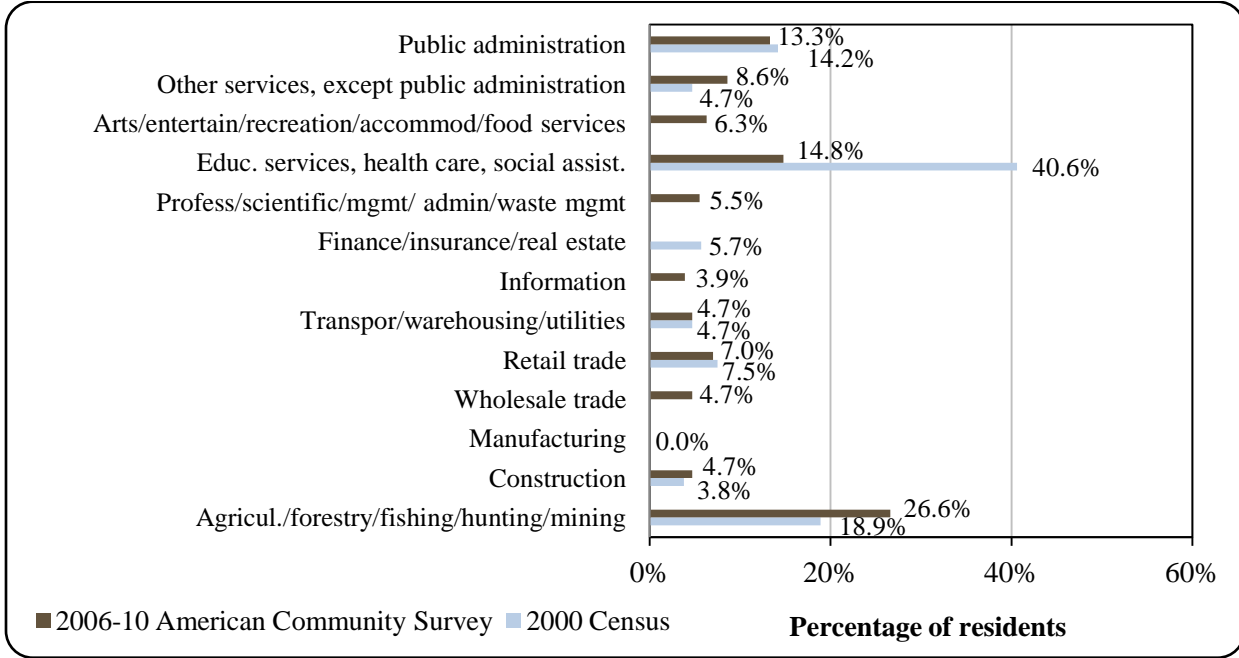
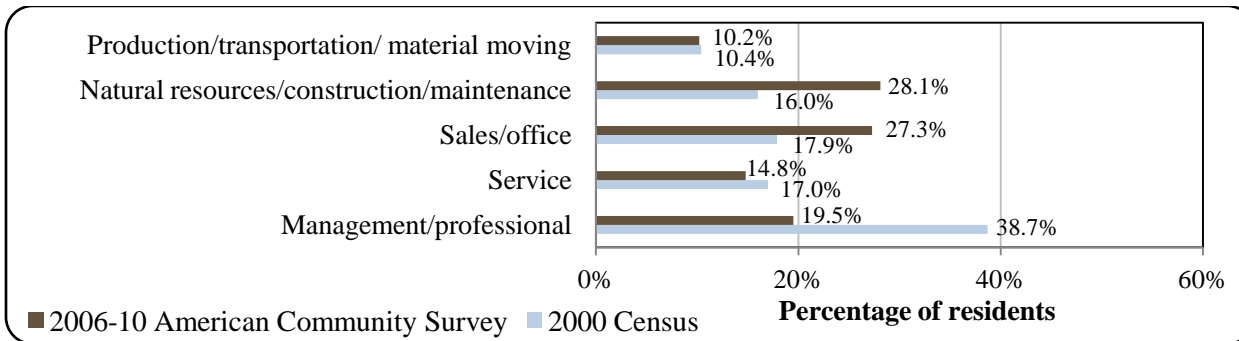


Figure 4. Local Employment by Occupation in 2000-2010, Noatak (U.S. Census).



³⁷¹ Ibid.

Governance

Noatak is an unincorporated community in the Northwest Arctic Borough. Neither the community nor the Borough administers any local taxes.³⁷² Given that Noatak is not incorporated, there was no municipal revenue or municipal sales tax revenue between 2000 and 2010. No information was reported regarding State or Community Revenue Sharing contributions received by the community between 2000 and 2010. However, one fisheries-related grant was received by Noatak in 2002. The \$750,000 grant was awarded for design and construction of a harbor in Noatak, along with an initial feasibility study.³⁷³ This information about selected aspects of revenue sources in Noatak are presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Noatak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	\$750,000
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Noatak was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Noatak. The regional Native corporation to which Noatak belongs is the NANA Regional Corporation. In 1972, most village corporations in the region merged with NANA Regional Corporation, with the exception of the village

³⁷² Alaska Dept. of Comm. And Rural Affairs (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

³⁷³ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

corporation for Kotzebue, known as Kikiktagruk Inupiat Corporation (KIC). NANA Regional Corporation now has title to 2,082,052 surface acres, including 115,200 that were originally titled to the Noatak Village Corporation.^{374,375}

Noatak is a member village of the Maniilaq Association, a tribal non-profit corporation that provides health and social services to residents of Northwest Alaska. The Maniilaq Association is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. It was originally called the Northwest Alaska Native Association (NANA), but was renamed Maniilaq when the NANA Regional Corporation was formed to avoid confusion between the names.³⁷⁶ Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.³⁷⁷ The Maniilaq Association coordinates tribal and traditional assistance programs, and environmental and subsistence protection services in the region.³⁷⁸

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development (DCCED) are located in Kotzebue. The closest offices of the Alaska Department of Natural Resources (DNR) and U.S. Bureau of Citizenship and Immigration Services are located in Fairbanks, although the Anchorage offices of these agencies may be more accessible by air to people of this region. The closest office of the National Marine Fisheries Service (NMFS) is located in Anchorage.

Infrastructure

Connectivity and Transportation

Noatak's primary means of connection to the outside world is by air. A state-owned, lighted, 4,000 ft by 60 ft, gravel runway is located in the Village. Commercially scheduled passenger flights serve Noatak, and the air strip is also used for delivery of cargo and mail. Currently, no barge service is able to access Noatak. Local residents use small boats, ATVs, and snowmachines for travel locally and to nearby villages. Historic trails are still used for inter-village travel and subsistence activities.³⁷⁹

Facilities

Water in Noatak is derived from three shallow wells in the Noatak River, two of which provide drinking water. At the village water treatment plant, water is filtered to remove solids, and chlorine is used for disinfection. Treated water is stored in a 97,000-gallon tank which provides approximately three days of water supply for Noatak. The water level in the river has

³⁷⁴ NANA Regional Corporation (2003). Introduction. *NANA Lands website*. Retrieved February 2, 2012 from <http://www.nanalands.com/introduction.htm>.

³⁷⁵ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷⁶ Maniilaq Association (2003). *Company Information*. Retrieved February 2, 2012 from <http://www.maniilaq.org/companyInfo.html>.

³⁷⁷ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

³⁷⁸ See footnote 376.

³⁷⁹ See footnote 375.

been decreasing in recent year, and the primary community well occasionally runs dry. All three wells are threatened by erosion.³⁸⁰ The Village Council operates a piped water and sewer system that serves 77 of 100 homes, the school, and businesses in Noatak. The remaining residences use honeybuckets, and the Village Council offers honeybucket haul service. Sewage is treated in Noatak using a sewage lagoon. The Village Council also operates a landfill, but refuse collection is left to individual residents. A diesel powerhouse, operated by the Alaska Village Energy Cooperative (AVEC), provides electricity in Noatak.³⁸¹

Other community facilities in Noatak include a fire hall that houses the Volunteer Fire Department, a school gymnasium, and school library.³⁸² Safety services are provided by Village Public Safety Officer stationed in Noatak.³⁸³ The nearest state trooper post is located in Kotzebue.³⁸⁴ Telephone, internet, and cable are available in the Village.³⁸⁵

With regard to fishing-related facilities, no docking facilities are available in Noatak. Small boats are used for river travel to subsistence camps, and pull-up areas are located along the riverbank by the Village.³⁸⁶

Medical Services

Medical services in Noatak are provided at the Esther Berger Memorial Health Clinic, owned by the Village Council and operated by the Maniilaq Association. Noatak is a Community Health Aid Program site. Emergency services have river and air access, and are provided by volunteers and a health aide.³⁸⁷ The nearest hospital is located in Kotzebue.

Educational Opportunities

One school is present in Noatak. The Napaaqtugmiut School serves preschool through 12th grade. As of 2011, the school had 159 students and 12 teachers.³⁸⁸

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Noatak area has been used by the Inupiat people for at least 1,000 years. Today, subsistence harvest of marine resources remains a primary economic activity for Noatak residents, continuing historic resource use patterns. Noatak residents travel to seasonal

³⁸⁰ Alaska Native Tribal Health Consortium (ANTHC) (2011). *Climate Change in Noatak, Alaska: Strategies for Community Health* (2011). Retrieved February 2, 2012 from http://www.anthc.org/chs/ces/climate/upload/Climate_Change_in_Noatak_Strategies_for_Community_Health.pdf.

³⁸¹ See footnote 375.

³⁸² Ibid.

³⁸³ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

³⁸⁴ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

³⁸⁵ See footnote 375.

³⁸⁶ See footnote 380.

³⁸⁷ See footnote 385.

³⁸⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

subsistence camps along the coast each summer.³⁸⁹ Today, some Noatak residents are also involved in the commercial salmon harvest, and a number of residents purchase sport fish licenses each year (see *Commercial Fishing* and *Recreational Fishing* sections below).

The Kotzebue Sound salmon fishery is the northernmost commercial salmon fishery in Alaska. Over 99% of the salmon harvested in this fishery are chum salmon returning to the Kobuk and Noatak Rivers. Commercial harvest of salmon first occurred in the Kotzebue area in 1909 when Native fishermen sold salmon to gold miners. Starting in 1914, salmon were canned and sold to miners in the upper Kobuk drainage. This small industry ceased after 1918. The modern commercial salmon fishery began in 1962, and catch peaked in 1981 with 680,000 chum commercially harvested. Since 1995, poor market conditions and variable processing capacity and interest have caused harvests to fall short of their potential. Due to limited opportunities to sell their catch, the number of active permits in the Kotzebue salmon fishery has declined over the last 30 years. Very few of the 173 total set gillnet permits have been actively fished in recent years.³⁹⁰

A chum salmon hatchery was built in 1981 at Sikasuilaq Springs, a tributary of the Noatak River. The hatchery operated until 1995. The peak of hatchery production was approximately 90,000 chum salmon per year.³⁹¹

Noatak is located in the Arctic Management Area. A Fishery Management Plan (FMP) for the Arctic Management Area was approved by the Secretary of Commerce in August 2009. Initially, the FMP prohibits commercial fishing in the Beaufort and Chukchi seas until more information is available to support sustainable fisheries management.³⁹² Noatak is not eligible to participate in either the Community Quota Entity (CQE) or the Community Development Quota (CDQ) programs.

Processing Plants

ADF&G's 2010 Intent to Operate list did not list a registered processing plant in Noatak. However, between one and five fish buyers were active in the nearby City of Kotzebue between 2000 and 2010, as well as one shore-side processor in 2004 and 2005 (see the Community Profile for Kotzebue).

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Noatak (Table 3).

³⁸⁹ See footnote 380.

³⁹⁰ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

³⁹¹ Ibid.

³⁹² NOAA National Marine Fisheries Service, Alaska Regional Office (n.d.). *Arctic Fisheries*. Retrieved February 6, 2012 from <http://www.fakr.noaa.gov/sustainablefisheries/arctic/>.

Commercial Fishing

In 2010, 14 Noatak residents held a total of 13 Commercial Fisheries Entry Commission (CFEC) permits, of which 5 were actively fished that year. All of these permits were held in the Kotzebue set gillnet salmon fishery. According to data reported by ADF&G, the percentage of permits actively fished that year (38%) was the highest of any year between 2000 and 2010.³⁹³ The number of salmon permits actively fished in the Kotzebue commercial salmon fishery has declined steadily over the past 30 years, and in some years between 2000 and 2010 only 3 or 4 permits out of a total of 173 Kotzebue gillnet permits were active.³⁹⁴ Also in 2010, no residents of Noatak held Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP). In addition, no residents held quota share accounts or quota shares in federal catch share fisheries for halibut, sablefish, or crab. Information about permits held by Noatak residents is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

Between 2000 and 2010, no fishing vessels were primarily owned by Noatak residents, and no fishing vessels were homeported in the Village. During this period, the number of Noatak residents holding commercial crew licenses varied between zero and five. No fish buyers or shore-side processors were reported to be present in Noatak between 2000 and 2010. Given that no fish buyers were present in Noatak, and no residents of Noatak were the primary owner of a fishing vessel, no landings or ex-vessel revenue were generated in the community or by Noatak vessel owners. Information about the commercial fishing sector in Noatak is presented in Table 5, and information about landings and ex-vessel revenue is presented in Tables 9 and 10.

³⁹³ Alaska Commercial Fisheries Entry Commission (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁹⁴ See footnote 390.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Noatak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Noatak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Noatak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	12	13	13	13	12	11	11	12	13	14	13
	Fished permits	2	2	0	0	2	0	0	1	1	4	5
	% of permits fished	17%	15%	-	-	17%	-	-	8%	8%	29%	38%
	Total permit holders	12	13	14	13	12	11	11	12	13	15	14
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>12</i>	<i>13</i>	<i>13</i>	<i>13</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>13</i>
	<i>Fished permits</i>	<i>2</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>4</i>	<i>5</i>
	<i>% of permits fished</i>	<i>17%</i>	<i>15%</i>	<i>-</i>	<i>-</i>	<i>17%</i>	<i>-</i>	<i>-</i>	<i>8%</i>	<i>8%</i>	<i>29%</i>	<i>38%</i>
	<i>Permit holders</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>13</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>15</i>	<i>14</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Noatak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Noatak ²	Total Net Pounds Landed In Noatak ^{2,5}	Total Ex-Vessel Value Of Landings In Noatak ^{2,5}
2000	5	0	0	0	0	0	0	\$0
2001	4	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	1	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	1	0	0	0	0	0	0	\$0
2010	5	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Noatak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Noatak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Noatak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Noatak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Noatak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were reported to be present in Noatak. However, the number of sportfishing licenses purchased each year by residents of Noatak (irrespective of point of sale) varied between 35 and 92 during this period. Prior to 2008, no sportfishing licenses were sold in the Village of Noatak. Between 2008 and 2010, a small number of licenses were purchased in the community, but a majority of residents continued to purchase their licenses elsewhere, indicating that Noatak residents travel to other communities for sportfishing.

The Alaska Statewide Harvest Survey,³⁹⁵ conducted by ADF&G between 2000 and 2010, noted sportfishing activity in freshwater only. The following species were listed as targeted by private anglers in Noatak: Chinook, coho, sockeye, pink, and chum salmon, Dolly Varden, whitefish, and northern pike. No kept/release log book data were reported for fishing charters out of Noatak between 2000 and 2010.³⁹⁶

Noatak is located within Alaska Sport Fishing Survey Area X – Northwest Alaska. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, Alaska resident anglers consistently fished a greater number of days than non-Alaska resident anglers in both freshwater and saltwater, and freshwater sportfishing activity was significantly higher than in saltwater. On average between 2000 and 2010, Alaska resident anglers fished 3,251 fresh water days and 582 saltwater days, while non-Alaska resident anglers fished on average 1,690 freshwater and 64 saltwater days. This information about the sportfishing sector in and near Noatak is also displayed in Table 11.

Table 11. Sport Fishing Trends, Noatak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Noatak ²
2000	0	0	83	0
2001	0	0	57	0
2002	0	0	53	0
2003	0	0	58	0
2004	0	0	40	0
2005	0	0	35	0
2006	0	0	52	0
2007	0	0	92	0
2008	0	0	78	17
2009	0	0	47	15
2010	0	0	39	11

³⁹⁵ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁹⁶ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Noatak: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	14	1,875	1,779	3,388
2001	296	114	2,986	2,508
2002	0	132	1,297	4,988
2003	15	1,698	1,807	2,601
2004	17	332	1,892	3,463
2005	19	35	1,309	1,755
2006	0	452	1,764	4,570
2007	65	62	1,146	3,754
2008	0	407	2,421	1,593
2009	138	815	1,160	5,318
2010	137	478	1,027	1,828

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence fishing and hunting are the primary economic activities in Noatak, in combination with employment in other local industries.³⁹⁷ Subsistence activities take place up-river at Noatak, and residents also travel to seasonal subsistence camps on the coast, the most important being Nuvguruk and Sisualik.³⁹⁸ According to a subsistence survey conducted in Noatak by ADF&G Division of Subsistence, the most important aquatic subsistence species for residents of Noatak in 2007, by harvest weight, included Dolly Varden, chum salmon, bearded seal, and whitefish. That year, two times as much non-salmon fish was harvested in Noatak as salmon.³⁹⁹

³⁹⁷ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁹⁸ Alaska Native Tribal Health Consortium (ANTHC) (2011). *Climate Change in Noatak, Alaska: Strategies for Community Health* (2011). Retrieved February 2, 2012 from http://www.anthc.org/chs/ces/climate/upload/Climate_Change_in_Noatak_Strategies_for_Community_Health.pdf.

³⁹⁹ Magdanz, J.S., N.S. Braem, B.C. Robbins, and D.S. Koster (2007). *Subsistence Harvests in Northwest Alaska, Kivalina and Noatak, 2007*. Alaska Department of Fish and Game, Technical Paper No. 354. Retrieved February 3, 2012 from <http://www.subsistence.adfg.state.ak.us/techpap/TP354.pdf>.

According to ADF&G's Community Subsistence Information System (CSIS), in 2007, 86% of households participated in salmon subsistence, 69% in marine mammals subsistence, and 74% in non-salmon fish subsistence (other than halibut). No information was reported regarding the percentage of households participating in halibut or marine invertebrate subsistence, or per capita harvest of marine and land-based resources that year. Information about household participation and per capita subsistence harvest is presented in Table 12.

The ADF&G survey of 2007 subsistence harvest includes species-level information about household use of non-salmon fish and marine mammals. Noatak households reported harvesting sheefish, Arctic grayling, northern pike, lake trout, Arctic char, burbot, tomcod, herring, smelt, Dolly Varden, and whitefish. In addition, Noatak households reported harvesting bearded seal, ringed seal, spotted seal, walrus, and beluga whale. In the case of most of the species listed above, a greater percentage of households reported using the species than reported harvesting them, suggesting the presence of sharing networks in Noatak. In addition, although bowhead whale was not harvested by any Noatak households in 2007, 1% of households reported using this resource, suggesting that trading also takes place between communities. It is also important to note that, although no harvest of marine invertebrates was reported by Noatak households in 2007, 1% of households did report using king crab.⁴⁰⁰

Information was also reported by ADF&G regarding subsistence salmon permits during the 2000-2010 period. Between 2000 and 2004, an average of 102 subsistence salmon permits were issued to Noatak households. In 2005, the reported number of permits issued fell to one, no information was reported for 2006, and in 2007 one permit was again issued. For those years in which data were reported, chum salmon were the most heavily harvested salmon species, with an average of 3,746 chum harvested per year. On average, several hundred coho and pink salmon were also harvested, along with a small number of sockeye per year. This information about subsistence harvest of salmon in Noatak is presented in Table 13. Also reported in Table 13, 51,476 total pounds of non-salmon fish (not including halibut; see species listed in previous paragraph) were harvested by Noatak residents in 2007.

No information was reported by management agencies regarding halibut or marine mammal subsistence harvest by Noatak residents during the 2000-2010 period (Tables 14 and 15). However, as noted earlier in this section, some Noatak households reported harvesting and using bearded seal, ringed seal, spotted seal, walrus, and beluga whale.

⁴⁰⁰ Ibid.

Table 12. Subsistence Participation by Household and Species, Noatak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	86%	n/a	69%	n/a	74%	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Noatak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	102	61	n/a	7,293	87	3	2	n/a	n/a
2001	96	68	n/a	2,326	116	n/a	n/a	n/a	n/a
2002	101	90	n/a	2,937	11	n/a	n/a	n/a	n/a
2003	104	103	1	2,177	28	17	10	n/a	n/a
2004	105	103	10	3,997	518	756	12	n/a	n/a
2005	1	1	1	n/a	n/a	n/a	29	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	1	1	n/a	n/a	n/a	22	n/a	51,476
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Noatak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Noatak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nuiqsut (*new-WICK-sit; var. Nooiksut*)



People and Place

*Location*⁴⁰¹

Nuiqsut is located on the west bank of the Nechelik Channel of the Colville River Delta, about 35 miles from the Beaufort Sea coast. Nuiqsut is located in the Barrow Recording District and the North Slope Borough Census Area. The City encompasses 9.2 square miles of land and 0 square miles of water.

*Demographic Profile*⁴⁰²

In 2010, there were 402 residents in Nuiqsut, ranking it as the 138th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Nuiqsut increased by 13.6%. Most of this growth occurred between 1990 and the year 2000, when 433 residents were recorded as residing in Nuiqsut. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 7.2%, with an average annual growth rate of -0.48%.

In 2010, a majority of the Nuiqsut residents identified themselves as American Indian or Alaska Native (87.1%), while 10% identified themselves as White, 0.2% as Black or African American, and 2.7% identified with two or more races. No Nuiqsut residents identified themselves as Hispanic in 2010. It is important to note that both Asians and Hispanics appear to have been present in 2000, and are no longer represented in 2010 Decennial Census statistics. The percentage of the population identifying as White increased over time, from 7.3% in 1990, to approximately 10% in 2000 and 2010. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

Based on household surveys conducted for the U.S. Decennial Census, the average household size in Nuiqsut was fairly consistent between 1990 and 2010, with 3.8 persons per household in 1990, 3.93 in 2000, and decreased slightly in 2010 to 3.47. The number of households in Nuiqsut has increased over time, from 91 households in 1990 and 110 in 2000, to 114 in 2010. Of the 136 total housing units surveyed for the 2010 U.S. Decennial Census, 44.9% were owner-occupied, 39% were rented, and 16.2% were vacant or used only seasonally. In 2010, six Nuiqsut residents were reported to be living in group quarters.

In 2000, the gender makeup of Nuiqsut's population (59.6% male and 40.4% female) was much more skewed toward males than the population of Alaska as a whole, which was made up of 51.7% males and 48.3% females. The gender imbalance evened out considerably by 2010,

⁴⁰¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁰² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

when 51.7% of Nuiqsut’s population was male and 48.3% was female, very close to the balance of the State population as a whole that year (52% male and 48% female). In 2010, the median age of Nuiqsut residents was 25.2 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. It is of note that very few Nuiqsut residents were between the ages of 30 and 39 in 2010. That year, 9.1% of Nuiqsut’s population was 60 or older. The overall population structure of Nuiqsut in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁴⁰³ 76.4% of Nuiqsut residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 9.8% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 13.8% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 10.5% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 1.1% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 3.6% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 14.2% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

Table 1. Population in Nuiqsut from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	354	-
2000	433	-
2001	-	426
2002	-	443
2003	-	416
2004	-	432
2005	-	411
2006	-	417
2007	-	402
2008	-	383
2009	-	402
2010	402	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

⁴⁰³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 1. Racial and Ethnic Composition, Nuiqsut: 2000-2010 (U.S. Census).

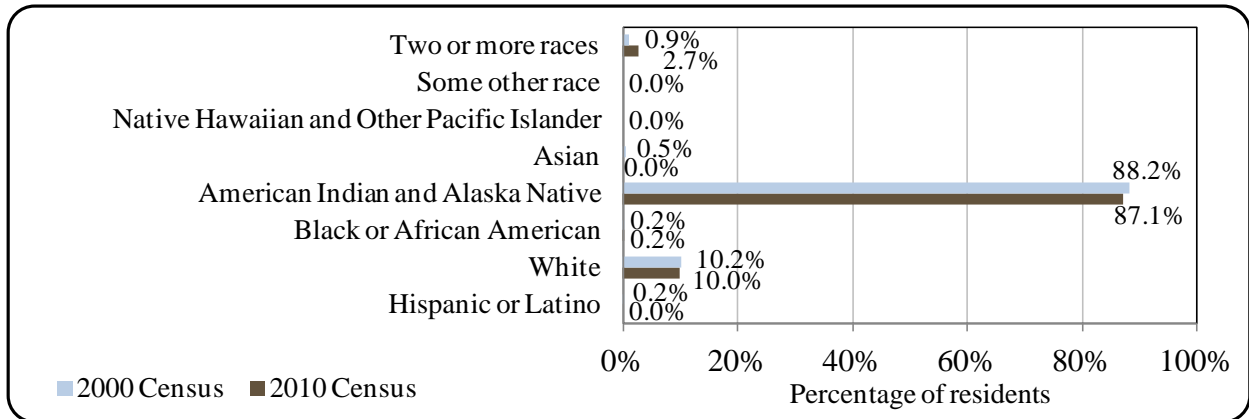
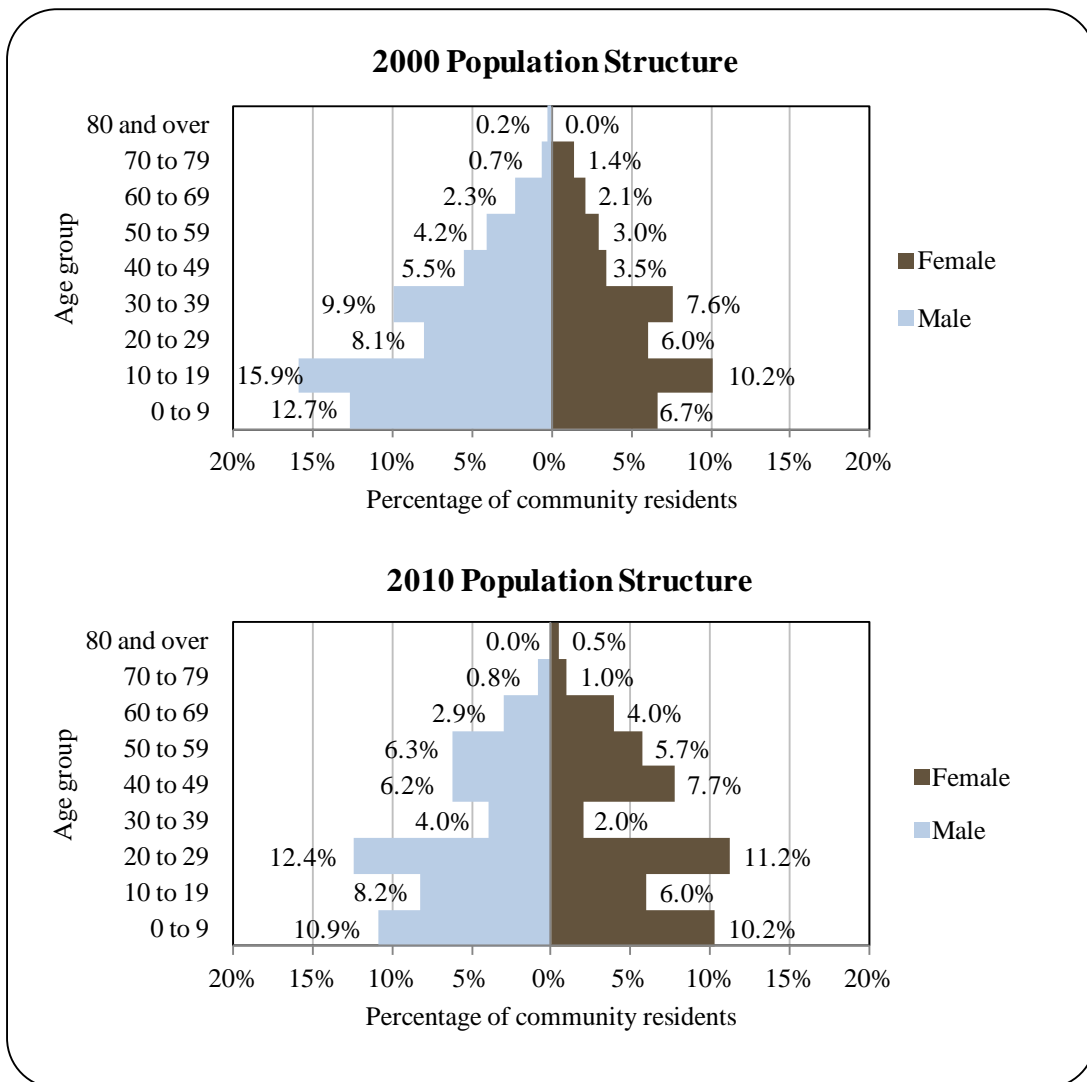


Figure 2. Population Age Structure in Nuiqsut Based on the 2000 and 2010 U.S. Decennial Census.



History, Traditional Knowledge, and Culture

The Nuiqsut area has been inhabited for at least 4,000 years, according to archaeological evidence. A cultural tradition known as the Arctic Small Tool tradition was the first to appear. Around 1,000 years ago, the Thule culture expanded into the North Slope region, characterized by winter ice-hunting, kayak and umiaq⁴⁰⁴ open sea hunting, use of dogs and dog sleds, and settlement in large coastal villages.⁴⁰⁵ Although major settlements have always occurred on the North Slope, traditionally people lived in small groups and travelled throughout the region to hunting and fishing areas. Today, most people live in permanent villages, “yet the animals still roam widely, and seasonal locations for fishing and trapping are scattered over a vast territory.”⁴⁰⁶ The use of snowmachines and motor boats allows residents to extend the range of their subsistence use while still living in a permanent community.⁴⁰⁷

Downstream from Nuiqsut, the Colville Delta has traditionally been a gathering and trading place for the Inupiat and has always offered good hunting and fishing. The Colville River was the traditional homeland of the Kukpikmut, the “people of the lower Colville River.” The old village of Nuiqsut (Itqilippaa) was abandoned in the late 1940s, when the Bureau of Indian Affairs (BIA) required families to relocate so that children could attend school in Barrow. Because some families had continued to use the lower Colville area for hunting, fishing, trapping, and trading after the 1940s, Nuiqsut qualified as a village under the Alaska Native Claims Settlement Act (ANCSA) of 1971.⁴⁰⁸ In 1973, the Village was resettled by 27 families from Barrow.⁴⁰⁹ Federal agencies, along with the Arctic Slope Regional Corporation, the regional Native corporation created under ANCSA, offered to help with the construction of a school, homes, and facilities in the summers of 1973 and 1974.^{410,411} Goods were hauled from Barrow by tractor and snowmachines. The City of Nuiqsut was incorporated in 1975.⁴¹²

Today, a majority of the Nuiqsut population is Inupiat Eskimo, and most residents practice a traditional subsistence lifestyle.⁴¹³ Cultural practices revolve around traditional whaling and other subsistence hunting, fishing, trapping, and gathering activities.⁴¹⁴ A subsistence exchange network exists between Nuiqsut and other villages in the region. Nuiqsut is known for its whitefish and pelts, and often receives bowhead and beluga whale, sheep, and smelt

⁴⁰⁴ An umiaq is a large open Inuit or Eskimo boat made of skins stretched on a wooden frame, usually propelled by paddles. (Source: <http://www.thefreedictionary.com>. Retrieved June 21, 2012.)

⁴⁰⁵ National Park Service (n.d.) *Archaeology of the Tundra and Arctic Alaska*. Retrieved December 8, 2011 from <http://www.nps.gov/akso/akarc/arctic.htm>.

⁴⁰⁶ North Slope Borough Planning Commission and Commission on History and Culture (1979). *Nuiqsut Heritage: A Cultural Plan*. Retrieved February 29, 2012 from http://www.alaska.boemre.gov/native/Nuiqsut_Guide.pdf.

⁴⁰⁷ Glenn Gray and Associates (2007). *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

⁴⁰⁸ See footnote 406.

⁴⁰⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴¹⁰ Ibid.

⁴¹¹ See footnote 406.

⁴¹² See footnote 409.

⁴¹³ Ibid.

⁴¹⁴ URS Corporation (2005). *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

from other villages.⁴¹⁵ The sale, importation, and possession of alcohol are banned in the village.⁴¹⁶

Natural Resources and Environment

The climate of Nuiqsut is arctic, with temperatures ranging from -56 to 78 °F. On average, the daily minimum temperature is below freezing 297 days each year. Annual precipitation is light, averaging 5 inches, along with 20 inches of snowfall per year.⁴¹⁷ Nuiqsut is located on the arctic coastal plain, a rolling landscape with small hills and many ponds and lakes trapped on the surface by an underlying permafrost layer. The Colville River has three major channels, of which Nuiqsut is situated on the westernmost, and the Colville Delta is crossed by a maze of waterways. The Brooks Range rises up in the distance to the south.^{418,419}

Nuiqsut is located within the National Petroleum Reserve – Alaska (NPRA). The Prudhoe Bay oil field was discovered in 1968, and all oil exploration and production to date has taken place in the Colville-Canning area. The zone immediately west of Nuiqsut has one of the highest concentrations of leases. Future development is planned to expand west and south within the NPRA, south in the Colville-Canning region, and into offshore state and federal waters. The NPRA area contains an estimated 10.6 billion barrels of oil in a total area of 24.2 million acres (440 barrels per acre).⁴²⁰

Offshore, initial oil and gas exploration in the outer continental shelf (OCS) of the Beaufort Sea began in 1981, and a total of 20 wells were drilled by 1989. The Bureau of Ocean Energy Management (formerly Minerals Management Service) held six sales in the Beaufort OCS between 1991 and 2007, resulting in the leasing of 1,742,987 acres. After reevaluation of their Beaufort Sea exploration plan due to a 2007 lawsuit, and numerous appeals by Native communities and environmental groups during the permitting process,⁴²¹ Shell began drilling exploratory wells in non-petroleum zones on October 3rd, 2012. Before Shell could receive final authorization to drill in petroleum zones, its spill response barge was required to be in place. The barge was damaged in September, but was expected to be in place in time for the 2013 drilling season.⁴²² The proposed 2012-2017 OCS oil and gas leasing program also schedules one additional lease sale in the Beaufort Sea planning area.⁴²³

⁴¹⁵ See footnote 407.

⁴¹⁶ See footnote 409.

⁴¹⁷ Ibid.

⁴¹⁸ See footnote 406.

⁴¹⁹ See footnote 407.

⁴²⁰ U.S. Dept. of Energy (2009). *Alaska North Slope Oil and Gas: A Promising Future or an Area in Decline?* Retrieved December 30, 2011 from: http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS_Potential.pdf.

⁴²¹ Bailey, A. October 2011. "One More Step for Shell: EPA Issues Shell's air permit for the Kulluk to drill in Beaufort Sea in 2012." *Petroleum News* 16(44). Retrieved March 1, 2012 from <http://www.petroleumnews.com/pntruncate/183741151.shtml>.

⁴²² Associated Press. October 3, 2012. "Shell Begins Beaufort Sea Drilling Off Alaska's North Coast." *Huffington Post*. Retrieved October 19, 2012 from http://www.huffingtonpost.com/2012/10/04/shell-beaufort-sea-drilling_n_1937715.html.

⁴²³ U.S. Dept. of the Interior, Minerals Management Service (2011). *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

The impact of oil and gas development activities on local subsistence resources has been the focus of considerable research. There is evidence that off-shore activities are disrupting migratory patterns of bowhead whales, causing difficulty for whalers from Nuiqsut and other villages in the area that depend on harvest of these animals.⁴²⁴ A 3-year study confirmed the reports of local elder and whaling captains that migrating bowhead whales deflect around seismic noise at a minimum distance of 20 kilometers (12 miles).⁴²⁵

Local communities are also concerned about pollution from military and oil and gas exploration and production activities. Several contaminated sites are present in the North Slope Borough as a result of old military installations, including Camp Lonely Landfill and the Point Lonely short range radar station. The U.S. Air Force operated the Camp Lonely Landfill between 1976 and 1989. As of 2005, human health and environmental concerns at the site included exposed sharp materials such as drums, glass, and scrap metal, as well as oil seeps leaching into the soil near the coastal lagoon, which could be toxic to aquatic organisms. Batteries and petroleum products had been disposed of at the site. Beginning in 2006, responsible parties were expected to start cleaning up the site. At the Point Lonely radar station, the U.S. Air Force is managing cleanup of an old dump site that received waste between 1955 and 1976. Cleanup efforts include removal of soil contaminated with petroleum products and polychlorinated biphenyls (PCBs), a probable human carcinogen. PCBs are not prone to leaching from the soil, and the primary routes of exposure are through ingestion or skin contact (eating or touching). During the cleanup process, steps are being taken to keep the contaminated soil capped to prevent these exposure routes to humans and wildlife.⁴²⁶ Nuiqsut has a restoration advisory board to work with the local community during cleanup of contaminated sites.⁴²⁷

In addition, local are concerned about air quality. In the winter and spring, visibility can be reduced from more than 50 miles to less than 5 miles, a phenomenon known as “arctic haze”. Scientists believe that the haze is a result of long-range transport of pollution from industrialized Europe. Nuiqsut resident have testified that they see a yellow haze that originates directly from local oil fields. A local health worker believes that rates of respiratory illness in Nuiqsut have increased dramatically since she began working in the community in 1985.⁴²⁸

Nuiqsut is located near several protected and special management areas. The Teshekpuk Lake Surface Protection Area is located just west of Nuiqsut, also within the area of the NPRA. The lake is in an area of high potential for economically recoverable oil and gas resources, and is also recognized for its unique environmental value.⁴²⁹ Teshekpuk Lake is one of the most important wetland complexes in the circumpolar Arctic, providing habitat for millions of migratory birds from around the world, as well as calving grounds for the Teshekpuk Lake caribou herd, and important herd for subsistence for hunters from Nuiqsut and surrounding

⁴²⁴ See footnote 414.

⁴²⁵ Glenn Gray and Associates (2007). *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

⁴²⁶ Alaska Dept. of Environmental Conservation (2012). Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁴²⁷ See footnote 425.

⁴²⁸ Ibid.

⁴²⁹ Bascle, R. (1993). *Teshekpuk Lake Special Management Area, Oil and Gas Resource Assessment, National Petroleum Reserve – Alaska*. U.S. Dept. of the Interior, Bureau of Land Management. Retrieved March 1, 2012 from http://www.blm.gov/pgdata/etc/medialib/blm/ak/aktest/ofr.Par.13949.File.dat/OFR_46.PDF.

villages. Oil development within this area is directed to minimize impact on these surface environmental values.⁴³⁰

The northern boundary of the Gates of the Arctic National Park and Preserve is located approximately 140 miles south of Nuiqsut, in the Central Brooks Range. The Central Arctic Caribou Herd migrates each year between the boreal forest of the Park and Preserve and calving areas on the coastal plain.⁴³¹ The western boundary of the Arctic National Wildlife Refuge (NWR) is located approximately 250 miles to the east of Nuiqsut, which contains calving grounds of both the Central Arctic and Porcupine Caribou Herds.⁴³² These areas host a diversity of ecosystems and animals and plant life. Polar bears are found in the Arctic NWR, and grizzly and black bears are found in both protected areas, along with wolves, lynx, wolverine, red fox, moose, muskoxen, Dall sheep, beaver, and other small mammals. The boreal forest hosts a diversity of migratory birds.⁴³³ The Arctic NWR is currently closed to oil and gas drilling activities under Section 1003 of the Alaska National Interest Lands Conservation Act (ANILCA).⁴³⁴ Estimates of recoverable oil in the NWR range between 4.2 and 11.8 billion barrels.⁴³⁵

Natural hazards in and near Nuiqsut include river erosion, river flooding (mainly due to ice jams, as precipitation is low), and permafrost melting. Coastal areas near Nuiqsut are also subject to erosion and ice hazards, such as ice ridging, shear zones, ice break-off, strudel scour, ice gouging, ice override, and ice pileup. Earthquakes and volcanoes are not identified as a concern in the North Slope Borough. Climate change appears to be leading to increased risk from coastal storms, flooding, erosion, and permafrost melting.^{436,437}

According to the Alaska Department of Environmental Conservation, one active environmental cleanup site is located in Nuiqsut as of August 2013. The U.S. Air Force operated a landfill near Nuiqsut from the mid 1970s through the late 1980s. The “Camp Lonely Landfill” was used to dispose of sharp objects including glass, and scrap metal, as well as oil drums and other toxics including batteries. On-going soil erosion in the area leads to exposure of sharp materials and exacerbates the rate at which oil contamination enters nearby water bodies. As of summer 2006, the responsible parties were expected to begin cleaning up the landfill⁴³⁸

⁴³⁰ Audubon Alaska (2003). *Wildlife and Oil Development at Teshekpuk Lake*. Retrieved March 2, 2012 from http://policy.audubon.org/sites/default/files/documents/Teshekpuk_low.pdf.

⁴³¹ National Park Service. 2011. *Gates of the Arctic*. Retrieved March 3, 2012 from <http://www.nps.gov/gaar/>.

⁴³² U.S. Fish and Wildlife Service. 2011. *Arctic National Wildlife Refuge*. Retrieved March 2, 2012 from <http://arctic.fws.gov/>.

⁴³³ See footnotes 431 and 432.

⁴³⁴ U.S. Fish and Wildlife Service (2011). *Arctic National Wildlife Refuge Draft Revised Comprehensive Conservation Plan*. Retrieved December 30, 2011 from <http://arctic.fws.gov/ccp.htm>.

⁴³⁵ U.S. Dept. of Energy (2009). *Alaska North Slope Oil and Gas: A Promising Future or an Area in Decline?* Retrieved December 30, 2011 from: http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS_Potential.pdf.

⁴³⁶ Glenn Gray and Associates (2007). *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

⁴³⁷ URS Corporation (2005). *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

⁴³⁸ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy⁴³⁹

Unemployment is high in Nuiqsut. In 2010, top employers of local residents included the Borough, City, and Village offices, the local village Native Corporation, the school, the local store, and several private construction and energy companies.⁴⁴⁰ Trapping and craft-making also provide some income, and subsistence harvest is a foundational aspect of the local economy. Caribou, bowhead and beluga whale, seal, moose, and fish are staples of the diet. Polar bears are also hunted.⁴⁴¹

Based on household surveys conducted for the 2006-2010 ACS,⁴⁴² in 2010, the per capita income in Nuiqsut was estimated to be \$22,981 and the median household income was estimated to be \$86,458. This represents a sizeable increase in the per capita and median household incomes reported in the year 2000 (\$14,876 and \$48,036, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,⁴⁴³ the income increase remains large, from a real per capita income of \$19,562 and a real median household income of \$63,167 in 2000. In 2010, Nuiqsut ranked 126th of 305 Alaskan communities with per capita income data that year, and 21st in median household income, out of 299 Alaskan communities with household income data.

However, Nuiqsut's small population size may have prevented the ACS from accurately portraying economic conditions.⁴⁴⁴ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nuiqsut in 2010 is \$14,214.⁴⁴⁵ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Nuiqsut between 2000 and 2010. Nuiqsut was not recognized as a "distressed" community by the Denali Commission in 2011.⁴⁴⁶ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

⁴³⁹ Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁴⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴⁴¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁴² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁴³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁴⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁴⁵ See footnotes 440 and 442.

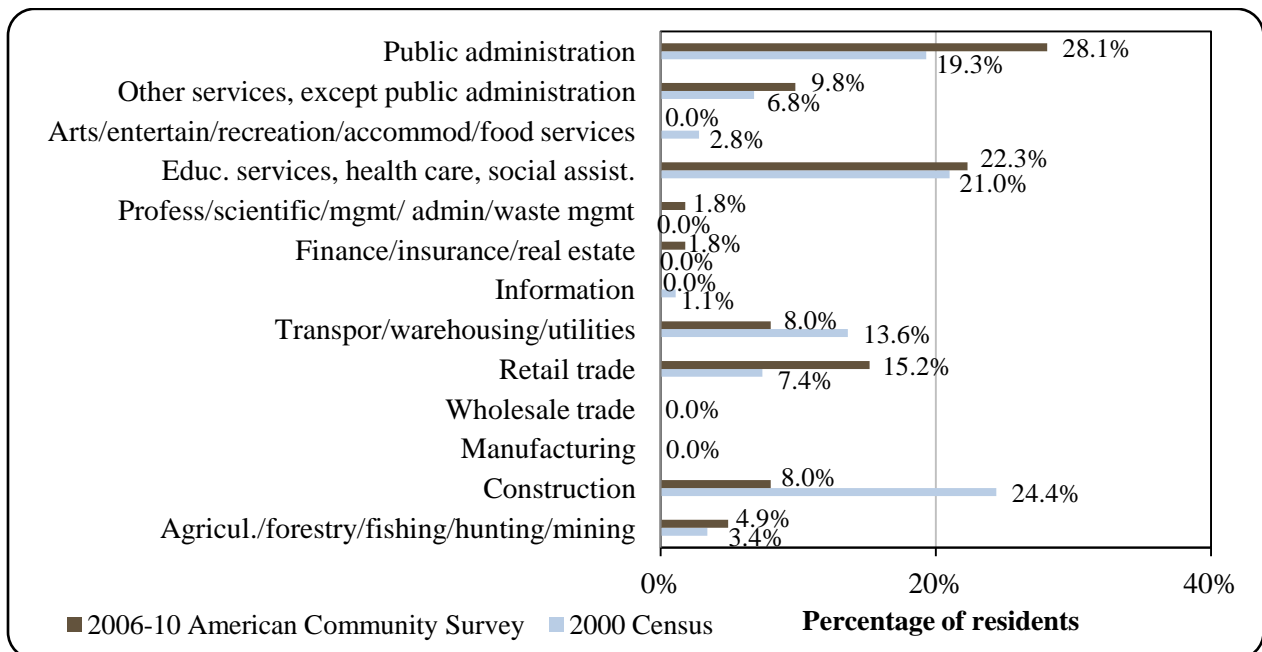
⁴⁴⁶ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Nuiqsut’s population (61.7%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). That same year, 0.6% of Nuiqsut residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate in Nuiqsut was estimated to be 20.1%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 16.1%, compared to a statewide unemployment rate estimate of 11.5%.⁴⁴⁷

Also based on the 2006-2010 ACS, a majority of Nuiqsut’s workforce was estimated to be employed in the public sector (60.3%), along with 39.7% in the private sector. Of the 224 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in public administration (28.1%), educational services, health care, and social assistance (22.3%), and retail trade (15.2%). This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 218 employed residents in Nuiqsut in 2010, of which 55.5% were employed in local government, 16.5% in financial activities, 9.6% in construction, 5.5% in natural resources and mining, 5% in trade, transportation, and utilities, 4.1% in professional and business services, 1.8% in education and health services, 0.9% in leisure and hospitality, and 0.9% in other industries.⁴⁴⁸ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

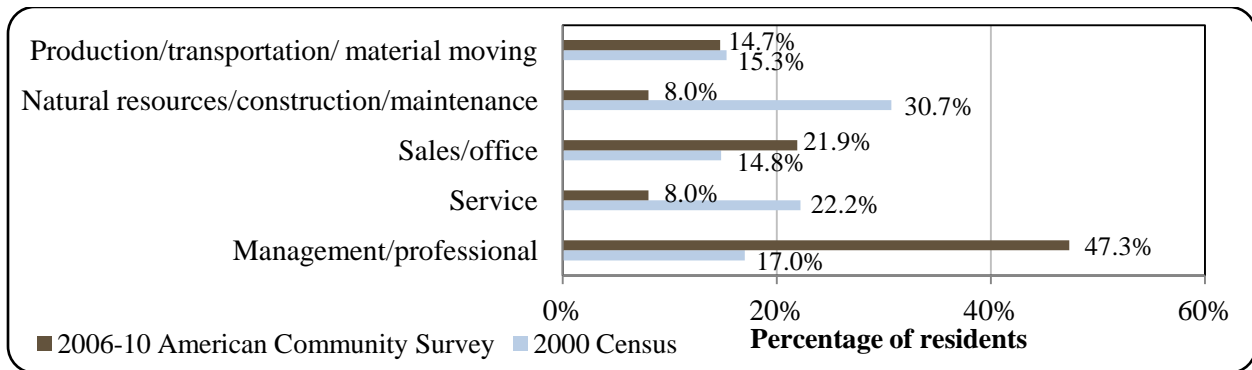
Figure 3. Local Employment by Industry in 2000-2010, Nuiqsut (U.S. Census).



⁴⁴⁷ See footnote 440.

⁴⁴⁸ Ibid.

Figure 4. Local Employment by Occupation in 2000-2010, Nuiqsut (U.S. Census).



Governance

Nuiqsut is a 2nd Class City in the North Slope Borough. The City has a Strong Mayor form of government, with a seven-person city council that includes the Mayor, a seven-person advisory school board, and several municipal employees. The Borough administers an 18.5 mills property tax, and the City does not administer any additional taxes.⁴⁴⁹ The North Slope Borough also receives significant tax revenue from oil and gas development activities which supports services provided in Nuiqsut.⁴⁵⁰

Total municipal revenue varied substantially each year between 2000 and 2010, with a low of \$205,741 in 2004 and a high of \$1,181,332 in 2009. Nuiqsut received State Revenue Sharing contributions each year between 2000 and 2004, and Community Revenue Sharing contributions between 2008 and 2010 of over \$100,000 per year. No information was reported regarding state and federal fisheries-related grants received by Nuiqsut between 2000 and 2010. However, a donation of \$23,000 was reported in 2008 to help carry out a survey of subsistence harvest activities in Nuiqsut. Information about selected aspects of Nuiqsut’s municipal revenue is presented in Table 2.

Nuiqsut was included under ANCSA, and is federally recognized as a Native village. The authorized traditional entity, recognized by the BIA, is the Native Village of Nuiqsut. The Native village corporation is the Kuukpik Corporation, which manages 137,881 acres of land. The regional Native corporation to which Nuiqsut belongs is the Arctic Slope Regional Corporation.⁴⁵¹

Nuiqsut is also a member of the Arctic Slope Native Association (ASNA), a tribal 501(c)(3) non-profit organization headquartered in Barrow. The ASNA is one of the 12 regional Alaska Native nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their

⁴⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁵⁰ Glenn Gray and Associates (2007). *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

⁴⁵¹ Alaska Dept. of Comm. And Rural Affairs (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

regions.⁴⁵² The ASNA works alongside the federal Indian Health Service to provide health and community services to Native communities in the region. In 1986, ASNA took over operation of the regional hospital in Barrow. In 2009, ASNA announced plans for construction of a new hospital in Barrow with an expanded space and range of services. The project is expected to be completed by 2013.^{453,454}

The closest office of the Alaska Department of Fish and Game (ADF&G) is located in Barrow. The closest office of the Alaska Department of Commerce, Community, and Economic Development (DCCED) is located in Kotzebue, and the closest office of the Alaska Department of Natural Resources (DNR) and U.S. Bureau of Citizenship and Immigration Services are located in Fairbanks, although the Anchorage offices of these agencies may be equally accessible by air to people of this region. The closest office of the National Marine Fisheries Service (NMFS) is located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nuiqsut from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵	Other Fisheries-Related Funding ¹
2000	\$715,402	n/a	\$58,179	n/a	n/a
2001	\$448,538	n/a	\$25,000	n/a	n/a
2002	\$452,174	n/a	\$26,503	n/a	n/a
2003	\$440,645	n/a	\$26,710	n/a	n/a
2004	\$180,035	n/a	n/a	n/a	n/a
2005	\$605,747	n/a	n/a	n/a	n/a
2006	\$701,118	n/a	n/a	n/a	n/a
2007	\$893,244	n/a	n/a	n/a	n/a
2008	\$1,047,630	n/a	\$187,640	n/a	\$23,000
2009	\$1,074,633	n/a	\$196,287	n/a	n/a
2010	\$1,104,884	n/a	\$203,079	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁴⁵² U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁴⁵³ Arcticslope.org (n.d.). *Samuel Simmonds Memorial Hospital*. Retrieved February 29, 2012 from <http://www.arcticslope.org/hospital.html>.

⁴⁵⁴ Guedel, Greg. December 17, 2009. "Arctic Slope Native Association Launches Major Native Hospital Construction Project." *Native American Legal Update*. Retrieved February 29, 2012 from <http://www.nativelegalupdate.com/2009/12/articles/arctic-slope-native-association-launches-major-native-hospital-construction-project/>.

Infrastructure

Connectivity and Transportation

Air travel provides the only year-round access. The 4,343-ft-long by 90-ft-wide gravel airstrip is owned and operated by the North Slope Borough.⁴⁵⁵ Barrow is a primary air hub for surrounding villages. Mail is shipped to Nuiqsut along the Dalton Highway and then flown from Deadhorse.⁴⁵⁶ The price of a roundtrip ticket by plane from Nuiqsut to Anchorage in early June of 2012 was \$977.⁴⁵⁷ Coastal access for barged fuel and supply deliveries is possible during the ice-free season, which takes place for only a few weeks during the middle of summer. A 60-mile ice road reaches Nuiqsut approximately 5 to 7 months per year from Deadhorse and Prudhoe Bay, which are connected to the Alaska road system via the Dalton Highway. Additional trails connect Nuiqsut to Anaktuvak Pass (140 miles) and Atqasuk (150 miles). Snowmobiles and ATVs are commonly used for local transportation.⁴⁵⁸ Proposed development of the Colville River Road would provide year-round access to eastern portions of the National Petroleum Reserve Area, and would include a spur road to Nuiqsut.⁴⁵⁹

Facilities

Water in Nuiqsut is derived from a lake, and is chlorinated and filtered before entering the Borough-operated piped water system. A majority of homes have running water in the kitchen. A central hauling point is available, and some homes have individual water tanks with water delivery services. The Borough also operates a piped sewer system, and a sewage lagoon is used for sewage treatment.⁴⁶⁰ The community and individuals also use septic tanks, and some use honeybucket pits. A landfill is located in the area, and the Borough offers refuse collection services. A diesel powerhouse provides electricity in Nuiqsut, and is owned and operated by the North Slope Borough.⁴⁶¹ According to a 2005 Borough Comprehensive Plan, Nuiqsut was in the process of converting from diesel to a natural gas system.⁴⁶² Police services in Nuiqsut are provided by the North Slope Borough Police Department.⁴⁶³ The nearest state trooper post is located in Barrow.⁴⁶⁴ Fire and rescue services are provided by the Nuiqsut Volunteer Fire Department. Additional community facilities include City Hall, the Kisik Community Center, a school/community library, and a school gymnasium.⁴⁶⁵ Nuiqsut has a digital telephone system, local dialup internet, a community teleconference center, cable television, public radio broadcast,

⁴⁵⁵ See footnote 451.

⁴⁵⁶ See footnote 450.

⁴⁵⁷ This price was calculated on November 21, 2011 using kayak.com.

⁴⁵⁸ Glenn Gray and Associates (2007). *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

⁴⁵⁹ URS Corporation (2005). *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

⁴⁶⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁶¹ Ibid.

⁴⁶² See footnote 458.

⁴⁶³ See footnote 460.

⁴⁶⁴ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁴⁶⁵ See footnote 460.

an interactive video distance education system, wide area data network, and several two-way radio technologies.⁴⁶⁶

Medical Services

Local health services are available at the Nuiqsut Clinic, which is owned by the City and operated by the North Slope Borough. The Clinic is a Community Health Aide Program site. Emergency Services have river and air access. Emergency service is provided by 911 Telephone Service volunteers and a health aide. Alternate health care is provided by the Nuiqsut Volunteer Fire Department.⁴⁶⁷ In addition to local health services, a regional hospital with a wider range of services is available in Barrow. A hospital renovation is expected to be completed by 2013, expanding space and services for people of the North Slope region.⁴⁶⁸

Educational Opportunities

One school is present in Nuiqsut. The Nuiqsut Trapper School serves preschool through 12th grade. As of 2011, the school had 91 students and 12 teachers.⁴⁶⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence hunting and fishing have defined the economy and culture of Inupiaq people for thousands of years, and remains essential today.⁴⁷⁰ Nuiqsut is located on the Colville River, which empties into the Beaufort Sea, an area encompassed by the Arctic Management Area. Commercial fishing for all species is currently prohibited in federally regulated waters of the Arctic Management Area, “until sufficient information is available to support the sustainable management of a commercial fishery.” In state-regulated waters near Nuiqsut, a small commercial fishery takes place for whitefish (Arctic and least cisco) in the Colville River Delta. Catch from this fishery is primarily sold to local markets, although some fish are shipped to markets outside the Arctic region.⁴⁷¹ However, the waters near Nuiqsut are primarily managed for subsistence. Currently, the marine areas north and east of the Colville River are designated for subsistence use of bowhead whales between August and October each year.⁴⁷²

Whaling has had a particularly strong presence and history in the North Slope region. Whales were historically and are currently a primary subsistence resource for the Inupiaq people. The commercial whaling industry entered area waters in the 1850s, and continued through the early decades of the 1900s, when the combination of overharvest and declining markets for

⁴⁶⁶ See footnote 458.

⁴⁶⁷ See footnote 460.

⁴⁶⁸ See footnote 453.

⁴⁶⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴⁷⁰ North Slope Borough Planning Commission and Commission on History and Culture (1979). *Nuiqsut Heritage: A Cultural Plan*. Retrieved February 29, 2012 from http://www.alaska.boemre.gov/native/Nuiqsut_Guide.pdf.

⁴⁷¹ North Pacific Fishery Management Council (2009). *Arctic Fishery Management Plan*. Retrieved February 29, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

⁴⁷² See footnote 458.

baleen and whale oil brought the industry to an end.⁴⁷³ In 1977, a NMFS study found that stocks of bowhead whale were in decline, and the International Whaling Commission (IWC) issued a ban on the Native subsistence whale hunt. However, Native whaling captains and elders reported that their estimates of population size were several times higher than the NMFS estimates. Follow-up study confirmed that the bowhead whale population was healthy and growing.⁴⁷⁴

A system of co-management was established with the creation of the Alaska Eskimo Whaling Commission (AEWC) in 1977. The AEWC represents whalers from Kaktovik, Nuiqsut, Barrow, Wainwright, Point Hope, Kivalina, Little Diomedes, Wales, Savoonga, and Gambell. Other examples of co-management efforts in the North Slope region are the Eskimo Walrus Commission (formed in 1978), the Beluga Whale Committee (formed in 1988), and the Nanuuq Commission (formed in 1994 for polar bear management). In 1994, Section 119 of the reauthorization for the Marine Mammal Protection Act provided a legislative basis for these cooperative agreements with Alaska Native organizations.⁴⁷⁵

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Nuiqsut does not have a registered processing plant. The closest seafood processing facility is located in Nome.

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue in Nuiqsut (Table 3).

Commercial Fishing

A combined subsistence-commercial fishery for Arctic cisco (*Coregonus autumnalis*) operates out of Nuiqsut on the Colville River delta during the fall. The commercial fishery is small and run by a prominent local family, the Helmericks. Fishery participants use gillnets strung under the ice. In total, the subsistence and commercial harvest can reach 80,000 fish each year.⁴⁷⁶ Arctic cisco feed on invertebrates and other fish and are distributed between Arctic Canada and Siberia. Arctic cisco from the Colville River can live up to 10 years, reaching a maximum of 14 inches in length and 1.5 pounds in weight. They are similar in appearance to Bering cisco (found in Bering Sea drainages), but are more easily distinguished from least cisco (found in Bristol Bay drainages), which is more slender and often confused with herring. Arctic cisco may sometimes be sold under the name "white trout".⁴⁷⁷ Fish caught in the Colville River fishery are primarily sold locally, although some are exported to markets in Barrow and

⁴⁷³ Iñupiat History and Culture website. (n.d.). *Historical Overview of the North Slope Iñupiat: Commercial Whaling and Trading*. Retrieved March 1, 2012 from <http://nsb-ihlc.com/>.

⁴⁷⁴ See footnote 459.

⁴⁷⁵ Glenn Gray and Associates (2007). *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

⁴⁷⁶ Fechhelm, Robert, Bill Streever, and Benny Gallaway (2007). "The Arctic Cisco (*Coregonus autumnalis*) Subsistence and Commercial Fisheries, Colville River, Alaska: A Conceptual Model." *Arctic* 60(4):421-429.

⁴⁷⁷ Alaska Dept. of Fish and Game. 1994. "Whitefish Species." *Wildlife Notebook Series*. Retrieved February 29, 2012 from http://www.adfg.alaska.gov/static/education/wns/whitefish_species.pdf.

Fairbanks. No other commercial fisheries are currently permitted in state or federal waters in the Nuiqsut area.⁴⁷⁸

Between 2000 and 2010, no residents of Nuiqsut held permits in state or federal commercial fisheries (Table 4). In addition, no Nuiqsut residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8). There were also no commercial crew license holders in Nuiqsut during the 2000 to 2010 period, no Nuiqsut residents were the primary owner of a fishing vessel, and no commercial fishing vessels were homeported in the community. In addition, no fish buyers or shore-side processing facilities were located in Nuiqsut. These characteristics of the commercial fishing sector are presented in Table 5. Given the lack of commercial fishing activity and fish buyers in Nuiqsut, no landings or ex-vessel revenue were generated in the community or by Nuiqsut vessel owners (Tables 9 and 10).

⁴⁷⁸ See footnote 471.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nuiqsut: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$715,402</i>	<i>\$448,538</i>	<i>\$452,174</i>	<i>\$440,645</i>	<i>\$180,035</i>	<i>\$605,747</i>	<i>\$701,118</i>	<i>\$893,244</i>	<i>\$1,047,630</i>	<i>\$1,074,633</i>	<i>\$1,104,884</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city brings in each year from all sources, including fisheries-related revenue streams. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Nuiqsut: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Nuiqsut: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nuiqsut: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Nuiqsut ²	Total Net Pounds Landed in Nuiqsut ^{2,5}	Total Ex-Vessel Value of Landings in Nuiqsut ^{2,5}
2000	0	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Nuiqsut: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nuiqsut: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nuiqsut: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nuiqsut: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nuiqsut Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no sport fish guide businesses or licensed sport fish guides were reported to be present in Nuiqsut. The number of sportfishing licenses purchased each year by residents of Nuiqsut (irrespective of point of sale) varied between 18 and 52 during this period. The number of licenses purchased in the City of Nuiqsut was much smaller, varying between 0 and 19 per year between 2008 and 2010, indicating that a Nuiqsut residents travel to other communities to prepare for sportfishing activity.

The Alaska Statewide Harvest Survey,⁴⁷⁹ conducted by ADF&G between 2000 and 2010, noted sport harvest of Pacific halibut by private anglers in Nuiqsut. The survey also noted sport harvest of sockeye salmon in nearby Prudhoe Bay, and a wider range of species targeted in Barrow, including all five species of Pacific salmon, rainbow trout, Dolly Varden, whitefish, burbot, arctic grayling, Pacific halibut, rockfish, and razor clams. No kept/release log book data were reported for sportfishing charters out of Nuiqsut between 2000 and 2010.⁴⁸⁰

Nuiqsut is located within Alaska Sport Fishing Survey Area Z – North Slope-Brooks Range, which includes all Alaskan waters, including drainages flowing into the Beaufort and Chukchi seas, north of the Brooks Range and east of Point Hope. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, Alaska resident anglers consistently fished a greater number of days than non-Alaska resident anglers in both freshwater and saltwater, and freshwater sportfishing activity was significantly higher than in saltwater. On average between 2000 and 2010, Alaska resident anglers fished 3,065 fresh water days and 228 saltwater days, while non-Alaska resident anglers fished on average 1,001 freshwater and 17 saltwater days. This information about the sportfishing sector in and near Nuiqsut is also displayed in Table 11.

⁴⁷⁹ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴⁸⁰ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Nuiqsut: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nuiqsut ²
2000	0	0	53	0
2001	0	0	27	1
2002	0	0	29	19
2003	0	0	33	12
2004	0	0	21	1
2005	0	0	35	1
2006	0	0	52	10
2007	0	0	42	4
2008	0	0	27	2
2009	0	0	12	1
2010	0	0	18	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	0	743	523	3,473
2001	0	635	715	4,682
2002	11	547	819	3,393
2003	15	67	594	2,034
2004	0	96	1,131	2,084
2005	0	0	2,183	2,169
2006	18	341	495	2,609
2007	0	83	733	3,338
2008	140	0	990	4,469
2009	0	0	1,505	2,400
2010	0	0	1,319	3,065

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence is an essential aspect of the culture and economy of Nuiqsut. The Inupiaq people depend on subsistence harvest of marine mammals and fish, as well as land-based resources. Historically, residents of the North Slope lived in small groups and traveled throughout the region following seasonal availability of fish and wildlife. Today, most live in permanent villages, and use snowmachines and motor boats to extend the range of subsistence harvest opportunities. Nuiqsut hunters travel as far east as Sagavanirktok, as far south as middle Colville, west to Teshekpuk Lake, and along the coast as far west as Pitt Point and east beyond Prudhoe Bay to the mouth of the Canning River.⁴⁸¹

Land-based resources are a primary focus of Nuiqsut subsistence harvesting, including caribou, moose, wolf, wolverine, fox, and freshwater fishes. Marine resources, including marine mammals, waterfowl, and polar bears are also important. Commonly utilized fish species include Arctic cisco, whitefish, least cisco, grayling, humpback whitefish, burbot, northern pike, pink salmon, and Arctic char.⁴⁸² Hunters from Nuiqsut harvest species of marine mammals including bowhead whale, bearded seal, ringed seal, Pacific walrus, and polar bear.⁴⁸³ Some trading of resources takes place between villages in the region. Nuiqsut is known for its whitefish and pelts, and often receives bowhead and beluga whale, sheep, and smelt from other villages.⁴⁸⁴

A survey conducted by the North Slope Borough in 2003 found that 85% of Nuiqsut households use subsistence foods, and approximately 74% of households receive over half of their food from subsistence activities.⁴⁸⁵ Between 2000 and 2010, ADF&G did not report any information about the percentage of Nuiqsut households participating in marine resource subsistence or regarding per capita subsistence harvest (Table 12).

A 1993 subsistence survey conducted by ADF&G provides species-level household participation information regarding marine mammals and non-salmon fish. That year, 31% of Nuiqsut households reported harvesting ringed seal, 7% reported harvesting bearded seal, 5% reported harvest of bowhead whale, and 2% reported harvest of spotted seal. Species of non-salmon fish harvested by the greatest percentage of Nuiqsut households in 1993 included Arctic cisco (68% of households reported involvement in harvesting), broad whitefish (66%), grayling (65%), burbot (57%), least cisco (47%), Arctic char (31%), and humpback whitefish (24%). Many of these resources were shared with households that did not participate in harvest activities. A particularly important example of subsistence resource sharing is the bowhead whale. While only 5% of households in Nuiqsut reported involvement in the harvest of bowhead whale in 1993, 97% of households reported using the resource that year.⁴⁸⁶

Some information was reported during the 2000-2010 period regarding subsistence salmon permits. In 2003 and 2004, one subsistence salmon permit was issued per year to a Nuiqsut household, and two were issued in 2008. No information was reported regarding the number of permits fished in these years or the number or species of salmon harvested. Likewise,

⁴⁸¹ Glenn Gray and Associates (2007). *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

⁴⁸² Ibid.

⁴⁸³ URS Corporation (2005). *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

⁴⁸⁴ See footnote 481.

⁴⁸⁵ Ibid.

⁴⁸⁶ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

no information was reported regarding subsistence harvest of marine invertebrates or non-salmon fish. This information is presented in Table 13. In addition, no information was reported regarding subsistence halibut harvest by Nuiqsut residents between 2003 and 2010 (Table 14).

Between 2000 and 2010, some information was reported regarding marine mammal subsistence harvest in Nuiqsut. According to data reported by the U.S. Fish and Wildlife Service, polar bears were harvested in several years during the period, including four harvested in 2000, two per year harvested in 2002 and 2004, and one harvested in 2009. No information was reported by management agencies regarding harvest of beluga whale, sea otters,⁴⁸⁷ walrus, harbor seal, spotted seal, or Steller sea lion. This information is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Nuiqsut: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁴⁸⁷ The range of the northern sea otter does not extend into the Arctic region. Source: ADF&G *Wildlife Notebook Series*. "Sea Otter Fact Sheet." Retrieved March 1, 2012 from http://www.adfg.alaska.gov/static/education/wns/sea_otter.pdf.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nuiqsut: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nuiqsut: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nuiqsut: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	4	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	2	n/a	n/a	n/a
2003	n/a	n/a	n/a	2	n/a	n/a	n/a
2004	n/a	n/a	n/a	2	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	1	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Point Lay (A.K.A. Kali)



People and Place

Location

Point Lay is located on the Chukchi Sea coast, south of the Kokolik River mouth. The community is protected from the open ocean by the Kasugaluk Lagoon. The Eskimo name for the site is Kali, which means ‘mound’, referring to the elevated ground on which the Village is located. Point Lay is located about 180 miles southwest of Barrow, and 700 miles northwest of Anchorage. Point Lay is located in the Barrow Recording District and the North Slope Borough Census Area.^{488,489}

*Demographic Profile*⁴⁹⁰

In 2010, there were 189 residents in Point Lay, ranking it as the 203rd largest of 352 communities in Alaska with populations recorded that year. Point Lay was first included in U.S. Decennial Census statistics in 1880, when 30 individual were recorded as permanent residents. No permanent residents were recorded during many decades of the 20th century, but a consistent population has been recorded since 1980, after some residents of Barrow and Wainwright relocated there. The population of Point Lay rose substantially between 1990 and 2000, increasing by approximately 78%. By 2010, the population declined again to 189 individuals, but was still 36% higher than the population in 1990. According to Alaska Department of Labor estimates, between 2000 and 2009 the population of permanent residents decreased by 5.3%, with an average annual growth rate of -0.76%.

According to a survey conducted by the AFSC in 2011, community leaders estimated that an additional 10 individuals are present in Point Lay as seasonal workers or transients each year, and are primarily Borough employees. They indicated that the community’s population peaks during June and August each year. They also noted that population fluctuations are not at all driven by employment in fishing sectors.

In 2010, a majority of the population of Point Lay identified themselves as American Indian or Alaska Native (88.4%), while 10.6% identified as White, 0.5% identified as Native Hawaiian or Other Pacific Islander, and 0.5% identified with two or more races. In addition, 0.5% of Point Lay residents identified themselves as Hispanic in 2010. It is important to note that Asians appear to have been present in 2000, and are no longer represented in 2010 Decennial Census statistics. The percentage of the population identifying as American Indian or Alaska Natives increased over time, from 81.3% in 1990 and 82.6% in 2000, to 88.4% by 2010. The

⁴⁸⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁸⁹ North Slope Borough website. 2012. *Point Lay*. Retrieved April 16, 2012 from <http://www.co.north-slope.ak.us/villages/ptlay/>.

⁴⁹⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

percentage of the population identifying as all other racial and ethnic groups declined over the same period. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

Based on household surveys conducted for the U.S. Decennial Census, the average household size in Point Lay increased from 2.9 persons per household in 1990 to 3.93 in 2000, and then declined to 3.15 by 2010. The number of households in Point Lay increased from 44 occupied housing units in 1990 to 61 in 2000 and 60 in 2010. Of the 70 total housing units surveyed for the 2010 U.S. Decennial Census, 32.9% were owner-occupied, 52.9% were rented, and 14.3% were vacant or used only seasonally. Nine Point Lay residents were reported to be living in group quarters in 1990, and six in 2000. In 2010, no Point Lay residents were reported to be living in group quarters.

Table 1. Population in Point Lay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	139	-
2000	247	-
2001	-	256
2002	-	256
2003	-	264
2004	-	252
2005	-	242
2006	-	235
2007	-	249
2008	-	256
2009	-	234
2010	189	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Point Lay: 2000-2010 (U.S. Census).

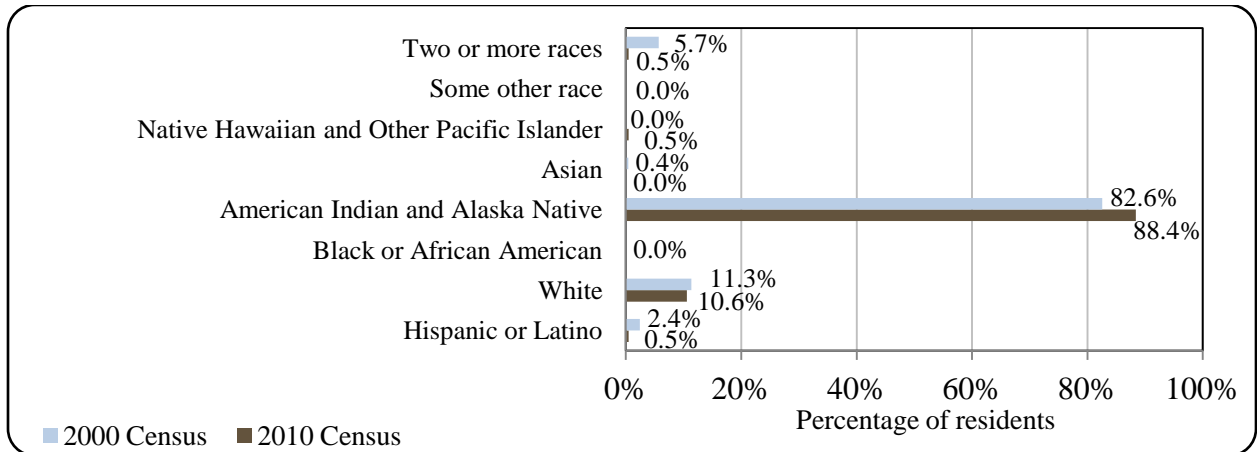
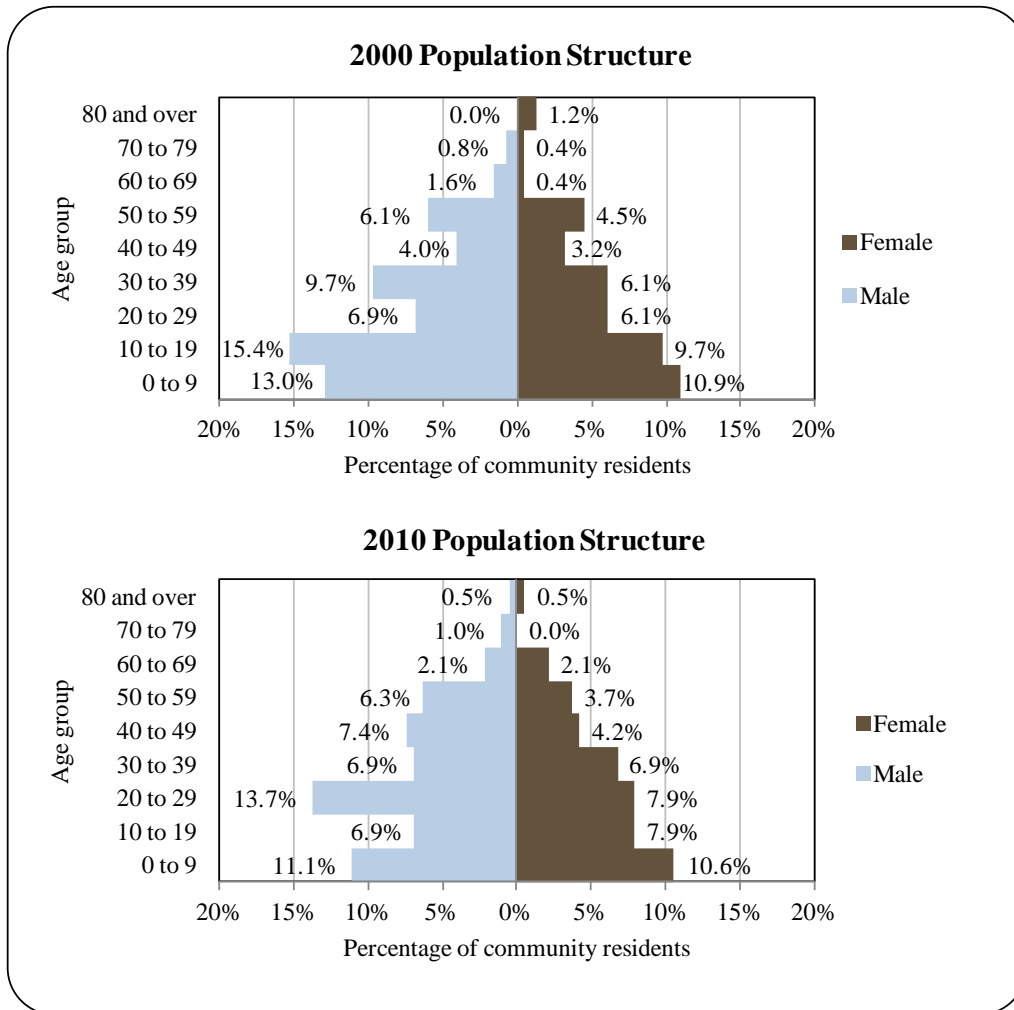


Figure 2. Population Age Structure in Point Lay Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup of Point Lay’s population (56.1% male and 43.9% female) was more heavily weighted toward males than the population of the Alaska as a whole, which had 52% males and 48% females. The median age of Point Lay residents was 25.1 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 6.4% of Point Lay’s population was 60 or older. The overall population structure of Point Lay in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁴⁹¹ 65.9% of Point Lay residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 6.9% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 27.2% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 16.2% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 0% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 2.9% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Point Lay is probably the last remaining village of the Kuukpaagruk people. The deeply indented shoreline prevented effective bowhead whaling, and the Village never fully participated in the whaling culture common in villages further north. The Village’s traditional hunt of the beluga whales is similar to the bowhead whaling culture in other North Slope villages.⁴⁹² Today, subsistence remains essential to the economy and culture of Point Lay, and the Village is particularly active in beluga whaling.⁴⁹³ In addition, the first bowhead whale since 1937 was landed in Point Lay in 2009.⁴⁹⁴

The Village of Point Lay was historically occupied year-round by a small group of one or two families. They were joined in 1929-30 by several more families from Point Hope. In 1974, the Village moved from the old site on a gravel barrier island just offshore. The old village site is now used as a summer hunting camp. Some residents of Barrow and Wainwright relocated to the Village in the mid-1970s during the Alaska Native Claims Settlement Act (ANCSA) process. In the late 1970s, due to seasonal flooding from the Kokolik River, the Village relocated again to a site near the Air Force Distance Early Warning station to the south. Homes were relocated to the new townsite. Point Lay bans the sale, possession, and importation of alcoholic beverages.⁴⁹⁵

⁴⁹¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁹² North Slope Borough website. 2012. *Point Lay*. Retrieved April 16, 2012 from <http://www.co.north-slope.ak.us/villages/ptlay/>.

⁴⁹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁹⁴ Alaska Newspapers Staff (2009). “Whaling crew lands Point Lay’s second whale after decades-long shutout.” *The Arctic Sounder*. Retrieved April 17, 2012 from http://www.thearcticsounder.com/article/1119whaling_crew_lands_point_lays_second_whale.

⁴⁹⁵ See footnote 493.

Natural Resources and Environment

The climate in Point Lay is arctic. Temperatures range from -55 to 78 °F during the course of the year. Precipitation is light, averaging 7 inches annually, with 21 inches of snow. The Chukchi Sea is ice-free from late June until September.⁴⁹⁶ The Village is located on the mainland shore of the Kasegaluk Lagoon, a coastal lagoon protected from the Chukchi Sea by a series of thin barrier islands. Five rivers or inlets empty into the lagoon, including the Koklik, which enters the lagoon just north of Point Lay. The tundra along the mainland coast near Point Lay is dotted by ponds, lakes, streams, marshes and river/river delta.⁴⁹⁷ The Point Lay area is underlain by a continuous permafrost layer.⁴⁹⁸

In 1980, much of the traditional area of the Iñupiaq people was protected as national parks, preserves, monuments, and wildlife areas under the Alaska National Interest Lands Conservation Act (ANILCA).⁴⁹⁹ One of the goals of the legislation was to protect subsistence uses of both Native and non-Native rural residents. Point Lay is located close to the Chukchi Sea unit of the Alaska Maritime National Wildlife Refuge (NWR). The NWR extends along the Aleutian Island chain and incorporates the Pribilof Islands, a unit in Bristol Bay, a unit in Kodiak, areas of the Southeast Alaska panhandle, and some in the Arctic. The Chukchi Sea unit includes coastal lagoons and headlands between Icy Cape and Cape Thompson.⁵⁰⁰

The Kasegaluk Lagoon is included in the Alaska Maritime NWR. The lagoon provides important habitat for marine mammals and seabirds. It is the largest coastal lagoon system in Arctic Alaska. It is particularly important for summer concentrations of beluga whale, spotted seal, and black brant.⁵⁰¹ In recent years, large concentrations of walrus (8,000-20,000) have also hauled out on the barrier island near Point Lay in late summer. Villagers from Point Lay have been actively involved in protection of the colony. Point Lay was awarded an “Outstanding Partner” award by the U.S. Fish and Wildlife Service in 2010 in recognition of these local efforts.⁵⁰² The Point Lay area also provides important habitat for the spectacled eider and Steller’s eider, both of which are listed as threatened under the U.S. Endangered Species Act.⁵⁰³

Point Lay is located approximately 30 miles from the western boundary of the National Petroleum Reserve – Alaska (NPR). To date, a majority of oil development has taken place in the Colville-Canning area, further east near Prudhoe Bay and Nuiqsut. Future development is

⁴⁹⁶ Ibid.

⁴⁹⁷ Johnson, Stephen R. 1993. An Important Early-Autumn Staging Area for Pacific Flyway Brant: Kasegaluk Lagoon, Chukchi Sea, Alaska. *Journal of Field Ornithology*, 64(4):539-548. Retrieved April 17, 2012 from <http://elibrary.unm.edu/sora/JFO/v064n04/p0539-p0548.pdf>.

⁴⁹⁸ ASCG Incorporated. 2005. *North Slope Borough Comprehensive Transportation Plan*. Retrieved April 16, 2012 from http://www.co.north-slope.ak.us/information/comp_plan/TransportationPlan_Final.pdf.

⁴⁹⁹ Alaska National Interest Lands Conservation Act (ANILCA). December 2, 1980. Public Law 96-487, 96th Congress. Retrieved February 6, 2012 from <http://alaska.fws.gov/asm/nilca/toc.html>.

⁵⁰⁰ U.S. Fish and Wildlife Service. 2011. *Land Protection Plan for Alaska Maritime National Wildlife Refuge*. Retrieved April 17, 2012 from http://alaska.fws.gov/nwr/planning/pdf/akmar/AM_LCP_complete.pdf.

⁵⁰¹ Alaska Northern Environmental Center. 2009. *Kasegaluk Lagoon*. Retrieved April 17, 2012 from <http://northern.org/programs/clean-water-mines/clean-water-mining-program-map-page/habitats/kasegaluk-lagoon-1/kasegaluk-lagoon>.

⁵⁰² McCracken, J., and J. Garlich Miller. 2011. Point Lay Walrus Protection and Research. U.S. Fish and Wildlife Service Marine Mammal Bulletin. Vol. 10, No. 1. Retrieved April 17, 2012 from http://alaska.fws.gov/fisheries/mmm/mtrp/pdf/bulletin_fall_2011.pdf.

⁵⁰³ URS Corporation. October 2005. *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

planned to expand west and south within the NPRA, south in the Colville-Canning region, as well as into offshore state and federal waters in the Beaufort Sea. The NPRA area contains an estimated 10.6 billion barrels of oil in a total area of 24.2 million acres (440 barrels per acre).⁵⁰⁴

Compared to the Beaufort Sea, very little oil and gas exploration has taken place in the Chukchi Sea Outer Continental Shelf area to date. Some exploration took place in the late 1980s, and several lease sales in the early 1990s allowed for follow-up exploration. In 2008, 488 tracts totaling 2,758,408 acres were leased during Lease Sale 193, primarily by Shell and ConocoPhillips, as well as international companies including StatoilHydro USA, Repsol, and ENI.⁵⁰⁵ Following the Deepwater Horizon event in the Gulf of Mexico, Lease Sale 193 was remanded to the Department of the Interior for further National Environmental Protection Act analysis regarding the potential for a very large oil spill and its potential consequences for the Chukchi Sea ecosystem, local economy, and subsistence harvest patterns. In late 2011, Secretary of the Interior Ken Salazar affirmed the original Lease Sale 193.^{506,507} This sale is expected to initiate a large-scale exploration effort in the Chukchi Sea.⁵⁰⁸ Given the controversy surrounding Lease Sale 193, Secretary Salazar removed Chukchi Sea Sales 212 and 221 from the 2007-2012 program.⁵⁰⁹ The Proposed 2012-2017 program schedules one sale in the Chukchi Sea, deliberately set late in the program (2016) to allow time for further study and infrastructure development.⁵¹⁰

Point Lay is at risk of severe weather events. Ice override events on barrier islands in the Point Lay area have been documented as moving 98 to 846 feet onshore and were up to 6.6 feet high.⁵¹¹ In addition, communities in the North Slope Borough were rated at risk of flooding, wildfire, earthquake, and volcanic activity, tsunami/seiche, landslides, erosion, and drought.⁵¹² Arctic communities are also experiencing significant changes and increased risk as a result of climate change. In interviews in the late 1990s, Point Lay residents reported late arrival of snow and decreased ocean ice formation.⁵¹³ Land settlement resulting from permafrost melting has negatively impacted sewer lines, leading to frequent need for repairs. Land settlement must be

⁵⁰⁴ U.S. Dept. of Energy. (2009). *Alaska North Slope Oil and Gas: A Promising Future or an Area in Decline?* Retrieved December 30, 2011 from: http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS_Potential.pdf.

⁵⁰⁵ Ibid.

⁵⁰⁶ U.S. Dept. of the Interior, Minerals Management Service. December 2010. *Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/RP.pdf>.

⁵⁰⁷ Bureau of Ocean Energy Management. October 2011. *Chukchi Sea OCS Oil & Gas Lease Sale 193: Record of Decision*. Retrieved February 28, 2012 from <http://www.boemre.gov/pdfs/sale193rodwofinal.pdf>.

⁵⁰⁸ See footnote 504.

⁵⁰⁹ See footnote 506.

⁵¹⁰ Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

⁵¹¹ Ibid.

⁵¹² State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁵¹³ Gibson, M-A., and S. B. Schullinger. 1998. *Answers from the Ice Edge: The Consequences of Climate Change on Life in the Bering and Chukchi Seas*. Retrieved April 17, 2012 from http://www.greenpeace.de/fileadmin/gpd/user_upload/themen/klima/answersfrom_icedge.pdf.

considered during both design and location of utilities, facilities, and housing in Point Lay and other North Slope communities.⁵¹⁴

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Point Lay as of July 2012.⁵¹⁵

Current Economy

The Point Lay economy is primarily based on subsistence hunting, fishing and whaling. Seal, walrus, beluga, caribou and fish are staples of the diet.^{516,517} According to a survey conducted by the AFSC in 2011, that the community primarily depends on subsistence harvesting, and there were no local commercial fisheries. Between 2000 and 2010, no Point Lay residents owned commercial fishing vessels, held commercial fishing permits or crew licenses (see *Commercial Fishing* section of this profile). Most year-round employment opportunities in Point Lay are with the North Slope Borough and school district, local Village government and the village Native corporation, local retailers, and private construction and engineering companies.^{518,519}

Based on household surveys conducted for the 2006-2010 ACS,⁵²⁰ in 2010, the per capita income in Point Lay was estimated to be \$15,802 and the median household income was estimated to be \$47,500. This represents a decrease from the year 2000, when per capita income in Point Lay was \$18,003 and median household income was \$68,750. If inflation is taken into account by converting the 2000 values to 2010 dollars,⁵²¹ the decrease in income is shown to be even larger; real per capita income in 2000, in 2010 dollars, was \$23,674, and real median household income was \$90,405. In 2010, Point Lay ranked 192nd of 305 Alaskan communities with per capita income data that year, and 145th in median household income, out of 299 Alaskan communities with household income data.

Although Point Lay's small population size may have prevented the ACS from accurately portraying economic conditions,⁵²² additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI)

⁵¹⁴ URS Corporation. October 2005. *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

⁵¹⁵ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁵¹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵¹⁷ North Slope Borough website. 2012. *Point Lay*. Retrieved April 16, 2012 from <http://www.co.north-slope.ak.us/villages/ptlay/>.

⁵¹⁸ See footnote 516 and 517.

⁵¹⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵²⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵²¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵²² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Point Lay in 2010 is \$13,898.⁵²³ Despite evidence for a decline in per capita income in Point Lay, the community did not meet the Denali Commission’s criteria as a “distressed” community in 2011.⁵²⁴ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Point Lay’s population (57.8%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). That same year, 15.1% of Point Lay residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate in Point Lay was estimated to be 9.4%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 16%, compared to a statewide unemployment rate estimate of 11.5%.⁵²⁵

Also based on the 2006-2010 ACS, a majority of Point Lay’s workforce was estimated to be employed in the public sector (65.3%), along with 29.8% in the private sector, and 4.8% estimated to be self-employed. Of the 124 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers was estimated to be employed in educational services, health care, and social assistance sector (35.5%), arts, entertainment, recreation, accommodation, and food services (19.4%), construction (16.9%), and transportation and warehousing (16.1%). This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 108 employed residents in 2010, of which 82.4% were employed in local government, 6.5% in construction, 5.6% in trade, transportation, and utilities, 2.8% in professional and businesses services, 0.9% in natural resources and mining, 0.9% in financial activities, and 0.9% in education and health services.⁵²⁶ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

⁵²³ See footnotes 519 and 520.

⁵²⁴ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁵²⁵ See footnote 519.

⁵²⁶ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Point Lay (U.S. Census).

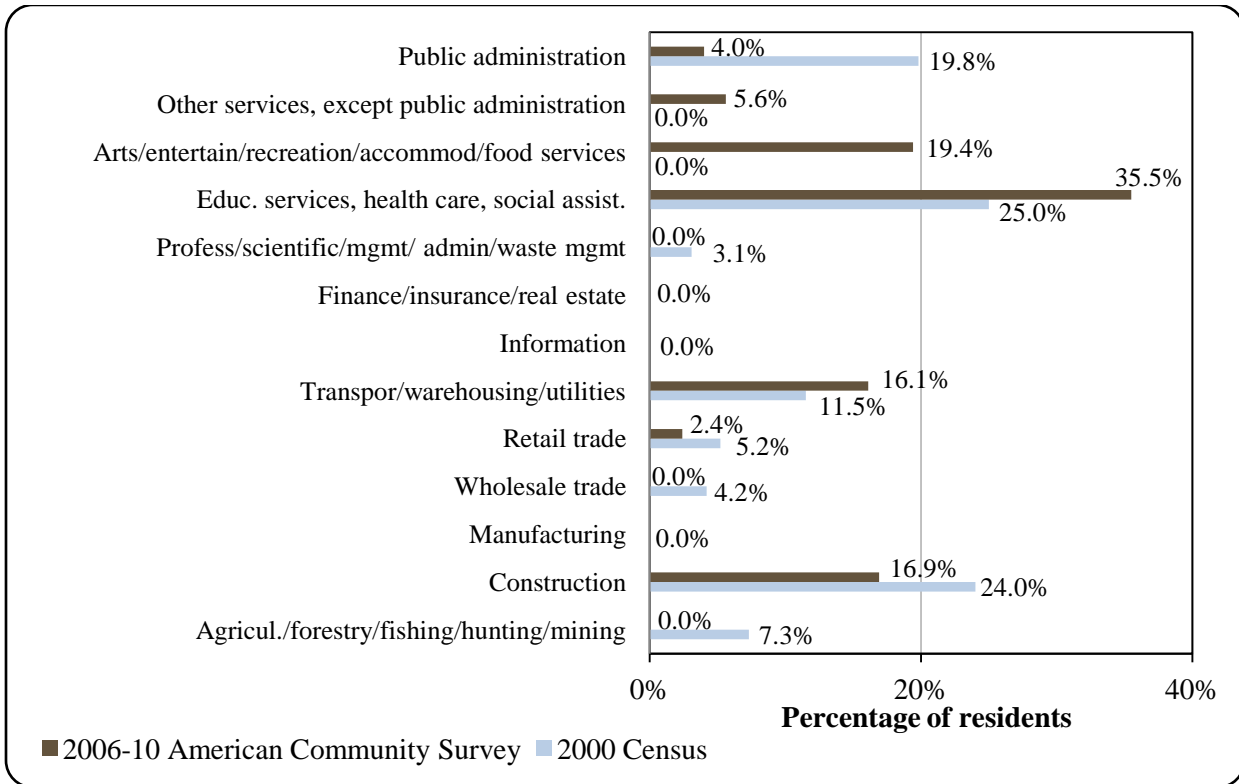
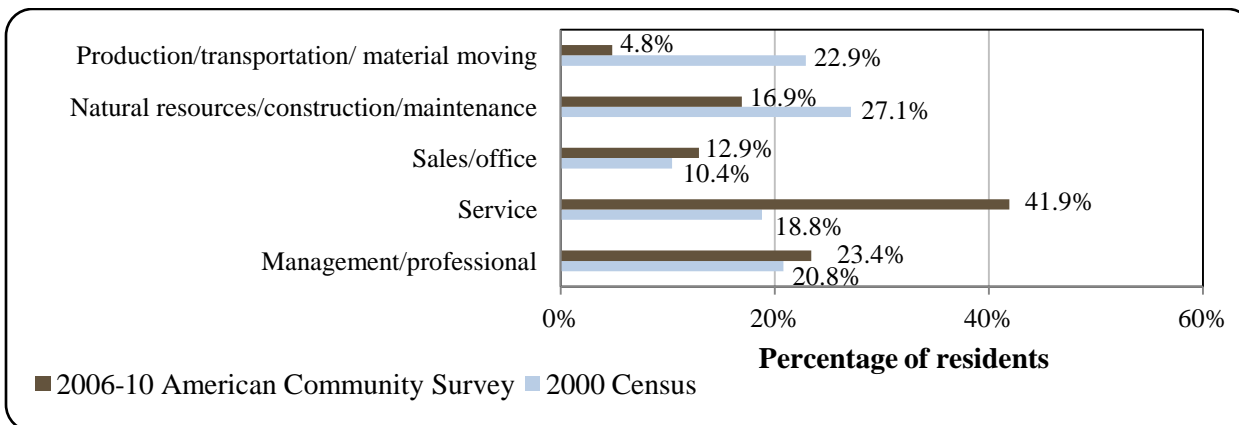


Figure 4. Local Employment by Occupation in 2000-2010, Point Lay (U.S. Census).



Governance

Point Lay is an unincorporated community located in the North Slope Borough. The Borough administers an 18.5 mills property tax.⁵²⁷ The North Slope Borough also receives significant tax revenue from oil and gas development activities which supports services provided in Point Lay.⁵²⁸ No taxes are collected in Point Lay, and no municipal revenue was reported between 2000 and 2010. Point Lay did not receive State or Community Revenue Sharing contributions or fisheries-related grants between 2000 and 2010. This information about selected revenue sources in Point Lay is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Point Lay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Point Lay was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Point Lay. The Native village corporation is Cully Corporation, Inc., which manages 90,009 acres of land. The regional Native corporation to which Point Lay belongs is the Arctic Slope Regional Corporation (ASRC).⁵²⁹

⁵²⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵²⁸ Glenn Gray and Associates. June 2007. *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

⁵²⁹ See footnote 527.

Point Lay is also a member of the Arctic Slope Native Association (ASNA), a tribal 501(c)(3) non-profit organization headquartered in Barrow. The ASNA is one of the 12 regional Alaska Native nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁵³⁰

The closest offices of the Alaska Department of Fish and Game (ADF&G) are located in Barrow and Kotzebue, the closest office of the Alaska Department of Commerce, Community, and Economic Development is located in Kotzebue, and the closest office of the Alaska Department of Natural Resources is located in Fairbanks. These agencies also have offices located in Anchorage. The closest offices of the National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services are also located in Anchorage.

Infrastructure

Connectivity and Transportation

Point Lay is accessible year-round by air. Coastal and overland access are seasonal. The U.S. Air Force owns the public 4,500 ft long by 100 ft wide gravel airstrip in Point Lay.⁵³¹ ERA Alaska provides direct flights between Point Lay and Barrow five days per week, and between Point Lay and Point Hope two days per week.⁵³² The price of a roundtrip ticket by plane from Point Lay to Anchorage in early June of 2012 was \$1,132.⁵³³ Freight is delivered by air throughout the year and seasonally by barge.⁵³⁴ Barges typically leave the Seattle area by July 1 and arrive in Barrow by August 1, delivering goods to North Slope Borough communities along the way. Landing craft with a 5-foot draft are used to unload goods on beaches near the communities. In the case of Point Lay, the landing craft unloads goods onto the outer spit of Kasegaluk Lagoon. They are transferred across the spit to a 50-ft watercraft that transports the goods across the Lagoon to Point Lay.⁵³⁵

Approximately eight miles of gravel roads are present in Point Lay. During the winter, an extensive network of trails is available for travel between communities and to subsistence sites. The trails are impassible in summer due to the presence of wetlands and many small lakes. Point Lay is connected to Point Hope, Wainwright, and Barrow via a coastal trail. The trail network also connects Wainwright to Deadhorse, Nuiqsut, and Atqasuk, and Nuiqsut south to Anaktuvuk Pass. Snowmobiles are used for winter travel between communities and to subsistence camps.⁵³⁶

⁵³⁰ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁵³¹ See footnote 527.

⁵³² Flight information retrieved April 16, 2012 from <http://www.trvlink.com/download/7h/ERAschedules.pdf>.

⁵³³ This price was calculated on November 21, 2011 using kayak.com.

⁵³⁴ North Slope Borough website. 2012. *Point Lay*. Retrieved April 16, 2012 from <http://www.co.north-slope.ak.us/villages/ptlay/>.

⁵³⁵ ASCG Incorporated. 2005. *North Slope Borough Comprehensive Transportation Plan*. Retrieved April 16, 2012 from http://www.co.north-slope.ak.us/information/comp_plan/TransportationPlan_Final.pdf.

⁵³⁶ Ibid.

Facilities

Water in Point Lay is obtained from a lake near the community and is filtered and stored in a tank. A community well source and individual wells are also in use. There is no piped water system. Water trucks deliver water to homes, providing running water for kitchens. A central watering point is also available. No piped sewer system is present, either. The Borough operates a sewage lagoon for sewage treatment.⁵³⁷ Problems associated with melting permafrost have caused problems for existing sewer lines, and system repairs have been frequent in recent years.⁵³⁸ The Borough also operates a landfill and provides refuse collection services in Point Lay. Electricity is provided by a diesel powerhouse operated by the Borough.⁵³⁹ According to a survey conducted by the AFSC in 2011, community leaders indicated that a new diesel powerhouse is expected to be completed by 2013. Wind power generation was briefly tried in Point Lay in the past, but was discontinued. The Borough is interested in revisiting the possibility of wind power in Point Lay.⁵⁴⁰ Police services are provided by the North Slope Borough Police Department.⁵⁴¹ The nearest state trooper posts are located in Barrow and Kotzebue.⁵⁴² Fire and rescue services are provided by the Point Lay Volunteer Fire Department.⁵⁴³ The fire station is equipped with a fire engine and an ambulance.⁵⁴⁴

Additional community facilities and services include a local store, operated by the Native Village of Point Lay, which sells groceries and clothing. Propane, diesel, and regular gasoline are sold in town.⁵⁴⁵ A community center is also present.⁵⁴⁶ According to the 2011 AFSC survey, a food bank and public library are present, and job placement services are offered. Telephone, internet, and cable services are available in Point Lay.⁵⁴⁷

In the 2011 AFSC survey, community leaders indicated that no fisheries-related infrastructure is present in Point Lay. They reported that no dock space is available in the community and no fishing support businesses are present. They also indicated that the only vessels present in Point Lay are small boats, ranging from 16 to 20 feet in length. Skiffs are a primary mode of transportation for Point Lay residents traveling to subsistence sites during summer months.⁵⁴⁸

Medical Services

Local health services are available at the Point Lay Clinic, which is owned and operated by the North Slope Borough. The Clinic is a Community Health Aide Program site. Emergency

⁵³⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵³⁸ URS Corporation. October 2005. *North Slope Borough Comprehensive Plan*. Retrieved February 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

⁵³⁹ See footnote 537.

⁵⁴⁰ See footnote 538.

⁵⁴¹ See footnote 537.

⁵⁴² Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁵⁴³ See footnote 537.

⁵⁴⁴ See footnote 534.

⁵⁴⁵ Ibid.

⁵⁴⁶ See footnote 537.

⁵⁴⁷ Ibid.

⁵⁴⁸ See footnote 535.

Services have coastal and air access. Emergency service is provided by 911 Telephone Service volunteers and a health aide. Alternate health care is provided by the Point Lay Volunteer Fire Department.⁵⁴⁹ The fire station is equipped with an ambulance.⁵⁵⁰ The nearest hospitals are located in Barrow and Kotzebue.

Educational Opportunities

One school is present in Point Lay. The Kali School provides preschool through 12th grade education. As of 2011, the school had 87 students and 11 teachers.⁵⁵¹ The school also provides adult basic education.⁵⁵²

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence hunting and fishing have defined the economy and culture of Inupiaq people for thousands of years, and remain essential today. Point Lay is located just south of the mouth of the Kokolik River, on the inland shore of Kasegaluk Lagoon. Beyond the Lagoon lies the Chukchi Sea, an area encompassed by the Arctic Management Area. Commercial fishing for all species is currently prohibited in federally regulated waters of the Arctic Management Area, “until sufficient information is available to support the sustainable management of a commercial fishery.” The focus of harvest in communities within the Arctic Management Area remains subsistence.⁵⁵³ In addition, no state regulated commercial fisheries currently take place in the vicinity of Point Lay.

Subsistence harvest in the North Slope region is managed by both federal government agencies and local Native communities through various co-management efforts that facilitate communication between these entities. Examples of co-management institutions include the Alaska Eskimo Whaling Commission (AEWC - established in 1977), the Eskimo Walrus Commission (formed in 1978), the Beluga Whale Committee (formed in 1988), and the Nanuq Commission (formed in 1994 for polar bear management). The Marine Mammal Protection Act (MMPA) includes specific text providing a legislative basis for these cooperative agreements. Specifically, in 1994, Section 119 of the reauthorization for the MMPA provided a legislative basis for cooperative agreements with Alaska Native organizations.⁵⁵⁴

In recent decades, the community of Point Lay has been particularly engaged in subsistence harvest of beluga whales. Point Lay hunters typically harvest between 30 and 50

⁵⁴⁹ See footnote 537.

⁵⁵⁰ North Slope Borough website. 2012. *Point Lay*. Retrieved April 16, 2012 from <http://www.co.north-slope.ak.us/villages/ptlay/>.

⁵⁵¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁵⁵² See footnote 550.

⁵⁵³ Glenn Gray and Associates. June 2007. *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

⁵⁵⁴ Ibid.

belugas per year.⁵⁵⁵ Recently, Point Lay has renewed historical bowhead whale harvest, as well. Since its formation in 1977, the AEWG has represented the whaling communities of Kaktovik, Nuiqsut, Barrow, Wainwright, Point Hope, Kivalina, Little Diomedea, Wales, Savoonga, and Gambell.⁵⁵⁶ No bowhead whales had been harvested in Point Lay since whaling ended there in 1937, and Point Lay was not initially included as a member community in the AEWG. In recent years, the community of Point Lay has sought to reactivate their bowhead whaling traditions, customs, and practices. A ‘needs study’ was conducted by the North Slope Borough, and in 2008, Point Lay received quota from the AEWG to harvest one whale. The first bowhead whale since 1937 was landed in Point Lay in 2009, and a second was landed in 2011.^{557,558} Point Lay is also a member community of the Eskimo Walrus Commission and Nanuuq Commission.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Point Lay does not have a registered processing plant. The closest seafood processing facility is located in Nome.

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue in Point Lay (Table 3).

Commercial Fishing

From 2001 and 2007, one state Commercial Fisheries Entry Commission (CFEC) permit was held by a Point Lay resident in the Kotzebue salmon gillnet fishery. The permit was not actively fished in any of these years, and no other state or federal commercial fishing permits were held by Point Lay residents between 2000 and 2010 (Table 4). In addition, no residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8). There were also no commercial crew license holders in Point Lay during the 2000-2010 period, no Point Lay residents were the primary owner of a fishing vessel, and no commercial fishing vessels were homeported in the community. In addition, no fish buyers or shore-side processing facilities were located in Point Lay. These characteristics of the commercial fishing sector are presented in Table 5. Given the lack of commercial fishing activity and fish buyers in Point Lay, no landings or ex-vessel revenue were generated in the community or by Point Lay residents (Tables 9 and 10).

⁵⁵⁵ Alaska Beluga Whaling Committee. May 5, 2007. *Comments on Draft Programmatic EIS for Seismic Surveys in the Beaufort and Chukchi Seas*. Letter to the Office of Protected Resources, NOAA NMFS. Retrieved April 17, 2012 from http://www.alaska.boemre.gov/ref/eis%20ea/draft_arctic_peis/comments/ABWC%20DPEIS.pdf.

⁵⁵⁶ See footnote 553.

⁵⁵⁷ Alaska Newspapers Staff. May 13, 2011. “Whaling crew lands Point Lay’s second whale after decades-long shutout.” *The Arctic Sounder*. Retrieved April 17, 2012 from http://www.thearcticsounder.com/article/1119whaling_crew_lands_point_lays_second_whale.

⁵⁵⁸ NOAA National Marine Fisheries Service. 2008. *Record of Decision. Final EIS for Issuing Annual Quotas to the Alaska Eskimo Whaling Commission for a Subsistence Hunt on Bowhead Whales for the Years 2008 through 2012*. Retrieved April 17, 2012 from <http://www.fakr.noaa.gov/protectedresources/whales/bowhead/eis0108/rod0308.pdf>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Point Lay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Point Lay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Point Lay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	1	1	1	1	1	1	1	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	0%	0%	0%	0%	0%	0%	0%	-	-	-
	Total permit holders	0	1	1	1	1	1	1	1	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>-</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Point Lay: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Point Lay ^{2,5}	Total Net Pounds Landed in Point Lay ^{2,5}	Total Ex-Vessel Value of Landings in Point Lay ^{2,5}
2000	0	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Point Lay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Point Lay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Point Lay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Point Lay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Point Lay Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to a survey conducted by the AFSC in 2011, community leaders reported that no recreational fishing activity takes place in Point Lay. This is reflected in the fact that, between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were reported to be present in Point Lay, and no sportfishing licenses were sold in the community. Several Point Lay residents were reported as having purchased sportfishing licenses (irrespective of point of sale), ranging from a total of 3 to 14 per year. The Alaska Statewide Harvest Survey,⁵⁵⁹ conducted by ADF&G between 2000 and 2010, did not report information regarding species targeted by recreational fishers in Point Lay, and given the lack of local sport fish businesses, no kept/release log book data were reported for sportfishing charters out of Point Lay between 2000 and 2010.⁵⁶⁰

Point Lay is located within Alaska Sport Fishing Survey Area Z – North Slope-Brooks Range, which includes all Alaskan waters, including drainages flowing into the Beaufort and Chukchi seas, north of the Brooks Range and east of Point Hope. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, Alaska resident anglers consistently fished a greater number of days than non-Alaska resident anglers in both freshwater and saltwater, and freshwater sportfishing activity was significantly higher than in saltwater. On average between 2000 and 2010, Alaska resident anglers fished 3,065 fresh water days and 228 saltwater days, while non-Alaska resident anglers fished on average 1,001 freshwater and 17 saltwater days. This information about the sportfishing sector in and near Point Lay is also displayed in Table 11.

Table 11. Sport Fishing Trends, Point Lay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Point Lay ²
2000	0	0	4	0
2001	0	0	8	0
2002	0	0	13	0
2003	0	0	14	0
2004	0	0	12	0
2005	0	0	9	0
2006	0	0	6	0
2007	0	0	7	0
2008	0	0	9	0
2009	0	0	3	0
2010	0	0	5	0

⁵⁵⁹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁵⁶⁰ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11, cont'd. Sport Fishing Trends, Point Lay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	0	743	523	3,473
2001	0	635	715	4,682
2002	11	547	819	3,393
2003	15	67	594	2,034
2004	0	96	1,131	2,084
2005	0	0	2,183	2,169
2006	18	341	495	2,609
2007	0	83	733	3,338
2008	140	0	990	4,469
2009	0	0	1,505	2,400
2010	0	0	1,319	3,065

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

In a survey conducted by the AFSC in 2011, Point Lay community leaders indicated that subsistence is the primary economic activity in the community. They reported that some of the most important marine subsistence resources are beluga whale, bowhead whale, ugruk (bearded seal), walrus, salmon, and spotted seal. They also indicated that the most important fishing seasons include harvest of grayling during the month of October, smelt harvest from mid-December to mid-February, and salmon harvest from June through August.

According to the North Slope Borough Coastal Management Plan, caribou, fish, and beluga whale comprise the most significant portion of the subsistence harvest in Point Lay, while the use of seals and walrus have declined due to reduced use of dog teams and the present adequate supply of caribou meat. In addition, polar bears are not as actively hunted as in former years.⁵⁶¹ Until recently, bowhead whales were not harvested in Point Lay, although residents traveled to other communities to participate in bowhead whale hunts. However, in 2008, Point

⁵⁶¹ Glenn Gray and Associates. June 2007. *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

Lay received quota from the AEWC. In 2009, the community harvested its first bowhead whale since 1937, and a second bowhead was landed in 2011.^{562, 563}

Residents of Point Lay utilize a large area of the North Slope for subsistence harvest, from Icy Cape to Cape Beaufort, and inland along the Kukpowruk River into the De Long Mountains. Many residents of Point Lay have lived in Wainwright, and subsistence use areas between the two communities overlap. Icy Cape is a site for harvest of waterfowl and eggs, the annual walrus hunt, and communal beluga hunts. Kasegaluk Lagoon is the site of gillnet fisheries for salmon, whitefish, flounder, smelt, herring, bullhead, and occasionally char. Hunting and trapping activities take place inland, in the Amatusuk Hills, Kiklupiklak Hills, and western Brooks range. Caribou is also hunted near Icy Cape during summer months, when the Western Caribou Herd migrates to the coast near Point Lay. Subsistence foods are exchanged between villages. Point Lay is a major supplier of beluga whale, and most often receives bowhead whale from Point Hope and Barrow.⁵⁶⁴

A survey conducted by the North Slope Borough in 2003 found that 77.4% of Point Lay households use subsistence foods, and approximately 13.6% of households receive over half of their food from subsistence activities.⁵⁶⁵ Between 2000 and 2010, ADF&G did not report any information about the percentage of Point Lay households utilizing various marine resources for subsistence purposes (Table 12). However, a 1987 subsistence survey conducted by ADF&G provides household participation information regarding marine mammals and non-salmon fish (not including halibut). That year, 29% of Point Lay households reported harvesting spotted seal, 27% reported harvesting bearded seal, 27% reported harvest of ringed seal, and 21% reported harvest of bowhead whale. Species of non-salmon fish harvested by the greatest percentage of Point Lay households in 1987 included grayling (37% of households reported harvesting), Arctic char (23%), and flounder (10%). Many of these resources were shared with households that did not participate in harvest activities.

Some information was reported for the 2000-2010 period regarding annual subsistence harvest of salmon. In 2001 and 2002, ADF&G issued one subsistence salmon permit per year to a Point Lay household. In 2001, 30 sockeye salmon were reported as harvested, and in 2002, harvest of 1 Chinook and 9 sockeye was reported (Table 13).

No information was reported regarding total subsistence harvest of marine invertebrates or non-salmon fish (not including halibut) between 2000 and 2010 (Table 13). Likewise, no information was reported regarding annual subsistence harvest of halibut (Table 14). The Chukchi Sea is noted as the northern extent of the range of Pacific halibut.⁵⁶⁶

Between 2000 and 2010, information was reported by the U.S. Fish and Wildlife Service and the AFSC regarding subsistence harvest of beluga whales, walrus, and polar bears by residents of Point Lay. For years in which data were reported, an average of 40 beluga whales, 3 walrus, and 2 polar bears were harvested per year. It is important to note that no information was

⁵⁶² Alaska Newspapers Staff. May 13, 2011. "Whaling crew lands Point Lay's second whale after decades-long shutout." *The Arctic Sounder*. Retrieved April 17, 2012 from http://www.thearcticsounder.com/article/1119whaling_crew_lands_point_lays_second_whale.

⁵⁶³ NOAA National Marine Fisheries Service. 2008. *Record of Decision. Final EIS for Issuing Annual Quotas to the Alaska Eskimo Whaling Commission for a Subsistence Hunt on Bowhead Whales for the Years 2008 through 2012*. Retrieved April 17, 2012 from <http://www.fakr.noaa.gov/protectedresources/whales/bowhead/eis0108/rod0308.pdf>.

⁵⁶⁴ See footnote 561.

⁵⁶⁵ Ibid.

⁵⁶⁶ Alaska Dept. of Fish and Game. 2012. *Pacific Halibut: Species Profile*. Retrieved April 17, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=halibut.main>.

reported by the AFSC regarding harvest of sea otters⁵⁶⁷ or by ADF&G regarding harbor seal, spotted seal, or Steller sea lion harvest in Point Lay during the period. This information is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Point Lay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵⁶⁷ The range of the northern sea otter does not extend into the Arctic region. Source: ADF&G *Wildlife Notebook Series*. "Sea Otter Fact Sheet." Retrieved March 1, 2012 from http://www.adfg.alaska.gov/static/education/wns/sea_otter.pdf.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Point Lay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	1	1	n/a	n/a	n/a	n/a	30	n/a	n/a
2002	1	1	1	n/a	n/a	n/a	9	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Point Lay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Point Lay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	4	1	n/a	n/a	n/a
2001	34	n/a	2	n/a	n/a	n/a	n/a
2002	47	n/a	4	1	n/a	n/a	n/a
2003	36	n/a	1	2	n/a	n/a	n/a
2004	53	n/a	n/a	2	n/a	n/a	n/a
2005	41	n/a	2	4	n/a	n/a	n/a
2006	29	n/a	1	1	n/a	n/a	n/a
2007	63	n/a	4	n/a	n/a	n/a	n/a
2008	48	n/a	n/a	n/a	n/a	n/a	n/a
2009	28	n/a	2	n/a	n/a	n/a	n/a
2010	23	n/a	4	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Prudhoe Bay (PROO-doh Bay)



People and Place

*Location*⁵⁶⁸

Prudhoe Bay is adjacent to the Beaufort Sea, east of Nuiqsut. Prudhoe Bay is located in the Barrow Recording District and the North Slope Census Area and is part of the North Slope Borough. Prudhoe Bay is unincorporated and figures for Prudhoe Bay include nearby Deadhorse.

*Demographic Profile*⁵⁶⁹

In 2010, there were 2,174 residents in Prudhoe Bay, making it the 43rd largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 460%. Between 2001 and 2009, the Alaska Department of Labor (DOL) estimates show that the population fell by 40%, though the U.S. Census shows that the population increased substantially between 2000 and 2010. This is likely due to differences in how each source calculates population estimates, as DOL only counts the number of permanent residents that are eligible to collect the Permanent Fund Dividend and the U.S. Census counts all people living in a community, irrespective of whether they are temporary or permanent residents. In the case of Prudhoe Bay, the majority of those counted in the U.S. Census could be classified as temporary workers in the oil and gas industry and thus not eligible to collect the Permanent Fund Dividend. The Prudhoe Bay average annual growth rate between 2000 and 2009 was -1.71%, indicating a slow rate of population decline of permanent residents. The change in population from 1990 to 2010 is provided in Table 1.

The majority of residents in 2010 identified themselves as White (85.2%), with the remaining racial composition as follows: American Indian or Alaska Native (7.8%), Hispanic (4.0%), two or more races (1.9%), Black or African American (1.9%), Asian (1.6%), other (1.4%), and Native Hawaiian and Other Pacific Islander (0.1%). The percentage of the population composed of residents identifying themselves as White increased by 65.2% between 2000 and 2010, with corresponding decreases in the percentage of residents identifying themselves as two or more races and as Native American or Alaska Native. The changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

Estimates of household size, number of households, and number of housing units in 2010 were not available for Prudhoe Bay, potentially due to the nature of this community as a work camp for employees involved with the oil industry. These individuals live in employer-provided housing when in residence in Prudhoe Bay.

⁵⁶⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁶⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Prudhoe Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	47	-
2000	5	-
2001	-	5
2002	-	7
2003	-	4
2004	-	3
2005	-	2
2006	-	2
2007	-	3
2008	-	4
2009	-	3
2010	2,174	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Prudhoe Bay: 2000-2010 (U.S. Census).

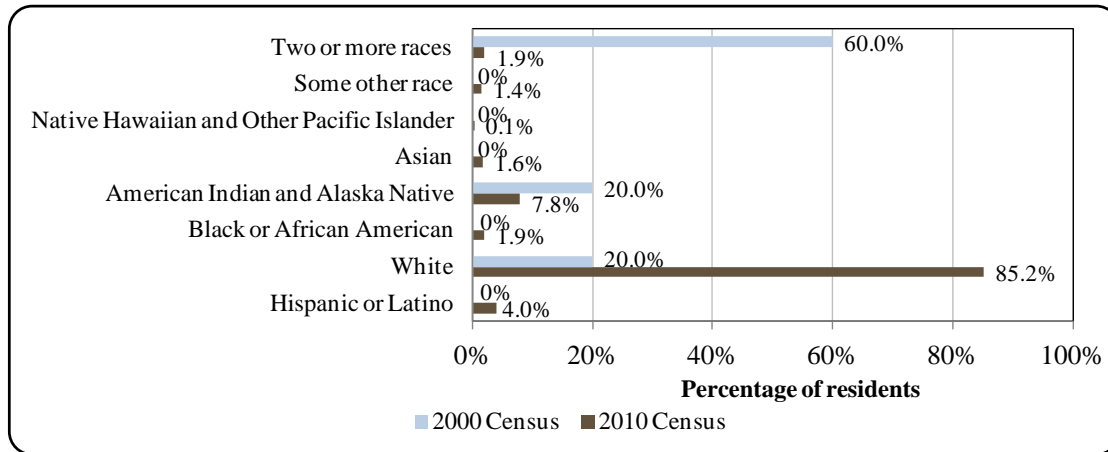
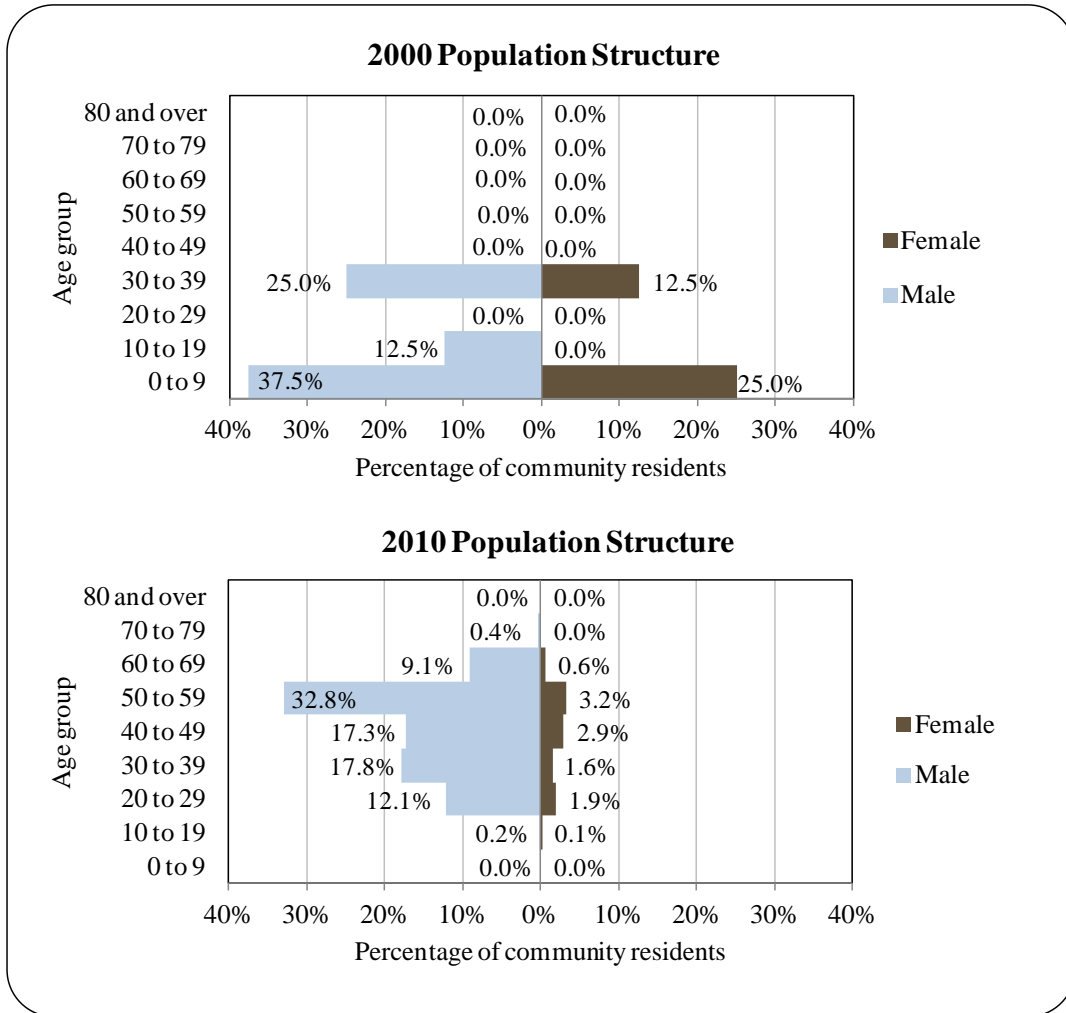


Figure 2. Population Age Structure in Prudhoe Bay Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup was heavily skewed, at 90% male and 10% female, quite different from the state as a whole (52% male, 48% female). The median age in Prudhoe Bay was estimated to be 49.1 years, higher than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the greatest percentage of residents fell within the age category 50-59 years old, with the next largest percentages falling within the age categories 40-49 years old and 30-39 years old. Relatively few people were 19 years old or younger and 60 years old or older. No data were reported by the 2000-2010 American Community Survey (ACS) regarding the educational attainment of Prudhoe Bay residents.⁵⁷⁰

⁵⁷⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*⁵⁷¹

The bay itself was named in 1828. The site was extensively developed for oil drilling operations in the 1970s. An 800-mile pipeline was constructed to transport crude oil from Prudhoe Bay to Valdez, where it is shipped in marine tankers to terminals throughout the country. The pipeline has 12 pump stations and a maximum capacity of 2 million barrels of crude oil per day. Prudhoe Bay is a large work camp for the oil industry. All residents are employees of oil-drilling or oil-production and support companies and work long consecutive shifts. Living quarters and food are provided to the workforce, and there are a number of recreational facilities.

Natural Resources and Environment⁵⁷²

Prudhoe Bay is located on the North Slope of Alaska, which experiences an arctic climate. Temperatures range from -56 to 78 °F (-48.9 to 25.6 °C). Precipitation is light, averaging 5 inches per year, with 20 inches of snow per year.

The presence of oil drives the economy and population of Prudhoe Bay, which is entirely composed of employees of oil-drilling or oil-production and support companies.

In October 2010, a former U.S. Navy facility at the Deadhorse Airport in Prudhoe Bay was added to the list of facilities needing a Preliminary Assessment (PA) to determine whether the site should be listed under the Superfund program.⁵⁷³ The PA had not yet been completed as of November 2011.

The Prudhoe Bay oil fields provide some 2-3% of the nation's domestic oil supply and employ over 5,000 individuals in drilling, pipeline operations, cargo transportation, and a variety of support positions. Most oil field workers travel home to Anchorage or the lower 48 when off duty. Pre-arranged tours are available through various tour companies.⁵⁷⁴

Prudhoe Bay is located near the Gates of the Arctic National Park and Preserve (Park), an area that is managed by the National Park Service.⁵⁷⁵ This vast landscape does not contain any roads or trails. Visitors discover intact ecosystems where people have lived with the land for thousands of years. The Park remains virtually unchanged except by the forces of climate, weather, geology, plant life, and animal activities. Situated above the Arctic Circle in the Central Brooks Range, summers here are short, but continuous daylight during the summer means very high productivity during this period. Animals present in the Park include insects, migratory birds such as arctic terns, non-migratory birds such as ptarmigan, and mammals such as beavers, caribou, moose, grizzly and black bears, arctic ground squirrels, lemmings, and voles. Fish species in the park include whitefish, northern pike, and grayling.

⁵⁷¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁷² Ibid.

⁵⁷³ U.S. Environmental Protection Agency (EPA) *Superfund Site Search*. Retrieved November 29, 2011. <http://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=1002945>

⁵⁷⁴ See footnote 571.

⁵⁷⁵ National Park Service (n.d.). *Gates of the Arctic National Park and Preserve*, Alaska. Retrieved from <http://www.nps.gov/gaar/naturescience/index.htm> on May 1, 2012.

Current Economy⁵⁷⁶

The oil companies involved in doing work in Prudhoe Bay are British Petroleum (BP), ConocoPhillips, ExxonMobil, and Chevron.⁵⁷⁷ Because the majority of employees working in Prudhoe Bay return to homes elsewhere in Alaska or in the lower 48 U.S. States when not working, employment and other information for these individuals is reflected in the information for their home communities.

Information regarding estimates for per capita and household income for Prudhoe Bay in 2010 was not available from the 2006-2010 ACS; however, in 2000 the U.S. Census reported that the mean per capita income for Prudhoe Bay was \$19,880 and the median household income was \$90,957. After accounting for inflation by converting the 2000 values to 2010 dollars,⁵⁷⁸ the per capita income for Prudhoe Bay was \$26,142 and the median household income was \$119,607. Prudhoe Bay's nature as a community of temporary residents and the overall small population size may have prevented the ACS from accurately portraying economic conditions.⁵⁷⁹ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Prudhoe Bay in 2010 was \$315, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁵⁸⁰

While employment data for Prudhoe Bay were not reported in the 2006-2010 ACS, an estimate based on the ALARI database indicates the unemployment rate in 2010 was 21.4%. Data from the 2000 U.S. Census show that 50% of Prudhoe Bay residents were employed in the professional, scientific, management, administration, and waste management industries, while the other 50% were employed in construction in 2000. This information is shown in Figures 3 and 4, which break down local employment by industry and occupation.

⁵⁷⁶ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁷⁷ British Petroleum (n.d.). *Prudhoe Bay Fact Sheet*. Retrieved November 29, 2011 from http://www.bp.com/liveassets/bp_internet/globalbp/STAGING/global_assets/downloads/A/abp_wwd_alaska_prudhoe_bay_fact_sheet.pdf

⁵⁷⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵⁷⁹ See footnote 570.

⁵⁸⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 3. Local Employment by Industry in 2000-2010, Prudhoe Bay (U.S Census).

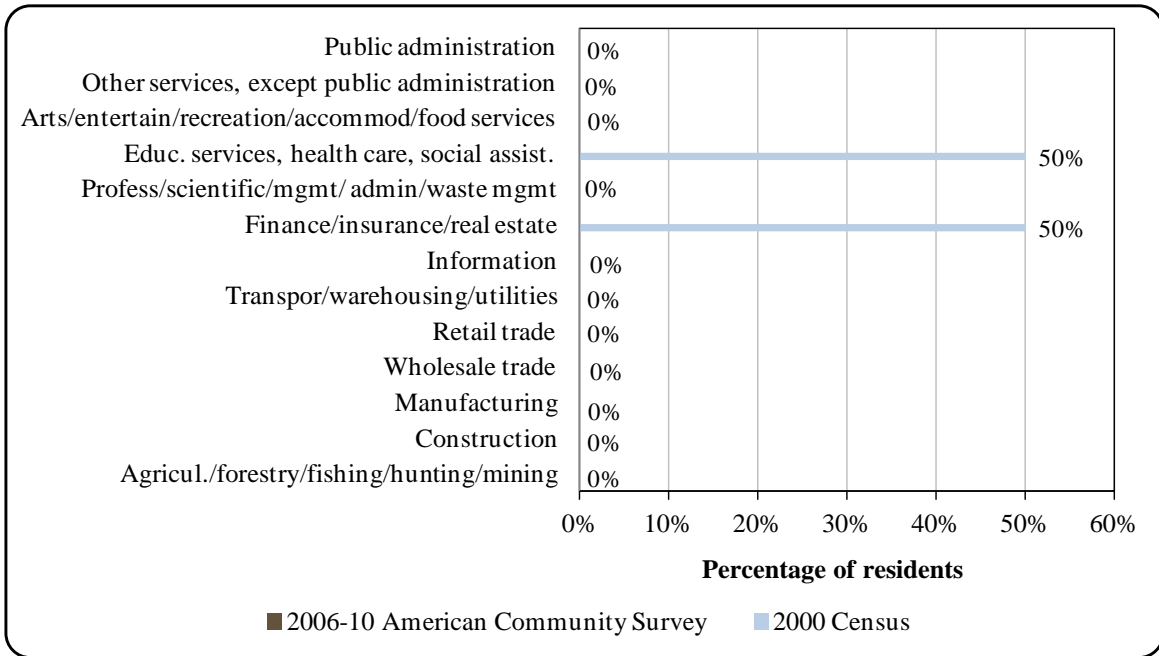
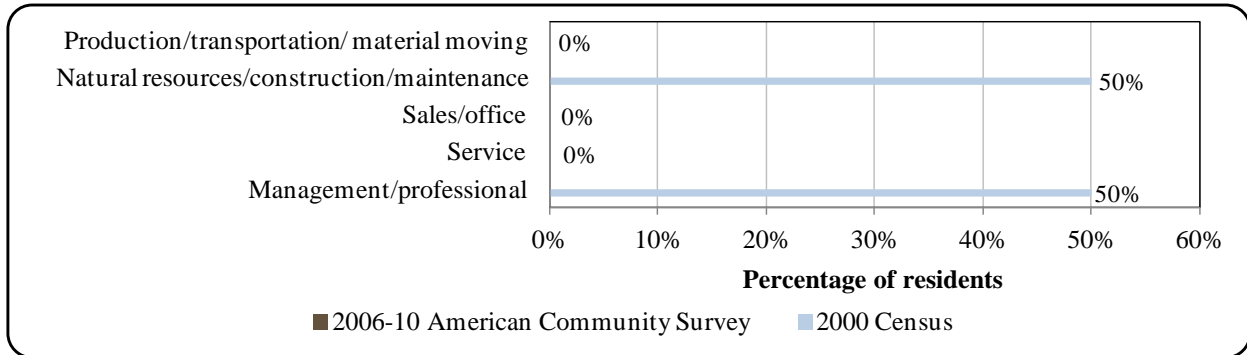


Figure 4. Local Employment by Occupation in 2000-2010, Prudhoe Bay (U.S. Census).



Governance

Prudhoe Bay is unincorporated and is located within the North Slope Borough. The nearest Alaska Department of Fish and Game (ADF&G) office is located in Barrow. The nearest offices of the Alaska Department of Natural Resources and the Alaska Department of Commerce, Community, and Economic Development are located in Fairbanks. The nearest offices of the National Marine Fisheries Service (NMFS), the U.S. Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Since it is unincorporated, Prudhoe Bay does not maintain a municipal budget with community revenue and expenditures, nor does Prudhoe Bay administer its own sales tax. Data are not available for community revenues from 2000 to 2010 (Table 2).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Prudhoe Bay Municipal Government from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

*Connectivity and Transportation*⁵⁸¹

The airport at nearby Deadhorse is the primary means of public transportation to the North Slope. The state-owned asphalt and gravel airstrip at Deadhorse is 6,500 feet long by 150 feet wide. A 5,000-foot by 100-foot wide private gravel airstrip is owned and maintained by Conoco Phillips Alaska, Inc. A state-owned heliport is located at Prudhoe Bay. The Dalton Highway is used year-round by trucks to haul cargo to the North Slope from Fairbanks. There are no services beyond this point, and the highway is hazardous during winter months. Roundtrip airfare to Anchorage was \$792.⁵⁸²

Facilities

Electricity is provided to the community by a diesel powerhouse operated by the local utility, TDX North Slope. Modern sanitation facilities are available at the group quarters facilities. The North Slope Borough offers refuse collection services and operates a Class 1

⁵⁸¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁸² Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on November 29, 2011.

landfill 6 miles northwest of Deadhorse, on Oxbow Road. The Borough also operates the local waters and sewer systems. There are also numerous other oilfield facilities. Fire and rescue services are provided by the Greater Prudhoe Bay Fire Department.⁵⁸³ The nearest state trooper post is located in Barrow.⁵⁸⁴

*Medical Services*⁵⁸⁵

Medical care is provided by private, oil company medical staff. Alternate health care is provided by the Greater Prudhoe Bay Fire Department. Emergency Services have limited highway, coastal, and airport access. Emergency service is provided by a paid EMS Service. Alternative health care is provided by oil company medical staff as well as the Greater Prudhoe Bay Fire Department. The nearest hospital is located in Barrow.

*Educational Opportunities*⁵⁸⁶

As of 2011, there were no schools located in Prudhoe Bay.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prudhoe Bay is located on the coast of the Arctic Management Area, and residents have had limited participation in North Pacific fisheries. Commercial fishing for all species is currently prohibited in federally regulated waters of the Arctic Management Area, “until sufficient information is available to support the sustainable management of a commercial fishery.”⁵⁸⁷ Between 2000 and 2010, one permit was held per year from 2000 to 2007 in a statewide freshwater fish set gillnet fishery (‘other finfish’). Commercial freshwater fish fisheries may target species such as Arctic char, pike, rainbow trout, Dolly Varden, and sheefish.⁵⁸⁸ No other commercial fisheries permits were held by Prudhoe Bay residents between 2000 and 2010. Prudhoe Bay is not eligible to participate in the Community Development Quota Program or the Community Quota Entity Program.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Prudhoe Bay does not have a registered processing plant.

⁵⁸³ See footnote 581.

⁵⁸⁴ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁵⁸⁵ Ibid.

⁵⁸⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁵⁸⁷ North Pacific Fishery Management Council. 2009. *Arctic Fishery Management Plan*. Retrieved February 29, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

⁵⁸⁸ Alaska Dept. of Fish and Game. 2006. *Our Wealth Maintained: A Strategy for Conserving Alaska’s Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=species.wapview>.

Fisheries-Related Revenue

Given that Prudhoe Bay has no taxing authority and does not manage a community budget, no data were available regarding revenue received by Prudhoe Bay from fisheries-related taxes and fees between 2000 and 2010 (Table 3).

Commercial Fishing

Between 2000 and 2010, there were no vessels reported as being owned by Prudhoe Bay residents, no vessels were homeported in Prudhoe Bay, and no vessels landed catch in Prudhoe Bay (Table 5). From 2000-2007, one resident held an Alaska Commercial Fisheries Entry Commission (CFEC) permit to harvest ‘other finfish,’ though the permit was not fished in 2007. This ‘other finfish’ permit was held in the statewide freshwater fish set gillnet fishery. No federal commercial fishing permits were held by Prudhoe Bay residents between 2000 and 2010. Information about state and federal commercial fishing permits is presented in Table 4. No residents of Prudhoe Bay are documented to have held quota share accounts in any of Alaska’s catch share programs during the 2000-2010 period (Table 6, Table 7, Table 8). Because no fish buyers or shore-side processing facilities were present in Prudhoe Bay, and because no residents were the primarily owners of fishing vessels (Table 5), no landings were recorded locally (Table 9) or by Prudhoe Bay vessel owners (Table 10) between 2000 and 2010.

Table 3. Known Fisheries-Related Revenue (in U.S. dollars) Received by the Community of Prudhoe Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Prudhoe Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Prudhoe Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	0	0	0
	Fished permits	1	1	1	1	1	1	1	0	0	0	0
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Prudhoe Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Prudhoe Bay ²	Total Net Pounds Landed In Prudhoe Bay ^{2,5}	Total Ex-Vessel Value Of Landings In Prudhoe Bay ^{2,5}
2000	0	0	0	0	0	0	0	\$0
2001	1	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	1	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Prudhoe Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Prudhoe Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Prudhoe Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by species, in Prudhoe Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by species, by Prudhoe Bay Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to the ADF&G Statewide Harvest Survey, sockeye salmon are the only species caught by private anglers in Prudhoe Bay.⁵⁸⁹ In 2010, a total of 13 sportfishing licenses were sold to residents of Prudhoe Bay (irrespective of the location of the point of sale). In comparison, a total of 66 sportfishing licenses were sold in Prudhoe Bay, indicating the potential that visitors and temporary residents are participating in recreational fishing activities.

Between 2000 and 2006, the ratio of non-charter anglers that were non-Alaska residents in the North Slope-Brooks Range region of Alaska varied from year to year. In 2007, all the saltwater angler days fished in this region were fished by non-Alaska residents. Between 2009 and 2010, there were no reported saltwater angler days fished in this region. For freshwater sportfishing, the number of angler days fished by non-Alaska residents increased between 2000 and 2010, while the number of angler days fished by Alaska residents remained relatively stable (Table 11).

Subsistence Fishing

For 2000-2010, the ADF&G Division of Subsistence does not provide estimates for the percent of households utilizing various marine resources for subsistence purposes or the per capita subsistence harvest (in pounds) in Prudhoe Bay (Table 12). Some limited information was reported regarding annual salmon harvest during the period: from 2005-2007, one subsistence salmon permit was issued to a Prudhoe Bay household. Using this permit, 13-14 sockeye salmon were harvested per year in those years. Data were not available for other salmon species or other years during the 2000-2010 period. Likewise, no information was available regarding total harvest of marine invertebrates or non-salmon fish (not including halibut) during these years (Table 13). In addition, data were not available from management agencies regarding subsistence harvest of halibut (Table 14) or marine mammals (Table 15) between 2000 and 2010.

Table 11. Sport Fishing Trends, Prudhoe Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Prudhoe Bay ²
2000	0	1	20	0
2001	0	1	26	0
2002	0	1	22	0
2003	0	0	17	0
2004	0	0	19	0
2005	1	0	14	38
2006	1	0	8	51
2007	0	0	4	68
2008	0	0	10	89
2009	0	0	13	69
2010	0	0	13	66

⁵⁸⁹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Prudhoe Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	0	743	523	3,473
2001	0	635	715	4,682
2002	11	547	819	3,393
2003	15	67	594	2,034
2004	0	96	1,131	2,084
2005	0	0	2,183	2,169
2006	18	341	495	2,609
2007	0	83	733	3,338
2008	140	0	990	4,469
2009	0	0	1,505	2,400
2010	0	0	1,319	3,065

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Prudhoe Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

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Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Prudhoe Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	1	n/a	n/a	n/a	13	n/a	n/a
2006	1	1	1	n/a	n/a	n/a	14	n/a	n/a
2007	1	1	1	n/a	n/a	n/a	14	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Prudhoe Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Prudhoe Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Selawik (SELL-uh-wick)



People and Place

*Location*⁵⁹⁰

Selawik is located at the mouth of the Selawik River, where it empties into Selawik Lake, about 90 miles east of Kotzebue. It lies 670 miles northwest of Anchorage. The City is near the Selawik National Wildlife Refuge, a key breeding and resting spot for migratory waterfowl. Selawik is located in the Kotzebue Recording District, the Northwest Arctic Census Area, and the Northwest Arctic Borough. The city boundaries encompass 2.5 square miles of land and 0.9 square miles of water. Selawik was incorporated as a 1st Class City in 1974, but changed to a 2nd Class City government in 1977.

*Demographic Profile*⁵⁹¹

In 2010, there were 829 residents in Selawik, making it the 76th largest of 352 total Alaskan communities with recorded populations that year. While the U.S. Census shows a dramatic increase in population between 1990 and 2010, the Alaska Department of Labor estimates of permanent residents shows a less substantial increase between 2001 and 2009. The change in population from 1990 to 2010 is presented in Table 1.

In 2010, a majority of Selawik residents identified themselves as American Indian and Alaskan Native (85.4%), with 10.5% of the population identifying themselves as two or more races, 4.0% of the population identifying themselves as White, and 0.1% of the population identifying themselves as Black or African American. Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaskan Native decreased by 9.4%, with corresponding increases in the percentage of the population identifying as two or more races and the percentage identifying as White. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Selawik was 4.46, a decrease from 4.6 persons per household in 1990 and 4.49 in 2000. The total number of households in Selawik increased during the same period, from 129 in 1990 to 172 in 2000 to 186 in 2010. Of the 201 housing units surveyed for the 2010 Decennial Census, 97 were owner-occupied, 89 were renter-occupied, and 15 were vacant. In 2010, there were no residents of Selawik reported to be living in group quarters.

⁵⁹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁹¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

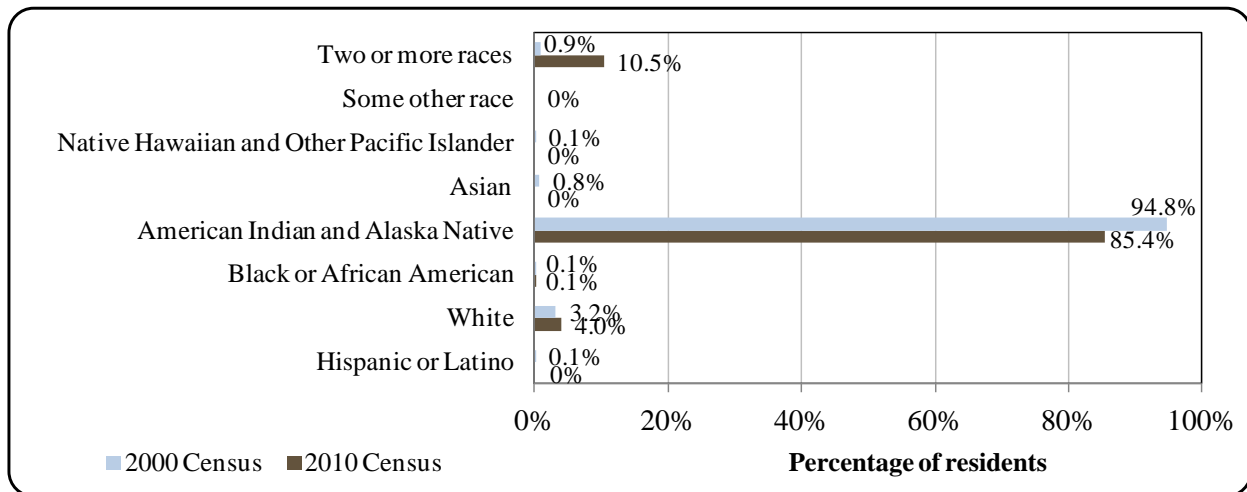
Table 1. Population in Selawik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	596	-
2000	772	-
2001	-	776
2002	-	779
2003	-	819
2004	-	833
2005	-	831
2006	-	842
2007	-	828
2008	-	846
2009	-	849
2010	829	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

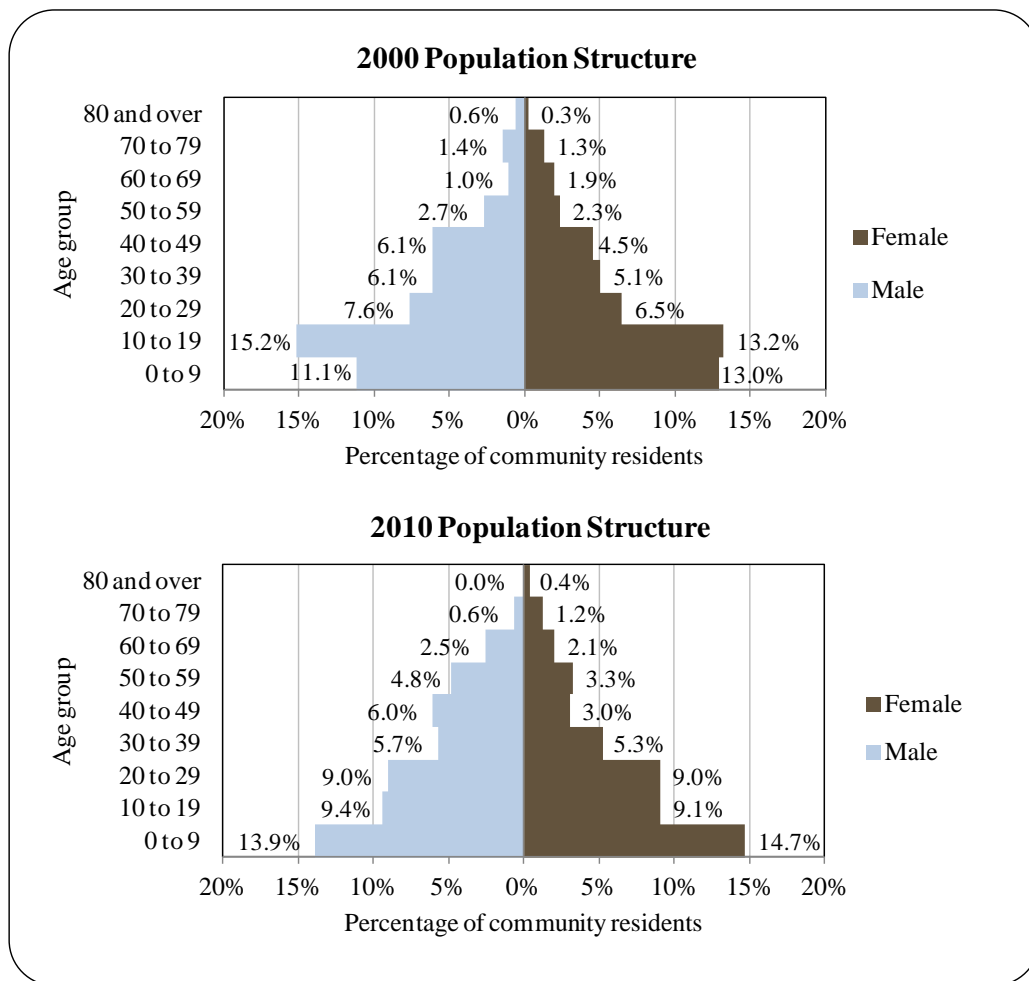
Figure 1. Racial and Ethnic Composition, Selawik: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Selawik was 52% male and 48% female, the same as the gender makeup for the state as a whole. The median age was estimated to be 21.4 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the greatest percentage of the population was in the age group 0 to 19 years, with the next largest percentage for the age group 20 to 39 years old. Relatively few people were age 70 or older. The overall population structure in Selawik in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁵⁹² 62.9% of Selawik residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 9.9% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; 27.2% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 45.5% were estimated to hold a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; 10.5% were estimated to have some college, but no degree, compared to 28.3% of Alaska residents overall; 4.2% were estimated to hold a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 2.7% were estimated to hold a graduate or professional degree, compared to 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Selawik Based on the 2000 and 2010 U.S. Decennial Census.



⁵⁹² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Selawik is an Inupiat Eskimo community active in traditional subsistence fishing and hunting. Lieutenant L.A. Zagoskin of the Imperial Russian Navy first reported the existence of the village in the 1840s as “Chilivik.” Ivan Petroff counted 100 “Selawigamute” people in his 1880 census. Around 1908, the community site had a small wooden schoolhouse and church. The village has continued to grow and has expanded across the Selawik River onto three banks, linked by bridges. Selawik was incorporated as a 1st Class City in 1974, changed to a 2nd Class City government in 1977.⁵⁹³ The Selawik River takes its name from the Inupiat Eskimo word “siilivik,” which means, “place where sheefish (sii) spawn (li-vik).”⁵⁹⁴ The sale and importation of alcohol is banned in the village.⁵⁹⁵

Natural Resources and Environment

Selawik is located in the transitional climate zone. Temperatures average -10 to 15 °F (-23.3 to -9.4 °C) during winter and 40 to 65 °F (4.4 to 18.3 °C) during summer. Temperature extremes have been recorded from -50 to 83 °F (-45.6 to 28.3 °C). Annual snowfall averages 35 to 40 inches, with 10 inches of precipitation. The Selawik River is navigable from early June to mid-October.⁵⁹⁶

Selawik is located near the Selawik National Wildlife Refuge (NWR), an area that is managed by the U.S. Fish and Wildlife Service. The 2.15-million-acre NWR is situated on the Arctic Circle to the east of Kotzebue Sound, and occupies a unique variety of landforms in northwest Alaska. Refuge lands, including the 240,000 acres of designated Wilderness Area, are some of the most remote “wildlands” in the state. Landscapes found on the refuge include alpine tundra, arctic tundra, taiga (northern forest), lake and wetland complexes, large river deltas, open grass and sedge meadows, and previously glaciated mountains and river valleys. This area is a transition zone where the northernmost boreal forests give way to open arctic tundra. The approximately 21,000 lakes on NWR lowlands create a very large arctic tundra lake complex that is comparable in scale and ecological significance to any found on Alaska’s other NWR lands.⁵⁹⁷

Historically, the Kobuk and Selawik rivers served as important travel corridors from the coast to the more mountainous areas to the east. This is still true today. Local residents access NWR lands via these waterways by boat in the summer and by snowmobile or dog team in the winter. In most roadless areas across northwest Alaska, river corridors remain important travel routes for humans and wildlife.⁵⁹⁸

One of the purposes for which the Selawik NWR was established is the conservation and management of the Western Arctic Caribou Herd. With 377,000 animals, as of 2007 the herd was the largest in Alaska, migrating twice annually through the NWR on its way between

⁵⁹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁹⁴ U.S. Fish and Wildlife Service. (2003). *Selawik National Wildlife Refuge*. Retrieved May 7, 2012 from selawik.fws.gov/pdf/selawik_brochure.pdf.

⁵⁹⁵ See footnote 593.

⁵⁹⁶ See footnote 594.

⁵⁹⁷ U.S. Fish and Wildlife Service (n.d.). *Selawik National Wildlife Refuge*. Retrieved February 15, 2012 from <http://selawik.fws.gov/>.

⁵⁹⁸ Ibid.

northern calving grounds and southern wintering grounds. The other wildlife found within the NWR include moose, musk oxen, black bears, grizzly bears, wolves, arctic and red fox, lynx, wolverine, beaver, marten, snowshoe hares, and small mammals such as redback voles, tundra voles, and arctic shrews. The NWR also provides important habitat for migratory waterfowl, such as white-fronted geese, tundra swans, sandhill cranes, Northern pintails, greater scaup, black scoters, Pacific loons, and Pacific golden plovers. Songbirds such as the yellow wagtail, yellow warbler, white-crowned sparrow, and Lapland longspur utilize habitats within the NWR, as do palmated and western sandpipers, red-necked phalaropes, and whimbrels. The NWR also contains large populations of resident and anadromous fish. Sheefish and other whitefish are the primary species harvested for subsistence purposes. Sheefish can be very large (approaching 60 lb). Other fish species found within the NWR include northern pike, burbot, and Arctic grayling.⁵⁹⁹

Most public use in the NWR is in the form of subsistence activities by local residents. Caribou hunting, subsistence fishing, furbearer trapping, and berry picking go on as they have for many hundreds of years. The residents of this area still depend on the wildlife and natural resources of the NWR for much of their food and for the perpetuation of their traditional way of life. In addition to subsistence activities, the other primary public use of the NWR occurs during fall hunting seasons. Caribou, moose, and bear hunters from other parts of Alaska and the continental United States come to the NWR to pursue hunting opportunities and to enjoy the scenery and wilderness character of the area.⁶⁰⁰

According to the Alaska Department of Environmental Conservation, no active environmental cleanup sites were located near Selawik as of August 2012.⁶⁰¹

Current Economy⁶⁰²

Subsistence harvest is fundamental to the local economy in Selawik. Important subsistence food sources include whitefish, sheefish, caribou, moose, ducks, ptarmigan, and berries. Occasionally, bartered seal and beluga whale supplement the diet. The primary employers in the community include the school, the city, the Tribal Council, Maniilaq, and three grocery stores. Handicrafts are made and sold locally and at gift shops in larger cities. Seasonal work is also found outside of Selawik with the Red Dog Mine, Bureau of Land Management firefighting, or lighterage operations.⁶⁰³

According to the 2006-2010 ACS,⁶⁰⁴ in 2010, the per capita income in Selawik was estimated to be \$9,681, and the median household income was estimated to be \$32,875, compared to \$8,170 and \$25,625 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁶⁰⁵ the real per capita income in 2000 was \$10,743

⁵⁹⁹ Ibid.

⁶⁰⁰ Ibid.

⁶⁰¹ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁶⁰² Unless otherwise noted, all monetary data are reported in nominal values.

⁶⁰³ See footnote 593.

⁶⁰⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁰⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

and the real median household income in 2000 was \$33,697, indicating that both per capita and household incomes in Selawik declined between 2000 and 2010. However, Selawik's small population size may have prevented the ACS from accurately portraying economic conditions.⁶⁰⁶ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD).). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Selawik in 2010 is \$7,255.^{607,608} According to the ALARI database, the per capita income in Selawik in 2010 was \$7,255, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁶⁰⁹ This is supported by the fact that the community was recognized as "distressed" by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁶¹⁰ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

In 2010, Selawik ranked 280th of 305 Alaskan communities with per capita income that year, and 229th of 299 Alaskan communities with household income data. Based on the ACS, in the same year, 47.1% of the population age 16 and older was in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 44.6%, compared to the statewide unemployment rate of 5.9%. Approximately 36.9% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Selawik are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Selawik.⁶¹¹ A potentially more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 24.1%.⁶¹²

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was employed in the public sector (59.3%), along with 40.7% employed in the private sector. Out of 123 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest numbers were estimated to work in education services, health care, and social assistance (39.8%), agriculture, forestry, fishing, hunting, and mining (15.4%), and public administration (13.8%). Compared to 2000, greater percentages of the workforce were estimated to work in education, health care and social assistance as well as agriculture, forestry, fishing, hunting and mining industries in 2010, while there was a decline in the

⁶⁰⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁰⁷ See footnote 604.

⁶⁰⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁰⁹ Ibid.

⁶¹⁰ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁶¹¹ See footnote 606.

⁶¹² See footnote 608.

percentage estimated to work in transportation, warehousing and utilities. When viewing employment in terms of occupation, a majority of the workforce in 2010 was estimated to be employed in service (30.9%) and management/professional occupations (30.1%). Compared to 2000, there were declines in the percentage of the workforce employed in sales/office and production/transportation/material moving occupations, and an increase in the percentage employed in service occupations. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Selawik (U.S. Census).

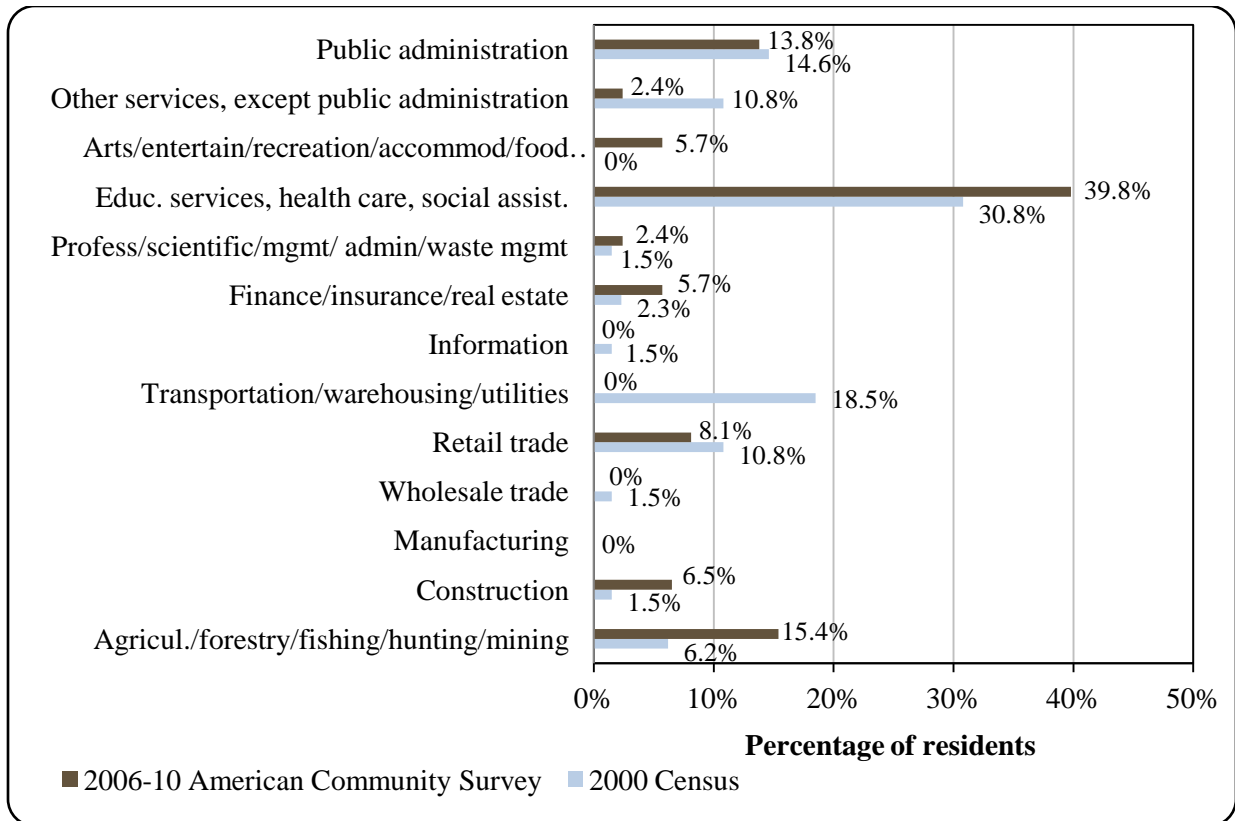
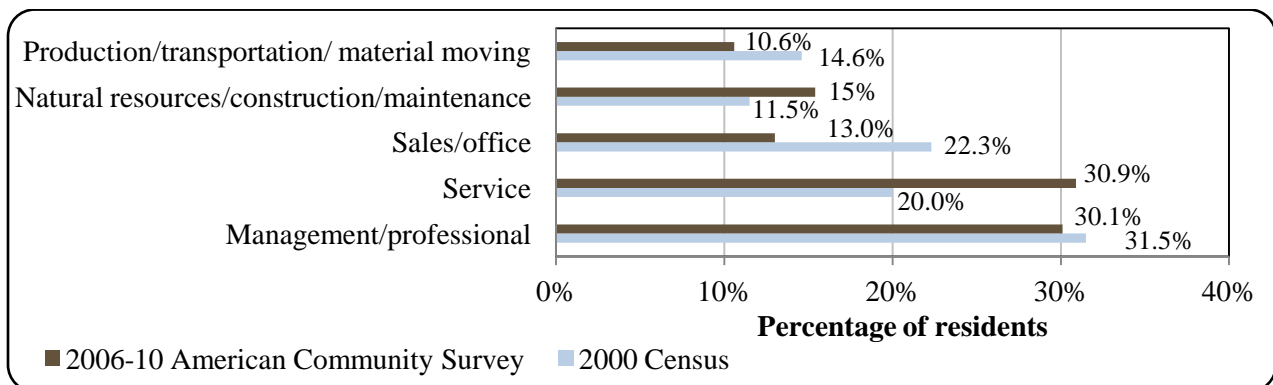


Figure 4. Local Employment by Occupation in 2000-2010, Selawik (U.S. Census).



Governance

Selawik is a 2nd Class City located in the Northwest Arctic Borough. The City has a Strong Mayor form of government, with a 7-person city council including the mayor, an 11-person school board, a 7-person planning commission, and various city employees. The City administers a 5% sales tax.⁶¹³ In addition to sales tax revenues, other locally-generated income sources in Selawik between 2000 and 2010 included enterprise revenues from water/sewer, washeteria, and cable TV fees, electric utility maintenance contract, building leases and rentals, equipment rentals, land sales, and bingo receipts. The total municipal revenue reported by the City of Selawik generally increased between 2000 and 2010, driven in part by an increase in sales tax revenues over the period. Selawik received Community Revenue Sharing contributions of just under \$140,000 per year in 2009 and 2010, and also reported receiving approximately \$36,000 in State Revenue Sharing contributions in 2001. No state or federal fisheries-related grants were reportedly received by Selawik between 2000 and 2010. Selected municipal, state, or federal revenue streams for Selawik are shown in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Selawik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$578,213 ⁶	\$6,000 ⁶	n/a	n/a
2001	\$793,966	\$62,155	\$36,236	n/a
2002	\$630,930	\$68,057	n/a	n/a
2003	\$639,074	\$74,991	n/a	n/a
2004	\$652,361	\$70,497	n/a	n/a
2005	\$660,612	\$114,832	n/a	n/a
2006	\$723,168	\$101,081	n/a	n/a
2007	\$718,101	\$122,422	n/a	n/a
2008	\$875,683	\$156,849	n/a	n/a
2009	\$973,274	\$157,043	\$138,671	n/a
2010	\$857,126	\$181,892	\$139,158	n/a

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁶ This is a budget estimate only, and does not reflect a final amount reported in a financial statement.

⁶¹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Selawik was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Selawik. The regional Native corporation to which Selawik belongs is the NANA Regional Corporation. In 1972, most village corporations in the region merged with NANA Regional Corporation, with the exception of the village corporation for Kotzebue, known as Kikiktagruk Inupiat Corporation. NANA Regional Corporation now has title to 2,082,052 surface acres, including 138,240 that were originally titled to Selawik's Native village corporation.^{614,615}

Selawik is a member village of the Maniilaq Association, a tribal non-profit corporation that provides health and social services to residents of Northwest Alaska. The Maniilaq Association is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. It was originally called NANA (the Northwest Alaska Native Association), but was renamed Maniilaq when the NANA Regional Corporation was formed to avoid confusion between the names.⁶¹⁶ Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁶¹⁷ The Maniilaq Association coordinates tribal and traditional assistance programs, and environmental and subsistence protection services in the region.⁶¹⁸

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community, and Economic Development are located in Kotzebue. The nearest office of the Alaska Department of Natural Resources is located in Fairbanks. The nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Selawik is accessible by plane and barge only. The Roland Norton Memorial Airport provides a 3,000-ft-long by 70-ft-wide gravel runway owned by the city. The state also owns a 3,000-ft-long by 60-ft-wide gravel airstrip, with a 2,659-ft-long by 60-ft-wide crosswind strip. Scheduled flights are available to Kotzebue and Nome and other area villages. Docking facilities and a barge landing area exist. Freight is shipped upriver from Kotzebue each summer by Crowley Marine Services. Boardwalks have been constructed within the village. Boats, ATVs,

⁶¹⁴ Ibid.

⁶¹⁵ NANA Regional Corporation. 2003. *Introduction*. Retrieved February 2, 2012 from <http://www.nanalands.com/introduction.htm>.

⁶¹⁶ Maniilaq Association. 2003. *Company Information*. Retrieved February 2, 2012 from <http://www.maniilaq.org/companyInfo.html>.

⁶¹⁷ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁶¹⁸ See footnote 616.

and snowmachines are prevalent forms of local travel.⁶¹⁹ The price of a round-trip ticket from Selawik to Anchorage (connecting in either Kotzebue or Nome) in June 2012 was \$725.⁶²⁰

*Facilities*⁶²¹

A circulating water and vacuum sewer system provides services to about 100 homes. A central treatment facility pumps water from the Selawik River, providing up to 8,000 gallons a day. Groundwater wells have been unsuccessful.

Law enforcement services are provided by VPSOs (Village Public Safety Officers), the city VPO (Village Police Officer), and state troopers stationed in Kotzebue. Fire and rescue services are provided by the Selawik Area Volunteer Emergency Rescue and the City Public Safety Office. The City is home to a Boys and Girls Club and has a community building that houses city offices and a multi-purpose facility. The school has a gym and a school/community library.

*Medical Services*⁶²²

Medical services are provided by the Selawik Health Clinic, which is owned by the Village Council and operated by the Maniilaq Association. The clinic is a Community Health Aid Program site. Alternate health care is provided by the Selawik Area Volunteer Emergency Rescue. Emergency services have lake and air access and are provided by volunteers and a health aide. The nearest hospital is located in Kotzebue.

Educational Opportunities

The Davis-Ramoth School in Selawik provides instruction for students from pre-school through 12th grade. In 2011, the school had 266 students and 18 teachers.⁶²³ Selawik is also a Head Start site.⁶²⁴

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The lands surrounding the community of Selawik have been the hunting and fishing grounds of the Iñupiaq Eskimo people for thousands of years. Historically, the Iñupiat were distributed in small, widely dispersed settlements often located on high river banks that provided good access to fishing sites. Historically, sheefish, whitefish, salmon, northern pike, caribou, hares, migratory birds, and marine mammals were major subsistence resources used by residents

⁶¹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶²⁰ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

⁶²¹ See footnote 619.

⁶²² Ibid.

⁶²³ Ibid.

⁶²⁴ Rural Alaska Community Action Program (2010). *2010 Annual Report*. Retrieved December 20, 2011 from http://www.ruralcap.com/index.php?option=com_content&view=category&layout=blog&id=40&Itemid=91.

of the Selawik and lower Kobuk rivers. These subsistence traditions continue today, although methods of harvest and travel have changed over time.⁶²⁵ Commercial fisheries are currently less important to the Selawik economy, although several residents held state commercial fishing permits in the Kotzebue salmon gill net fishery between 2000 and 2010 (see Commercial Fishing section).

Selawik is located in the Arctic Management Area. A Fishery Management Plan for the Arctic Management Area was approved by the Secretary of Commerce in August 2009. Initially, the plan prohibits commercial fishing in the federal waters of the Beaufort and Chukchi seas until more information is available to support sustainable fisheries management.⁶²⁶ In state regulated waters of the Arctic Management Area, several small fisheries occur, including a small fishery for chum salmon in the Kotzebue Sound region.⁶²⁷ The Kotzebue Sound salmon fishery is the northernmost commercial salmon fishery in Alaska. Over 99% of the salmon harvested in this fishery are chum salmon returning to the Kobuk and Noatak Rivers. Commercial harvest of salmon first occurred in the Kotzebue area in 1909 when Native fishermen sold salmon to gold miners. Starting in 1914, salmon were canned and sold to miners in the upper Kobuk drainage. This small industry ceased after 1918. The modern commercial fishery began in 1962, and catch peaked in 1981 with 680,000 chum commercially harvested. Since 1995, poor market conditions and variable processing capacity and interest have caused harvests to fall short of their potential. Due to limited opportunities to sell their catch, the number of active permits in the Kotzebue salmon fishery had declined over the last 30 years. Very few of the 173 total set gill net permits have been used in recent years.⁶²⁸ Fish caught in the Kotzebue salmon fishery are primarily sold to local markets, although some are shipped to markets outside the Arctic region.⁶²⁹

Selawik is not eligible to participate in the CDQ (Community Development Quota) or CQE (Community Quota Entity) programs.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Selawik does not have a registered processing plant. The nearest processing plant is located in Kotzebue.

Fisheries-Related Revenue

Selawik did not receive any known fisheries-related revenue between 2000 and 2010 (Table 3).

⁶²⁵ U.S. Fish and Wildlife Service (n.d.). *Selawik National Wildlife Refuge*. Retrieved February 15, 2012 from <http://selawik.fws.gov/>.

⁶²⁶ NOAA National Marine Fisheries Service, Alaska Regional Office. (n.d.). *Arctic Fisheries*. Retrieved February 6, 2012 from <http://www.fakr.noaa.gov/sustainablefisheries/arctic/>.

⁶²⁷ North Pacific Fishery Management Council. 2009. *Arctic Fishery Management Plan*. Retrieved February 29, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

⁶²⁸ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶²⁹ See footnote 471.

Commercial Fishing

In 2010, four Selawik residents held Commercial Fisheries Entry Commission (CFEC) permits for the Kotzebue salmon gill net fishery, and this number remained stable between 2001 and 2010. Between 2000 and 2010, the number of salmon permits that were actively fished varied between zero to two. In 2010, none of the four permits were reported as actively fished (Table 4). In 2010, there were no crew license holders, fish buyers, shore-side processing facilities, vessels owned primarily by community residents, vessels homeported in the community, or vessels landing catch in the community of Selawik. In previous years there were crew license holders residing in Selawik, ranging from one to six between 2000 and 2009 (Table 5). Also, there were no community residents holding quota share accounts in federal catch share fisheries for halibut (Table 6) or sablefish (Table 7) between 2000 and 2010, and no residents holding quota share accounts for crab (Table 8) between 2005 and 2010. As there were no vessels landing catch in Selawik between 2000 and 2010, there was no ex-vessel value to report during the same period (Table 9). Additionally, there were no vessels owned primarily by Selawik residents landing catch between 2000 and 2010 (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Selawik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal revenue</i> ⁵	\$578,213 ⁶	\$793,966	\$630,930	\$639,074	\$652,361	\$660,612	\$723,168	\$718,101	\$875,126	\$973,274	\$857,126

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

⁶ This is a budget estimate only, and does not reflect a final amount reported in a financial statement.

Table 4. Permits and Permit Holders by Species, Selawik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 Cont. Permits and Permit Holders by Species, Selawik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	3	4	4	4	4	4	4	4	4	4	4
	Fished permits	1	2	0	0	2	1	1	1	1	2	0
	% of permits fished	33%	50%	-	-	50%	25%	25%	25%	25%	50%	-
	Total permit holders	3	4	4	4	4	4	4	4	4	4	4
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>3</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>
	<i>Fished permits</i>	<i>1</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>0</i>
	<i>% of permits fished</i>	<i>33%</i>	<i>50%</i>	<i>-</i>	<i>-</i>	<i>50%</i>	<i>25%</i>	<i>25%</i>	<i>25%</i>	<i>25%</i>	<i>50%</i>	<i>-</i>
	<i>Permit holders</i>	<i>3</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>

¹National Marine Fisheries Service. 2011. *Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Selawik: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Selawik ²	Total Net Pounds Landed In Selawik ^{2,5}	Total Ex-Vessel Value Of Landings In Selawik ^{2,5}
2000	5	0	0	0	0	0	0	\$0
2001	6	0	0	0	0	0	0	\$0
2002	1	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	4	0	0	0	1	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	3	0	0	0	0	0	0	\$0
2007	3	0	0	0	0	0	0	\$0
2008	2	0	0	0	0	0	0	\$0
2009	5	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ National Marine Fisheries Service. 2011. *Alaska processors' Weekly Production Reports (WPR) data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Individual Fishing Quota, Halibut, Selawik: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Individual Fishing Quota, Sablefish, Selawik: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Individual Fishing Quota, Crab, Selawik: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Selawik: 2000-2010.

	<i>Total Net Lb¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Selawik Residents: 2000-2010.

	<i>Total Net Lb¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses or licensed sport fish guides in Selawik. In 2010, 47 sportfishing licenses were sold to Selawik residents (irrespective of the point of sale). In the same year, 62 sportfishing licenses were sold in Selawik, indicating the potential that some visitors came to Selawik to pursue recreational fishing activities (Table 11).

Table 11. Sportfishing trends, Selawik: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sportfishing Licenses to residents ²	Sport Fishing Licenses Sold in Selawik ²
2000	0	0	42	0
2001	0	0	55	0
2002	0	0	67	0
2003	0	0	39	0
2004	0	0	66	0
2005	0	0	47	0
2006	0	0	96	87
2007	0	0	15	0
2008	0	0	64	64
2009	0	0	40	39
2010	0	0	47	62

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	14	1,875	1,779	3,388
2001	296	114	2,986	2,508
2002	0	132	1,297	4,988
2003	15	1,698	1,807	2,601
2004	17	332	1,892	3,463
2005	19	35	1,309	1,755
2006	0	452	1,764	4,570
2007	65	62	1,146	3,754
2008	0	407	2,421	1,593
2009	138	815	1,160	5,318
2010	137	478	1,027	1,828

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Selawik is located within Alaska Sport Fishing Survey Area X – Northwest Alaska. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, Alaska resident anglers consistently fished a greater number of days than non-Alaska resident anglers in both freshwater and saltwater, and freshwater sportfishing activity was significantly higher than in saltwater. On average between 2000 and 2010, Alaska resident anglers fished 3,251 freshwater days and 582 saltwater days, while non-Alaska resident anglers fished on average 1,690 freshwater and 64 saltwater days (Table 11).

Subsistence Fishing

Inhabitants of Selawik subsist mainly on whitefish, sheefish, caribou, moose, ducks, ptarmigan, and berries. Occasionally, bartered seal and beluga whale supplement the diet.⁶³⁰ Eschscholtz Bay is an important subsistence area for Selawik residents. Spring and summer uses include beluga whaling, seal hunting, egg gathering, smelt harvest, and berry picking. Beluga whaling involves the combined effort of residents of various area villages who set up hunting camps at Elephant Point. In addition, Kobuk and Selawik Lakes are an important subsistence use area for residents of Selawik and other nearby villages. Seal are harvested in both lakes during the spring and summer, and sheefish are harvested year-round. Selawik Lake is also an important site for waterfowl hunting in the spring and fall, and eggs are gathered during summer. Whitefish are the second most important fish resource in the area, along with some Dolly Varden char and northern pike.⁶³¹

Limited data were available subsistence salmon permits in 2000, 2002, 2003, and 2006. In each of these years, one subsistence salmon permit was issued to a Selawik household, though the permit was only actively fished in 2000 and 2006. In these two years, Chinook salmon and sockeye salmon were the species reported as harvested for subsistence use under the permit. In addition, in 2006, 115,481 lb of non-salmon fish (not including halibut) were reported as harvested for subsistence in Selawik (Table 13). Species of non-salmon harvested in Selawik that year included northern pike, sheefish, and whitefish.⁶³²

Data were not available for Selawik during the 2000-2010 period regarding subsistence participation by household and species or per capita subsistence harvest (Table 12), or for subsistence halibut fishing participation (Table 14), or subsistence harvest of marine mammal resources (Table 15).

⁶³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶³¹ Northwest Arctic Borough. (n.d.). "Chapter 6: Description of Designated Areas." *Coastal Management Plan, Final Draft Plan Amendment*. Retrieved July 10, 2012 from http://www.alaskacoast.state.ak.us/District/FinalFinalPlans/NorthwestArctic/NAB_Chap_6_DesignatedAreas.pdf.

⁶³² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Selawik: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lb)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Selawik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	1	1	1	n/a	n/a	n/a	16	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	1	1	n/a	n/a	n/a	n/a	30	n/a	115,481
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Selawik: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Selawik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. "Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006." *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear.* Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008.* Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Wainwright (WANE-rite, A.K.A. Ulguniq)



People and Place

*Location*⁶³³

Wainwright is located on the Chukchi Sea coast, about 300 miles north of the Arctic Circle and 100 miles southwest of Point Barrow, the most northerly point in the United States. The community is situated on the base of a small peninsula separating the Kuuk Lagoon from the ocean. Barrow, the economic and transportation hub for the region, is located approximately 90 miles to the northeast; and Anchorage is located 711 miles to the southeast. The community's area encompasses 17.6 square miles of land and 24.9 square miles of water. The community is located in the North Slope Borough and the Barrow Recording District. It is located on the perimeter of the 23.5 million acre National Petroleum Reserve - Alaska (NPR).

*Demographic Profile*⁶³⁴

In 2010, there were 556 residents in Wainwright, making it the 110th largest community out of 352 Alaska communities with a recorded population. Since the 1990 Census, which recorded 492 residents, the population of Wainwright has increased by 13%. Between 2000 and 2010, the recorded population fluctuated from a high of 562 in 2001 to a low of 517 in 2006, but overall increased by only ten individuals. Wainwright's annual growth rate between 2000 and 2009 was 0.28%, though population figures in Table 1 suggest that this rate is more reflective of year-to-year variation than a general upward trend. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that 50 people in the community reside there seasonally or are transients. Community leaders reported that while seasonal workers are present year-round, there is a heavier presence in the summer, with the population typically reaching its annual peak in July.

In 2010, 90.1% of the population identified themselves as American Indian and Alaska Native, a slight increase from the 2000 figure of 90.3%. White residents made up a slightly larger share of the population in 2010 (8.1%) than in 2000 (6.8%), while the percentage of the population identifying with two or more races decreased slightly from 2.7% in 2000 to 1.8% in 2010. In 2010, 0.4% of residents identified themselves as Hispanic or Latino. No residents in 2010 identified themselves as Native Hawaiian or Pacific Islander, Asian, or Black or African American. Figure 1 shows changes in the city's racial and ethnic makeup between 2000 and 2010.

⁶³³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶³⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

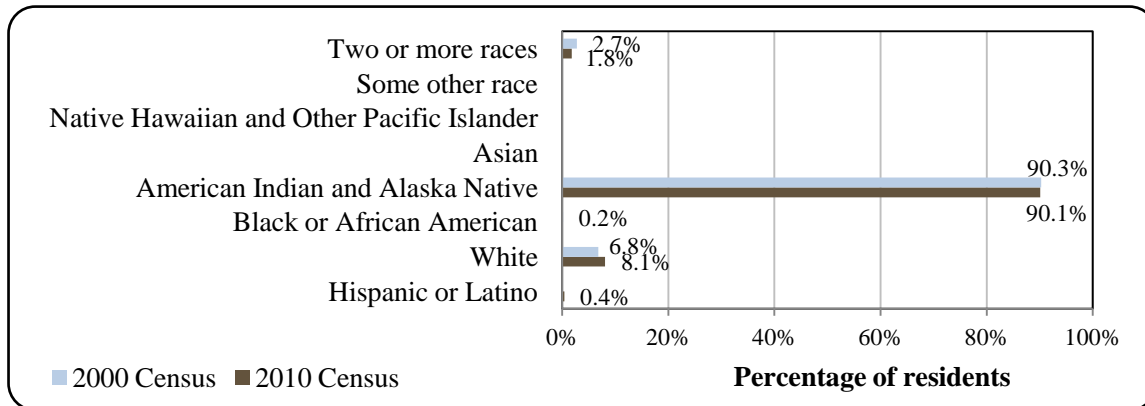
Table 1. Population in Wainwright from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimates of Permanent Residents ²
1990	492	-
2000	546	-
2001	-	562
2002	-	536
2003	-	552
2004	-	533
2005	-	520
2006	-	517
2007	-	538
2008	-	534
2009	-	551
2010	556	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Wainwright: 2000-2010.

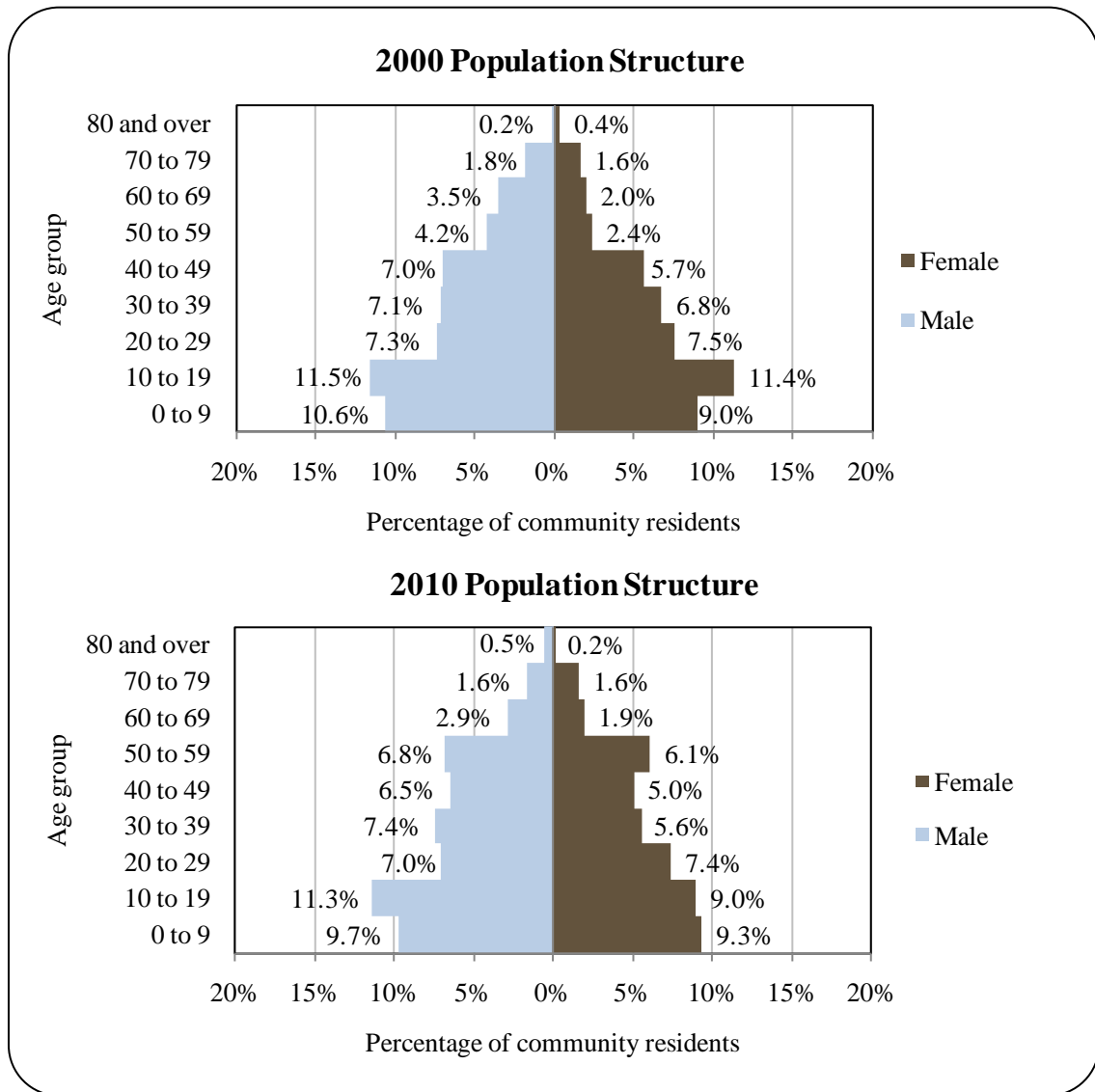


In 2010, the average household size in Wainwright was 3.65, a slight decrease from the 2000 average household size of 3.69. Also in 2010, 20 individuals (3.6% of the population) resided in non-institutionalized group quarters, compared to 0 in 2000. The community had 179 housing units in 2010, the same number recorded in the 2000 Decennial Census. From 2000 to 2010, there was only a slight change in the ratio of occupied and unoccupied housing units: 147 units in 2010 were occupied, compared to 148 in 2000. Of the 147 households in 2010, 99 (67.3%) were owner occupied, and 48 (32.7%) were renter occupied; 115 (78.2%) were family households, and 32 (21.8%) were nonfamily households. In 2010, 99 individuals (17.8% of the population) were counted as living in a household and being either a non-relative of the head of

the household (including unmarried partners) or a non-spouse or non-child relative of the head of the household.

In 2010, the gender makeup of Wainwright’s population was 53.8% male and 46.2% female, less balanced than the state as a whole (52% male and 48% female). Between 2000 and 2010, the median age of Wainwright’s residents was 27.6 (28.8 for males and 26.5 for females), notably lower than the statewide median of 33.8 years. In 2010, 39.4% of the population was younger than 20 years, 51.8% was between the ages of 20 and 59, and 8.7% of the population was 60 or older. The overall population structure of Wainwright in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Wainwright in 2000 and 2010.



According to the 2006-10 American Community Survey,⁶³⁵ in terms of educational attainment, an estimated 61.8% of the 490 Wainwright residents aged 25 and older in 2010 held a high school diploma or higher degree, compared to 90.7% of Alaskan residents overall; and an estimated 2.9% held a bachelor's degree or higher, compared to 27.0% of Alaska residents overall. Also in 2010, 7.1% of the community's 25-and-over population was estimated to have less than a 9th grade education, compared to 3.5% of residents statewide overall; 31% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 19.4% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 1.4% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 0% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 2.9% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Inupiat Eskimos been present on the North Slope of Alaska for hundreds of years; archaeological sites around Wainwright indicate their presence in the vicinity from as early as 1000 CE.⁶³⁶ The area around Kuuk Lagoon was well-populated by the time the community site was formally established at the turn of the twentieth century: an 1853 map documented the village of "Olrona,"⁶³⁷ and in 1881, at least five Inupiat settlements were located within a 25 mile radius.⁶³⁸ Inhabitants of these settlements migrated seasonally between the interior and the coast.

During the 1880s, small-scale coal mines were opened nearby to provide coal for steam whaling ships, which had been active in the Arctic since the mid-century. Natives were located to the area to mine coal. They also engaged in trade with whalers and were employed as wage laborers assisting in whaling operations.⁶³⁹

The community of Wainwright was formally established in 1904, when it became the site of an Alaska Native Service schoolhouse. The site was reportedly chosen by the ship captain delivering construction materials for the school, due to favorable sea-ice conditions. The community took its name from Wainwright (Kuuk) Lagoon, named in 1826 by Captain F.W. Beechey for one of his officers.⁶⁴⁰

A reindeer station was also established in 1904, and Kuugmiut (from the Kuuk River area and the coasts around Wainwright) and Utuggagmiut (from areas to the east and south of Wainwright) were enlisted to manage the herd. The 1918 influenza epidemic brought additional immigrants to Wainwright from nearby smaller communities, as did the expansion of the school in the early 1920s. Booms and busts in whaling, coal mining, reindeer herding, and fur trapping

⁶³⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶³⁶ National Parks Service (2012). *National register of historic places database*. Retrieved February 14, 2012 from <http://www.nps.gov/nr/research/>.

⁶³⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶³⁸ Jorgensen, J.G., and G. I. Languir. 1990. *Oil age Eskimos*. Berkley, CA: University of California Press.

⁶³⁹ Ibid.

⁶⁴⁰ See Footnote 637.

also contributed to fluctuations in the population from the 1880s to the 1970s. During the late 1940s and 1950s, Wainwright's population fell by a third as residents moved to Barrow to pursue new opportunities there provided by federal military projects. The passage of the Alaska Native Claims Settlement Act (ANCSA) in 1971, the formation of the North Slope Borough and Arctic Slope Regional Corporation, and the development of North Slope oil resources resulted in investments in Wainwright's public infrastructure and helped drive population growth over the next two decades.⁶⁴¹ The city was incorporated as a second-class city in 1962.

The majority of current Wainwright residents are of Kuugmiut or Ituggagmiut Inuit descent. The community is also known by its Inupiaq name, "Ulguniq".

Natural Resources and Environment

Wainwright has an arctic climate. Temperatures range from a low extreme of -56°F to 80°F. Precipitation is light, averaging 5 inches annually, with 12 inches of snow. The Chukchi Sea is ice-free from mid-July through September. The North Slope Borough has about 83 days annually of "midnight sun", when the sun stays above the horizon, and about 65 days annually when the sun stays below the horizon.⁶⁴²

The landscape of the North Slope is treeless from the coast to the foothills of the Brooks Range, located 100 miles inland from Wainwright. Permafrost is continuous across the region due to low temperatures. The tundra supports lichens, mosses, and low bushes. Tundra plants include salmonberry, wild rhubarb, cranberry, and blueberry; sedges and grasses grow around sloughs, marshes, and poorly drained lakes. Kuuk Lagoon, located behind the peninsula on which Wainwright is sited, extends for 50 miles inland before narrowing into the 80-mile long Kuuk River. Major tributaries of the Kuuk fan out over a 110 mile radius. The Kuuk river system allows travel to the interior year round—by snow machine when the river is frozen in winter and by motorboat during the remainder of the year.⁶⁴³ During the winter months, the sea ice cover extends for several miles out to sea. Wainwright is vulnerable to coastal flooding and erosion.⁶⁴⁴

The North Slope provides habitat for many species of terrestrial and marine mammals, freshwater and marine fish, and birds. Terrestrial mammals in the region include caribou, reindeer, moose, muskox, wolverine, wolf, arctic and red foxes, grizzly bear, and small furbearers such as marmot, ermine, and Arctic ground squirrels. Marine mammals include bowhead, gray, and beluga whale; bearded, ringed, and spotted seal; and Pacific walrus. Wainwright residents fish locally for grayling, whitefish, lingcod (or burbot), salmon, cisco, sculpin, rainbow smelt, Arctic grayling, capelin, crab, and shrimp. Birds of importance to community subsistence practices include eider duck, Pacific brant, white-fronted goose, snow goose, oldsquaw and pintail duck, and ptarmigan.⁶⁴⁵

Extensive oil and gas resources exist on the North Slope and on the continental shelves of the Beaufort and Chukchi Seas. North Slope oil production began in 1977, and as of 2008, 15.7 billion barrels of oil had been produced, with 6.1 billion barrels of technically recoverable oil

⁶⁴¹ See Footnote 638.

⁶⁴² North Slope Borough (n.d.). *North Slope Borough local all hazard mitigation plan*. Retrieved February 14, 2012 from <http://www.commerce.state.ak.us/dca/planning/nfip/mitigation.htm>.

⁶⁴³ See Footnote 638.

⁶⁴⁴ See Footnote 642.

⁶⁴⁵ Kassam, K.S. and Wainwright Traditional Council (2001). *Passing on the knowledge: mapping human ecology in Wainwright, Alaska*. Calgary, Alberta: University of Calgary.

remaining from then-developed fields.⁶⁴⁶ Though production to date has been limited to the Central Arctic, between the Colville and Canning rivers, and adjacent near-shore areas in the Beaufort Sea,⁶⁴⁷ exploratory well drilling in leased areas of the Chukchi Sea Continental Shelf (OCS) could begin as early as summer of 2012.⁶⁴⁸ The Chukchi Sea OCS is estimated to contain 15.38 billion barrels of technically recoverable oil and 76.77 trillion cubic feet of natural gas.⁶⁴⁹ In a 2011 survey conducted by the AFSC, community leaders cited “opening up of off-shore drilling” as the fisheries-related policy or management action of most concern to Wainwright.

The Northern Alaska Coal Province contains an estimated four trillion tons of bituminous coal deposits, or one ninth of the world’s known coal reserves. These deposits have remained undeveloped due to distance from markets; though the Arctic Slope Regional Corporation (ASRC) is engaged in an aggressive program to determine the economic feasibility of their development.⁶⁵⁰

Climate change effects observed in the region include reductions in sea ice cover and permafrost. The extent of Arctic sea-ice has generally declined over the last half century, and total loss of summer sea ice is projected over the next century.⁶⁵¹ The delayed formation of sea ice may increase Wainwright’s exposure to coastal flooding and erosion. Shifts in population densities and distribution may occur for species associated with ice habitats, including seals, walrus, and polar bears.⁶⁵² Additionally, warmer summers and milder winters may result in thawing of permafrost and ground subsidence.⁶⁵³

Current Economy⁶⁵⁴

Wainwright residents participate in a mixed economy involving both wage labor and subsistence practices. Economic opportunities in the community are influenced by its proximity to Barrow, the economic center of the North Slope Borough. The village and regional corporations, along with the North Slope Borough and the North Slope Borough School District, are the major employers in the community, and sales of arts and crafts supplement income from wage employment. Important subsistence resources include bowhead whale, bearded seal, caribou, and arctic grayling.⁶⁵⁵ The North Slope oil and gas industry is the primary source of

⁶⁴⁶ U.S. Dept. of Energy (2009). *Alaska North Slope oil and gas: a promising future or an area in decline?* Retrieved February 14, 2012 from: http://www.netl.doe.gov/technologies/oil-gas/publications/AEO/ANS_Potential.pdf.

⁶⁴⁷ Ibid.

⁶⁴⁸ Bailey, A. (2011, May 20). Shell files plan for Chukchi Sea drilling, starting next year. *Anchorage Daily News*. Retrieved February 17, 2012 from <http://www.adn.com/2011/05/20/1873922/shell-files-plan-for-chukchi-sea.html>.

⁶⁴⁹ Bureau of Ocean Energy Management. (November 2011). Assessment of undiscovered technically recoverable oil and gas resources of the nation’s outer continental shelf, 2011. Retrieved February 17, 2012 from http://www.boem.gov/uploadedFiles/2011_National_Assessment_Factsheet.pdf.

⁶⁵⁰ Arctic Slope Regional Corporation (2012). *Homepage*. Retrieved February 17, 2012 from <http://www.asrc.com/Pages/Home.aspx>.

⁶⁵¹ North Slope Borough (2005). *Comprehensive Plan*. Retrieved February 17, 2012 from <http://www.commerce.state.ak.us/dca/plans/NorthSlopeBorough-CP-2005.pdf>.

⁶⁵² Ibid.

⁶⁵³ Ibid.

⁶⁵⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁶⁵⁵ See Footnote 645.

revenue for Borough government services. Top employers in 2010⁶⁵⁶ included: North Slope Borough, Olgoonik Crop., North Slope Borough School, City of Wainwright, Wainwright Cooperative Association, Olgoonik Environmental Services, Olgoonik Oilfield Services LLC, SKW/Eskimos Inc., Arctic Slope Regional Corp., and Arctic Slope Native Association Ltd.⁶⁵⁷

In 2010, the median household income in Wainwright was estimated to be \$65,156, compared to \$66,521 statewide; and per capita household income was estimated at \$19,395, compared to \$30,726 statewide. Wainwright ranked 61st out of 299 Alaska communities with data on median income and 156th out of 305 Alaska communities with data on per capita income. Median and per capita income in Wainwright in 2010 represented decreases from 1999 estimated levels, which were \$71,959 and \$21,972, respectively, in 2010 dollars.⁶⁵⁸ From 2000 to 2010, the percentage of residents below the poverty line decreased slightly from 12.5% to 11.4%. The 2010 poverty rate in Wainwright was higher than the statewide rate of 9.5%. It should be noted that income and poverty statistics are based on wage income and other cash sources; these statistics are not reflective of the value of subsistence to the local economy.

Wainwright's small population size may have prevented the American Community Survey from accurately portraying economic conditions.⁶⁵⁹ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, residents earned \$7.19 million in total wages in 2010.⁶⁶⁰ When matched with the population in 2010, the per capita income equals \$12,935, which is significantly less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Decennial Census figures.⁶⁶¹

Based on 2006-2010 American Community Survey estimates, 69.1% of Wainwright residents aged 16 years and older were in the civilian labor force. Of the civilian labor force in 2010, 33% were unemployed. This is notably higher than the statewide rate of 5.9% and represents a notable increase from 2000 unemployment rate of 21.8%. Of the employed civilian labor force in 2010, 41.4% were in the private sector, 55.2% were in the public sector, and the remaining 3.4% were self-employed. The largest industries in terms of employment were educational services, healthcare, and social assistance (22.1% of the employed civilian labor force) and transportation, warehousing, and utilities (15.6% of the employed civilian labor force). The percentage employed in agriculture or natural resource extraction (fishing and hunting, forestry, and mining) was 6.7%. As with income and poverty statistics, it should be noted that employment statistics do not reflect residents' activity in the subsistence economy. Additional statistics on employment by industry and by occupation are shown in Figures 3 and 4.

⁶⁵⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁵⁷ See Footnote 651.

⁶⁵⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁵⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁶⁰ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁶⁶¹ See footnote 656.

Figure 3. Local Employment by Industry in 2000-2010, Wainwright (U.S. Census).

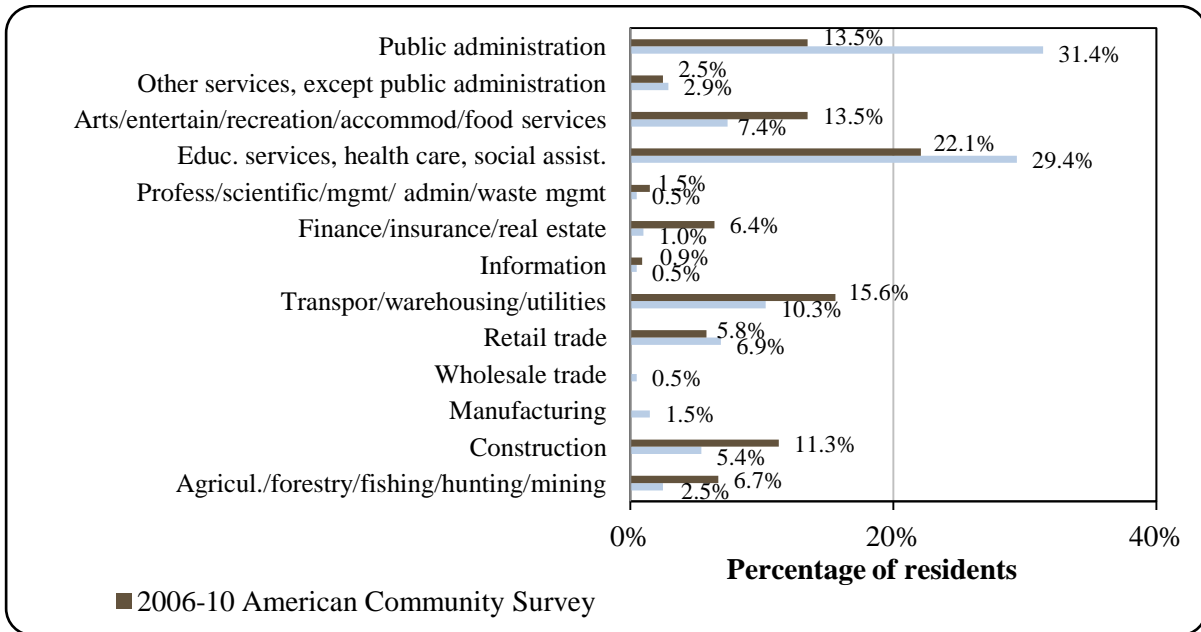
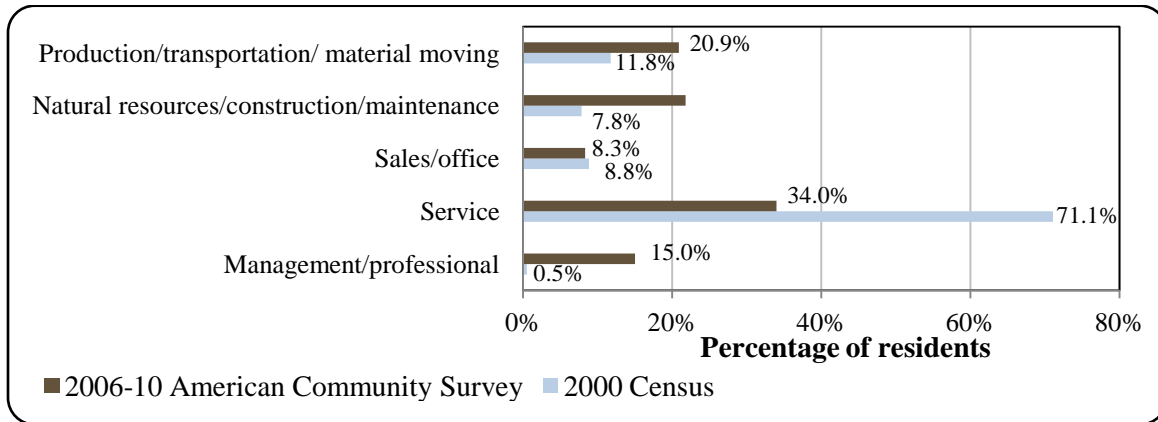


Figure 4. Local Employment by Occupation in 2000-2010, Wainwright (U.S. Census).



Governance

Wainwright is a Second-class city with a strong-mayor form of government. The mayor holds the seventh seat on the City Council. The Native Village of Wainwright is a Bureau of Indian Affairs (BIA) recognized Native village council and is a member of the Inupiat Community of the Arctic Slope (ICAS), the regional Alaska Native tribal government organized under the Indian Organization Act. Among other activities, ICAS provides vocational rehabilitation services to members and advocates for environmental and natural resource protection in the North Slope. Olgoonik Corporation and the Arctic Slope Regional Corporation

(ASRC) are the village and regional Alaska Native corporations under the Alaska Native Claims Settlement Act (ANSCA). Olgoonik Corporation holds title to over 170,000 acres of land.⁶⁶²

North Slope Borough offices, as well as the closest regional office of the Alaska Department of Fish and Game (ADF&G), are located in Barrow. The closest office of the Alaska Department of Commerce, Community and Economic Development (DCCED) is located in Kotzebue. The closest Alaska Department of National Resources (DNR) office is located in Fairbanks. Anchorage is the site of the closest National Marine Fisheries Service (NMFS) office and the closest Bureau of Citizenship and Immigration Services (BCIS) office.

In 2010, the North Slope Borough administered an 18.5 mills property tax. Municipal finance figures were taken from *Certified Financial Statements*⁶⁶³ (with the exception of 2008, which was taken from financial audits). When adjusted for inflation,⁶⁶⁴ total municipal revenues increased by 133.3% between 2000 and 2010 from \$434,265 to \$1.52 million. Beginning in 2006, state and federal grants began accounting for a significant portion of municipal revenues. This followed 2004, when municipal revenues were at their lowest. In that year, Borough payments in lieu of taxes accounted for half of revenues collected, while rentals, gaming receipts, and state grants accounted for the remainder. In 2010, general fund revenues accounted for 15.7% of total municipal revenues, while various grants made up the remainder. Most grant revenues were awarded by the National Petroleum Reserve of Alaska, and targeted community development, services, and youth programs. Most (34.5%) locally generated revenues were collected from rents and leases, followed by donations (31.7%) and leases for the senior center (14.2%). Outside revenues were collected from state allocated Community Revenue Sharing and North Slope Borough payments in lieu of taxes. Overall, Community Revenue Sharing accounted for 8.1% of total municipal revenues in 2010, compared to 6.2% from State Revenue Sharing in 2000.

From 2000 to 2010, Wainwright received grants totaling \$2,358,212 (\$2,512,394 in 2010-adjusted dollars) for improvements to existing dock structures. Information on community finances from 2000 to 2010 can be found in Table 2.

⁶⁶² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁶³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

⁶⁶⁴ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Wainwright Municipal Government from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$434,265	n/a	\$27,000	n/a
2001	\$494,081	n/a	\$27,562	n/a
2002	\$656,799	n/a	\$26,710	n/a
2003	\$200,895	n/a	\$27,000	\$25,000
2004	\$89,965	n/a	-	n/a
2005	\$184,450	n/a	-	n/a
2006	\$508,901	n/a	-	\$525,000
2007	\$881,235	n/a	-	\$904,212
2008	\$855,658	n/a	-	\$904,000
2009	\$1,380,934	n/a	\$123,829	n/a
2010	\$1,520,138	n/a	\$123,242	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Air travel provides Wainwright’s only method of year-round access. The North Slope Borough owns and operates a 4,494-ft long gravel airstrip; an additional 3,000 ft long gravel airstrip exists at the Wainwright Air Station. Roundtrip airfare between Wainwright and Anchorage in early June of 2012 was \$982, which included connecting travel through the regional hub of Barrow.⁶⁶⁵ Skiffs, all terrain vehicles, and snowmachines are used for local transportation. Freight arrives by cargo plane and barge.

Communications in Wainwright include local and long distance phone service, radio, Internet, and television. Wainwright is one of 235 Alaskan communities that receive television service from the state-owned Alaska Rural Communication Service.⁶⁶⁶ In a 2011 survey conducted by the AFSC, community leaders reported that improvements to broadband internet infrastructure were made within the last 10 years.

⁶⁶⁵ This price was calculated on November 21, 2011 using kayak.com.

⁶⁶⁶ See Footnote 662.

Facilities

All utilities in Wainwright, including water distribution, sewage collection, landfill, and electricity, are provided by North Slope Borough. Water is obtained from Merekrak Lake, located 3 miles northeast of the community, and then treated and stored in tanks. Water is then hauled or delivered to household tanks by truck; hauling services are provided by the borough. The majority of homes have running water for the kitchen. Diesel fuel is the primary energy source used.⁶⁶⁷ In a 2010 survey conducted by the AFSC, community leaders reported water and sewer pipelines among community infrastructure projects completed within the last 10 years.

Community facilities in Wainwright include a USPS post office, as well a hotel, restaurant, and community store operated by the Olgoonik Corporation. The gymnasium and library at the school are available for public use.⁶⁶⁸

With respect to fisheries-related facilities and services, community leaders reported in a 2011 survey conducted by the AFSC that improvements to dock infrastructure were among the community projects completed within the last 10 years. Vessels up to 24 feet long can use moorage in Wainwright; however, no dock space is currently available for permanent or temporary public moorage. Fishing support services available in Wainwright include fishing gear sales, haulout facilities for small boats, and boat fuel sales.

Medical Services

The North Slope Borough owns and operates the Wainwright Health Clinic. Emergency services have coastal and air access to the community. Auxiliary medical care is provided by the Wainwright Volunteer Fire Department.⁶⁶⁹ The nearest hospital is located in Barrow.

Educational Opportunities

The community has one school, Alak School, which is operated by North Slope Borough Schools. As of 2011, the school has 16 teachers and serves 149 students from preschool through twelfth grade.⁶⁷⁰ IIsagvik College, a public community located in Barrow, is the nearest postsecondary institution and offers associate degrees and certificates in a range of vocational, health services, art, and business fields.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Participation in subsistence fisheries on the Arctic coast dates back almost 2,000 years to the Birnirk and Thule traditions. Commercial whalers began operating in the Arctic during the mid-19th century, and the industry factored heavily in the growth and development of the community of Wainwright. Today, fisheries participation is limited to subsistence and

⁶⁶⁷ Ibid.

⁶⁶⁸ Ibid.

⁶⁶⁹ Ibid.

⁶⁷⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

recreational fisheries. As of February 2012, no commercial fishing in federal waters of the Chukchi and Beaufort Seas is authorized under the Arctic Fishery Management Plan (FMP).⁶⁷¹ Since 1964, a small commercial finfish fishery has taken place in state waters in the Colville River delta to the east of Wainwright.⁶⁷²

Current engagement by Wainwright residents is limited to subsistence and recreational fishing. In a survey conducted by the AFSC in 2011, community leaders reported that residents fish for coho salmon during the month of August. Additionally, whale and other fish were cited in the survey as the most important subsistence marine or aquatic resources to residents.

Wainwright is located adjacent to the Arctic Management Area for federal fisheries management. The community is located in the Northern Area of the Arctic-Yukon-Kuskokwim Region for ADF&G commercial fisheries management; in the North Slope Management Area for ADF&G recreational fisheries management; and in the Northern Area for ADF&G subsistence fisheries management. Wainwright has a representative on North Slope Subsistence Regional Advisory Council of the Federal Subsistence Management Board. The community is one of ten Alaska whaling Alaska communities that participates in the Alaska Eskimo Whaling Commission, which manages bowhead whale hunting. Additionally, Wainwright is a member community of the Eskimo Walrus Commission.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Wainwright does not have any registered processing plants. The closest seafood processor is located in Nome.

Fisheries-Related Revenue

Between 2000 and 2003, Wainwright received a small amount of revenue from raw fish taxes and the Shared Fisheries Business Tax. No known fisheries-related revenue was received by the community after 2003. Information on fisheries-related revenue trends are shown in Table 3.

Commercial Fishing

Residents of Wainwright do not currently participate in commercial fisheries either as permit holders, holders of IFQ quota share, or fishing vessel owners. Between 2000 and 2010, no Commercial Fisheries Entry Commission (CFEC) permits, Federal Fisheries Permits (FFP), or License Limitation Program (LLP) permits were issued to residents. No residents have held halibut, sablefish, or crab quota share since these IFQ programs began. Between 2000 and 2010, no commercial fishery landings were made by vessels owned by Wainwright residents, irrespective of location of landing. With the exception of one commercial fishing crew license holder in 2000, no residents participated as crew members in Alaska commercial fisheries. Information on commercial fishing trends can be found Table 4 through 10.

⁶⁷¹ NPFMC. (2009). *Arctic Fishery Management Plan*. Retrieved January 3, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>

⁶⁷² ADF&G. (2012). *Commercial Fisheries Overview – Northern Management Area*. Retrieved April 10, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyareanorthern.main>.

Table 3. Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Wainwright: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$210	\$210	\$3,901	\$3,901	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	\$52	\$106	\$148	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$262</i>	<i>\$316</i>	<i>\$4,049</i>	<i>\$3,901</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$434,265</i>	<i>\$494,091</i>	<i>\$656,799</i>	<i>\$200,895</i>	<i>\$89,965</i>	<i>\$184,450</i>	<i>\$508,901</i>	<i>\$881,235</i>	<i>\$855,658</i>	<i>\$1.38 M</i>	<i>\$1.52 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

Note: n/a indicates that no data were reported for that year. Cells showing -- indicate that the data are considered confidential.

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Wainwright: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Wainwright ²	Total Net Pounds Landed in Wainwright ^{2,5}	Total Ex-Vessel Value of Landings in Wainwright ^{2,5}
2000	1	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Wainwright: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 7. Sablefish Catch Share Program Participation in Wainwright: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation in Wainwright: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Wainwright: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Wainwright Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The sport fish population on the North Slope is slow growing and supports minimal harvest. As shown in Table 11, no sport fish guide businesses were registered in the community between 2000 and 2010, and no residents held sport fish guide licenses during this period. Additionally, there were no reports of charter operations in the community between 2000 and 2010.

Between 2000 and 2010, the number of sportfishing licenses sold to residents, irrespective of location of sale, fluctuated between a low of 7 in 2007 to a high of 16 in 2008. No sportfishing licenses were sold in the community during this period.

Wainwright is located in the North Slope-Brooks Range (Area Z) of the Alaska Department of Fish & Game Sport Division Statewide Harvest Survey (SWHS). The area includes all Alaskan waters and drainages north of the Brooks Range and flowing into the Beaufort and Chukchi seas to the north and east of Point Hope. Major drainages in the area, which include the Colville, Sagavanirktok, Canning, and Kuparuk rivers, provide habitat for diadromous Beaufort Sea Dolly Varden. The area also includes Teshekpuk Lake, the state’s third largest lake, as well as hundreds of smaller lakes, many of which contain lake trout, Arctic char, Arctic grayling, and burbot. As presented in Table 11, freshwater fishing accounts for the vast majority of recreational fishing in the area (94% of all angler days fished between 2000 and 2010), with Alaska residents doing most of the fishing (76% of angler days fished between 2000 and 2010). According to the SWHS, species caught and harvested by private anglers in the North Slope-Brooks range area include Dolly Varden char; Chinook, pink, and chum salmon; arctic grayling; burbot; lake trout; and northern pike. Community leaders also reported in a 2011 AFSC survey that Wainwright residents target silver salmon as a recreational species. Sportfishing by residents is typically done using locally-owned private vessels.

Table 11. Sport Fishing Trends, Wainwright: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Wainwright²
2000	0	0	10	0
2001	0	0	11	0
2002	0	0	13	0
2003	0	0	8	0
2004	0	0	15	0
2005	0	0	12	0
2006	0	0	12	0
2007	0	0	7	0
2008	0	0	16	0
2009	0	0	9	0
2010	0	0	14	0

Table 11 cont'd. Sport Fishing Trends, Wainwright: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler days fished – Alaska residents ³
2000	n/a	743	523	3,473
2001	n/a	635	715	4,682
2002	11	547	819	3,393
2003	15	67	594	2,034
2004	n/a	96	1,131	2,084
2005	n/a	n/a	2,183	2,169
2006	18	341	495	2,609
2007	n/a	83	733	3,338
2008	140	n/a	990	4,469
2009	n/a	n/a	1,505	2,400
2010	n/a	n/a	1,319	3,065

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence resources comprise an important part of Wainwright's mixed economy. According to a 2003 survey, almost 92% of Wainwright households depended on subsistence to some extent, with 31% of households dependent on subsistence for at least 50% of their food source.⁶⁷³ Wainwright residents engage in subsistence fishing throughout the year, but most fishing activity takes place during the summer and fall. In midsummer, nets are set up in front of the village for salmon, trout, and whitefish, with fishing moving to streams and rivers along with the migration of fish. Fall fishing typically takes place at camps along the Kuk, Ivisaruk, Avalik, and Utukok Rivers. Smelt fishing is conducted January through March in the Kuk Lagoon.⁶⁷⁴ Other important subsistence fish species include whitefish, Arctic grayling, rainbow smelt, burbot, lingcod, Bering cisco, and pink and chum salmon.⁶⁷⁵

⁶⁷³ North Slope Borough (2004). 2004. *North Slope Borough 2003 economic and census report Volume IX*. North Slope Borough Department of Planning and Community Services. Barrow. (June 2007). Coastal Management Plan. Retrieved April 10, 2012 from http://www.north-slope.org/programs/coastal_management/.

⁶⁷⁴ North Slope Borough (2007). *Coastal Management Plan*. Retrieved April 10, 2012 from http://www.north-slope.org/programs/coastal_management/.

⁶⁷⁵ Kassam, K.S. and Wainwright Traditional Council (2001). *Passing on the knowledge: mapping human ecology in Wainwright, Alaska*. Calgary, Alberta: University of Calgary.

Data between 2000 and 2010 on subsistence harvests in Wainwright is limited, as shown in Tables 12-15. Available survey data collected by ADF&G show estimated harvests of Chinook salmon, sockeye salmon, walrus, and beluga whale in selected years. Marine mammals constitute an important subsistence resource for Wainwright residents. The bowhead whale hunt, typically occurring anytime from mid April to early June, is a central part of Wainwright community life: customs associated with the bowhead whale, including the celebrations that follow a successful hunt, help reinforce social relations and the values of sharing and interdependence. Other marine mammals used as subsistence resources in Wainwright include bearded seals, polar bears, beluga whale, and Pacific walrus.⁶⁷⁶

Of the species listed by ADF&G in Table 12, sockeye salmon were harvested exclusively (based on reported harvests). In any given year between 2000 and 2005, between one and two subsistence salmon permits were held by Wainwright residents. In those years, 132 sockeye salmon were reported harvested. Between 2000 and 2010, an estimated 213 beluga whales were harvested. Harvest reporting was somewhat variable, with few harvests occurring in 2004 through 2006, and in 2010. An estimated 276 walrus were harvested between 2000 and 2010, 70.3% of which were reported harvested between 2000 and 2004. Finally, an estimated 31 polar bears were harvested between 2000 and 2005. Information regarding marine mammal subsistence harvests can be found in Table 15.

Table 12. Subsistence Participation by Household and Species, Wainwright: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁶⁷⁶ Ibid.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Wainwright: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	2	2	1	n/a	n/a	n/a	29	n/a	n/a
2002	2	2	2	n/a	n/a	n/a	31	n/a	n/a
2003	1	1	1	n/a	n/a	n/a	29	n/a	n/a
2004	1	1	1	n/a	n/a	n/a	29	n/a	n/a
2005	2	2	n/a	n/a	n/a	n/a	14	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Wainwright: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Wainwright: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	39	3	n/a	n/a	n/a
2001	23	n/a	90	9	n/a	n/a	n/a
2002	37	n/a	111	3	n/a	n/a	n/a
2003	38	n/a	18	2	n/a	n/a	n/a
2004	n/a	n/a	36	5	n/a	n/a	n/a
2005	1	n/a	7	9	n/a	n/a	n/a
2006	n/a	n/a	25	n/a	n/a	n/a	n/a
2007	58	n/a	14	n/a	n/a	n/a	n/a
2008	25	n/a	3	n/a	n/a	n/a	n/a
2009	22	n/a	28	n/a	n/a	n/a	n/a
2010	9	n/a	5	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kodiak Island Archipelago

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Regional Introduction: Kodiak Island Archipelago

Communities

Akhiok

Alitak Bay*

Karluk

Kodiak

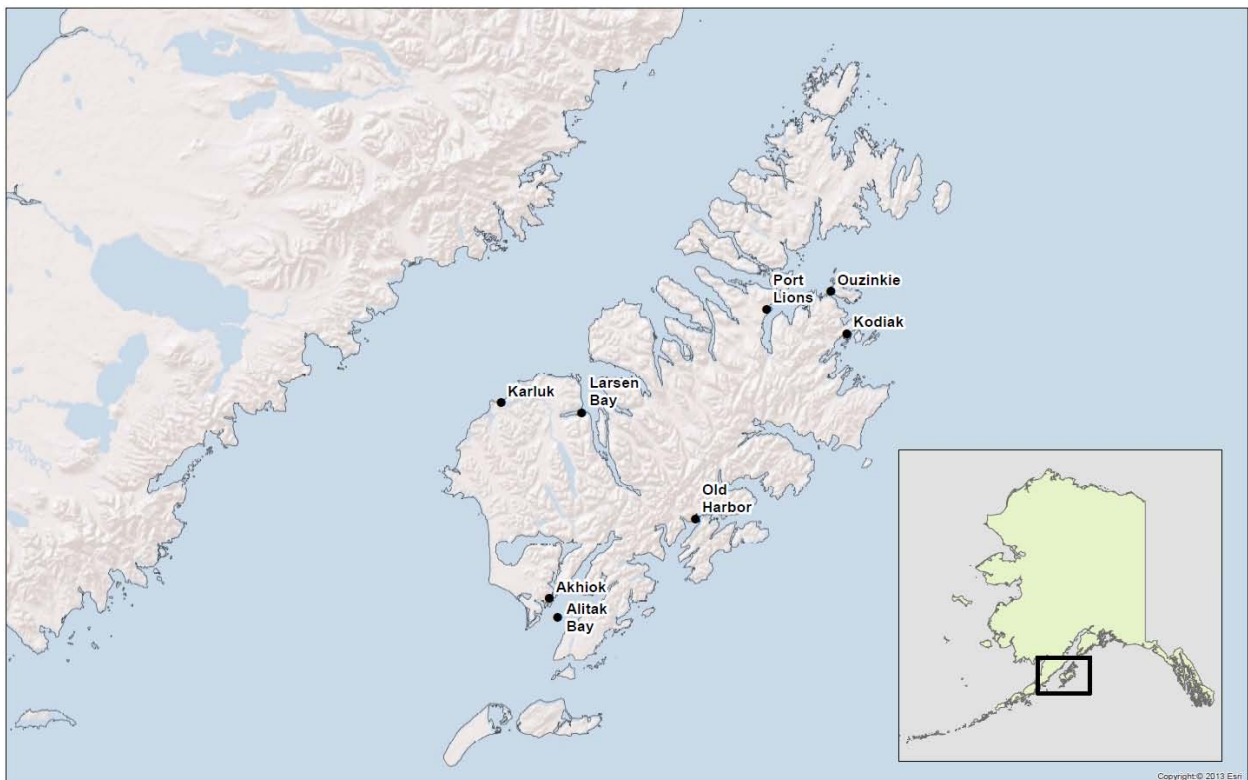
Larsen Bay

Old Harbor

Ouzinkie

Port Lions

*Included in Akhiok



People and Place

Location

The communities profiled in this section are located in the Kodiak Island archipelago, a group of islands located in the Western Gulf of Alaska. The largest island is Kodiak Island, the second largest island in the country, encompassing approximately 3,500 square miles and spanning 100 miles in length. Others are Afognak Island, Sitkalidak Island, the Trinity Islands, Raspberry Island, Shuyak Island, and Marmot Island and many additional small islands.¹ The archipelago is approximately 25 miles across the Shelikof Strait from the Katmai Coast of the Alaska Peninsula, and 90 miles southwest of the Kenai Peninsula.² In total, the area of the Kodiak Island Borough includes 6,559.8 square miles of land and 5,463.8 square miles of water. The islands are located at approximately 57.8° N. latitude and -152.4° W longitude. The most populous city, Kodiak, is located on the eastern shore of Kodiak Island, and is about 252 air miles south of Anchorage.

The influence of surrounding ocean waters protects the islands from extreme temperatures. Average monthly temperatures in this area vary from 32° to 62° F. There is frequent cloud cover on Kodiak Island as well as fog, with moderate rain, and rare if any freezing weather. Harsh storms during the months of December through February are common with winds sometimes reaching 90 miles-per-hour. On the windward side of the island the yearly precipitation is 60 inches and 40 inches on the leeward side. These intense winds and rain often result in airport closures or delays.³

Demographic Profile

In 2010, the total population of the Kodiak Island Borough was 13,592. That year, just under half of Borough residents resided in the City of Kodiak (45.1%), with a population of 6,130. The other six communities profiled in this section had populations of between 37 and 218 in 2010.⁴

In 2010, just over half of Kodiak Island Borough residents identified themselves as White (55%), along with 19.6% who identified as Asian, 13.2% as American Indian or Alaska Native, 0.7% as Black or African American, 0.6% as Native Hawaiian or Other Pacific Islander, 0.5, 2.9% as 'Some Other Race', and 7.6% that identified as two or more races. In addition, 7.3% of Kodiak Island Borough residents identified themselves as Hispanic or Latino in 2010. It is important to note that, other than in the City of Kodiak, a majority of the population of all other communities profiled in this section identified themselves as American Indian or Alaska Native, from 51% identifying as Native in Ouzinkie to 100% in Karluk. In comparison, 9.9% of the population of the City of Kodiak identified themselves as Native in 2010, along with 13.8% that

¹ Kodiak, Alaska's Emerald Island. (2008). *The Kodiak Island Archipelago*. Retrieved November 29, 2012 from <http://www.kodiak.org/explore-kodiak/the-kodiak-islands/46-the-kodiak-islands.html>.

² Alaska Dept. of Natural Resources. (2011). *Kodiak Island Natural History*. Retrieved November 28, 2012 from <http://dnr.alaska.gov/parks/units/kodiak/nathistory.htm>.

³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

indicated they were American Indian or Alaska Native in combination with some other race. Most individuals identifying with other races or ethnicities reside in the City of Kodiak.⁵

In 2010, the overall regional per capita income of the Kodiak Island Borough was estimated at \$26,413, while the estimated median household income was \$65,605, compared to statewide estimates of \$30,726 and \$77,886, respectively.⁶

History

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.⁷ At the time of Russian settlement, the Alutiiq peoples were referred to as ‘Aleuts’. The name ‘Alutiiq’ has been used since the 1980s to refer to the linguistic and cultural group of Alaska Natives from the southern coast of the Alaska Peninsula to Prince William Sound, as distinguished from the Aleuts living in the Aleutian Islands. Alutiiq people living on Kodiak Island and the south coast of the Alaska Peninsula are called Koniag (Koniagmiut), and those living on Kodiak Island specifically are called Qikertarmiut (people of Kodiak Island). The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources, and marine mammals, including whales, sea lions, seals, and sea otters. They were skilled mariners, using skin kayaks and larger wooden boats for both war raids and trade.^{8,9}

After the Russian fur trade caused sea otter populations to decline in the Aleutian Islands, fur traders entered the territory of the Koniags. The Russians were initially repelled by the Alutiiqs, but in 1784 Gregorii Shelikof approached Kodiak Island armed with muskets and cannons to take the area by force. Several thousand Natives retreated to Refuge Rock near Sitkalidak Island. Once the Russians discovered a hidden access to the rock, the Alutiiqs knew they were overwhelmed. Rather than be captured, hundreds of Alutiiqs were killed jumping off a cliff to escape from Shelikof’s party. That same year, Shelikof’s men founded a settlement near the present location of Old Harbor. Three Saint’s Bay was the first Russian colony in Alaska, but in 1788 the settlement was destroyed by a tsunami. The community experienced two more earthquakes and relocated to the northeast coast of the island in 1793, to “Saint Paul’s”, which today is the City of Kodiak. Kodiak was the capital of Russian America until 1808, when the capital was moved to Sitka to provide better access to Russia’s holdings in California. Russian Orthodox clergymen arrived around 1794 to missionize the population of the region. There were more than 6,500 Koniags in the Kodiak area at that time, but by the end of Russian control of the

⁵ Ibid.

⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁷ Jordan, R. H. and R. A. Knecht. (1986). Archaeological research on western Kodiak Island, Alaska: the development of Koniag culture, pp. 225-306. In: *Late Prehistoric Development of Alaska's Native People*. R. D. Shaw, R. K. Harritt, and D. E. Dumond, eds. Anchorage: Aurora IV, Alaska Anthropological Association. (Alaska Historical Commission studies in history, no. 190) 641 p.

⁸ City of Old Harbor (1989). *Old Harbor Comprehensive Plan and Capital Improvements Program: Public Hearing Draft*. June 1989. Retrieved December 5, 2011 from <http://www.kodiakak.us/>.

⁹ Mason, R. (1995). *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

island in 1867 the Native population had decreased to around 2,000 because of “hardship, accidents, and starvation, along with diseases introduced by the Russians.”¹⁰

After the U.S. purchase of Alaska in 1867, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing.¹¹ The first salmon cannery on the Karluk River was established in 1882. Additional canneries were built in the Karluk area in the late 1800s and early 1900s.^{12,13} Few Alaska Natives initially worked in the local canneries. A majority of cannery employees were brought in from outside the region, primarily from the lower U.S. and China, and later a wave of Scandinavian immigrants arrived to work in local fisheries. However, Alaska Natives became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated their commercial fishing activity with subsistence hunting and fishing activities.¹⁴ Canneries placed at the mouth of rivers funned returning salmon into their processing lines, and by the late 1930s overfishing forced all of the Karluk canneries to close.¹⁵

Through the early decades of the 1900s, the salmon fishery remained the primary focus of local commercial fishing activity, and the most common fishing gear was the beach seine. With the rise of diesel engines in the 1920s, the range of fishing vessels expanded, and commercial exploitation of halibut and groundfish extended into the Gulf of Alaska. The rise of fuel-powered vessels also led to a shift towards the use of purse seines in the salmon fishery. Herring fishermen also began stopping in Kodiak by the 1920s, and a herring reduction plant also operated in Kodiak until the early 1960s.^{16,17,18}

Military involvement during World War II contributed to development on Kodiak Island; the Navy and the Army both built bases as part of the “Aleutian Campaign”. Fort Abercrombie, built in 1939, became the first secret radar site in Alaska.¹⁹

The Good Friday earthquake of 1964 caused widespread destruction of communities on Kodiak Island and throughout the Gulf of Alaska. All three salmon canneries on the Karluk River were destroyed, as was the City of Old Harbor and nearby Native villages. The fishing fleet and downtown area of the City of Kodiak were also destroyed. The canneries at Karluk were never rebuilt, and after the tsunami, processing activity became increasingly concentrated in Kodiak. The king crab fishery emerged as a new focus for the Kodiak fishing fleet in the years following the tsunami. Most Alutiiq fishermen continued to focus on salmon fishing into the late 1900s, but some also diversified into herring, Pacific cod, and crab fisheries. Today, all of these

¹⁰ Ibid.

¹¹ Ibid.

¹² Bowers, G. M., Commissioner. 1899. *Bulletin of the United States Fish Commission, Vol. XVIII*, for 1898. Washington D.C. Government Printing Office. 55th Congress, 3rd Session, Document No. 308.

¹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴ See footnote 12.

¹⁵ See footnote 13.

¹⁶ Ibid.

¹⁷ Thompson, W. F. and N. L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹⁸ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

commercial fisheries continue to be important to Kodiak Island fishermen, along with continued subsistence fishing and hunting.²⁰

Natural Resources and Environment

The Kodiak Island archipelago is a group of islands located approximately 25 miles from the Alaska Peninsula. The largest island in the group, Kodiak Island, comprises 3,588 square miles of diverse landscapes, and is part of a larger archipelago encompassing roughly 5,000 square miles. The Island consists primarily of mountainous terrain, with mountain ridges running northeast-southeast. Most peaks range between 3,000 and 4,000 feet, although several peaks are greater than 4,000 feet. Approximately 40 small cirque glaciers are located along the main divide of the glaciers, feeding into hanging valleys. Many swift-water streams drain upland areas. The Barren Islands to the north of Shuyak Island consist primarily of barren, rocky environments. Tugidak Island is relatively flat and supports expansive areas of moist and wet tundra. Sitka spruce stands dominate much of the landscape from the shore to the treeline on Shuyak Island to northeastern Kodiak Island. Stands extend south to a general northwest-southeast divider running from Kupreanof Peninsula to Cape Chiniak. Southeast Kodiak Island is relatively flat and covered by wet and moist tundra. Exposed bedrock and shallow soils cover the 2,500 miles coastline.²¹

Protected areas in the Kodiak Island Borough include several National Wildlife Refuges, state parks and recreation sites, and a Critical Habitat Area (CHA). The Kodiak National Wildlife Refuge (NWR) encompasses 1.9 million acres of the southwestern two-thirds of Kodiak Island, Uganik Island, Ban Island, and the Red Peaks area on the northwest side of Afognak Island.²² The waters surrounding the northeastern portion of the archipelago are included as a unit of the Alaska Maritime NWR.²³ A number of state parks, state historical parks, and state recreation sites located on the northeast corner of Kodiak Island.²⁴ The Tugidak Island CHA is located on the southwest corner of Kodiak Island. It was established in 1988 to protect habitat and populations of marine mammals, birds, fish and shellfish and other wildlife.²⁵

Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific “Ring of Fire.” The original settlement at the site of Old Harbor was destroyed by a tsunami in 1788, and Old Harbor was again destroyed by the tsunami resulting from the Good Friday earthquake of 1964.²⁶ The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula, covered the island in ash and gasses and disrupted the

²⁰ See footnote 12.

²¹ Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy*. Retrieved September 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf>.

²² U.S. Fish and Wildlife Service. (2012). *Kodiak National Wildlife Refuge*. Retrieved November 28, 2012 from <http://www.fws.gov/refuge/Kodiak/about.html>.

²³ U.S. Fish and Wildlife Service. (n.d.) *Alaska Maritime National Wildlife Refuge Map*. Retrieved November 28, 2012 from <http://alaska.fws.gov/nwr/akmar/pdf/akmmmap.pdf>.

²⁴ Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/>.

²⁵ Alaska Dept. of Fish and Game. (1995). *Tugidak Island Critical Habitat Area Management Plan*. Retrieved November 28, 2012 from http://www.adfg.alaska.gov/static/lands/protectedareas/_management_plans/tugidak.pdf.

²⁶ City of Old Harbor. *Community Emergency Response Plan: Annex D to the Kodiak Emergency Operations Plan*. August 2000. Retrieved November 30, 2011 from <http://www.city.kodiak.ak.us>.

local salmon fishery, especially between 1915 to 1919, when many adult fish starved and failed to spawn in ash-choked streams.²⁷

In addition to high risk of earthquake, tsunami, and volcanic activity, natural hazards with the potential to impact communities in the Kodiak Island Borough include landslides (moderate to high risk), fire, severe weather, flood, drought, and coastal erosion (all moderate risk), and avalanche (low risk).²⁸

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.²⁹ Oil was carried by currents throughout the area of the Alutiiq people, and hit the beaches of Kodiak Island in mid-April.³⁰ The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection, and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included within the Kodiak NWR.³¹

Governance

The Kodiak Island Borough was incorporated in 1963 and includes Kodiak Island and the surrounding islands, as well as a portion of the southern coast of the Alaska Peninsula.³² Services provided by the Borough include solid waste management, fire protection, and road maintenance within road service areas.³³ The Borough also administers the school system. As of 2011, there were 15 schools in the school district, with a total of 2,565 students and 207 teachers.³⁴ Communities located in the Borough include Akhiok, Chiniak, Karluk, Kodiak, Kodiak Station, Larsen Bay, Old Harbor, Ouzinkie, Port Lions, Uganik, and Womens Bay.³⁵ City governments are incorporated for six communities (Akhiok, Kodiak, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions),³⁶ and there are Tribal Councils in six communities (Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions).³⁷ The Borough administers a 10.75 mills property tax (excluding service areas), a 1.075% severance tax, and a 5% Bed Tax.³⁸ Sales tax is collected by

²⁷ U.S. Geological Survey. 1998. "Can Another Great Volcanic Eruption Happen in Alaska?" Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

²⁸ Kodiak Emergency Services Organization. (2005). *Kodiak Area Emergency Operations Plan*. Retrieved November 29, 2012 from <http://www.city.kodiak.ak.us/Emergency/Documents/EOP.pdf>.

²⁹ Environmental Protection Agency. "Exxon Valdez." Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

³⁰ City of Old Harbor (1989). *Old Harbor Comprehensive Plan and Capital Improvements Program: Public Hearing Draft*. June, 1989. Retrieved December 5, 2011 from <http://www.kodiakak.us/>.

³¹ Restoration Notebook. 2009. "Habitat Protection – A Successful Restoration Strategy." *Exxon Valdez Oil Spill Trustee Council*. Retrieved December 1, 2011 from <http://dnr.alaska.gov>.

³² Kodiak Island Borough. (n.d.). *Government and Community*. Retrieved November 29, 2012 from <http://www.kodiakak.us/index.aspx>.

³³ Kodiak Island Borough. (n.d.). *Services*. Retrieved November 29, 2012 from <http://www.kodiakak.us/index.aspx>.

³⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³⁵ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved November 29, 2012 from http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm.

³⁶ Kodiak Island Borough. (n.d.). *Communities*. Retrieved November 29, 2012 from <http://www.kodiakak.us/index.aspx>.

³⁷ Kodiak Area Native Association. (n.d.). *Communities*. Retrieved November 29, 2012 from <http://www.kanaweb.org/>.

³⁸ See footnote 35.

some City governments within the Borough, including a 6% sales tax in the City of Kodiak, and 3% sales tax in Larsen Bay, Old Harbor, and Ouzinkie.³⁹

The regional Native corporation for the Kodiak area is Koniag, Inc. The corporation holds approximately 56,860 acres of surface lands near Karluk and Larsen Bay, as well as subsurface land rights to these lands and Native village corporation lands elsewhere in the Kodiak archipelago and the coast of the Alaska Peninsula.⁴⁰ The Koniag Education Foundation, which is part of Koniag, Inc., provides scholarships and other educational programs to Koniag shareholders and their descendants for college, graduate school, vocational training, or career development courses.⁴¹ Native villages in the region are also members of the Kodiak Area Native Association (KANA), a tribal non-profit organization headquartered in Kodiak that serves communities in the Kodiak Archipelago. KANA provides health and development services, as well as career development and other community services, with the goal of promoting economic self sufficiency and promote healthy families.⁴²

Offices of the National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources, and U.S. Bureau of Citizenship and Immigration Services are all located within the City of Kodiak, on the eastern tip of Kodiak Island. The nearest office of the Alaska Department of Commerce, Community, and Economic Development is in Anchorage.

Involvement in North Pacific Fisheries

Communities in the Kodiak Island Borough are highly dependent on fisheries resources overall. The City of Kodiak is one of the top commercial fishing ports in Alaska, ranking 2nd in 2010 in terms of overall volume and value of landings. While commercial fishing activity is concentrated around the City of Kodiak, a relatively high percentage of the local populations of Larsen Bay, Old Harbor, and Ouzinkie are also engaged in commercial fishing activities as vessel owners, crew license holders, and permit holders.^{43,44} The higher rate of commercial fishing participation in these communities relative to others profiled in this section is likely due to their proximity to processing facilities. According to ADF&G's Intent to Operate list, there were 11 shore-side processing plants in the City of Kodiak in 2010, as well as 1 in Larsen Bay and 1 in Old Harbor.⁴⁵ Although no processing facilities were located in Ouzinkie, Kodiak processing facilities are relatively close by. In contrast, some Kodiak Island communities are minimally engaged in commercial fishing. For example, in a survey conducted by NOAA's

³⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁰ Koniag, Incorporated. (2011). *Our Lands*. Retrieved November 29, 2012 from <http://www.koniag.com/>.

⁴¹ Koniag Education Foundation. (2012). *Scholarships and Programs*. Retrieved November 29, 2012 from <http://www.koniageducation.org/>.

⁴² Kodiak Area Native Association. (n.d.). *Homepage*. Retrieved February 16, 2012 from <http://www.kanaweb.org/>.

⁴³ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁴ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁵ Alaska Dept. of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Alaska Fisheries Science Center (AFSC) in 2011, Akhiok community leaders indicated that the community has no dependence on commercial fishing. In Karluk, no fishing permits were held by residents between 2000 and 2010, and very few community members held crew licenses or owned fishing vessels.

The sport fishing industry is also an important component of the regional economy of Kodiak Island. Sport fisheries target all five species of Pacific salmon, halibut, rockfish, lingcod, Dolly Varden, steelhead, and rainbow trout. As in the case of commercial fishing, infrastructure in the visitor industry is centered in and around the City of Kodiak, and the extensive road network provides easy access to 10 salmon streams and over 20 stocked lakes.⁴⁶ In 2010, 65 sport guide businesses operated out of the City of Kodiak.⁴⁷ The sport hunting and fishing industry is also a primary economic driver in the community of Karluk. According to the Kodiak Area Native Association, as of 2011, there were six lodges in Karluk that provide local employment opportunities,⁴⁸ although ADF&G statistics suggest that the number of guides and guide businesses declined to zero in Karluk over the 2000-2010 period. ADF&G statistics suggest that sportfishing activity was also relatively high in Old Harbor, Larsen Bay, and Ouzinkie. One registered sport fish guide was also located in Akhiok in 2010.⁴⁹

Finally, subsistence fishing is very important to residents of the Kodiak Island area. Of those communities surveyed in a 2003 subsistence harvest study by ADF&G, per capita subsistence harvest varied between a low of 157 lbs in Akhiok to a high of 357 lbs in Old Harbor. In all communities surveyed that year (Akhiok, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions), 100% of households were estimated to participate in halibut subsistence, and between 80% and 88% of households were estimated to participate in salmon subsistence. The highest levels of marine invertebrate subsistence participation were recorded in Akhiok and Ouzinkie, and the highest levels of marine mammal and non-salmon fish participation in Old Harbor and Ouzinkie.⁵⁰

Regional Challenges

The Kodiak Island region faces several challenges with regard to fishery stock status. The Kodiak red king crab fishery, historically the leading fishery in Kodiak from the 1950s to early 1970s, has been closed in recent years due to low abundance.⁵¹ A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet) has been below threshold since 1998. The

⁴⁶ Alaska Dept. of Fish and Game. (n.d.). *Kodiak Management Area*. Retrieved September 17, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaSouthcentralKodiak.fishingInfo#/runtiming>.

⁴⁷ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁸ Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from <http://www.kanaweb.org/files/CEDS.pdf>

⁴⁹ See footnote 47.

⁵⁰ Alaska Dept. of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵¹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

Alaska Board of Fish closes food/bait fisheries if any of the individual spawning populations is below threshold.⁵²

In the 2011 AFSC survey, some community leaders also noted a lack of sufficient infrastructure to effectively engage in commercial fishing activities. In Ouzinkie, community leaders indicated in the survey that Individual Fishing Quota accounts have migrated out of the community over the past decade, creating a challenge for continued participation in that fishery. The community was actively looking for ways to bring quota back into the community, and as of the 2011 survey, the Ouzinkie Community Holding Corporation had purchased its first block of community quota through the Community Quota Entity program.

The challenge of declining fisheries participation is present in many Kodiak-area coastal communities. Data on fisheries participation presented in these community profiles show dramatic changes in fisheries participation in the Kodiak Archipelago in recent years. This topic has been thoroughly studied by Courtney Carothers at the University of Alaska. Please refer to the books and articles referenced here a more detailed discussion of the impact of declining fishing participation on Kodiak-area villages.^{53,54,55,56}

⁵² Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=CommercialByFisheryHerring.main>.

⁵³ Carothers, C. 2012. Enduring ties: salmon and the Sugpiat of the Kodiak Archipelago. Pages 133-160 in B.J. Colombi and J.F. Brooks, eds. *Keystone Nations: Indigenous Peoples and Salmon across the North Pacific*. School for Advanced Research Press, Santa Fe, NM.

⁵⁴ Carothers C. 2010. Tragedy of commodification: Transitions in Alutiiq fishing communities in the Gulf of Alaska. *MAST* 90:91–115.

⁵⁵ Langdon, S.J. 2008. The Community Quota Program in the Gulf of Alaska: A vehicle for Alaska Native village sustainability. In Lowe, M.E., Carothers, C., eds. "Enclosing the Fisheries: People, Places, and Power." *American Fisheries Society*. Symposium 68:155-194.

⁵⁶ Carothers, C. 2011. Equity and access to fishing rights: Exploring the Community Quota Program in the Gulf of Alaska. *Human Organization*.70:213–223.

Akhiok (AH-key-ock)

Includes Alitak Bay

People and Place

*Location*⁵⁷

Akhiok is located at the southern end of Kodiak Island in Alitak Bay. It lies 80 mi southwest of the City of Kodiak and 340 mi southwest of Anchorage. The area encompasses 7.9 sq mi of land and 2.5 sq mi of water. Akhiok was incorporated as a Second-class city in 1972 and is under the jurisdiction of the Kodiak Borough.



*Demographic Profile*⁵⁸

In 2010, there were 71 residents, ranking Akhiok 278th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 7.8%. Between 2000 and 2009, the population fell by 10.5% with an average annual growth rate of -1.9%, which was much lower than the statewide average of 0.75% and indicative of a rapid decline in those years. There is a notable difference between the 2009 Alaska Department of Labor and Workforce Development (DOLWD) and 2010 Census figures indicating a possible discrepancy between the two. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported 80 permanent and no seasonal or transient residents living in Akhiok in 2010 (83 as of 2012). Because of housing shortages, the community is unable to accommodate temporary residents. Information regarding population trends can be found in Table 1.

Akhiok's population was mostly Alutiiq in 2010. In that year, 50.7% of residents identified themselves as American Indian or Alaska Native, compared to 86.2% in 2000. In addition, 38.0% of residents identified themselves as two or more races that year, compared to 7.5% in 2000; 8.5% identified themselves as White, compared to 2.5% in 2000; 1.4% identified themselves as Black or African American, compared to 0.0% in 2000; and 1.4% identified themselves as Asian, compared to 3.8% in 2000. In addition, 11.3% of residents identified themselves as Hispanic or Latino in 2010, compared to 1.3% in 2000. Information regarding race and ethnicity can be found in Figure 1.

In 2010, the average household size was 3.74, compared to 3.91 in 2000 and 4.0 in 1990. The total number of housing units that year was 27, compared to 77 in 1990 and 34 in 2000. Of the households surveyed in 2010, 41% were owner-occupied, compared to 68% in 2000; 30% were renter-occupied, compared to 6% in 2000; 22% were vacant, compared to 21% in 2000; and 7% were occupied seasonally, compared to 6% in 2000. In a survey conducted by NOAA's

⁵⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

AFSC in 2011, community leaders reported that there was no annual influx of seasonal workers in Akhiok due to housing shortages.

The gender distribution in 2010 was almost even, at 49.3% male and 50.7% female. This was slightly more even than both the statewide distribution (52.0% male, 48.0% female) and 2000 distribution (55.0% male, 45.0% female). The median age that year was 22.2 years, much younger than the statewide median of 32.7 and slightly younger than the 2000 median of 24.0 years.

Table 1. Population in Akhiok from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	77	-
2000	80	-
2001	-	57
2002	-	49
2003	-	51
2004	-	57
2005	-	42
2006	-	41
2007	-	36
2008	-	48
2009	-	51
2010	71	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Akhiok: 2000-2010 (U.S. Census).

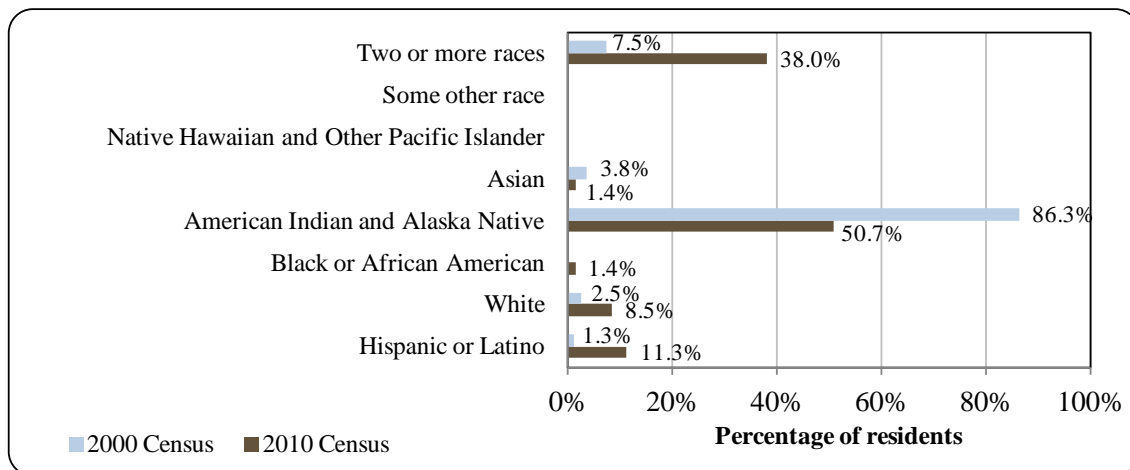
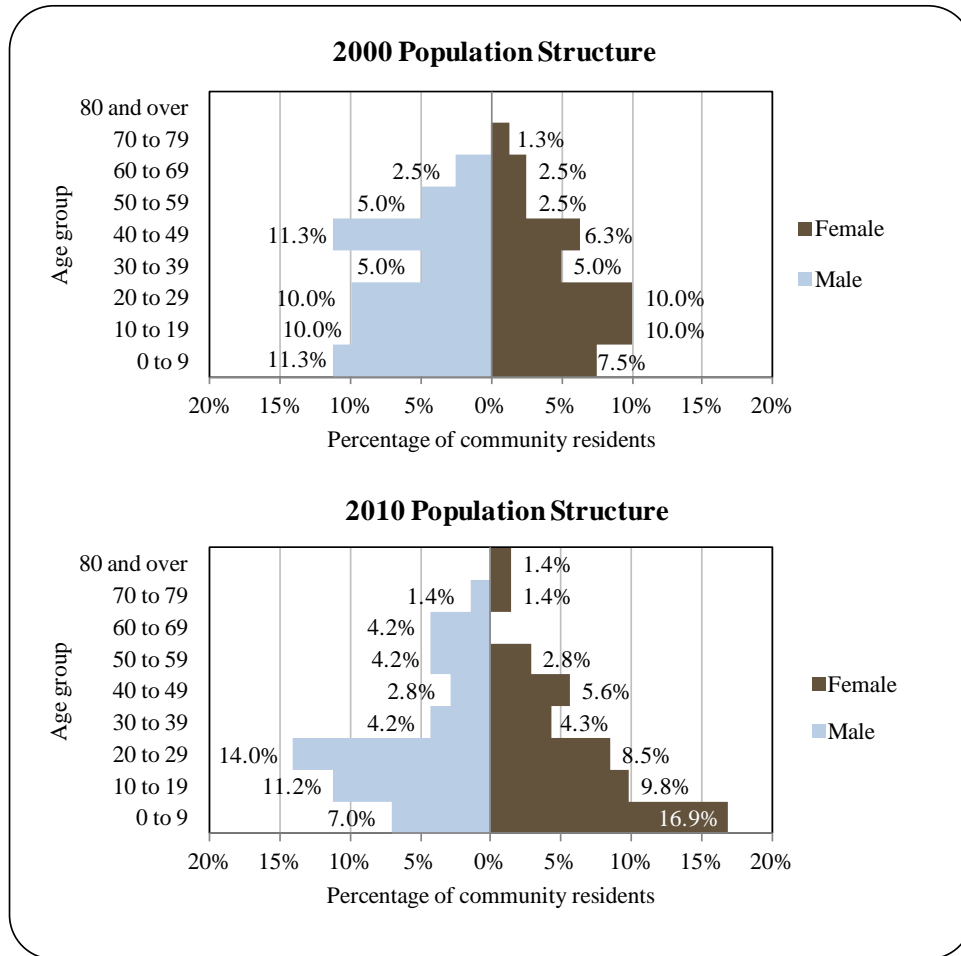


Figure 2. Population Age Structure in Akhiok Based on the 2000 and 2010 U.S. Decennial Census.



Compared to 2000, the population structure in 2010 was slightly more expansive. In that year, 44.9% of residents under the age of 20, compared to 33.8% in 2000; 8.4% were over the age of 59, compared to 4.4% in 2000; 23.9% were between the ages of 30 and 59, compared to 23.1% in 2000; and 22.5% were between the ages of 20 and 29, compared to 15.4% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000 with almost equal biases in both females and males among age ranges. In that year, the greatest absolute gender difference occurred in the 0 to 9 age (16.9% female, 7.0% male), followed by the 20 to 29 (14.0% male, 8.5% female) and 60 to 69 (4.2% male, 0% female) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range. Information regarding population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁵⁹ estimated that in 2010, 75.5% of residents aged 25 and older held a high school

⁵⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 10.3% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 13.8% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 25.9% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 6.9% had an Associate's degree, compared to an estimated 8% of Alaska residents overall; and an estimated 22.4% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall. No residents were estimated to have a graduate or professional degree in 2010.

*History, Traditional Knowledge, and Culture*⁶⁰

The original village of Akhiok was located near Humpy Cove, and served as a sea otter hunting settlement. The village, called Kashukugniut, was occupied by Russians during the early nineteenth century. The name "Akhiok" was reported in the 1880 census. In 1881, residents from the old village relocated to the present site at the south end of Kodiak Island at Alitak Bay. A post office was established in 1933 and remained open until 1945. The village was renamed Alitak during World War I by the post office to avoid confusion with a village near Bethel named Akiak. The name was later changed back to Akhiok. With the decline of the sea otter industry, the village became oriented toward fishing. Following the 1964 earthquake and tsunami, families from the village of Kaguyak were relocated in Akhiok.

The majority of Akhiok's residents are descendants from the Alutiiq people who originally occupied the Kodiak archipelago. Residents are proud of their heritage and traditions of respect towards their land and marine resources. Subsistence is an important part of the community's culture. Children are taught from an early age how to hunt, fish, dig for clams, pick berries, and gather wild edibles and medicinal plants.

Akhiok's community life revolves around its "Protection of the Theotokos" Orthodox Church. This strong faith has sustained the community through loss and hardship, demonstrated during Great Lent when the entire community gathers to celebrate the Easter season. The community's cemetery contains several historic landmarks. The community values the need to find ways to continue its Native language and culture so that young people grow up with a strong sense of identity. To this end, Akhiok initiated "Alutiiq Week" in 1991. Alutiiq Week is a week of workshops, celebration and community gatherings in the Akhiok School that focus on the continuance of Alutiiq culture. Alutiiq Week is now celebrated every year by other Kodiak Archipelago villages, and has become a cornerstone of teaching skills such as carving to young people.

The community hosts one property currently on the National Register of Historic Places (NRHP). Protection of the Theotokos Chapel, a Russian Orthodox church, was founded in 1926.⁶¹ Alutiiq petroglyphs are also found in the area.

⁶⁰ Kodiak Island Borough. (2008). *Kodiak Island Borough Comprehensive Plan Update*. Retrieved March 8, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KodiakIslandBorough-CP-2008.pdf>.

⁶¹ American Dreams Inc. (n.d.). *National Register of Historic Places*. Retrieved December 2, 2011 from: <http://www.nationalregisterofhistoricplaces.com/ak/Kodiak+Island/state.html>

Natural Resources and Environment

The climate of the Kodiak Islands is dominated by a strong marine influence. There is little or no freezing weather, moderate precipitation, and frequent cloud cover and fog. Severe storms are common from December through February. Annual precipitation is 35 inches. Temperatures remain within a narrow range, from 25 to 54 °F (-3 to 12 °C).⁶²

Akhiok's landscape is characterized by narrow rocky beaches, moist tundra lowlands, and steep relief uplands. Dominant vegetation types include tall grasses, fireweed, horse-tail, yarrow, sedges, mosses, fern, lichens, dwarf birch, and alder stands.⁶³

The Kodiak archipelago and waters that surround it are home to many species of terrestrial and aquatic life. The Kodiak National Wildlife Refuge occupies two-thirds of Kodiak Island and is home to terrestrial species such as brown bears, bats, tundra vole, short-tailed weasel, red fox, river otter, Sitka black-tail deer, beavers, red squirrels, snowshoe hare, arctic ground squirrel, Roosevelt elk, muskrat, and mountain goat. Marine mammals documented in the area include whales, harbor seals, fur seals, sea otters, and Steller sea lions.⁶⁴ The adjacent waters provide some of the richest commercial fishing grounds in the world, home to stocks of Pacific salmon, halibut, flounder, cod, trout, grayling, crab, and shrimp.⁶⁵

There are several mineral projects in the area as of 2011 including a tin claim around Halibut Bay to the north and a gold/silver claim around the city of Kodiak.⁶⁶ In addition, there is a placer gold deposit located in the vicinity of Alitak and Tanner Head Island to the south.⁶⁷

Natural hazards in the area include coastal flooding, coastal erosion, earthquakes, tsunamis, volcanism, landslides, and sea-level rise. Coastal flooding and erosion is mainly attributed to storm surges. There are several faults that run through Kodiak Island, and earthquakes that are magnitude six or above are relatively frequent. Threats from Aleutian volcanoes include the possibility of acidic rain, ash clouds, landslides, tsunamis, and earthquakes.⁶⁸ According to the Alaska Department of Environmental Conservation, there were no local significant environmental remediation projects active in 2010.⁶⁹

Current Economy⁷⁰

Akhiok's economy is largely based around subsistence. Public sector employment and seasonal work provide cash flow in the community. Almost all of Akhiok's residents depend heavily on subsistence fishing and hunting. Salmon, crab, shrimp, clams, ducks, seal, deer, rabbit, and bear are utilized. In January 2003, each Akhiok shareholder received \$200,000 from

⁶² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶³ See footnote 60.

⁶⁴ United States Fish and Wildlife Service (n.d.). *Kodiak National Wildlife Refuge*. Retrieved December 2, 2011 from: http://kodiak.fws.gov/wildlife_habitat.htm.

⁶⁵ Ibid.

⁶⁶ Alaska Department of Commerce. (n.d.) *Mineral Resources of Alaska Map*. Retrieved December 2, 2011 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁶⁷ See footnote 64.

⁶⁸ City of Akhiok. (1986). *Comprehensive Plan*. Retrieved December 2, 2011 from: <http://www.kodiakak.us/DocumentView.aspx?DID=85>.

⁶⁹ Alaska Department of Environmental Conservation. (n.d.) *Contaminated Sites Program*. Retrieved June 5, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

⁷⁰ Unless otherwise noted, all monetary data are reported in nominal values.

the sale of a \$36 million trust fund provided in the *Exxon Valdez* oil spill settlement.⁷¹ Top employers in 2010⁷² included the Kodiak Area Native Association, Kodiak Island Housing Authority, the City of Akhiok, Kodiak Island Borough School District, Ocean Beauty Seafoods, and Kishan Group.

According to the 2006-2010 ACS,⁷³ the per capita income in Akhiok was estimated at \$12,614 and the median household income was estimated at \$23,182, compared to \$8,473 and \$33,438 in 2000, respectively.⁷⁴ After accounting for inflation by converting 2000 values into 2010 dollars,⁷⁵ the real per capita income (\$11,142) and real median household income (\$43,971) indicate that while individual earnings increased slightly, household earnings decreased somewhat dramatically. In 2010, Akhiok ranked 229th of 305 Alaskan communities from which per capita income was estimated, and 267th of 299 Alaskan communities from which median household income was estimated, indicating that it is one of the poorer communities in Alaska.

Akhiok's small population size may have prevented the ACS from accurately portraying economic conditions.⁷⁶ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned a total of \$335,453 in wages in 2010.⁷⁷ When divided by the 2010 population, the per capita income of \$4,725 indicates a significant decline in individual earnings compared to the real per capita income values reported by the U.S. Census in 2000.⁷⁸ In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁷⁹ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,⁸⁰ 62.9% of residents aged 16 and over were considered part of the civilian labor force. Between 2006 and 2010, the estimated unemployment rate was 4.8%, compared to an estimated 5.9% statewide; and an estimated 7.1% of the population was living below the poverty level, compared to an estimated 9.5% of residents

⁷¹ See footnote 62.

⁷² Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁷³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁷⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁷⁶ See footnote 74.

⁷⁷ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁷⁸ See footnote 72.

⁷⁹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

⁸⁰ See footnote 74.

statewide. Of those employed, an estimated 91.7% worked in the public sector while an estimated 8.3% worked in the private sector.

By industry, most (77.8%) employed residents were estimated to work in education services, health care, or social assistance sectors; followed by public administration sectors (8.3%); finance, insurance, and real estate sectors (8.3%); and transportation, warehousing, and utilities sectors (5.6%) (Figure 3). By occupation type, most (75.0%) employed residents were estimated to hold management or professional positions; followed by services positions (11.1%); natural resources, construction, or maintenance positions (8.3%); and sales or office positions (5.6%) (Figure 4).

Figure 3. Local Employment by Industry in 2000-2010, Akhiok (U.S. Census).

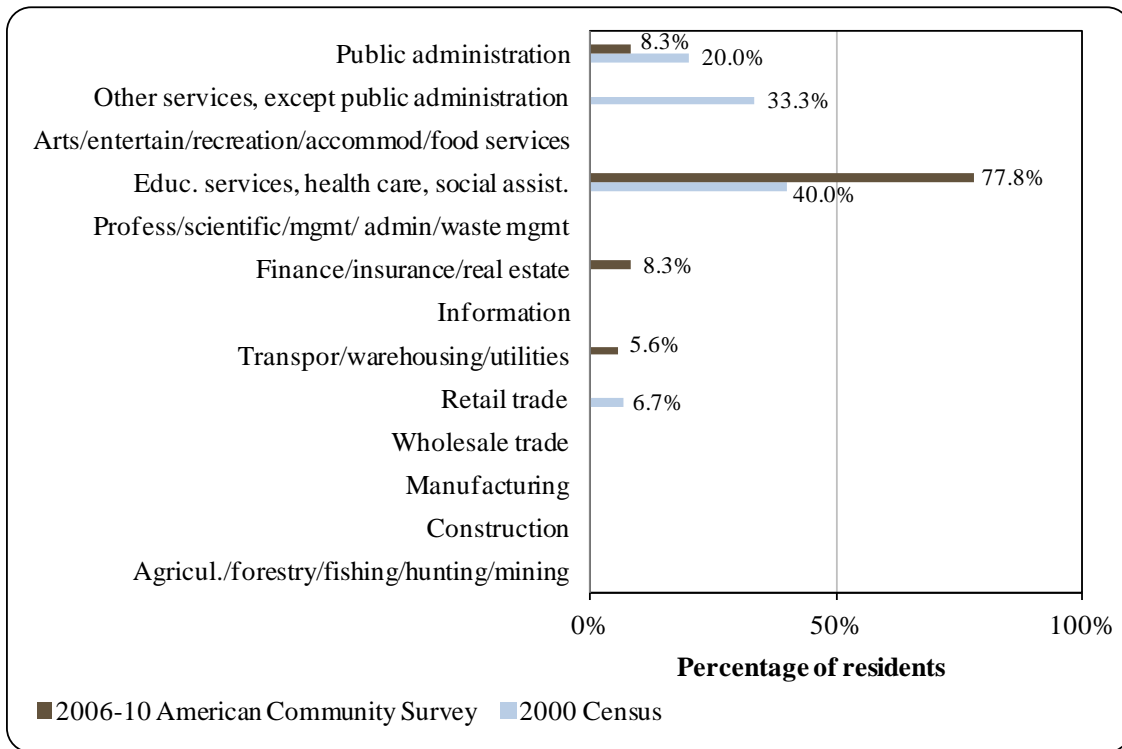
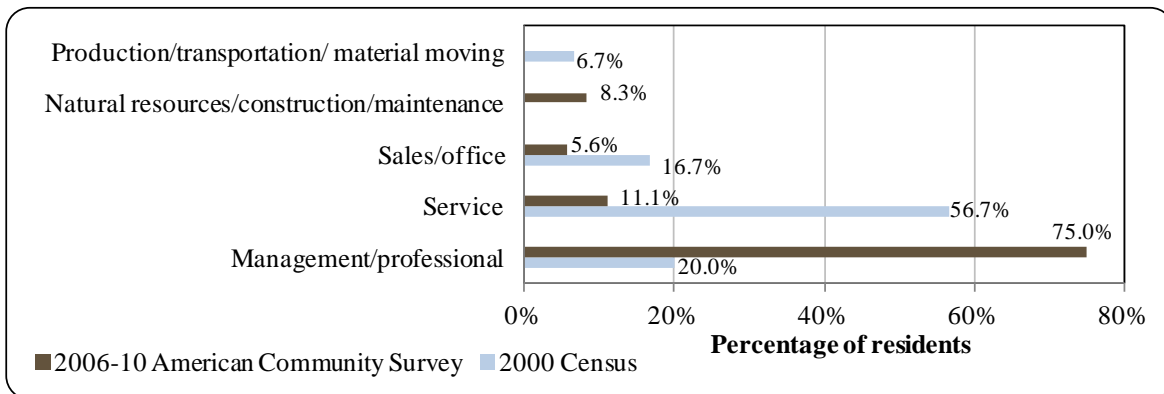


Figure 4. Local Employment by Occupation in 2000-2010, Akhiok (U.S. Census).



It should be noted that sampling techniques may not have captured the true scope of industry and occupational representation. This may account for the dramatic variation in industry sector employment and occupation type between 2000 and 2010. It should also be noted that income and poverty statistics are based on wage income and other money sources and are not reflective of the value of subsistence to the local economy. According to 2010 ALARI estimates, most (30.0%) employed residents were estimated to work in local government sectors; followed by education and health service sectors (26.7%) and financial service sectors (20.0%). No individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

Governance

Akhiok is a Second-class city located within the Kodiak Island Borough. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal government located in Akhiok. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Akhiok is Koniag Inc., and the local ANCSA chartered non-profit is the Kodiak Area Native Association. The ANCSA chartered village corporation is Akhiok-Kaguyak, Inc. The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and Bureau of Citizenship and Immigration Services are all located within the city of Kodiak, 80 mi northeast.

The City does not administer any taxes; however, the borough administers an annually adjusted property tax, resource severance tax, and 5% accommodations tax. The total municipal revenue for 2010 was \$215,913, compared to \$101,285 in 2000, representing a 64.8% increase in revenues after adjusting for inflation.⁸¹ Akhiok collected revenue from both the Community Revenue Sharing and State Revenue Sharing programs between 2000 and 2010. Akhiok collected an average of \$21,316 annually between 2000 and 2004 from State Revenue Sharing and \$99,230 annually between 2009 and 2010 from Community Revenue Sharing. Additional revenue included \$19,000 collected in 2007 from fuel deliveries, and a \$14 million grant in 2008 for the construction of a sewer system and landfill (Table 2).

⁸¹ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Akhiok from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$101,285	n/a	\$21,119	n/a
2001	\$119,374	n/a	\$20,337	n/a
2002	\$113,619	n/a	\$20,483	n/a
2003	\$114,517	n/a	\$20,643	n/a
2004	\$115,780	n/a	\$24,000	n/a
2005	\$195,256	n/a	-	n/a
2006	\$78,000	n/a	-	n/a
2007	\$140,535	n/a	-	n/a
2008	\$203,127	n/a	-	n/a
2009	\$204,199	n/a	\$98,449	n/a
2010	\$215,913	n/a	\$100,012	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Akhiok is accessible by water or air only. The State of Alaska maintains a 3,120-ft runway south of town. No crosswind runway or tower services exist and flights are often limited due to severe weather. There is also a floatplane harbor available.⁸²

Akhiok does not have a deep water dock or boat harbor and no regular barge service is available. One company transports cargo via landing craft as needed. Alitak cannery possesses full docking facilities and residents are able to obtain supplies at the cannery store when the facility is operating. Otherwise, freight is most often moved by small personal craft from off-shore freight vessels or by air.⁸³

According to survey conducted by the AFSC in 2011, community leaders reported that most travel throughout the area is done by private skiff. As of November 2011, the price for

⁸² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸³ Kodiak Island Borough. (2008). *Kodiak Island Borough Comprehensive Plan Update*. Retrieved March 8, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KodiakIslandBorough-CP-2008.pdf>.

airfare in June 2012 was \$360 for roundtrip from Anchorage to the city of Kodiak.⁸⁴ Island Air provides charter flights from Kodiak to Akhiok. As of 2011, the rate was \$140 each way.⁸⁵

*Facilities*⁸⁶

Akhiok's water is derived from a small dam and reservoir. Water is treated, stored, and distributed through a city-owned piped gravity water and sewer system that serves each home in the community. Additional water capacity is needed, as current systems often do not provide adequate water during July and August, which forces residents to haul water from other sources. Improvements to filtration systems are needed as well. Wastewater is piped from buildings to several city-owned septic tanks. The city and Tribal council provide electricity service from a central diesel power plant, and fuel is stored in a new bulk storage facility located outside the community.

*Medical Services*⁸⁷

Basic healthcare is provided by the Akhiok Health Clinic or Akhiok Village Response Team. The clinic is a Primary Health Care Facility. Acute, long-term, and specialized care can be found in the city of Kodiak.

*Educational Opportunities*⁸⁸

Akhiok has one school providing Kindergarten through 12th grade instruction. As of 2011, Akhiok School had 12 students enrolled and 2 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts.⁸⁹

⁸⁴ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

⁸⁵ Island Air. (n.d.). Retrieved January 31, 2012 from: <http://www.kodiakislandair.com/>.

⁸⁶ See footnote 83.

⁸⁷ See footnote 82.

⁸⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁸⁹ Mason, R. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

The ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.⁹⁰ The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.⁹¹ Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet) has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.⁹²

Groundfish and crab fisheries that occur within 3 nmi off the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. In the Gulf of Alaska (GOA), federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a ‘state-waters fishery’ for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.⁹³

Kodiak Island is one historical center of the red king crab fishery, and Tanner crab are also distributed through the GOA. ADF&G manages red king and Tanner crab stocks in the GOA. Snow crab are distributed throughout the eastern and northern Bering Sea, and are not found in the immediate Kodiak area.^{94,95} The Kodiak red king crab fishery has been closed in recent years due to low abundance. Parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using eight separate

⁹⁰ Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main>.

⁹¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹² Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main>.

⁹³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹⁴ Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main>.

⁹⁵ Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management>.

management areas, each with its own GHL.⁹⁶ Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Although Akhiok was originally founded as a sea-otter hunting community, the decline of the industry prompted its economy to migrate towards subsistence and commercial fishing. Today, salmon is the mainstay of commercial fishing in the community while subsistence activities involve range of marine mammals, fish, and aquatic invertebrates.

In a survey conducted by the AFSC in 2011, community leaders reported that the community is not tied to commercial fisheries economically, nor does it advocate for itself in the management process. However, Akhiok is eligible for participation in the Community Quota Entity (CQE) program and is represented by the Akhiok Halibut & Sablefish Commission. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.

The community is located in Federal Reporting Area 620, International Pacific Halibut Commission Regulatory Area 3B, and the Central Gulf of Alaska (GOA) Sablefish Regulatory District.

Processing Plants

In a survey conducted by the AFSC in 2011, community leaders reported that Akhiok's economy is not dependant on the commercial fishing industry nor are there any fisheries support businesses in town. According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Akhiok does not have a registered processing plant. However, there is a seafood processor located in nearby Alitak.

The Alitak processing facility, owned and operated by Ocean Beauty Seafoods, was built in 1917. Due to its remote location on the south end of Kodiak Island the facility is only accessible by boat or float plane. The facility opens in early April to process herring roe. During this time the plant also processes deliveries of black cod, halibut, Pacific cod and idiot fish (rockfish) from long line boats. Starting in early June the plant begins the salmon season. Between June and mid-September the Alitak facility processes sockeye, chum, pink and coho salmon. The Alitak facility is completely self-sufficient, providing its own electricity and water system. It supplies work-related clothing such as gloves, aprons, rubber boots and rain gear to its fish processing employees.⁹⁷

⁹⁶ See footnote 93.

⁹⁷ Ocean Beauty Seafoods. (n.d.). Retrieved from: <http://www.oceanbeauty.com/about/alitak.htm>

Fisheries-Related Revenue

Overall, in 2010, the city of Akhiok received a reported \$332,699 in fisheries-related taxes and fees, most of which came from Fisheries Resource Landings taxes. Since 2000, reported fisheries-related revenues steadily increased by an inflation adjusted⁹⁸ \$314,807, although these figures are likely tied to Alitak Bay which is not recognized as a Census Designated Place (CDP). In addition, in several cases reported fisheries-related revenue exceeded reported municipal revenue which further complicates Alitak Bay's distinction as a separate community. Information regarding fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that Akhiok does not possess harbor infrastructure or commercial fishery support services. In addition, they reported that the community itself is not dependent on fisheries. However, commercial vessels between 35 and 60 feet do use the community as a base of operation during the fishing season. It is likely that when reporting, community leaders made a distinction between Akhiok and neighboring Alitak Bay, where a processor is located and landings are made. However, for the purpose of this profile Alitak Bay is considered part of Akhiok.

In 2010, 7 residents, or 9.9% of the population, held 8 permits issued by the Commercial Fishery Entry Commission (CFEC). In 2000, 10 residents held 8 CFEC permits. In both 2000 and 2010, salmon permits made up 88% of the CFEC permits issued. In addition, one Federal Fisheries Permit (FFP) and one License Limitation Program (LLP) permit for groundfish were held, although neither was actively fished. No residents held halibut, sablefish, or crab quota between 2010 and when the programs began.

Residents held 8 commercial crew licenses in 2010, compared to 12 in 2000. In addition, residents held majority ownership of four vessels that year, compared to two in 2000. Overall, every CFEC permit issued in 2010 was actively fished, compared to 88% in 2000. Fisheries prosecuted by residents of Akhiok that year included Kodiak gillnet and purse seine herring roe, and Kodiak purse seine and set gillnet salmon.⁹⁹

Akhiok (Alitak Bay) ranked 39th of 67 communities who reported landings in terms of total pounds landed that year and 33rd in terms of total ex-vessel value of landings. All information regarding total net poundage and total ex-vessel value of landings in Akhiok (Alitak Bay) between 2000 and 2010 are considered confidential. In addition, all information regarding total poundage and ex-vessel value of landings by residents of Akhiok between 2000 and 2010 are also considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁹⁸ Inflation calculated using Anchorage CPI for 2010 from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

⁹⁹ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 3. Known Fisheries-Related Revenue (In U.S. Dollars) Received by the Community of Akhiok: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	\$13,892	\$13,892	\$10,978	\$11,000	\$8,500	n/a	\$15,531	\$13,500	\$15,000	\$15,000
Shared Fisheries Business Tax ¹	\$13,836	\$10,756	\$14,242	\$10,737	\$8,655	\$11,617	\$13,633	\$15,517	\$13,749	\$16,323	\$18,908
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	\$108,081	\$77,584	\$155,078	\$125,016	\$179,193	\$170,205	\$259,551	\$298,791
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$13,836	\$24,648	\$28,134	\$129,797	\$97,239	\$175,196	\$138,649	\$210,241	\$197,455	\$290,874	\$332,699
Total municipal revenue⁵	\$101,285	\$119,374	\$113,619	\$114,517	\$115,780	\$195,256	\$78,000	\$140,535	\$203,127	\$204,199	\$215,913

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Akhiok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	1
	% of permits fished	n/a	n/a	n/a	0%	0%	0%	0%	0%	0%	0%	100%
	Total permit holders	0	0	0	1	1	1	1	1	1	1	1

Table 4 -- Cont. Permits and Permit Holders by Species: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	7	6	6	7	8	5	5	5	5	7	7
	Fished permits	7	6	1	7	8	5	4	4	5	6	7
	% of permits fished	100%	100%	17%	100%	100%	100%	80%	80%	100%	86%	100%
	Total permit holders	9	7	7	8	8	5	5	6	6	6	6
<i>Total CFEC Permits²</i>	<i>Permits</i>	8	6	6	8	9	6	6	6	6	8	8
	<i>Fished permits</i>	7	6	1	7	8	5	4	4	5	6	8
	<i>% of permits fished</i>	88%	100%	17%	88%	89%	83%	67%	67%	83%	75%	100%
	<i>Permit holders</i>	10	7	7	9	9	6	6	7	7	7	7

Note: n/a indicates that no data were reported for that year.

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Akhiok: 2000-2010.

Year	¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Akhiok ²	Total Net Pounds Landed In Akhiok ^{2,5}	Total Ex-Vessel Value Of Landings In Akhiok ^{2,5}
2000	12	2	0	2	10	77	--	--
2001	9	1	0	3	9	43	--	--
2002	9	2	0	3	9	43	--	--
2003	8	1	1	4	7	16	--	--
2004	7	2	1	5	9	7	--	--
2005	5	2	1	4	8	14	--	--
2006	7	3	2	4	7	29	--	--
2007	2	2	2	4	6	42	--	--
2008	6	1	1	4	6	41	--	--
2009	7	1	1	4	6	28	--	--
2010	8	1	1	4	6	43	--	--

Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Akhiok: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Akhiok: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program participation by Residents of Akhiok: 2000-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Akhiok: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Akhiok Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing on Kodiak Island can be divided into private anglers who use boats and those who use the Island's road system to access sportfishing destinations. There are 75 mi of paved and hard-packed gravel roads that cross 10 significant streams and provide access to 18 stocked lakes. Road system anglers can find salmon, Dolly Varden, rainbow trout, and steelhead in freshwaters. Remote areas on Kodiak, categorized as any areas outside the road system, provide opportunities for salmon, Dolly Varden, and fall-run steelhead trout. Remote Area salmon being to return in early June, and fishing grounds are typically accessed by charter boat or seaplane.¹⁰⁰

Troll-fishing Kodiak's marine waters for Chinook and coho salmon is a popular activity on the island. Chiniak bay provides year-round habitat for Chinook. The Karluk River south of

¹⁰⁰ Alaska Dept. of Fish and Game. (2012). *Kodiak*. Division of Sport Fish. Retrieved August 14, 2012 from: <http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/kodiak.pdf>.

Larsen Bay provides one of Kodiak’s only native freshwater Chinook fisheries. Normally, the Karluk River annually averages an in-river run of 8,000 Chinook; however, recent runs have been in decline.

Sockeye salmon are plentiful in many drainages on Kodiak and tend to spawn along lakeshores and tributary systems. Generally, sockeye salmon arrive in early June and run through the end of July. The Kodiak road system provides access to sockeye salmon on the Buskin, Pasagshak, and Saltery rivers on eastern Kodiak Island. Pink salmon are found in abundance throughout the coastal and freshwater drainage systems around Kodiak Island. Pink salmon can be caught along ocean beaches and near stream mouths between middle to late July with runs peaking around mid-August. Coho salmon are typically targeted in offshore marine areas using charter or private vessels. The troll recreational fishery peaks the third week of August and is typically over by mid-September. Large runs of coho salmon occur late in the year in the Karluk River, with lagoon fishing starting in early September and peaking by the end of the month. The Karluk River also maintains the largest population of steelhead trout on the island, averaging 8,000 fish annually. Middle to late October is the best time to fish for steelhead, although mid-April and early May are also good times. Dolly Varden are found at lake outlets and near the mouths of freshwater systems feeding on out-migrating pink salmon fry. Then in mid-July through October, Dolly’s migrate back into freshwaters to spawn and winter. Halibut are abundant around Kodiak Island, and sportfishing is excellent from late April through early September. In a typical year, sport anglers catch over 25,000 halibut in Kodiak waters. More than 30 species of rockfish are found in Kodiak marine waters. Common species caught include dark, dusky, and yellow-eye rockfish. The estimated rockfish catch is around 25,000 fish annually. Lingcod are also found in the area, and the typical annual catch averages around 2,500 fish.¹⁰¹

Although sportfishing around Kodiak Island is immensely popular among both Alaska resident and non-Alaska resident private anglers, accessibility and infrastructure limit large-scale tourism-based sportfishing within Akhiok. In 2010, only one registered sport fish guide business was active in the community. South Kodiak Adventures provides lodging, fishing, hunting, and wildlife viewing services.¹⁰² In 2010, 14 sportfishing licenses were sold to residents, compared to 16 in 2000. No sportfishing licenses were sold within the community between 2000 and 2010.

Akhiok is located within the Kodiak Island ADF&G Harvest Survey Area, which includes all Alaskan waters and drainages of the Kodiak and Afognak Island groups. In 2010, angler days fished totaled 40,377 for saltwater and 41,082 for freshwater fisheries, compared to 55,576 and 65,831 in 2000, respectively. In that year non-Alaska residents accounted for 49.6% of saltwater angler days fished, compared to 30.2% in 2000; indicating a proportional decline in resident angler days fished. The same trend was seen in freshwater angler days fished with non-Alaska residents accounting for 45.9% in 2010, compared to 28.3% in 2000.

According to ADF&G Harvest Survey data, local anglers using private boats target Chinook, coho, sockeye, and pink salmon, Dolly Varden char, halibut, and Dungeness crab. Other species targeted include chum salmon, rainbow and steelhead trout, and Tanner crab.¹⁰³ There is no kept/released charter log data available for Akhiok.

¹⁰¹ Ibid.

¹⁰² South Kodiak Adventures. (n.d). Retrieved January 31, 2012 from: <http://www.kodiakadventures.com/>

¹⁰³ Ibid.

Table 11. Sport Fishing Trends, Akhiok: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Akhiok ²
2000	0	0	16	0
2001	0	1	14	0
2002	0	1	22	0
2003	0	2	20	0
2004	0	2	22	0
2005	1	3	9	0
2006	0	0	14	0
2007	0	0	16	0
2008	0	0	9	0
2009	0	1	11	0
2010	0	1	14	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	16,767	38,809	18,524	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	10,859	21,283
2010	20,012	20,365	18,871	22,211

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Many residents of Akhiok supplement their income and diets with subsistence resources. According to a survey conducted by the AFSC in 2011, community leaders reported that halibut, salmon, and clams were the three most important subsistence resources to the community. In a 2003 ADF&G survey of subsistence participation by household, 88% were participating in salmon subsistence activities, 100% were participating in halibut subsistence activities, 21% were participating in marine mammals subsistence activities, 77% were participating in marine invertebrates subsistence activities, and 26% were participating in non-salmon fish subsistence activities. Estimated pounds per capita harvested that year for those species was 157.22. Another similar survey conducted by ADF&G in 2004 found 92% of households participating in salmon subsistence activities and 46% participating in non-salmon fish subsistence activities.

Of the species reported by ADF&G in Table 13, residents reported harvesting sockeye salmon the most often, followed by pink and coho. In 2008, residents reported harvesting 90 salmon on 3 permits, compared to 105 salmon on 2 permits in 2000. In 2010, 6 residents held 10 Subsistence Halibut Registration Certificates (SHARC), compared to 15 in 2003. In that year, an estimated 320 lbs of halibut was harvested using 8 SHARC, compared to an estimated 1,846 lbs harvested on 14 SHARC in 2003. Subsistence halibut harvests peaked in 2005 with an estimated 3,587 lbs harvested on 16 SHARC. Residents living in Akhiok have seen dramatic declines in subsistence halibut harvests. Between 2007 and 2012, the community reported significant declines in number of halibut over 20 lbs, compared to regular harvests of fish ranging from 80 to 100 lbs during the 1990s. There have also been observations in skin abnormalities (including the apparent “shearing” of skin from the underside of the fish) in halibut harvests. Overall there is concern within the community over implications of commercial trawl fisheries on subsistence resources.¹⁰⁴ In terms of marine mammal harvests, an ADF&G survey estimated that 15 sea lions and 78 harbor seals were harvested between 2000 and 2008 (Table 15). Further information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing has “dwindled down to almost non-existent” and that the community’s economy is currently not dependent on natural resources. Commercial vessel traffic to the community has remained unchanged over the last 5 years, although there has been an increase in recreational and pleasure vessels in the harbor.

¹⁰⁴ Personal correspondence (recorded November 13, 2012).

Table 12. Subsistence Participation by Household and Species, Akhiok: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	88%	100%	21%	77%	26%	157.22
2004	92%	n/a	n/a	n/a	46%	123.3
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Akhiok: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	2	4	n/a	6	n/a	95	n/a	n/a
2001	n/a	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	1	12	n/a	n/a	n/a	n/a	20	n/a	n/a
2003	n/a	7	n/a	n/a	n/a	n/a	n/a	766	151
2004	8	8	n/a	n/a	n/a	11	102	n/a	70
2005	5	5	n/a	n/a	4	8	95	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	4	3	n/a	n/a	4	4	82	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Akhiok: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	15	14	1,846
2004	19	11	1,691
2005	22	16	3,587
2006	23	15	3,563
2007	22	10	924
2008	14	7	823
2009	10	8	1,123
2010	6	1	320

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Akhiok: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	3	18	n/a
2001	n/a	n/a	n/a	n/a	1	7	n/a
2002	n/a	n/a	n/a	n/a	n/a	6	n/a
2003	n/a	n/a	n/a	n/a	3	5	n/a
2004	n/a	n/a	n/a	n/a	1	4	n/a
2005	n/a	n/a	n/a	n/a	n/a	7	n/a
2006	n/a	n/a	n/a	n/a	2	14	n/a
2007	n/a	n/a	n/a	n/a	3	7	n/a
2008	n/a	n/a	n/a	n/a	2	10	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Karluk (KAR-luck)



People and Place

*Location*¹⁰⁵

Karluk is located on the west coast of Kodiak Island, on the Karluk River, 88 air miles southwest of Kodiak and 301 miles southwest of Anchorage. The community occupies 55.4 sq mi of land and 2.4 sq mi of water. Karluk is unincorporated and under the jurisdiction of the Kodiak Island Borough.

*Demographic Profile*¹⁰⁶

In 2010, there were 37 residents in Karluk, making it the 309th largest of 352 communities in Alaska with recorded populations that year. Between 1990 and 2000, the population declined by 62%, followed by a rebound of 37% between 2000 and 2010. Overall, the Karluk's population in 2010 was 47.9% lower than in 1990. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 40.7%., with an average annual growth rate of 4.06%.

In 2010, a majority of Karluk residents identified themselves as American Indian and Alaska Native (35 individuals; 94.6% of the total population), while 2 individuals (5.4%) identified themselves as White. It is important to note that, although no Asian population appears to be represented in 2010, in 2000 one individual (3.7% of the population) identified as Asian, and no residents identified themselves as White that year. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Karluk was 3.08, a slight increase from 3.0 persons per household in 2000, but an overall decrease from 3.9 in 1990. In that year, there were a total of 21 housing units, compared to 27 in 1990 and 24 in 2000. Of the households surveyed in 2010, 43% were owner-occupied, compared to 25% in 2000; 14% were renter-occupied, compared to 13% in 2000; and 43% were vacant or occupied seasonally, compared to 63% in 2000.

The gender distribution in 2010 was skewed towards males at 56.8% male and 43.2% female. This was less even than the statewide distribution (52.0% male, 48.0% female), and similar to the distribution in 2000 (55.6% male, 44.4% female). The median age in 2010 was 18.8 years, which was significantly lower than both the statewide median of 33.8 years and 2000 median of 30.3 years.

¹⁰⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

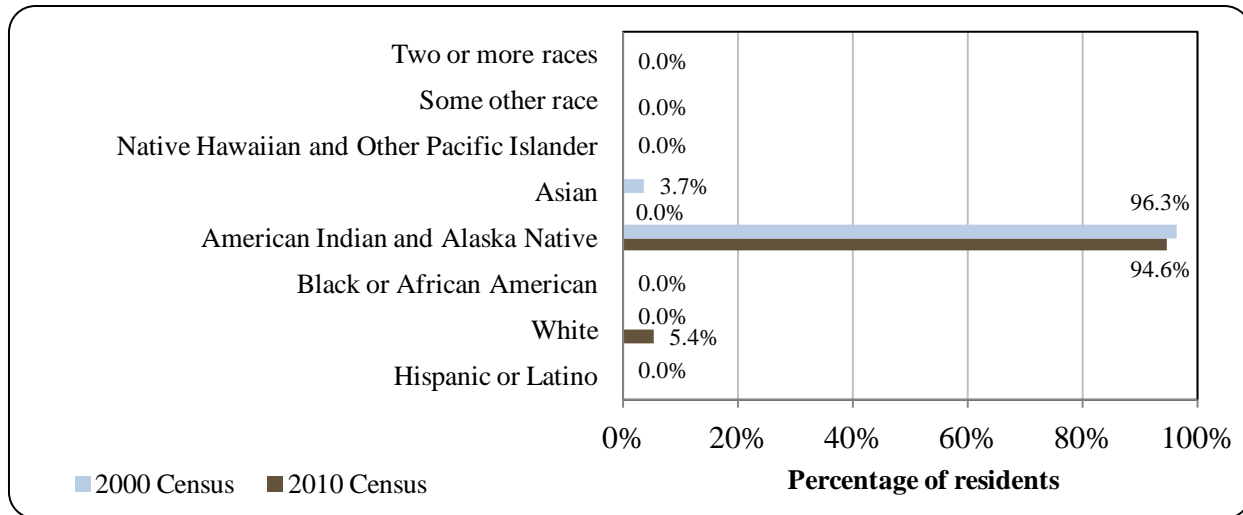
¹⁰⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Karluk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	71	-
2000	27	-
2001	-	29
2002	-	27
2003	-	28
2004	-	32
2005	-	35
2006	-	34
2007	-	40
2008	-	38
2009	-	38
2010	37	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

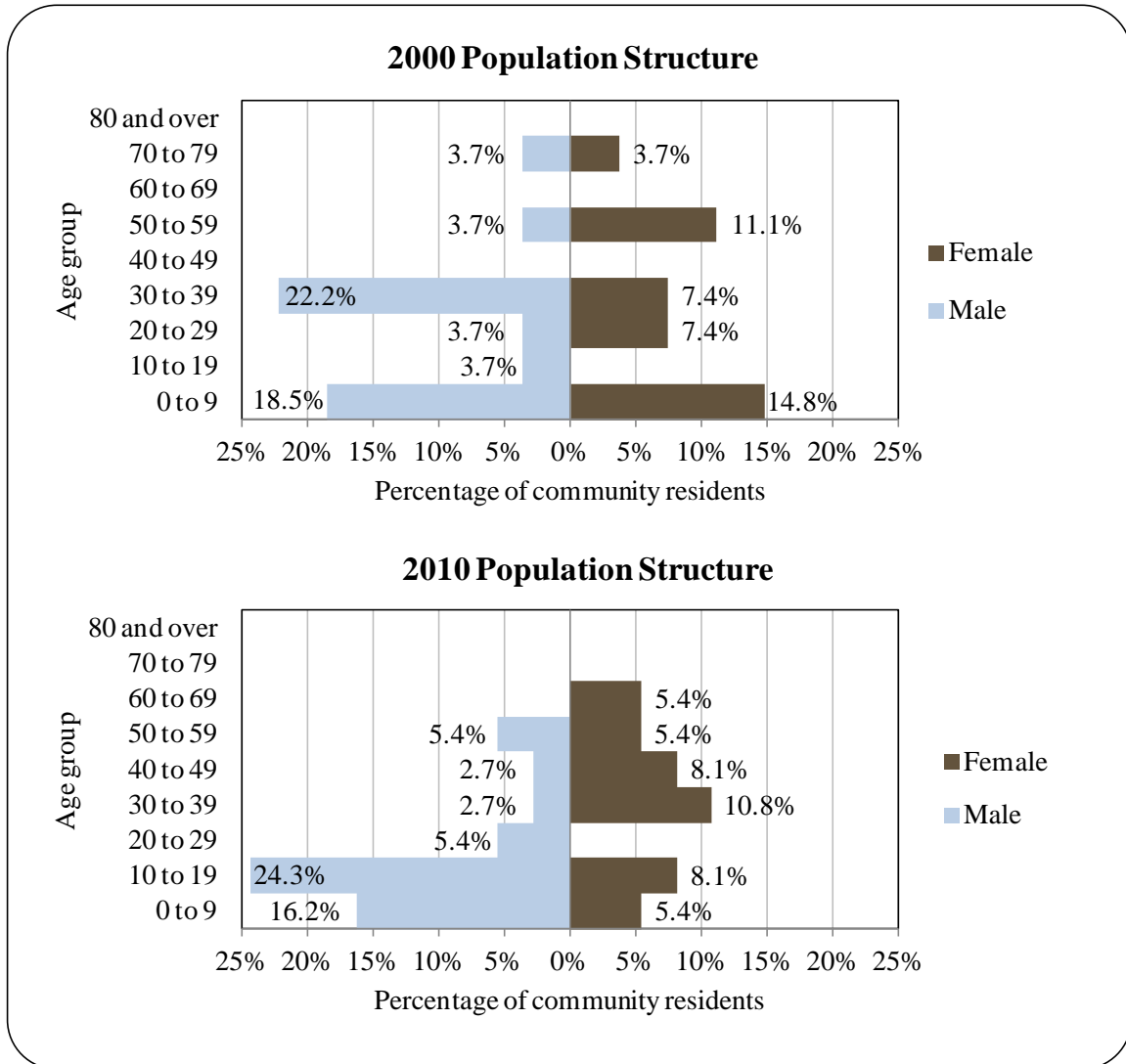
Figure 1. Racial and Ethnic Composition, Karluk: 2000-2010 (U.S. Census).



The population structure was significantly irregular in both 2000 and 2010, likely due to the small population size. However, there was a strong shift to a younger demographic between those years. In 2010, 54.0% of residents were under the age of 20, compared to 37.0% in 2000; 5.4% were over the age of 59, compared to 7.4% in 2000; 35.1% were between the ages of 30 and 59, compared to 44.4% in 2000; and 5.4% were between the ages of 20 and 29, compared to 11.1% in 2000.

Gender distribution by age cohort was significantly less even in 2010 than in 2000. In 2010, the greatest absolute gender difference occurred in the 10 to 19 range (24.3% male, 8.1% female), followed by the 0 to 9 (16.2% male, 5.4% female) and 30 to 39 (10.8% female, 2.7% male) ranges.

Figure 2. Population Age Structure in Karluk Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹⁰⁷ estimated that 66.7% of residents aged 25 and over held a high school diploma or higher degree in 2010, significantly less than the estimated 90.7% of Alaska residents overall.

¹⁰⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Also in that year, 16.7% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; 16.7% of resident had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; 10% of residents had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; no resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.^{108,109,110} Great numbers of salmon can be harvested at the mouth of the Karluk River. In part due to this abundant resource, the Karluk village site is thought to have been populated by indigenous people for more than 7,000 years. Thirty-six archaeological sites have been identified in the area.¹¹¹ At one of the more recent sites called 'Karluk 1' (1250 - 1750 A.D.), a large number of well preserved wooden artifacts have been excavated, including masks, tools, and boxes.¹¹²

Russian hunters established a trading post and salmon saltery at Karluk in 1786. The Russians often referred to Karluk village as 'Nunakakhvak'. During that period, the village was located on both sides of the Karluk River.¹¹³ Following the U.S. purchase of Alaska from Russia in 1867, commercial exploitation of the salmon resource intensified. The first cannery at Karluk – also the first on Kodiak Island – was built on Karluk Spit in 1882, and by 1884, five other canneries were also operating at Karluk.¹¹⁴ In the beginning of the industry, few Alaska Natives worked in the local canneries, and a majority of cannery employees were hired from outside the region, primarily from the U.S. and China. In 1890, only 10% of the people living at Karluk were Alaska Native. However, Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated their commercial fishing activity with subsistence hunting and fishing activities.^{115,116} In the early 1900s, Karluk was known for having the largest cannery and the greatest salmon stream in the world.¹¹⁷ However, overfishing forced all of the Karluk canneries to close by the late 1930s.¹¹⁸

¹⁰⁸ Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. *Looking Both Ways: Heritage and Identity of the Alutiiq People*. University of Alaska Press, Fairbanks.

¹⁰⁹ Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.

¹¹⁰ Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Institution, Washington D.C.

¹¹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹² Smithsonian Museum of Natural History, Alaska Native Heritage Center, and Alutiiq Museum & Archaeology Repository. 2001. "Exhibition Catalog: Karluk Village Profile." In *Looking Both Ways: Heritage and Identity of the Alutiiq People of Southern Alaska: An Interactive Exhibition, Text Only Version*. Eds. Crowell, Aron L., Amy F. Steffian, and Gordon L. Pullar. University of Alaska, Fairbanks. Retrieved August 24, 2012 from <http://www.mnh.si.edu/lookingbothways/text/villages/karluk.html>.

¹¹³ See footnotes 111 and 112.

¹¹⁴ Bowers, George M., Commissioner. 1899. *Bulletin of the United States Fish Commission, Vol. XVIII*, for 1898. Washington D.C. Government Printing Office. 55th Congress, 3rd Session, Document No. 308.

¹¹⁵ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

¹¹⁶ See footnote 112.

¹¹⁷ Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from <http://www.kanaweb.org/files/CEDS.pdf>.

¹¹⁸ See footnote 111.

In 1978, a severe storm with winds of 100 miles per hour from the northeast damaged personal property and caused severe coastal erosion, including breaching the spit that connected the two sides of the community of Karluk.^{119,120} Following the storm, the Karluk village council chose to relocate the community to its present site, upstream on the south side of the Karluk Lagoon. The U.S. Department of Housing and Urban Development constructed 23 houses at the new community location. Today, Karluk residents continue to engage in commercial fishing and subsistence hunting, fishing, and gathering.¹²¹

Natural Resources and Environment

The climate of the Kodiak Islands is dominated by a strong marine influence. There is moderate precipitation, frequent cloud cover and fog, and little to no freezing weather. Severe storms are common from December through February. Annual precipitation averages 60 inches with 87 inches of snowfall. Temperatures remain within a narrow range throughout the year, from 32 to 62 °F.¹²²

Karluk is located in close proximity to Kodiak National Wildlife Refuge (KNWR). The KNWR was established in 1941 with the purpose of wildlife conservation, in particular the Kodiak brown bear, unique to the island, as well as fulfillment of treaty obligations, providing for continued subsistence use, and to ensure water quality and quantity.¹²³ In 2002, the KNWR signed an agreement with Koniag, Inc. (the regional Native corporation for Kodiak Island) and the State of Alaska creating a conservation easement zone on Koniag land surrounding Karluk Lake and the portion of Karluk River within the boundaries of the KNWR. The 22-mile long Karluk River begins in the KNWR and passes through tribal land before emptying into the Gulf of Alaska at Karluk. Koniag, Inc. owns the majority of the land adjacent to the river and the northern portion of Karluk Lake while the Native Village of Karluk owns the land adjacent to the lower 3 miles of the Karluk River and the Karluk Lagoon. To facilitate public use of this zone, the KNWR implemented a cost-free permit system for unguided users of land within one-half mile of Karluk Lake and Karluk River.¹²⁴ In addition to the KNWR, protected areas near Karluk include a number of state parks, state historical parks, and state recreation sites located on the northeast corner of Kodiak Island.¹²⁵

Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific “Ring of Fire”. The earthquake belt along the Aleutian Islands, Alaska Peninsula, and Kenai Peninsula is known as the Alaska-Aleutian subduction zone, where strong earthquakes occur as a result of slipping along the contact zone between the Pacific and Alaska plates. Earthquakes can

¹¹⁹ Karluk IRA Traditional Council. 1999. *Community Emergency Response Plan*. Retrieved August 24, 2012 from <http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20B%20-%20Karluk.pdf>.

¹²⁰ Norgaard Consultants. 1984. *Karluk Comprehensive Development Plan*. Prepared for Kodiak Island Borough. Retrieved August 27, 2012 from <http://www.commerce.state.ak.us/dca/plans/Karluk-CP-1984.pdf>.

¹²¹ See footnote 111.

¹²² Ibid.

¹²³ U.S. Fish & Wildlife Service. *Kodiak National Wildlife Refuge*. Retrieved November 30, 2011 from <http://kodiak.fws.gov>.

¹²⁴ U.S. Fish & Wildlife Service. 2011. *Karluk River Land Status & Public Use Info*. Retrieved August 24, 2012 from www.fws.gov/uploadedFiles/Region_7/NWRS/Zone_2/Kodiak/PDF/Koniag%20easement%20leaflet_2011.pdf#d.

¹²⁵ Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks website*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/>.

cause tsunamis, landslides, snow avalanches, and submarine slumps. The risk posed to Karluk by any individual earthquake depends on the quake's severity and location. The 1964 Alaska Earthquake and ensuing tsunami, which destroyed the City of Old Harbor and caused significant damage in Kodiak, did not inflict any significant damage in Karluk. The earthquake did cause 1.5 feet of subsidence, causing tides to run slightly earlier into the area.¹²⁶ The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula, covered the island in ash and gasses and disrupted the local salmon fishery, especially between 1915 to 1919, when many adult fish starved and failed to spawn in ash-choked streams.¹²⁷

In addition to risk of earthquake and volcanic activity, natural hazards that pose a high risk in Karluk include coastal erosion and severe weather. The primary weather hazards in Karluk are freezing rain, heavy snowfall, and high winds. Winds can occasionally exceed 50 miles per hour, with gusts of up to 90 miles per hour. Extreme weather events can also exacerbate the hazard of coastal erosion, which is already a problem in the community. In 1978, extreme winter weather eroded the Karluk spit and forced a relocation of the entire village. Coastal erosion has also occurred in several other places in the village, and has the potential to impact current structures and future residential and commercial development. According to the Karluk Emergency Response Plan of 2000, a hillside road from the airstrip down to the lagoon was eroding away. The potential impact of natural hazards is increased by Karluk's relative isolation from emergency response services.¹²⁸

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.¹²⁹ Oil was carried by currents throughout the area of the Alutiiq people, and hit the beaches of Kodiak Island in mid-April.¹³⁰ The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection, and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included within the KNWR.¹³¹

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in Karluk as of August 2012.¹³²

Current Economy¹³³

From the late 1800s through the 1930s, fish processing was a primary source of livelihood in Karluk.^{134,135,136,137} Today, Karluk residents have minimal involvement in

¹²⁶ See footnote 119.

¹²⁷ U.S. Geological Survey. 1998. *Can Another Great Volcanic Eruption Happen in Alaska?* Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

¹²⁸ Karluk IRA Traditional Council. 1999. *Community Emergency Response Plan*. Retrieved August 24, 2012 from <http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20B%20-%20Karluk.pdf>.

¹²⁹ United States Environmental Protection Agency. *Exxon Valdez*. Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

¹³⁰ Mason, R. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

¹³¹ Restoration Notebook. January 2009. *Habitat Protection – A Successful Restoration Strategy*. Exxon Valdez Oil Spill Trustee Council. Retrieved December 1, 2011 from <http://dnr.alaska.gov>.

¹³² Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹³³ Unless otherwise noted, all monetary data are reported in nominal values.

commercial fishing activities, and the lack of marine facilities in Karluk provides a barrier to higher levels of local involvement. Construction of docking and moorage facilities would allow for expansion in fishing as well as tourism opportunities. Today, the primary economic activity in the community is sport hunting and fishing. As of 2011, there were six lodges in Karluk that provide a limited number of seasonal employment opportunities to local residents. Other top employers in the community are the Native Village of Karluk Traditional IRA Council and the Kodiak Island Borough School District. Local residents rely heavily on subsistence hunting and fishing to supplement their diets.¹³⁸ Salmon, trout, ducks, seals, and deer are some of the primary subsistence resources utilized by local residents.¹³⁹

Based on household surveys for the 2006-2010 ACS,¹⁴⁰ in 2010, the per capita income in Karluk was estimated to be \$7,540 and the median household income was estimated to be \$34,375. This represents a decrease from the per capita income reported in the year 2000 (\$13,736) and an increase from the median household income reported in 2000 (\$19,167). If inflation is taken into account by converting 2000 values to 2010 dollars,¹⁴¹ the drop in per capita income is revealed to be even greater; real per capita income in 2000 was \$18,063. In contrast, the real median household income in 2000 was \$25,204, and the 2010 estimate remains a substantial increase. In 2010, Karluk ranked 300th in per capita income out of 305 Alaskan communities with per capita income data, and 220th in median household income, out of 299 Alaskan communities with household income data that year.

Although Karluk's small population size may have prevented the ACS from accurately portraying economic conditions,¹⁴² the decline in per capita income suggested by the 2006-2010 ACS estimate is supported by data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Karluk in

¹³⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁵ Smithsonian Museum of Natural History, Alaska Native Heritage Center, and Alutiiq Museum & Archaeology Repository. 2001. "Exhibition Catalog: Karluk Village Profile." In *Looking Both Ways: Heritage and Identity of the Alutiiq People of Southern Alaska: An Interactive Exhibition, Text Only Version*. Eds. Crowell, Aron L., Amy F. Steffian, and Gordon L. Pullar. University of Alaska, Fairbanks. Retrieved August 24, 2012 from <http://www.mnh.si.edu/lookingbothways/text/villages/karluk.html>.

¹³⁶ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹³⁷ See footnote 130.

¹³⁸ Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from <http://www.kanaweb.org/files/CEDS.pdf>.

¹³⁹ See footnote 134.

¹⁴⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁴¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁴² While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

2010 is \$10,939.^{143,144} Although this is higher than the ACS estimate, it remains lower than the reported inflation-adjusted per capita income in 2000. Despite the apparent decline in per capita income in Karluk from 2000 to 2010, the community was not recognized as “distressed” by the Denali Commission in 2011.¹⁴⁵ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 48.6% of the population age 16 and older was estimated to be in the civilian labor force, a substantially lower percentage than was estimated to be in the civilian labor force statewide (68.8%). In the same year, 65.5% of local residents were estimated to be living below the poverty line, almost seven times the statewide rate of 9.5%, and the unemployment rate was estimated to be 11.4% compared to the statewide rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 9%, compared to a statewide unemployment rate estimate of 11.5%.¹⁴⁶

Also based on the 2006-2010 ACS, a majority of Karluk workers were estimated to be employed in the public sector (76.9%), along with 23.1% in the private sector. Of the 13 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number was estimated to work in transportation, warehousing, and utilities (4 individuals; 30.8% of the civilian labor force), retail trade (3 individuals; 23.1%), educational services, health care, and social assistance (3 individuals; 23.1%), and public administration (3 individuals; 23.1%). In 2010, 0% of the employed civilian labor force was estimated to be working in agriculture, forestry, fishing and hunting, and mining. However, the number of individuals employed in the fishing industry is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3.

By occupation type, most (53.8%) residents were estimated to hold management or professional positions in 2010; followed by service (23.1%) and sales or office (23.1%) positions. Between 2000 and 2010, there was a significant proportional decline in the number of service positions occupied by residents. Conversely, there were significant proportional gains in the number of management and professional positions between those years (Figure 4).

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 18 employed residents in Karluk in 2010, of which 12 (66.7%) were employed in local government, 3 (16.7%) were employed in financial activities, 2 (11.1%) in trade, transportation, and utilities, and 1 (5.6%) in educational and health services.¹⁴⁷ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

¹⁴³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁴⁴ See footnote 140.

¹⁴⁵ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹⁴⁶ See footnote 143.

¹⁴⁷ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Karluk (U.S. Census).

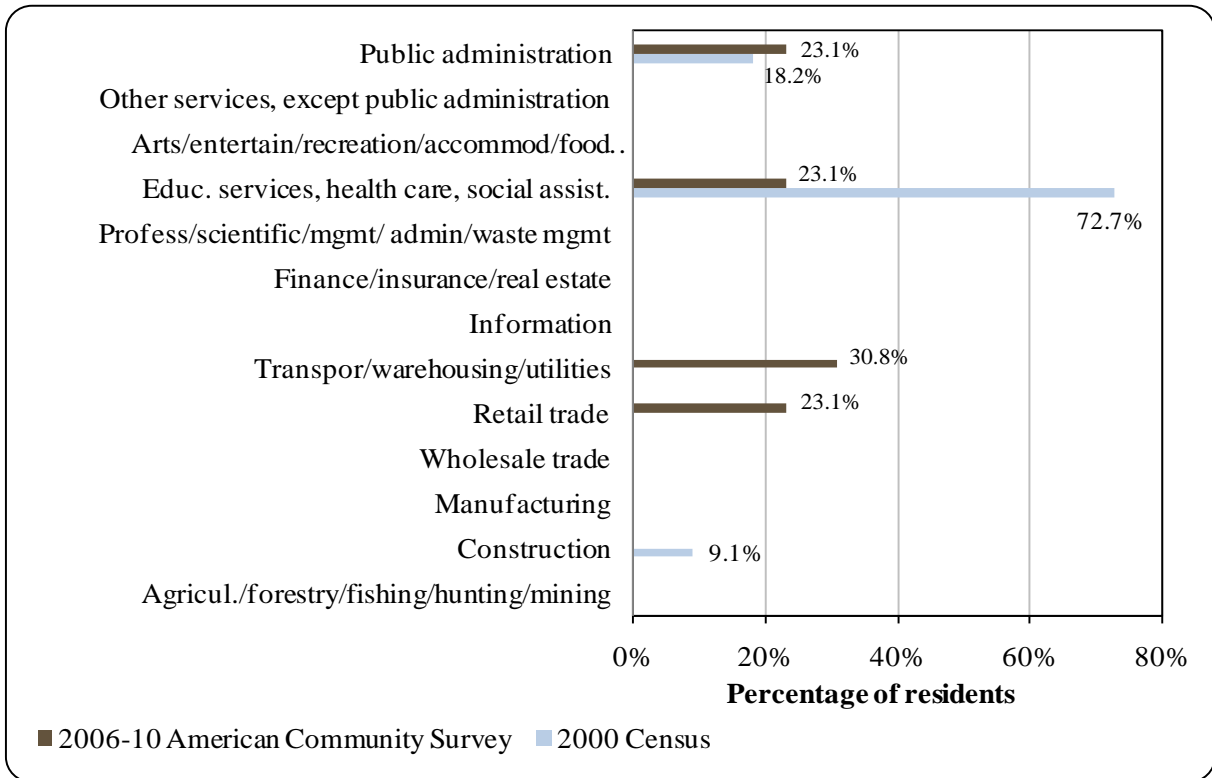
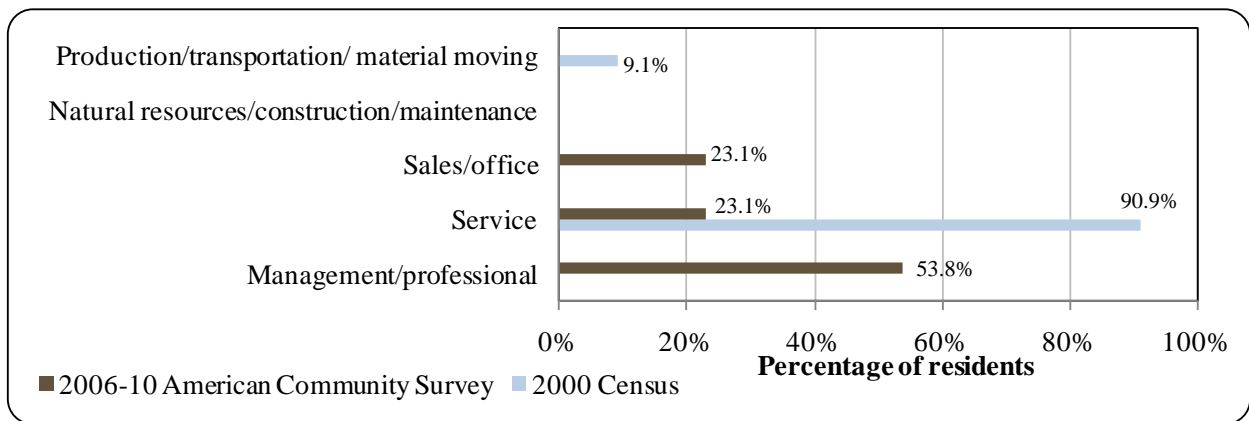


Figure 4. Local Employment by Occupation in 2000-2010, Karluk (U.S. Census).



Governance

Karluk is an unincorporated community under the jurisdiction of the Kodiak Island Borough. Because the community is not incorporated, no information is available regarding local revenue sources (Table 2). However, the Borough administers a 11.27 mills property tax in Karluk, along with a 5% Bed Tax and 1.05% severance tax. Karluk was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized Indian Reorganization Act Tribal Council, recognized by the Bureau of Indian Affairs, is the Native Village of Karluk.¹⁴⁸ The Tribal Council administers a variety of federal programs, including local health care, employment assistance, and other social services.¹⁴⁹

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Karluk from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

A village corporation, Karluk Native Corporation, was formed in 1971 pursuant to ANCSA. Karluk Native Corporation selected and received 83,787 acres of land conveyance, approximately 90% of the total acreage to which it was entitled. On December 6, 1980, Karluk Native Corporation merged with Koniag, Incorporated, the regional Native corporation for Kodiak Island. The merged corporation owns both surface and subsurface rights to lands

¹⁴⁸ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

¹⁴⁹ Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from <http://www.kanaweb.org/files/CEDES.pdf>.

originally titled to Karluk Native Corporation.¹⁵⁰ Shareholders of the original village corporation received additional shares of Koniag stock, and the Native Village of Karluk received 1,860 acres of land near the village and \$35,340 to divide among its former shareholders.¹⁵¹

In early 2012, the Native Village of Karluk brought a lawsuit against Koniag, Incorporated in an effort to have former reservation lands put under the control of the IRA Council. In July 2012, a federal court blocked the lawsuit, saying that Karluk tribal court lacks jurisdiction over Kodiak Island's regional Native corporation.¹⁵²

Karluk is a member of the Kodiak Area Native Association (KANA), a tribal non-profit organization headquartered in Kodiak that serves communities in the Kodiak Archipelago.¹⁵³ KANA is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹⁵⁴ KANA provides health and development services, as well as career development and other community services, with the goal of promoting economic self sufficiency and promote healthy families.¹⁵⁵ KANA provides health services in Karluk under an agreement with the Native Village of Karluk.¹⁵⁶

The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and U.S. Bureau of Citizenship and Immigration Services offices are all located within the City of Kodiak. The nearest Alaska Department of Natural Resources office is a Division of Parks and Outdoor Recreation office, also located in Kodiak, and the nearest office of the Alaska Department of Commerce, Community, and Economic Development is in Anchorage.

Infrastructure

Connectivity and Transportation

Karluk is accessible by air and water. Regular and charter flights depart from nearby Kodiak. There are both a state-owned 2,000 feet long by 60 feet wide gravel airstrip and a seaplane base at Karluk Lake.¹⁵⁷ As of early June 2012, a roundtrip ticket between Kodiak and Anchorage cost \$360.¹⁵⁸ Several companies offer service between Kodiak and Karluk if a minimum number of passengers charter a plane. As of summer 2012, a roundtrip ticket between

¹⁵⁰ Norgaard Consultants. 1984. *Karluk Comprehensive Development Plan*. Prepared for Kodiak Island Borough. Retrieved August 27, 2012 from <http://www.commerce.state.ak.us/dca/plans/Karluk-CP-1984.pdf>.

¹⁵¹ Koniag, Incorporated. 2012. *Shareholder News*. Retrieved August 23, 2012 from http://www.koniag.com/wp-content/uploads/2012/07/KON207-Shareholder-Newsletter-MAY_v13A.pdf.

¹⁵² Anchorage Daily News. July 12, 2012. "Federal judge blocks village lawsuit against Native corporation." Retrieved August 23, 2012 from <http://www.adn.com/2012/07/12/v-printer/2539564/federal-judge-blocks-village-lawsuit.html>.

¹⁵³ Kodiak Area Native Association. (n.d.). Retrieved February 16, 2012 from <http://www.kanaweb.org/>.

¹⁵⁴ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹⁵⁵ See footnote 153.

¹⁵⁶ Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from <http://www.kanaweb.org/files/CEDS.pdf>.

¹⁵⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁸ This price was calculated on November 21, 2011 using kayak.com.

Kodiak and Karluk with Island Air Service cost \$300 roundtrip, and was available Monday, Wednesday, or Friday with a minimum of two passengers. Servant Air did not offer scheduled service to Karluk, but a stop could be added for three or more seat fares.¹⁵⁹ Barge service is available twice a month from Kodiak, and goods are lightered to shore by skiff.¹⁶⁰ Karluk does not have a harbor or docking facilities, so landing crafts are used to bring supplies ashore. Local residents who transport their own supplies will anchor off shore and haul their goods with smaller boats or skiffs. There is about one mile of gravel road in the community.¹⁶¹

Facilities

Water in Karluk is retrieved from a creek and is treated and stored in a 50,000-gallon tank. All occupied homes are fully plumbed. A community septic tank and sewage lagoon are used to manage waste. There is no organized refuse collection service, and individuals must haul their own garbage. The landfill is a temporary, unpermitted site, and is operated by the Village Council. The school organizes aluminum recycling. Power is provided by a diesel powerhouse operated by the Village Council.¹⁶² The Kodiak Island Borough is considering options for renewable energy sources. Some of the most promising opportunities include electrical interties between communities that are currently powered by hydroelectric and nearby communities still operating diesel plants, such as a possible intertie between Larsen Bay and Karluk. In addition, wind power generation is of interest. Karluk is one of several communities on Kodiak Island that may have potential for wind generation, although the proximity to the KNWR may present challenges to gaining approval of such a facility.¹⁶³

Police services in Karluk are provided by a Village Public Safety Officer stationed in Karluk. The nearest state trooper post is located in Kodiak. Fire and rescue services are provided by the Karluk Village Response Team.¹⁶⁴ Additional community facilities include a community hall and the school library, which is accessible to the public, and a small post office operated by the U.S. Postal Service. As of August 2012, a telephone system was in place in Karluk. Residents can access internet through purchase of individual satellite dishes. No cable service is available locally.¹⁶⁵¹⁶⁶

Medical Services

The Karluk Health Clinic provides residents with basic medical services. The Clinic is a Community Health Aid Program site. It is owned and operated by the Karluk Village Council.¹⁶⁷ KANA provides health services in Karluk under an agreement with the Native Village of

¹⁵⁹ Price information retrieved June 26, 2012 from http://www.kodiakislandair.com/summer_schedule.htm and http://www.servantair.com/schedules_summer.html.

¹⁶⁰ See footnote 157.

¹⁶¹ See footnote 156.

¹⁶² See footnote 157.

¹⁶³ Kodiak Island Borough. 2009. *Regional Energy Plan*. Retrieved August 24, 2012 from <ftp://ftp.aidea.org/2010AlaskaEnergyPlan/Regional%20Energy%20Plans/Kodiak%20Island%20Borough%20Regional%20Energy%20Plan.pdf>.

¹⁶⁴ See footnote 157.

¹⁶⁵ Ibid.

¹⁶⁶ See footnote 156.

¹⁶⁷ See footnote 157.

Karluk.¹⁶⁸ Emergency Services have coastal floatplane and air access.¹⁶⁹ The nearest hospital is located in the City of Kodiak.

Educational Opportunities

One school is present in Karluk. The school offers a Kindergarten through 12th grade education. However, due to the small student population residing in Karluk and the requirement that a rural school have a minimum of 10 students enrolled to retain funding, each year the Karluk school is at the risk of being closed for the year.¹⁷⁰ The school was closed due to low enrollment during the 1999-2000 and 2002-2003 school years.¹⁷¹ In 2010, Karluk School had 13 enrolled students and 2 teachers, in 2011 there were 15 students and 4 teachers, and in 2012 there were 16 students and 3 teachers.¹⁷² A few high school students attend Mount Edgecumbe High School in Sitka, Alaska.¹⁷³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. For up to 7,000 years, the mouth of the Karluk River has been utilized as a village site due to the great numbers of salmon can be harvested there. Like Alutiiq people today, the ancient residents of Karluk smoked and dried the river salmon they caught during the summer to provide food through the long winter.^{174,175} In addition to salmon, the Alutiiq people of Kodiak Island also harvested other fish, intertidal resources, and marine mammals, including whales, sea lions, seals, and sea otters.^{176,177}

¹⁶⁸ Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from <http://www.kanaweb.org/files/CEDS.pdf>.

¹⁶⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁷¹ See footnote 169.

¹⁷² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁷³ See footnote 163.

¹⁷⁴ Smithsonian Museum of Natural History, Alaska Native Heritage Center, and Alutiiq Museum & Archaeology Repository. 2001. "Exhibition Catalog: Karluk Village Profile." In *Looking Both Ways: Heritage and Identity of the Alutiiq People of Southern Alaska: An Interactive Exhibition, Text Only Version*. Eds. Crowell, Aron L., Amy F. Steffian, and Gordon L. Pullar. University of Alaska, Fairbanks. Retrieved August 24, 2012 from <http://www.mnh.si.edu/lookingbothways/text/villages/karluk.html>.

¹⁷⁵ See footnote 169.

¹⁷⁶ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

¹⁷⁷ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts. The Russians also began commercial salmon exploitation in the early 1800s. They blocked salmon streams, such as the Karluk River on the west side of Kodiak Island, using fish weirs. Commercial processing involved salting. In addition, Alutiiq women dried the fish for the winter for use in the Russian colony.¹⁷⁸

After the U.S. purchase of Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing. The first cannery at Karluk – the first on Kodiak Island – was built on Karluk Spit by Smith & Hirsch in 1882, who had previously operated a salting operation there. In 1884, this cannery was organized under the title of Karluk Packing Company. By 1884, five other canneries were also operating at Karluk, including canneries operated by the Alaska Improvement Company and the Alaska Packers Association (APA). By 1897, the APA operated all of the local canneries.¹⁷⁹ Few Natives worked initially worked in the local canneries, and a majority of cannery employees were hired from outside the region, primarily from the United States and China. By 1890, only 10% of the people living at Karluk were Alaska Native. However, Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated their commercial fishing activity with subsistence hunting and fishing activities.^{180,181}

By 1901, the Karluk salmon fishery harvest reached about 4 million sockeye, but after that point began to decline.¹⁸² At that time, Karluk was known for having the largest cannery and the greatest salmon stream in the world.¹⁸³ In the early 1900s, additional canneries were constructed in the area by the APA.¹⁸⁴ The APA finally opened a hatchery in 1896 because officials believed that hatcheries would protect the dwindling salmon runs. But overfishing continued to reduce the number of salmon at the Karluk River. In 1911, the APA moved its prominent cannery operations from the village of Karluk to the sheltered inlet at Larsen Bay due to the lack of a harbor in Karluk and the frequent shipwrecks in the shallow and rocky waters. The hatchery was closed in 1917.^{185,186} Overfishing forced all of the Karluk canneries to close by the late 1930s.¹⁸⁷

Through the early decades of the 1900s, the salmon fishery remained the primary focus of local commercial fishing activity, and the most common fishing gear was the beach seine. With the rise of diesel engines in the 1920s, the range of fishing vessels expanded, and commercial exploitation of halibut and groundfish extended into the Gulf of Alaska. The rise of fuel-powered vessels also led to a shift toward use purse seines in the salmon fishery. Herring

¹⁷⁸ See footnotes 176 and 177.

¹⁷⁹ Bowers, George M., Commissioner. 1899. *Bulletin of the United States Fish Commission, Vol. XVIII*, for 1898. Washington D.C. Government Printing Office. 55th Congress, 3rd Session, Document No. 308.

¹⁸⁰ See footnote 176.

¹⁸¹ See footnote 174.

¹⁸² See footnote 177.

¹⁸³ See footnote 168.

¹⁸⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸⁵ KMXT Radio. September 6, 2011. "Larsen Bay Cannery is 100 This Year." Retrieved August 24, 2012 from http://www.kmxt.org/index.php?option=com_content&task=view&id=3110&Itemid=2.

¹⁸⁶ See footnote 174.

¹⁸⁷ See footnote 184.

fishermen also began stopping in Kodiak by the 1920s, and a herring reduction also operated in Kodiak until the early 1960s.^{188,189,190}

Since the closure of the Karluk canneries in the 1930s,¹⁹¹ no processing facilities have been operational locally, although it is important to note that Icicle Seafoods currently operates a cannery at nearby Larsen Bay.¹⁹² Today, the primary economic activity in Karluk is sport hunting and fishing. As of 2011, there were six lodges in Karluk that provide a limited number of seasonal employment opportunities to local residents. Local residents also rely heavily on subsistence hunting and fishing to supplement their diets.¹⁹³ Salmon, trout, ducks, seals, and deer are some of the primary subsistence resources utilized by local residents.¹⁹⁴

Karluk is located in Federal Statistical and Reporting Area 620, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. Karluk is eligible to participate in the Community Quota Entity. The governing body that recommended Karluk was the Native Village of Karluk, but as of August 2012, the community had not formed a CQE.¹⁹⁵ The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there were no registered shore-side processing plants in Karluk. Karluk was a historical center of the Kodiak salmon fishery

¹⁸⁸ Ibid.

¹⁸⁹ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://ww.iphc.int/publications/scirep/Report0005.pdf>.

¹⁹⁰ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁹¹ See footnote 184.

¹⁹² Icicle Seafoods. (n.d.). *Larsen Bay*. Retrieved August 24, 2012 from <http://www.icicleseafoods.com/locations/lbs/>

¹⁹³ Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from <http://www.kanaweb.org/files/CEDS.pdf>.

¹⁹⁴ See footnote 184.

¹⁹⁵ NOAA Fisheries, Alaska Regional Office. 2012. *Name and Contact Information of Community Quota Entities*. Retrieved August 20, 2012 from <http://www.fakr.noaa.gov/ram/daily/cqenamescontacts.pdf>.

beginning in the late 1800s, but the last canneries in the area were closed by the late 1930s.¹⁹⁶ It is important to note that one shore-side processing facility is located nearby in the community of Larsen Bay (see the community profile for Larsen Bay profile).

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue in Karluk (Table 3).

Commercial Fishing

Karluk residents are minimally involved in commercial fishing. Two Karluk residents held commercial crew license in 2010, representing a decline of crew licenses through the decade when compared to six crew license holders in 2000. In 2000, there were also two vessels homeported and two vessels primarily owned by Karluk residents, but none in other years during the decade. No fish buyers or shore-side processors were present in any year during the 2000-2010 period, and it follows that no landings or ex-vessel revenue were reported locally (Table 5).

The only state Commercial Fisheries Entry Commission (CFEC) permit held by a Karluk resident between 2000 and 2010 was a groundfish permit held by one permit holder in 2004. The permit was held in the statewide miscellaneous saltwater finfish fishery, and was associated with mechanical jig gear. The permit was actively fished that year. Between 2000 and 2010, no Karluk residents held other state CFEC permits, federal License Limitation Permits or Federal Fisheries Permits (Table 4). In addition, no Karluk residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab during the period (Tables 6 through 8). Given the lack of fish buyers and shore-side processors (Table 5), no landings or ex-vessel revenue were generated in the community during the 2000-2010 period (Table 9). Two vessels were owned by Karluk residents in 2000, but due to the small number of participants, landings and ex-vessel revenues generated by Karluk vessel owners are considered confidential that year. Given the lack of vessel owners in the remaining years of the period, no data are reported from 2001 to 2010 (Table 10).

¹⁹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 3. Known Fisheries-Related Revenue (In U.S. Dollars) Received by the Community of Karluk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal revenue</i> ⁵	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Karluk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Karluk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	1	0	0	0	0	0	0
	% of permits fished	-	-	-	-	100%	-	-	-	-	-	-
	Total permit holders	0	0	0	0	1	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>100%</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Karluk: 2000-2010.

Year	¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Karluk ²	Total Net Pounds Landed In Karluk ^{2,5}	Total Ex-Vessel Value Of Landings In Karluk ^{2,5}
2000	6	0	0	2	2	0	0	\$0
2001	4	0	0	0	0	0	0	\$0
2002	1	0	0	0	0	0	0	\$0
2003	3	0	0	0	0	0	0	\$0
2004	3	0	0	0	0	0	0	\$0
2005	2	0	0	0	0	0	0	\$0
2006	1	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	2	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Karluk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Karluk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Karluk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Karluk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Karluk Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	0	0	0	0	0	0	0	0	0	0
Finfish	-	0	0	0	0	0	0	0	0	0	0
Halibut	-	0	0	0	0	0	0	0	0	0	0
Herring	-	0	0	0	0	0	0	0	0	0	0
Other Groundfish	-	0	0	0	0	0	0	0	0	0	0
Other Shellfish	-	0	0	0	0	0	0	0	0	0	0
Pacific Cod	-	0	0	0	0	0	0	0	0	0	0
Pollock	-	0	0	0	0	0	0	0	0	0	0
Sablefish	-	0	0	0	0	0	0	0	0	0	0
Salmon	-	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	-	0	0	0	0	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Today, the primary economic activity in Karluk is sport hunting and fishing. As of 2011, there were six lodges in Karluk that provide a limited number of seasonal employment opportunities to local residents.¹⁹⁷ However, according to data reported by ADF&G, sportfishing activity appears to have declined between 2000 and 2010. While there were sport fish guide businesses registered in Karluk between 2000 and 2010, none were active during those years. The number of sport fish guide licenses held in the community declined from 14 in 2000 to 1 in 2009. No residents held sport fish guide licenses in 2010 (Table 11). Eight residents purchased sportfishing licenses in 2000 (irrespective of point of sale), while only two purchased licenses in 2009. Similarly, the number of sportfishing licenses purchased in Karluk fell from 85 in 2000 to 4 in 2009, and 0 in 2010. Given that a greater number of licenses were purchased each year in Karluk than were purchased by local residents indicates that sportfishing activities brought visitors to Karluk during the 2000-2010 period.

Karluk is located within Alaska Sport Fishing Survey Area Q – Kodiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. On average, Alaska resident anglers fished more angler days per year than non-Alaska residents in both saltwater and freshwater sport fisheries, and more angler days were fished per year in freshwater than in saltwater in the Kodiak region between 2000 and 2010. However, sportfishing activity in by both Alaska resident and non-Alaska resident anglers, and in both saltwater and freshwater, was extremely high. Information about the sportfishing sector in and near Karluk is displayed in Table 11.

The Alaska Statewide Harvest Survey,¹⁹⁸ conducted by ADF&G between 2000 and 2010, noted the following species targeted in freshwater by private anglers in Karluk: Chinook, coho, and sockeye salmon. They also noted sport harvest of Pacific halibut in saltwater by private anglers in Karluk. No kept/release log book data were reported for sportfishing charters out of Karluk between 2000 and 2010.¹⁹⁹

¹⁹⁷ Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from <http://www.kanaweb.org/files/CEDS.pdf>.

¹⁹⁸ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁹⁹ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Karluk: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Karluk ²
2000	0	14	8	84
2001	0	10	7	85
2002	0	9	7	38
2003	0	6	3	56
2004	0	7	6	54
2005	0	4	3	47
2006	0	3	6	47
2007	0	1	3	19
2008	0	1	4	16
2009	0	1	3	4
2010	0	0	3	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Alaska residents ³	Angler Days Fished – Alaska residents ³	Angler Days Fished – Non-Alaska residents ³	Angler Days Fished – Alaska residents ³
2000	16,767	38,809	18,524	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	10,859	21,283
2010	20,012	20,365	18,871	22,211

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Villages have existed through history at the mouth of the Karluk River, where great numbers of salmon can be harvested. Like Alutiiq people today, the ancient residents of Karluk smoked and dried the river salmon they caught during the summer to provide food through the winter.²⁰⁰ In addition to salmon, Alutiiq people living on Kodiak Island caught other fish and gathered intertidal resources on the shores. Hunting was done with harpoons and clubs, and fish were speared, gaffed, harpooned or hooked. Salmon were often caught in weirs built across rivers.²⁰¹ Today, local residents rely heavily on subsistence hunting and fishing to supplement their diets.²⁰² Salmon, trout, ducks, seals, and deer are some of the primary subsistence resources utilized by local residents.²⁰³

Between 2000 and 2010, ADF&G did not report any information about the percentage of Karluk households participating in marine resource subsistence or regarding per capita subsistence harvest (Table 12). An earlier ADF&G subsistence survey provides species-level household participation information regarding marine invertebrate, marine mammal, and non-salmon fish harvest in 1991. That year, 54% of Karluk households reported harvesting black chitons, 39% harvested mussels, 31% harvested butter clams, 23% harvested sea urchin, 15% harvested Pacific littleneck clams, 8% harvested geoducks, and 8% reported harvesting octopus. Although no households reported harvest of Dungeness crab, Tanner crab, or scallops, 8% of households reported using each of these subsistence resources in 1991. In the same year, 8% of Karluk households reported harvesting harbor seal, while 39% of households reported using harbor seal. Also in 1991, species of non-salmon fish harvested by the greatest percentage of Karluk households included Dolly Varden (69% of households reported involvement in harvesting), steelhead (46%), flounder (23%), rainbow trout (15%), and black rockfish (8%). Although no households reported harvest of Pacific cod or red rockfish in 1991, 23% of households reported using Pacific cod and 8% reported using red rockfish for subsistence. The fact that some households utilized resources not harvested in the community suggests sharing of resources between communities. It is also important to note that, in many cases, the percentage of households using subsistence resources was higher than the percentage involved in harvest, indicating the presence of sharing networks within Karluk as well.²⁰⁴

Some information was available regarding subsistence salmon, halibut, and marine mammal harvest between 2000 and 2010 in Karluk. For those years in which data were available between 2000 and 2010, the number of subsistence salmon permits issued to Karluk households varied between one and three. In addition, a number of permits were reported as returned in

²⁰⁰ Smithsonian Museum of Natural History, Alaska Native Heritage Center, and Alutiiq Museum & Archaeology Repository. 2001. "Exhibition Catalog: Karluk Village Profile." In *Looking Both Ways: Heritage and Identity of the Alutiiq People of Southern Alaska: An Interactive Exhibition, Text Only Version*. Eds. Crowell, Aron L., Amy F. Steffian, and Gordon L. Pullar. University of Alaska, Fairbanks. Retrieved August 24, 2012 from <http://www.mnh.si.edu/lookingbothways/text/villages/karluk.html>.

²⁰¹ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

²⁰² Kodiak Area Native Association. 2011. *Kodiak Rural Regional Comprehensive Economic Development Strategy*. Retrieved August 24, 2012 from <http://www.kanaweb.org/files/CEDS.pdf>.

²⁰³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁴ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

2001, 2002, and 2003 although no data were available regarding the total number issued to households in those years. No information was reported regarding the species harvested using these permits. In addition, no data were reported regarding total harvest of marine invertebrates or non-salmon fish in Karluk between 2000 and 2010 (Table 13). Between 2003 and 2007, one Subsistence Halibut Fishing Certificate (SHARC) was issued per year to an individual in Karluk, and no information was reported regarding the number of permits returned or the total pounds harvested using these SHARC. In 2010, 9 SHARC were issued, and an estimated 595 lbs of halibut harvested (Table 14). Marine mammals were also harvested by Karluk residents between 2000 and 2010. According to data reported by ADF&G, between 2000 and 2008, Karluk residents harvested 11 to 63 harbor seals per year, and also harvested 2 to 3 Steller sea lions in some early years of the period (Table 15).

Table 12. Subsistence Participation by Household and Species, Karluk: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Karluk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	3	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Karluk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	9	5	595

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Karluk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	2	22	n/a
2001	n/a	n/a	n/a	n/a	3	18	n/a
2002	n/a	n/a	n/a	n/a	3	18	n/a
2003	n/a	n/a	n/a	n/a	n/a	32	n/a
2004	n/a	n/a	n/a	n/a	n/a	21	n/a
2005	n/a	n/a	n/a	n/a	n/a	11	n/a
2006	n/a	n/a	n/a	n/a	n/a	11	n/a
2007	n/a	n/a	n/a	n/a	n/a	21	n/a
2008	n/a	n/a	n/a	n/a	n/a	63	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kodiak (KOH-dee-ack)

People and Place

*Location*²⁰⁵



Kodiak is located near the northwestern tip of Kodiak Island in the Gulf of Alaska. Kodiak Island (aka: “the emerald isle”) is the largest island in Alaska and is the second largest island in the United States. Kodiak National Wildlife Refuge (KNWR) encompasses nearly 1.9 million acres on Kodiak and Afognak Islands. It is 252 mi south of Anchorage (a 45-minute flight) and is a 4-hour flight from Seattle. The area encompasses 3.5 sq mi of land and 1.4 sq mi of water. Kodiak was first incorporated in 1940 and is now a Home Rule City and the seat of the Kodiak Island Borough .

*Demographic Profile*²⁰⁶

In 2010, there were 6,130 residents in Kodiak, ranking it the 16th largest of 352 total Alaskan communities with recorded populations that year. Between 1990 and 2010, the population declined by 3.7%. Between 2000 and 2009, the population increased by 4.6% with an average annual growth rate of 0.51%, which was similar to statewide average of 0.75% and indicative of modest growth (Table 1). In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were an estimated 6,000 permanent residents, and 600 transient residents living in Kodiak in 2010. According to community leaders, seasonal workers live in Kodiak from July through September, with annual population peaks typically occurring in July and August. Peaks in population are mostly driven by employment in fisheries sectors.

Kodiak has a racially and ethnically diverse community. The majority of the Alaska Native population is Alutiiq, and there is a large Filipino subculture residing in the city. The majority of the changes in racial distribution in the population occurred as proportional increases in the Asian population and decreases in the White population between 2000 and 2010. Further, in 2010, 40.3% of residents identified themselves as White, compared to 46.4% in 2000; 37.4% identified themselves as Asian, compared to 31.7% in 2000; 9.9% identified themselves as American Indian or Alaska Native, compared to 10.5% in 2000; 1.0% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.9% in 2000; 0.5% identified themselves as Black or African American, compared to 0.7% in 2000; 6.3% identified themselves as two or more races, compared to 5.4% in 2000; and 4.6% identified themselves as some other race, compared to 4.4% in 2000. In addition, 9.4% of residents identified themselves as Hispanic or Latino, compared to 8.5% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

²⁰⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

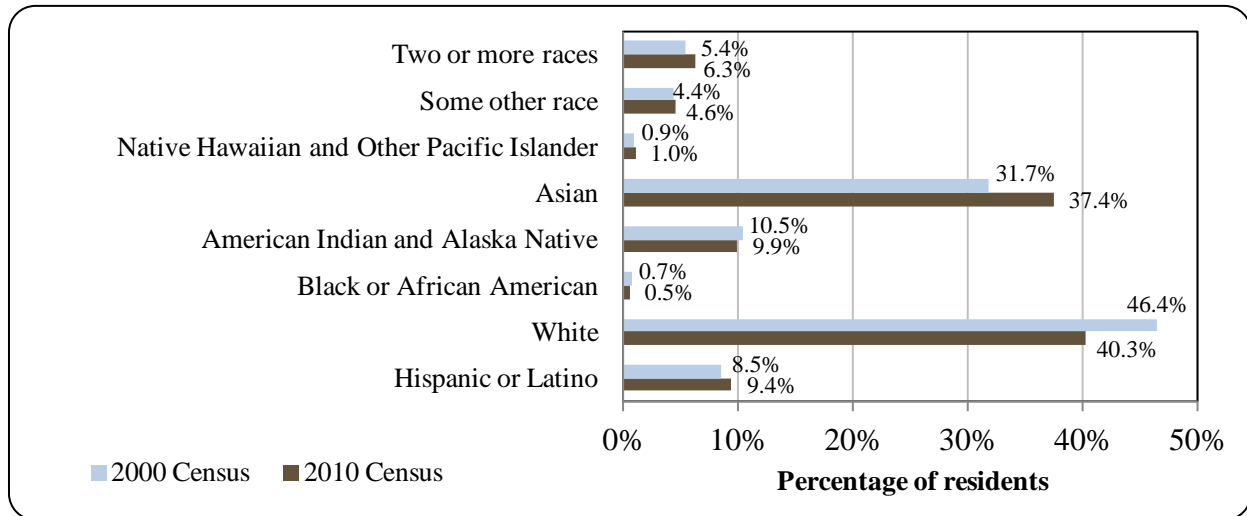
Table 1. Population in Kodiak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	6,365	-
2000	6,334	-
2001	-	6,073
2002	-	6,100
2003	-	6,109
2004	-	6,210
2005	-	6,139
2006	-	5,670
2007	-	5,796
2008	-	6,541
2009	-	6,626
2010	6,130	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kodiak: 2000-2010 (U.S. Census).

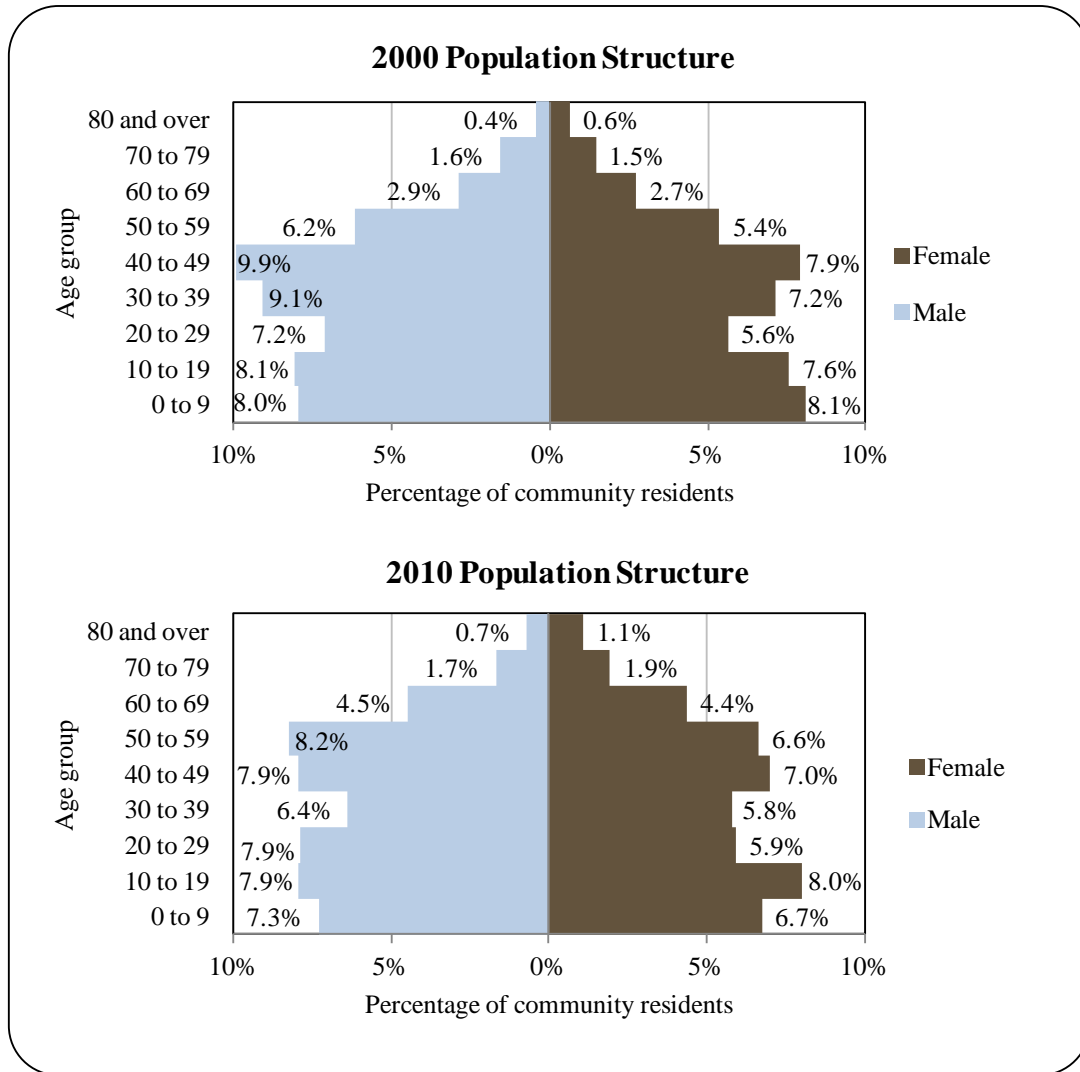


In 2010, the average household size was 2.94, compared to 2.90 in 1990 and 3.10 in 2000. In that year, there were a total of 2,178 households, compared to 2,177 in 1990 and 2,255 in 2000. Of the households surveyed in 2010, 46% were owner-occupied, compared to 43% in 2000; 47% were renter-occupied, compared to 46% in 2000; 5% were vacant, compared to 10% in 2000; and 2% were occupied seasonally, compared to 1% in 2000. In addition, 144 residents were living in group quarters in 2010, compared to 146 in 2000.

In 2010, the gender distribution in Kodiak was 52.5% male and 47.4% female. This was similar to both the statewide gender distribution (52.0% male, 48.0% female), and 2000 distribution (53.3% male, 46.7% female). The median age that year was 35.1 years, which was higher than both the statewide median of 33.8 years and 2000 median of 33.5 years.

In general, population structure was stationary in both 2000 and 2010. However, cohorts displayed age transitions consistent with a stable population, meaning that they retained their overall structure as they aged. In 2010, 29.9% of residents were under the age of 20, compared to 31.8% in 2000; 14.3% were over the age of 59, compared to 9.7% in 2000; 41.9% were between the ages of 30 and 59, compared to 45.7% in 2000; and 13.8% were between the ages of 20 and 29, compared to 12.8% in 2000.

Figure 2. Population Age Structure in Kodiak Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 20 to 29 range (7.9% male, 5.9% female), followed by the 50 to 59 (8.2% male, 6.6% female) and 40 to 49 (7.9% male, 7.0% female) ranges. Of those three, the greatest relative difference occurred within the 20 to 29 range. Information regarding changes in Kodiak's population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²⁰⁷ estimated that 88.2% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 7.8% had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; and estimated 4.0% had 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 30.4% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 8.5% held an Associate's degree, compared to an estimated 8.0% of Alaska residents overall; an estimated 17.8% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 5.8% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Kodiak Island is estimated to have been inhabited for at least 7,500 years.^{208,209,210} According to some archaeologists "the ancestors of the present-day Native Alaska residents of the Alutiiq culture area have continuously inhabited the area for at least 7,000 years."²¹¹ Alutiiq is the more recent term which is used for the culture and the language of the "group of Alaska Native people indigenous to the Kodiak Island Archipelago, the southern coast of the Alaska Peninsula, Prince William Sound, and the lower tip of the Kenai Peninsula."²¹² By about 1200 C.E., the Island may have had a population of about 14,000 Alutiiq inhabitants which is similar to the total number of inhabitants today on the island of Kodiak.²¹³

At the time of Russian contact the peoples living on Kodiak Island were the Koniags (the Alutiiq of Kodiak Island and the Alaska Peninsula) of which there were 10,000 or more.²¹⁴ The first European and specifically Russian contact was in 1763 by Stephen Glotov. A Russian settlement was established at Three Saints Bay by Gregorii Shelikof in 1784 where the native population was forced to work hunting sea otters. Prior to this hundreds of Alutiiq natives were killed attempting to hide from Shelikof's party and the Alutiiqs were dominated by the Russians

²⁰⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁰⁸ Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. *Looking Both Ways: Heritage and Identity of the Alutiiq People*. University of Alaska Press, Fairbanks.

²⁰⁹ Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.

²¹⁰ Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Institution, Washington D.C.

²¹¹ Mason, R. (1995). *The Alutiiq Ethnographic Bibliography*. Retrieved April 3, 2012 from <http://www.ankn.uaf.edu/aeb.html>

²¹² Ibid.

²¹³ Rennick, P., ed. (2002). From Kodiak to Unalaska. *Alaska Geographic*, 29(4).

²¹⁴ Korsmo, F. L. (1994). The Alaska Natives. In Minority Rights Group (Ed.), *Polar Peoples: Self Determination and Development*. London: Minority Rights Publications.

using muskets and cannons. Shelikof was recalled back to Russia and in 1792 Alexander Baranov, a fur trapper established a trading post at St. Paul Harbor, which is the site of the City of Kodiak today. Kodiak became the capital of Russian America and at that time the island was called “Kikhtak” and later “Kadiak” which is the Inuit word for the island. Russian Orthodox clergymen arrived around 1794 to missionize the people of the region. There were more than 6,500 Koniags in the area at that time, but by the end of Russian control of the island in 1867 the population had decreased down to around 2,000 because of “hardship, accidents, and starvation, along with diseases introduced by the Russians.”²¹⁵

Alaska became a U.S. Territory in 1867 and the harvesting of the sea otters was still the major commercial enterprise of the area, although this quickly led to the near extinction of the animals. In 1882 a fish cannery opened at the Karluk spit which began the development of commercial fishing in the Kodiak area. Many canneries opened by the 1890’s with salmon being the main fish harvested at that time. Kodiak was incorporated in the year of 1940. During World War II, Kodiak was a key operations area throughout the Aleutian Campaign and both the Navy and Army built bases on the island. The population of the town rocketed up to more than 25,000 people during the World War II. After the war the Navy base was transferred into a Coast Guard base and now is the largest Coast Guard base in the world.

Natural Resources and Environment

The climate of the Kodiak Islands has a strong marine influence. There is little to no freezing weather, moderate precipitation, occasional high winds, and frequent cloud cover and fog. Severe storms are common from December through February. Annual rainfall averages 67 inches, and annual snowfall averages 78 inches. January temperatures range from 14 to 46 °F (-10 to 8 °C); July temperatures vary from 39 to 76 °F (4 to 24 °C).²¹⁶

Kodiak Island comprises of 3,588 sq mi of diverse landscapes, and is part of a larger archipelago encompassing roughly 5,000 sq mi. The Island consists primarily of mountainous terrain, with mountain ridges running northeast-southeast. Most peaks range between 3,000 and 4,000 ft, although several peaks are greater than 4,000 ft. Approximately 40 small cirque glaciers are located along the main divide of the glaciers; feeding into hanging valleys. Many swift-water streams drain upland areas. The Barren Islands to the north of Shuyak Island consist primarily of barren, rocky environments. Tugidak Island is relatively flat and supports expansive areas of moist and wet tundra. Sitka spruce stands dominate much of the landscape from the shore to the treeline on Shuyak Island to northeastern Kodiak Island. Stands extend south to a general northwest-southeast divider running from Kupreanof Peninsula to Cape Chiniak. Southeast Kodiak Island is relatively flat and covered by wet and moist tundra. Exposed bedrock and shallow soils cover the 2,500 mi coastline.²¹⁷

Subsurface geology is diverse, consisting of both marine sedimentary and meta-sedimentary rocks to intrusive igneous plutons that make up the ridge and peak formations that provide the interior drainage divide of Kodiak Island. The central part of the island is composed of weakly metamorphosed turbidites including shale, slate, and phyllite, with lesser amounts of

²¹⁵ See footnote 211.

²¹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²¹⁷ Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy*. Retrieved September 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf>.

siltstone and greywacke sandstone. The southeast portion of the island consists of clastic sedimentary marine deposits, including siltstone. Most of the Kodiak Island was extensively glaciated during the late Pleistocene. During glacial maximum, glaciers extended well offshore in the southern region of the Island. As they retreated they scoured bedrock and left a thin layer of moraine which is clay-rich and poorly drained. As glaciers retreated into valleys, cobble and boulder outwash was deposited at the lower reaches, leaving glacio-fluvial gravels more than 100 ft thick in some areas. Following deglaciation, the Island was repeatedly covered by layers of volcanic ash from Alaska Peninsula volcanoes, the thickest and most recent originating from the 1912 Mt. Katmai eruption. Ash rich soils are moderately permeable and can form perched aquifers when covering bedrock. Perched aquifers are generally very shallow and easily contaminated, possibly leading to a high incidence of septic system failure on the Island.²¹⁸

Primary habitat areas located within the Kodiak Island Borough include small portions of the Alaska Maritime National Wildlife Refuge and Alaska Peninsula National Wildlife Refuge, The KNWR, Shuyuk Island State Park, Afognak Island State Park, Tugidak Island Critical Habitat Area, Koniag Inc. trust lands, and other essential habitat areas throughout the Borough.²¹⁹ The KNWR encompasses 1.9 million acres of the southwestern two-thirds of Kodiak Island, Uganik Island, Ban Island, and the Red Peaks area on the northwest side of Afognak Island. In terms of local wildlife, six species of terrestrial mammals occur naturally within the KNWR. These include: Kodiak brown bear, red fox, river otter, ermine, tundra vole, and little brown bat. Introduced species include Sitka black tail deer, mountain goats, Roosevelt elk, reindeer, beaver, red squirrel, snowshoe hare, and pine marten. In addition, a total of 247 species of birds have been observed on the Kodiak archipelago.²²⁰ Freshwater and anadromous fish include all five species of Pacific salmon, Dolly Varden, and rainbow trout. Saltwater species include sablefish, Alaska pollock, Pacific cod, Pacific halibut, black rockfish, skate, lingcod, octopus, littleneck clams, shrimp, scarlet king crab, red sea cucumber, golden king crab, Tanner crab, Dungeness crab, razor clams, sea urchin, and Pacific herring. Marine mammals include sea otters; Dalls porpoise; white-sided porpoise; fin, minke, sei, humpback, and gray whales; Steller sea lion; and harbor seals.²²¹

Kodiak Island has an abundance of natural resources. The KNWR provides ecosystem services which support wildlife habitat and recreational opportunities. Wildlife viewing, hunting, hiking, fishing, and camping are accessible by boat, floatplane, or road system.²²² Mineral resources include lode deposits of gold, mainly in quartz veins, are found throughout the Kodiak Island Borough. Tungsten, chromite, pyrite, arsenopyrite, galena, bornite, chalcocopyrite, pyrrhotite, chlorite, sphalerite, and stibnite occurrences are also found within the Borough. Placer gold mining produced approximately \$150,000 from Borough beaches in the early 20th century. Lode mining of gold occurred prior to World War I, and a small amount of activity continued until 1935. However, gold mining has generally been unprofitable within the Borough, and there are no active commercial-scale mining operations within the vicinity of Kodiak. Coal Beds are found on the eastern portion of Kodiak Island and on Sitkinak Island. The coal that is exposed

²¹⁸ Kodiak Island Borough. (2008). *KIB Comprehensive Plan Update*. Retrieved September 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KodiakIslandBorough-CP-2008.pdf>.

²¹⁹ Ibid.

²²⁰ U.S. Fish & Wildlife Service. (n.d.). *Kodiak National Wildlife Refuge*. Retrieved September 11, 2012 from: <http://www.fws.gov/refuge/kodiak/>.

²²¹ Glen Gray and Associates. (2007). *KIB Coastal Management Plan – Final Plan Amendment*. Retrieved September 11, 2012 from: http://alaskacoast.state.ak.us/District/FinalFinalPlans/Kodiak/Kodiak_CMP.pdf.

²²² See footnote 218.

does not contain economically viable reserves. Abundant sand, gravel, and rock resources are available for local use. A large sand and gravel deposit is found on one of the Trinity Islands.²²³

Timber resources are abundant, and make up an important although declining segment of the Kodiak economy. Sitka spruce stands extend from the northern portion of Kodiak Island toward both the south and west. Most natural emerging stands contain many knots which decrease their value. Second growth stands that develop naturally following clear-cutting produce higher quality timber. In 2002, two forest products companies operated within the Kodiak Island Borough. Production has been in decline due to depressed Asian timber markets. The Kodiak Island Borough contains portions of petroleum reserves located within the Cook Inlet Planning Area for Oil and Gas Lease 149. Three exploration plays sourced are recognized in the sale area.²²⁴ Cultural and historic resources which are listed on the National Register of Historic Places and are located in Kodiak include the Agricultural Experiment Station Barn, American Cemetery, Erskine House, Fort Ambercrombie State Historic Site, Holy Resurrection Church, Kad'yak, and several archaeologically significant sites. Sites in the area are mostly related to Alutiiq cultural history, Russian Orthodox history, or World War II.²²⁵

Kodiak Island is located in a geologically active zone, and hazards posed by earthquakes and volcanism are prevalent. Many fault lines run along the length of Kodiak Island in a southwest-northeast direction, just south of the City of Kodiak. Kodiak Island lies directly above the eastern Aleutian subduction zone and the Aleutian megathrust, which lies under Kodiak, is the largest active fault in North America. The Kodiak Island Borough designates the entire coastal zone, excluding federal land, as an Earthquake Hazard Area. It generated the 1964 “Good Friday” earthquake which devastated many coastal areas around south-central Alaska. Much of downtown Kodiak was destroyed by the resulting tsunami. The City of Kodiak has experience at least 14 earthquake generated tsunamis since settlement by Russians in the late 18th century. The Alaska Volcano Observatory at the University of Alaska Fairbanks list 19 active or dormant volcanoes bordering the western edge of the Kodiak Island Borough, on the Alaska Peninsula. Several have generated major eruptions including the 1912 Mt. Katmai eruption. Pyroclastic flows, lahars, and slope failures have the potential to create tsunamis if they reach the Shelikof Straits. Steep slope relief within the Kodiak area poses a significant threat of slope failure and avalanche. Flood hazards are present in valley bottoms of larger rivers and along some coastlines. Bank erosion hazards are high among rivers and channels where there is a high content of glaciofluvial and alluvial deposition. The Kodiak Island Borough designates areas 20 ft on either side of rivers and streams and areas 50 ft from the mean high water mark of coastlines as erosion hazard areas.^{226,227}

There are a number of hazardous waste “Superfund” sites located within the Kodiak Island Borough; however, none of them are on the National Priorities List. Most contamination sites involve petroleum products, sourced from fuel farms and marine vessel spills. Portions of the Kodiak region were also impacted by the 1989 *Exxon Valdez* spill.²²⁸ According to the Alaska Department of Environmental Conservation, there is an ongoing cleanup effort being conducted within the vicinity of the U.S. Coast Guard Integrated Support Command facility.

²²³ See footnote 221.

²²⁴ Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy*. Retrieved September 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf>.

²²⁵ See footnote 218.

²²⁶ Ibid.

²²⁷ See footnote 221.

²²⁸ See footnote 218.

Contaminates of concern include petroleum compounds, PCBs, paints, solvents, metals, herbicides, pesticides, and leachate from solid waste. Possible impacts to the Buskin River, which runs through the facility, are being monitored.²²⁹

Current Economy²³⁰

Commercial fishing, seafood processing, and commercial fishing support services are the major industries contributing to the local economy. The U.S. Coast Guard station is also a significant employer. Other industries include retail services and government. Tourism is growing, and recreational fishing, hiking, and kayaking are increasing in popularity. In 2002, the visitor industry generated estimated revenue of over \$19 million. The local hospital is another top employer. The Kodiak Launch Complex is a commercial orbital launch facility operated by the Alaska Aerospace Corporation, a public corporation of the State of Alaska. In 2001, the launch facility provided an equivalent of 85 jobs.²³¹ In a survey conducted by the AFSC in 2011, community leaders reported that Kodiak's economy is reliant on logging, fishing, ecotourism, and sport hunting and fishing.

In 2010,²³² the estimated per capita income was \$23,674 and the estimated median household income was \$56,731, compared to \$21,522 and \$55,142 in 2000. However, after adjusting for inflation by converting 2000 values to 2010 dollars,²³³ the real per capita income (\$28,301) and real median household income (\$72,511) indicate a decline in both individual and household earnings. In 2010, Kodiak ranked 121st of 305 communities from which per capita income was estimated, and 91st of 299 communities from which median household income was estimated.

However, Kodiak's small population size may have prevented the ACS from accurately portraying economic conditions.²³⁴ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$84.04 million in total wages in 2010.²³⁵ When matched with the 2000 Decennial Census population, the per capita income equaled \$13,710, which was significantly lower than the 2010 ACS estimate, and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.²³⁶

²²⁹ Alaska Dept. of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved September 12, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

²³⁰ Unless otherwise noted, all monetary data are reported in nominal values.

²³¹ See footnote 224.

²³² U.S. Census American Community Survey 2006-2010 estimates.

²³³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²³⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²³⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²³⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

According to 2006-2010 ACS estimates,²³⁷ 75.4% of residents over the age of 16 were in the civilian labor force and 2.5% were in the Armed Forces in 2010. Unemployment that year was estimated at 3.0%, compared to 5.9% statewide; and an estimated 12.8% of residents were living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. According to 2010 ALARI estimates, the unemployment rate was 23.9% based on unemployment insurance claimants.²³⁸ Both the unemployment rate and per capita income estimated by DOLWD differed significantly from 2010 ACS estimates.

Of those employed in 2010 (according to ACS estimates), an estimated 82.5% worked in the private sector, an estimated 13.6% worked in the public sector, and an estimated 3.9% were self-employed. Kodiak's economy is diverse. By industry, most (22.7%) employed residents were estimated to work in manufacturing sectors; followed by retail trade (18.8%) and education services, health care, social assistance sectors (15.4%). Between 2000 and 2010, there were no extreme variations in employment by industry sector. The most significant proportional increase occurred in retail trade sectors, while the most significant proportional decline occurred in manufacturing sectors. Agriculture, forestry, fishing, hunting, and mining sectors accounted for 1.8% of industry sector employment in 2010, compared to 6.8% in 2000. According to 2010 ALARI estimates, most (37.2%) employed residents worked in manufacturing sectors; followed by trade transportation, and utilities (16.1%) and educational and health service (9.3%) sectors.²³⁹

According to 2006-2010 ACS estimates, by occupation, most (32.9%) employed residents were estimated to hold production, transportation, or material moving positions; followed by sales or office (28.9%); management or professional (17.9%); service (17.1%); and natural resource, construction, or maintenance (6.3%) positions. Again there were no extreme variations in employment by occupation type between 2000 and 2010. The most significant proportional gain occurred in residents holding sales or office positions. The most significant proportional decline occurred in residents holding natural resources, construction, or maintenance positions. According to 2010 ALARI estimates, most employed residents held occupations related to food processing; followed by cashiers, janitorial, and retail sales positions.²⁴⁰ There was a diverse range of occupations represented in Kodiak in 2010, and DOLWD listed over 100 distinct occupational categories. Information regarding employment trends can be found in Figures 3 and 4.

²³⁷ See footnote 234.

²³⁸ See footnote 236.

²³⁹ Ibid.

²⁴⁰ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Kodiak (U.S. Census).

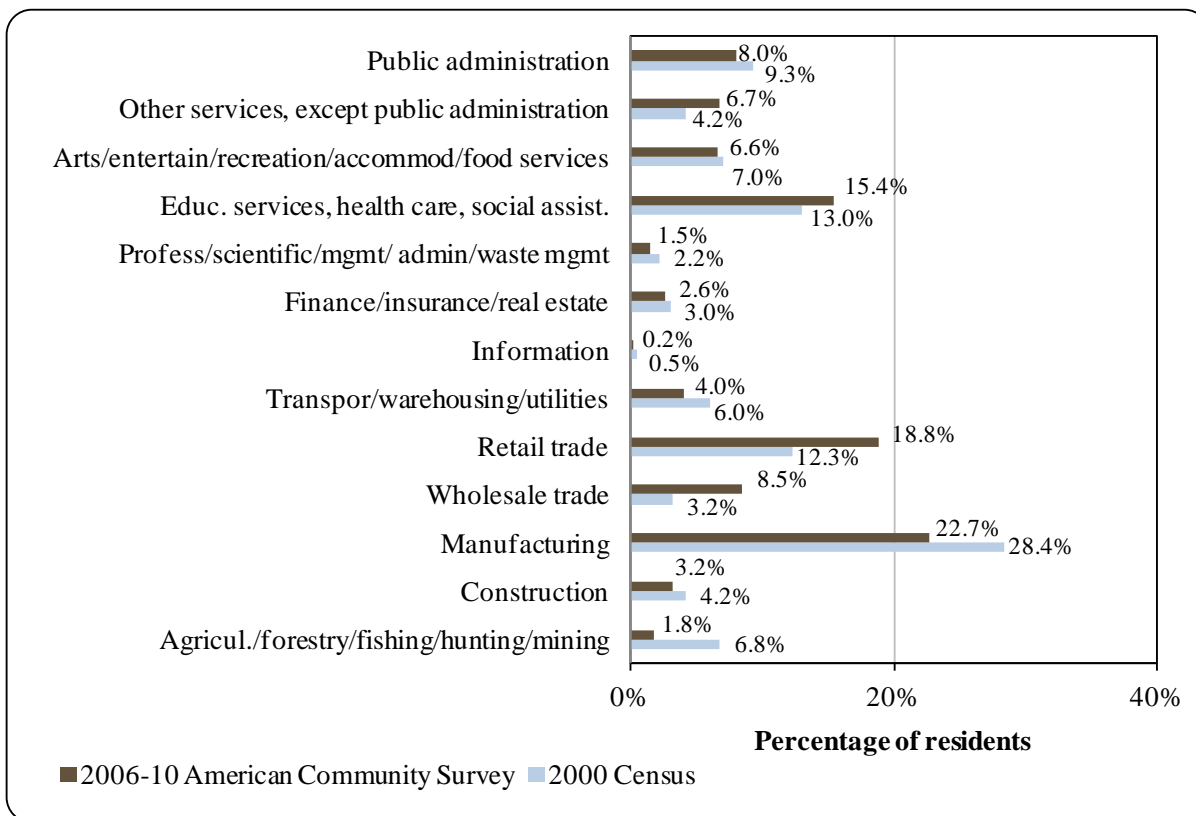
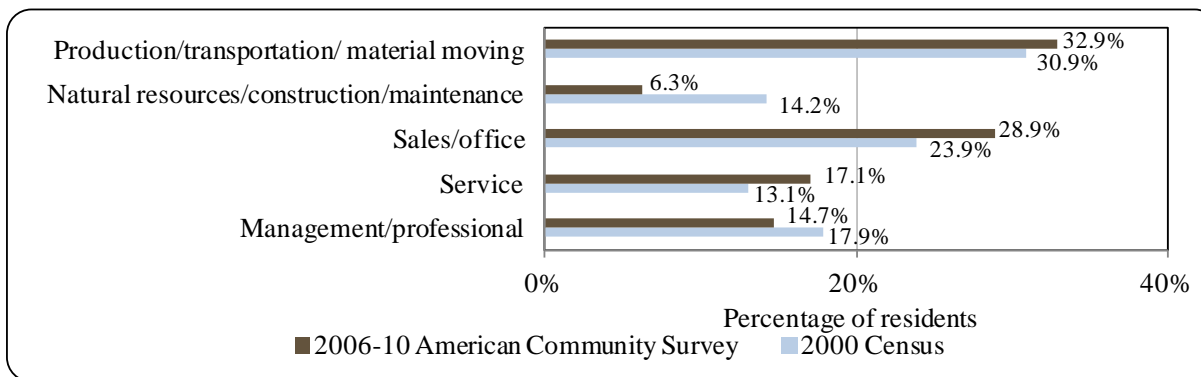


Figure 4. Local Employment by Occupation in 2000-2010, Kodiak (U.S. Census).



Governance

Kodiak is a Home Rule city and the seat of the Kodiak Island Borough. Incorporated in 1940, Kodiak has a Council-Manager form of government, which includes a mayor, a six-person city council, a five member school board, and six municipal employees. The City of Kodiak also has a seven-member advisory board.²⁴¹ In addition, there is a U.S. Bureau of Indian Affairs recognized tribal government located in Kodiak. The Shoonaq' Tribe of Kodiak was federally recognized in 2001. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Kodiak is Koniag, Incorporated, and the local ANCSA chartered non-profit is the Kodiak Area Native Association. The ANCSA chartered village corporation is Native of Kodiak, Inc.

The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish & Game (ADF&G), and Bureau of Citizenship and Immigration Services offices are all located within the city of Kodiak. The new NOAA ship *Oscar Dyson* is homeported in Kodiak.

There is a 6% sales tax for a maximum of \$30 per transaction, a property tax of 2 mills (0.2%) by the City and 9.25 mills (0.93%) by the Borough, and a 5% accommodations tax imposed by the City and the Borough. Beyond the revenue sources that accrue to the municipality directly, residents of Kodiak (like the residents of other communities on the island) derive benefits from services provided by the Borough, which also funds its services in part through fishery derived revenues. The Borough has a resource-based severance tax that applies to extraction of natural resources including rock, sand, and gravel as well as timber and fish. This Borough tax is designed to mirror that state raw fish tax with the taxes being applied to the transactional value at the point of extraction, based on the value paid to commercial fishermen (as part of the transaction with the processors upon landing).

In 2010, Kodiak's municipal budget was \$30.48 million, compared to \$22.99 in 2000; a 2.5% increase after adjusting for inflation.²⁴² Municipal revenues estimated here include general fund revenues, special revenues, enterprise funds, and capital project funds. The annual municipal budget peaked in 2008 at \$60.76 million. In 2010, sales tax accounted for 30.5% of the total municipal budget that year, compared to 31.0% in 2000. In addition, state allocated Community Revenue Sharing accounted for 1.4% of the total municipal budget that year, compared to less than 1% in 2000. Fisheries related state and federal grants awarded to Kodiak between 2000 and 2010 included: \$2.0 million for a large vessel lift and boat yard, \$250,000 for a cruise ship pier master plan, \$710,000 for city harbor projects, \$2.3 million for Pier III repairs; \$2.3 million for a travel lift and tidal grid, \$78,367 for seafood marketing projects, \$15,000 for Half Moon Bay Fisheries: RSW and Skiff modifications, \$200,000 for St. Herman Harbor loading dock planning and design, \$200,000 for a fisheries research building feasibility study, and \$140,000 for St. Paul Harbor spit improvements. Information regarding municipal finances can be found in Table 2.

²⁴¹ City of Kodiak (2006). *City of Kodiak Annual Operating Budget: July 1, 2005 – June 30, 2006*. Prepared for Kodiak City Council. May 25, 2005. Retrieved July 27, 2012 from <http://www.commerce.state.ak.us/dcra/commfin/Kodiak/KodiakFY06Budget.pdf>.

²⁴² Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kodiak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$22,985,854	\$7,122,358	\$82,265	n/a
2001	\$25,204,376	\$7,139,290	\$70,535	\$140,000
2002	\$29,219,409	\$6,996,894	\$68,511	\$400,000
2003	\$33,409,555	\$7,003,452	\$63,501	\$150,000
2004	\$27,827,753	\$7,130,691	n/a	\$95,367
2005	\$34,780,344	\$7,328,281	n/a	\$2,300,000
2006	\$32,797,953	\$7,814,820	n/a	\$2,000,000
2007	\$48,467,736	\$8,136,785	n/a	\$600,000
2008	\$60,759,520	\$8,838,679	n/a	n/a
2009	\$55,024,164	\$8,878,804	\$400,759	\$2,960,000
2010	\$30,482,743	\$9,308,959	\$428,304	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*²⁴³

Kodiak is accessible by air and sea. The state-owned Kodiak airport has three asphalt runways measuring 7,542-ft long by 150-ft wide, 5,399-ft long by 150-ft wide, and 5,013-ft long by 150-ft wide. Kodiak Municipal Airport also offers a 2,475-ft long by 40-ft wide paved runway. Three airlines serve Kodiak with several daily flights, and a number of air taxi services provide flights to other communities on the island. City-owned seaplane bases at Trident Basin and Lilly Lake accommodate floatplane traffic. Roundtrip airfare between Anchorage and Kodiak in June 2012 was \$360.²⁴⁴

Approximately 140 mi of state roads connect island communities on the east side of the island. Rental cars are available through Budget, Rent-a-Heap, and Avis. Numerous taxi services are available for transport on the island. Kodiak also has its own transit system with limited public service.

²⁴³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Database Online. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁴⁴ Airfare calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).

Facilities

Electricity in Kodiak is operated and purchased by Kodiak Electric Association Incorporated, a cooperative utility, from the Four Dam Pool-owned Terror Lake Hydroelectric Facility. Kodiak Electric Association also operates a Coast Guard-owned plant and owns three additional diesel-powered plants at Swampy Acres, Kodiak, and Port Lions. In a survey conducted by the AFSC in 2011, community leaders indicated that Kodiak plans to expand their alternative energy sources (e.g. hydro, wind, tidal) between 2012 and 2015. The City operates piped water and sewage systems. Water is supplied by the Pillar Creek and Monashka Creek reservoirs and chlorinated before distribution. Piped sewage is processed in a treatment plant. All homes are fully plumbed. A washeteria is privately operated within the community. Refuse collection services are provided by the Kodiak Borough through Waste Management Inc., and refuse is delivered to a permitted, Class 1 landfill located six mi north of the city at Monashka Bay.²⁴⁵

A public teen center, community gym and pool, public library, and food bank are also available in the community.²⁴⁶ Community leaders report that a community center will be completed between 2013 and 2015. Safety services are provided by the City police department and the state trooper post in Kodiak itself. The City also maintains its own fire department. Visitor accommodations are provided by Russian Heritage Inn, Comfort Inn, and 38 Bed and Breakfasts in the area.²⁴⁷ The community is also home to four museums including the Alutiiq Museum. Kodiak also has a post office, and telephone service and broadband internet access are in place.

With regard to fisheries-related infrastructure, the City provides several public dock facilities. Pier I is 204-ft by 28-ft and provides mooring, loading, and unloading capabilities. Services include water and bulk fuel. This dock also services Alaska Marine Highway ferries. Pier II (City Dock) is 804-ft by 64-ft and has a harbor depth that exceeds 30 ft depending on tides (which range approximately 10 ft). Uses include loading and unloading commercial freight, and services include bulk fuel, water, warehousing, and cargo cranes. Pier III (Container Terminal) is 490-ft by 64-ft. Uses include container services for general cargo, and services include water and a 30 ton Gantry crane. Small vessel moorage includes two small boat harbors with 600 stalls and mooring buoys in St. Paul and St. Herman Harbors. Ship and boat repair services are available through local boatyards, and can accommodate vessels up to 150 tons. Dry dock storage is also available.²⁴⁸

In the 2011 AFSC survey, community leaders reported that 35,000 linear ft of floating dock space and 3,000 linear ft of fixed dock space is available for permanent vessels to moor at. Transient vessels have access to 5% of dock space for mooring. The current dock infrastructure is serviced by electricity, water, and roads although no fuel tanks exist at the dock. Currently, community leaders report that vessels up to 710 ft long can use moorage in Kodiak, and the port of Kodiak is capable of handling rescue vessels (e.g., Coast Guard), cruise ships, ferries, fuel barges, and containers ships. Community leaders also report that Kodiak has a fish cleaning station and built dry dock space, haul out facilities, and an Environmental Protection Agency

²⁴⁵ See footnote 243.

²⁴⁶ Ibid.

²⁴⁷ Ibid.

²⁴⁸ Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy*. Retrieved September 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf>.

certified boat cleaning station in 2009. Within the next 10 years, Kodiak hopes to make improvements to its existing dock structure and construct new dock spaces. Community leaders indicate that multiple fisheries-related businesses are available in Kodiak, including fish processing plants, fishing gear sales and repair, haul out facilities, and extensive boat repair services.

*Medical Services*²⁴⁹

The primary medical facilities in Kodiak are the Alutiiq Health Clinic, the Kodiak Community Health Center, the Providence Kodiak Island Medical Center, and the U.S. Coast Guard (USCG) Rockmore-King Medical Clinic. Both hospitals are qualified Acute Care Facilities, and long-term care is available at Providence Kodiak Island Medical Center. The USCG facility provides emergency support only. The City is part of the Southern Emergency Medical System (EMS) Region. Emergency Services have limited highway marine airport floatplane and helicopter access, and are provided by 911 Telephone Service and paid EMS Service.

Educational Opportunities

In 2012, there were 6 schools and a correspondence school. Combined, these schools employed 144 teachers, and enrolled 2,147 students.²⁵⁰ Kodiak is located in the Kodiak Island Borough School District. St. Herman Orthodox Seminary, located in Kodiak, is one of only two Russian Orthodox seminaries in the United States. Kodiak College, a branch of the University of Alaska system, offers a number of occupational certificates and undergraduate degrees. Bachelor's degrees are offered for early childhood education and elementary education.²⁵¹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Kodiak archipelago was likely populated approximately 7,500 years ago. The Alutiiq culture has been strongly dependent on harvesting fish, marine invertebrates, and marine mammals. Salmon, caught in both salt and fresh water, have been extremely important resources and Alutiiq peoples have traditionally hunted whales. Today, residents of Kodiak Island Borough continue to rely on subsistence resources as a lifestyle, and to supplement income and diet. Reliance on subsistence resources is higher within the six villages within the Borough with higher Alaska Native populations than in the City of Kodiak and other communities along the road system.²⁵²

²⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Database Online. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁵¹ Kodiak College. (n.d.). *Degrees and Certificates*. Retrieved September 13, 2012 from: <http://www.koc.alaska.edu/>.

²⁵² Glen Gray and Associates. (2007). *KIB Coastal Management Plan – Final Plan Amendment*. Retrieved September 11, 2012 from: http://alaskacoast.state.ak.us/District/FinalFinalPlans/Kodiak/Kodiak_CMP.pdf.

Kodiak has participated in commercial fisheries since the early 1800s, when Russians in the area began salting and exporting salmon. The first salmon cannery was established on the Karluk spit in 1882 to take advantage of large sockeye runs. By 1889, five canneries were operating on the mouth of the Karluk River. Sockeye salmon harvests in the region ranged between 1.0 million (1887) and 4.83 million (1901) fish between 1887 and 1928. From 1984 to 1999, the average ex-vessel value of salmon landings was \$88.3 million. A record harvest of 39 million salmon occurred in 1993 within the Kodiak Management Area (KMA). Over 800 salmon producing streams are located in the KMA, contributing to the highly productive fishery.²⁵³

Before 1950, most seafood processing facilities in Kodiak were dedicated to salmon. However, in 1950, 60,000 pounds of king crab were landed and processing capacity was added by building new plants and expanding others. The king crab fishery became a major component in Kodiak's fisheries economy from 1950 to 1959 as catch increased from 60,000 to 21 million pounds. By 1968, the City of Kodiak was the largest fishing port in the United States in terms of ex-vessel value. However, by the late 1960s and early 1970s, harvest levels began to drop and several seafood processors relocated in Unalaska and Dutch Harbor to be closer to the crab supply. This diverted much of the Bering Sea and Aleutian Island harvests away from Kodiak. In 1982, king crab harvest was 8.7 million pounds, which was the lowest in 24 years. Soon after, the crab fishery was closed because of poor stock conditions.

The Kodiak shrimp fishery began in the 1950s with a harvest of 31,886 pounds in 1958. The fishery grew rapidly to an annual catch of 10 to 12 million pounds in the early 1960s. The 1964 "Good Friday" earthquake devastated seafood processing infrastructure, leading to the fishery's decline; however, harvests peaked in 1970s at 82.2 million pounds in 1971. Sharp declines in harvests followed this peak, and effort was shifted to the Chignik and South Peninsula areas until those areas experienced similar declines in the late 1970s. Since its decline, the Kodiak shrimp fishery has remained depressed.

As harvests and processing capacity declined through overharvesting and resource competition, an effort to develop groundfish fisheries began in the 1980s and continued through the 1990s. During those two decades, groundfish landings increased from \$528,000 to almost \$45 million ex-vessel, making groundfish one of Kodiak's most valuable fisheries.

Kodiak is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. The community is not eligible for the Community Quota Entity program or the Community Development Quota program.

Processing Plants

According to ADF&G's Intent to Operate list, there were 11 shoreside processing plants in Kodiak in 2010. Alaska Fresh Seafoods, Inc. operates a seafood processing facility in Kodiak. The plant began operations in 1978 and in 2010 employed a maximum of 60 workers.²⁵⁴ Alaska

²⁵³ Kodiak Chamber of Commerce. (2003). *Kodiak Region Comprehensive Economic Development Strategy*. Retrieved September 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KodiakRegion-EDP-2003.pdf>.

²⁵⁴ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

Fresh Seafoods processes cod (black, Pacific), crab (king, snow), halibut, herring, lingcod, pollock, scallops, and all five species of Pacific salmon.²⁵⁵

Alaska Seafood Systems operates a seafood processing facility in Kodiak. Alaska Seafood Systems processes cod (black and Pacific), flounder, halibut, octopus, pollock, sea urchin, skate, and all five species of Pacific salmon.²⁵⁶ The plant began operations in 2007 and in 2010 employed a maximum of 20 workers.²⁵⁷

Global Seafoods North America owns several processing facilities though out the Pacific Rim, including a plant in Kodiak. The plant began operations in 2000 and was previously owned by Peter Pan Seafoods.²⁵⁸ The facility in Kodiak processes black and Pacific cod, pollock, sole, rockfish, halibut and several species of salmon.²⁵⁹ In 2010, the plant employed a maximum of 100 workers.²⁶⁰

International Seafoods of Alaska, Inc. was founded in Kodiak in 1978. Its shoreside processing facility takes deliveries from fishing vessels directly from its dock. Located near the Kodiak boat harbor, the plant operates year round. During the summer months the facility processes salmon, halibut and black cod. Throughout the rest of the year the plant processes Pacific cod, pollock, and various types of sole and rockfish. In addition to processing facilities International Seafoods of Alaska also owns the largest cold storage facility in Kodiak.²⁶¹ In 2010, the plant employed a maximum of 420 workers.²⁶²

Island Seafoods began in 1995 as a small custom processing facility for charter boat fishermen. After being acquired by Pacific Seafood Group in 2003, Island Seafoods has expanded dramatically. Their processing facility is located just outside the Kodiak boat harbor breakwater. Today, the Island Seafoods processing facility operates year round and processes millions of pounds of cod, halibut, rockfish and salmon from commercial fishing vessels. Staying true to its roots, Island Seafood continues to offer custom processing for sport fishermen.²⁶³ In 2010, the plant employed a maximum of 100 workers.²⁶⁴

Since 1984, Kodiak Island Smokehouse has been a small family owned and operated smokehouse that processes smoked salmon (Chinook, sockeye and coho) caught by sport fishermen and a few commercial salmon boats. The plant began operations in 2001 and its

²⁵⁵ Alaska Seafood Marketing Institute. (n.d.). *Supplier Information*. Retrieved August 15, 2012 from: <http://alaskaseafood.org/>.

²⁵⁶ Ibid.

²⁵⁷ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

²⁵⁸ Ibid.

²⁵⁹ Global Seafoods. (n.d.). *Company Homepage*. Retrieved August 15, 2012 from: <http://www.globalseafoods.com>.

²⁶⁰ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

²⁶¹ International Seafoods of Alaska. (n.d.). *International Seafoods of Alaska, Inc.* Retrieved August 15, 2012 from: <http://isa-ak.com/about.html>.

²⁶² This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

²⁶³ Island Seafoods. (n.d.). *About Us*. Retrieved August 15, 2012 from:

http://www.islandseafoods.com/index.php?option=com_content&view=article&id=48&Itemid=61.

²⁶⁴ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

primary customers are tourists and locals.²⁶⁵ Kodiak Island Smokehouse also processes and smokes black cod and halibut. It is located on Mill Bay road.²⁶⁶

North Pacific Seafoods Inc. facility is located in the City of Kodiak. The plant was originally built in the early 1950s as an ice and cold storage facility. When North Pacific Seafoods purchased the facility in 1975 they expanded it to include seafood processing. Today, the plant is open year-round and processes all major commercially harvested species from the Gulf of Alaska including salmon, pollock, Pacific cod, rockfish, black cod, halibut, crab, roe, octopus, herring, flatfish and sea cucumber. During the peak season from June until the end of September the facility employs a maximum of 280 workers.²⁶⁷ The Kodiak plant provides to its fish processors free room and board (including shower facilities), as well as free air transportation from and to Anchorage, provided the processors fulfill their contractual obligations.²⁶⁸

Ocean Beauty Seafoods LLC., founded in 1910, operates the largest and oldest seafood production facility in Kodiak (constructed in 1911). Located near the Kodiak boat harbor, Ocean Beauty - Kodiak is a major producer of fresh, frozen and canned salmon, as well as halibut, perch, cod, pollock, flatfish and herring. The facility processes seafood year round and employs a maximum of 375 workers during the peak season.²⁶⁹

Trident Seafoods Corporation, founded 1973, owns and operates two processing facilities in Kodiak. A portion of the processing activity takes place on the *Star of Kodiak*, a permanently moored World War II Liberty Ship that has been converted into a processing facility. The shipboard operation works in conjunction with another modern facility located next to the vessel. The facilities operate year-round, processing cod (black and Pacific), crab, pollock, halibut, flatfish, rockfish, and various species of Pacific salmon. The *Star of Kodiak* alone can process 1.1 million pounds of pollock and 400,000 pounds of cod per day. The very culturally diverse crew size varies from 100 to 300 employees depending on the season. The Kodiak facility provides room and board (including shower facilities) to its fish processing workforce at a nominal fee, as well as free air transportation from and to Seattle. Its on-site store sells personal care items to the workers, such as toothpaste and soap.²⁷⁰

Westward Seafoods was established in 1989 and started operations in 1991. In 2004, Western Alaska Fisheries merged with Westward Seafoods to form what is now known as Westward Seafoods Inc. One of Westward's seafood processing facilities is located in Kodiak. Westward also owns a facility in Dutch Harbor. The Kodiak plant processes cod, pollock, halibut

²⁶⁵ Ibid.

²⁶⁶ Kodiak Island Smokehouse. (n.d.). *Kodiak Island Smokehouse*. Retrieved August 15, 2012 from: <http://www.kodiaksmokehouse.com/>.

²⁶⁷ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

²⁶⁸ North Pacific Seafoods. (n.d.). *Production Facilities*. Retrieved August 15, 2012 from: http://northpacificseafoods.com/index.php?option=com_content&task=view&id=40&Itemid=51.

²⁶⁹ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

²⁷⁰ Trident Seafoods. (n.d.). *Alaska Plants*. Retrieved August 15, 2012 from: http://www.tridentseafoods.com/company/plants_alaska.php#Kodiak.

and salmon. The facility has an annual total production of 45,000,000 pounds²⁷¹ and employs a maximum of 300 workers each year.²⁷²

Wildsource Inc. processes black cod and salmon (Chinook, coho, pink and sockeye) in Kodiak²⁷³ and began operations in 2008.²⁷⁴ The Sun'aq tribe purchased the Wildsource facility in January 2010 with grant money from the Office of Indian Energy and Economic Development.²⁷⁵ The plant employs a maximum of six workers each year.²⁷⁶

Fisheries-Related Revenue

In 2010, Kodiak collected \$5.27 million in fisheries-related taxes, compared to \$3.63 million in 2000. However, it should be noted that data related to port/dock usage fees are not available for 2010. Since those fees accounted for a significant portion of fisheries-related revenue in previous years, it is likely that revenue figures are grossly underrepresented. The most accurately represented year was 2009, when fisheries-related revenue peaked at \$31.1 million. In that year, port/dock usage fees accounted for most revenues collected, followed by harbor usage fees and Shared Fisheries Business Tax revenues. Revenue collected for port/dock fees increased significantly between 2000 and 2009. Information regarding fisheries-related taxes and fees can be found in Table 3. In a survey conducted by the AFSC in 2011, community leaders reported that Kodiak received \$100,680 from harbor sales tax, \$1.05 million from raw fish tax sharing, and \$179,789 from Commercial Passenger Vessel Tax revenues in 2010. Revenues collected from fisheries-related taxes are put towards maintaining the harbor, roads, water and wastewater systems, and public safety services.

Commercial Fishing

Kodiak hosts Alaska's largest fishing port. The KMA has 7 districts and 52 sections. There are approximately 750 salmon producing streams within the KMA. Chinook salmon occur in 6 streams, and sockeye salmon are found in 49. Coho salmon are found in 204 streams, while 404 streams support pink salmon. Finally, chum salmon can be found in 174 streams. Two hatcheries are located within the KMA which supplement natural populations. One is located in Kitoi Bay on the southeast side of Afognak Island, while the other is located at Pillar Creek near the City of Kodiak. Commercial salmon in the KMA dates back to 1882. In 1974, a limited entry system was created by the state to restrict effort. The primary gear used in harvesting is either purse or beach seine, although gillnets are also used. In 2010, the projected KMA harvest was

²⁷¹ Westward Seafoods. (n.d.). *Our Plants*. Retrieved August 15, 2012 from: <http://www.westwardseafoods.com/company.php>.

²⁷² This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

²⁷³ Alaska Seafood Marketing Institute. (n.d.). *Suppliers*. Retrieved August 15, 2012 from: alaskaseafood.org/industry/suppliers/.

²⁷⁴ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

²⁷⁵ Kodiak Daily Mirror "Sun'aq Tribe awarded grant for entering seafood industry." October 11, 2010. Retrieved August 15, 2012 from: kodiakdailymirror.com.

²⁷⁶ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

20,000 Chinook, 2.49 million sockeye, 413,108 coho, 11.4 million pink, and 1.02 million chum salmon.²⁷⁷

Pacific herring have been harvested for food and bait in the KMA since 1912. Early harvests were primarily used for food or reduction products. During the 1980s and 1990s, harvests occurred mainly in the northeast portion of the Shelikof Strait, with effort targeting both the Kodiak and Kamishak Bay stocks. However, the Kamishak spawning biomass has been below acceptable levels since 1998, and the Kamishak Bay sac roe and Kodiak food/bait fisheries have remained closed since then. Fisheries remain open in the rest of the KMA where spawning stocks are strong. The Kodiak food/bait herring fishery has been utilized primarily as bait for crab and longline fisheries, while the sac roe fishery is typically exported to Asian markets.²⁷⁸

Halibut stocks in IPHC Area 3A were at average levels as of 2007; however, levels are believed to be declining due to low recruitment and decreasing size-at-age.²⁷⁹

Historically, Kodiak supported significant red king crab populations, and trawl shrimp fisheries. However, since the 1980s, red king crab populations have been depressed, and the commercial fishery remains closed. Shrimp stocks as of 2009 only support minor fisheries. Small green sea urchin, golden king crab, and grooved Tanner crab fisheries exist, and various clam species are commercial harvested for consumption or bait. The dominate species harvested from Kodiak waters in 2009 were Tanner crab, Dungeness crab, giant Pacific octopus, and red sea cucumber. Dungeness crab was the most valuable shellfish harvested in the Kodiak area in 2009.²⁸⁰

Commercially significant groundfish species harvested in the Kodiak area include Pacific cod, sablefish, lingcod, skates, black rockfish, and walleye pollock. In 2010, walleye pollock and Pacific cod comprised the largest volume of groundfish harvested from state waters around Kodiak. Pacific cod are managed primarily through NMFS, although ADF&G issues emergency orders for state-water or parallel fisheries. The largest harvest of cod in federal waters occurred in the early 1990s, but has recently been more closely regulated in order to mitigate impacts on Steller sea lion populations. Harvest of Pacific cod within the KMA during the 2010 parallel season reached 8.59 million pounds. The majority of cod was harvested using pot and longline gear. Total Pacific cod harvests from state-waters in 2010 was 13.56 million pounds. Walleye pollock are managed by NMFS as three separate stocks, with parallel fisheries occurring in state-waters. Harvests from state-waters within the KMA totaled 23.68 million pounds in 2010.²⁸¹ Black rockfish were not targeted commercially in the Kodiak area until 1990. Harvests declined shortly after they started due to low abundance and poor market conditions. Skate harvests grew

²⁷⁷ Jackson, J.; Dinnocenzo, J.; and Spalinger, G. (2010). *Kodiak Management Area Commercial Salmon Fishery Annual Management Report, 2010*. Fishery Management Report No. 10-47. Retrieved September 14, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR10-47.pdf>.

²⁷⁸ Jackson, J. (2011). *Kodiak Management Area Commercial Herring Food and Bait Fishery Harvest Strategy, 2010*. Fishery Management Report No. 10-34. Retrieved September 14, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidpdfs/FMR10-34.pdf>.

²⁷⁹ Glen Gray and Associates. (2007). *KIB Coastal Management Plan – Final Plan Amendment*. Retrieved September 11, 2012 from: http://alaskacoast.state.ak.us/District/FinalFinalPlans/Kodiak/Kodiak_CMP.pdf.

²⁸⁰ Stichert, M. A. (2010). *Annual Management Report for Shellfish Fisheries in the Kodiak, Chignik, and Alaska Peninsula Areas, 2009*. Fishery Management Report No. 10-32. Retrieved September 14, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR10-32.pdf>.

²⁸¹ Stichert, M. A.; Phillips, K.; and Converse, P. (2011). *Annual Management Report for Groundfish Fisheries in the Kodiak, Chignik, and South Alaska Peninsula Management Areas, 2010*. Fishery Management Report No. 11-44. Retrieved September 14, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-44.pdf>.

quickly starting in 2003 due an emerging Korean market for skate products. Fishermen targeting skates were also allowed to retain cod in some instances. Sablefish habitat in state waters is limited in the Kodiak area, and larger adult fish prefer deeper waters. Lingcod are not typically targeted in the western Gulf of Alaska (GOA), although they are harvested from bycatch. Harvests primarily occur in rocky reef areas, although large catches are sometimes taken in offshore trawl fisheries.²⁸²

In 2010, 587 residents, or 9.6% of the population, held 1,279 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 716 residents held 1,646 CFEC permits, indicating an 18% decrease in commercial fisheries participation by local residents over the decade. Of the permits held in 2010, 13% were for crab, compared to 8% in 2000; 6% were for “other” shellfish, compared to 4% in 2000; 16% were for halibut, compared to 18% in 2000; 11% were for herring, compared to 10% in 2000; 3% were for sablefish, compared to 4% in 2000; 23% were for groundfish, compared to 34% in 2000; and 31% were for salmon, compared to 23% in 2000. Also in that year, 187 residents held 216 License Limitation Program (LLP) groundfish permits, compared to 245 permits held by 200 residents in 2000; 42 residents held 47 LLP crab permits, compared to 67 permits held by 56 residents in 2000; and 137 residents held 143 Federal Fisheries Permits (FFP), compared to 188 FFP held by 168 residents in 2000.

In 2010, 224 account holders held 47.77 million shares of halibut quota, compared to 304 who held 57.08 million in 2000. The number of halibut quota shares held in Kodiak peaked in 2000. However, it should be noted that the amount of Individual Fish Quota (IFQ) in pounds decreased steadily between 2000 and 2010 from 9.26 million pounds, to 6.44 million. Also in 2010, 62 account holders held 19.09 million shares of sablefish quota, compared to 67 who held 17.99 million in 2000. The number of sablefish shares held in Kodiak peaked in 2010, and the IFQ allotment peaked in 2006 at 1.79 million pounds. Finally, 57 account holders held 174.24 million pounds of crab quota, compared to 46 who held 146.08 million in 2005. The number of crab quota shares held in Kodiak peaked in 2009 at 181.71 million, and the IFQ allotment peaked in 2008 at 6.75 million pounds. Overall, Kodiak residents held 23.3% of halibut, 14.4% of sablefish, and 32.5% of crab quota statewide in 2010.

Of the CFEC permits held in 2010, 59% were actively fished, compared to 60% in 2000. By fishery, 47% of crab permits were actively fished, compared to 69% in 2000; 35% of “other: shellfish permits, compared to 36% in 2000; 86% of halibut permits, compared to 81% in 2000; 26% of herring permits, compared to 23% in 2000; 89% of sablefish permits, compared to 69% in 2000; 63% of groundfish permits, compared to 52% in 2000; and 59% of salmon permits, compared to 73% in 2000.

Residents held 884 commercial crew licenses in 2010, compared to 1,263 in 2000; which was also the year in which the number of locally held crew licenses peaked. Also in that year, residents held majority ownership of 452 commercial fishing vessels, compared to 719 in 2000; which was again, the year in which local vessel ownership peaked. Both the number of crew licenses and the number of vessels owned by local residents declined at a steady rate between 2000 and 2010. Fisheries prosecuted by Kodiak residents in 2010 included: Westward pot Dungeness crab; Kodiak pot king and Tanner crab; Bering Sea pot king and Tanner crab; Bristol Bay pot king crab; Alaska Peninsula pot Tanner crab; statewide hand troll, mechanical jig, and longline halibut; southeast purse seine herring roe; Kodiak purse seine and gillnet herring roe; Alaska Peninsula purse seine herring roe; Bristol Bay purse seine herring roe; Kodiak purse seine

²⁸² See footnote 279.

herring food/bait; statewide longline, otter trawl, mechanical jig, and pot miscellaneous saltwater finfish; GOA longline, otter trawl, pot, and mechanical jig miscellaneous saltwater finfish; southeast longline demersal shelf rockfish; statewide pot octopi/squid; Prince William Sound pot shrimp; Westward pot shrimp; statewide dive sea cucumber; Kodiak dive sea cucumber; statewide dredge scallop; statewide longline sablefish; Prince William Sound purse seine and drift gillnet salmon; Kodiak set gillnet and purse and beach seine salmon; Chignik purse seine salmon; Cook Inlet drift gillnet salmon; Alaska Peninsula drift gillnet salmon; Bristol Bay drift and set gillnet salmon; and statewide power troll salmon.²⁸³

In 2010, a total of 316.50 million pounds of seafood was landed in Kodiak valued at \$121.70 million ex-vessel, compared to 285.43 million pounds valued at \$96.71 million in 2000. Pounds landed in Kodiak peaked in 2006 at 376.51 million. Total ex-vessel value of landings peaked in 2008 at \$145.33 million. Overall, 13.6% of total 2010 landings made in Alaska were made in Kodiak, compared to 13.0% in 2000. In addition, Kodiak received 9.9% of total ex-vessel revenue made statewide that year, compared to 13.2% in 2000. Kodiak ranked 2nd of 65 communities reporting landings for 2010 in both total pounds landed and total ex-vessel value of landings and pollock was ranked first in 2010 in terms of pounds landed, followed by Pacific cod, “other” groundfish, salmon, herring, halibut, sablefish, and “other” shellfish. In that year, 106.78 million pounds of pollock valued at \$17.43 million ex-vessel was landed, compared to 106.09 million pounds valued at \$12.17 million ex-vessel in 2000; an increase of \$0.00 per pound ex-vessel after adjusting for inflation.²⁸⁴ Also in that year, 75.38 million pounds of Pacific cod valued at \$19.43 million ex-vessel was landed, compared to 64.17 million pounds valued at \$22.90 ex-vessel in 2000; a decrease of \$0.23 per pound ex-vessel after adjusting for inflation.²⁸⁵ In terms of “other” groundfish, landings totaled 66.15 million pounds valued at \$7.41 million ex-vessel, compared to 47.02 million valued at \$4.54 million ex-vessel in 2000. In terms of salmon, 44.22 million pounds were landed valued at \$24.02 million ex-vessel, compared to 52.03 million pounds valued at \$18.59 million ex-vessel in 2000; an increase of \$0.05 per pound ex-vessel after adjusting for inflation,²⁸⁶ and without considering the species composition of landings. In terms of herring, landings totaled 11.63 million pounds valued at \$1.33 million in 2010, compared to 1.87 million pounds valued at \$635,596 in 2000; a decrease of \$0.11 per pound ex-vessel after adjusting for inflation.²⁸⁷ In terms of halibut, 6.45 million pounds valued at \$31.16 million were landed in 2010, approximately a third less than landed in 2000 (9.23 million pounds valued at \$23.02 million); however, also representing an increase of \$0.40 per pound ex-vessel after adjusting for inflation.²⁸⁸ In terms of sablefish, 2.76 million pounds were landed valued at \$21.02 million, compared to 2.07 million pounds valued at \$6.34 million in 2000; an increase of \$0.72 per pound ex-vessel after adjusting for inflation.²⁸⁹ Finally, 674,606 pounds of “other” shellfish were landed valued at \$452,263, significantly higher than the 141,935 pounds valued at \$49,545 landed in 2000.

²⁸³ Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁸⁴ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

²⁸⁵ Ibid.

²⁸⁶ Ibid.

²⁸⁷ Ibid.

²⁸⁸ Ibid.

²⁸⁹ Ibid.

For landings made by Kodiak residents in 2010, pollock ranked first in terms of pounds landed; followed by Pacific cod, salmon, “other” groundfish, herring, halibut, crab, sablefish, and “other” shellfish. In that year, residents landed 67.07 million pounds of pollock valued at \$10.40 million ex-vessel, compared to 75.44 million pounds valued at \$8.48 million ex-vessel; an increase of \$0.01 per pound ex-vessel after adjusting for inflation.²⁹⁰ Residents landed 54.20 million pounds of Pacific cod valued at \$14.65 million ex-vessel, compared to 52.90 million pounds valued at \$22.45 million ex-vessel in 2000; a decrease of \$0.31 per pound ex-vessel after adjusting for inflation.²⁹¹ Residents landed 31.97 million pounds of salmon valued at \$18.88 million ex-vessel, compared to 31.73 million pounds valued at \$11.66 million ex-vessel in 2000; an increase of \$0.08 per pound ex-vessel after adjusting for inflation,²⁹² and without considering the species composition of landings. Residents landed 27.82 million pounds of “other” groundfish valued at \$3.24 million ex-vessel, compared to 35.76 million pounds valued at \$4.55 million ex-vessel in 2000. Residents landed 22.36 million pounds of herring valued at \$3.60 million ex-vessel, compared to 8.0 million pounds valued at \$1.19 million in 2000; a decrease of \$0.04 per pound ex-vessel after adjusting for inflation.²⁹³ Residents landed 7.52 million pounds of halibut valued at \$35.64 million ex-vessel, compared to 10.85 million pounds valued at \$27.04 million ex-vessel in 2000; an increase of \$1.31 per pound ex-vessel after adjusting for inflation.²⁹⁴ Residents landed 7.30 million pounds of crab valued at \$17.29 million ex-vessel, compared to 7.41 million pounds valued at \$19.15 million ex-vessel in 2000; a decrease of \$1.18 per pound ex-vessel after adjusting for inflation,²⁹⁵ and without considering the species composition of landings. Residents landed 1.61 million pounds of sablefish valued at \$8.60 million ex-vessel, compared to 1.87 million pounds valued at \$6.62 million in 2000; an increase of \$0.47 per pound ex-vessel after adjusting for inflation.²⁹⁶ Finally, residents landed 453,391 pounds of “other” shellfish valued at \$446,032, compared to 224,160 pounds valued at \$311,114 in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁹⁰ Ibid.

²⁹¹ Ibid.

²⁹² Ibid.

²⁹³ Ibid.

²⁹⁴ Ibid.

²⁹⁵ Ibid.

²⁹⁶ Ibid.

Table 3. Known Fisheries-Related Revenue (In U.S. Dollars) Received by the Community of Kodiak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$520,000	\$520,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$1.05 M ³
Shared Fisheries											
Business Tax ¹	\$617,330	\$649,909	\$885,447	\$610,634	\$503,617	\$642,980	\$711,505	\$828,287	\$884,658	\$1.02 M	\$1.12 M
Fisheries Resource											
Landing Tax ¹	\$337	\$18,016	\$3,868	\$17,084	\$857	\$580	\$918	\$485	\$1,018	\$779	\$1,441
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	\$26,000	\$30,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$1.27 M	\$1.77 M	\$2.38 M	\$2.46 M	\$2.77 M	\$2.37 M	\$1.79 M	\$1.89 M	\$2.58 M	\$2.63 M	\$3.10 M
Port/dock usage ²	\$1.20 M	\$1.80 M	\$1.22 M	\$578,776	\$2.06 M	\$3.38 M	\$2.63 M	\$8.74 M	\$15.77 M	\$27.45 M	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$3.63 M</i>	<i>\$4.79 M</i>	<i>\$4.48 M</i>	<i>\$3.67 M</i>	<i>\$5.34 M</i>	<i>\$6.40 M</i>	<i>\$5.13 M</i>	<i>\$11.46 M</i>	<i>\$19.24 M</i>	<i>\$31.10 M</i>	<i>\$5.27 M</i>
<i>Total municipal revenue⁵</i>	<i>\$22.99 M</i>	<i>\$25.20 M</i>	<i>\$29.22 M</i>	<i>\$33.41 M</i>	<i>\$27.83 M</i>	<i>\$34.78 M</i>	<i>\$32.80 M</i>	<i>\$48.47 M</i>	<i>\$60.76 M</i>	<i>\$55.02 M</i>	<i>\$30.48 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kodiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	245	228	215	209	204	211	209	210	218	215	216
	Active permits	125	125	126	113	110	111	106	101	109	109	116
	% of permits fished	51%	54%	58%	54%	53%	52%	50%	48%	50%	50%	53%
	Total permit holders	200	195	187	176	176	181	182	179	188	187	187
Crab (LLP) ¹	Total permits	67	61	58	52	51	50	51	50	50	49	47
	Active permits	39	36	36	33	32	31	28	25	22	21	19
	% of permits fished	58%	59%	62%	63%	62%	62%	54%	50%	44%	42%	40%
	Total permit holders	56	50	49	43	41	42	43	42	43	41	42
Federal Fisheries Permits ¹	Total permits	188	197	202	171	174	180	153	160	164	141	143
	Fished permits	0	0	1	125	121	124	112	118	125	112	109
	% of permits fished	0%	0%	0%	73%	70%	69%	73%	74%	76%	79%	76%
	Total permit holders	168	176	180	157	160	163	144	149	152	135	137
Crab (CFEC) ²	Total permits	124	268	295	217	215	222	182	172	168	166	167
	Fished permits	85	195	240	146	125	107	84	70	56	55	79
	% of permits fished	69%	73%	81%	67%	58%	48%	46%	41%	33%	33%	47%
	Total permit holders	79	198	220	155	133	176	154	149	145	143	144
Other shellfish (CFEC) ²	Total permits	73	63	56	60	53	64	43	39	45	35	45
	Fished permits	27	12	16	17	13	14	9	9	13	8	16
	% of permits fished	36%	19%	28%	28%	24%	21%	20%	23%	28%	22%	35%
	Total permit holders	56	52	42	47	44	47	37	31	37	31	35
Halibut (CFEC) ²	Total permits	289	270	248	243	229	224	221	217	210	208	207
	Fished permits	235	207	217	208	192	188	192	186	187	172	177
	% of permits fished	81%	77%	88%	86%	84%	84%	87%	86%	89%	83%	86%
	Total permit holders	262	249	234	227	216	212	208	206	198	198	196
Herring (CFEC) ²	Total permits	159	145	139	134	131	131	132	131	128	133	135
	Fished permits	36	36	36	32	30	38	19	20	23	28	35
	% of permits fished	23%	25%	26%	24%	23%	29%	14%	15%	18%	21%	26%
	Total permit holders	103	102	97	91	94	97	100	96	97	98	94

Table 4 cont'd. Permits and Permit Holders by Species, Kodiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	58	55	52	52	47	46	52	53	48	50	44
	Fished permits	40	42	43	42	33	39	42	43	37	40	39
	% of permits fished	69%	76%	83%	81%	70%	85%	81%	81%	77%	80%	89%
	Total permit holders	57	54	50	50	46	46	51	50	47	50	44
Groundfish (CFEC) ²	Total permits	559	406	348	379	399	411	345	332	340	293	290
	Fished permits	292	183	164	211	238	234	198	181	189	176	182
	% of permits fished	52%	45%	47%	56%	60%	57%	57%	55%	56%	60%	63%
	Total permit holders	386	299	264	282	300	309	269	267	262	239	237
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	384	378	370	367	372	386	381	385	383	391	391
	Fished permits	279	240	179	204	207	221	207	211	208	210	232
	% of permits fished	73%	63%	48%	56%	56%	57%	54%	55%	54%	54%	59%
	Total permit holders	391	375	363	346	356	361	355	352	349	345	347
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1,646</i>	<i>1,585</i>	<i>1,508</i>	<i>1,452</i>	<i>1,446</i>	<i>1,484</i>	<i>1,356</i>	<i>1,329</i>	<i>1,322</i>	<i>1,276</i>	<i>1,279</i>
	<i>Fished permits</i>	<i>994</i>	<i>915</i>	<i>895</i>	<i>860</i>	<i>838</i>	<i>841</i>	<i>751</i>	<i>720</i>	<i>713</i>	<i>689</i>	<i>760</i>
	<i>% of permits fished</i>	<i>60%</i>	<i>58%</i>	<i>59%</i>	<i>59%</i>	<i>58%</i>	<i>57%</i>	<i>55%</i>	<i>54%</i>	<i>54%</i>	<i>54%</i>	<i>59%</i>
	<i>Permit holders</i>	<i>716</i>	<i>666</i>	<i>661</i>	<i>633</i>	<i>636</i>	<i>659</i>	<i>628</i>	<i>624</i>	<i>608</i>	<i>595</i>	<i>587</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kodiak: 2000-2010.

Year	¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Kodiak ²	Total Net Pounds Landed In Kodiak ^{2,5}	Total Ex-Vessel Value Of Landings In Kodiak ^{2,5}
2000	1,263	27	15	719	697	661	285,432,670	\$96,713,090
2001	1,127	30	12	644	645	621	280,354,204	\$79,969,674
2002	965	34	16	601	633	536	260,611,820	\$66,415,954
2003	920	29	13	579	621	508	271,050,978	\$84,596,173
2004	937	35	11	581	620	527	324,206,948	\$95,440,256
2005	891	42	12	526	565	610	361,877,488	\$108,642,258
2006	901	32	12	485	537	498	376,511,736	\$123,710,448
2007	892	33	13	490	511	477	328,773,989	\$133,955,945
2008	891	31	12	468	530	504	289,541,359	\$145,335,157
2009	868	34	11	457	536	499	308,772,614	\$112,442,426
2010	884	33	11	452	533	506	316,500,477	\$121,704,107

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kodiak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	304	57,080,447	9,255,627
2001	287	50,510,994	9,243,424
2002	271	46,525,462	8,729,310
2003	264	44,811,524	8,603,499
2004	251	44,645,629	8,189,985
2005	252	47,078,550	8,140,122
2006	249	48,840,531	7,759,598
2007	249	48,900,974	7,510,047
2008	236	50,549,298	7,865,301
2009	229	48,807,714	7,050,593
2010	224	47,765,032	6,444,672

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kodiak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	67	17,988,783	1,573,109
2001	65	16,950,060	1,453,540
2002	62	14,816,809	1,327,576
2003	57	15,398,307	1,653,396
2004	54	13,365,140	1,605,057
2005	55	14,666,666	1,672,611
2006	56	16,641,450	1,785,365
2007	60	15,728,908	1,622,165
2008	60	16,535,007	1,452,653
2009	58	17,347,762	1,384,865
2010	62	19,086,362	1,447,274

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kodiak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	46	146,078,033	4,459,871
2006	47	170,384,920	4,402,191
2007	48	175,622,924	7,278,521
2008	54	175,501,341	6,749,102
2009	58	181,707,004	5,689,446
2010	57	174,235,081	5,715,071

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kodiak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	9,233,449	8,659,750	7,657,222	7,988,764	8,514,844	8,638,822	8,416,196	8,243,195	8,384,759	7,507,807	6,452,623
Herring	1,865,675	3,164,892	3,193,111	4,395,581	6,765,288	7,414,634	5,410,127	4,958,669	6,099,140	9,767,602	11,626,225
Other Groundfish	47,024,536	41,843,195	43,993,573	47,182,133	46,235,331	52,646,313	66,964,895	71,000,361	82,093,807	71,964,543	66,146,874
Other Shellfish	141,935	355,233	483,660	336,158	445,659	1,501,641	3,268,894	1,231,477	686,828	1,041,789	674,606
Pacific Cod	64,174,761	53,748,832	49,182,878	51,774,863	61,285,752	53,882,267	49,023,028	54,288,908	58,902,808	45,702,810	75,380,048
Pollock	106,094,642	89,611,856	65,111,550	71,338,423	84,169,222	104,029,882	98,427,793	73,202,635	71,933,351	56,927,178	106,776,930
Sablefish	2,071,265	2,105,860	1,683,118	2,328,749	2,600,036	2,525,996	2,410,174	3,080,707	2,455,314	2,466,658	2,763,564
Salmon	52,027,172	78,838,317	86,970,330	83,542,164	111,910,020	127,826,561	139,194,438	109,715,426	56,188,080	110,801,766	44,222,475
<i>Total²</i>	<i>282,633,435</i>	<i>278,327,935</i>	<i>258,275,442</i>	<i>268,886,835</i>	<i>321,926,152</i>	<i>358,466,116</i>	<i>373,115,545</i>	<i>325,721,378</i>	<i>286,744,087</i>	<i>306,180,153</i>	<i>314,043,345</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$23,023,430	\$17,207,856	\$16,857,177	\$22,552,489	\$24,904,619	\$25,122,905	\$32,175,455	\$34,889,958	\$35,848,807	\$22,848,762	\$31,157,917
Herring	\$635,596	\$919,020	\$793,678	\$1,170,045	\$1,661,260	\$1,663,673	\$562,236	\$783,448	\$1,298,566	\$2,137,909	\$1,333,146
Other Groundfish	\$4,541,561	\$3,434,518	\$3,285,893	\$4,188,390	\$3,202,659	\$5,141,931	\$8,688,375	\$10,404,637	\$12,021,987	\$7,778,009	\$7,407,750
Other Shellfish	\$49,545	\$269,242	\$333,135	\$248,386	\$312,463	\$521,266	\$469,014	\$506,827	\$533,670	\$490,720	\$452,263
Pacific Cod	\$22,903,026	\$15,547,542	\$12,091,259	\$16,026,883	\$17,123,994	\$16,785,166	\$19,688,080	\$27,269,569	\$33,533,205	\$14,451,852	\$19,430,012
Pollock	\$12,170,802	\$11,080,009	\$6,281,669	\$6,385,428	\$8,868,979	\$14,176,306	\$13,390,885	\$8,145,267	\$12,290,730	\$9,616,228	\$17,425,037
Sablefish	\$6,342,126	\$6,063,222	\$4,779,447	\$7,449,042	\$7,406,201	\$7,569,457	\$8,237,177	\$10,104,721	\$9,290,959	\$9,924,865	\$13,621,925
Salmon	\$18,591,496	\$18,822,924	\$13,598,450	\$19,265,619	\$23,978,687	\$28,104,742	\$32,171,181	\$32,438,126	\$32,094,870	\$39,095,940	\$24,024,558
<i>Total²</i>	<i>\$88,257,582</i>	<i>\$73,344,333</i>	<i>\$58,020,709</i>	<i>\$77,286,282</i>	<i>\$87,458,861</i>	<i>\$99,085,445</i>	<i>\$115,382,402</i>	<i>\$124,542,554</i>	<i>\$136,912,794</i>	<i>\$106,344,285</i>	<i>\$114,852,609</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kodiak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	7,410,891	5,383,969	6,205,762	6,169,872	5,755,299	6,497,203	6,323,098	7,926,096	13,063,779	9,299,824	7,302,708
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	10,850,819	10,266,327	10,515,056	10,270,942	9,879,735	9,364,183	8,834,092	9,059,984	8,640,983	8,151,599	7,524,511
Herring	7,998,326	8,421,986	9,096,512	8,033,311	9,612,358	12,169,653	11,802,235	9,974,002	19,046,884	15,125,022	22,362,694
Other											
Groundfish	35,756,763	25,770,366	21,584,998	22,295,660	16,205,733	16,707,938	19,251,764	23,767,197	27,598,223	29,141,207	27,821,343
Other Shellfish	224,160	240,167	342,992	326,250	607,091	676,168	1,369,868	708,282	514,370	635,151	453,391
Pacific Cod	52,897,317	30,635,990	34,366,630	39,768,485	43,055,249	39,314,436	39,207,893	41,358,433	36,577,122	32,558,237	54,196,122
Pollock	75,435,694	72,877,022	74,679,015	73,879,805	79,078,724	77,582,088	74,419,635	66,797,804	49,862,065	45,852,004	67,067,727
Sablefish	1,873,774	1,246,189	1,376,278	1,468,051	1,596,333	1,578,174	1,521,295	1,867,634	1,474,405	1,572,900	1,613,994
Salmon	31,732,849	49,172,809	42,441,699	35,631,899	49,241,534	56,259,715	58,244,505	57,047,460	31,377,462	56,906,860	31,967,261
<i>Total²</i>	<i>224,180,593</i>	<i>204,014,826</i>	<i>200,608,942</i>	<i>197,844,276</i>	<i>215,032,056</i>	<i>220,149,558</i>	<i>220,974,385</i>	<i>218,506,892</i>	<i>188,155,293</i>	<i>199,242,804</i>	<i>220,309,751</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$19,154,686	\$14,525,267	\$17,325,538	\$18,691,177	\$17,539,509	\$15,887,860	\$11,995,305	\$21,043,428	\$31,909,307	\$18,846,590	\$17,293,854
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$27,037,553	\$20,304,227	\$23,350,180	\$29,375,078	\$29,105,782	\$27,716,712	\$33,507,055	\$38,638,741	\$36,788,565	\$24,588,722	\$35,636,950
Herring	\$1,192,064	\$1,502,602	\$1,329,126	\$1,162,874	\$1,599,499	\$2,197,767	\$1,060,641	\$1,526,360	\$3,871,738	\$3,539,728	\$3,600,773
Other											
Groundfish	\$4,553,293	\$3,545,368	\$2,469,797	\$2,837,700	\$1,146,875	\$1,754,855	\$2,702,843	\$3,506,269	\$4,423,705	\$3,314,810	\$3,238,609
Other Shellfish	\$311,114	\$219,060	\$243,164	\$292,305	\$583,952	\$503,749	\$430,632	\$489,759	\$503,357	\$487,513	\$446,032
Pacific Cod	\$22,453,748	\$8,801,981	\$8,482,457	\$12,795,181	\$11,790,348	\$12,189,145	\$16,007,844	\$21,059,066	\$21,084,289	\$9,921,927	\$14,647,444
Pollock	\$8,477,141	\$7,098,811	\$7,853,801	\$6,974,400	\$7,855,493	\$10,065,597	\$9,642,785	\$8,005,230	\$9,143,172	\$8,028,073	\$10,397,353
Sablefish	\$6,618,730	\$3,714,869	\$4,203,723	\$5,018,220	\$4,612,858	\$4,886,092	\$5,387,704	\$6,612,485	\$6,038,160	\$6,997,784	\$8,602,511
Salmon	\$11,662,171	\$10,540,860	\$6,343,594	\$7,714,676	\$9,830,603	\$11,828,845	\$15,016,648	\$16,599,984	\$16,707,469	\$20,652,430	\$18,877,120
<i>Total²</i>	<i>\$101,460,500</i>	<i>\$70,253,046</i>	<i>\$71,601,381</i>	<i>\$84,861,611</i>	<i>\$84,064,918</i>	<i>\$87,030,622</i>	<i>\$95,751,457</i>	<i>\$117,481,322</i>	<i>\$130,469,764</i>	<i>\$96,377,576</i>	<i>\$112,740,645</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The KMA is a very popular recreational fishing area for both Alaska resident and non-resident anglers. The 70 mi of paved and hard-packed gravel roads provide access to 10 significant salmon streams and over 20 stocked lakes. Freshwater fishing opportunities available include Chinook, pink, sockeye, and coho salmon, Dolly Varden, rainbow trout, and steelhead. Fishing destinations not located adjacent to the road system can be accessed by boat or floatplane. Approximately 11,000 people live along the Kodiak road system, and around 14,000 visitors travel to the Kodiak area every year. Available services include 65 charter operators, 33 remote lodges, 6 air taxis, 12 state and federal public cabins, 10 private remote rental cabins, 5 hotels and motels, 30 bed and breakfasts, 4 sporting good stores, and a range of other services which support a robust visitor economy.²⁹⁷ According to ADF&G records, there were 46 sport fish guide businesses active in Kodiak in 2010, compared to 47 in 2000. According to records, active sport fish guide businesses peaked in 2008 at 58. In addition, 98 sport fish guide licenses were issued to residents in 2010, compared to 140 in 2000. The number of sport fish guide licenses held by residents declined at a steady rate between 2000 and 2010. Between 4,300 and 5,000 sportfishing licenses were sold to residents each year between 2000 and 2010; however, as many as 11,436 licenses were sold in the community (irrespective of residence) indicating that Kodiak is a popular sportfishing destination for non-residents (Table 11).

On the road system, Chinook salmon can be found offshore of Monashka Bay, Cape Chiniak, and the American and Olds rivers. Saltwater trolling is a popular activity in marine waters, and most trolling occurs in Chiniak Bay between April and October. The Karluk and Ayakulik rivers, located on the southwest end of Kodiak Island, are Kodiak's only native Chinook fisheries. There are three sockeye salmon producing streams on the Kodiak road system: the Buskin, Pasagshak, and Saltery rivers. The largest sockeye run occurs on the Saltery River, starting in early July, and peaking near the end of the month. Pink salmon are widely available throughout the Kodiak area. Pinks can be taken along beaches or at the mouth of most drainages, and are available by mid-July. Coho salmon are typically targeted in marine waters by troll vessel during the last week of July as they begin to move towards shore.

Popular areas include Cape Chiniak and Buoy 4. Steelhead trout are available in limited numbers within Buskin, Miam, and Saltery drainages adjacent to the road system. The Karluk River contains Kodiak Island's largest population of steelhead. The Dog Salmon and Litnik rivers also contain large concentrations. Halibut are found in abundance throughout marine waters around Kodiak Island, and are typically targeted from late April through early September. More than 30 species of rockfish are also available, with yellow-eye caught most often. Lingcod can be targeted beginning July 1, but are in relatively lower abundance. Dolly Varden are at their peak in late May, and again from mid-July through October. Fishing areas along the road system include Mission and Pillar creek beaches in the spring and most Kodiak drainages in the summer and fall.²⁹⁸

Kodiak is located in the Kodiak ADF&G Harvest Survey Area, which included all Alaskan waters, including drainages, of the Kodiak and Afognak Island groups. In 2010, there were a total of 40,377 saltwater and 41,082 freshwater angler days fished, compared to 55,576

²⁹⁷ Alaska Dept. of Fish and Game. (n.d.). *Kodiak Management Area*. Retrieved September 17, 2012 from: <http://www.adfg.alaska.gov/index.cfm?adfg=ByAreaSouthcentralKodiak.fishingInfo#/runtiming>

²⁹⁸ Alaska Dept. of Fish and Game. (n.d.). *Kodiak*. Retrieved September 17, 2012 from: <http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/kodiak.pdf>.

and 65,831 in 2000, respectively (Table 11). Both saltwater and freshwater angler days fished peaked in 2000. Between 2000 and 2010, the proportion of non-Alaska residents participating in freshwater and saltwater recreational fisheries grew relative to the total number of angler days fished. Overall, non-Alaska residents accounted for 49.6% of saltwater and 45.9% of freshwater angler days fished in 2010, compared to 30.2% and 28.1% in 2000, respectively.

Table 11. Sport Fishing Trends, Kodiak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kodiak ²
2000	47	140	5,062	6,402
2001	43	142	4,699	5,271
2002	44	165	4,733	7,182
2003	45	154	4,785	6,990
2004	45	151	4,691	7,112
2005	53	102	4,754	7,606
2006	53	109	4,602	7,134
2007	55	116	4,450	7,436
2008	58	106	4,317	6,931
2009	49	97	4,436	6,472
2010	46	98	4,418	11,436

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	16,767	38,809	18,524	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	10,859	21,283
2010	20,012	20,365	18,871	22,211

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

In a survey conducted by the AFSC in 2011, community leaders reported that private anglers in Kodiak target Chinook salmon, coho salmon, sockeye salmon, halibut, and crab. Fishing is typically done by charter vessel, locally owned private vessel, or from shore (residents only). According to ADF&G Harvest Survey data, local private anglers target all five species of Pacific salmon, rainbow trout, Dolly Varden, Arctic grayling, northern pike, Pacific halibut, rockfish, lingcod, Pacific cod, sablefish, smelt, Dungeness crab, Tanner crab, razor clams, hardshell clams, and shrimp.²⁹⁹ According to 2010 catch/release data collected by ADF&G, charter vessels kept 1,017 Chinook salmon, 1,759 coho salmon, 83 sockeye salmon, 421 unspecified salmon, 7,133 halibut, 1,423 lingcod, and 11,388 rockfish. Overall, the number of salmon caught was lower in 2010 than in previous years since 2000. The number of Chinook and coho salmon caught was lower than any other year during that decade. Conversely, the number of rockfish caught was at its highest level in 10 years in 2010.

Subsistence Fishing

Subsistence resources have been relied on in Kodiak since human occupation began some 7,500 years ago. The Alutiiq culture relied strongly on subsistence use of marine fish, invertebrates, marine mammals, terrestrial mammals, and freshwater fish. While Kodiak's economy is not as dependent on subsistence resources as more remote locations on Kodiak Island, residents still practice subsistence to supplement diets and income. Participation in the KMA subsistence salmon fishery is open to any Alaska residents. However, subsistence activities on federal waters are limited only to qualified rural Alaska residents. All communities located within the KMA are considered rural by the Federal Subsistence Board and are eligible to participate in subsistence activities on federal lands and waters.³⁰⁰ In a survey conducted by the AFSC in 2011, community leaders reported that residents consider salmon, halibut, and crab as the three most important aquatic subsistence resources. Species which Kodiak Island Borough residents harvest for subsistence purposes include: all five species of Pacific salmon, halibut, sole, flounder, herring, capelin, cod, bass, snapper, herring, crab, mussels, razor clams, butter clams, softshell clams, cockles, emmas, bidarkis, king crabs, tanner crabs, Dungeness crabs, horse crabs, limpets, snails, octopus, sea urchins, shrimp, Dolly Varden, whitefish, lake trout, rainbow/steelhead trout, Arctic grayling, Northern pike, burbot, blackfish, longnose sucker, smelt, harbor seal, spotted seal, ringed seal, bearded seal, Steller sea lion, walrus, and beluga whale.³⁰¹

According to 2006 ADF&G estimates detailed in Kodiak Island Borough's *2007 Coastal Management Plan*, 93.3% of Kodiak residents use subsistence salmon, 1.9% use marine mammals, 79.0% use marine invertebrates, and 95.2% use non-salmon fish.³⁰² Of the species listed by ADF&G in Table 13, residents reported harvesting sockeye salmon the most, followed by coho, pink, Chinook, and chum salmon. In 2008, residents reported harvesting 19,996 salmon,

²⁹⁹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁰⁰ Federal Subsistence Board. (2010). *Rural Determinations*. 50 CFR 100 Subpart B – Subsistence Management Regulations for Public Lands in Alaska. Retrieved September 18, 2012 from: <http://ecfr.gpoaccess.gov>

³⁰¹ Glen Gray and Associates. (2007). *KIB Coastal Management Plan – Final Plan Amendment*. Retrieved September 11, 2012 from: http://alaskacoast.state.ak.us/District/FinalFinalPlans/Kodiak/Kodiak_CMP.pdf.

³⁰² Ibid.

compared to 23,619 in 2000. Reported salmon harvests peaked in 2004 at 29,399 fish. In 2010, residents were issued 1,720 Subsistence Halibut Registration Certificates (SHARC), compared to 1,345 in 2003. In that year, an estimated 130,384 pounds of halibut was harvested on 508 SHARC, compared to an estimated 157,746 pounds harvested on 667 SHARC in 2003. This represents a significant decline in both the number of SHARC fished and the estimated pounds harvested, as well as the lowest permit activity relative to the number of SHARC issued since the program began. Subsistence halibut harvests peaked in 2004 at an estimated 257,581 pounds harvested on 827 SHARC (Table 14). Between 2000 and 2010, an estimated 458 sea otters were harvested. Estimated sea otter harvests peaked in 2002 at 64 otters. Between 2000 and 2008 an estimated 222 harbor seals and 8 Steller sea lions were harvested (Table 15).

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that high fuel prices, variable fish prices, and continuous changes in fishery regulations are current challenges for the portion of Kodiak’s economy that is based on fishing. They expressed that due to the diversity of Kodiak’s fleet and seafood processing sectors, most policy or management changes have an impact on some portion of the local population and fishing industry. In the past, regulations pertaining to rationalization and privatization have affected Kodiak the most.

Table 12. Subsistence Participation by Household and Species, Kodiak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kodiak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	24	1,118	282	206	3,531	467	19,133	n/a	n/a
2001	26	1,683	16	8	n/a	4	753	n/a	n/a
2002	17	1,755	14	13	n/a	n/a	1,069	n/a	n/a
2003	14	1,768	12	2	13	n/a	559	n/a	n/a
2004	1,740	1,730	252	153	3,493	594	24,907	n/a	n/a
2005	1,424	1,424	293	135	4,815	860	20,107	n/a	n/a
2006	23	20	26	10	n/a	7	526	n/a	n/a
2007	28	22	22	7	n/a	n/a	930	n/a	n/a
2008	1,276	1,268	112	104	2,721	669	16,390	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kodiak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1,345	667	157,746
2004	1,587	827	257,581
2005	1,762	885	217,016
2006	1,738	975	210,696
2007	1,902	966	197,788
2008	1,745	978	180,440
2009	1,847	941	182,340
2010	1,720	508	130,384

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kodiak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	41	n/a	n/a	2	27	n/a
2001	n/a	39	n/a	n/a	3	18	n/a
2002	n/a	64	n/a	n/a	3	18	n/a
2003	n/a	61	n/a	n/a	n/a	32	n/a
2004	n/a	38	n/a	n/a	n/a	21	n/a
2005	n/a	57	n/a	n/a	n/a	11	n/a
2006	n/a	38	n/a	n/a	n/a	11	n/a
2007	n/a	26	n/a	n/a	n/a	21	n/a
2008	n/a	54	n/a	n/a	n/a	63	n/a
2009	n/a	5	n/a	n/a	n/a	n/a	n/a
2010	n/a	35	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Larsen Bay



People and Place

*Location*³⁰³

Larsen Bay is located on the northwest coast of Kodiak Island. It is 60 miles southwest of the City of Kodiak and 283 miles southwest of Anchorage. The area encompasses 5.4 square miles of land and 2.2 square miles of water. The City was incorporated in 1974 and is under the jurisdiction of the Kodiak Island Borough.

*Demographic Profile*³⁰⁴

In 2010, there were 87 residents in Larsen Bay, ranking it the 259th largest of 352 Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population decreased by 40.8%. Between 2000 and 2009, the population declined by 31.3% and there was an average annual growth rate of -1.37%, compared to the statewide average of 0.75%; indicative of a steep rate of decline. Information regarding population trends can be found in Table 1.

Larsen Bay is a predominately Alutiiq community. In 2010, 71.3% of residents identified themselves as American Indian or Alaska Native, compared to 78.3% in 2000; 24.1% identified themselves as White, compared to 20.9% in 2000; and 4.6% identified themselves as two or more races, compared to 0.9% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size in Larsen Bay was 2.56, compared to 3.30 in 1990 and 2.88 in 2000. Also in 2010, there were a total of 70 housing units, compared to 74 in 1990 and 70 in 2000. Of the households surveyed in 2010, 29% were owner-occupied, compared to 46% in 2000; 20% were renter-occupied, compared to 11% in 2000; 11% were vacant, compared to 3% in 2000; and 40% were occupied seasonally, compared to 40% in 2000.

In 2010, the gender makeup of Larsen Bay was 55.2% male and 44.8% female. This was somewhat more skewed than both the distribution statewide (52.0% male, 48.0% female) and the distribution in 2000 (53.0% male, 47.0% female). The median age was estimated to be 43.5 years, higher than both the statewide median of 33.8 years, and 2000 median of 29.3 years.

Compared with 2000, the population structure in 2010 was more constricted in the younger age groups and expanded in the older age groups. In that year, 24.2% of residents were under the age of 20, compared to 39.1% in 2000 while 10.4% were between the ages of 20 and 29, compared to 12.2% in 2000. However, in 2010, 40.4% were between the ages of 30 and 59, compared to 37.5% in 2000 and 25.3% were over the age of 59, compared to 11.3% in 2000.

³⁰³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁰⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

This suggests that the population of Larsen Bay is continuing to age and no longer possesses a pyramid structure when the population is examined by age and gender.

Gender distribution by age cohort was slightly more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within both the 60 to 69 age range (9.2% male, 5.7% female) and the 80 and over age range (0.0% male, 3.5% female) with a disparity of 3.5%, closely followed by the 10 to 19 (6.9% male, 3.5% female) age group. Further information regarding trends in Fairbanks’ population structure can be found in Figure 2.

Table 1. Population in Larsen Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	147	-
2000	115	-
2001	-	113
2002	-	107
2003	-	95
2004	-	96
2005	-	97
2006	-	83
2007	-	89
2008	-	68
2009	-	79
2010	87	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Larsen Bay: 2000-2010 (U.S. Census).

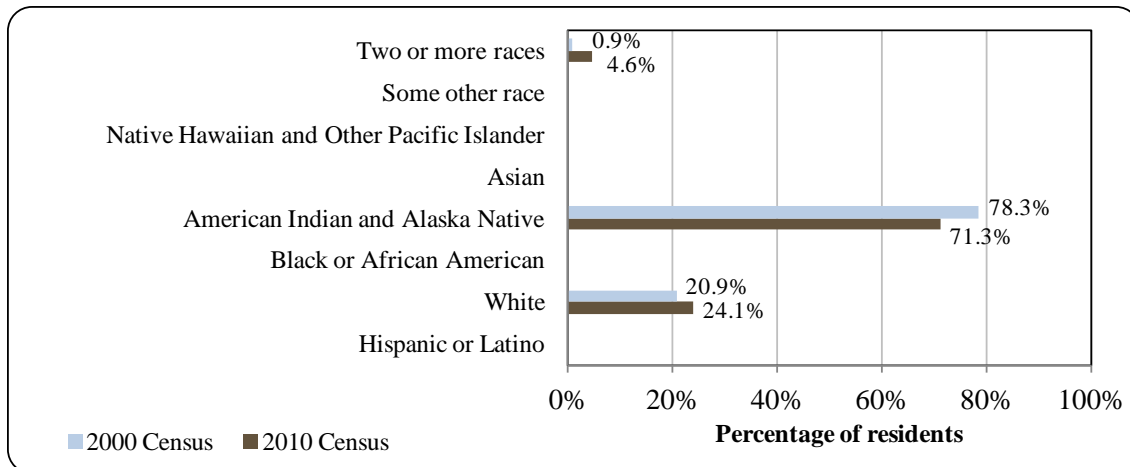
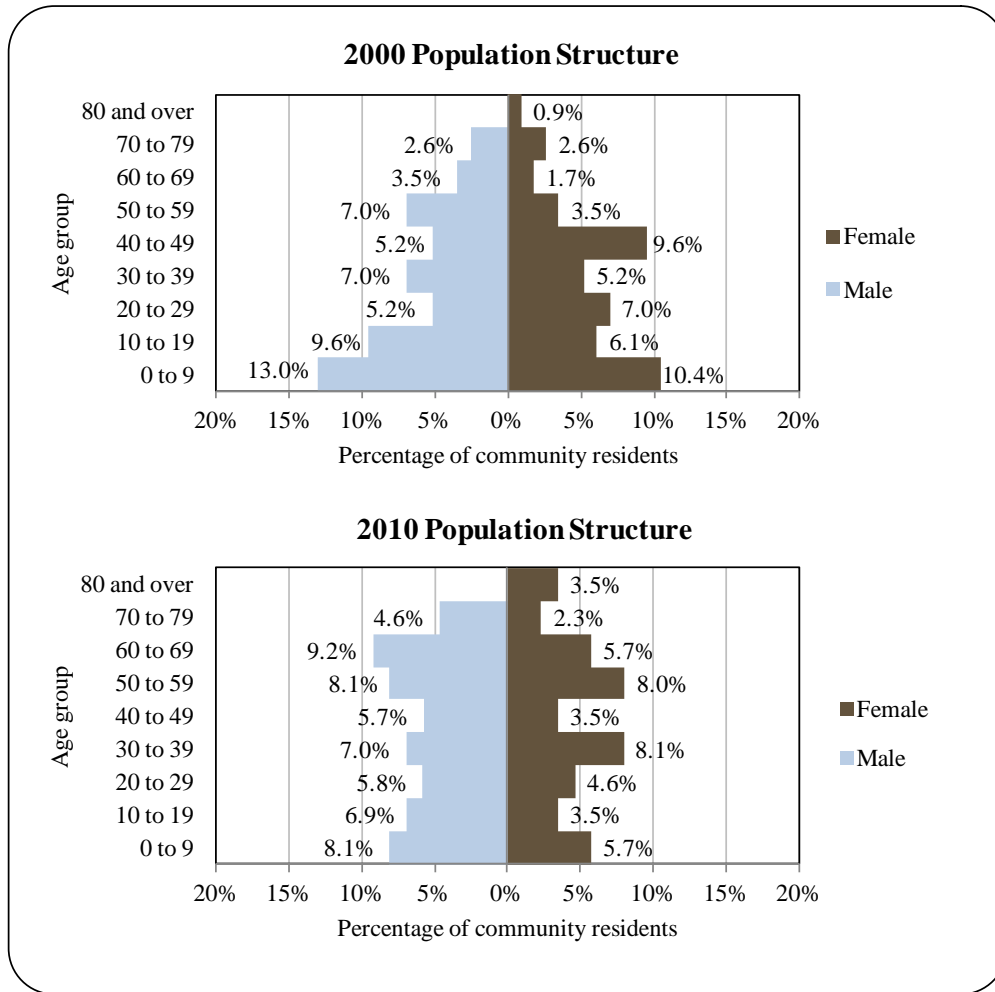


Figure 2. Population Age Structure in Larsen Bay Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³⁰⁵ estimated that 94.4% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 2.6% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 3.1% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 14.1% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; 28.2% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 17.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

³⁰⁵ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*³⁰⁶

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.^{307,308,309} The area around Larsen Bay is believed to have been inhabited for at least 2,000 years. Hundreds of artifacts have been uncovered in the community, which attest to the fact that an Aleut or more recently termed Alutiiq community lived in the area for about 2,000 years prior to the first contact with the Russians in the mid-1700s when fur traders began to frequent the islands. A tannery was present at Uyak Bay during the early 1800s. Peter Larsen was an Unga Island furrier, hunter and guide during the late 1800s and at the time of the 1890 Census the native village which was situated on the west shore of the bay, Uyak was renamed Larsen Bay after him. A cannery was constructed by the Alaska Packers Association in 1911. Owned now by the Kodiak Salmon Packers, the facility is one of the largest in the State of Alaska.³¹⁰

Larsen Bay was incorporated in the year 1974. The City gained national attention in 1991 when the Smithsonian Institution repatriated the remains of 756 Alutiiq people which had been taken 50 years earlier in accordance with the Native American Graves Protection and Repatriation Act. The remains were given a Russian Orthodox reburial and interned in a mass grave. This was the largest repatriation of Native remains carried out by the Smithsonian.

Natural Resources and Environment³¹¹

The climate of the Kodiak Islands is dominated by a strong marine influence. There is moderate precipitation, frequent cloud cover and fog, and little or no freezing weather. Severe storms are common from December through February. Average annual precipitation is 23 inches. Temperatures remain within a narrow range, from 32 to 62 °F.³¹²

The Larsen Bay area was sculpted heavily by glacial activities dating back to the Miocene. The bay itself is a fjord, which was at one time filled with ice as part of an extensive ice mass occupying Uyak Bay. Larsen Bay's coastal regions are characterized by narrow rocky beaches, moist tundra lowlands, and steep relief uplands. The community itself is located along a beach with gradual incline. Surrounding mountains reach elevations of approximately 3,000 feet. Because of extensive glaciation, the hills are generally smooth and rounded.³¹³

Subsurface geology consists primarily of slate dating by to the Late Cretaceous Period. Bedrock is found and varying depths, with some areas exposed. The mantle of bedrock is

³⁰⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁰⁷ Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. *Looking Both Ways: Heritage and Identity of the Alutiiq People*. University of Alaska Press, Fairbanks.

³⁰⁸ Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.

³⁰⁹ Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Institution, Washington D.C.

³¹⁰ Norgaard Consultants. (1984). *Comprehensive Development Plan*. Retrieved August 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/LarsenBay-CP-1984.pdf>

³¹¹ See footnote 306.

³¹² Ibid.

³¹³ See footnote 310.

covered in till with thicknesses up to 30 feet. Organic silt and volcanic ash overlay this till in depths of up to four feet. Soils are relatively shallow throughout Kodiak Island.³¹⁴

Vegetation in the area is dominated by scattered birch, cottonwood, and alders. In addition, high brush alder and willow is mixed with tree stands. There are no Sitka spruce or western hemlock in the area, as are found in eastern Kodiak Island. Bluejoint and fescue grasses abound in the open area, accompanied by other vegetation, such as lupine, Jacob's ladder, germs, sedges, and horsetail. Small areas of wetlands are found, especially near the head of the bay where soils are poorly drained.³¹⁵

The Kodiak archipelago and waters that surround it are home to many species of terrestrial and aquatic life. The Kodiak National Wildlife Refuge occupies two-thirds of Kodiak Island and is home to terrestrial species such as brown bears, bats, tundra vole, short-tailed weasel, red fox, river otter, Sitka black-tail deer, beavers, red squirrels, snowshoe hare, arctic ground squirrel, Roosevelt elk, muskrat, and mountain goat. Marine mammals documented in the area include whales, harbor seals, fur seals, sea otters, and Steller sea lions.³¹⁶ The adjacent waters provide some of the richest commercial fishing grounds in the world, home to stocks of Pacific salmon, halibut, flounder, cod, trout, grayling, crab, and shrimp.³¹⁷

There are several mineral projects in the area as of 2011 including a tin claim around Halibut Bay to the north and a gold/silver claim around the City of Kodiak.³¹⁸ In addition, there is a placer gold deposit located in the vicinity of Alitak and Tanner Head Island to the south.³¹⁹

Natural hazards in the area include coastal flooding, coastal erosion, earthquakes, tsunamis, volcanism, landslides, and sea-level rise. Coastal flooding and erosion is mainly attributed to storm surges. There are several faults that run through Kodiak Island, including one 3.5 km west of Larsen Bay, and earthquakes that are magnitude six or above are relatively frequent. Threats from Aleutian volcanoes include the possibility of acidic rain, ash clouds, landslides, tsunamis, and earthquakes. Residents in the area reported subsidence of around 2 to 20 ft as a result of the 1964 Good Friday earthquake. Coastal erosion is a significant threat to the coastline of Larsen Bay, particularly along the shore to the northeast of the mouth of Humpy Creek. East-facing shorelines are the most prone to such damage. Gulf of Alaska (GOA) storms exacerbate coastal erosion as well as cause wind-related damage to infrastructure and utilities. Cyclonic storms in the GOA can sustain speeds of between 50 and 75 knots. Tsunami risks are considered low because of Larson Bay's location on the west side of Kodiak Island. Ash is considered a secondary threat posed by volcanism in the area. In 1912, the eruption of Mt. Katmai blanketed Kodiak Island in several feet of ash. Corrosive rains cause ash clouds may also pose a threat.³²⁰

According to the Alaska Department of Environmental Conservation, there were no local significant environmental remediation projects active in 2010.³²¹

³¹⁴ Ibid.

³¹⁵ Ibid.

³¹⁶ U.S. Fish and Wildlife Service (n.d.). *Kodiak National Wildlife Refuge*. Retrieved December 2, 2011 from: http://kodiak.fws.gov/wildlife_habitat.htm.

³¹⁷ Ibid.

³¹⁸ Alaska Department of Commerce. (n.d.) *Mineral Resources of Alaska Map*. Retrieved December 2, 2011 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

³¹⁹ See footnote 316.

³²⁰ See footnote 310.

³²¹ Alaska Department of Environmental Conservation. (n.d.) *Contaminated Sites Program*. Retrieved June 5, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy³²²

Larsen Bay's economy is heavily dependent on commercial fishing. In the summer months, the population swells to over 300 with approximately 200 local cannery workers and transient lodge workers joining the community. The local commercial fishing industry has been in decline since its peak in the 1980s. The impact of limited entry consolidated local fishing efforts, and many residents emigrated to find other employment. Permanent wage employment was replaced with a more seasonal economy as the community shrank. Local demographics have also had an impact on the local economy. Between 2000 and 2010, Larsen Bay's population structure went from an expansive, younger demographic, to a more constrictive, older demographic. Youth retention is of particular concern to the community and its economy. In 2004, only 12 of the 222 positions available in Larsen Bay were full time. The local seafood processor and tourism lodges provide seasonal employment, but the positions are low paying and typically outsourced to non-residents. The area surrounding Larsen Bay provides an abundance of exploitable marine resources. In addition, the Karluk River and Kodiak National Wildlife Refuge provides ample wildlife habitat and recreational resources. However, many areas surrounding Larsen Bay are restricted to non-commercial uses. As of 2004, Larsen Bay supported six tourism sport fish lodges; two of which were open year round.³²³

In 2010,³²⁴ the estimated per capita income was \$15,350 and the estimated median household income was \$37,083, compared to \$16,227 and \$40,833 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,³²⁵ the real per capita income \$21,338 and real median household income \$53,695 indicate a decline in both individual and household earnings between 2000 and 2010. In 2010, Larsen Bay ranked 200th of 305 Alaskan communities from which per capita income was estimated, and 208th of 299 communities from which median household income was estimated.

However, Larsen Bay's small population size may have prevented the ACS from accurately portraying economic conditions.³²⁶ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$1.06 million in total wages in 2010.^{327,328} When matched with the 2010 Decennial Census population, the per capita income

³²² Unless otherwise noted, all monetary data are reported in nominal values.

³²³ Townsend-Vennel, R. J. (2004). *Community of Larsen Bay, Community Comprehensive Plan*. Retrieved August 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/LarsenBay-CP-2004.pdf>.

³²⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³²⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³²⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³²⁷ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

³²⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

equals \$12,233, which is somewhat less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Decennial Census figures.

According to 2006-2010 ACS estimates,³²⁹ 50% of residents over the age of 16 were part of the civilian labor force in 2010. In that year, unemployment was estimated at 0%, compared to an estimated 5.9% statewide; and an estimated 0% of residents were living below the poverty level, compared to an estimated 9.5% of Alaskan residents overall. However, it is likely that the ACS misrepresented employment conditions due to Larsen Bay's small population size. The ALARI database³³⁰ estimated that unemployment in 2010 was 27.4% according to unemployment insurance claimants. In addition, the 2006-2010 ACS estimated to 50% of those employed worked in the public sector, and 50% were self-employed. Again, the validity of this estimate is questionable considering the ACS sample size; however, if accurate, ALARI estimates may be misrepresentative as they do capture not self-employed residents.

By industry, half of those employed were estimated to work in public administration sectors; and half in agriculture, forestry, fishing, hunting, and mining sectors. Between 2000 and 2010, there was significant consolidating of Larsen Bay's economy. The proportion of residents working in agriculture, forestry, fishing, hunting, and mining sectors experienced the greatest gain in those years, while all other sectors—with the exception of public administration—experienced significant proportional declines. This reduction in diversity was also seen in employment by occupation type, with significant proportional increases in natural resources, construction, and maintenance positions. Again, it is likely that Larsen Bay's small population size impacted the ACS' ability to accurately portray economic conditions. According to 2010 ALARI estimates,³³¹ most (59.6%) employed residents worked in local government sectors; followed by financial service sectors (11.5%); leisure and hospitality sectors (5.8%); and education and health service sectors (5.8%). It was estimated that natural resources and mining sectors accounted for only 1.9% of sector employment that year. Further information regarding employment by industry sector can be found in Table 3.

By occupation, most (50.0%) employed residents were estimated to hold natural resources, construction, or maintenance positions; followed by service (25.0%) and sales or office positions (25.0%). With the exception of service positions, there was significant proportional variation in employment by occupation type between 2000 and 2010. Between those years, there were large representative gains in natural resources, construction, maintenance, sales, and office occupations; while there were large declines in production, transportation, material moving, management, and professional occupations. As with employment by industry sector, it is possible that the ACS was unable to accurately portray local employment by occupation type in 2010. Further information regarding employment by occupation type can be found in Table 4.

³²⁹ See footnote 326.

³³⁰ See footnote 328.

³³¹ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Larsen Bay (U.S. Census).

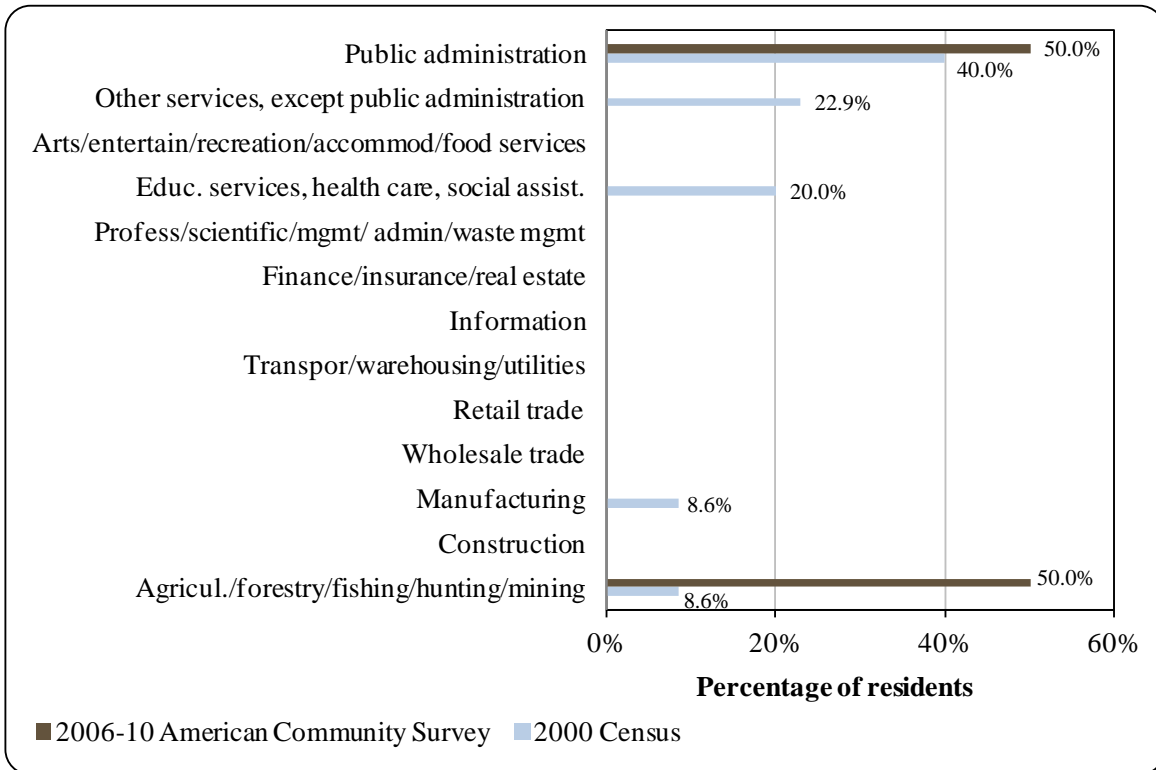
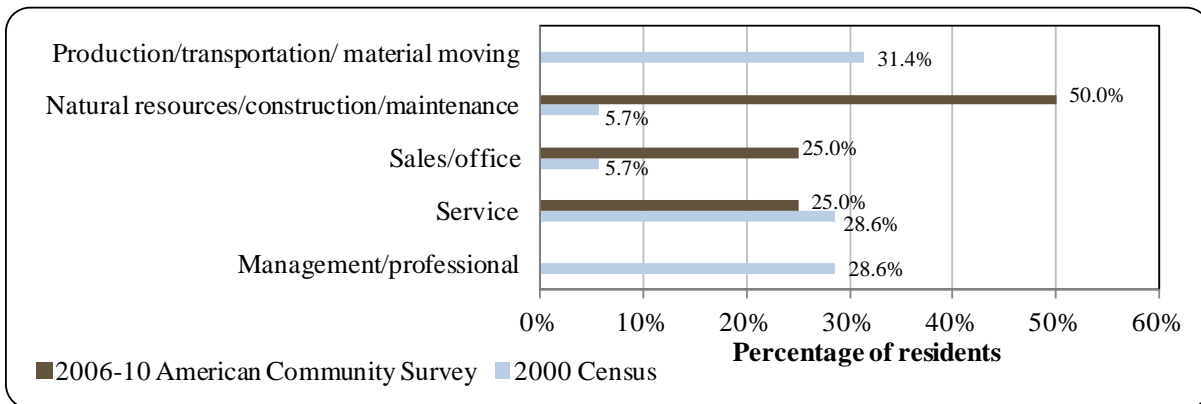


Figure 4. Local Employment by Occupation in 2000-2010, Larsen Bay (U.S. Census).



Governance

Larsen Bay is a Second-class city located within the Kodiak Island Borough. Incorporated in 1974, Larsen Bay has a manager or “Strong Mayor” form of government. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized tribal government located in Larsen Bay. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Larsen Bay is Koniag, Incorporated, and the local ANCSA chartered non-profit is the Kodiak Area Native Association. The ANCSA chartered village corporation is Anton Larsen, Inc. The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and

Game (ADF&G), and Bureau of Citizenship and Immigration Services offices are all located within the City of Kodiak, 60 miles northeast.

The City collected a 3% sales tax and an accommodations tax in 2010. When adjusted for inflation,³³² total municipal revenues increased by 14.5% between 2000 and 2010 from \$627,854, to \$929,462. In 2010, most (91.1%) locally generated revenues came from utility rents; followed by local tax revenues (2.9%) and building and equipment rentals (2.5%). In terms of outside revenues, Outside revenues were almost entirely collected from state revenue sharing sources. Also in that year, sales taxes accounted for 1.3% of total municipal revenues, compared to 3.1% in 2000. Finally, state allocated Community Revenue Sharing accounted for 10.8% of total municipal revenues, compared to 3.4% from State Revenue Sharing in 2000. State and federal fisheries-related grants awarded to Larsen Bay between 2000 and 2010 included \$399,600 for a small boat harbor, \$67,624 for a disaster/boat harbor, and \$965,000 for freezer/storage/processing equipment.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Larsen Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-related Grants (State and Federal) ⁵
2000	\$627,854	\$19,418	\$21,301	\$222,630
2001	\$748,362	\$14,314	\$20,480	n/a
2002	\$919,511	\$9,800	\$20,483	\$22,147
2003	\$781,229	\$6,333	\$20,643	\$222,447
2004	\$730,103	\$7,019	-	\$965,000
2005	\$674,334	\$8,925	-	n/a
2006	\$555,306	\$9,627	-	n/a
2007	\$631,606	\$9,335	-	n/a
2008	\$697,648	\$9,231	-	n/a
2009	\$822,603	\$10,071	\$99,417	n/a
2010	\$929,462	\$11,638	\$99,961	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

³³² Inflation calculated using 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

Connectivity and Transportation

Larsen Bay is accessible by water or air only. No roads connect the community with any other on Kodiak Island. Docking facilities are available. In 2002, a small boat harbor was completed. A cargo barge arrives every 6 weeks from Seattle.

The State of Alaska operates a 2,690-foot gravel airstrip and a seaplane base. As of November 2011, the price for airfare in June 2012 was \$360 for roundtrip from Anchorage to the City of Kodiak.³³³ Regular and charter flights are available from Kodiak to Larsen Bay and serviced by Island Air Service and Servant Air. Uyak Air Service is based in Larsen Bay and provides air service to other Kodiak Island communities on a charter basis.

Facilities

Water is supplied by two groundwater sources – a gravity feed from the hydrological plant and a backup well – and stored in a 200,000-gallon steel tank. A water supply line is connected to the penstock of the hydroelectric plant and used a majority of the time to reduce utility expenses to both the service plant and the customers. All 40 homes are connected to the piped water system. A community septic tank with outfall line serves approximately half of these homes and the rest are on individual septic systems. Weekly refuse collection services are provided.

In the City's Comprehensive Development Plan, community members report that a post office is present in the community.³³⁴ The community also has telephone and internet access, but does not have a cable provider. A fire-hydrant system is attached to the City's water storage tank, and the community utilizes a local volunteer fire department for fire protection. The community is served by a Village Public Safety Officer. The nearest state troopers are located in Kodiak.

Medical Services

The Larsen Bay Health Clinic provides residents with basic medical services and contains an examination room as well as laboratory, waiting room, and office. Larsen Bay is part of the Southern Emergency Medical Services Region. Emergency Services have coastal and air access. Emergency service is provided by a health aide. The nearest hospital is located in Kodiak.

Educational Opportunities

The education system is operated by the Kodiak Island Borough School District. The school is housed in two buildings,³³⁵ the first being the older building which houses grades kindergarten through sixth grade. This building has two classrooms and a library. The second building was constructed in 1980 and houses grades seventh through twelfth. This building

³³³ Inflation calculated using 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

³³⁴ U.S. Government Printing Office. (n.d.) *City of Larsen Bay Comprehensive Development Plan*. Retrieved July 23, 2012 from: <http://www.gpo.gov/fdsys/pkg/CZIC-ht168-138-137-1984/html/CZIC-ht168-138-137-1984.htm>.

³³⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

contains two classrooms, a vocational education room, a gymnasium, a kitchen, and a storage area. The facility is utilized by the community during selected non-school hours for recreational use. In 2011, the school had 16 students in attendance and 5 teachers.³³⁶

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts.³³⁷

After the U.S. purchase of Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing. In 1889, the Royal Packing Company constructed a cannery at Larsen Bay. Shortly afterward, the American Packing Company built another. A majority of cannery employees were hired from outside the region, primarily from the United States and China. Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated commercial fishing activity with subsistence hunting and fishing activities. The most common fishing gear was the beach seine until purse seining became popular in the 1920s with the rise of fuel-powered boats. The salmon fishery was the primary focus of local commercial fishing activity, although by the 1920s, halibut fisherman began stopping in Kodiak, and herring and cod fishermen also worked in the area.³³⁸

The ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.³³⁹ The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.³⁴⁰ Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet)

³³⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³³⁷ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

³³⁸ Ibid.

³³⁹ Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main>.

³⁴⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.³⁴¹

Groundfish and crab fisheries that occur within 3 nautical miles (nm) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. In the Gulf of Alaska (GOA), federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a ‘state-waters fishery’ for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.³⁴²

Kodiak Island is one historical center of the red king crab fishery, and Tanner crabs are also distributed through the GOA. The ADF&G manages red king crab and Tanner crab stocks in the GOA. Ouzinkie residents primarily held permits in the snow crab fishery between 2000 and 2010. Snow crab are distributed throughout the eastern and northern Bering Sea, and are not found in the immediate Kodiak area.^{343,344} The Kodiak red king crab fishery has been closed in recent years due to low abundance. Parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using 8 separate management areas, each with its own GHL.³⁴⁵ Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Larsen Bay has the longest history of a running cannery, Kodiak Salmon Packers, dating back to 1911. Since this time, Larsen Bay has been a focal point for the commercial and sports fishing industry. Before Russian fur traders arrived in the 18th century, Alutiiq villagers fished the waters around what is today Larsen Bay.

The City is located in Federal Statistical and Reporting Area 620, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska (GOA) Sablefish Regulatory Area. Larsen Bay is not eligible to participate in the Community Development Quota program. The community is, however, eligible to participate in the Community Quota Entity (CQE) program.

The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels.

³⁴¹ Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main>.

³⁴² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁴³ Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main>.

³⁴⁴ Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management>.

³⁴⁵ See footnote 342.

Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf. As of 2013, 45 communities were considered eligible for the CQE program, and 2 CQE non-profits had purchased commercial halibut IFQ and were actively leasing it to eligible community residents. Both of these CQE non-profits were located in the Kodiak area: Cape Barnabas, Inc. in Old Harbor and the Ouzinkie Company Holding Corporation in Ouzinkie.³⁴⁶

The Larsen Bay Development Company is the CQE non-profit entity which represents Larsen Bay and according to a household survey conducted in 2006, the majority of residents (72%) expressed a desire to participate directly in the CQE program and 85% of residents expected the program to help the Larsen Bay community.³⁴⁷ As of October 2013, the Larsen Bay Development Company had not purchased any commercial IFQ. However, the non-profit did have seven halibut charter permits available for lease to community members.³⁴⁸

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there is one shoreside processing plant in Larsen Bay. In 2006, Icicle Seafoods Inc. purchased the Larsen Bay processing plant from Kodiak Salmon Packers. The plant, constructed in 1911, is located in a small glacial fjord off of the large Uyak Bay that bisects Kodiak Island and is one of the oldest canneries in Alaska. The plant exclusively processes and cans salmon and is only open during the summer and early fall. Over 200 employees work at the facility from June until late September. Free room, laundry service and board as well as air transportation between Anchorage and Larsen Bay are provided to fish processing workers, provided they fulfill their contractual obligations. Icicle offers a varied fare in its galley.³⁴⁹ In 2010, the plant employed a maximum of 246 workers.³⁵⁰

Fisheries-Related Revenue

The City began collecting harbor usage fees in 2004, but has collected revenue from the Shared Fisheries Business Tax and Fisheries Resource Landing Tax programs every year between 2000 and 2010. In 2010, known fisheries-related revenue totaled \$107,079, an increase

³⁴⁶ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 24, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

³⁴⁷ Carothers, Courtney (2011). Equity and Access to Fishing Rights: Exploring the Community Quota Program in the Gulf of Alaska. *Human Organization* 70(3):213-223.

³⁴⁸ See footnote 346.

³⁴⁹ Icicle Seafoods, Inc. (n.d.). *Kodiak Salmon Packers*. Retrieved at <http://www.icicleseafoods.com/locations/lsb/about.aspx> on May 5, 2012.

³⁵⁰ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

from 2000 when a total of \$81,489 was collected. However, there was significant inter-annual variation in the intervening years. In the second half of the decade, anywhere from 23% to 34% of the total fisheries-related revenues came from harbor usage fees. For more information on known fisheries-related revenues for Larsen Bay between 2000 and 2010, see Table 3.

Commercial Fishing

In 2000, 21 residents held 26 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2010, 14 residents, or 16% of the population, held 14 CFEC permits. Of the permits held in 2010, 86% were for salmon, compared to 73% in 2000; 7% were for groundfish, compared to 23% in 2000; and 7% were for crab, compared to 0% in 2000. In addition, one resident held a groundfish License Limitation Program (LLP) permit in 2010. No residents held halibut quota shares between 2008 and 2010. However, residents held 1,181 shares through 1 account in 2007, compared to 4,559 shares through 2 accounts in 2000. No residents held sablefish or crab quota shares between 2005 and 2010.

Residents held 8 commercial crew licenses in 2010, compared to 29 in 2000. Also in that year, residents held majority ownership of 8 vessels, compared to 20 in 2000. Both the number of crew licenses and vessels owned by residents declined between 2000 and 2010. Of the permits held in 2010, 64% were actively fished, compared to 77% in 2000. This varied by fishery from 100% of groundfish and crab permits, to 58% of salmon permits. Fisheries prosecuted in 2010 by Larsen Bay residents included: GOA mechanical jig saltwater finfish and Kodiak purse seine, beach seine, and set gillnet salmon.

Between 2000 and 2010, no landings were made in Larsen Bay, with the exception of 2010, when 40 vessels made landings. However, landings are considered confidential for that year. Landings reported by Larsen Bay residents are considered confidential, with the exception of 2004 when residents landed 166,330 pounds of Pacific cod valued at \$53,759. Information regarding commercial fishing trends can be found in Tables 4 through 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Larsen Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$81,429	\$113,036	\$69,750	\$28,259	\$33,675	\$40,177	\$51,718	\$65,785	\$73,461	\$99,273	\$82,480
Fisheries Resource Landing Tax ¹	\$60	\$358	\$198	\$259	\$220	\$271	\$76	\$139	\$259	\$90	\$88
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	\$20,500	\$20,500	\$12,750	\$15,000	\$13,750	\$13,000	\$24,510
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$81,489</i>	<i>\$113,394</i>	<i>\$69,948</i>	<i>\$28,518</i>	<i>\$54,396</i>	<i>\$60,948</i>	<i>\$64,545</i>	<i>\$80,924</i>	<i>\$87,470</i>	<i>\$112,363</i>	<i>\$107,079</i>
<i>Municipal revenue⁵</i>	<i>\$627,854</i>	<i>\$748,362</i>	<i>\$919,511</i>	<i>\$781,229</i>	<i>\$730,103</i>	<i>\$674,334</i>	<i>\$555,306</i>	<i>\$631,606</i>	<i>\$697,648</i>	<i>\$822,603</i>	<i>\$929,462</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Larsen Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	1	2	1	1	1
	Active permits	1	0	0	0	1	0	0	0	0	0	0
	% of permits fished	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	2	1	1	1
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	2	2	1	1	1	2	2	1	1	1
	Fished permits	0	2	2	0	0	1	0	1	0	0	1
	% of permits fished	n/a	100%	100%	0%	0%	100%	0%	50%	0%	0%	100%
	Total permit holders	0	2	2	1	1	1	2	2	1	1	1
Other shellfish (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Larsen Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	6	2	2	1	7	2	1	1	1	2	1
	Fished permits	5	2	1	1	6	1	0	1	0	0	1
	% of permits fished	83%	100%	50%	100%	86%	50%	0%	100%	0%	0%	100%
	Total permit holders	5	2	2	1	5	2	1	1	1	1	1
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	19	13	13	11	14	13	14	10	9	12	12
	Fished permits	14	10	7	7	10	10	10	7	4	7	7
	% of permits fished	74%	77%	54%	64%	71%	77%	71%	70%	44%	58%	58%
	Total permit holders	19	13	13	12	16	13	18	12	10	12	13
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>26</i>	<i>17</i>	<i>17</i>	<i>13</i>	<i>22</i>	<i>16</i>	<i>17</i>	<i>13</i>	<i>11</i>	<i>15</i>	<i>14</i>
	<i>Fished permits</i>	<i>20</i>	<i>14</i>	<i>10</i>	<i>8</i>	<i>16</i>	<i>12</i>	<i>10</i>	<i>9</i>	<i>4</i>	<i>7</i>	<i>9</i>
	<i>% of permits fished</i>	<i>77%</i>	<i>82%</i>	<i>59%</i>	<i>62%</i>	<i>73%</i>	<i>75%</i>	<i>59%</i>	<i>69%</i>	<i>36%</i>	<i>47%</i>	<i>64%</i>
	<i>Permit holders</i>	<i>21</i>	<i>14</i>	<i>14</i>	<i>12</i>	<i>19</i>	<i>13</i>	<i>19</i>	<i>13</i>	<i>12</i>	<i>13</i>	<i>14</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Larsen Bay: 2000-2010.

Year	¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Larsen Bay ²	Total Net Pounds Landed in Larsen Bay ^{2,5}	Total Ex-Vessel Value of Landings in Larsen Bay ^{2,5}
2000	29	0	0	20	37	0	0	\$0
2001	32	0	0	22	39	0	0	\$0
2002	17	0	0	24	38	0	0	\$0
2003	22	0	1	22	37	0	0	\$0
2004	25	0	1	16	33	0	0	\$0
2005	24	0	1	11	18	0	0	\$0
2006	13	0	1	9	18	0	0	\$0
2007	10	0	1	10	19	0	0	\$0
2008	9	0	1	6	16	0	0	\$0
2009	11	0	1	8	18	0	0	\$0
2010	8	1	1	8	17	40	--	--

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Larsen Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	2	4,559	451
2001	2	4,559	539
2002	2	4,559	558
2003	2	4,559	557
2004	2	4,559	617
2005	1	1,181	162
2006	1	1,181	160
2007	1	1,181	167
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Larsen Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Larsen Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Larsen Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	--
Finfish	0	0	0	0	0	0	0	0	0	0	--
Halibut	0	0	0	0	0	0	0	0	0	0	--
Herring	0	0	0	0	0	0	0	0	0	0	--
Other Groundfish	0	0	0	0	0	0	0	0	0	0	--
Other Shellfish	0	0	0	0	0	0	0	0	0	0	--
Pacific Cod	0	0	0	0	0	0	0	0	0	0	--
Pollock	0	0	0	0	0	0	0	0	0	0	--
Sablefish	0	0	0	0	0	0	0	0	0	0	--
Salmon	0	0	0	0	0	0	0	0	0	0	--
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>--</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>--</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Larsen Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	166,330	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	166,330	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	\$53,759	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	\$53,759	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Larsen Bay residents participate in recreational fishing. The number of active sport fish guide businesses remained relatively steady between 2000 and 2010 at either three or four in any given year. The only exception was 2004 when only two sport fish guide businesses were active. The number of sport fish guide licenses held also remained relatively steady, averaging about 12 licenses annually. Residents

Larsen Bay is located within Alaska Sport Fishing Survey Area Q – Kodiak. This area includes all Alaskan waters, including drainages, of the Kodiak and Afognak Island groups, including the Trinity Islands. Sportfishing on Kodiak Island can be divided into private anglers who use boats and those who use the Island’s road system to access sportfishing destinations. There are 75 miles of paved and hard-packed gravel roads that cross 10 significant streams and provide access to 18 stocked lakes. Road system anglers can find salmon, Dolly Varden, and rainbow and steelhead trout in fresh waters. Remote areas on Kodiak, categorized as any areas

outside the road system, provide opportunities for salmon, Dolly Varden, and fall-run steelhead trout. Remote Area salmon begin to return in early June, and fishing grounds are typically accessed by charter boat or seaplane.³⁵¹

Troll-fishing Kodiak's marine waters for Chinook and coho salmon is a popular activity on the island. Chiniak Bay provides year-round habitat for Chinook. The Karluk River south of Larsen Bay provides one of the only native freshwater Chinook. Normally, the Karluk River annually averages an in-river run of 8,000 Chinook; however, recent runs have been in decline. Sockeye salmon are plentiful in many drainages on Kodiak and tend to spawn along lakeshores and tributary systems. Generally, sockeye arrive in early June and run through the end of July. The Kodiak road system provides access to sockeye on the Buskin, Pasagshak, and Saltery rivers, in eastern Kodiak Island. Pink salmon are found in abundance throughout the coastal and freshwater drainage systems around Kodiak Island. Pinks can be taken along ocean beaches and near stream mouths between middle to late July with runs peaking around mid-August. Coho salmon are typically targeted in offshore marine areas using charter or private vessels. The troll recreational fishery peaks the third week of August, and is typically over by mid-September. Large runs of coho occur late in the year in the Karluk River, with lagoon fishing starting in early September and peaking by the end of the month. The Karluk River also maintains the largest population of steelhead trout on the island, averaging 8,000 fish annually. Middle to late October is the best time to fish for steelhead, although mid-April and early May are also good times. Dolly Varden are found at lake outlets and near the mouths of freshwater systems feeding on out-migrating pink salmon fry. Then in mid-July through October, Dolly Varden migrate back into freshwaters to spawn and winter. Halibut are abundant around Kodiak Island, and sportfishing is excellent from late April through early September. In a typical year, sport anglers catch over 25,000 halibut in Kodiak waters. More than 30 species of rockfish are found in Kodiak marine waters. Common species caught include dark, dusky, and yellow-eye rockfish. The estimated rockfish catch is around 25,000 fish annually. Lingcod are also found in the area, and the typical annual catch averages around 2,500 fish.³⁵²

In 2010, angler days fished totaled 40,377 for saltwater and 41,082 for freshwater fisheries, compared to 55,576 and 65,831 in 2000, respectively (Table 11). In that year non-Alaskan residents accounted for 49.6% of saltwater angler days fished, compared to 30.2% in 2000; indicating a proportional decline in resident angler days fished. The same trend was seen in freshwater angler days fished with non-Alaska residents accounting for 45.9% in 2010, compared to 28.3% in 2000.

According to ADF&G Harvest Survey Records, Larsen Bay private anglers target Chinook, coho, sockeye, and pink salmon, Pacific halibut, rockfish, Pacific cod, steelhead trout, and Tanner crab. According to 2010 kept/released charter logs, local charter fishing vessels reported keeping 232 Chinook salmon, 2,792 coho salmon, 2,487 halibut, 57 lingcod, 1,098 rockfish, and 6 sockeye salmon.³⁵³

³⁵¹ Alaska Dept. of Fish and Game. (2012). *Kodiak*. Division of Sport Fish. Retrieved August 14, 2012 from: <http://www.adfg.alaska.gov/static-sf/Region2/pdfpubs/kodiak.pdf>.

³⁵² Ibid.

³⁵³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Larsen Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Larsen Bay ²
2000	4	11	30	64
2001	4	14	24	66
2002	3	15	32	1
2003	3	13	32	30
2004	2	13	38	40
2005	3	12	37	70
2006	3	11	35	88
2007	4	11	31	130
2008	4	15	29	206
2009	4	11	29	234
2010	3	10	31	192

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	16,767	38,809	18,524	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	10,859	21,283
2010	20,012	20,365	18,871	22,211

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Larsen Bay residents participate extensively in subsistence fishing. Community residents consider halibut, salmon, trout, grayling, flounder, and cod as primary fish subsistence resources. In addition, clams, crab, and shrimp are harvested. Subsistence marine mammals include seals and sea lions. Waterfowl and terrestrial mammal hunting also takes place. Uyak Bay is the principal area for subsistence activities, both upland and waterside. Zachar and Spiridon Bay are also important areas for subsistence harvest.³⁵⁴

According to the ADF&G Community Subsistence Information System (CSIS), an estimated 83% of households participated in salmon subsistence activities in 2005, and 25% of households participated in non-salmon fish subsistence activities. In 2003, an estimated 80% of households participated in salmon subsistence activities, an estimated 76% participated in halibut subsistence activities, an estimated 12% participated in marine mammal subsistence activities, an estimate 40% participated in marine invertebrate subsistence activities, and an estimated 11% participated in non-salmon fish subsistence activities.³⁵⁵

Data on subsistence harvest of salmon, marine invertebrates, and non-salmon fish are somewhat limited. In 2008, residents reported harvesting sockeye salmon most often, followed by coho, pink, Chinook, and chum salmon. In that year, residents reported harvesting 1,130 fish, compared to 439 in 2000. Reported salmon harvests peaked in 2005 at 1,470 fish. In addition, residents reported harvesting 3,199 lbs of marine invertebrates and 1,034 lbs of other fish species in 2003.

Halibut is a popular subsistence resource in Larsen Bay. In 2010, 33 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 21 in 2003. In that year, an estimated 2,617 lbs of halibut was harvested on 13 SHARC, compared to an estimated 5,684 on 20 SHARC in 2003. Estimated halibut harvests peaked in 2004 at 12,327 lbs. In 2010, SHARC activity and estimated pounds harvested were both at their lowest since the program began. SHARC activity declined significantly after years of stable use.

Reported marine mammal harvests included sea otters and harbor seals. Between 2000 and 2010, a total of 46 sea otters were reported harvested; and 96 harbor seals were reported harvested between 2000 and 2008.

According to ADF&G's CSIS database, marine and freshwater species that residents of Larsen Bay have harvested or used include chitons, butter clams, king crab, octopus, razor clams, sea cucumber, sea urchin, Tanner crab, harbor seal, Steller sea lion, rockfish, Dolly Varden, herring, Pacific cod, and steelhead trout.³⁵⁶ Information regarding subsistence trends can be found in Tables 12 through 15.

³⁵⁴ Norgaard Consultants. (1984). *Comprehensive Development Plan*. Retrieved August 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/LarsenBay-CP-1984.pdf>.

³⁵⁵ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Retrieved August 25, 2012 from: <http://www.adfg.alaska.gov/sb/CSIS/>.

³⁵⁶ Ibid.

Table 12. Subsistence Participation by Household and Species, Larsen Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	80%	76%	12%	40%	11%	290.76
2004	84%	n/a	n/a	n/a	35%	n/a
2005	83%	n/a	n/a	n/a	25%	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Larsen Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	11	n/a	3	23	3	430	n/a	n/a
2001	n/a	26	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	21	n/a	n/a	n/a	n/a	n/a	3,199	1,034
2004	28	28	21	n/a	19	23	958	n/a	2,032
2005	25	25	7	25	53	51	1,334	n/a	347
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	23	23	26	9	76	42	977	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Larsen Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	21	20	5,684
2004	40	29	12,327
2005	39	21	4,359
2006	37	22	5,022
2007	42	29	6,827
2008	39	21	3,381
2009	34	24	3,889
2010	33	13	2,617

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Larsen Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	6	n/a	n/a	n/a	19	n/a
2001	n/a	6	n/a	n/a	n/a	9	n/a
2002	n/a	n/a	n/a	n/a	n/a	3	n/a
2003	n/a	6	n/a	n/a	n/a	2	n/a
2004	n/a	23	n/a	n/a	n/a	12	n/a
2005	n/a	n/a	n/a	n/a	n/a	17	n/a
2006	n/a	4	n/a	n/a	n/a	20	n/a
2007	n/a	n/a	n/a	n/a	n/a	9	n/a
2008	n/a	n/a	n/a	n/a	n/a	5	n/a
2009	n/a	1	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Old Harbor



People and Place

Location

Old Harbor is situated on the southeast coast of Kodiak Island. The harbor is protected from the Gulf of Alaska by Sitkalidak Island to the southeast. A large salt lagoon is present at the center of the community.³⁵⁷ Old Harbor is located 70 miles southwest of the City of Kodiak and 322 miles southwest of Anchorage. The City encompasses 21.0 square miles of land and 6.2 square miles of water. Old Harbor is located in the Kodiak Island Borough Census Area and the Kodiak Recording District.³⁵⁸

*Demographic Profile*³⁵⁹

In 2010 there were 218 residents in Old Harbor, making it the 189th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Old Harbor declined by 23%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 18.6%, with an average annual growth rate of -0.71%. A majority of the population in Old Harbor identifies with the cultural group Alutiiq/Sugpiaq.³⁶⁰ This is reflected in U.S. Census statistics. In 2010, a majority of Old Harbor residents identified themselves as American Indian or Alaska Native (87.6%). In addition, 11% of the population identified as White in 2010, 1.4% identified with two or more races, and 1.4% of the population also identified themselves as Hispanic. Individuals identifying as American Indian or Alaska Natives made up 14.6% more of the population in 2010 than in 2000, while 2.1% less of the population identified as White and 12.5% less identified with two or more races. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

According to household surveys conducted for the U.S. Census, the average household size in Old Harbor in 2010 was 2.6, a substantial decrease from 3.60 persons per household in 2000 and 3.20 in 1990. Over the same period, the number of households stayed relatively stable, decreasing from 87 in 1990 to 79 in 2000, and then increasing again to 84 occupied housing units in 2010. Of the 105 housing units surveyed for the 2010 U.S. Decennial Census, 66.7% were owner-occupied, 13.3% were rented, and 20% were vacant or used only seasonally. From 1990 to 2010, no residents of Old Harbor lived in group quarters.

³⁵⁷ City of Old Harbor. *Community Emergency Response Plan: Annex D to the Kodiak Emergency Operations Plan*. August 2000. Retrieved November 30, 2011 from <http://www.city.kodiak.ak.us>.

³⁵⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁶⁰ Based on community feedback provided during review of the draft of this community profile in December, 2012.

The gender makeup in Old Harbor in 2010 was more skewed toward males (56.4% male and 43.6% female) than the gender makeup of the State as a whole, which was 52% male and 48% female. That year, the median age of Old Harbor residents was 34.3 years, slightly higher than the median age for Alaska of 33.8, and lower than the U.S. national average of 36.8 years. The overall population structure of Old Harbor in 2000 and 2010 is shown in Figure 2 below. In 2010, almost all age groups had more males than females, with the exception of more females in the 0-9 and 70-79 age categories, and an equal number of males and females between 30 and 39 years of age. Relatively few people were over the age of 70, and no one over the age of 80 lived in Old Harbor in 2010.

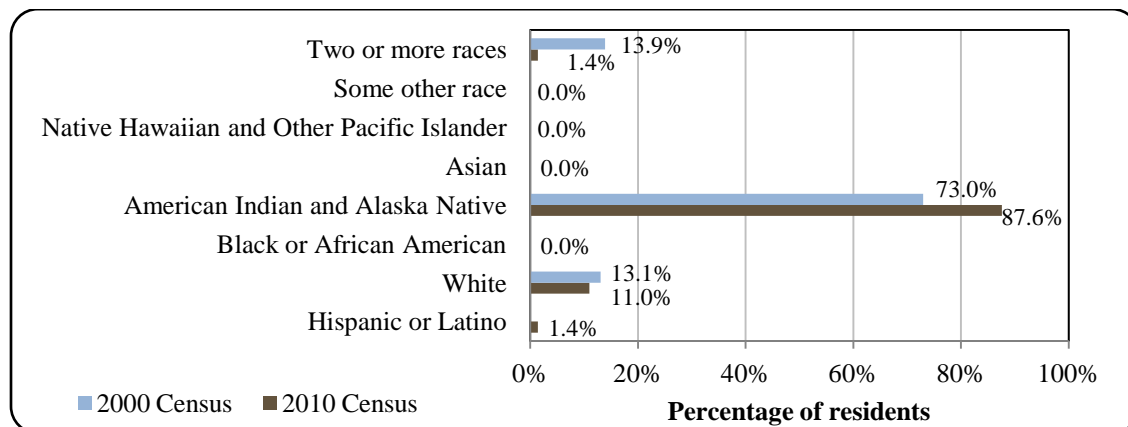
Table 1. Population in Old Harbor from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	284	-
2000	237	-
2001	-	236
2002	-	226
2003	-	211
2004	-	198
2005	-	200
2006	-	179
2007	-	201
2008	-	185
2009	-	193
2010	218	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

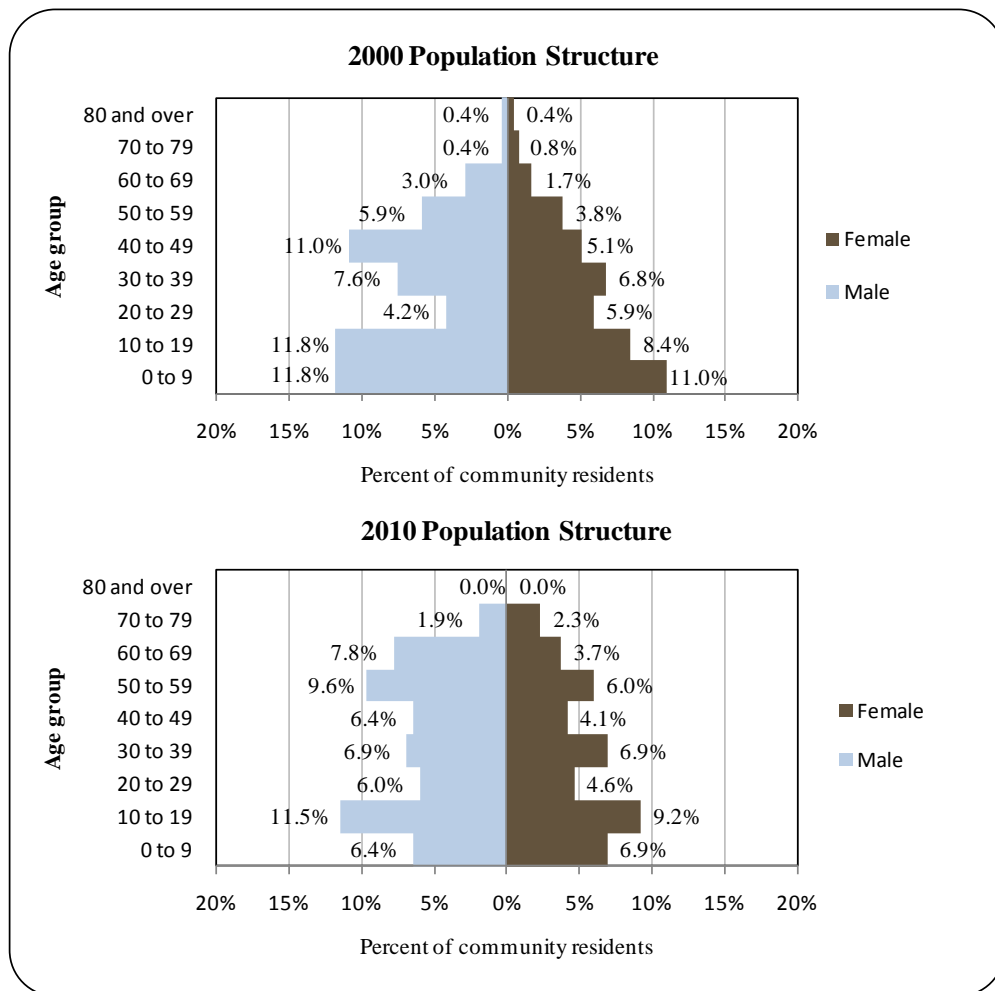
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Old Harbor: 2000-2010 (U.S. Census).



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),³⁶¹ 78.9% of Old Harbor residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 9.2% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 11.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 20.2% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 3.7% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 0% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 7.3% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Old Harbor Based on the 2000 and 2010 U.S. Decennial Census.



³⁶¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.^{362,363,364} At the time Russian settlement, the Alutiiq peoples were referred to as ‘Aleuts’. The name ‘Alutiiq’ has been used since the 1980s to refer to the linguistic and cultural group of Alaska Natives from the southern coast of the Alaska Peninsula to Prince William Sound, as distinguished from the Aleuts living in the Aleutian Islands. Alutiiq people living on Kodiak Island and the south coast of the Alaska Peninsula are called Koniag (Koniagmiut), and those living on Kodiak Island specifically are called Qikertarmiut (people of Kodiak Island). The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources, and marine mammals, including whales, sea lions, seals, and sea otters. They were skilled mariners, using skin kayaks and larger wooden boats for both war raids and trade.^{365,366}

After the Russian fur trade caused sea otter populations to decline in the Aleutian Islands, fur traders entered the territory of the Koniags. The Russians were initially repelled by the Alutiiqs, but in 1784 Gregorii Shelikof approached Kodiak Island armed with muskets and cannons to take the area by force. Several thousand Natives retreated to Refuge Rock near Sitkalidak Island. The Russians discovered a hidden access to the rock, and hundreds of Natives were killed jumping off a cliff to escape from Shelikof’s party. That same year, Shelikof’s men founded a settlement near the present location of Old Harbor. It was named Three Saint’s Bay after Shelikof’s flagship, the “Three Saints”. Three Saint’s Bay was the first Russian colony in Alaska, but in 1788 the settlement was destroyed by a tsunami. The community experienced two more earthquakes and relocated to the northeast coast of the island in 1793, to “Saint Paul’s,” which today is the City of Kodiak.³⁶⁷

By the time of the sale of Alaska to the United States in 1867, hardship, starvation, and disease had reduced the Native population of Kodiak Island from 8,000 to 2,000. Salmon canneries were established around the region starting in the 1880s. Although some Natives worked in the canneries, the workforce was primarily hired from the U.S. and China. Starting in the late 1800s there was a wave of Scandinavian immigrants to the region.³⁶⁸ In 1884 the community of “Staruigayan”, which translates to “old harbor” from Russian, was established near the original site of Three Saint’s Bay. In 1932, the Old Harbor post office opened. The Good Friday earthquake in 1964 and accompanying tsunami destroyed the whole community of Old Harbor; only the church and two homes remained. The community was rebuilt, and in 1966 the City of Old Harbor was incorporated.^{369,370}

³⁶² Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. *Looking Both Ways: Heritage and Identity of the Alutiiq People*. University of Alaska Press, Fairbanks.

³⁶³ Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.

³⁶⁴ Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Institution, Washington D.C.

³⁶⁵ Mason, R. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

³⁶⁶ City of Old Harbor (1989). *Old Harbor Comprehensive Plan and Capital Improvements Program: Public Hearing Draft*. June, 1989. Retrieved December 5, 2011 from <http://www.kodiakak.us/>.

³⁶⁷ See footnotes 365 and 366.

³⁶⁸ See footnote 365.

³⁶⁹ Ibid.

Natural Resources and Environment

The climate of Kodiak Island is dominated by a strong marine influence. There is little or no freezing weather, moderate precipitation, and frequent cloud cover and fog. Severe storms are common from December through February.³⁷¹ Annual precipitation averages 69 inches. Average temperatures vary between 23 to 62 °F.³⁷² Extreme low temperatures can be well below freezing and summer high temperatures can run as high as 80 or 90 °F.³⁷³ Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific “Ring of Fire”. The original settlement at the site of Old Harbor was destroyed by a tsunami in 1788, and Old Harbor was again destroyed by the tsunami resulting from the Good Friday earthquake of 1964.³⁷⁴ The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula, covered the island in ash and gasses and disrupted the local salmon fishery, especially between 1915 to 1919, when many adult fish starved and failed to spawn in ash-choked streams.³⁷⁵ For more information about earthquakes and volcanic activity near Old Harbor, see the *Additional Information* section of this profile.

Old Harbor is located in close proximity to Kodiak National Wildlife Refuge (NWR). The NWR was established in 1941 with the purpose of wildlife conservation, in particular the Kodiak brown bear, unique to the island, as well as fulfillment of treaty obligations, providing for continued subsistence use, and to ensure water quality and quantity.³⁷⁶ Two conservation easements were purchased in 1995 from the village Native corporation, Old Harbor Native Corporation. They are located in the Lagoon Creek and Mountain Creek Drainages, and became part of the NWR. In 2000, the local electrical utility, Alaska Village Electric Cooperative (AVEC) requested amendments to the conservation easements in order to divert water from Mountain Creek to a hydroelectric powerhouse discharging into Lagoon Creek. The amendments were granted, and the project was estimated to impact between 24 and 36 acres of the NWR.³⁷⁷ There are also a number of state parks, state historical parks, and state recreation sites located on the northeast corner of Kodiak Island.³⁷⁸

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.³⁷⁹ Oil was carried by currents throughout the area of the Alutiiq people, and

³⁷⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷¹ Ibid.

³⁷² USA website. (2013). *Old Harbor, AK Weather*. Retrieved October 21, 2013 from <http://www.usa.com/old-harbor-ak-weather.htm>.

³⁷³ Based on community feedback provided during review of the draft of this community profile in December, 2012.

³⁷⁴ City of Old Harbor. *Community Emergency Response Plan: Annex D to the Kodiak Emergency Operations Plan*. August 2000. Retrieved November 30, 2011 from <http://www.city.kodiak.ak.us>.

³⁷⁵ U.S. Geological Survey. 1998. “Can Another Great Volcanic Eruption Happen in Alaska?” Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

³⁷⁶ U.S. Fish and Wildlife Service. Kodiak National Wildlife Refuge. Retrieved November 30, 2011 from <http://kodiak.fws.gov>.

³⁷⁷ State of Alaska (2001). “Old Harbor – Amendment to Purchase Agreement and Conservation.” Publish date 06/06/2001. Retrieved December 2, 2011 from <http://notes4.state.ak.us/pn/pubnotic.nsf>.

³⁷⁸ Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/>.

³⁷⁹ Environmental Protection Agency. “*Exxon Valdez*.” Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

hit the beaches of Kodiak Island in mid-April.³⁸⁰ The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection, and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included within the NWR.³⁸¹

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Old Harbor as of May 2012.³⁸²

Current Economy³⁸³

Commercial and subsistence fishing, as well as subsistence hunting, are all very important to the community of Old Harbor. Many residents hold commercial fishing permits or work as crew members. In 2000, the number of state fishery permit holders in Old Harbor was equivalent to 14% of the total local population, and the number of crew license holders was equivalent to 26.5% of the population. By 2010, the number of permit holders had declined to 13% and the number of crew license holders declined to 16.5% of the population. The City also has a number of sportfishing guide businesses. Important subsistence food sources include salmon, halibut, crab, deer, seal, rabbit, and bear.³⁸⁴ In addition to commercial fisheries, top employers of Old Harbor residents in 2010 included local government offices, the Kodiak Island Borough School District, regional housing and other community service providers, Kodiak Sportsman Lodge, LLC, a construction company, a stevedoring company, and Servant Air, Inc.³⁸⁵

Based on household surveys for the 2006-2010 ACS,³⁸⁶ in 2010, the per capita income in Old Harbor was estimated to be \$10,992 and the median household income was estimated to be \$33,333, compared to \$14,265 and \$32,500 reported in 2000, respectively. This drop in per capita income between 2000 and 2010 is revealed to be even greater when accounting for inflation by converting the 2000 values to 2010 dollars,³⁸⁷ showing that the real per capita income in 2000 was \$18,758. Household income is also shown to have decreased over the period after accounting for inflation, from a real median household income in 2000 of \$42,737. In 2010, Old Harbor ranked 257th in per capita income out of 305 Alaskan communities with per capita income data, and 227th in median household income, out of 299 Alaskan communities with household income data that year.

³⁸⁰ Mason, R. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

³⁸¹ Restoration Notebook. 2009. "Habitat Protection – A Successful Restoration Strategy." *Exxon Valdez Oil Spill Trustee Council*. Retrieved December 1, 2011 from <http://dnr.alaska.gov>.

³⁸² Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³⁸³ Unless otherwise noted, all monetary data are reported in nominal values.

³⁸⁴ See footnote 370.

³⁸⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁸⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁸⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Although Old Harbor's small population size may have prevented the ACS from accurately portraying economic conditions,³⁸⁸ the 2010 ACS per capita income estimate is supported by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Old Harbor in 2010 is \$7,050.³⁸⁹ This is slightly lower than the 2006-2010 ACS estimate, and provides additional evidence that per capita income declined in Old Harbor between 2000 and 2010. This decline is reflected in the fact that the community was recognized as "distressed" by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.³⁹⁰ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 75.6% of the population age 16 and older was estimated to be in the civilian labor force, a higher percentage than was estimated to be in the civilian labor force statewide (68.8%). Also in 2010, 41.6% of local residents were estimated to be living below the poverty line, compared to 9.5% statewide, and the unemployment rate was estimated to be 25.2%, much higher than the state estimate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 9.9%, compared to a statewide unemployment rate estimate of 11.5%.³⁹¹

Also based on the 2006-2010 ACS, a majority of Old Harbor workers were estimated to be employed in the public sector (79.4%), along with 16.2% worked in the private sector, and 4.4% estimated to be self-employed. Of the 68 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number of workers was estimated to be employed in educational services, health care, and social assistance (54.4%) and public administration (20.6%). No residents reported working in fishing or other natural resource industries. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 96 employed residents in Old Harbor in 2010, of which 52.1% were employed in local government, 10.4% in education and health services, 10.4% in financial activities, 7.3% in trade, transportation, and utilities, 6.3% in leisure and hospitality, 5.2% in construction, 1% in professional and business services, and 7.3% in other industries.³⁹² As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

³⁸⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁸⁹ See footnotes 385 and 386.

³⁹⁰ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

³⁹¹ See footnote 385.

³⁹² Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Old Harbor (U.S. Census).

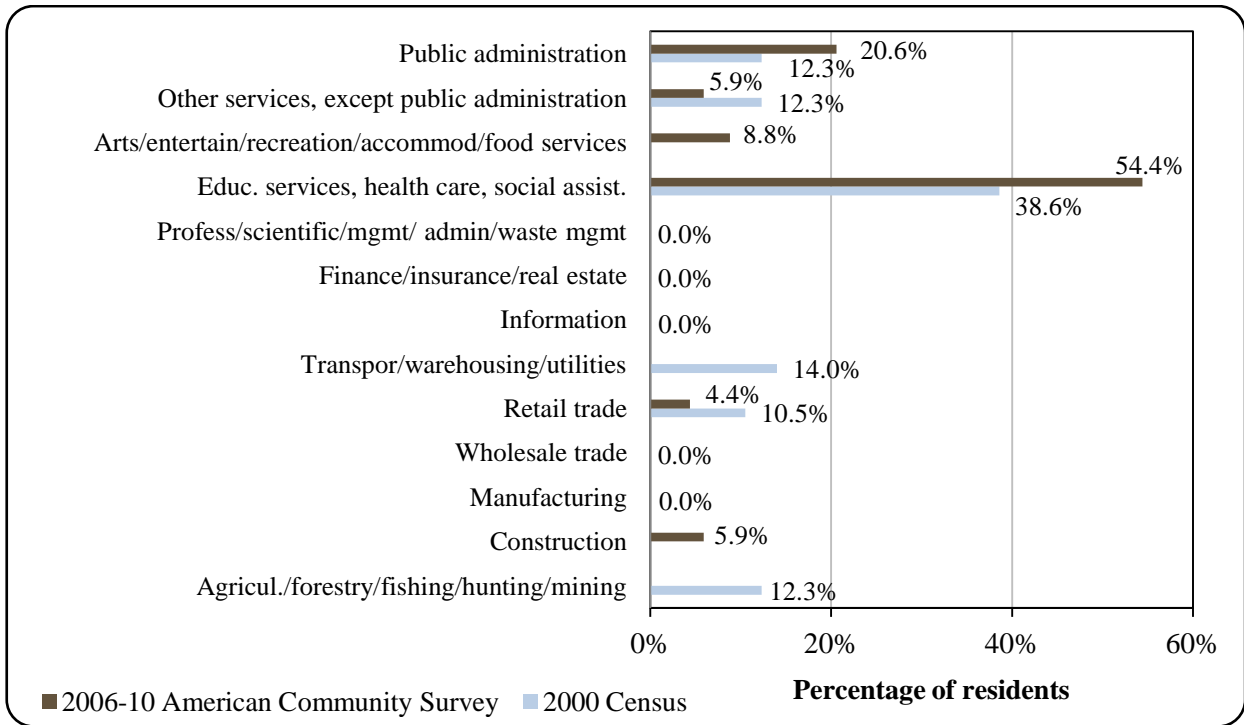
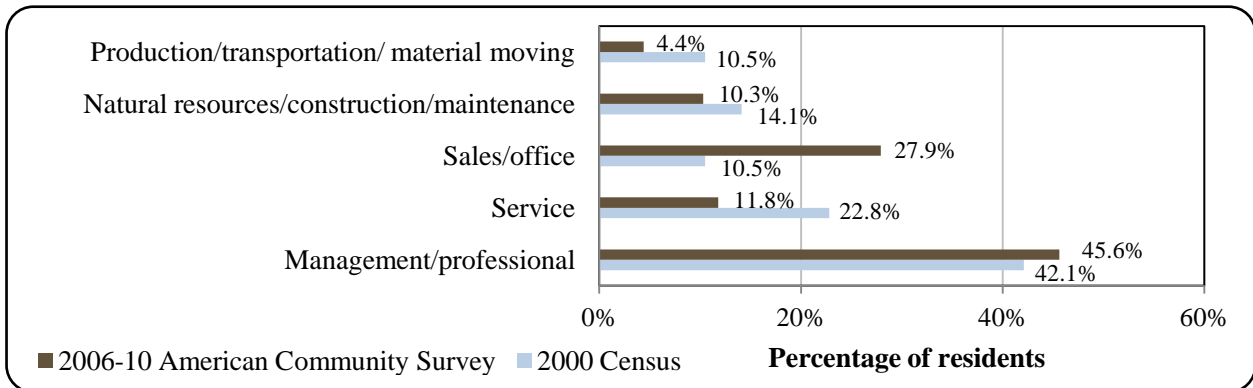


Figure 4. Local Employment by Occupation in 2000-2010, Old Harbor (U.S. Census).



Governance

Old Harbor is a 2nd Class City in the Kodiak Island Borough. The City was incorporated in 1966 and has a Strong Mayor form of government, including a mayor, a seven-person city council, a five-person advisory school board, and six municipal employees. The City administers a 3% sales tax, and the Borough administers a 10.5 mills (1.05%) property tax, excluding service area taxes.³⁹³ In addition to sales tax revenue, other locally-generated revenue sources in Old Harbor included building leases, state contracts for maintenance of facilities, building and equipment rentals, water and sewer service fees, and fuel sales. Outside revenue sources included shared revenue from various state programs as well as a number of capital and special project grants. Shared revenues came from the State Revenue Sharing program (contributions of just over \$20,000 per year from 2000 to 2003), the Community Revenue Sharing program (just over \$100,000 per year in 2009 and 2010), the Safe Communities program, telephone and electric co-op refunds, and fish tax refunds. (See the *Fisheries-Related Revenue* section for more information about fish tax revenues.) Total municipal revenue was substantially higher in 2004 and in the last two years of the 2000-2010 period. Grants were received in a number of years for special projects and capital improvements including equipment upgrades, erosion control, and road building. Particularly large grants were received in 2006, 2009, and 2010, accounting in large part for the substantial increase in total municipal revenues in these years. State and federal grants were received from the Alaska Division of Emergency Services, the Alaska Department of Commerce, Community, and Economic Development, the Bureau of Indian Affairs (BIA), the Denali Commission, and the Federal Emergency Management Agency, among others. In addition, Old Harbor received fisheries-related grants in some years for projects including city dock construction and replacement, small boat harbor renovations, and purchase of processing equipment.³⁹⁴ Information about selected revenue sources in Old Harbor are presented in Table 2.

Old Harbor was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the BIA, is the Village of Old Harbor. The Native village corporation is the Old Harbor Native Corporation, which manages 115,200 acres of land. The regional Native corporation to which Old Harbor belongs is Koniag, Incorporated.³⁹⁵

Old Harbor is also a member of the Kodiak Area Native Association (KANA), a tribal non-profit organization headquartered in Kodiak that serves communities in the Kodiak Archipelago.³⁹⁶ KANA is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.³⁹⁷ KANA provides health and

³⁹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁹⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

³⁹⁵ See footnote 393.

³⁹⁶ Kodiak Area Native Association. (n.d.). *Homepage*. Retrieved February 16, 2012 from <http://www.kanaweb.org/>.

³⁹⁷ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

development services, as well as career development and other community services, with the goal of promoting economic self sufficiency and promote healthy families.³⁹⁸

The closest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources, and U.S. Bureau of Citizenship and Immigration Services are all located within the City of Kodiak, which is on the eastern tip of Kodiak Island. The nearest office of the Alaska Department of Commerce, Community, and Economic Development is in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Old Harbor from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$265,455	\$11,620	\$21,775	n/a
2001	\$356,393	\$14,123	\$20,961	\$50,000
2002	\$359,076	\$12,749	\$20,960	\$25,004
2003	\$473,843	\$23,918	\$21,100	n/a
2004	\$1,375,421	\$18,192	-	\$46,000
2005	\$472,906	\$23,247	-	n/a
2006	\$457,321	\$19,904	-	n/a
2007	\$494,547	\$16,771	-	\$1,200,000
2008	\$583,101	\$11,798	-	n/a
2009	\$890,503	\$16,608	\$105,387	n/a
2010	\$2,619,181	\$19,429	\$105,679	\$5,000,000

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

³⁹⁸ See footnote 396.

Infrastructure

Connectivity and Transportation

The community of Old Harbor is only reachable by air or water. A state-owned 2,750 foot by 60 foot gravel runway is present in Old Harbor, as well as a seaplane base. Both regularly scheduled and charter flights are available from Kodiak.³⁹⁹ As of June 2012, the approximate cost to fly roundtrip between Kodiak and Anchorage \$360,⁴⁰⁰ and an additional roundtrip flight between Kodiak and Old Harbor was approximately \$200 roundtrip.⁴⁰¹ A harbor is present in Old Harbor with docking facilities for 55 boats. Seattle-based and local barge services are available.⁴⁰²

Facilities

Water in Old Harbor is derived from a dammed creek and an infiltration gallery,⁴⁰³ then filtered, chlorinated, and stored in a tank. The City operates a piped water and sewer system. A diesel powerhouse provides electricity to the community, operated by the Alaska Village Electric Cooperative. The City operates a landfill but does not provide refuse collection.⁴⁰⁴ Police services are available from the State Village Public Safety Officer stationed in Old Harbor.⁴⁰⁵ The nearest state trooper post is located in the City of Kodiak.⁴⁰⁶ Accommodations are available at the Bay View Bed and Breakfast, the Ocean View Lodge and the Kodiak Sportsman Lodge.⁴⁰⁷

Medical Services

Health care is available at the Old Harbor Health Clinic and owned by the City and operated by KANA.⁴⁰⁸ The nearest hospital is located in the City of Kodiak.

Educational Opportunities

There is one school in the community which offers Kindergarten through 12th grade. As of 2011, the Old Harbor School had 43 students and 10 teachers.⁴⁰⁹

³⁹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁰⁰ This price was calculated on November 21, 2011 using kayak.com.

⁴⁰¹ Price information retrieved June 26, 2012 from http://www.kodiakislandair.com/summer_schedule.htm and http://www.servantair.com/schedules_summer.html.

⁴⁰² See footnote 399.

⁴⁰³ Infiltration galleries are a type of well constructed near rivers or ponds to collect infiltrated surface waters. Since the water infiltrates through a layer of soil/sand, it is significantly free from suspended impurities including microorganisms usually present in surface water. (Definition retrieved February 22, 2012 from http://phys4.harvard.edu/~wilson/arsenic/conferences/Feroze_Ahmed/Sec_3.htm.)

⁴⁰⁴ Personal communication with Old Harbor Tribal Council, 2004.

⁴⁰⁵ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁴⁰⁶ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁴⁰⁷ Personal communication with Old Harbor Tribal Council, 2004.

⁴⁰⁸ See footnote 399.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources, and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts. The Russians also began commercial salmon exploitation in the early 1800s. They blocked salmon streams, such as the Karluk River on the west side of Kodiak Island, using fish weirs. Commercial processing involved salting. In addition, Alutiiq women dried the fish for the winter for use in the Russian colony.^{410,411}

After the U.S. purchase Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing. The first salmon cannery on the Karluk River was established in 1882, and two more followed. Few Natives worked initially in the local canneries; a majority of cannery employees were hired from outside the region, primarily from the lower U.S. states and China. However, Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated their commercial fishing activity with subsistence hunting and fishing activities.⁴¹²

Through the early decades of the 1900s, the salmon fishery remained the primary focus of local commercial fishing activity, and the most common fishing gear was the beach seine. With the rise of diesel engines in the 1920s, the range of fishing vessels expanded, and commercial exploitation of halibut and groundfish extended into the Gulf of Alaska (GOA). The rise of fuel-powered vessels also led to a shift toward use purse seines in the salmon fishery. Herring fishermen also began stopping in Kodiak by the 1920s, and a herring reduction also operated in Kodiak until the early 1960s.^{413,414,415}

All three salmon canneries on the Karluk River were destroyed by the Good Friday earthquake of 1964, along with the City of Old Harbor and nearby Native villages. Kodiak's fishing fleet was also destroyed. The canneries near Old Harbor were never rebuilt, and after the tsunami processing activity became increasingly concentrated in Kodiak. The king crab fishery emerged as a new focus for the Kodiak fishing fleet in the years following the tsunami. Most

⁴⁰⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴¹⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁴¹¹ Mason, R. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

⁴¹² Ibid.

⁴¹³ Ibid.

⁴¹⁴ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁴¹⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

Alutiiq fishermen continued to focus on salmon fishing into the late 1900s, but some also diversified into herring, cod, and crab fisheries. Today all of these commercial fisheries continue to be important to fishermen living in Old Harbor, as well as continued subsistence fishing and hunting.⁴¹⁶

Between 2000 and 2010, Old Harbor fishermen were most engaged in commercial fisheries for salmon and Pacific cod, as well as halibut, herring, crab, ‘other groundfish’ and ‘other shellfish’ fisheries (see the *Commercial Fishing* section for details). Fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction.⁴¹⁷ Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Old Harbor is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area. ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.⁴¹⁸ The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.⁴¹⁹ Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet) has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.⁴²⁰

In the GOA, federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a ‘state-waters fishery’ for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.⁴²¹ Kodiak Island is one historical center of the red king crab fishery, and Tanner crabs are also distributed through the GOA. The

⁴¹⁶ See footnote 411.

⁴¹⁷ See footnote 415.

⁴¹⁸ Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main>.

⁴¹⁹ See footnote 410.

⁴²⁰ Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main>.

⁴²¹ Ibid.

ADF&G manages red king crab and Tanner crab stocks in the GOA.^{422,423} The Kodiak red king crab fishery has been closed in recent years due to low abundance. However, parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using eight separate management areas, each with its own GHL.⁴²⁴

In 1995, management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual TAC to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries.⁴²⁵ These and other factors that may contribute to decreasing fisheries participation in villages of the Kodiak Island archipelago have been discussed in detail in a number of research papers. Please refer to the books and articles referenced here for a more nuanced discussion of the impact of catch share programs on Kodiak-area coastal communities.^{426,427}

The Community Quota Entity (CQE) program, implemented by the North Pacific Fishery Management Council in 2005, is one program intended to address the issue of fishing rights leaving rural communities. Under the program, eligible communities can form a non-profit corporation under state law to purchase and manage quota share on their behalf. After they purchase quota share, CQE non-profits can lease the IFQ to eligible community residents.⁴²⁸ Old Harbor participates in the program through Cape Barnabas, Incorporated, a non-profit entity created under the program through the recommendation of the City of Old Harbor. Cape Barnabas, Inc. is one of two CQE non-profits in Alaska that held commercial halibut IFQ and was actively leasing commercial halibut quota to residents in 2013. As of October that year, Cape Barnabas, Inc. held 151,234 halibut quota shares in Area 3B.⁴²⁹ It is important to note that, in addition to commercial halibut quota, CQE non-profits now have the ability to acquire and

⁴²² Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main>.

⁴²³ Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management>.

⁴²⁴ See footnote 415.

⁴²⁵ North Pacific Fishery Management Council. (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

⁴²⁶ Langdon, S.J. 2008. The Community Quota Program in the Gulf of Alaska: A vehicle for Alaska Native village sustainability. In Lowe, M.E., Carothers, C., eds. "Enclosing the Fisheries: People, Places, and Power." *American Fisheries Society*. Symposium 68:155-194.

⁴²⁷ Carothers, C. 2011. Equity and access to fishing rights: Exploring the Community Quota Program in the Gulf of Alaska. *Human Organization*.70:213–223.

⁴²⁸ Gulf of Alaska Coastal Communities Coalition. 2012. *Halibut Community Quota Entities: Management Manual*. Retrieved October 21, 2013 from http://www.goac3.org/pdf/initiatives/Halibut_Managment_Manualv6.pdf.

⁴²⁹ NOAA National Marine Fisheries Service. (2013). *Permit Reports: Individual Fishing Quota*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/ifq_cqea_permits.xls.

lease charter halibut permits and non-trawl gear groundfish License Limitation Permits (LLP). In October 2013, Cape Barnabas, Inc. held seven halibut charter permits and five non-trawl groundfish LLPs.^{430,431} Old Harbor is not eligible to participate in the Community Development Quota (CDQ) program.

Processing Plants

A fish buyer operated in Old Harbor during one year of the 2000-2010 period (2003). That year, one vessel delivered fish in Old Harbor. Despite the lack of fish buyers in other years during the decade, ADF&G's 2010 Intent to Operate List listed one shore-side processing plant in Old Harbor from 2003 and 2010 (Table 5).

The seafood processing facility Old Harbor's Finest processes sablefish, Pacific cod, Pacific halibut, and all five species of salmon.⁴³² According to a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2012, the plant is a home-based business that began operations in 2006 and primarily smokes fish, freezes fresh fillets, and processes for sport fisherman and charter boats.

Fisheries-Related Revenue

Overall, in 2010, the City of Old Harbor received \$34,485 from fisheries-related taxes and fees. The most consistent fisheries-related revenue sources between 2000 and 2010 were a raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, an Extraterritorial Fish Tax, and fees for harbor usage. In 2010, Old Harbor also received \$5,000,000 in state and federal fisheries-related grants, the most the community received in any year between 2000 and 2010. Refer to Tables 2 and 3 for details on selected aspects of community finances during this period.⁴³³

Commercial Fishing

Between 2000 and 2010, Old Harbor residents were engaged in commercial fishing activities as vessel owners, quota share account and permit holders, and crew license holders. There was one registered fish processor in town from 2003 to 2010. With the exception of 2003, there were no fish buyers in Old Harbor between 2000 and 2010. In 2010, there were no direct landings of fisheries resources and no ex-vessel revenue generated in Old Harbor, indicating that landings are made elsewhere and then shipped to the plant for processing. The fish buyer that operated briefly in 2003 received landings from one vessel, but information about the landings and ex-vessel revenue generated is considered confidential due to the small number of buyers. Table 9 presents information about landings and ex-vessel revenue generated in Old Harbor.

⁴³⁰ NOAA National Marine Fisheries Service. (2013). *Permit Reports: Charter Halibut*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/chp_cqe_permits.xls.

⁴³¹ NOAA National Marine Fisheries Service. (2013). *Permit Reports: License Limitation Program*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/llp_cqea_permits.xls.

⁴³² Alaska Seafood Marketing Institute. 2005. *Supplier Information: Old Harbor's Finest*. Retrieved June 25, 2012 from <http://alaskaseafood.org/industry/suppliers/detail.cfm?Supplier=471>.

⁴³³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

In 2010, 36 Old Harbor residents held state crew licenses (equivalent to 16.5% of the total local population) and 22 residents were the primary owner of a fishing vessel. Both of these numbers represent substantial declines since 2000, with a 42.9% decrease in crew licenses (down from 63 in 2000), and a 43.6% decrease in vessels owned by residents (down from 39 in 2000). In 2010, 27 vessels were homeported in Old Harbor, down from 41 homeported there in 2000 (a decline of 34.1%). These characteristics of the Old Harbor commercial fishing sector are available in Table 5.

As the data in Table 5 indicate, along with permit data presented in Table 4 and described in below, there have been dramatic changes in fisheries participation in the Kodiak Archipelago. This topic has been thoroughly studied by Courtney Carothers at the University of Alaska. Please refer to the books and articles referenced here a more detailed discussion of the impact of declining fishing participation on Kodiak-area villages.^{434,435}

In 2010, 57 state Commercial Fisheries Entry Commission (CFEC) permits were held by 29 Old Harbor residents (equivalent to 13.3% of the population). Of these, 24 were salmon permits (11 actively fished in 2010, including 7 Prince William Sound seine permits, 1 Bristol Bay drift gillnet, and 1 Kodiak set gillnet), 8 were halibut permits (6 actively fished in 2010, all longline permits for vessels under 60 feet), 7 were for groundfish (2 actively fished in 2010, both using pot gear), 7 were for crab (2 actively fished in 2010, Tanner crab, fished using pot gear on vessels under 60 feet) and 2 were for ‘other shellfish’ (0 active in 2010, octopi/squid fished using pot gear on vessels under 60 feet). These numbers represent a 19.7% decline in total permits held since the year 2000, but only a 12.1% decline in total permits actively fished. This information can be found in Table 4.

In addition to state fishery permits, 10 Old Harbor residents held a total of 11 License Limitation Permits (LLP) in federal groundfish fisheries and 4 residents held 5 Federal Fisheries Permits (FFP). That year, no LLPs were held in federal crab fisheries. This permit information is also presented in Table 4.

Also in 2010, eight Old Harbor residents held quota share accounts in the federal halibut catch share fishery, with a total of 313,812 quota shares held. The number of halibut quota shares held in the community increased between 2000 and 2010, and the annual halibut individual fishing quota (IFQ) allotment also increased slightly over the period. Information about federal halibut catch share participation is presented in Table 6. Between 2000 and 2010, no Old Harbor residents held quota share accounts or quota shares in federal catch share fisheries for sablefish or crab (Tables 7 and 8).

In 2010, Old Harbor vessel owners landed 1,571,308 net pounds of salmon and 49,085 pounds of halibut, earning \$929,828 and \$221,741 in ex-vessel revenue, respectively. Information about landings and earnings by Old Harbor vessel owners in other fisheries in 2010 is considered confidential due to the small number of participants. However, it should be noted that over time Pacific cod and herring fisheries have also made up a large portion of total harvest and value for local fisherman. Some local vessel owners have also participated in crab, ‘other groundfish’, and ‘other shellfish’ fisheries. Information about landings and ex-vessel revenue earned by vessels owners residing in Old Harbor is presented in Table 10.

⁴³⁴ Carothers, C. 2012. Enduring ties: salmon and the Sugpiat of the Kodiak Archipelago. Pages 133-160 in B.J. Colombi and J.F. Brooks, eds. *Keystone Nations: Indigenous Peoples and Salmon across the North Pacific*. School for Advanced Research Press, Santa Fe, NM.

⁴³⁵ Carothers C. 2010. Tragedy of commodification: Transitions in Alutiiq fishing communities in the Gulf of Alaska. *MAST* 90:91–115.

Table 3. Known Fisheries-Related Revenue (In U.S. Dollars) Received by the Community of Old Harbor: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$9,000	\$20,000	\$19,500	\$16,500	\$15,147	\$11,096	\$13,000	\$14,700	\$15,714	\$13,930	\$16,000
Shared fisheries business tax ¹	\$10,596	\$11,339	\$14,941	\$11,046	\$9,035	\$21,064	\$26,149	\$30,029	\$30,055	\$16,949	\$15,254
Fisheries resource landing tax ¹	\$43	\$311	\$206	\$249	\$623	\$265	\$76	\$138	\$142	\$89	\$84
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	\$70,000	\$100,000	\$60,000	\$60,000	n/a	\$274,731	\$240,000	\$270,000	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$5,000	\$2,000	\$850	n/a	\$851	n/a	\$1,000	n/a	n/a	\$1,166	\$3,147
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$24,639</i>	<i>\$103,650</i>	<i>\$135,497</i>	<i>\$87,795</i>	<i>\$85,656</i>	<i>\$32,426</i>	<i>\$314,956</i>	<i>\$284,867</i>	<i>\$315,911</i>	<i>\$32,134</i>	<i>\$34,485</i>
<i>Total municipal revenue⁵</i>	<i>\$265,455</i>	<i>\$356,393</i>	<i>\$359,076</i>	<i>\$473,843</i>	<i>\$1.4 million</i>	<i>\$472,906</i>	<i>\$457,321</i>	<i>\$494,547</i>	<i>\$583,101</i>	<i>\$890,503</i>	<i>\$2.6 million</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Kodiak Area Native Association Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Old Harbor: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	12	11	11	11	11	11	11	11	11	11	11
	Active permits	6	6	6	6	5	5	6	6	6	5	5
	% of permits fished	50%	54%	54%	54%	45%	45%	54%	54%	54%	45%	45%
	Total permit holders	11	10	10	10	10	10	10	10	10	10	10
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	6	6	6	3	3	3	4	4	4	4	5
	Fished permits	0	0	0	2	2	2	2	2	2	3	2
	% of permits fished	0%	0%	0%	67%	67%	67%	50%	50%	50%	75%	40%
	Total permit holders	6	6	6	3	3	3	4	4	4	4	4
Crab (CFEC) ²	Total permits	0	6	7	8	12	7	7	7	7	7	7
	Fished permits	0	3	7	8	4	4	4	4	4	2	2
	% of permits fished	0%	50%	100%	100%	33%	57%	57%	57%	57%	29%	29%
	Total permit holders	0	6	7	8	7	7	7	7	7	7	7
Other shellfish (CFEC) ²	Total permits	7	5	4	3	2	2	2	2	2	2	2
	Fished permits	4	0	0	0	0	0	0	0	0	0	0
	% of permits fished	57%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	6	5	4	3	2	2	2	2	2	2	2
Halibut (CFEC) ²	Total permits	3	3	3	3	3	3	5	8	10	11	8
	Fished permits	3	1	3	2	3	3	4	6	8	8	6
	% of permits fished	100%	33%	100%	67%	100%	100%	80%	75%	80%	73%	75%
	Total permit holders	3	3	3	3	3	3	5	8	10	11	8
Herring (CFEC) ²	Total permits	15	14	13	13	10	10	10	10	11	9	9
	Fished permits	5	6	4	4	4	3	3	3	3	3	3
	% of permits fished	33%	43%	31%	31%	40%	30%	30%	30%	27%	33%	33%
	Total permit holders	9	9	9	9	9	9	9	9	9	8	8

Table 4 cont'd. Permits and Permit Holders by Species, Old Harbor: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	18	16	12	9	9	9	8	9	9	9	7
	Fished permits	10	8	5	5	2	4	2	4	4	5	2
	% of permits fished	56%	50%	42%	56%	22%	44%	25%	44%	44%	56%	29%
	Total permit holders	15	13	10	7	7	7	7	9	8	8	6
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	28	26	24	24	23	24	24	25	26	26	24
	Fished permits	15	11	7	9	7	10	10	11	9	14	11
	% of permits fished	54%	42%	29%	38%	30%	42%	42%	44%	35%	54%	46%
	Total permit holders	29	26	24	25	23	25	24	25	24	26	25
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>71</i>	<i>70</i>	<i>63</i>	<i>60</i>	<i>59</i>	<i>55</i>	<i>56</i>	<i>61</i>	<i>65</i>	<i>64</i>	<i>57</i>
	<i>Fished permits</i>	<i>37</i>	<i>29</i>	<i>26</i>	<i>28</i>	<i>20</i>	<i>24</i>	<i>23</i>	<i>28</i>	<i>28</i>	<i>32</i>	<i>24</i>
	<i>% of permits fished</i>	<i>52%</i>	<i>41%</i>	<i>41%</i>	<i>47%</i>	<i>34%</i>	<i>44%</i>	<i>41%</i>	<i>46%</i>	<i>43%</i>	<i>50%</i>	<i>42%</i>
	<i>Permit holders</i>	<i>33</i>	<i>31</i>	<i>27</i>	<i>28</i>	<i>25</i>	<i>27</i>	<i>27</i>	<i>30</i>	<i>28</i>	<i>33</i>	<i>29</i>

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Old Harbor: 2000-2010.

Year	¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Old Harbor ²	Total Net Pounds Landed In Old Harbor ^{2,5}	Total Ex-Vessel Value Of Landings In Old Harbor ^{2,5}
2000	63	0	0	39	41	0	0	\$0
2001	52	0	0	34	36	0	0	\$0
2002	48	0	0	36	37	0	0	\$0
2003	54	1	1	33	34	1	-	-
2004	51	0	1	27	33	0	0	\$0
2005	35	0	1	22	24	0	0	\$0
2006	44	0	1	20	22	0	0	\$0
2007	42	0	1	22	23	0	0	\$0
2008	44	0	1	22	22	0	0	\$0
2009	39	0	1	25	22	0	0	\$0
2010	36	0	1	22	27	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ (ADF&G) Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² (ADF&G) Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Old Harbor: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	8	267,126	29,843
2001	7	214,699	27,264
2002	7	195,685	25,869
2003	7	195,685	25,845
2004	7	186,513	27,293
2005	7	186,513	27,077
2006	8	313,812	53,270
2007	10	313,812	49,137
2008	11	313,812	52,636
2009	10	313,812	50,601
2010	8	313,812	46,185

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Old Harbor: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Old Harbor: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Old Harbor: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	-	0	0	0	0	0	0	0
Finfish	0	0	0	-	0	0	0	0	0	0	0
Halibut	0	0	0	-	0	0	0	0	0	0	0
Herring	0	0	0	-	0	0	0	0	0	0	0
Other Groundfish	0	0	0	-	0	0	0	0	0	0	0
Other Shellfish	0	0	0	-	0	0	0	0	0	0	0
Pacific Cod	0	0	0	-	0	0	0	0	0	0	0
Pollock	0	0	0	-	0	0	0	0	0	0	0
Sablefish	0	0	0	-	0	0	0	0	0	0	0
Salmon	0	0	0	-	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	-	0	0	0	0	0	0	0
Finfish	0	0	0	-	0	0	0	0	0	0	0
Halibut	0	0	0	-	0	0	0	0	0	0	0
Herring	0	0	0	-	0	0	0	0	0	0	0
Other Groundfish	0	0	0	-	0	0	0	0	0	0	0
Other Shellfish	0	0	0	-	0	0	0	0	0	0	0
Pacific Cod	0	0	0	-	0	0	0	0	0	0	0
Pollock	0	0	0	-	0	0	0	0	0	0	0
Sablefish	0	0	0	-	0	0	0	0	0	0	0
Salmon	0	0	0	-	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: (ADF&G) Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Old Harbor Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	15,402	28,257	39,824	58,581	102,277	29,440	13,512	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	40,722	59,247	48,466	49,085
Herring	939,001	1,480,042	815,317	1,100,194	1,424,343	-	-	-	-	-	-
Other Groundfish	18,559	-	-	-	-	-	-	-	-	-	-
Other Shellfish	18,849	6,624	5,803	-	-	5,944	-	-	-	-	-
Pacific Cod	1,157,988	777,919	272,545	298,768	-	887,940	-	472,418	446,667	494,064	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	2,209,324	3,256,359	3,688,912	3,124,849	2,623,278	6,079,984	5,647,237	4,737,014	2,290,944	5,132,378	1,571,308
<i>Total²</i>	<i>4,343,721</i>	<i>5,520,944</i>	<i>4,797,979</i>	<i>4,552,068</i>	<i>4,087,445</i>	<i>7,032,449</i>	<i>5,749,514</i>	<i>5,279,594</i>	<i>2,810,370</i>	<i>5,674,908</i>	<i>1,620,393</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	\$33,854	\$65,460	\$97,609	\$101,462	\$156,279	\$54,081	\$26,740	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	\$162,266	\$246,217	\$142,512	\$221,741
Herring	\$272,551	\$266,038	\$207,091	\$303,654	\$360,359	-	-	-	-	-	-
Other Groundfish	\$8,029	-	-	-	-	-	-	-	-	-	-
Other Shellfish	\$8,460	\$3,213	\$3,493	\$800	-	\$3,837	-	-	-	-	-
Pacific Cod	\$426,399	\$230,122	\$68,513	\$96,260	-	\$293,933	-	\$242,268	\$268,108	\$167,474	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$892,958	\$720,719	\$525,364	\$595,654	\$709,955	\$1,043,140	\$1,176,479	\$1,153,537	\$1,221,931	\$1,625,895	\$929,828
<i>Total²</i>	<i>\$1,608,398</i>	<i>\$1,220,092</i>	<i>\$838,315</i>	<i>\$1,061,828</i>	<i>\$1,167,922</i>	<i>\$1,442,372</i>	<i>\$1,332,758</i>	<i>\$1,612,152</i>	<i>\$1,762,996</i>	<i>\$1,935,882</i>	<i>\$1,151,569</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: (ADF&G) Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In 2010, there were three active sport fish guide businesses in Old Harbor, a decrease from six guide businesses in the year 2000. The number of licensed sport fish guides residing in Old Harbor also declined slightly from 11 in 2000 to 5 in 2005, and rebounded to 8 guides by 2010. The number of Old Harbor residents who purchased sportfishing licenses (irrespective of point of sale) varied between 43 and 69 per year between 2000 and 2010. Starting in 2004, sportfishing licenses were sold in the community. In 2004, 44 licenses were sold locally, and from 2005-2010 the number varied between 217 and 338 licenses sold per year. The greater number of sportfishing licenses purchased in Old Harbor than those purchased by residents of Old Harbor, along with the presence of several guides and guide businesses, suggests that visitors come to Old Harbor in order to engage in sportfishing activity (Table 11). It is also important to note that, as of 2013, Old Harbor's CQE non-profit, Cape Barnabas, Inc., held seven charter halibut permits that were available for lease to community residents.⁴³⁶

Old Harbor is located within Alaska Sport Fishing Survey Area Q – Kodiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. On average, Alaska resident anglers fished more angler days per year than non-Alaska residents in both saltwater and freshwater sport fisheries, and more angler days were fished per year in freshwater than in saltwater in the Kodiak region between 2000 and 2010. However, sportfishing activity in by both resident and non-Alaska resident anglers, and in both saltwater and freshwater, was extremely high. Information about the sportfishing sector in and near Old Harbor is displayed in Table 11.

The Alaska Statewide Harvest Survey,⁴³⁷ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Old Harbor: Chinook, coho, sockeye, and pink salmon, and Pacific halibut. The survey also noted harvest of Dungeness crab and razor and hardshell clams in Old Harbor. Kept/released statistics from charter logbook data reported by ADF&G⁴³⁸ show that Pacific halibut was by far the most important species targeted by fishing charters out of Old Harbor, with 1,067 halibut kept and 880 released in 2010. These numbers represent a decline from 1,501 halibut kept and 1,250 released in 2005. Chinook and coho salmon were important, with 234 large Chinook kept and 4 released, and 854 coho kept and 0 released in 2010. Pelagic rockfish were also important, with 739 kept and 240 released in 2010, down from 1,561 kept and 1,219 released in 2007. Other species that were also caught during charters out of Old Harbor between 2000 and 2010 include sockeye, chum, and pink salmon, lingcod, yelloweye rockfish, 'other rockfish', sablefish, and shark.

⁴³⁶ NOAA National Marine Fisheries Service. (2013). *Permit Reports: Charter Halibut*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/chp_cqe_permits.xls.

⁴³⁷ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴³⁸ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Old Harbor: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Old Harbor ²
2000	6	11	43	0
2001	4	9	50	0
2002	3	9	40	0
2003	3	8	55	0
2004	3	7	69	44
2005	2	5	55	311
2006	3	7	60	217
2007	3	7	63	338
2008	3	7	68	228
2009	3	9	59	195
2010	3	8	48	97

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler days fished –Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	16,767	38,809	18,542	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	16,654	32,965
2010	20,012	20,365	18,871	22,211

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest continues to play an important role in the traditional Alutiiq culture and lifestyle of Old Harbor.⁴³⁹ Between 2003 and 2005, the years for which subsistence surveys were conducted by ADF&G in the community, an average of 85.5% of households were reported to participate in salmon subsistence. In 2003, 92.3% of households participated in halibut subsistence and 35.6% of households participated in non-salmon fish subsistence (other than halibut). In the case of marine mammals and marine invertebrates, data were only available for 2003. In that year, 35.3% of households participated in marine mammal subsistence and 55.7% participated in marine invertebrate subsistence. In 2003, per capita subsistence harvest of land and sea-based resources in Old Harbor was 357 lbs. This information is presented in Table 12. In total that year, 4,752 lbs of marine invertebrates were harvested and 2,138 lbs of ‘non-salmon’ fish were harvested (not including halibut) (Table 13).⁴⁴⁰

At the species level, some Old Harbor households reported harvesting marine mammals in 2003, including harbor seal and Steller sea lion. The species of marine invertebrates harvested by the greatest number of Old Harbor households in 2003 included butter clams, black chitons, sea urchin, Pacific littleneck clams, Tanner crab, octopus, Dungeness crab, and king crab. The species of non-salmon fish harvested by the greatest number of households included Pacific cod, black rockfish, and lingcod. In addition, while only a small number of Old Harbor households reported subsistence harvest of herring and sablefish in 2003, a greater percentage of households reported using these species. Most species listed above were used by a greater percentage of household than were involved in harvest activities, indicating the presence of sharing networks in the community.⁴⁴¹

In 2008, the most recent year for which data are available from ADF&G about subsistence salmon harvest, 25 Old Harbor households were issued subsistence salmon permits. All 25 were returned that year, with a total of 1,445 salmon harvested. These numbers represent a decline from 38 to 39 permits issued in 2004 and 2005, and total salmon harvests of 2,000 – 3,000 in those years. Coho and sockeye salmon made up the greatest percentage of the subsistence salmon harvest in all years for which data were reported.

In 2010, 41 Subsistence Halibut Fishing Certificates (SHARC) were issued to residents of Old Harbor. Of these, 13 were fished that year, and the total reported subsistence halibut harvest was 3,583 pounds. These numbers represent a decline from earlier years in the decade. Of all years in which data were reported, the highest volume harvest was reported in 2004, when 13,150 pounds of halibut were reported harvested using 46 SHARC cards. Information about subsistence halibut harvest is presented in Table 14.

Old Harbor residents also participated in the subsistence harvest of marine mammals. According to data reported by the U.S. Fish and Wildlife Service, for years in which data were reported, the number of sea otters harvested varied between 2 and 21. According to data reported by ADF&G, the number of harbor seals harvested varied between 1 and 28 per year, and the number of Steller sea lions harvested varied between 20 and 71. No information was reported by

⁴³⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁴⁰ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁴⁴¹ Ibid.

management agencies regarding harvest of beluga whale, walrus, or spotted seal between 2000 and 2010. Information about marine mammal subsistence is presented in Table 15.

Additional Information

The Alaska-Aleutian arc, also known as the “Pacific Ring of Fire” is one of the most active earthquake areas in the world.⁴⁴² Some of these earthquakes are associated with explosive volcanic eruptions.⁴⁴³ Since the arrival of Europeans to Kodiak Island, three major geologic events stand out in history, including two great earthquakes in 1788 and 1967, both followed by tsunamis, and the eruption of Novarupta Volcano on the Alaska Peninsula in 1912.

During the period of Russian settlement, the community of Three Saint’s Bay was destroyed by a tsunami. Based on the following evidence from written accounts, geologists have determined that this earthquake was large enough to have ruptured at least a 600-km portion of the Alaska-Aleutian arc:

*In a letter of 1789 to G.I. Shelikov, Merkul’ev described strong shaking on Kodiak Island, an intense flood (tsunami) consisting of a series of waves, aftershocks every day for a month or longer, and a permanent change in sea level. Davydov also mentioned landslides on Kodiak Island and observed that the sea first withdrew from shore, surged onshore, and carried a vessel onto the top of a cabin.*⁴⁴⁴

Ash clouds from the 3-day-long 1912 eruption of the volcano Novarupta traveled as far as Seattle, Washington, by the end of the eruption, and 10 days later reached Algeria in Africa. Kodiak Island was in the immediate path of the ash, located only 100 miles southeast of the volcano. Water became undrinkable on the island and people suffered from respiratory distressed and sore eyes. Radio communications were disrupted, and boats were unable to dock due to low visibility. Roofs in Kodiak collapsed under more than a foot of ash, and building were wrecked in ash avalanches. The Novarupta eruption also formed the famous Valley of 10,000 Smokes located in Katmai National Park on the Alaska Peninsula. In the years following the eruption local fish and wildlife populations suffered from lack of food and poor water quality. The salmon fishery faltered between 1915 to 1919 due to starvation and failure of many adult fish to spawn in ash-choked streams.⁴⁴⁵

The Good Friday earthquake of 1964 was the largest recorded earthquake in the United States, with a magnitude of 9.2 on the Richter scale. It struck Prince William Sound on Good Friday, March 28th, 1964. Kodiak Island was one of the areas affected by the ensuing tsunami. The extreme southeast coast of Kodiak Island, Sitkalidak Island and part or all of Sitkinak Island experienced extreme uplift of between 13 and 15 m. In Anchorage, the quake lasted for about 3 minutes, and although the City was 75 miles from the location of the quake’s epicenter, major damages resulted. Many buildings were damaged beyond repair, displacements broke the ground

⁴⁴² Sykes, L. R., J. B. Kisslinger, L. House, J. N. Davies and K. H. Jacob. 1980. Rupture Zones and Repeat Times of Great Earthquakes along the Alaska-Aleutian Arc, 1784-1980. *Science* 19 December 1980, Vol. 210, No.. 4476 pp. 1343-1345.

⁴⁴³ U.S. Geological Survey. 1998. *Can Another Great Volcanic Eruption Happen in Alaska?* Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

⁴⁴⁴ See footnote 442, pg. 1343.

⁴⁴⁵ See footnote 443.

in an area of about 130 acres, and landslides destroyed areas of the business district and private homes.⁴⁴⁶

Table 12. Subsistence Participation by Household and Species, Old Harbor: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	82%	92%	35%	56%	36%	357
2004	90%	n/a	n/a	n/a	3%	n/a
2005	85%	n/a	n/a	n/a	10%	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁴⁴⁶ U.S. Geological Survey. “Historic Earthquakes: Prince William Sound, Alaska, 1964 March 28 03:36 UTC, Magnitude 9.2.” Retrieved December 5, 2011 from <http://earthquake.usgs.gov/earthquakes/states/>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Old Harbor: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	21	n/a	34	570	184	351	n/a	n/a
2001	n/a	49	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	40	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	41	n/a	n/a	n/a	n/a	n/a	4752	2138
2004	39	39	13	85	1001	531	574	n/a	66
2005	38	38	13	236	1025	725	1304	n/a	116
2006	38	38	22	81	1262	563	630	n/a	n/a
2007	38	38	22	81	1262	563	630	n/a	n/a
2008	25	25	0	34	604	222	585	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Old Harbor: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	46	35	5,196
2004	63	46	13,150
2005	74	55	7,411
2006	71	61	9,270
2007	73	51	4,877
2008	71	48	7,714
2009	64	49	4,376
2010	41	13	3,583

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Old Harbor: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	13	59	n/a
2001	n/a	21	n/a	n/a	26	71	n/a
2002	n/a	n/a	n/a	n/a	9	40	n/a
2003	n/a	2	n/a	n/a	28	67	n/a
2004	n/a	12	n/a	n/a	8	38	n/a
2005	n/a	11	n/a	n/a	18	38	n/a
2006	n/a	12	n/a	n/a	1	20	n/a
2007	n/a	9	n/a	n/a	7	35	n/a
2008	n/a	n/a	n/a	n/a	7	35	n/a
2009	n/a	5	n/a	n/a	n/a	n/a	n/a
2010	n/a	6	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Ouzinkie (ooh-ZINK-ee)



People and Place

*Location*⁴⁴⁷

Ouzinkie is located on the west coast of Spruce Island, adjacent to the northeast coast of Kodiak Island. It lies 10 miles north of the City of Kodiak and 247 air miles southwest of Anchorage. Ouzinkie is located in the Kodiak Recording District and the Kodiak Island Borough Census Area. The City encompasses 6.0 square miles of land and 1.7 square miles of water.

*Demographic Profile*⁴⁴⁸

In 2010 there were 161 residents in Ouzinkie, making it the 216th largest of 352 communities in Alaska with recorded populations that year. Since the community was first recorded in the 1880 U.S. Census, the population has fluctuated from no inhabitants at the lowest point (1900 and 1910) to 253 inhabitants at the highest point (in 1940). Since 1930 the population has remained relatively stable, remaining close to 200 inhabitants. Between 1990 and 2010, the population of Ouzinkie declined by 23%. After a period of growth between 1990 and 2000, Alaska Department of Labor estimates suggest that the population of permanent residents decreased by 24.4% between 2000 and 2009, with an average annual growth rate of -0.9%. According to a survey conducted by the NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders indicated that approximately 10 additional people are present in Ouzinkie each year as seasonal workers or transients. They also indicated that the population of Ouzinkie is stable year-round, and the seasonal fishing activities do not influence population fluctuations in the community.

In 2010, a majority of the population of Ouzinkie identified as American Indian and Alaska Native (79.5%), along with 10.6% who identified as White, 0.6% as Asian, and 9.3% who identified with two or more races. In addition, 1.9% of the population considered themselves to be Hispanic in 2010. Individuals identifying as American Indian and Alaska Natives made up 1.4% less of the population in 2010 than in 2000, while those identifying as White made up 0.5% less of the population, and 1.3% more of the population identified with two or more races. In addition, Asian residents appeared to be present in 2010 but not in 2000, and the percentage of residents identifying as Hispanic decreased by 2.5%. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

⁴⁴⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁴⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

According to household surveys conducted for the U.S Census, the average household size in Ouzinkie in 2010 was 2.88, a slight decrease from 3.04 persons per household in 2000 and 3.0 in 1990. The total number of households increased slightly between 1990 and 2000, from 68 to 74 occupied housing units, and then decreased to 56 households in 2010. Of the 88 housing units surveyed for the 2010 U.S. Decennial Census, 45.5% were owner-occupied, 18.2% were rented, and 36.4% were vacant or used only seasonally. From 1990 to 2010, no residents of Ouzinkie lived in group quarters.

Table 1. Population in Ouzinkie from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	209	-
2000	225	-
2001	-	204
2002	-	189
2003	-	172
2004	-	187
2005	-	189
2006	-	172
2007	-	166
2008	-	168
2009	-	170
2010	161	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Ouzinkie: 2000-2010 (U.S. Census).

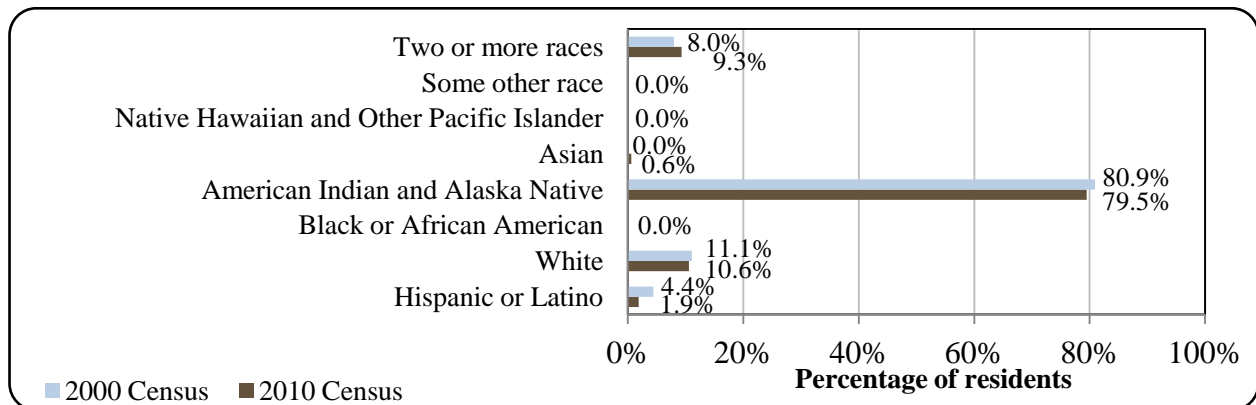
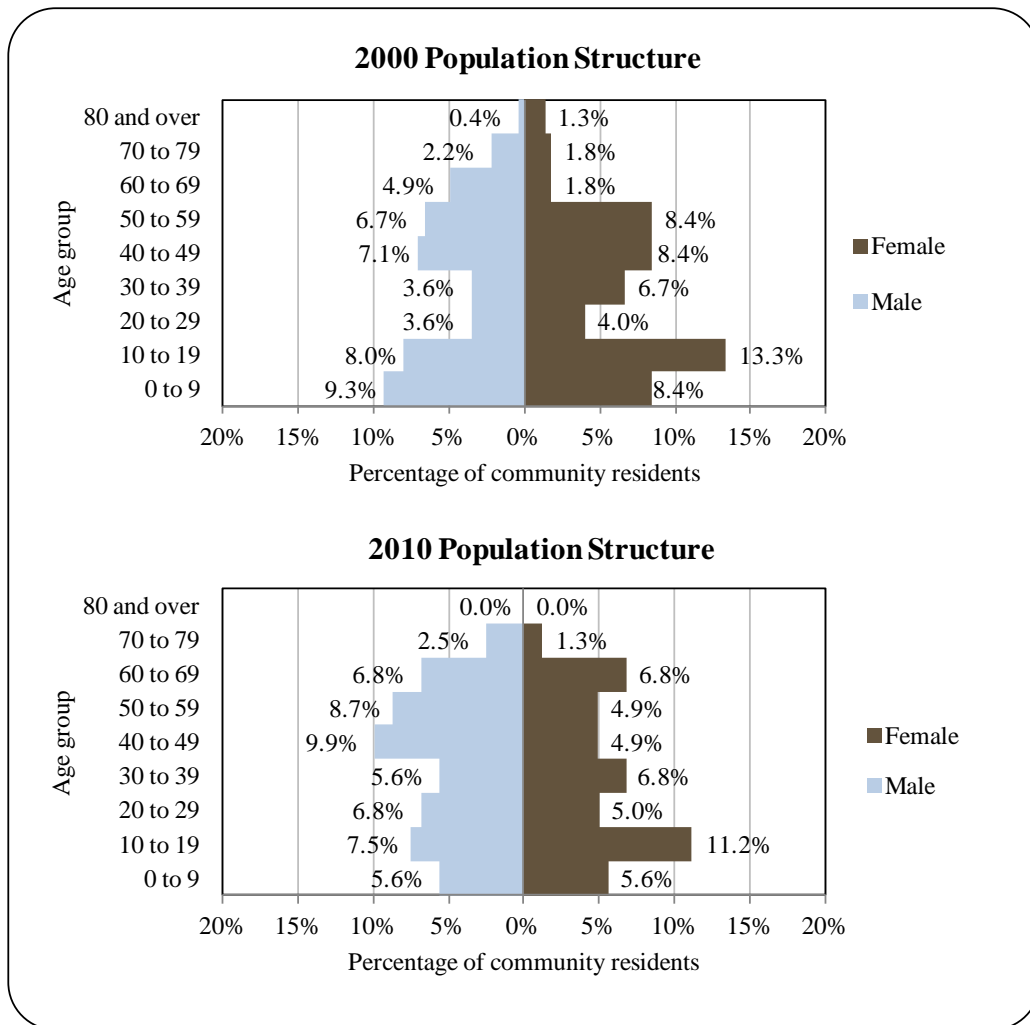


Figure 2. Population Age Structure in Ouzinkie Based on the 2000 and 2010 U.S. Decennial Census.



The gender makeup in Ouzinkie in 2010 was slightly more skewed toward males (53.4% male and 46.6% female) than the gender makeup of the State as a whole, which was 52% male and 48% female. That year, the median age was 40.7 years, higher than the median age for Alaska of 33.8 and the U.S. national average of 36.8 years. In 2010, almost all age groups had more males than females, with the exception of more females in the 10-19 and 30-39 age groups, and an equal number of males and females between 0 and 9 and between 60 and 69 years of age. Relatively few people were over the age of 70, and no one over the age of 80, lived in Ouzinkie in 2010. The overall population structure of Ouzinkie in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁴⁴⁹ 80% of Ouzinkie residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also

⁴⁴⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

in 2010, 3.9% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 16.1% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 16.1% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 17.4% were estimated to have a Bachelor's degree, the same as the percentage of Alaskan residents overall; and 11% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Kodiak Island is within the traditional territory of the Alutiiq peoples, and the area is estimated to have been inhabited for at least 7,500 years.^{450,451,452} At the time Russian settlement, the Alutiiq peoples were referred to as 'Aleuts'. The name 'Alutiiq' has been used since the 1980s to refer to the linguistic and cultural group of Alaska Natives from the southern coast of the Alaska Peninsula to Prince William Sound, as distinguished from the Aleuts living in the Aleutian Islands. Alutiiq people living on Kodiak Island and the south coast of the Alaska Peninsula are called Koniag (Koniagmiut), and those living on Kodiak Island specifically are called Qikertarmiut (people of Kodiak Island).

The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals and sea otters. They were skilled mariners, using skin kayaks and larger wooden boats for both war raids and trade. When sea otter populations began to decline in the Aleutian Islands, Russian fur traders entered the territory of the Koniags. They were initially repelled by the Alutiiqs, but in 1784 Gregorii Shelikof and his men took Kodiak Island by force using cannons and muskets.⁴⁵³

Following a smallpox epidemic that dramatically reduced the Native population of Kodiak Island, in the 1840s the Russian colonial administration consolidated the remaining population into seven villages. Two villages, including Ouzinkie, were intended to be creole⁴⁵⁴ settlements. The number of creoles increased during the period of the Russian colony. In addition, Ouzinkie was conceived as a retirement community for employees of the Russian American Company, many of whom had Native families and wanted to stay in Alaska.⁴⁵⁵ The Russians referred to the settlement in 1849 as "Uzenkiy," meaning "village of Russians and Creoles."⁴⁵⁶

In 1889, the Royal Packing Company constructed a cannery at Ouzinkie. Shortly afterward, the American Packing Company built another. In 1890, a Russian Orthodox church

⁴⁵⁰ Crowell, A.L. Steffian, A.F., and G.L. Pullar, eds. 2001. *Looking Both Ways: Heritage and Identity of the Alutiiq People*. University of Alaska Press, Fairbanks.

⁴⁵¹ Clark, D.W. 1998. Kodiak Island: The Later Cultures. *Arctic Anthropology* 35:172-186.

⁴⁵² Clark, D.W. 1984. Pacific Eskimo: Historical Ethnography. In *Handbook of North American Indians, vol. 5*. D. Damas, ed. Pp 185-197. Smithsonian Institution, Washington D.C.

⁴⁵³ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

⁴⁵⁴ Creoles were the children of Native women and Russian men, or the children of creoles.

⁴⁵⁵ See footnote 453.

⁴⁵⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

was built, and in 1927 a post office was established. Cattle ranching was popular in the early 1900s. In 1964, the Good Friday Earthquake and resulting tsunami destroyed the Ouzinkie Packing Company cannery. Following the disaster, Columbia Ward bought the remains and rebuilt the store and dock but not the cannery. The City was incorporated in 1967. In the late 1960s, the Ouzinkie Seafoods cannery was constructed. The operation was sold to Glacier Bay and burned down in 1976 shortly after the sale. No canneries have operated since. Today, Ouzinkie remains an Alutiiq village.⁴⁵⁷

Natural Resources and Environment

The climate of the Kodiak Islands is dominated by a strong marine influence. There is moderate precipitation, frequent cloud cover and fog, and little to no freezing weather. Severe storms are common from December through February. Annual precipitation averages 60 inches, with 87 inches of snowfall. Temperatures remain within a narrow range throughout the year, from 32 to 62 °F.⁴⁵⁸

Ouzinkie is located just over 20 miles east of the border of the Kodiak National Wildlife Refuge (NWR). The NWR covers the southwestern two-thirds of Kodiak Island. It was established in 1941 with the purpose of wildlife conservation, in particular the Kodiak brown bear unique to the island, as well as fulfillment of treaty obligations, providing for continued subsistence use, and to ensure water quality and quantity.⁴⁵⁹ There are also a number of state parks, state historical parks, and state recreation sites located on the northeast corner of Kodiak Island.⁴⁶⁰

Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific “Ring of Fire”. The earthquake belt along the Aleutian Islands, Alaska Peninsula, and Kenai Peninsula is known as the Alaska-Aleutian subduction zone, where strong earthquakes occur as a result of slipping along the contact zone between the Pacific and Alaska plates. Earthquakes can cause tsunamis, landslides, snow avalanches, and submarine slumps.⁴⁶¹ The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula, covered the island in ash and gasses and disrupted the local salmon fishery, especially between 1915 to 1919, when many adult fish starved and failed to spawn in ash-choked streams.⁴⁶²

In addition to risk of earthquake and volcanic activity, natural hazards present in Ouzinkie include wildfire and severe weather. A drought scenario has the potential to exacerbate wildfire risk and disrupt hydroelectric power production. A backup diesel generator is present in the community in such an event. High winds are the greatest weather threat in Ouzinkie.⁴⁶³

⁴⁵⁷ Ibid.

⁴⁵⁸ See footnote 456.

⁴⁵⁹ U.S. Fish and Wildlife Service. *Kodiak National Wildlife Refuge website*. Retrieved November 30, 2011 from <http://kodiak.fws.gov>.

⁴⁶⁰ Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks website*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/>.

⁴⁶¹ City of Ouzinkie. 2000. *Community Emergency Response Plan. Annex E to the Kodiak Emergency Operations Plan*. Retrieved March 7, 2012 from <http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20E%20-%20Ouzinkie.pdf>.

⁴⁶² U.S. Geological Survey. 1998. “Can Another Great Volcanic Eruption Happen in Alaska?” Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

⁴⁶³ See footnote 461.

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.⁴⁶⁴ Oil was carried by currents throughout the area of the Alutiiq people, and hit the beaches of Kodiak Island in mid-April.⁴⁶⁵ The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection, and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included with Kodiak NWR.⁴⁶⁶

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Ouzinkie as of May 2012.⁴⁶⁷

Current Economy⁴⁶⁸

According to a survey conducted by the AFSC in 2011, community leaders reported that Ouzinkie's economy relies upon commercial fishing and sport hunting and fishing. Other top local employers in 2010 included local government offices, regional health and social service organizations, the Kodiak Island Borough School District, the village Native corporation (Ouzinkie Native Corporation), a construction company, a stevedoring company, and Servant Air, Inc.⁴⁶⁹ In addition, almost the entire population depends to some extent on subsistence activities for various food sources. Salmon, crab, halibut, shrimp, clams, ducks, deer, and rabbit are utilized.⁴⁷⁰

Based on household surveys for the 2006-2010 ACS,⁴⁷¹ in 2010, the per capita income in Ouzinkie was estimated to be \$18,548 and the median household income was estimated to be \$48,824. This represents a decrease from the per capita and median household incomes reported in the year 2000 (\$19,324 and \$52,500, respectively). If inflation is taken into account by converting 2000 values to 2010 dollars,⁴⁷² this drop in income is revealed to be even greater. Real per capita income in 2000 was \$25,411 and real median household income was \$69,037. In 2010, Ouzinkie ranked 166th in per capita income out of 305 Alaskan communities with per capita income data, and 139th in median household income, out of 299 Alaskan communities with household income data that year.

⁴⁶⁴ Environmental Protection Agency. *Exxon Valdez*. Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

⁴⁶⁵ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

⁴⁶⁶ Restoration Notebook. 2009. *Habitat Protection – A Successful Restoration Strategy*. *Exxon Valdez* Oil Spill Trustee Council. Retrieved December 1, 2011 from <http://dnr.alaska.gov>.

⁴⁶⁷ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁴⁶⁸ Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁶⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴⁷⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁷¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁷² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Although Ouzinkie’s small population size may have prevented the ACS from accurately portraying economic conditions,⁴⁷³ the 2010 ACS per capita income estimate is supported by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Ouzinkie in 2010 is \$10,970.⁴⁷⁴ This is lower than the 2006-2010 ACS estimate, providing additional evidence that per capita income declined in Ouzinkie between 2000 and 2010. Despite this apparent decline in per capita income in Ouzinkie, the community was not recognized as “distressed” by the Denali Commission.⁴⁷⁵ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 54.3% of the population age 16 and older was estimated to be in the civilian labor force, a lower percentage than was estimated to be in the civilian labor force statewide (68.8%). In the same year, 26.5% of local residents were estimated to be living below the poverty line, compared to 9.5% statewide, and the unemployment rate was estimated to be 7.5%, compared to the state percentage of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 8.5%, compared to a statewide unemployment rate estimate of 11.5%.⁴⁷⁶

Also based on the 2006-2010 ACS, a majority of Ouzinkie workers were estimated to be employed in the public sector (64.2%), along with 34.6% worked in the private sector, and 1.2% estimated to be self-employed. Of the 81 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number was estimated to work in educational services, health care, and social assistance (27.2%), public administration (27.2%), construction (17.3%), and transportation, warehousing, and utilities (13.6%). Also in 2010, 4.6% of the employed civilian labor force was estimated to be working in agriculture, forestry, fishing and hunting, and mining. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 97 employed residents in Ouzinkie in 2010, of which 53.6% were employed in local government, 10.3% in trade, transportation, and utilities, 10.4% in educational and health services, 9.3% in professional and business services, 5.2% in construction, 4.1% in natural resources and mining, 1% in leisure and hospitality, 1% in unknown industries, and 5.2% in other industries.⁴⁷⁷ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

⁴⁷³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁷⁴ See footnotes 469 and 471.

⁴⁷⁵ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁴⁷⁶ See footnote 469.

⁴⁷⁷ *Ibid.*

Figure 3. Local Employment by Industry in 2000-2010, Ouzinkie (U.S. Census).

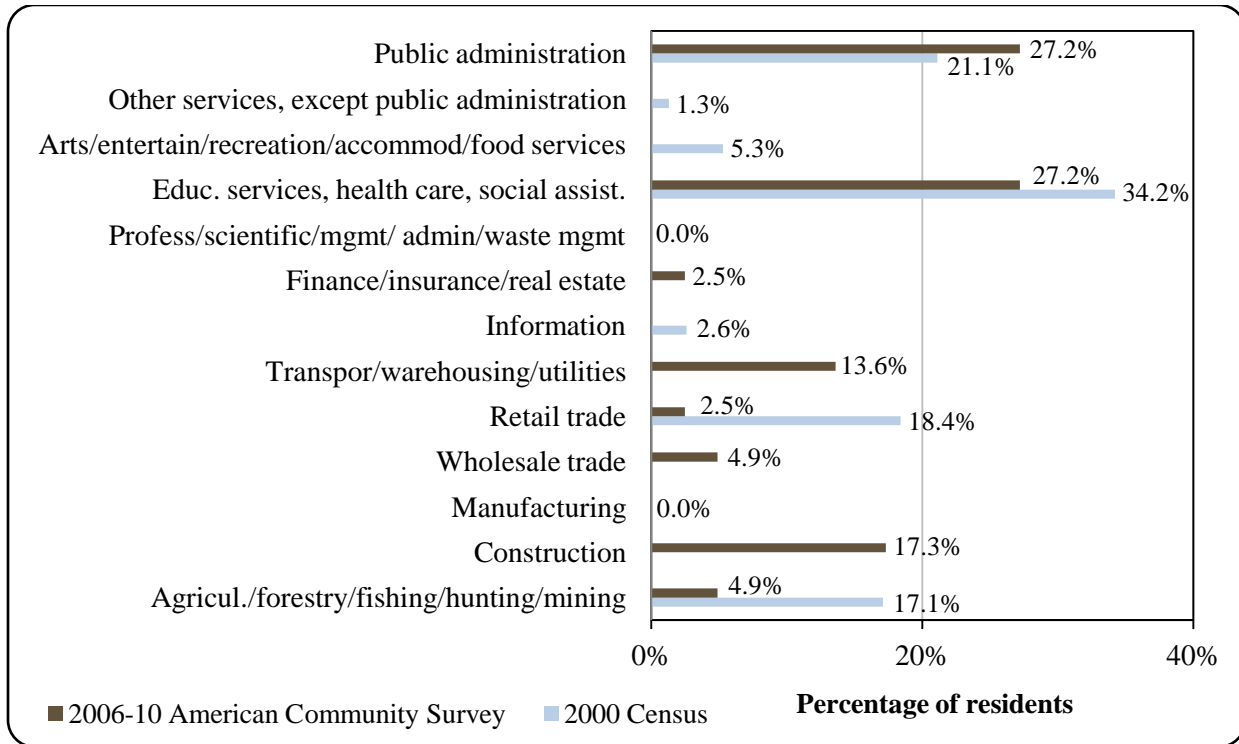
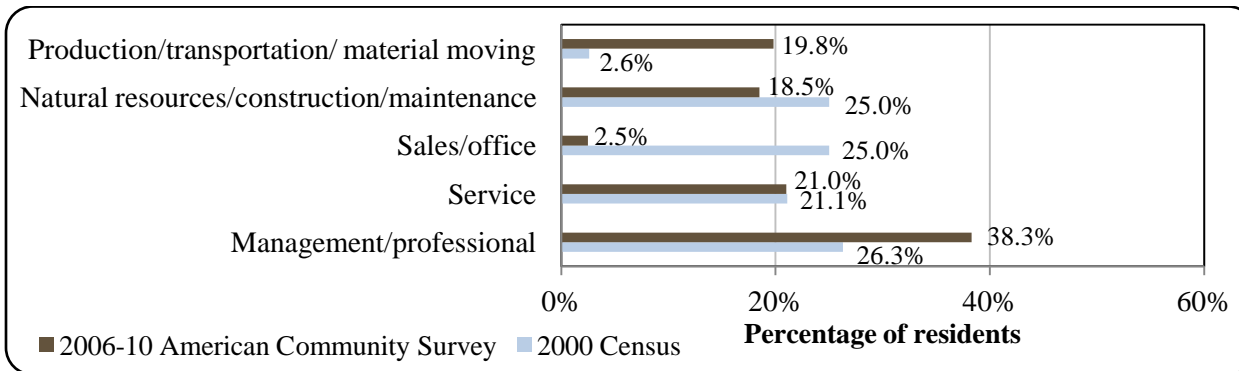


Figure 4. Local Employment by Occupation in 2000-2010, Ouzinkie (U.S. Census).



Governance

Ouzinkie is a 2nd Class City in the Kodiak Island Borough. The City was incorporated in 1967 and has a Strong Mayor form of government, including a seven-person city council which includes the Mayor, a five-person advisory school board, and several municipal employees. The City administers a 3% sales tax, and the Borough administers a 11.27 mills (1.127%) property tax, excluding service area taxes.⁴⁷⁸ In addition to sales tax revenue, other locally-generated revenue sources included contracted maintenance services, land leasing, fees for water/sewer,

⁴⁷⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

landfill, and electricity services, gravel sales, apartment rentals, and equipment rentals. Outside revenue sources included shared funds from various state revenue sharing programs, as well as grants and subsidies in some years. Revenue sharing contributions came from the State Revenue Sharing program (approximately \$21,000 per year from 2000 to 2003), the Community Revenue Sharing program (just over \$100,000 per year in 2009 and 2010), and state fish tax revenues (see the *Fisheries-Related Revenue* section of this profile). In addition, Ouzinkie received a variety of fisheries-related grants between 2000 and 2010, including a \$1,300,000 grant in 2002 for improvements to harbor facilities, a \$11,854 disaster aid grant in 2005 for construction of a Wave Wall, and a series of grants in 2008 and 2010 for dock replacement. Information about selected aspects of Ouzinkie municipal revenue is presented in Table 2.

Ouzinkie was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Ouzinkie. The Native village corporation is the Ouzinkie Native Corporation, which manages 151,052 acres of land. The regional Native corporation to which Ouzinkie belongs is Koniag, Incorporated.⁴⁷⁹

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Ouzinkie from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$522,007	\$12,318	\$21,640	n/a
2001	\$627,637	\$6,276	\$20,824	\$1,300,000
2002	\$576,919	\$5,962	\$20,825	n/a
2003	\$490,483	\$8,134	\$20,970	n/a
2004	\$539,797	\$5,266	n/a	\$11,854
2005	\$579,957	\$15,246	n/a	n/a
2006	\$507,541	\$10,108	n/a	n/a
2007	\$519,718	\$11,544	n/a	\$570,000
2008	\$551,541	\$8,577	n/a	n/a
2009	\$628,567	\$6,866	\$104,519	\$4,000,000
2010	\$878,950	\$17,494	\$104,526	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁴⁷⁹ Ibid.

Ouzinkie is also a member of the Kodiak Area Native Association (KANA), a tribal non-profit organization headquartered in Kodiak that serves communities in the Kodiak Archipelago.⁴⁸⁰ KANA is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁴⁸¹ KANA provides health and development services, as well as career development and other community services, with the goal of promoting economic self sufficiency and promote healthy families.⁴⁸²

The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and U.S. Bureau of Citizenship and Immigration Services offices are all located within the City of Kodiak, 10 miles south of Ouzinkie. The nearest Alaska Department of Natural Resources office is a Division of Parks and Outdoor Recreation office, also located in Kodiak, and the nearest office of the Alaska Department of Commerce, Community, and Economic Development is in Anchorage.

Infrastructure

Connectivity and Transportation

The village is accessible by air and water. There is a state-owned 2,085 ft long by 80 ft wide gravel airstrip, although runway conditions are not monitored, so visual inspection is recommended prior to use.⁴⁸³ As of early June 2012, a roundtrip ticket between Kodiak and Anchorage cost \$360.⁴⁸⁴ Several companies offer service between Kodiak and Ouzinkie, including Servant Air, Inc. and Island Air Service. As of June 2012, a roundtrip ticket between Kodiak and Ouzinkie with these air services cost between \$110 and \$120.⁴⁸⁵ A floatplane landing area is also available at Ouzinkie Harbor.⁴⁸⁶ According to a survey conducted by the AFSC in 2011, water taxi service was also available to Ouzinkie. Barges provide cargo delivery from Seattle and Kodiak.⁴⁸⁷ The road system in Ouzinkie is limited, including only a few miles of gravel roads and paths. Less than 50 vehicles are present in town, along with approximately 40-60 ATVs.⁴⁸⁸

⁴⁸⁰ Kodiak Area Native Association. (n.d.). *Homepage*. Retrieved February 16, 2012 from <http://www.kanaweb.org/>.

⁴⁸¹ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁴⁸² See footnote 480.

⁴⁸³ City of Ouzinkie. 2000. *Community Emergency Response Plan. Annex E to the Kodiak Emergency Operations Plan*. Retrieved March 7, 2012 from <http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20E%20-%20Ouzinkie.pdf>.

⁴⁸⁴ This price was calculated on November 21, 2011 using kayak.com.

⁴⁸⁵ Price information retrieved June 26, 2012 from http://www.kodiakislandair.com/summer_schedule.htm and http://www.servantair.com/schedules_summer.html.

⁴⁸⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁸⁷ Ibid.

⁴⁸⁸ See footnote 483.

Facilities

The City operates a piped water system in Ouzinkie. Water is derived from a dam on Mahoona Lake, and also from Katmai Creek. The City also operates a piped sewage system. A central septic treatment system and a sludge disposal site are used for waste. Over 90% of all homes in Ouzinkie are fully plumbed. Electricity is provided in Ouzinkie from a hydroelectric facility operated by the City, with a diesel backup generator.⁴⁸⁹ Public safety services are provided by a Village Public Safety Officer (VPSO) stationed in Ouzinkie,⁴⁹⁰ as well as a state trooper post in Kodiak. Fire and rescue services are provided by the city volunteer fire department and the U.S. Coast Guard (USCG). Additional community facilities include a Community Center, school gymnasium, and public library. A meals program for senior citizens operates out of the Community Center.⁴⁹¹ According to a survey conducted by the AFSC in 2011, a post office and publicly subsidized housing are also present in Ouzinkie.

With regard to fisheries-related infrastructure, according to the 2011 AFSC survey, community leaders reported that Ouzinkie has a breakwater, small boat harbor, and dock with fuel tanks. They indicated that 800 feet of dock space is available for permanent vessel moorage along with 100 ft of space for transient vessel moorage. They said that vessels up to 80 ft in length can be accommodated in Ouzinkie. According to community leaders, several improvements are currently underway to these facilities, including construction of new dock space and pilings, improvements to the existing dock structure, and addition of roads and electricity serving the dock. The new dock will have the capacity to receive a ferry. They noted that plans are in place to add a fish cleaning station and barge landing area and to connect the water system to the dock within the next 10 years. Additionally, they reported that harbor dredging has recently been carried out. For fisheries-related businesses and services not available locally, community leaders indicated that Ouzinkie residents typically travel to Kodiak, Homer, or Anchorage.

Medical Services

Health care is available at the Ouzinkie Health Clinic which is owned by the Village Council and operated by KANA. The clinic is a Community Health Aide Program site. Emergency Services have coastal and air access. Emergency service is provided by volunteers and a health aide.⁴⁹² The nearest hospital is located in the City of Kodiak.

Educational Opportunities

There is one school in the community, which offers Kindergarten through 12th grade. As of 2011, the Ouzinkie School had a total of 28 students and 3 teachers.⁴⁹³

⁴⁸⁹ See footnote 486.

⁴⁹⁰ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁴⁹¹ See footnote 486.

⁴⁹² Ibid.

⁴⁹³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts.⁴⁹⁴

After the U.S. purchase of Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries, including salmon fishing. In 1889, the Royal Packing Company constructed a cannery at Ouzinkie. Shortly afterward, the American Packing Company built another. A majority of cannery employees were hired from outside the region, primarily from the lower U.S. states and China. Native Alaskans became increasingly involved in commercial salmon fishing in the early 1900s, and coordinated commercial fishing activity with subsistence hunting and fishing activities. The most common fishing gear was the beach seine until purse seining became popular in the 1920s with the rise of fuel-powered boats. The salmon fishery was the primary focus of local commercial fishing activity, although by the 1920s halibut fisherman began stopping in Kodiak, and herring and cod fishermen also worked in the area.⁴⁹⁵

The Ouzinkie cannery was destroyed by the Good Friday earthquake of 1964. Following the disaster, Columbia Ward bought the remains and rebuilt the store and dock but not the cannery. In the late 1960s, the Ouzinkie Seafoods cannery was constructed. The operation was sold to Glacier Bay and burned down in 1976 shortly after the sale. No canneries have operated since.⁴⁹⁶ After the 1964 earthquake, Kodiak became the focal point of seafood processing for the region. The king crab fishery emerged as a new focus for the Kodiak fishing fleet in the years following the tsunami. Most Alutiiq fishermen continued to focus on salmon fishing into the late 1900s, but some also diversified into herring, cod, and crab fisheries.⁴⁹⁷ Today all of these commercial fisheries continue to be important to fishermen living in Ouzinkie, as well as continued subsistence fishing and hunting.⁴⁹⁸

Between 2000 and 2010, Ouzinkie fishermen were most engaged in commercial fisheries for salmon, groundfish, and halibut, and were also involved to a lesser degree in fisheries for crab, sablefish, and ‘other shellfish’. According to a survey conducted by the AFSC in 2011, community leaders indicated that the Pacific cod jig fishery takes place during the first half of January each year, the snow crab fishery takes place in the second half of January, and the Pacific halibut longline fishery runs between mid-March and mid-November. Fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic

⁴⁹⁴ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

⁴⁹⁵ Ibid.

⁴⁹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁹⁷ See footnote 494.

⁴⁹⁸ See footnote 496.

Zone (EEZ) are under federal jurisdiction.⁴⁹⁹ Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Ouzinkie is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area. ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.⁵⁰⁰ The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.⁵⁰¹ Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet) has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.⁵⁰²

In the GOA, federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a ‘state-waters fishery’ for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.⁵⁰³ Kodiak Island is one historical center of the red king crab fishery, and Tanner crabs are also distributed through the GOA. The ADF&G manages red king crab and Tanner crab stocks in the GOA.^{504,505} The Kodiak red king crab fishery has been closed in recent years due to low abundance. However, parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using eight separate management areas, each with its own GHL.⁵⁰⁶

⁴⁹⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁵⁰⁰ Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main>.

⁵⁰¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁵⁰² Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main>.

⁵⁰³ Ibid.

⁵⁰⁴ Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main>.

⁵⁰⁵ Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management>.

⁵⁰⁶ See footnote 499.

In 1995, management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual TAC to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries.⁵⁰⁷ These and other factors that may contribute to decreasing fisheries participation in villages of the Kodiak Island archipelago have been discussed in detail in a number of research papers. Please refer to the books and articles referenced here for a more nuanced discussion of this issue.^{508,509}

The Community Quota Entity (CQE) program, implemented by the North Pacific Fishery Management Council in 2005, is one program intended to address the issue of fishing rights leaving rural communities. Under the program, eligible communities can form a non-profit corporation under state law to purchase and manage quota share on their behalf. After they purchase quota share, CQE non-profits can lease the IFQ to eligible community residents.⁵¹⁰ Ouzinkie participates in the program through the Ouzinkie Community Holding Corporation, a non-profit entity created under the program through the recommendation of the City of Ouzinkie. The Ouzinkie Community Holding Corporation is one of two CQE non-profits in Alaska that held commercial halibut IFQ and was actively leasing commercial halibut quota to residents in 2013. As of October that year, the Ouzinkie Community Holding Corporation held 159,978 halibut quota shares in Area 3A.⁵¹¹ It is important to note that, in addition to commercial halibut quota, CQE non-profits now have the ability to acquire and lease charter halibut permits and non-trawl gear groundfish License Limitation Permits (LLP). In October 2013, the Ouzinkie Community Holding Corporation held seven halibut charter permits and nine non-trawl groundfish LLPs.^{512,513} Ouzinkie is not eligible to participate in the Community Development Quota (CDQ) program.

⁵⁰⁷ North Pacific Fishery Management Council. (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

⁵⁰⁸ Langdon, S.J. 2008. The Community Quota Program in the Gulf of Alaska: A vehicle for Alaska Native village sustainability. In Lowe, M.E., Carothers, C., eds. "Enclosing the Fisheries: People, Places, and Power." *American Fisheries Society*. Symposium 68:155-194.

⁵⁰⁹ Carothers, C. 2011. Equity and access to fishing rights: Exploring the Community Quota Program in the Gulf of Alaska. *Human Organization*.70:213–223.

⁵¹⁰ Gulf of Alaska Coastal Communities Coalition. 2012. *Halibut Community Quota Entities: Management Manual*. Retrieved October 21, 2013 from http://www.goac3.org/pdf/initiatives/Halibut_Managment_Manualv6.pdf.

⁵¹¹ NOAA National Marine Fisheries Service. (2013). *Permit Reports: Individual Fishing Quota*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/ifq_cqea_permits.xls.

⁵¹² NOAA National Marine Fisheries Service. (2013). *Permit Reports: Charter Halibut*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/chp_cqe_permits.xls.

⁵¹³ NOAA National Marine Fisheries Service. (2013). *Permit Reports: License Limitation Program*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/llp_cqea_permits.xls.

Community leaders also commented in the 2011 AFSC survey that Ouzinkie is not actively involved in the fisheries management process in Alaska. They also noted that lack of local infrastructure and high fuel costs are challenges for Ouzinkie's fishing sector, and expressed that the IFQ system has led to decreased recruitment of local residents into the fishing industry. They commented that most of the original local IFQ shareholders have sold their shares to individuals outside of the community, and noted that the community of Ouzinkie is actively looking for ways to buy into community quota to promote new entry into IFQ fisheries and invigorate future fishing opportunities locally. It is important to note that the declining fishery participation has a dramatic impact on coastal fishing communities. Several books and articles are referenced here that provide a more detailed discussion of the impact of declining fishing participation on Kodiak-area villages.^{514,515}

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Ouzinkie. However, 11 processing facilities were registered in nearby Kodiak in 2010.

Fisheries-Related Revenue

According to information provided in Ouzinkie's annual municipal budget between 2000 and 2010, local fisheries-related revenue sources included a raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, a fuel transfer tax, and harbor usage fees. In 2010, Ouzinkie received \$17,250 in raw fish tax revenue, \$15,777 from the Shared Fisheries Business Tax, \$87 from the Fisheries Resource Landing Tax, \$10,000 in fuel transfer tax revenue, and \$10,000 from harbor usage fees. In addition, community leaders reported in a 2011 survey conducted by the AFSC that \$100 was generated from tax on marine fuel sales. They also noted that a portion of revenues from fisheries-related funding sources is used to fund harbor maintenance activities. Information about fisheries-related revenue is presented in Table 3.⁵¹⁶

Commercial Fishing

Between 2000 and 2010, Ouzinkie residents were engaged in commercial fishing activities as vessel owners, permit and quota share account holders, and crew license holders. In 2010, 23 Ouzinkie residents held state crew licenses and 20 residents were the primary owner of a fishing vessel. Both of these numbers represent decreases since 2000, with a 34.3% decrease in crew licenses, down from 35 in 2000, and a 28.6% decrease in vessels owned by residents, down from 23 in 2000. In addition, 16 vessels were homeported in Ouzinkie in 2010, down from 23 in 2000, a decline of 30.4%. Please refer to literature cited above, at the end of the *History and*

⁵¹⁴ Carothers, C. 2012. Enduring ties: salmon and the Sugpiat of the Kodiak Archipelago. Pages 133-160 in B.J. Colombi and J.F. Brooks, eds. *Keystone Nations: Indigenous Peoples and Salmon across the North Pacific*. School for Advanced Research Press, Santa Fe, NM.

⁵¹⁵ Carothers C. 2010. Tragedy of commodification: Transitions in Alutiiq fishing communities in the Gulf of Alaska. *MAST* 90:91-115.

⁵¹⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Evolution of Fishing section, for a more detailed discussion of the impact of declining fishing participation on Kodiak-area coastal communities.

According to the 2011 AFSC survey, community leaders reported that fishing boats using the community as their base of fishing operations are typically under 35 feet or between 35 and 60 feet in length, and used pots, longline, gillnet, or seine gear. No fish buyers or shore-side processors were present in Ouzinkie between 2000 and 2010. These characteristics of the Ouzinkie commercial fishing sector are presented in Table 5.

In 2010, a total of 31 state Commercial Fisheries Entry Commission (CFEC) permits were held by 19 Ouzinkie residents in fisheries for salmon, groundfish, halibut, herring, crab, and ‘other shellfish’. Salmon permits were held in the Kodiak purse seine, beach seine, and set gillnet fisheries. Of 11 total salmon permits held in 2010, 5 were actively fished (45%). All eight permits in the statewide halibut fishery were actively fished in 2010. Also in 2010, groundfish permits were held in the statewide lingcod and miscellaneous saltwater finfish mechanical jig fisheries, and Gulf of Alaska (GOA) miscellaneous saltwater finfish troll and mechanical jig fisheries. Of the seven permits held, three were actively fished that year (43%). In addition, one crab permit was actively fished in 2010 in the Kodiak Tanner crab pot gear fishery, one sablefish permit was held but not actively fished in the statewide longline fishery (vessel under 60 ft), and one ‘other shellfish’ permit was held but not actively fished in the westward shrimp pot gear fishery (vessel under 60 ft). Overall between 2000 and 2010, the total number of CFEC permit holders declined by 32.1% and the number of permits held declined by 36.7%. The percentage of permits held that were actively fished remained relatively stable over the period. Information about CFEC permits held in Ouzinkie can be found in Table 4.

In addition, seven Ouzinkie residents held a total of nine License Limitation Program permits (LLP), all of which were held in federal groundfish fisheries. Four of these nine permits were actively fished in 2010 (44%). In 2001, one LLP was also held in a federal crab fishery, but was not actively fished that year. In 2010, five Ouzinkie residents also held a total of five Federal Fisheries Permits (FFP), of which three were actively fished that year (60%). This federal permit information is also presented in Table 4.

In 2010, Ouzinkie residents held 10 quota share accounts in the federal halibut catch share fishery, with a total of 550,333 halibut quota shares. The number of quota share accounts and the number of quotas held in Ouzinkie decreased between 2000 and 2010. The annual halibut individual fishing quota (IFQ) allotment increased to 17% higher than 2000 levels by 2004, and then declined again to 10% under the 2000 allotment level by 2010. Between 2000 and 2010, one sablefish quota share account was also held in Ouzinkie, and 91,457 sablefish quota shares were held each year. Sablefish IFQ allotment increased to 27% over the 2000 level by 2004, and then declined to almost 22% lower than the 2000 allotment by 2010. Between 2000 and 2010, no Ouzinkie residents held quota share accounts or quota shares in federal crab catch share fisheries. Federal catch share participation is presented in Tables 6 through 8.

Given the lack of fish buyers in Ouzinkie (Table 5), no landings or ex-vessel revenue were reported in the community between 2000 and 2010 (Table 9). However, information was reported regarding landings and ex-vessel revenue generated by Ouzinkie vessel owners, including all delivery locations. In 2010, Ouzinkie vessel owners landed 63,802 net pounds of Pacific halibut and 34,787 net pounds of Pacific cod. Other landings and ex-vessel revenue in 2010 are considered confidential due to the small number of participants. Salmon landings and revenue data were reported for 6 years during the 2000-2010 period. In 2007, Ouzinkie vessel owners landed 1,488,878 net pounds of salmon for an ex-vessel value of \$408,426. ‘Other

groundfish' landings and ex-vessel revenue were reported for only one year between 2000 and 2010 while information from other years is considered confidential due to the small number of participants. During the year in which 'other groundfish' data were reported (2002), Ouzinkie vessel owners landed 7,265 net pounds of groundfish, valued at \$2,775. For information about landings and ex-vessel revenue earned by vessels owners residing in Ouzinkie, see Table 10.

Table 3. Known Fisheries-Related Revenue (In U.S. Dollars) Received by the Community of Ouzinkie: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$16,379	\$12,000	n/a	\$12,000	\$11,500	\$11,500	\$12,280	\$14,531	\$14,531	\$15,000	\$17,250
Shared Fisheries Business Tax ¹	\$13,717	\$11,272	\$14,950	\$11,309	\$9,248	\$21,477	\$26,490	\$20,327	\$14,195	\$17,011	\$15,777
Fisheries Resource Landing Tax ¹	\$56	\$309	\$207	\$255	\$219	\$271	\$77	\$139	\$143	\$89	\$87
Fuel transfer tax ²	n/a	n/a	n/a	\$4,900	\$11,500	\$12,000	\$8,000	\$10,000	\$10,000	\$10,000	\$10,000
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	\$4,900	\$11,500	\$12,000	\$8,000	\$10,000	\$10,000	\$10,000	\$10,000
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$100
Total fisheries-related revenue⁴	\$30,152	\$23,581	\$15,156	\$33,364	\$43,968	\$57,248	\$54,847	\$54,997	\$48,869	\$52,101	\$53,114
Total municipal revenue⁵	\$522,007	\$627,637	\$576,919	\$490,483	\$539,797	\$579,957	\$507,541	\$519,718	\$551,541	\$628,567	\$878,950

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Ouzinkie: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	9	8	7	7	7	7	7	7	9	9	9
	Active permits	2	3	1	1	0	1	1	1	2	4	4
	% of permits fished	22%	37%	14%	14%	%	14%	14%	14%	22%	44%	44%
	Total permit holders	8	7	6	6	6	6	6	6	7	8	7
Crab (LLP) ¹	Total permits	0	1	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	0%	-	-	-	-	-	-	-	-	-
	Total permit holders	0	1	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	7	8	8	4	5	5	4	4	5	5	5
	Fished permits	0	0	0	2	1	1	1	1	2	3	3
	% of permits fished	0%	0%	0%	50%	20%	20%	25%	25%	40%	60%	60%
	Total permit holders	6	6	6	4	5	5	4	4	5	5	5
Crab (CFEC) ²	Total permits	0	3	3	2	3	3	1	1	1	1	1
	Fished permits	0	0	2	1	1	1	1	1	1	1	1
	% of permits fished		0	67%	50%	33%	33%	100%	100%	100%	100%	100%
	Total permit holders	0	3	3	2	2	3	1	1	1	1	1
Other shellfish (CFEC) ²	Total permits	0	0	0	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	1	1	1	1	1	1	1	1
Halibut (CFEC) ²	Total permits	14	14	15	13	14	12	12	11	11	10	8
	Fished permits	13	10	13	12	12	11	11	10	11	9	8
	% of permits fished	93%	71%	87%	92%	86%	92%	92%	91%	100%	90%	100%
	Total permit holders	14	14	15	13	14	12	11	11	11	10	8
Herring (CFEC) ²	Total permits	2	2	2	2	2	2	2	2	2	2	2
	Fished permits	0	1	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	2	2	2	2	2

Table 4 cont'd. Permits and Permit Holders by Species, Ouzinkie: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	1	0	1	0	1	0	0	0	0	0	0
	% of permits fished	100%	0%	100%	0%	100%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Groundfish (CFEC) ²	Total permits	18	17	15	15	14	14	7	7	7	11	7
	Fished permits	6	2	1	6	4	5	2	1	2	4	3
	% of permits fished	33%	12%	7%	40%	29%	36%	29%	14%	29%	36%	43%
	Total permit holders	13	14	12	12	11	10	7	7	7	9	6
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	14	14	15	12	12	13	13	13	12	12	11
	Fished permits	7	8	7	5	5	5	4	7	3	4	5
	% of permits fished	50%	57%	47%	42%	42%	38%	31%	54%	25%	33%	45%
	Total permit holders	15	14	15	12	12	13	14	13	13	11	10
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>49</i>	<i>51</i>	<i>51</i>	<i>46</i>	<i>47</i>	<i>46</i>	<i>37</i>	<i>36</i>	<i>35</i>	<i>38</i>	<i>31</i>
	<i>Fished permits</i>	<i>27</i>	<i>21</i>	<i>24</i>	<i>24</i>	<i>23</i>	<i>22</i>	<i>18</i>	<i>19</i>	<i>17</i>	<i>18</i>	<i>17</i>
	<i>% of permits fished</i>	<i>55%</i>	<i>41%</i>	<i>47%</i>	<i>52%</i>	<i>49%</i>	<i>48%</i>	<i>49%</i>	<i>53%</i>	<i>49%</i>	<i>47%</i>	<i>55%</i>
	<i>Permit holders</i>	<i>28</i>	<i>28</i>	<i>28</i>	<i>24</i>	<i>24</i>	<i>24</i>	<i>23</i>	<i>24</i>	<i>23</i>	<i>24</i>	<i>19</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Ouzinkie: 2000-2010.

Year	¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Ouzinkie ²	Total Net Pounds Landed In Ouzinkie ^{2,5}	Total Ex-Vessel Value Of Landings In Ouzinkie ^{2,5}
2000	35	0	0	28	23	0	0	\$0
2001	32	0	0	36	26	0	0	\$0
2002	23	0	0	32	24	0	0	\$0
2003	23	0	0	26	21	0	0	\$0
2004	32	0	0	26	22	0	0	\$0
2005	31	0	0	22	17	0	0	\$0
2006	34	0	0	21	16	0	0	\$0
2007	29	0	0	22	19	0	0	\$0
2008	25	0	0	21	19	0	0	\$0
2009	14	0	0	22	20	0	0	\$0
2010	23	0	0	20	16	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Ouzinkie: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	20	652,006	87,090
2001	18	607,009	88,504
2002	17	584,140	88,774
2003	18	588,991	89,197
2004	18	611,484	96,326
2005	17	601,597	92,113
2006	17	601,597	87,631
2007	13	588,902	85,919
2008	12	578,329	81,866
2009	11	578,329	75,174
2010	10	550,333	65,996

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Ouzinkie: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	91,457	8,280
2001	1	91,457	7,807
2002	1	91,457	7,846
2003	1	91,457	9,302
2004	1	91,457	10,544
2005	1	91,457	10,470
2006	1	91,457	9,199
2007	1	91,457	8,939
2008	1	91,457	7,943
2009	1	91,457	7,206
2010	1	91,457	6,513

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Ouzinkie: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Ouzinkie: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Ouzinkie Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	81,159	75,849	96,789	91,575	90,933	81,112	88,112	84,140	81,426	63,981	63,802
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	7,265	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	58,531	13,599	-	39,086	-	-	-	-	8,926	60,796	34,787
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	996,100	1,861,839	1,166,568	-	1,007,615	1,571,529	-	1,488,878	-	-	-
<i>Total²</i>	<i>1,135,790</i>	<i>1,951,287</i>	<i>1,263,357</i>	<i>137,926</i>	<i>1,098,548</i>	<i>1,652,641</i>	<i>88,112</i>	<i>1,573,018</i>	<i>90,352</i>	<i>124,777</i>	<i>98,589</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$204,172	\$152,456	\$213,313	\$260,714	\$267,161	\$238,226	\$334,476	\$353,826	\$346,146	\$196,111	\$311,768
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	\$2,775	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	\$23,870	\$4,254	-	\$13,376	-	-	-	-	\$5,588	\$20,155	\$10,652
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$306,918	\$376,716	\$176,891	-	\$220,906	\$321,909	-	\$408,426	-	-	-
<i>Total²</i>	<i>\$534,960</i>	<i>\$533,427</i>	<i>\$390,204</i>	<i>\$276,864</i>	<i>\$488,068</i>	<i>\$560,134</i>	<i>\$334,476</i>	<i>\$762,252</i>	<i>\$351,733</i>	<i>\$216,266</i>	<i>\$322,419</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there was at least one active sport fish guide business in Ouzinkie in each year except 2002. The number of licensed sport fish guides residing in the community declined slightly over this period, falling from four in 2000 to one in 2010, after a brief increase to six guides present in 2003 and 2004. The number of Ouzinkie residents who purchased sportfishing licenses (irrespective of point of sale) varied between 46 and 75 per year between 2000 and 2010. This was higher than the number of licenses sold in Ouzinkie, which varied between 31 and 63 per year, suggesting that Ouzinkie residents may travel to Kodiak or other areas to prepare for or engage in sportfishing activity. According to a survey conducted by the AFSC in 2011, community leaders indicated that local sportfishing activity is largely made up of residents using private boats or fishing from docks or the shore, as well as charter fishing. They also noted that fishing lodges are present in Ouzinkie.

Ouzinkie is located within Alaska Sport Fishing Survey Area Q – Kodiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. On average, Alaska resident anglers fished more angler days per year than non-Alaska residents in both saltwater and freshwater sport fisheries, and more angler days were fished per year in freshwater than in saltwater in the Kodiak region between 2000 and 2010. However, sportfishing activity in by both Alaska resident and non-Alaska resident anglers, and in both saltwater and freshwater, was extremely high. Information about the sportfishing sector in and near Ouzinkie is displayed in Table 11.

The Alaska Statewide Harvest Survey,⁵¹⁷ conducted by ADF&G between 2000 and 2010, noted the following saltwater species targeted by private anglers in Ouzinkie: Chinook, coho, sockeye, and pink salmon, Dolly Varden, Pacific halibut, rockfish, lingcod, and Pacific cod, as well as Tanner crab and razor clams. In freshwater the survey noted sport harvest of Chinook, coho, and pink salmon. In the 2011 AFSC survey, community leaders reported a similar list of species targeted by recreational fishing, including all five species of Pacific salmon, Pacific halibut, rockfish, crab, and clams.

Kept/released statistics from charter logbook data reported by ADF&G⁵¹⁸ show that Pacific halibut, coho salmon, and pelagic rockfish were the most important species targeted by fishing charters out of Ouzinkie. In 2010, 112 halibut were kept and 21 released, 104 coho were kept, and 66 pelagic rockfish were kept and 43 released. These numbers represent a decline from higher charter harvest levels in 2005 and 2006. Other species that were also caught on charter fishing trips out of Ouzinkie between 2000 and 2010 include Chinook, chum, sockeye, and pink salmon, lingcod, yelloweye rockfish, ‘other rockfish’, and shark.

It is also important to note that, as of 2013, Ouzinkie’s CQE non-profit, the Ouzinkie Community Holding Corporation, held seven charter halibut permits that were available for lease to community residents.⁵¹⁹

⁵¹⁷ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁵¹⁸ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵¹⁹ NOAA National Marine Fisheries Service. (2013). *Permit Reports: Charter Halibut*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/chp_cqe_permits.xls.

Table 11. Sport Fishing Trends, Ouzinkie: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Ouzinkie ²
2000	2	4	75	63
2001	2	5	74	49
2002	0	4	55	47
2003	1	6	62	46
2004	1	6	55	37
2005	1	1	49	38
2006	1	1	46	39
2007	1	2	51	44
2008	1	4	51	34
2009	1	3	58	33
2010	1	2	55	31

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	16,767	38,809	18,542	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	16,654	32,965
2010	20,012	20,365	18,871	22,211

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest continues to play an important role in the culture and economy of Ouzinkie.⁵²⁰ According to a survey conducted by the AFSC in 2011, salmon, Pacific halibut, and waterfowl were some of the most important subsistence resources for Ouzinkie residents. Crab, shrimp, clams, deer, and rabbit are also utilized.⁵²¹ Between 2003 and 2005, the years for which subsistence surveys were conducted in the community, an average of 85% of households were reported to participate in salmon subsistence, and an average of 29% participated in non-salmon fish subsistence (not including halibut). In 2003, 98% of households participated in halibut subsistence, 27% of households participated in marine mammal subsistence, and 65% participated in marine invertebrate subsistence. That year, the per capita subsistence of land and sea-based resources by residents of Ouzinkie was 316 lbs. This information is presented in Table 12.

Information was also available from ADF&G regarding the species of marine invertebrates, non-salmon fish, and marine mammals harvested by Ouzinkie households in 2003. The species of marine invertebrate harvested by the greatest number of Ouzinkie households that year included black chitons, octopus, Tanner crab, sea urchin, limpets, butter clams, Dungeness crab, razor clams, Pacific littleneck clams, red chitons, shrimp, and weathervane scallops. The species of non-salmon fish harvested by the greatest number of households included black rockfish, Pacific cod, Dolly Varden, lake trout, rainbow trout, steelhead, lingcod, red rockfish, herring, greenling, walleye pollock, starry flounder, Pacific tomcod, and Irish lord. In addition, although no households reported harvesting herring roe, a small number of households did report using it, indicating the presence of sharing networks between Ouzinkie and other communities. In addition, a number of Ouzinkie households reported involvement in the harvest of harbor seal. Most species listed above were used by a greater percentage of household than were involved in harvest activities, indicating the presence of sharing networks within the community.⁵²²

Information was also reported during the 2000-2010 period regarding total subsistence harvests of salmon and halibut. In 2008, the most recent year for which data are available about subsistence salmon harvest, 29 Ouzinkie households were issued subsistence salmon permits, and all 29 were returned, with a total harvest of 1,644 salmon. These numbers represent a decline from 43 permits issued in 2004 and 36 in 2005, and harvests of between 2,000 and 3,400 salmon in those years. Sockeye salmon made up the greatest percentage of the subsistence salmon harvest in all years for which data were reported. Additionally, in 2003, 2,966 pounds of marine invertebrates were harvested and 13,543 lbs of non-salmon fish (not including halibut) were harvested. This information is presented in Table 13.

In 2009, the most recent year for which data are available regarding subsistence halibut harvest, 59 Subsistence Halibut Fishing Certificates (SHARC) were issued to residents of Ouzinkie. Of these, 26 were fished that year, and a total of 3,433 lbs of halibut were harvested through the program. The number of SHARC cards issued varied considerably between 2003 and 2010, fluctuating between a low of 39 in 2003 and a high of 66 in 2007. The greatest volume of

⁵²⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵²¹ Ibid.

⁵²² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

halibut was harvested in 2006 through this program, with 8,718 lbs harvested on 39 active SHARC cards. This information about subsistence halibut harvest is presented in Table 14.

Ouzinkie residents also participated in the subsistence harvest of marine mammals. Data reported by the U.S. Fish and Wildlife Service (FWS) indicate that six sea otters were harvested for subsistence purposes in 2003, and data from a 2009 ADF&G report indicates that Steller sea lions were also harvested in several years between 2000 and 2010. No information was available from management agencies regarding subsistence harvest of beluga whale, walrus, harbor seal, or spotted seal during the 2000-2010 period. This information is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Ouzinkie: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	88%	98%	27%	65%	35%	316
2004	86%	n/a	n/a	n/a	38%	n/a
2005	81%	n/a	n/a	n/a	13%	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Ouzinkie: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	26	8	43	617	20	1,422	n/a	n/a
2001	n/a	45	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	40	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	1	41	3	n/a	n/a	n/a	30	2,966	13,543
2004	43	43	23	35	514	168	1,525	n/a	843
2005	36	36	119	172	863	572	1,690	n/a	758
2006	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	29	29	7	14	449	54	1,120	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Ouzinkie: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	39	28	5,163
2004	47	38	6,435
2005	43	35	6,620
2006	48	39	8,718
2007	66	46	6,248
2008	53	31	5,181
2009	59	26	3,433
2010	47	17	2,724

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Ouzinkie: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	43	n/a
2001	n/a	n/a	n/a	n/a	3	33	n/a
2002	n/a	n/a	n/a	n/a	5	63	n/a
2003	n/a	6	n/a	n/a	n/a	49	n/a
2004	n/a	n/a	n/a	n/a	3	73	n/a
2005	n/a	n/a	n/a	n/a	n/a	137	n/a
2006	n/a	n/a	n/a	n/a	n/a	49	n/a
2007	n/a	n/a	n/a	n/a	2	50	n/a
2008	n/a	n/a	n/a	n/a	n/a	32	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Port Lions

People and Place

*Location*⁵²³



Port Lions is located in Settler Cove, on the north coast of Kodiak Island, 247 air miles southwest of Anchorage. Port Lions is located in the Kodiak Island Census Area and is under the jurisdiction of the Kodiak Island Borough. The community encompasses 6.3 square miles of land and 3.7 square miles of water. Port Lions is a Second-class city and was incorporated in 1966.

*Demographic Profile*⁵²⁴

In 2010, there were 194 residents in Port Lions, making it the 196th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population decreased by 12.6%. According to Alaska Department of Labor population estimates, between 2000 and 2009, the population of permanent residents fell by 21.88%. The average annual growth during this period was -1.82%, indicating a slow, steady decline. The change in population from 1990 to 2010 is provided in Table 1.

The majority of the residents of Port Lions in 2010 identified themselves as American Indian or Alaska Native (58.8%), with the remaining racial composition as follows: White (36.1%), Asian (2.6%), two or more races (2.6%), and Hispanic or Latino (1.5%). The percentage of the population identifying themselves as American Indian or Alaska Native decreased by 8.8% from 2000 to 2010, with corresponding increases in the percentage of the population identifying themselves as White, Asian, and two or more races. The change in racial and ethnic composition from 2000 to 2010 is provided in Figure 1 below.

In 2010, the average household size was estimated at 2.52, a decrease from 2.88 in 2000 and 3.0 in 1990. There was a decrease in the number of households present in 2000 (89), though the 2010 estimate number of households (77) is still larger than the number of households in 1990 (73). Of the 113 total housing units surveyed for the 2010 Decennial Census, 62 were owner-occupied, 15 were renter-occupied, and 36 were vacant. In 2010, no residents of Port Lions were reported to be living in group quarters.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimate that approximately 50 people come to Port Lions as seasonal workers each year between May and August.

⁵²³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵²⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

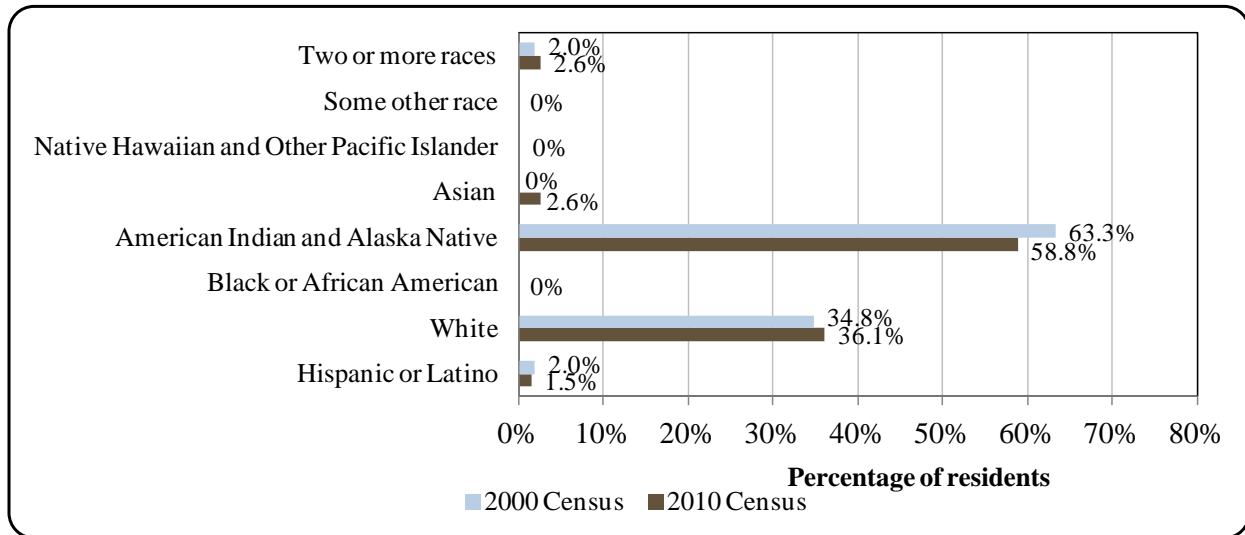
Table 1. Population in Port Lions from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	222	-
2000	256	-
2001	-	246
2002	-	227
2003	-	233
2004	-	240
2005	-	220
2006	-	196
2007	-	193
2008	-	191
2009	-	200
2010	194	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

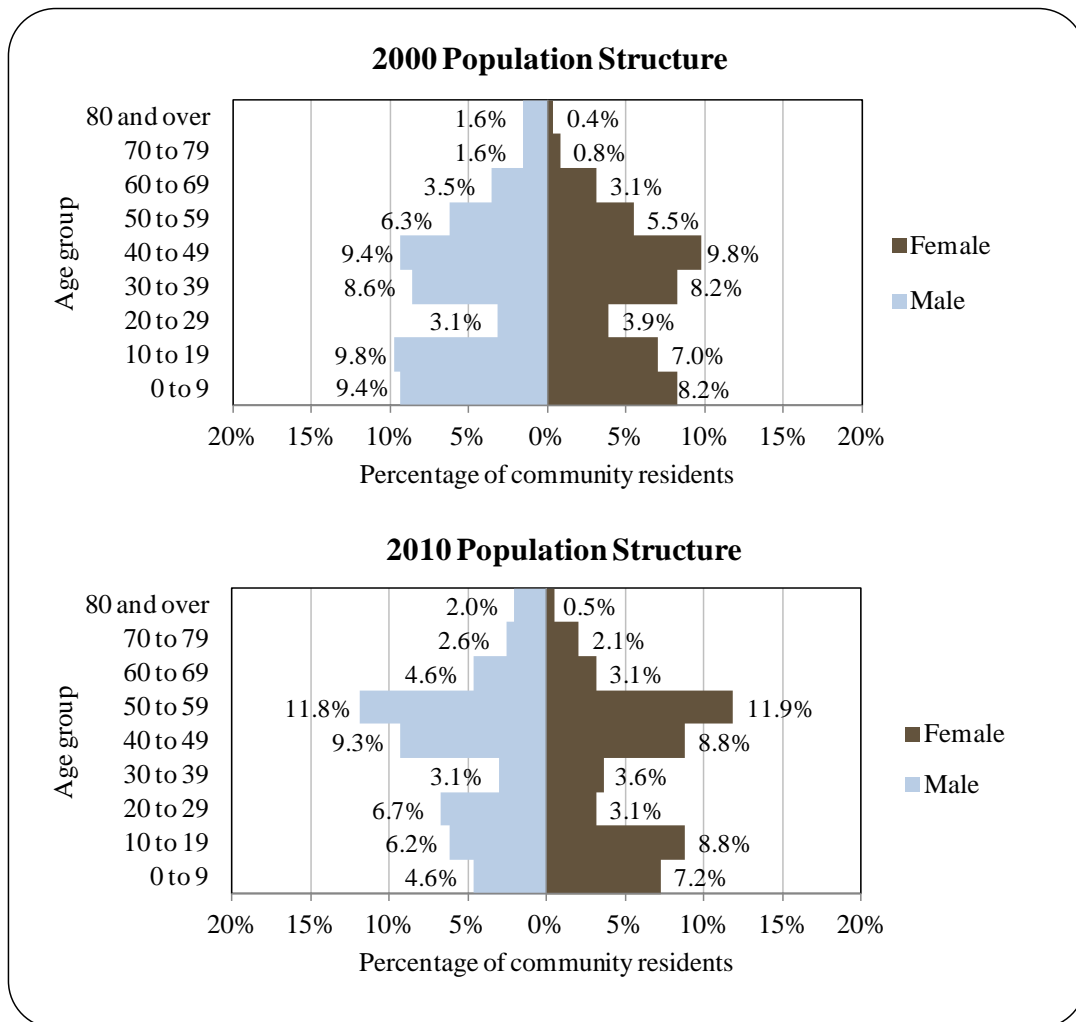
Figure 1. Racial and Ethnic Composition, Port Lions: 2000-2010 (U.S. Census).



In 2010, the gender makeup was fairly even, at 51% male and 49% female, similar to the state as a whole (52% male, 48% female). The median age in Port Lions was 44.3, higher than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 40-59 years old, with the next largest percentage for the age category 0-29 years old. Relatively few people were 30-39 years old or 60 or older. The overall population structure of Port Lions in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁵²⁵ an estimated 86.6% of residents aged 25 and older had a high school diploma or higher degree, compared to 90.7% of Alaskans overall. Also in 2010, an estimated 3.2% of residents had less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 10.2% had a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 32.5% had a high school diploma, compared with 27.4% of Alaskan residents overall; 29.9% had some college but no degree, compared to 28.3% of Alaskan residents overall; 7.6% had an Associate’s degree, compared with 8% of Alaskan residents overall; 2.5% had a Bachelor’s degree, compared with 17.4% of Alaskan residents overall; and 14% had a graduate or professional degree, compared with 9.6% of Alaskan residents overall.

Figure 2. Population Age Structure in Port Lions Based on the 2000 and 2010 U.S. Decennial Census.



⁵²⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*⁵²⁶

The majority of the population of Port Lions is Alutiiq, and the residents lead a fishing and subsistence lifestyle. The town was founded in 1964 by the displaced inhabitants of Afognak, which was destroyed by a tsunami after the Good Friday Earthquake. The community was named in honor of the Lions Club for their support in rebuilding and relocating the village. The city government was incorporated in 1966. For many years, Port Lions was the site of the large Wakefield Cannery on Peregrebni Point. The cannery burned down in March 1975. Soon thereafter, the village corporation purchased a 149-foot floating processor, the *Smokwa*. Although sold in 1978, the *Smokwa* processed crab in the area intermittently between 1975 and 1980. A small sawmill, located south of town, operated until 1976.

Natural Resources and Environment⁵²⁷

The climate of the Kodiak Islands is dominated by a strong marine influence. There is little or no freezing weather, moderate precipitation, and frequent cloud cover and fog. Severe storms are common from December through February. Annual precipitation averages 54 inches, with 75 inches of snowfall. Temperatures remain within a narrow range, from 20 to 60 °F (-6.7 to 15.6 °C).

The economy of Port Lions depends on the area's natural resources, especially fish. In a survey conducted by the AFSC in 2011, community leaders report local reliance on commercial fishing, recreational/sportfishing, and charter fishing.

Port Lions is located near the Kodiak National Wildlife Refuge (Refuge). The Refuge covers the southwestern two-thirds of Kodiak Island. It was established in 1941 with the purpose of wildlife conservation, in particular the Kodiak brown bear unique to the island, as well as fulfillment of treaty obligations, providing for continued subsistence use, and to ensure water quality and quantity.⁵²⁸ There are also a number of state parks, state historical parks and state recreation sites located on the northeast corner of Kodiak Island.⁵²⁹

Kodiak Island is located in a highly active volcanic and tectonic zone along the Pacific "Ring of Fire". The earthquake belt along the Aleutian Islands, Alaska Peninsula and Kenai Peninsula is known as the Alaska-Aleutian subduction zone, where strong earthquakes occur as a result of slipping along the contact zone between the Pacific and Alaska plates. Earthquakes can cause tsunamis, landslides, snow avalanches, and submarine slumps.⁵³⁰ The 1912 eruption of the volcano Novarupta, located 100 miles northwest of Kodiak Island on the Alaska Peninsula,

⁵²⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵²⁷ Ibid.

⁵²⁸ U.S. Fish and Wildlife Service. *Kodiak National Wildlife Refuge website*. Retrieved November 30, 2011 from <http://kodiak.fws.gov>.

⁵²⁹ Alaska Dept. of Natural Resources. (n.d.) *Alaska State Parks website*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/>.

⁵³⁰ City of Ouzinkie. 2000. *Community Emergency Response Plan. Annex E to the Kodiak Emergency Operations Plan*. Retrieved March 7, 2012 from <http://www.city.kodiak.ak.us/Emergency/Documents/Annex%20E%20-%20Ouzinkie.pdf>.

covered the island in ash and gasses and disrupted the local salmon fishery, especially between 1915 to 1919 due to starvation and failure of many adult fish to spawn in ash-choked streams.⁵³¹

Kodiak Island was directly impacted by the *Exxon Valdez* Oil Spill in March of 1989, in which 11 million gallons of crude oil spilled into Prince William Sound and spread to surrounding areas.⁵³² Oil was carried by currents throughout the area of the Alutiiq people, and hit the beaches of Kodiak Island in mid-April.⁵³³ The *Exxon Valdez* Oil Spill Trustee Council was formed following the spill, and has overseen large-scale habitat restoration, protection and acquisition. On Kodiak Island, the Trustee Council has protected over 260,000 acres, much of it now included with Kodiak National Wildlife Refuge.⁵³⁴

Current Economy⁵³⁵

The economy of Port Lions is based primarily on commercial fishing, fish processing, and tourism. In addition, the residents depend to some extent on subsistence food sources such as salmon, crab, halibut, shrimp, clams, duck, seal, deer, and rabbit.⁵³⁶

Based on the 2006-2010 ACS,⁵³⁷ the per capita income in Port Lions in 2010 was estimated to be \$24,555, and the median household income in 2010 was estimated to be \$64,167, compared to \$17,492 and \$39,107 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁵³⁸ the real per capita income (\$23,002) and the real median household income (\$51,425) in 2000 indicate an increase in both per capita and household income between 2000 and 2010. However, the small population size of Port Lions may have prevented the ACS from accurately portraying economic conditions.⁵³⁹ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Port Lions in 2010 was \$9,243, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁵⁴⁰ In 2011, Port Lions was recognized as a distressed community (using a plus/minus 3% formula) by the Denali Commission, prioritizing it for economic assistance.⁵⁴¹ In 2010, Port Lions ranked 113th of 305

⁵³¹ U.S. Geological Survey. 1998. "Can Another Great Volcanic Eruption Happen in Alaska?" Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

⁵³² United States Environmental Protection Agency. "*Exxon Valdez*." Retrieved December 2, 2011 from <http://www.epa.gov/emergencies/content/learning/exxon.htm>.

⁵³³ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

⁵³⁴ Restoration Notebook. January 2009. "Habitat Protection – A Successful Restoration Strategy." *Exxon Valdez* Oil Spill Trustee Council. Retrieved December 1, 2011 from http://dnr.alaska.gov/commis/opmp/evos/pdfs/restoration_notebook.pdf.

⁵³⁵ Unless otherwise noted, all monetary data are reported in nominal values.

⁵³⁶ See footnote 526.

⁵³⁷ See footnote 525.

⁵³⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵³⁹ See footnote 525.

⁵⁴⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵⁴¹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Alaskan communities with per capita income that year, and 65th out of 299 Alaskan communities with household income data.

Based on the 2006-2010 ACS, in 2010, 54.8% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 4.6%, compared to the statewide unemployment rate of 5.9%. Approximately 6% of residents were living below the poverty line, compared to 9.6% of Alaskan residents overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Port Lions are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Port Lions. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 15.2%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the public sector (47.1%), while 24% were employed in the public sector and 28.8% were self-employed. Out of 104 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in transportation, warehousing, and utilities (23.8%), arts, entertainment, recreation, accommodations, and food services (17.9%), retail trade (14.3%), public administration (13.1%), and wholesale trade (10.7%). Only 7.1% of the workforce was estimated to be employed in education services, health care, and social assistance, with 7.1% employed in agriculture, forestry, fishing, hunting, and mining, and 6% employed in construction. The number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Port Lions (U.S. Census).

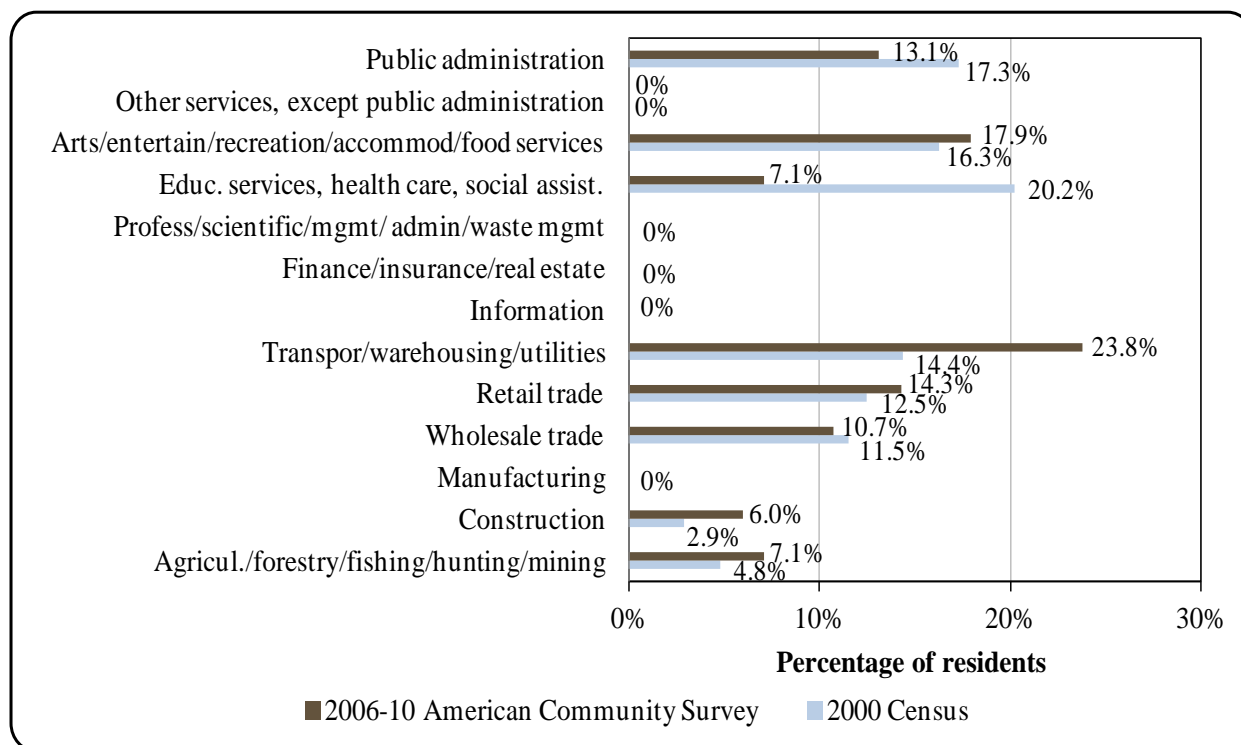
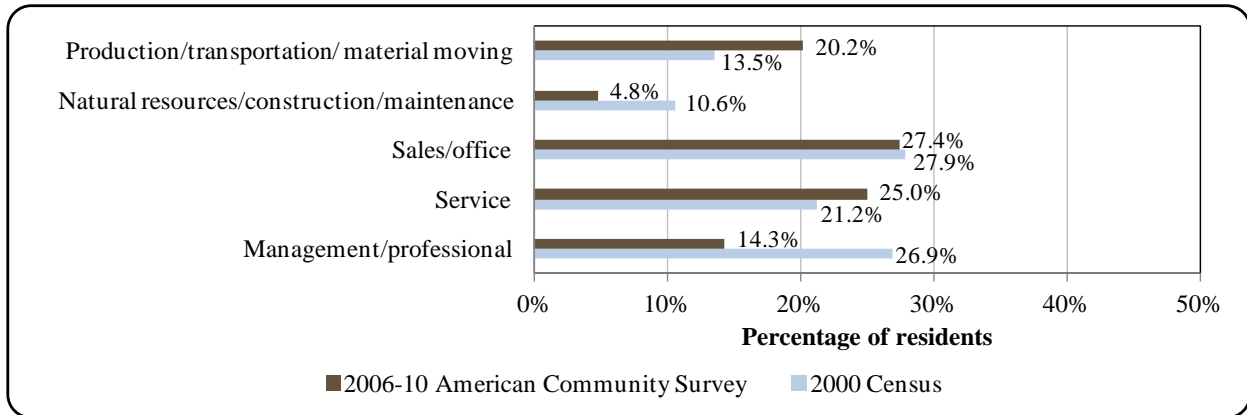


Figure 4. Local Employment by Occupation in 2000-2010, Port Lions (U.S. Census).



Governance

Port Lions is a Second-class City, governed by a mayor and city council. Port Lions is part of the Kodiak Island Borough, and is also a member of a regional Native corporation called Koniag, Incorporated. The Native village corporation is Afognak Native Corporation, which manages 98,208 acres of land granted under the Alaska Native Claims Settlement Act. The nearest Alaska Department of Fish and Game (ADF&G), National Marine Fisheries Service (NMFS), U.S. Bureau of Citizenship and Immigration Services, and Alaska Department of Natural Resources offices are located in Kodiak. The nearest office of the Alaska Department of Commerce, Community, and Economic Development is located in Anchorage.

As of 2010, neither the Kodiak Island Borough nor the City of Port Lions administered a sales tax. However, the Borough administered a 1.05% severance tax and the City administered a 10.5 mills property tax and a 5% bed tax.⁵⁴² Municipal revenues were taken from Certified Financial Statements. When adjusted for inflation,⁵⁴³ total revenues increased 26.1% between 2000 and 2010 from \$252,856, to \$412,368. Municipal revenues peaked in 2006 at \$470,565, and were at their lowest in 2007 at \$192,238. In 2010, most (25.6%) municipal revenues were collected from state allocated Community Revenue Sharing, followed by water and sewer charges (19.0%) and outside grants (13.0%).

Also in 2010, Port Lions received \$1,690,421 in fisheries-related grants, including a harbor feasibility grant, a grant for Port Lions city dock and ferry terminal repair, design, and construction, and a grant for harbor improvements. Refer to Table 2 for details on community finances from 2000 to 2010. While the amount received from fisheries-related grants varies from year to year, the total grants received in 2010 is the second-largest amount during the period.

The Native Village of Port Lions, a federally recognized Tribe, was established in August 1978 with a base roll of 225 members. Membership has grown steadily and is currently over 300. The Port Lions Traditional Tribal Council is the traditional governing body of the village.⁵⁴⁴

⁵⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴³ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

⁵⁴⁴ Native Village of Port Lions (n.d.). *Homepage*. Retrieved from <http://portlions.net/> on December 2, 2011.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Port Lions from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$252,856	n/a	\$21,706	\$24,000
2001	\$327,265	n/a	\$20,890	\$24,000
2002	\$302,660	n/a	\$20,890	\$895,005
2003	\$285,519	n/a	\$21,032	\$5,024,000
2004	\$256,424	n/a	-	\$4,699
2005	\$257,927	n/a	-	n/a
2006	\$470,565	n/a	-	n/a
2007	\$192,238	n/a	-	n/a
2008	\$430,697	n/a	-	\$125,000
2009	\$337,905	n/a	\$105,693	\$846,878
2010	\$412,368	n/a	\$106,030	\$1,690,421

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Port Lions is accessible by air and water, but not by road. There is a state-owned 2,200 ft long by 75 ft wide gravel airstrip, and the city dock may be used by seaplanes. Regular and charter flights are available from Kodiak. The boat harbor with breakwater and dock provide 82 boat slips. The state ferry operates bi-monthly from Kodiak between May and October. Barge service is available from Seattle.⁵⁴⁵ After a short flight to Kodiak (\$110⁵⁴⁶), round-trip airfare to Anchorage was \$360.⁵⁴⁷

⁵⁴⁵ See footnote 542.

⁵⁴⁶ Regular air service from Port Lions to Kodiak is provided by Island Air. One-way fares are \$55. Retrieved on December 1, 2011 from <http://www.kodiakislandair.com>.

⁵⁴⁷ Airfare was obtained from the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

*Facilities*⁵⁴⁸

The community system was built by the Bureau of Indian Affairs and Indian Health Service in 1965. Over 100 residences are connected to the City's piped water and sewer systems, and 95% of these have complete plumbing. The Branchwater Creek Reservoir provides water, which is treated and stored in a 125,000-gallon tank.

Local law enforcement is provided by a local Village Public Safety Officer and state troopers stationed in the City of Kodiak. Fire and rescue services provided by Port Lions Public Safety/Emergency Medical Services. The Village Council operates a youth center, senior services, and bingo. There are both public and school libraries. The city of Port Lions provides sewage collection through a piped sewer system and a community septic tank, and also operates a Class 3 landfill. Electricity is powered by diesel fuel and is provided by the Kodiak Electric Association.

In a survey conducted by the AFSC in 2011, community leaders report that a fish cleaning station and new dock space with electricity, water, and pilings are currently in progress. In the same survey, community leaders report that plans for additional new dock space and a breakwater will be completed in the future.

*Medical Services*⁵⁴⁹

Medical services are provided by the Port Lions Health Clinic, which is operated by the Kodiak Area Native Association. The clinic is a Community Health Aid Program site. Alternate health care is provided by the Port Lions Department of Public Safety. Emergency services have marine and air access and are provided by 911 telephone service volunteers and a health aide.

*Educational Opportunities*⁵⁵⁰

The Port Lions School provides instruction to students from kindergarten through 12th grade and, in 2011 had 36 students and 4 teachers.

⁵⁴⁸ See footnote 542.

⁵⁴⁹ Ibid.

⁵⁵⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Kodiak Island and surrounding areas. The Koniags historically migrated between permanent winter villages and temporary summer fish camps. Salmon was an important staple, and they also harvested other fish, intertidal resources and marine mammals, including whales, sea lions, seals, and sea otters. With the arrival of Russian colonists to Kodiak Island in the late 1700s, the Alutiiq people were forced to hunt for sea otters to fuel the trade of their valuable pelts.⁵⁵¹

After the U.S. purchase of Alaska, American entrepreneurs arrived to continue hunting sea otter and to develop other industries. The salmon fishery was the primary focus of local commercial fishing activity, although by the 1920s halibut fisherman began stopping in Kodiak, and herring and cod fishermen also worked in the area. After the 1964 earthquake, the City of Kodiak became the focal point of seafood processing for the region. The king crab fishery emerged as a new focus for the Kodiak fishing fleet in the years following the tsunami. Most Alutiiq fishermen continued to focus on salmon fishing into the late 1900s, but some also diversified into herring, cod, and crab fisheries.⁵⁵² Today all of these commercial fisheries continue to be important to fishermen living in Port Lions, as well as continued subsistence fishing and hunting.⁵⁵³

Between 2000 and 2010, Port Lions fishermen were most engaged in commercial fisheries for salmon, groundfish, halibut, and herring, and were also involved to a lesser degree in fisheries for crab, sablefish, and ‘other shellfish’. According to a survey conducted by the AFSC in 2011, community leaders indicated that the Pacific cod jig fishery takes place during the first half of January each year, the snow crab fishery takes place in the second half of January, and the Pacific halibut longline fishery runs between mid-March and mid-November.

The ADF&G manages the Kodiak salmon and herring fisheries in waters surrounding the Kodiak archipelago.⁵⁵⁴ The salmon fishery is divided into seven fishing districts (Afognak District, Northeast Kodiak District, Eastside Kodiak District, Alitak Bay District, Southwest Kodiak District, Northwest Kodiak District, and Mainland Districts). Gear types in use currently include purse seine, set gillnets and beach seine.⁵⁵⁵ Kodiak herring fisheries include a roe fishery (using both purse seine and gillnet gear) and a food/bait fishery. Herring sac roe fisheries take place in the spring when individual spawning biomasses are aggregated. In contrast, food/bait fisheries take place in the summer, fall, and winter when herring from several stocks may be mixed together. A Kodiak food/bait herring fishery has historically taken place in Shelikof Strait, but has been closed in recent years because the Kamishak Bay spawning biomass (Cook Inlet)

⁵⁵¹ Mason, Rachel. 1995. *The Alutiiq Ethnographic Bibliography*. Project sponsored by the Kodiak Area Native Association. Retrieved November 30, 2011 from <http://ankn.uaf.edu>.

⁵⁵² Ibid.

⁵⁵³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁵⁴ Alaska Dept. of Fish and Game. 2012. *Kodiak Management Area*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakodiak.main>.

⁵⁵⁵ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

has been below threshold since 1998. The Alaska Board of Fish (BOF) closes food/bait fisheries if any of the individual spawning populations is below threshold.⁵⁵⁶

Groundfish and crab fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. In the Gulf of Alaska (GOA), federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Parallel fisheries for Pacific cod and walleye pollock also take place in state waters surrounding Kodiak Island. Parallel fisheries occur at the same time as the federal fisheries. The Total Allowable Catch (TAC) set by NMFS in each fishery applies to both federal and parallel harvest. In addition to federally-managed groundfish fisheries, beginning in 1997, a ‘state-waters fishery’ for Pacific cod was initiated in the Kodiak area. Management plans for state-waters fisheries are approved by the BOF, and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.⁵⁵⁷

Kodiak Island is one historical center of the red king crab fishery, and Tanner crabs are also distributed through the GOA. The ADF&G manages red king crab and Tanner crab stocks in the GOA. From 2000 to 2002, Port Lions residents held permits in the Kodiak king crab and Bristol Bay Dungeness crab fisheries. However, from 2003 to 2010, only Tanner crab permits were held.^{558,559} The Kodiak red king crab fishery has been closed in recent years due to low abundance. Parts of the Kodiak district have been open for Tanner crab harvest in recent years. Kodiak area Tanner crab harvest is managed using 8 separate management areas, each with its own GHL.⁵⁶⁰ Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Port Lions is located in the Gulf of Alaska Federal Statistical and Reporting Area 630, the Pacific Halibut Fishery Regulatory area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. The community is not eligible to participate in the Community Development Quota (CDQ) program. However, Port Lions is eligible to participate in the Community Quota Entity (CQE) program.

The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In

⁵⁵⁶ Alaska Dept. of Fish and Game. 2012. *Commercial Herring Fisheries*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryHerring.main>.

⁵⁵⁷ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁵⁵⁸ Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.main>.

⁵⁵⁹ Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=tannercrab.management>.

⁵⁶⁰ See footnote 557.

addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf. As of 2013, 45 communities were considered eligible for the CQE program. Only two CQE non-profits had purchased commercial halibut IFQ and were actively leasing it to eligible community residents. Both of these CQE non-profits were located in the Kodiak area: Cape Barnabas, Inc. in Old Harbor and the Ouzinkie Company Holding Corporation in Ouzinkie.⁵⁶¹

Port Lions Fisheries, Inc. is the CQE non-profit entity which represents Port Lions. In a survey conducted by the AFSC in 2011, Port Lions community leaders reported that the CQE non-profit was developed with the intention of also purchasing and managing commercial quota shares in eligible fisheries as well as charter halibut permits for the community. As of October 2013, Port Lions Fisheries, Inc. had not purchased any commercial IFQ. However, the non-profit did have seven halibut charter permits available for lease to community members.⁵⁶²

In the 2011 AFSC survey, community leaders also said in the survey that the community's annual population peak is "entirely" driven by employment in the fishing sectors, particularly commercial fishing, recreational/sportfishing, and charter fishing. Community leaders also reported that Port Lions has seen an increase in charter/party boats and in commercial fishing boats over the past five years.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Port Lions does not have a registered processing plant. The nearest processing plant is located in Kodiak.

Fisheries-Related Revenue

Overall, in 2010, Port Lions received \$63,459 from fisheries-related taxes and fees (Table 3).⁵⁶³ These revenue sources include the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, and harbor usage fees. Table 3 shows the historical annual revenue for each of these categories.

In a survey conducted by the AFSC in 2011, community leaders reported that roads, social services, and water and wastewater systems are supported at least partially by funds obtained through fisheries-related revenue sources.

⁵⁶¹ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 24, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

⁵⁶² Ibid.

⁵⁶³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 16 residents of Port Lions held a total of 38 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Salmon permits made up 37% of the CFEC permits issued in 2010, a percentage which remained generally the same between 2000 and 2010. The majority (10) of the salmon CFEC permits issued in 2010 were for the Kodiak purse seine fishery, with the remainder issued for the Kodiak beach seine fishery, the Peninsula-Aleutians drift gill net fishery, and the Kodiak set gill net fishery. Halibut CFEC permits were issued for the statewide longline fishery using vessels under 60 ft. Also in 2010, herring CFEC permits were issued for the Kodiak purse seine and gill net roe herring fisheries, the Cook Inlet purse seine fishery (roe and food/bait), and the Kodiak purse seine food/bait fishery using vessels under 60 ft. Permits were also issued in 2010 for the following “other shellfish” fisheries: statewide octopi/squid longline fishery using vessels under 60 ft and pot gear fishery using vessels under 60 ft, the Kodiak sea cucumber diving gear fishery, and the Kodiak Tanner bairdi crab pot fishery using vessels under 60 ft. There were also other finfish CFEC permits issued for the statewide and Gulf of Alaska miscellaneous saltwater finfish mechanical jig fisheries. In addition, one Federal Fisheries Permit (FFP) was issued to a Port Lions resident in 2010 (Table 4). Overall, just over half the permits issued to residents of Port Lions in 2010 were actually fished, although this varies by fishery, with 71% of salmon CFEC permits fished to 100% of halibut CFEC permits fished to 20% of crab CFEC permits fished. There was a large decline in the total quota shares held by residents of Port Lions for both halibut and sablefish between 2000 and 2010. Note that no residents of Port Lions held quota shares in any of the Alaskan crab fisheries regulated by catch share programs.

Between 2000 and 2010, there were an average of 25 crew license holders, 28 vessels owned primarily by Port Lions residents and 31 vessels homeported in Port Lions. There were no fish buyers, shore-side processing facilities, or vessels landing catch in Port Lions between 2000 and 2010 (Table 5). The number of halibut quota share account holders decreased between 2000 and 2010, as did the number of halibut quota shares held by Port Lions residents and the annual IFQ allotment (Table 6). There was one Port Lions resident holding sablefish quota shares between 2000 and 2009, though there were no Port Lions residents holding sablefish quota shares in 2010 (Table 7). There were no Port Lions residents holding crab quota shares between 2005 and 2010 (Table 8). Since there were no vessels landing catch in Port Lions between 2000 and 2010, there are no landings or ex-vessel revenue data to report during this period (Table 9). Landings by Port Lions residents were considered confidential due to a small number of participants for all species in all years with the exception of halibut (2000, 2002, 2006-2008, and 2010), Pacific cod (2004), and salmon (2000-2010). Landings and ex-vessel revenue reported by Port Lions residents for halibut decreased during the period for years in which data were available, while landings and ex-vessel revenue for salmon varied considerably during the period (Table 10).

In a survey conducted by the AFSC in 2011, community leaders reported that gear types used by commercial fishing vessels based in Port Lions include gill nets, pots, and purse seines. Community leaders also reported that Port Lions is home to more commercial fishing boats than there were five years ago. In addition, community leaders reported that, while not directly involved in the fisheries management process in Alaska, Port Lions relies on regional organizations, such as the Gulf of Alaska Regional Communities Coalition, to provide information on fisheries management issues to the community.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Port Lions: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$9,979	\$12,640	\$15,044	\$10,953	\$8,961	\$20,818	\$25,646	\$29,328	\$13,714	\$16,588	\$15,573
Fisheries Resource Landing Tax ¹	\$41	\$308	\$206	\$567	\$212	\$262	\$74	\$135	\$138	\$87	\$86
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$31,000	\$34,300	\$32,600	\$34,200	\$32,000	\$34,100	n/a	\$37,858	\$43,891	\$27,500	\$47,800
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$41,020	\$47,248	\$47,850	\$45,720	\$41,173	\$55,180	\$25,720	\$67,320	\$57,743	\$44,175	\$63,459
Total municipal revenue⁵	\$252,856	\$327,265	\$302,660	\$285,519	\$256,424	\$257,927	\$470,565	\$192,238	\$430,697	\$337,905	\$412,368

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Port Lions: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	8	8	8	8	8	8	8	8	8	5	5
	Active permits	1	2	2	1	2	2	1	1	2	0	1
	% of permits fished	12%	25%	25%	12%	25%	25%	12%	12%	25%	-	20%
	Total permit holders	7	7	7	7	7	7	7	7	7	5	5
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	3	3	3	2	3	3	3	3	3	1	1
	Fished permits	0	0	0	1	1	1	0	1	1	1	1
	% of permits fished	-	-	-	50%	33%	33%	-	33%	33%	100%	100%
	Total permit holders	3	3	3	2	2	2	2	2	2	1	1
Crab (CFEC) ²	Total permits	2	4	4	4	4	4	4	4	4	4	5
	Fished permits	1	3	3	1	3	3	2	1	2	1	1
	% of permits fished	50%	75%	75%	25%	75%	75%	50%	25%	50%	25%	20%
	Total permit holders	2	4	4	4	3	4	4	4	4	4	5
Other shellfish (CFEC) ²	Total permits	0	1	1	2	2	2	2	2	2	3	3
	Fished permits	0	0	1	0	0	0	0	0	0	1	0
	% of permits fished	-	-	100%	-	-	-	-	-	-	33%	-
	Total permit holders	0	1	1	1	1	1	1	1	1	2	2
Halibut (CFEC) ²	Total permits	11	10	9	9	8	8	7	7	7	6	7
	Fished permits	8	7	8	6	6	5	6	7	7	4	7
	% of permits fished	73%	70%	89%	67%	75%	63%	86%	100%	100%	67%	100%
	Total permit holders	10	9	8	8	7	7	7	7	7	6	7
Herring (CFEC) ²	Total permits	7	7	7	8	7	8	7	6	6	6	6
	Fished permits	1	2	3	3	3	4	1	2	1	1	2
	% of permits fished	14%	29%	43%	38%	43%	50%	14%	33%	17%	17%	33%
	Total permit holders	5	5	4	4	4	4	4	4	4	4	4

Table 4 cont'd. Permits and Permit Holders by Species, Port Lions: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	2	0
	Fished permits	1	1	1	1	1	1	1	1	1	1	0
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	100%	50%	-
	Total permit holders	1	1	1	1	1	1	1	1	1	1	0
Groundfish (CFEC) ²	Total permits	13	9	10	8	6	6	3	6	7	6	3
	Fished permits	6	2	2	4	3	2	1	2	4	2	1
	% of permits fished	46%	22%	20%	50%	50%	33%	33%	33%	57%	33%	33%
	Total permit holders	10	6	7	7	5	5	3	5	5	5	3
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	15	14	13	14	14	13	12	13	13	12	14
	Fished permits	10	9	7	9	9	9	7	9	7	8	10
	% of permits fished	67%	64%	54%	64%	64%	69%	58%	69%	54%	67%	71%
	Total permit holders	16	15	14	14	14	13	12	13	14	12	14
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>49</i>	<i>46</i>	<i>45</i>	<i>46</i>	<i>42</i>	<i>42</i>	<i>36</i>	<i>39</i>	<i>40</i>	<i>39</i>	<i>38</i>
	<i>Fished permits</i>	<i>27</i>	<i>24</i>	<i>25</i>	<i>24</i>	<i>25</i>	<i>24</i>	<i>18</i>	<i>22</i>	<i>22</i>	<i>18</i>	<i>21</i>
	<i>% of permits fished</i>	<i>55%</i>	<i>52%</i>	<i>56%</i>	<i>52%</i>	<i>60%</i>	<i>57%</i>	<i>50%</i>	<i>56%</i>	<i>55%</i>	<i>46%</i>	<i>55%</i>
	<i>Permit holders</i>	<i>25</i>	<i>21</i>	<i>20</i>	<i>19</i>	<i>18</i>	<i>17</i>	<i>15</i>	<i>18</i>	<i>18</i>	<i>17</i>	<i>16</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Port Lions: 2000-2010.

Year	¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ⁴	Vessels Primarily Owned by Residents ⁵	Vessels Homeported ⁵	Vessels Landing Catch in Port Lions ²	Total Net Pounds Landed in Port Lions ^{2,3}	Total Ex-Vessel Value of Landings in Port Lions ^{2,3}
2000	28	0	0	35	37	0	0	\$0
2001	27	0	0	33	36	0	0	\$0
2002	27	0	0	30	33	0	0	\$0
2003	26	0	0	32	35	0	0	\$0
2004	25	0	0	33	36	0	0	\$0
2005	22	0	0	27	29	0	0	\$0
2006	21	0	0	24	27	0	0	\$0
2007	21	0	0	24	28	0	0	\$0
2008	25	0	0	22	25	0	0	\$0
2009	27	0	0	21	27	0	0	\$0
2010	23	0	0	25	28	0	0	\$0

¹ (ADF&G) Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² (ADF&G) Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Totals only represent non-confidential data.

⁴ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Port Lions: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	15	234,732	28,635
2001	15	234,732	33,436
2002	15	287,638	52,722
2003	14	196,783	41,441
2004	14	196,783	36,650
2005	14	190,122	34,514
2006	14	203,219	34,297
2007	13	174,159	27,662
2008	13	174,159	27,125
2009	10	155,973	21,343
2010	10	155,973	19,592

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Port Lions: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	283,840	25,609
2001	1	283,840	26,728
2002	1	283,840	28,926
2003	1	193,739	24,325
2004	1	193,739	27,731
2005	1	191,739	23,839
2006	1	234,755	30,752
2007	1	277,260	35,143
2008	1	277,260	29,217
2009	1	191,739	15,392
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Port Lions: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Port Lions: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: (ADF&G) Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Port Lions Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	60,832	--	30,922	--	--	--	21,341	27,717	21,895	--	17,116
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	118,851	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	1,528,906	2,435,323	3,667,375	2,925,854	3,760,603	4,597,767	2,875,396	2,978,450	1,276,042	3,013,703	1,748,979
<i>Total²</i>	<i>1,589,738</i>	<i>2,435,323</i>	<i>3,698,297</i>	<i>2,925,854</i>	<i>3,879,454</i>	<i>4,597,767</i>	<i>2,896,737</i>	<i>3,006,167</i>	<i>1,297,937</i>	<i>3,013,703</i>	<i>1,766,095</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$149,634	--	\$66,435	--	--	--	\$80,495	\$117,899	\$88,559	--	\$81,105
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	\$38,298	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$527,766	\$494,701	\$460,539	\$511,840	\$730,241	\$965,779	\$652,490	\$774,712	\$678,089	\$957,254	\$843,246
<i>Total²</i>	<i>\$677,400</i>	<i>\$494,701</i>	<i>\$526,974</i>	<i>\$511,840</i>	<i>\$768,539</i>	<i>\$965,779</i>	<i>\$732,985</i>	<i>\$892,611</i>	<i>\$766,648</i>	<i>\$957,254</i>	<i>\$924,351</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: (ADF&G) Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to the ADF&G Statewide Harvest Survey, Chinook salmon, coho salmon, pink salmon, sockeye salmon, Dolly Varden, Pacific halibut, rockfish, Pacific cod, razor clams, and hardshell clams are caught by private anglers in Port Lions. In addition, charter logbook data indicate that Chinook salmon, chum salmon, coho salmon, pink salmon, sockeye salmon, other salmon, halibut, lingcod, pelagic rockfish, yelloweye rockfish, other rockfish, and sharks have been targeted by the charter industry in Port Lions.⁵⁶⁴ According to the ADF&G Charter Logbook data, Chinook salmon, chum salmon, coho salmon, halibut, lingcod, other rockfish, other salmon, pink salmon, pelagic rockfish, sablefish, shark, sockeye, and yelloweye rockfish are caught by anglers aboard charter vessels operating out of Port Lions.⁵⁶⁵ According to a survey conducted by the AFSC in 2011, community leaders indicated that the following saltwater species are targeted by recreational fishermen that use boats based in Port Lions: pink salmon, chum salmon, Chinook/king salmon, sockeye/red salmon, halibut, rockfish, crab, and clams.

In 2010, there were nine registered sport fish businesses active and twelve registered sport fish guides. The number of active sport fish guide businesses fluctuated at any given year between 2000 and 2010, but ranged between 6 and 10. In addition, there was a yearly average of 12 registered sport fish guides located in the community during that time. A total of 77 sportfishing licenses were sold to residents of Port Lions in 2010 (irrespective of the location of the point of sale). In comparison, a total of 84 sportfishing licenses were sold in Port Lions, indicating the potential that visitors to Port Lions are participating in recreational fishing activities.

Port Lions is located within Alaska Sport Fishing Survey Area Q – Kodiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. On average, Alaska resident anglers fished more angler days per year than non-Alaska residents in both saltwater and freshwater sport fisheries, and more angler days were fished per year in freshwater than in saltwater in the Kodiak region between 2000 and 2010. However, sportfishing activity in by both Alaska resident and non-Alaska resident anglers, and in both saltwater and freshwater, was extremely high. Information about the sportfishing sector in and near Port Lions is displayed in Table 11.

⁵⁶⁴ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁵⁶⁵ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Port Lions: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Port Lions ²
2000	7	15	60	0
2001	6	16	80	86
2002	7	11	68	43
2003	6	13	81	89
2004	7	14	87	111
2005	9	11	80	104
2006	7	11	71	116
2007	7	9	70	130
2008	10	14	62	137
2009	8	11	70	126
2010	9	12	77	84

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	16,767	38,809	18,542	47,307
2001	14,761	24,604	18,299	19,757
2002	18,356	19,737	15,018	35,113
2003	17,715	23,726	13,362	34,034
2004	18,896	22,787	21,331	31,124
2005	21,269	33,917	23,789	36,753
2006	23,511	21,991	23,483	26,239
2007	21,668	31,554	26,916	31,072
2008	20,275	31,944	24,944	24,876
2009	20,813	26,520	16,654	32,965
2010	20,012	20,365	18,871	22,211

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Residents of Port Lions supplement their incomes and diet with subsistence resources such as salmon, crab, halibut, shrimp, clams, duck, seal, deer, and rabbit.⁵⁶⁶

According to a survey conducted by the AFSC in 2011, community leaders indicated that salmon, halibut, cod, clams, and sea ducks are the most important subsistence marine resources for the residents of Port Lions. There has been considerable harvest of halibut for subsistence by residents of Port Lions that hold a valid Subsistence Halibut Registration Certificate (SHARC) issued by NMFS (Table 14). The ADF&G Division of Subsistence estimated subsistence participation between 2003 and 2004 by household and species, showing a high percentage of households participating in salmon and halibut subsistence, as well as lower participation levels in marine mammal, marine invertebrate, and non-salmon fish subsistence (Table 12).

Between 2000 and 2010, for years in which data are available, the estimated total subsistence harvest of salmon appears to be somewhat variable from year to year (Table 13). From 2003 to 2010, while somewhat variable, the total subsistence harvest of halibut decreased overall by nearly half. During this same time period, the number of SHARC card holders and the number of SHARC cards fished has also decreased (Table 14). In 2004, there was a significant spike in subsistence halibut harvests. In that year, an estimated 18,914 pounds were harvested on 44 SHARC despite permit activity remaining relatively unchanged in the shouldering years. In years for which data were reported by ADF&G between 2000 and 2010, an estimated total of 97 sea otters, 16 Steller sea lions, and 301 harbor seals were harvested. Sea otter harvests peaked in 2010 at an estimated 32 otters, while harbor seal harvests peaked in 2005 through 2007 at an estimated 77 seal in each of those years. However, it should be noted that years which reflect consecutive estimates may represent estimates which were carried over from the original year. This was done in the event that there was a gap in the data. This should be considered when calculating total Steller sea lion and harbor seal harvests (Table 15).

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Port Graham during this period: black (small) chitons, butter clams, Dungeness crab, king crab, limpets, octopus, Pacific littleneck clams (steamers), razor clams, sea urchin, snails, Tanner crab, unknown king crab, unknown mussels, and unknown Tanner crab. Marine mammals reported as harvested for subsistence use included harbor seal and Steller sea lion. Non-salmon fish reported as harvested for subsistence use included: black rockfish, Dolly Varden, herring, lake trout, lingcod, Pacific cod, rainbow trout, red rockfish, sablefish (black cod), starry flounder, steelhead, unknown rockfish, unknown shark, unknown sole, unknown trout, and walleye pollock.⁵⁶⁷

Additional Information

⁵⁶⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁶⁷ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

A long, wooden footbridge links the two sides of Port Lions across Settlers Cove. The bridge is commonly known as “The Causeway.”⁵⁶⁸

⁵⁶⁸ Go Kodiak Alaska (n.d.). *Port Lions*. Retrieved December 1, 2011 from <http://www.gokodiakalaska.com/html/locations/port-lions.php>.

Table 12. Subsistence Participation by Household and Species, Port Lions: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	85%	93%	13%	31%	31%	221
2004	78%	n/a	n/a	n/a	13%	n/a
2005	72%	n/a	n/a	n/a	17%	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADF&G.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Port Lions: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	41	2	1	431	11	2,041	n/a	n/a
2001	1	55	n/a	n/a	n/a	n/a	75	n/a	n/a
2002	n/a	47	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	51	n/a	n/a	n/a	n/a	n/a	2,262	3,130
2004	49	49	43	3	612	65	1,519	n/a	229
2005	43	43	28	1	466	85	1,313	n/a	1,134
2006	39	39	25	1	560	165	531	n/a	n/a
2007	39	39	25	1	560	165	531	n/a	n/a
2008	38	38	3	0	313	85	1,161	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Port Lions: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	68	42	6,786
2004	83	44	18,914
2005	84	41	8,709
2006	77	44	7,465
2007	66	30	4,826
2008	45	24	3,465
2009	49	28	3,754
2010	39	19	3,986

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2010. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Port Lions: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	1	n/a	n/a	n/a	6	n/a
2001	n/a	n/a	n/a	n/a	n/a	9	n/a
2002	n/a	10	n/a	n/a	n/a	13	n/a
2003	n/a	21	n/a	n/a	n/a	13	n/a
2004	n/a	n/a	n/a	n/a	1	21	n/a
2005	n/a	24	n/a	n/a	4	77	n/a
2006	n/a	n/a	n/a	n/a	4	77	n/a
2007	n/a	3	n/a	n/a	4	77	n/a
2008	n/a	6	n/a	n/a	3	20	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	32	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

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Regional Introduction: Aleutian and Pribilof Islands

Communities

Adak

Akutan

Atka

Cold Bay

False Pass

King Cove

Nelson Lagoon

Nikolski

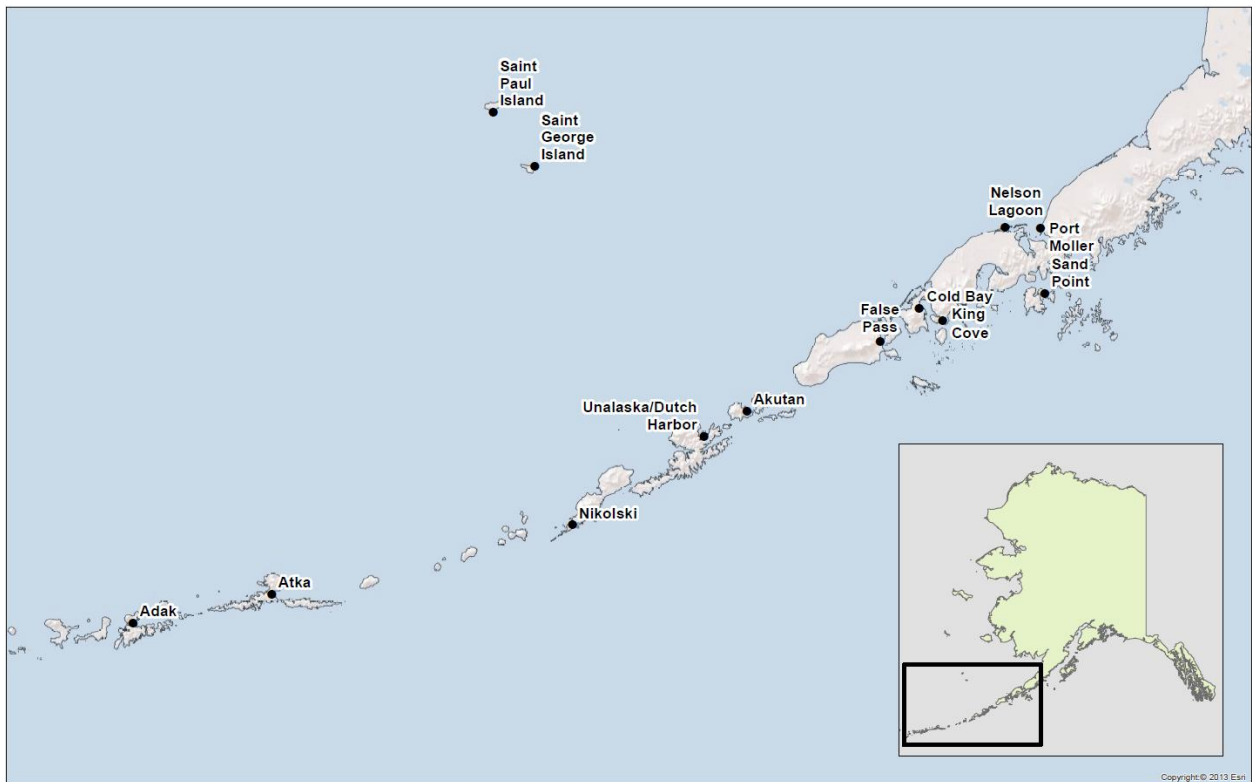
Port Moller

Saint George

Saint Paul

Sand Point

Unalaska/Dutch Harbor



People and Place

Location

The Aleutian Island chain stretches approximately 1,200 miles southwest from the end of the Alaska Peninsula at False Pass, toward the Kamchatka Peninsula in Russia. The chain itself consists of 14 large volcanic islands and 55 smaller ones located between 51° and 55° N latitude and 172° E and 163° W longitude. A total of 13 communities were selected to be profiled from this region, all of which are located within either the Aleutians East Borough or the Aleutians West Census Area. Saint George and Saint Paul are located within the Pribilof Island group, 200 miles north of Unalaska.

Demographic Profile

Of the 13 communities profiled, only 4 had populations exceeding 500 residents as of 2010. In that year, the total regional population was 8,498; 51.5% of which lived in Unalaska/Dutch Harbor. However, it should be noted that 2010 Census figures are misleading as seasonal seafood processor employees were tallied for the communities of Unalaska and Akutan. In the case of Akutan, the inflated population figure is extremely misrepresentative of the total number of permanent residents.¹

Because of its robust seafood processing sector, the region has a highly diversified population in terms of race or ethnicity. In 2010, 23.1% of residents identified themselves as at least part American Indian or Alaska Native, 34.4% as at least part Asian, 31.3% as White, and 7.0% as at least part Black or African American. In addition, 13.1% identified themselves as Hispanic or Latino.² Again, those demographics may not have been representative of residents living in the region permanently.

The Aleutian and Pribilof Islands area is highly dependent on commercial fishing and seafood processing. Most economic activity comes from communities where large seafood processors are operating and/or commercial fishing fleets are staged. In larger fishing ports, most jobs are seasonal and are related to commercial fishing, fish processing, or support services. The communities of Atka, Nelson Lagoon, Saint George, and Saint Paul are largely dependent on subsistence activities to supplement limited wage employment opportunities. The community of Adak is somewhat unique in that it is in the process of reinventing its economy from a military installation to a more diversified transportation service and commercial fishing hub. In 2010, the overall regional per capita income was estimated at \$26,100, while the estimated median household income was \$63,646.³

¹ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Ibid.

³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

History

There is evidence of human occupation of the Aleutian Islands dating back at least 8,000 to 9,000 years; however, it is believed that humans were populating the Americas at least 13,000 years ago during the end of the last glacial maximum. Archaeological sites dating back over 11,000 years have been found on Prince of Wales Island, lending evidence to a possible coastal migration route.⁴ Archaeological sites on Anangula Island, near Nikolski, are thought to be around 8,000 years old and are some of the earliest evidence of human occupation of the area.⁵

Russian ships first reached the Aleutians in 1741, lured by the abundance of fur bearing animals. During the beginning of Russian occupation, many social and cultural upheavals took place in the Aleutians, often to the detriment of the indigenous population. Many local inhabitants were placed into slavery, while most others feel victim to diseases brought from Europe.⁶

By the late eighteenth century, the Aleutians had for the most part been abandoned by Russians in favor of eastern trapping grounds. American influence in Alaska increased as people migrated northward; drawn by furs, fishing, and whaling. Unalaska and Dutch Harbor flourished in the 1880s as a coaling station and commercial trade center. The Gold Rush of the 1890s brought many ships to Dutch Harbor, lured by its position as a gateway to the gold fields of northwest Alaska. Many prospectors traveled through Dutch Harbor on their way to goldfields in Nome. By the turn of the twentieth century, several seafood processors may have been in operation processing herring, salmon, and whale meat.⁷

Interest in fishery resources of the Aleutians began to increase around 1950 with the harvesting and processing of halibut, salmon, and king crab. The growth of the king crab fishery in the early 1960s greatly improved local economic conditions. Today, the region is dependent mainly on commercial and subsistence fisheries tied to the Bering Sea, which is home to productive cod and crab fisheries.⁸

Natural Resources and Environment

The Aleutian and Pribilof Islands are located in Alaska's maritime climate zone, with winter temperatures ranging from 10 to 35° F and cool summers with temperatures from 45 to 65° F. Precipitation averages 20 to 25 inches annually. Wind and fog are frequent, and communities which face the Bering Sea experience average winds of 15 knots year-round, with severe winter storms bringing winds in excess of 100 miles per hour. The warm Japanese Current keeps Bering Sea ports ice-free during all seasons and contributes to one of the richest marine ecosystems on earth.

The Aleutian Range was formed by volcanic outpourings which began around sixty million years ago, and which have continued to shape the region since. Much of the eastern region of the Aleutians was glaciated during the last ice age, covering portions of Unimak and

⁴ National Park Service. (n.d.). *Archaeological Overview of Alaska*. Retrieved May 30, 2012 from: <http://www.nps.gov/akso/akarc/early.htm>.

⁵ Trych, Nyman and Hayes (1977). *City of Unalaska, Alaska: Recommended Community Development Plan*. Retrieved June 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Unalaska-CP-1977.pdf>.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

Unalaska islands and leaving behind a layer of gravel moraine and till in some areas. Overall, subsurface geology consists of volcanic basalts and lahar deposits. Soil is generally thin and unproductive. Topography is characterized by moderate relief alpine tundra and flat coastal meadows.⁹ Much of the region is covered by the Alaska Maritime National Wildlife Refuge (AMNWR), which covers approximately 3.4 million acres.¹⁰

There are no terrestrial mammals endemic to AMNWR, although foxes, rats, caribou, cattle, and ground squirrels have been introduced. Marine mammals include sea otter, Steller sea lion, northern fur seal, harbor seal, walrus, and beluga, blue, bowhead, gray, humpback, and killer whales. Marine fish include lampreys, mackerel sharks, skates, all five species of Pacific salmon, Dolly Varden, smelts, toothed cod, Pacific cod, walleye pollock, stickleback, rockfish, sablefish, greenling, mackerel, sculpin, Pacific halibut, sole, and flounder. Marine invertebrates include king, Tanner and Dungeness crab, shrimp, scallop, razor clam, and hardshell clam. Finally, AMNWR provides critical birding habitat for approximately 40 million seabirds.¹¹

Governance

The Aleutian and Pribilof Islands region is comprised of one borough and one census area. The Aleutians East Borough seat is located in Sandpoint, a city of 976 residents and the largest within the Borough. In 2010, the Aleutians East Borough administered at 2% raw fish tax, and took in \$6.4 million in total revenue.¹² The Aleut Corporation is the regional Alaska Native Claims Settlement Act (ANCSA) chartered for-profit corporation with 66,000 acres of surface and 1.57 million acres of subsurface land holdings. Unalaska is the largest city in the Aleutian and Pribilof Islands region as well as the economic center. The city is the western-most container terminal in the United States and a regional shipping hub.¹³

The Aleutian Pribilof Island Community Development Association is the regional Community Development Quota (CDQ) group that operates in the region. CDQ groups distribute a portion of commercial fishing proceeds to their various communities and sponsor economic and infrastructural development. Most communities in this region are not eligible to participate in the Community Quota Entity (CQE) program given their geographic location outside of the Gulf of Alaska. However, one entity has been formed. Aleutia Incorporated is the CQE representing Sand Point. CQE groups are eligible to purchase fishing quota share on behalf of residents of their respective communities.

In addition, there are a number of ANCSA chartered village corporations and Indian Reorganization Act recognized tribal governments.

⁹ Wilson, F. H., S. Mohadjer, and D. M. Grey. (2006). *Reconnaissance Geologic Map of The Western Aleutian Islands, Alaska*. Retrieved May 30, 2012 from: http://pubs.usgs.gov/of/2006/1302/waleut_text.pdf.

¹⁰ National Park Service. (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved May 30, 2012 from: <http://alaskamaritime.fws.gov/>

¹¹ Ibid.

¹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

¹³ City of Unalaska. (2012). *2012 Economic Report*. Retrieved November 21, 2012 from: http://www.unalaska-ak.us/vertical/sites/%7B0227B6A7-A82F-4BFC-9D02-A4B2D3A8BC35%7D/uploads/2012_brochure%281%29.pdf.

Involvement in North Pacific Fisheries

Shoreside seafood processing plants are located in Adak, Akutan, Atka, False Pass, King Cove, Port Moller, Saint Paul, Sand Point, and Dutch Harbor (Unalaska).¹⁴ Dutch Harbor is a base of operation for approximately 300 licensed vessels that fish within the Bering Sea.¹⁵ Target species for the commercial fleet include pollock, Pacific cod, halibut, mackerel, sole, rockfish, herring Pacific salmon, and crab.^{16,17}

In 2010, over 1.1 billion pounds of seafood was landed at Aleutian/Pribilof communities, accounting for roughly a quarter of total landings made in Alaska that year. Pollock accounted for most landings in 2010, at 846.6 million pounds of total. Pacific cod accounted for 149.8 million pounds, and the two species combined made up approximately 91% of total landings in the region.¹⁸ Aleutian and Pribilof Islands residents held 7.9 million shares of halibut quota, 1.1 million shares of sablefish quota, and 46.4 million shares of crab quota in 2010.¹⁹

Sportfishing is limited compared to other parts of Alaska. Most recreational fishing takes place in marine waters or on various drainages found throughout the islands. Most sportfishing activity is based out of Unalaska where 1,163 of the region's 1,405 sportfishing licenses were sold in 2010. In that year, residents held 762 sportfishing licenses.²⁰ Popular species targeted by recreational anglers include greenling, black bass, halibut, Pacific cod, flounder, Dolly Varden, and all five species of Pacific salmon.^{21,22}

Subsistence fishing and hunting form a major part of residents' livelihoods, especially in communities that are dependent on subsistence resources to supplement their incomes and diet. Common subsistence species include halibut, Pacific cod, salmon, rockfish, sculpin, greenling, flatfish, king and Tanner crab, razor clams, butter clams, chitons, limpets, mussels, and

¹⁴ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁵ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁶ City of Unalaska. (2012). *Official 2012 Visitors Guide*. Retrieved November 21, 2012 from: www.unalaska.info/files/documents/CVBVGfinal.pdf.

¹⁷ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁸ Ibid.

¹⁹ National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁰ Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²¹ City of Unalaska. (2012). *Official 2012 Visitors Guide*. Retrieved November 21, 2012 from: www.unalaska.info/files/documents/CVBVGfinal.pdf.

²² Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADFG.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

octopus.²³ In 2008, residents reported harvesting 133,671 lbs of salmon, of which approximately 76% were sockeye. Chinook salmon also made up a significant portion of salmon harvested at 11% of fish reported. Sockeye salmon were the most frequently harvested species of Pacific salmon, accounting for 8,285 of the reported 15,751 salmon harvested in 2008.²⁴ In 2008, an estimated 61,473 pounds of halibut was harvested by Aleutian and Pribilof Island residents. In that year, residents of Sand Point harvested more than any other community with an estimated 25,013 pounds.²⁵ Marine mammals harvested by residents include Steller sea lions, harbor seals, sea otters, and walrus.^{26,27}

Regional Challenges

The region's heavy dependence on commercial fishing often places communities at the whim of ever-changing market conditions and management regimes. According to community surveys administered by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, several communities throughout the region expressed frustration over Pacific cod and Atka mackerel closures in the Western Aleutians resulting from depressed Steller sea lion populations. Measures limiting bycatch are also seen as overly restrictive by several communities. As with many remote areas of Alaska, developing fishery-related infrastructure can be cost prohibitive in many situations, as is being experienced in Adak.

If current trends continue, the potential opening of a seasonal shipping route through the Arctic could create unique challenges as well as opportunities for communities in the Aleutian and Pribilof Islands. As Arctic sea ice retreats as a result of climate change, there is the potential for seasonal shipping routes to open, subsequently connecting the Aleutian Islands with ports in New York, Europe, and Russia. It is believed that these theoretical routes can reduce shipping times significantly, and could allow Aleutian ports to become major transportation hubs.^{28,29}

²³ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADFG.alaska.gov/sb/CSIS/> (Accessed February 2011).

²⁴ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

²⁵ Fall, J.A. and D. Koster. (2011). *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

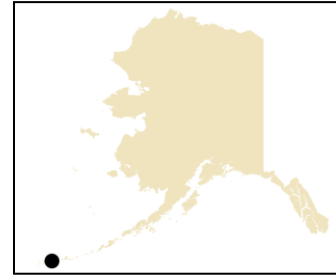
²⁶ Wolfe, R.J., J. A. Fall, and M. Riedel. 2009. *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

²⁷ U.S. Fish and Wildlife Service. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

²⁸ Rodrigue, J-P. (2012). *The Geography of Transport Systems*. Retrieved November 21, 2012 from: <http://people.hofstra.edu/geotrans/eng/ch1en/conclen/polarroutes.html>.

²⁹ Paulin, J. (2012). Adak Hopes Oil, Trans-Arctic Shipping will Revitalize Island. *The Dutch Harbor Fisherman*. Retrieved November 21, 2012 from: http://www.thedutchharborfisherman.com/article/1238adak_hopes_oil_trans-arctic_shipping_will.

Adak (A-dack)



People and Place

*Location*³⁰

Adak is located on Kuluk Bay on Adak Island. It lies 1,300 mi southwest of Anchorage and 350 mi west of Unalaska in the Aleutian Island Chain. Flight time to Anchorage is 3 hours. Adak is the southern-most community in Alaska, on the latitude of Vancouver Island in Canada. The area encompasses 122.4 sq mi of land and 4.9 sq mi of water. Adak was incorporated as a city in 2001, is located in the Aleutians West Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*³¹

In 2010, there were 326 residents living in Adak, which ranked the community 156th of 352 Alaska communities in terms of population size. Between 1990 and 2010, the population declined by 93.0%. Between 2000 and 2009, the population declined by 47.8% with an average annual growth rate of 8.1% which was much higher than the statewide average of 0.75% and indicative of a significantly variable population. Information regarding population trends can be found in Table 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the permanent population in Adak was estimated to be between 120 to 140 residents. Typically there are seasonal residents living in Adak from January through April as well as June through October. Peaks in population seen in July and January through April are entirely attributed to employment in fisheries sectors.

Adak's racial and ethnic composition was relatively mixed in 2010. In that year, 52.5% of residents identified themselves as Asian, compared to 9.8% in 2000; 19.6% identified themselves as White, compared to 49.7% in 2000; 10.7% identified themselves as two or more races, compared to 2.2% in 2000; 5.5% identified themselves as American Indian or Alaska Native, compared to 35.1% in 2000; 4.0% identified themselves as Black or African American, compared to 1.3% in 2000; 1.5% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 1.9% in 2000; and 6.1% identified themselves as some other race, compared to 0% in 2000. In addition, 8.9% of residents identified themselves as Hispanic of Latino in 2010, compared to 5.1% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

Although unconfirmed, it is highly likely that the 2010 U.S. Census captured a large population of seasonal workers. This would explain the significant variation in racial

³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

composition between 2000 and 2010, and the discrepancy between 2010 Census population figures and local and state estimates. Locally, more of the population is identified as White, with American Indian or Alaska Native residents comprising the second largest racial or ethnic group.

The average household size in 2010 was 2.48, compared to 3.10 in 1990 and 1.99 in 2000. In that year there were a total of 500 housing units, compared to 1,051 in 1990 and 884 in 2000. Of the households surveyed in 2010, 6% were owner-occupied, compared to 0% in 2000; 3% were renter-occupied, compared to 18% in 2000; 85% were vacant, compared to 81% in 2000; and 7% were occupied seasonally, compared to 1% in 2000.

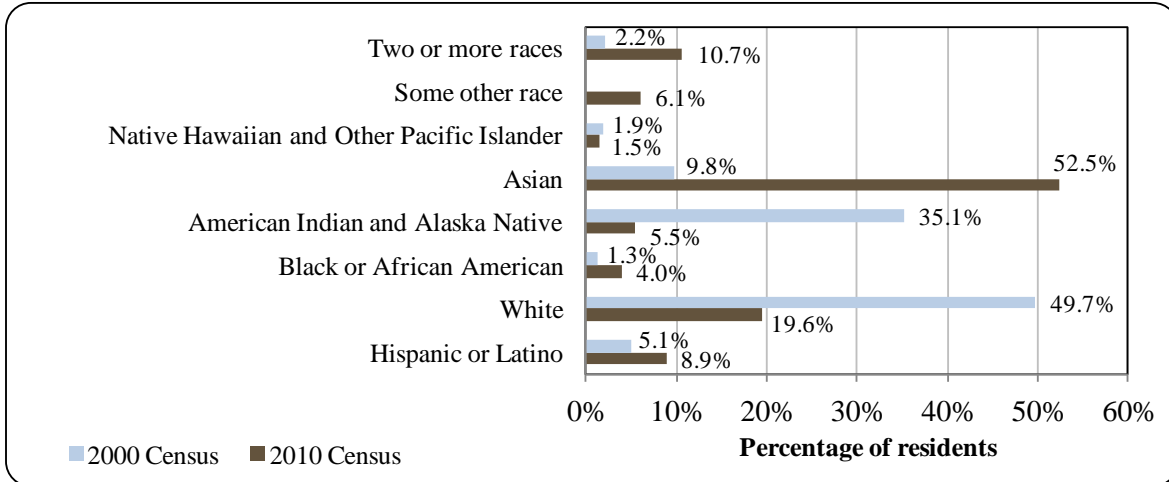
Table 1. Population in Adak from 1990 to 2010 By Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	4,633	-
2000	316	-
2001	-	153
2002	-	166
2003	-	74
2004	-	70
2005	-	167
2006	-	146
2007	-	137
2008	-	178
2009	-	165
2010	326	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

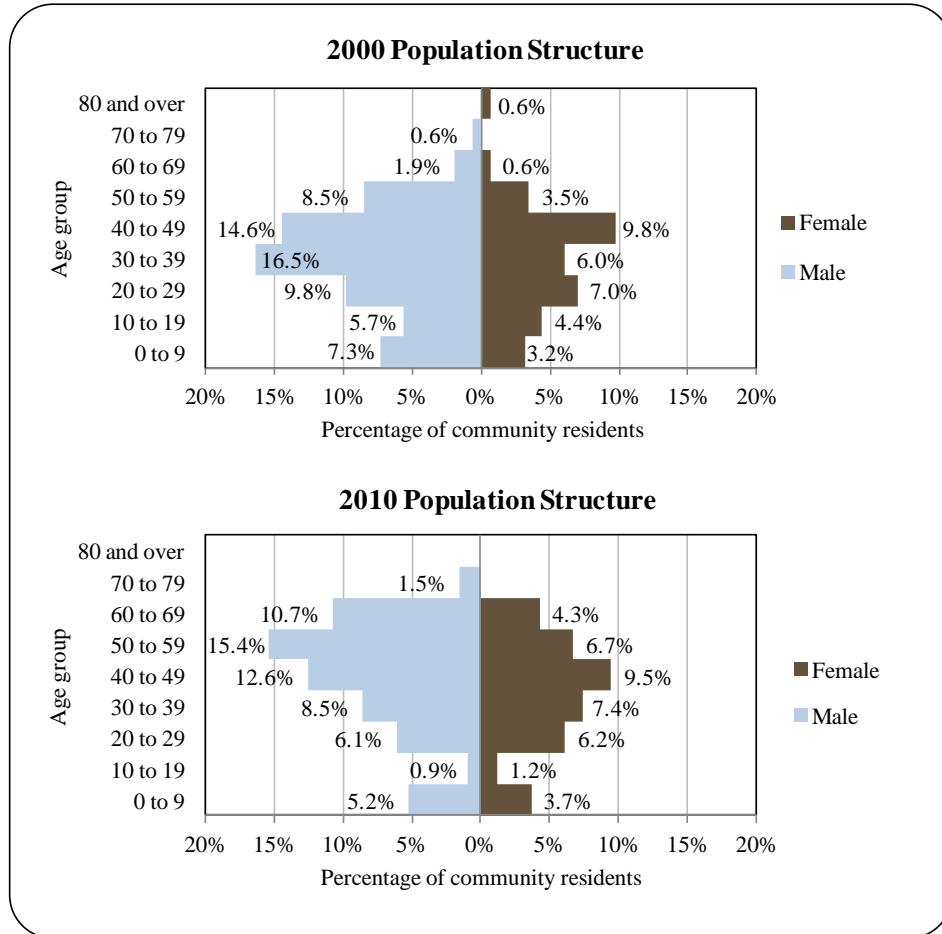
Figure 1. Racial And Ethnic Composition, Adak: 2000-2010 (U.S. Census).



The gender distribution in 2010 was moderately skewed at 61.0% male and 39.0% female. This was significantly more skewed than the distribution statewide (52.0% male, 48.0% female), and somewhat less skewed than the distribution in 2000 (64.9% male, 35.1% female). The median age in 2010 was 45.5 years, which was significantly older than the statewide median of 33.8 years and 2000 median of 35.2 years. Gender distribution by age cohort was more even in 2010 than in 2000, with male biases among most age ranges. In that year, the greatest absolute gender difference occurred within the 50 to 59 range (15.4% male, 6.7% female), followed by the 60 to 69 (10.7% male, 4.3% female) and 40 to 49 (12.6% male, 9.5% female) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range.

Compared with the year 2000, the population structure was less expansive in 2010, with older cohorts showing age transitions consistent with a stable population; meaning that overall, older cohorts appeared to age with little attrition compared with younger cohorts. In 2010, 11.0% of residents were under the age of 20, compared to 20.6% in 2000; 16.5% were over the age of 59, compared to 3.7% in 2000; 60.1% were between the ages of 30 and 59, compared to 58.9% in 2000; and 12.3% were between the ages of 20 and 29, compared to 16.8% in 2000. It should be noted that seasonal workers captured in the 2010 Census may have affected Adak’s population structure. Because of this, determining a trend may be difficult. Information regarding population structure can be found in Figure 2.

Figure 2. Population Age Structure in Adak Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³² estimated that 97.6% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 2.4% had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; and estimated 46.3% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 2.4% held an Associate's degree, compared to an estimated 8.0% of Alaskan residents overall; an estimated 7.3% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 12.2% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*³³

There is evidence of human occupation of the Aleutian Islands dating back at least 8,000 years; however, it is believed that humans were populating the Americas at least 13,000 years

³² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

ago during the end of the last glacial maximum. Archaeological sites dating back over 11,000 years have been found on Prince of Wales Island, lending evidence to a possible coastal migration route.³⁴ Archaeological evidence in the vicinity of Clam Lagoon shows that confirmed occupation of Adak Island dates back approximately 6,000 years.³⁵

The island was abandoned in the early 17th Century when Aleut hunters moved or were forced eastward because of the Russian fur trade. The Native people continued to use the island as a place to fish and hunt until the beginning of World War II. The island had been designated in 1913 as part of the Aleutian Island Reservation, but in the 1940's became "a key operations and supply location for United States military forces after the Japanese occupation of Kiska and Attu Islands during World War II". Adak's population in the spring of 1944 was made up of at least 32,000 military personnel, peaking at approximately 90,000 during the early staging periods of the war. After World War II, Adak was developed into a Naval Air Station and played an important role during the Cold War as a submarine surveillance center. The navy base housed 6,000 personnel and their families during its peak, but harsh cut-backs occurred in 1994 and navy family housing and schools were closed. Adak Naval Station officially closed on March 31, 1997. Aleut Corporation acquired the majority of Adak's facilities in 2004 in a land transfer agreement and in 1998 about 30 families with children (mostly Aleut Corp. shareholders) relocated to Adak.³⁶

³⁴ National Park Service. (n.d.). *Archaeological Overview of Alaska*. Retrieved May 30, 2012 from: <http://www.nps.gov/akso/akarc/early.htm>.

³⁵ West, D. (n.d.). *The Prehistory of Clam Lagoon*. Retrieved May 30, 2012 from: <http://www.adakdiscovery.org/>.

³⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment³⁷

Located in Alaska's maritime climate zone, Adak's weather is characterized by frequent and intense storms in the winter and extensive fog in the summer. Temperatures average from 20 °F (-7 °C) to 60 °F (16 °C). Total precipitation is 64 inches annually, with an average accumulated snowfall of 100 inches, primarily in the mountains.

Adak Island is located in the Alaska Maritime National Wildlife Refuge (AMNWR), which includes over 3,000 islands, islets, rocks, pinnacles, and headlands covering 3.4 million acres. Subsurface geology on Adak Island consists primarily of volcanic basalts and lahar deposits. Soils are generally thin, and there is evidence of Holocene age moraine deposits.³⁸ Much of Adak's local topography is characterized by steep to moderate relief alpine tundra. Coastal regions consist of lowland tundra and meadows. Vegetation includes grasses, sedges, lichens, mosses, wildflowers, and heath plants.³⁹ Trees are few in number and limited to introduced spruce.

There are no terrestrial mammals endemic to AMNWR although foxes, rats, caribou, cattle, and ground squirrels have been introduced. Marine mammals include sea otter, Steller sea lion, northern fur seal, harbor seal, walrus, and beluga, blue, bowhead, gray, humpback, and orca whales. Marine fish include lampreys, mackerel sharks, skates, all five species of Pacific salmon, Dolly Varden, smelts, toothed cod, Pacific cod, walleye pollock, stickleback, rockfish, sablefish, greenling, mackerel, sculpin, Pacific halibut, sole, and flounder. Marine invertebrates include king, Tanner and Dungeness crab, shrimp, scallop, razor clam, and hardshell clam. Finally, AMNWR provides critical birding habitat for approximately 40 million seabirds.⁴⁰

Although Adak does not have a hazard mitigation plan, the Aleutians East Borough identified several natural hazards with the potential to impact Aleutian communities, including volcanic eruptions, earthquakes, coastal flooding and erosion, ground failure, tsunami, and extreme weather. All of these hazards have records of occurrence in the area and have a high potential for future occurrence.⁴¹

Since the closure of the Adak Naval Station in 1997, the U.S. Navy and U.S. Environmental Protection Agency has been performing Superfund clean-up and restoration of Adak. Contamination was the result of hazardous substances including PCBs (polychlorinated biphenyl), petroleum, chlorinated solvents, and contaminants sourced from discarded batteries that were released over a 40-year period during base operation.⁴² Site cleanup was still in progress as of 2010.⁴³

³⁷ Ibid.

³⁸ Wilson, F. H.; Mohadjer, S.; and Grey, D. M. (2006). *Reconnaissance Geologic Map of The Western Aleutian Islands, Alaska*. Retrieved May 30, 2012 from: http://pubs.usgs.gov/of/2006/1302/waleut_text.pdf.

³⁹ Heusser, C. J. (1978). Postglacial Vegetation on Adak Island, Aleutian Islands, Alaska. *Bulletin of the Torrey Botanical Club*, 105, 18-23.

⁴⁰ National Park Service. (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved May 30, 2012 from:

⁴¹ Aleutians East Borough. (2010). *Multi-Jurisdictional Hazards Mitigation Plan*. Retrieved December 28, 2011 from: <http://www.aleutianseast.org/vertical/Sites/%7BEBDABE05-9D39-4ED4-98D4-908383A7714A%7D/uploads/%7B5F7E9057-83A3-4DBA-B144-073C3F6461D6%7D.PDF>.

⁴² U.S. Environmental Protection Agency. (2002). *Adak Naval Air Station, Alaska EPA ID# AK4170024323 (EPA Region 10, Aleutian Islands, Adak)*. Retrieved May 30, 2012 from: <http://yosemite.epa.gov>.

⁴³ U.S. Environmental Protection Agency (n.d.). *Superfund Information Systems*. Retrieved May 30, 2012 from: <http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=1000128#CleanupProgress>.

Current Economy⁴⁴

Adak provides a fueling port and crew transfer facility for foreign fishing fleets, and an airport, dock, housing facilities, restaurant, grocery store, and ship supply store are available. Adak has a shore-based processing plant capable of processing more than 500,000 lbs of fish per day.^{45,46} However, the plant closed in 2013 because of concerns over the viability of the Aleutian Pacific cod resource.⁴⁷ A land exchange between Aleut Corp., the U.S. Navy, and the Department of the Interior has transferred most of the naval facilities to the Aleut Corporation. A portion of the island remains within the AMNWR, managed by the U.S. Fish & Wildlife Service. A portion of northern Adak Island is still held by the U.S. Navy. In a survey conducted by the AFSC in 2011, community leaders reported that Adak's economy is reliant on fishing, fuel sales (predominately related to fishing), ecotourism, sportfishing and hunting, and historical tourism. Top employers⁴⁸ in 2010 included: Adak Seafoods LLC, City of Adak, Adak Petroleum LLC, Lakloey Inc., Eastern Aleutian Tribes Inc., State of Alaska, TDX Adak Generating LLC, Adak General Store LLC, the Aleutian Region School District, and Adak Eagle Enterprises.

According to the 2006-10 ACS,⁴⁹ the estimated per capita income was \$36,947 and the estimated median household income was \$75,417, compared to \$31,747 and \$52,727 in 2000, respectively. However, after adjusting for inflation by converting 2000 values into 2010 dollars,⁵⁰ the real per capita income (\$41,747) and real median household income (\$69,335) indicate that individual earnings declined while household earnings increased. In that year, Adak ranked 22nd of 305 communities from which per capita income was estimated, and 33rd of 299 communities from which median household income was estimated.

It should be noted that Adak's small population size may have prevented the ACS from accurately portraying economic conditions. Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, total wages based on state and private employers in 2010 was \$1.60 million.⁵¹ When compared with the 2010 Census population, the per capita income equals \$4,921, indicating an extreme decrease compared to per capita income values reported by the U.S. Census in 2000.⁵²

⁴⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁵ Personal correspondence.

⁴⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁷ Bristol Bay Times. (2013). *Adak Loses Private Fish Processor*. Retrieved July 7, 2013 from: http://www.thebristolbaytimes.com/article/1317adak_loses_private_fish_processor_1.

⁴⁸ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁵² Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

According to 2006-2010 ACS estimates, 90.9% of residents aged 16 and older were part of the civilian labor force. Between 2006 and 2010, unemployment was estimated at 2.3%, compared to an estimated 5.9% statewide. In addition, 1.7% of residents were estimated to be living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. However, ALARI estimates 22.6% unemployment.⁵³ Of those employed between 2006 and 2010, an estimated 74.4% worked in the private sector and 25.6% worked in the public sector.

By industry, Adak's economy was relatively diverse between in 2010. In that year, most (17.9%) employed residents were estimated to work in information sectors; followed by construction sectors (15.4%); education service, health care, and social assistance sectors (12.8%); and arts, entertainment, recreation, accommodations, and food service sectors (12.8%) (Figure 3). By occupation type, most (41.0%) employed residents were estimated to hold natural resources, construction, or maintenance positions; followed by management or professional positions (17.9%); production, transportation, or material moving positions (17.9%); sales or office positions (12.8%); and service positions (10.3%) (Figure 4). Overall, there was significant variation in industry sector representation between 2000 and 2010. There were notable declines in the proportion of residents employed in professional, scientific, management, administrative, waste management, and retail trade sectors. Conversely there were notable increases in construction, information, education services, health care, social assistance, arts, entertainment, recreation, accommodations, and food service sectors. While this may be attributed to shifts in economic regimes, ACS sampling methods may not have captured accurate conditions. According to 2010 ALARI estimates,⁵⁴ 15.0% if residents worked in construction sectors; 2.5% worked in manufacturing sectors; 25.0% worked in trade, transportation, and utilities sectors; 2.5% worked in information sectors; 2.5% worked in financial service sectors; 7.5% worked in education and health service sectors; 2.5% worked in leisure and hospitality sectors; 7.5% worked in state government; 20.0% worked in local government; and 15.0% worked in undetermined sectors.

Finally, it should be noted that no individuals characterized themselves as working in natural resource based industries, which includes fishing, in 2010. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

⁵³ See footnote 48.

⁵⁴ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Adak (U.S. Census).

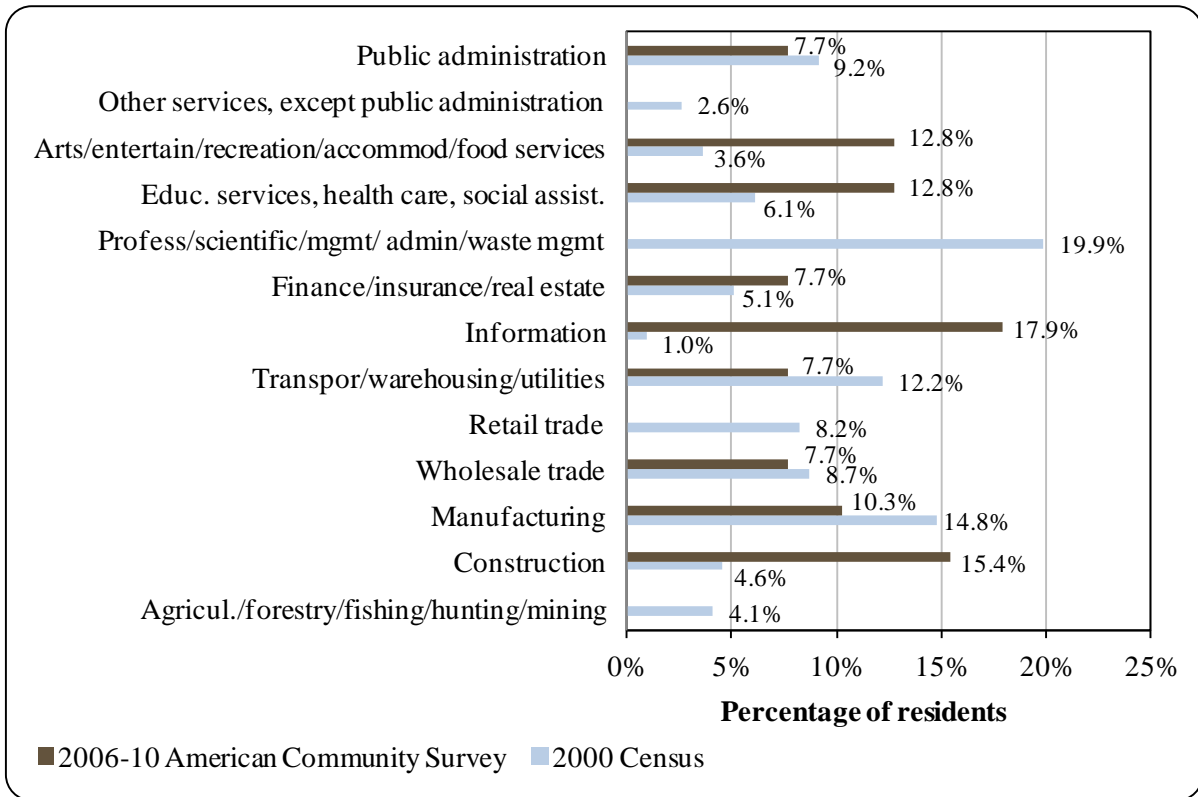
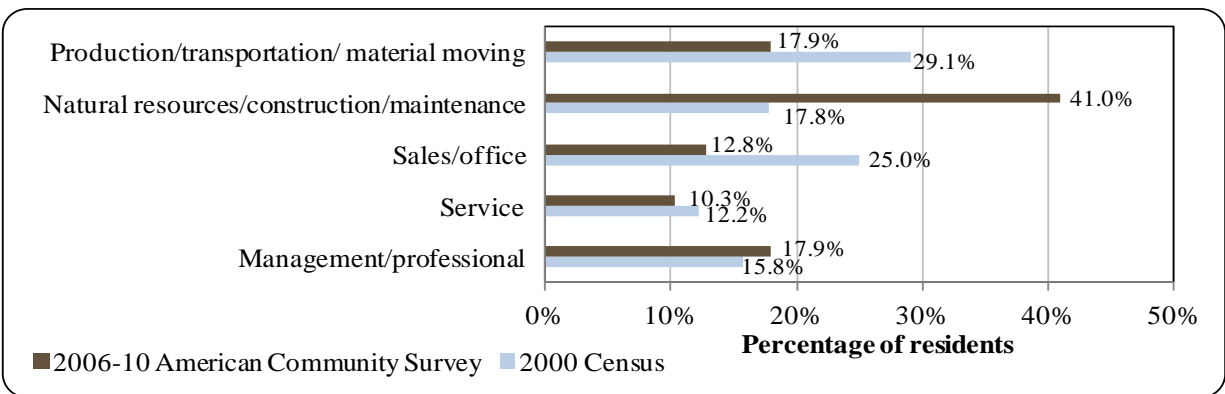


Figure 4. Local Employment by Occupation in 2000-2010, Adak (U.S. Census).



Governance

The City of Adak has a manager form of government which includes a mayor (elected from the council), a seven-member city council, and eight municipal employees, including a City Manager. The City is not part of an organized borough.

Adak was not included in Alaska Native Claims Settlement Act (ANCSA) and is not federally recognized as a Native village. However, the Aleut Corporation has taken a very active role in the development of the city in tandem with the City government, taking over

responsibilities of almost all services to the community, the ownership of a large amount of the land, and taking action to bring new businesses to the community.

The closest Bureau of Citizenship and Immigration Services office, National Marine Fisheries Service (NMFS) office, Office of Sustainable Fisheries, and Alaska Department of Fish and Game (ADF&G) office are all located in Dutch Harbor, 350 mi east.

Adak administers a 4% sales tax, and 5% transient lodging tax. The total municipal budget in 2010 was \$877,545, compared to \$594,420 in 2002. Total municipal revenues peaked in 2004 at \$1.63 million. Sales tax accounted for 25.1% of total municipal revenues in 2010, compared to 73.6% in 2002. In addition, State allocated Community Revenue Sharing accounted for 7.4% of total municipal revenues that year, compared to 2.0% in 2003 when the State Revenue Sharing program was still active. State and federal fisheries-related grants awarded to Adak between 2000 and 2010 include \$7.1 million in harbor projects, \$5.7 million in small vessel harbor projects, and \$300,000 for port improvement projects. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Adak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	\$594,420	\$571,978	n/a	\$300,000
2003	\$3,198,200	\$570,978	\$30,245	n/a
2004	\$2,511,256	\$660,000	n/a	\$2,428,530
2005	\$2,628,478	\$632,817	n/a	\$3,328,530
2006	\$2,857,315	\$660,000	n/a	\$2,000,000
2007	\$3,160,210	\$900,000	n/a	n/a
2008	\$2,784,968	\$528,697	n/a	n/a
2009	\$1,604,646	\$128,212	\$105,081	n/a
2010	\$877,545	\$411,815	\$104,275	\$1,600,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*⁵⁵

Adak is only accessible by air or by sea. Alaska Airlines provides twice weekly non-stop service from Anchorage. The price of a roundtrip flight between Anchorage and Adak in June, 2012 was \$1,198.00.⁵⁶ Along with fishing and cargo vessels, Adak also provides services to various personal craft. Peak visits of these vessels typically coincide with the tourism season. Shortened periods of sea-ice cover in the Arctic associated with climate change have increased the possibility that a seasonal northern shipping route might open in the future. Adak hopes that if trends continue, the community can grow as an international shipping hub connecting Europe and the Eastern United States with Asian markets.⁵⁷

Facilities

The city operates water, sewer, and landfill services. Water is derived from Lake Bonnie Rose, Lake De Marie, and Nurses Creek, stored in any of the four water tanks throughout the community, and piped to facilities and housing units. The wastewater treatment system discharges through a marine outfall line to Kuluk Bay. Husky Road landfill is class III permitted. Aleut Corporation (Adak Petroleum) owns nine fuel storage tanks with the combined capacity of 22 million gallons. Accommodations include Aleut Real Estate (D/B/A Adak Island Inn) and Little Michaels Lodges. Public safety is provided by City Public Safety, and Alaska state troopers based in King Salmon. Fire and rescue services are provided by Adak Volunteer Fire Department and supported by the State of Alaska Airport. Additional public facilities include a City Hall with gymnasium, Olympic size swimming pool, community center, weight room, and racquetball court. Communication services include local and long distance telephone, internet, cellular services, and local and cable television.⁵⁸

In a survey conducted by the AFSC in 2011, community leaders reported on completed and in progress infrastructure projects. These projects included broadband internet access, warehouse facilities, cable television, and improvements to current water and sewer systems, water treatment, community center, public safety, emergency response systems, fire department, school, and telephone services. Projects planned for completion within 10 years included sewage treatment, new landfill, and airport updates (glideslope antennae). Port facilities completed or in progress included fish cleaning stations, dockside electricity and water, harbor dredging, dock structure improvements, pilings, and a barge landing area. Port facility projects planned for completion within 10 years included electrical system upgrades and replacement, hydroelectricity, new dock space, additional dock improvements, additional pilings, additional harbor dredging, dry dock space, haul-out facilities, completion of a small boat harbor, and an EPA-certified cleaning station.

⁵⁵Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁶ Airfare was determined using lowest fare. (Retrieved November 7, 2011 from: www.alaskaair.com.)

⁵⁷ Paulin, J. (2012). *Adak Hopes oil, trans-Arctic shipping will revitalize island*. The Dutch Harbor Fisherman. Retrieved November 13, 2012 from: http://www.thedutchharborfisherman.com/article/1238adak_hopes_oil_trans-arctic_shipping_will.

⁵⁸Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Services supporting the fisheries sector include processing plants, boat welding services, small vessel haulout facilities, commercial and recreational vessel moorage, tackle and bait sales, commercial cold storage, drydock, fish lodges, fishing related bookkeeping, fishing gear storage, and ice sales. Fisheries related businesses and services include fish processing, vessel repair (welding), small vessel (<60 ft) haulout facilities, commercial fishing vessel moorage, recreation vessel moorage, tackle sales, bait sales, commercial cold storage, drydock storage, fish lodges, vessel fuel sales, fishing gear storage, and ice sales. Additional businesses include a United Parcel Service (UPS) station, post office, housing rentals, grocery store, liquor store, vehicle rentals, bar and grill, food bank, and marine logistics. Residents typically travel to Unalaska, King Cove, Sandpoint, Anchorage, or Seattle for services not available locally.

As of 2010, Adak was capable of handling vessels of all sizes, including rescue vessels, cruise ships, ferries, fuel barges, cargo vessels, barges, and vessels containing hazardous materials. Between 2005 and 2010, community leaders noticed that there were a significant reduction in the number of visits by charter boats, commercial fishing boats, vessels between 35 and 125 ft, and vessels over 125 ft. In addition, there was an increase in the number of visits by private pleasure boats, and no change in the number of visits by vessels under 35 ft.

*Medical Services*⁵⁹

Health care is provided by the Adak Community Health Center, operated by Eastern Aleutian Tribes. Adak Community Health Center is a qualified Emergency Care Center and Primary Health Care facility. The clinic is staffed by a physician's assistant and Community Health Aide/Practitioner(s) who provide emergency care family practice and referral services. Lab, pharmacy, behavioral health, and public health services are available. Adak is an isolated town/sub-regional center located in the Southern EMS (Emergency Medical Services) Region. Emergency Services have coastal and airport access to Adak. Alternate health care is provided through the City via the Adak Volunteer Fire Department.

*Educational Opportunities*⁶⁰

The Adak Public School offers preschool through 12th grade instruction. As of 2011, there were 20 students enrolled with 2 teachers and 3 teacher aides employed.

Involvement in North Pacific Fisheries

*History and Evolution of Fisheries*⁶¹

The Aleuts of the region were the first to be involved in North Pacific fisheries through their participation in subsistence activities. Historically, salmon, cod, herring, and other fish were targeted throughout the Aleutian chain. Subsistence fish stocks were more abundant in the

⁵⁹ Ibid.

⁶⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶¹ Atkinson, C.E. (n.d.). A Brief Review of the Salmon Fishery in the Aleutian Islands Region. Retrieved May 20, 2012 from: [http://www.npafc.org/new/inpfc/INPFC%20Bulletin/Bull%20No.1/Bull1%20p93-104%20\(Atkinson\).pdf](http://www.npafc.org/new/inpfc/INPFC%20Bulletin/Bull%20No.1/Bull1%20p93-104%20(Atkinson).pdf).

eastern part of the Aleutians, and became less abundant further to the west. Subsistence fishing was typically done by beach seines and hooks.

Previous to Alaska's purchase in 1867, American schooners were fishing for cod in the Aleutian Islands and Okhotsk Sea regions. By the end of the nineteenth century, salmon canneries were being established in western Alaska and on the eastern portion of the Alaska Peninsula. No large-scale commercial seafood processing operation was undertaken in the Aleutian area during those years however. In 1916, Pacific American Fisheries, Inc. established a cannery at Makushin Bay, Unalaska. In those days, adverse weather conditions typically kept the small seine fleet close to Unalaska and Umnak islands.

Following the 1924 White Act, newly protected fisheries began to proliferate throughout the Aleutian region. The implementation of a 1928 Executive Order removed Akun, Akutan, Tigalda, Umnak, and Unalaska Islands from an earlier established wildlife reserve, opening up further opportunities.

The International Packing Company fished the Aleutian area between 1924 and 1942 and operated a floating processor in the region through 1941. Pink, sockeye, and chum salmon were popular species.

Although historically not a fishing community, the cessation of military operations in Adak led to economic diversification which included an increase in commercial, recreational, and subsistence fishing participation. As of 2010, several residents held commercial fishing permits, and Adak Seafood LLC operated a seafood processing plant (see *Commercial Fishing* section below).

In a survey conducted by the AFSC in 2011, community leaders reported that community representatives participate in North Pacific Fishery Management Council as well as Federal Subsistence Board/Federal Subsistence Regional Advisory Council processes. The community is located in Federal Reporting Area 541, International Pacific Halibut Commission (IPHC) Regulatory Area 4B, and the Aleutian Islands Sablefish Regulatory District. Adak is eligible for participation in the Community Quota Entity (CQE) program and is represented by the Adak Community Development Corporation. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, an unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.⁶²

⁶² North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEreport210.pdf>.

Processing Plants

After Adak Seafoods LLC closed in 2011, Icicle Seafoods took over on-shore seafood processing in Adak. Cod is the principal species purchased, and product is processed, frozen, and distributed globally.⁶³ In addition to cod, Icicle Seafoods processed halibut and crab during its cod season. In 2013, Icicle announced that it would cease operations in Adak due to economic uncertainty.

Fisheries-Related Revenue

In 2010, Adak received fisheries-related revenue from Shared Fisheries Business Taxes, Fisheries Resource Landing Taxes, fuel transfer taxes, bulk fuel transfer fees, and harbor usage fees. In that year, revenues totaled \$314,200, compared to \$56,600 in 2002. Fisheries-related revenue peaked in 2010 at \$749,058. It should be noted that based on figures given in Table 3, a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the reported municipal budget. Information regarding fisheries-related revenue trends can be found in Table 3.

In a survey conducted by the AFSC in 2011, community leaders reported fisheries-related taxes and fees are put towards harbor maintenance, emergency response services, water and wastewater systems, and public safety services.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that commercial vessels ranging 35 to over 125 feet use Adak as a base of operation during fishing seasons (generally January through November depending on species). Gear types being used include trawl, pots, longlines, jigs, and circle hooks.

In 2010, three residents, or 1% of the population, held 10 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, four residents held seven CFEC permits. Of the permits held in 2010, 10% were for salmon, compared to 0% in 2000; 40% were for groundfish, compared to 100% in 2000; 20% were for sablefish, compared to 0% in 2000; and 30% were for halibut, compared to 0% in 2000. In addition, two residents held Federal Fisheries Permits (FFP) and three residents held three License Limitation Program (LLP) groundfish permits. Residents held 288,494 shares of halibut quota on two accounts in 2010, compared to 0 in 2000; and 451,426 shares sablefish quota on one account, compared to 0 in 2000. No residents held crab quota between when the program began in 2005 and 2010.

Nine residents held commercial crew licenses in 2010, compared to two in 2000. In addition, residents held majority ownership of two vessels that year, compared to four in 2000. Of the CFEC permits held in 2010, 50% were actively fished, compared to 86% in 2000. This varied by fishery from 67% of halibut permits, to 50% of both sablefish and groundfish permits

⁶³ Icicle Seafoods, Inc. (n.d.). *Adak*. Retrieved November 13, 2012 from: <http://www.icicleseafoods.com/locations/adk/>.

and 0% of salmon permits. Fisheries prosecuted by Adak residents in 2010 included: statewide longline halibut and statewide longline miscellaneous saltwater finfish.⁶⁴

In 2010, 800,992 lbs of fish valued at \$583,005 ex-vessel were landed in Adak, compared to 11.16 million lbs valued at \$12.44 million landed in 2000. In that year, Adak ranked 40th of 67 communities in terms of total lbs landed and 42nd in terms of ex-vessel revenue from landings. By species type, 2010 landings are considered confidential with the exception of halibut, which totaled 100,103 lbs and was valued at \$399,256 ex-vessel. All landings reported by residents of Adak are considered confidential for 2010. Information regarding commercial fishing trends can be found in Table 4 through 10.

⁶⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Adak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	\$70,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	\$293,220	\$429,776	\$430,442	\$367,616	\$245,313	\$228,759	\$379,277	\$116,000 ²
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	\$108,081	\$77,584	\$155,078	\$125,016	\$179,193	\$170,205	\$259,551	\$64,000 ²
Fuel transfer tax ²	n/a	n/a	\$50,600	\$24,000	\$43,200	\$36,000	\$144,000	\$240,000	\$36,000	\$36,000	\$28,800
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$100,000
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	\$6,000	\$12,000	\$42,000	n/a	n/a	n/a	n/a	n/a	\$5,400
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>\$56,600</i>	<i>\$507,301</i>	<i>\$592,560</i>	<i>\$621,520</i>	<i>\$636,632</i>	<i>\$664,506</i>	<i>\$434,964</i>	<i>\$674,828</i>	<i>\$749,058*</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>\$594,420</i>	<i>\$3.20 M</i>	<i>\$2.51 M</i>	<i>\$2.63 M</i>	<i>\$2.86 M</i>	<i>\$3.16 M</i>	<i>\$2.78 M</i>	<i>\$1.60 M</i>	<i>\$877,545</i>

Note: n/a indicates that no data were reported for that year.

*Total fisheries-related revenue figure was amended according to profile edits provided by the community of Adak.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Adak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	1	1	1	2	3	3	3
	Active permits	0	0	0	0	0	0	0	0	2	2	2
	% of permits fished	n/a	n/a	n/a	n/a	0%	0%	0%	0%	66%	66%	66%
	Total permit holders	0	0	0	0	1	1	1	2	3	3	3
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	1	1	1	1	1	2	2
	Fished permits	0	0	0	0	1	1	1	1	1	2	2
	% of permits fished	n/a	n/a	n/a	n/a	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	0	0	0	0	1	1	1	1	1	2	2
Crab (CFEC) ²	Total permits	0	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	1	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	100%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	1	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	1	2	0	1	1	1	2	2	3	3
	Fished permits	0	1	1	0	1	1	1	2	2	2	2
	% of permits fished	n/a	100%	50%	n/a	100%	100%	100%	100%	100%	67%	67%
	Total permit holders	0	1	2	0	1	1	1	2	2	3	3
Herring (CFEC) ²	Total permits	0	1	0	0	3	1	1	1	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	0%	n/a	n/a	0%	0%	0%	0%	n/a	n/a	n/a
	Total permit holders	0	1	0	0	3	1	1	1	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Adak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	1	0	1	1	1	1	2	2	2
	Fished permits	0	0	1	0	1	1	1	1	0	1	1
	% of permits fished	n/a	n/a	100%	n/a	100%	100%	100%	100%	0%	50%	50%
	Total permit holders	0	0	1	0	1	1	1	1	2	2	2
Groundfish (CFEC) ²	Total permits	7	7	5	3	5	4	6	3	3	3	4
	Fished permits	6	4	2	0	1	2	2	1	2	1	2
	% of permits fished	86%	57%	40%	0%	20%	50%	33%	33%	67%	33%	50%
	Total permit holders	4	5	3	2	3	2	5	2	2	2	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	3	1	1	2	0	0	1
	Fished permits	0	0	0	0	1	0	0	1	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	33%	0%	0%	50%	n/a	n/a	0%
	Total permit holders	0	0	0	0	2	1	1	2	0	0	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>7</i>	<i>10</i>	<i>8</i>	<i>3</i>	<i>13</i>	<i>8</i>	<i>10</i>	<i>9</i>	<i>7</i>	<i>8</i>	<i>10</i>
	<i>Fished permits</i>	<i>6</i>	<i>6</i>	<i>4</i>	<i>0</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>5</i>
	<i>% of permits fished</i>	<i>86%</i>	<i>60%</i>	<i>50%</i>	<i>0%</i>	<i>31%</i>	<i>50%</i>	<i>40%</i>	<i>56%</i>	<i>57%</i>	<i>50%</i>	<i>50%</i>
	<i>Permit holders</i>	<i>4</i>	<i>5</i>	<i>4</i>	<i>2</i>	<i>6</i>	<i>3</i>	<i>6</i>	<i>4</i>	<i>2</i>	<i>3</i>	<i>3</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Adak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Adak ²	Total Net Lbs Landed In Adak ^{2,5}	Total Ex-Vessel Value Of Landings In Adak ^{2,5}
2000	2	4	2	4	1	69	11,160,828	\$12,439,240
2001	7	6	2	5	4	74	11,415,239	\$12,583,504
2002	3	3	2	3	4	69	--	--
2003	18	3	2	3	4	72	--	--
2004	12	3	2	8	4	49	--	--
2005	21	2	1	6	4	38	--	--
2006	7	2	1	6	7	32	--	--
2007	7	1	1	4	5	52	--	--
2008	9	1	1	2	7	46	--	--
2009	6	3	2	2	6	24	--	--
2010	9	7	2	2	3	10	800,992	\$583,005

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Adak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	2	44,154	5,478
2008	3	226,362	39,268
2009	5	332,648	54,381
2010	2	288,494	52,181

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Adak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	1	215,541	20,130
2009	1	215,541	18,207
2010	1	451,426	37,303

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Adak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Adak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	100,103
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	<i>100,103</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	\$399,256
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	<i>\$399,256</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Adak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	296,511	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	<i>296,511</i>	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	\$81,572	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	<i>\$81,572</i>	--	--	--	--	--	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is limited in Adak due to its remote location. Several sport fish guide businesses operated locally between 2000 and 2008; however, as of 2010 there were none registered. Also in that year, residents were sold 27 sportfishing licenses, compared to 68 in 2000. No sportfishing licenses were sold in the community between 2000 and 2010.

Adak is located within the Alaska Peninsula and Aleutian Islands ADF&G Harvest Survey Area which includes all Alaskan waters, including drainages, between Cape Douglas and the community of Naknek. In 2010, angler days fished totaled 5,297 for saltwater fisheries and 33,635 for freshwater fisheries. In that year, non-Alaska resident anglers accounted for 38.4% of saltwater and 58.4% of freshwater angler days fished, compared to 15.8% and 39.5% in 2000, respectively. According to ADF&G Harvest Survey data,⁶⁵ local private anglers target coho salmon, Pacific halibut, and Pacific cod. In a survey conducted by the AFSC in 2011, community leaders reported that recreational fishers target pink, Chinook, coho, and sockeye salmon, halibut, crab, sablefish, clams, mussels, Dolly Varden, and flounder. No kept/released charter information is available for Adak. Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Subsistence is an important part of Adak's economy. In 2007, Adak's status as a federally recognized rural place was revised, and the community became eligible to participate in the Federal Subsistence program on Federal public lands.⁶⁶ According to a survey conducted by the AFSC in 2011, community leaders reported salmon, halibut, crab, seal, sea lion, duck, and geese as important subsistence resources.

Information on subsistence participation is limited, and data on participation by household is unavailable. Of the species listed by ADF&G in Table 13, sockeye salmon were harvested the most often. In 2008, residents reported harvesting 369 salmon, compared to 346 in 2000. Reported salmon harvests peaked in 2001 at 479 fish. In 2009, 26 residents held Subsistence Halibut Registration Certificates, compared to six in 2003. In that year an estimated 377 lbs of halibut was harvested on four SHARC cards, compared to an estimated 687 harvested on six in 2003. Estimated halibut harvests peaked in 2008 at 3,058 lbs harvested on 12 SHARC cards. Between 2000 and 2008, an estimated seven sea otters were harvested. In addition, an estimated 11 sea lions and 22 harbor seals were harvested in those years. Information regarding subsistence trends can be found in Tables 12 through 15.

⁶⁵ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁶⁶ Federal Register. (2007). *Subsistence Management Regulations for Public Lands in Alaska, Subpart C; Non-rural determinations*. Retrieved November 18, 2011 at <http://www.federalregister.gov/articles/2007/05/07/07-2205/subsistence-management-regulations-for-public-lands-in-alaska-subpart-c-nonrural-determinations>

Table 11. Sport Fishing Trends, Adak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Adak ²
2000	0	0	68	0
2001	0	0	51	0
2002	0	0	30	0
2003	2	2	16	0
2004	2	2	38	0
2005	0	0	41	0
2006	0	0	47	0
2007	1	0	40	0
2008	1	0	27	0
2009	0	0	13	0
2010	0	0	27	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Adak: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Adak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	12	12	n/a	n/a	4	72	270	n/a	n/a
2001	16	14	14	n/a	18	14	433	n/a	n/a
2002	4	4	n/a	n/a	n/a	n/a	230	n/a	n/a
2003	5	5	n/a	n/a	n/a	n/a	238	n/a	n/a
2004	7	5	n/a	n/a	n/a	n/a	340	n/a	n/a
2005	2	2	n/a	n/a	n/a	n/a	138	n/a	n/a
2006	1	1	n/a	n/a	n/a	1	74	n/a	n/a
2007	7	6	n/a	n/a	2	29	292	n/a	n/a
2008	7	6	n/a	n/a	n/a	14	355	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Adak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	6	6	687
2004	13	3	185
2005	13	1	370
2006	12	2	508
2007	30	16	1,540
2008	29	12	3,058
2009	26	4	377
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Adak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	5	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	1	4	n/a
2004	n/a	n/a	n/a	n/a	2	n/a	n/a
2005	n/a	1	n/a	n/a	4	12	n/a
2006	n/a	1	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	4	n/a
2008	n/a	n/a	n/a	n/a	4	2	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing restrictions prompted by measures to protect western Steller sea lion populations, attempts to keep fisheries open, opening a new fish plant, a lack of essential services, and a lack of support businesses are challenges to Adak’s fisheries economy. Negative effects that fisheries management or policies have had on Adak include “Olympic-style” fishing, low processing capacity, a struggling business sector, declines in fish tax revenues, population declines, and unemployment. Positive effects that fisheries management or policies have had on Adak include Adak specific quota and small boat fisheries. Community leaders expressed that Steller sea lion restrictions deter potential growth and increase the cost of living and doing business in Adak.

In addition, Adak continues to face challenges regarding funding for fishery infrastructure and service projects. Community leaders noted a downward trend in vessel visitations and home-porting which has put strain on local revenues and the fishing industry.

Akutan (ACK-oo-tan)



People and Place

*Location*⁶⁷

Akutan is located on Akutan Island in the eastern Aleutians, one of the Krenitzin Islands of the Fox Island group. It is 35 mi east of Unalaska and 766 mi southwest of Anchorage. The area occupies 14.0 sq mi of land and 4.9 sq mi of water. The community was incorporated as a Second-class city in 1979 and is under the jurisdiction of the Aleutians East Borough.

*Demographic Profile*⁶⁸

As of 2010, there were 1,027 residents, ranking Akutan 64th of 355 Alaskan communities in terms of population size (this population count captured a large number of non-permanent residents). Between 1990 and 2010, the population grew by 74.4%. Between 2000 and 2009, the population grew by 18.7% with an average annual growth rate of 0.61%, which was similar to the statewide average of 0.75% and reflective of the small increases and declines in population over time. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were an estimated 85 permanent and 900 seasonal residents living in Akutan in 2010. Seasonal workers typically live in Akutan from January through April with the population peaking in May. Peaks in Akutan's population are mostly driven by seasonal employment in fisheries sectors. Information regarding population trends can be found in Table 1.

Akutan was a racially and ethnically diverse community in 2010. In that year, 43.3% of residents identified themselves as Asian, compared to 38.6% in 2000; 23.3% identified themselves as White, compared to 23.6% in 2000; 17.9% identified themselves as Black or African American, compared to 2.1% in 2000; 5.5% identified themselves as American Indian or Alaska Native, compared to 15.7% in 2000; 1.5% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.3% in 2000; 4.7% identified themselves as two or more races, compared to 1.5% in 2000; and 3.9% identified themselves as some other race, compared to 18.2% in 2000. In addition, 20.8% of residents identified themselves as Hispanic or Latino, compared to 20.8% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 2.25, compared to 2.80 in 1990 and 3.0 in 2000. Total housing units that year was 44, compared to 34 in 1990 and 38 in 2000. Of the households surveyed between in 2010, 30% were owner-occupied, compared to 74% in 2000, 61% were renter occupied, compared to 16% in 2000, 9% were vacant, compared to 11% in 2000, and no

⁶⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

houses were occupied seasonally. A total of 937 residents were living in group quarters, compared to 638 in 2000.

In 2010 the gender distribution of Akutan was heavily skewed towards males at 76.9% male and 23.1% female. This was similar to the gender distribution in 2000 (77.0% male, 23.0% female) and markedly more skewed than the distribution statewide (52.0% male, 48.0% female). The median age in 2010 was 44.1 years, which was older than both the Alaska median of 33.8 years and 2000 median of 40.2 years.

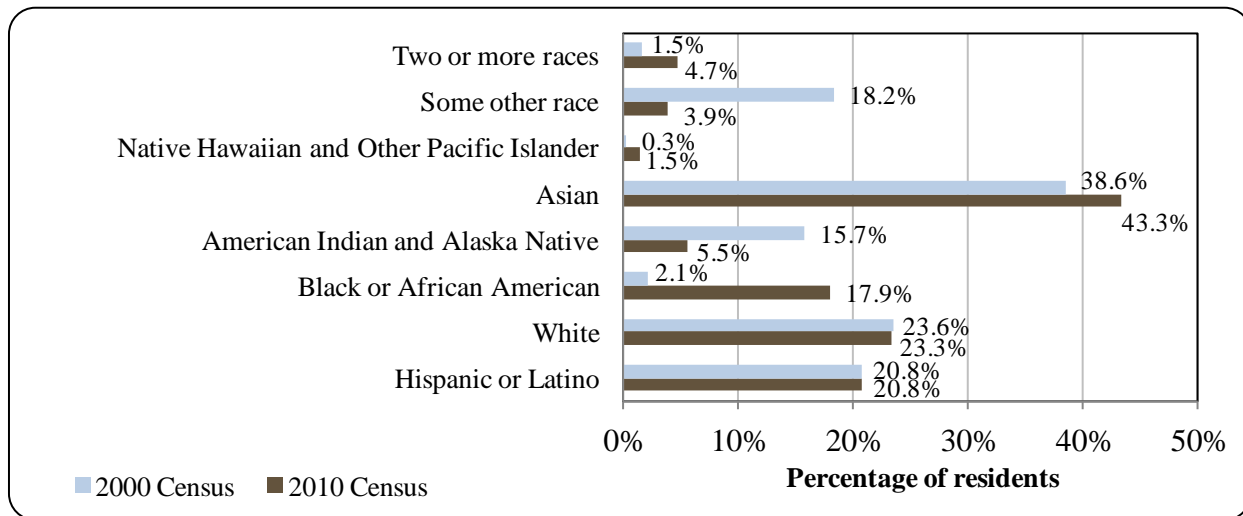
Table 1. Population In Akutan From 1990 To 2010 By Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	589	-
2000	713	-
2001	-	708
2002	-	748
2003	-	807
2004	-	789
2005	-	773
2006	-	745
2007	-	859
2008	-	796
2009	-	846
2010	1,027	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

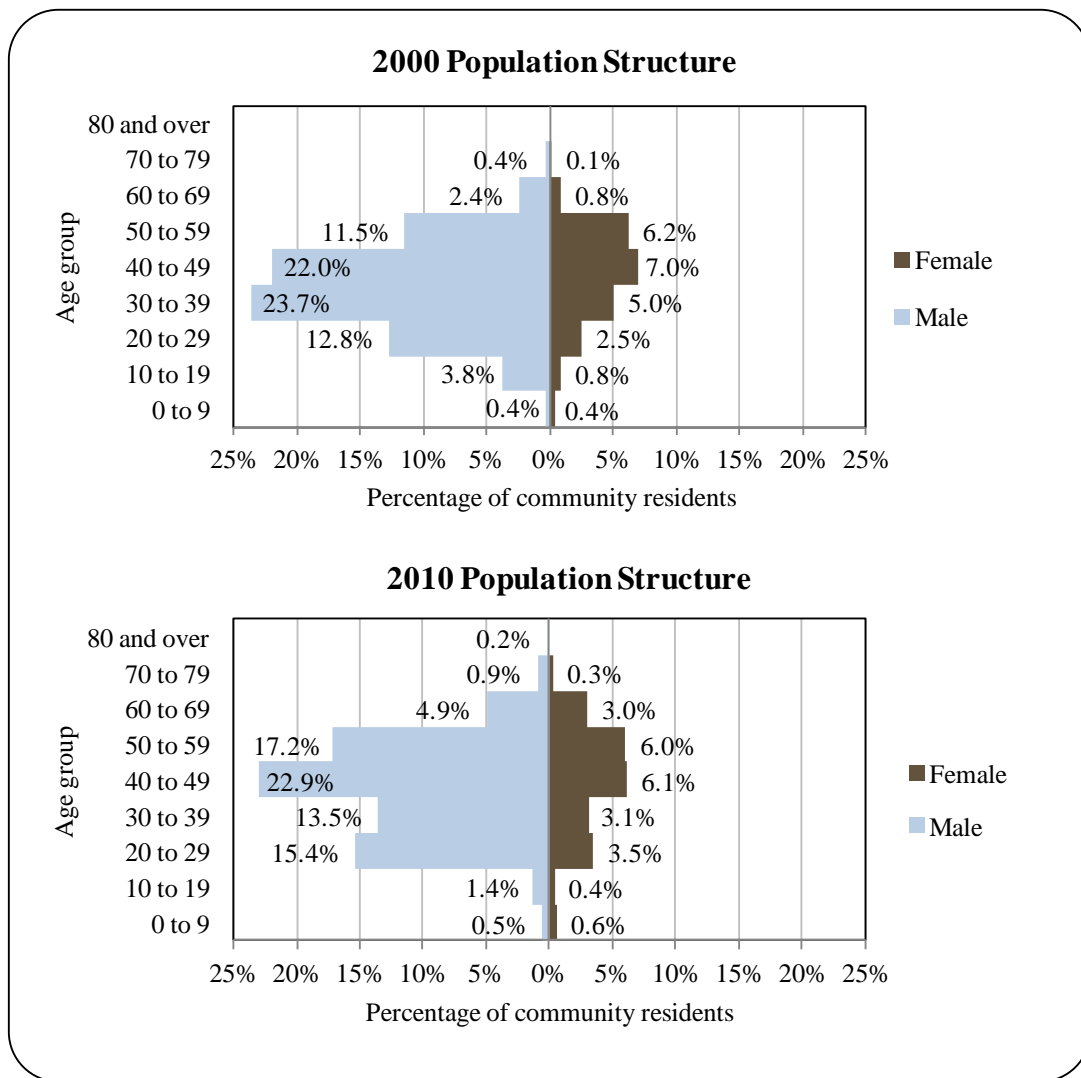
Figure 1. Racial and Ethnic Composition, Akutan: 2000-2010 (U.S. Census).



The population structure for both 2000 and 2010 was highly constrictive due to the seasonally based population. In 2010, 2.9% of residents were under the age of 20, compared to 5.4% in 2000; 9.3% were over the age of 59, compared to 3.7% in 2000; 68.8% were between the ages of 30 and 59, compared to 75.4% in 2000; and 18.9% were between the ages of 20 and 29, compared to 15.3% in 2000.

Gender distribution by age cohort was similar in both 2000 and 2010 with heavy male biases among almost every age range. The greatest absolute gender difference in 2010 occurred within the 40 to 49 (22.9% male, 6.1% female) range, followed by the 20 to 29 (15.4% male, 3.5% female) and 50 to 59 (17.2% male, 6.0% female) ranges. Of those three, the greatest relative gender difference occurred within the 20 to 29 range. Information regarding Akutan’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Akutan Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁶⁹ estimated that 59.5% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 21.4% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 19.1% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 24% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 5.1% had an Associate's degree, compared to an estimated 8% of Alaska residents overall; and an estimated 9.2% had a Bachelor's degree compared to an estimated 17.4% of Alaska residents overall. No residents were estimated to have a graduate or professional degree.

History, Traditional Knowledge, and Culture^{70,71}

Occupation of the area dates back approximately 8,500 years to the early Anangula tradition, and evidence is represented by an archaeological site located on Anangula Island. However, that site was abandoned following a volcanic eruption which blanketed the area with a thick layer of ash. Evidence of an early Aleutian tradition was found on Umnak Island dating back approximately 5,400 years.

The Krenitzin Islands were first visited by Russian fur traders in 1766. The first camp was established on Akun Island, which had been occupied by Aleuts since around 780 CE. At the time of contact, every habitable region within the Unalaska District was occupied, and in 1792, five villages existed on Akutan Island. In 1806, a severe disease epidemic impacted a large portion of the Krenitzin Island group and by 1834, only one village remained on Akutan Island; two small dwellings occupied by 13 people. Following the small pox outbreak in 1838, the Unangan population of the area was all but decimated, and many survivors relocated. Between 1866 and 1879, people returned to Akutan and in 1878, the Western Fur and Trading Company established a sea otter trading post and a Russian Orthodox Church and school were built. Alexander Nevsky Chapel was built in 1918 to replace the original structure. The Pacific Whaling Company built a whale processing station across the bay from Akutan in 1912. It was the only whaling station in the Aleutians and operated until 1939.

After the Japanese attacked Unalaska in June 1942, the U.S. government evacuated Akutan residents to the Ketchikan area. The village was re-established in 1944, although many villagers chose not to return. This exposure to the outside world brought many changes to the traditional lifestyle and attitudes of the community. The Wakefield Seafood Processors began to process king crab in 1948. In 1979, Seawest, Inc. purchased Wakefield operations, which triggered rapid expansion of Akutan's shore-based facilities. Historic and cultural resources documented in the area include the Ugathigana archaeological site and St. Alexander Nevsky

⁶⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷¹ Bold Peak Archaeological Services. (2005). *Akutan Harbor Access Road Literature Review & Documentation*. Retrieved February 3, 2012 from: [http://www.dowlhkm.com/projects/akutanharborrd/documents/pdf%20doc/Akutan_S106_report\[2\].pdf](http://www.dowlhkm.com/projects/akutanharborrd/documents/pdf%20doc/Akutan_S106_report[2].pdf)

Chapel, both which have been recommended as eligible for listing in the National Register of Historic Places (NRHP).⁷²

Natural Resources and Environment

Akutan lies in a maritime climate zone, characterized by mild winters and cool summers. Mean temperatures range from 22 to 55 °F (-5 to 13 °C) and precipitation averages 28 inches per year. High winds and storms are frequent in the winter, and fog is common in the summer.

Akutan Island and neighboring Akun Island predominately consist of moist and alpine tundra and barren ground. There are meadows along the sand and gravel shorelines consisting of various grasses and forbs. Sedge marshes can be found around the head of Akutan Harbor. There are limited trees on the islands due to shallow and unproductive soils. There are several streams on Akutan Island that support anadromous fish.⁷³

Terrestrial wildlife documented in the area includes an abundance of bird species, red fox, tundra voles, domestic rabbits, arctic fox, ground squirrel, Norway rat, and Greenland collared lemming. In addition, the Aleut Corporation owns cattle, which they allow to graze on Akun Island.⁷⁴ Aquatic wildlife documented in the area includes harbor seals, Steller sea lion, northern sea otter, Pacific cod, walleye pollock, Atka mackerel, sole, sculpins, skates, red crab, king crab, Tanner crab, coho salmon, chum salmon, pink salmon, sockeye salmon, and orca and humpback whale.⁷⁵

Natural hazards which threaten the community include tsunamis, earthquakes, storm surges, coastal erosion, coastal flooding, riverine erosion and volcanoes.⁷⁶ According to the Aleutians East Borough Hazard Mitigation Plan,⁷⁷ there is a high probability of an earthquake or volcanic event affecting the community, while there are moderate chances of tsunami, severe weather, and erosion events occurring. As of 2010, erosion was threatening the impoundment pond carrying the community's water supply.⁷⁸

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation projects active in Akutan as of 2010.⁷⁹

⁷² National Park Service. (n.d.) *National Register of Historic Places Inventory, Russian Orthodox Church Buildings and Sites in Alaska*. Retrieved December 2011 from <http://pdfhost.focus.nps.gov/docs/NRHP/Text/80000738.pdf>.

⁷³ HDR Alaska, Inc. (2006). *Biological Assessment of the Northern Sea Otter Enhydra lutris kenyoni for the Akutan Airport Project*. Retrieved December 8, 2011 from:

http://alaska.fws.gov/fisheries/mmm/Chukchi_Sea/pdf/biological_assessment_northern_sea_otter.pdf

⁷⁴ Alaska Department of Transportation and Public Facilities (n.d.). *Akutan Airport Environmental Assessment*. Retrieved December 8, 2011 from: http://dot.alaska.gov/project_info/index.shtml

⁷⁵ Ibid.

⁷⁶ WH Pacific. (2010). *Communities of Aleutians East Borough Multi-Jurisdictional, Multi-Hazards Mitigation Plan*.

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 7, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Aleutians>.

Current Economy⁸⁰

Akutan's economy is largely based on the commercial fishing industry and subsistence. Trident Seafoods' Akutan plant is the largest facility in North America, processing over three million pounds of product per day and capable of housing up to 825 employees.⁸¹ Top employers in 2010⁸² included Trident Seafood Corp., the City of Akutan, Akutan Corp., Akutan Traditional Council, Aleutians East Borough School District, Akutan Roadhouse Inc., Akutan Rural Power System Upgrade Project, and Aleutian Housing Authority.

In 2010,⁸³ per capita income in Akutan was estimated at \$22,099 and the median household income was estimated at \$34,375, compared to \$12,258 and 33,750 in 2000, respectively. After accounting for inflation by converting the 2000 values to 2010 dollars,⁸⁴ the real per capita income (\$16,119) and real median household income (\$42,381) indicate a rise in individual earnings and drop in household earnings. In 2010, Akutan ranked 134th of 305 communities from which per capita income was estimated, and 217th of 299 communities from which median household earnings was estimated.

It should be noted that Akutan's small permanent population size may have prevented the ACS from accurately portraying economic conditions.⁸⁵ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, residents earned \$3.47 million in total wages in 2010.⁸⁶ When matched with the estimated number of permanent residents reported by community leaders in the AFSC 2011 Community Survey, the per capita earnings equal \$40,824, which was significantly more than inflation adjusted per capita values reported in the 2000 Census.⁸⁷

According to the 2006-10 ACS,⁸⁸ an estimated 98.2% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 2.7%, compared to an estimated 5.9% statewide; and an estimated 11.4% of residents were estimated to be living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Of those employed in the civilian labor force, an estimated 97.8% worked in the private sector, an estimated 0.9% worked in the public sector, and an estimated 1.4% were self-employed.

By industry, most (96.6%) were estimated to be employed in manufacturing sectors, followed by wholesale trade (2.2%). By occupation type, most (80.0%) employed residents were estimated to hold production, transportation, or material moving positions; followed by sales or office positions (9.9%); natural resources, construction, or maintenance positions (4.0%); service positions (3.9%); and management or professional positions (2.2%). Between

⁸⁰ Unless otherwise noted, all monetary data are reported in nominal values.

⁸¹ Trident Seafoods. (n.d.). Retrieved from: http://www.tridentseafoods.com/company/plants_alaska.php

⁸² Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸³ U.S. Census. American Community Survey, 2006-10 estimates.

⁸⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012) from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>.

⁸⁵ See footnote 69.

⁸⁶ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁸⁷ See footnote 82.

⁸⁸ See footnote 69.

2000 and 2010, estimated employment in manufacturing sectors experienced substantial proportional growth while all other sectors declined. By occupation type, estimated production, transportation, and material moving positions experienced proportional growth between 2000 and 2010, while management, professional, and service positions declined. According to 2010 ALARI estimates, most (62.0%) of those employed worked in manufacturing sectors; followed by local government sectors (21.7%) and financial service sectors (9.3%). No individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Akutan (U.S. Census Bureau).

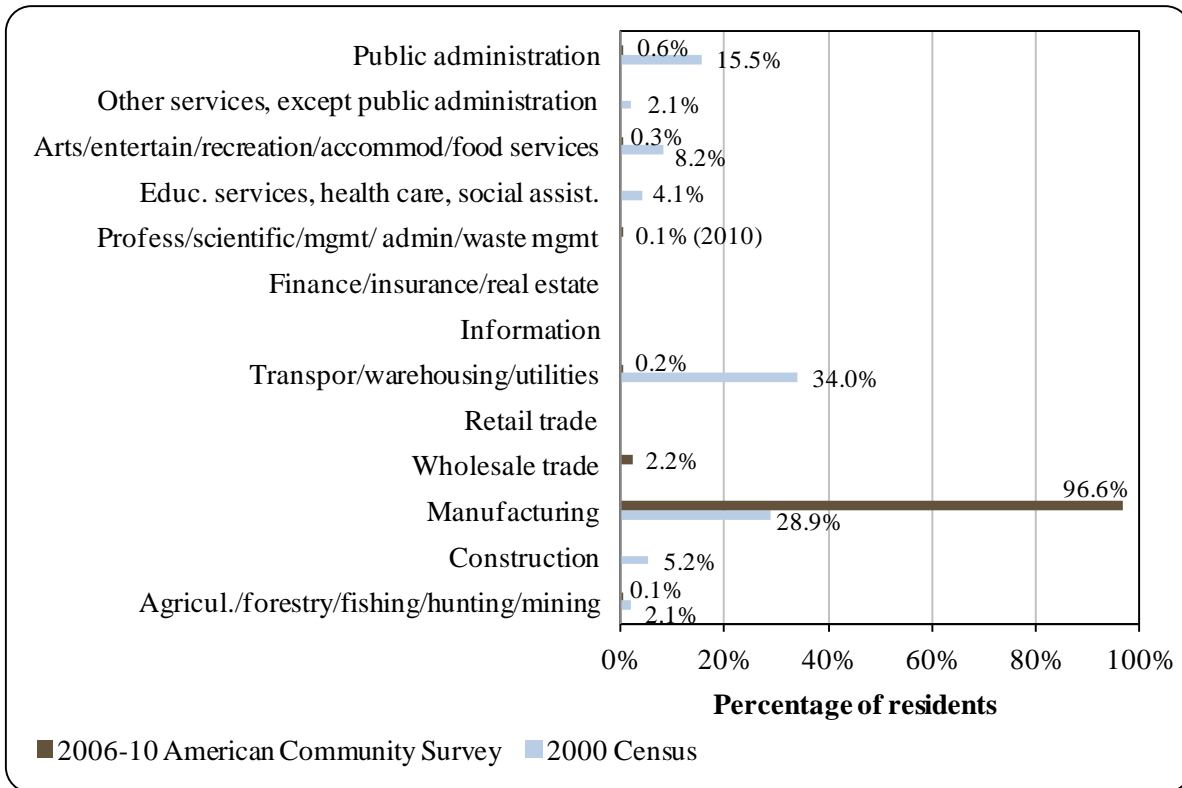
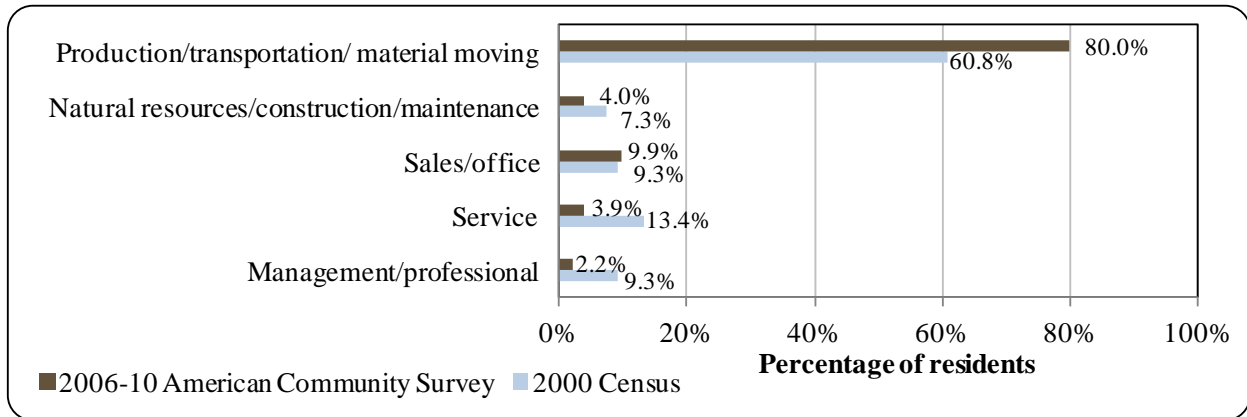


Figure 4. Local Employment by Occupation in 2000-2010, Akutan (U.S. Census Bureau).



Governance

Akutan is a Second-class city with a mayoral form of government. The Akutan Corporation is the local Alaska Native Claims Settle Act (ANCSA) chartered village corporation, and the Aleut Corporation is the regional ANCSA chartered corporation. The closest Alaska Department of Fish and Game (ADF&G), U.S. Bureau of Citizenship and Immigrant Services (BCIS), and National Marine Fisheries Service (NMFS) offices are located in Unalaska, 35 mi west.

In 2010, the city administered a 1% raw fish tax in addition to the borough administered 2% raw fish tax. Other community taxes include a 1% sales tax. The total municipal budget for 2010 was \$2.65 million, compared to \$1.02 million in 2000.⁸⁹ In that year, state allocated Community Revenue Sharing accounted for 5.2% of the total municipal budget, compared to 2.6% in 2000 from State Revenue Sharing. State and federal fisheries-related grants awarded between 2000 and 2010 included \$3.1 million for a harbor access road project, \$434,000 for port and ferry dock improvements, \$100,000 for a skiff moorage facility, and \$22.5 million for harbor construction. Information regarding municipal finances can be found in Table 2.

⁸⁹ Inflation calculated using Anchorage CPI for 2010 from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Akutan from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,016,600	n/a	\$25,969	n/a
2001	\$1,452,963	n/a	\$24,986	n/a
2002	\$1,815,003	n/a	\$24,987	\$7,500,000
2003	\$1,180,486	n/a	\$25,614	\$15,000,000
2004	\$1,730,756	n/a	-	n/a
2005	\$1,948,921	n/a	-	\$100,000
2006	\$1,769,963	n/a	-	n/a
2007	\$1,767,260	n/a	-	\$3,534,000
2008	\$2,557,788	n/a	-	n/a
2009	\$2,651,656	n/a	\$136,607	n/a
2010	\$2,651,682	n/a	\$138,428	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*.

Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). Community Funding Database. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Boats and amphibious aircraft are the only means of transportation into Akutan. A 200-ft dock and a small boat mooring basin are available. The state ferry operates from Kodiak bi-monthly between May and October. Cargo is delivered weekly by freighter from Seattle and the city owns and operates a landing craft. A 10,000-ft by 1,000-ft seaplane base is available and open to the public, and as of 2011 there was an airstrip under construction on Akun Island.⁹⁰ In June 2012, roundtrip airfare between Anchorage and Unalaska was \$958.⁹¹ Seaplane charters are available by appointment.

Facilities

Water is supplied by a local stream and dam, originally constructed in 1927. Water is treated and piped into all homes and sewage is piped to a community septic tank, with effluent

⁹⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹¹ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

discharge through an ocean outfall. Refuse is collected three times a week and taken to the landfill. The city recycles aluminum. Trident Seafoods operates its own water, sewer, and electric facilities.⁹²

General infrastructure located in Akutan includes police and fire services, youth center, community center, city and school library, café, telephone services, post office, broadband internet services, and several hotels. In a survey conducted by the AFSC in 2011, community leaders indicated that a fish cleaning station, barge landing area, dockside utilities, pilings, breakwater, jetty, dry dock space, haul out facilities, and a U.S. Environmental Protection Agency (EPA) certified boat cleaning station exist within the community. In addition, there is 350 ft of public dock space for permanent and transient moorage and vessels up to 400 ft in length can use the community's mooring facilities. Regulated vessels which the port of Akutan is capable of handling include rescue vessels, cruise ships, ferries, and fuel barges. Local businesses and services supporting the local fishing industry include a processor, bait sales, and boat fuel sales. Residents typically go to Unalaska, King Cove, and Sand Point for services that are not available in Akutan.

*Medical Services*⁹³

Basic health care is provided by Anesia Kudrin Memorial Clinic. The clinic is a Primary Health Care facility, qualified Emergency Care Center, and Community Health Aid Program (CHAP) site. The closest hospital is located in Unalaska.

*Educational Opportunities*⁹⁴

There is one school in Akutan offering a preschool through 12th grade education. As of 2011, there were eight students enrolled and two teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historically, Aleut fishermen would harvest salmon, cod, herring, and other abundant local species. The Russian American Company moved Aleutians by the early 1800s and by 1855, was awarded a contract to deliver ice, fish, coal, and timber to a company in San Francisco. However, the venture was a total failure. Prior to Alaska's purchase in 1867, American schooners were fishing for cod in Aleutians.⁹⁵ Today, cod are fished throughout the Bering Sea and Aleutian Islands regions using trawl, longline, pot, and jig gear types. Trawl catcher vessels range from 60 to 180 ft in length, while catcher processor vessels typically range

⁹² See footnote 90.

⁹³ Ibid.

⁹⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁹⁵ Atkinson, C. E. (n.d.). *A Brief Review of the Salmon Fishery in the Aleutian Islands Area*. Retrieved July 13, 2012 from: [http://www.npafc.org/new/inpfc/INPFC%20Bulletin/Bull%20No.1/Bull1%20p93-104%20\(Atkinson\).pdf](http://www.npafc.org/new/inpfc/INPFC%20Bulletin/Bull%20No.1/Bull1%20p93-104%20(Atkinson).pdf)

from 107 to 295 ft. Smaller vessels typically fish longline, pot, or jig gear. Pollock are fished in nearshore waters as a mid-water trawl fishery.⁹⁶

Aleutian herring typically congregate within the vicinity of Unalaska Island, where the Togiak-spawning herring reside during the summer feeding period. An early food and reduction fishery was established in at Dutch Harbor between 1929 to 1939. The Dutch Harbor herring fishery resumed in 1982, primarily as a bait fishery. Other areas along the Alaska Peninsula host smaller and more sporadic harvests.

Crab fisheries began in 1930 and accelerated in size and scope in the 1950s, when king crab fisheries developed in the Bering Sea. Red king crab is found throughout the Bering Sea and Aleutian Islands (BSAI) area, while blue king crab is found in small populations around the Pribilof Islands. Golden king crab is found along the continental slopes. Hair crabs are mostly found near the Pribilof Islands. Tanner grab is distributed widely throughout the BSAI region. Snow crab is found throughout the Bering Sea along continental slopes, and Dungeness crab is found throughout estuaries and intertidal zones. King crab harvests peaked in the 1970s and early 1980s, but declined significantly along with biomass. Although management has tightened, many populations are still considered depressed. Snow crab replaced king crab in terms of harvest size, and several peaks were seen in the 1990s. Today, crab harvests remain at low levels compared to years past.

According to survey conducted by the AFSC in 2011, community leaders reported that the community's economy relies heavily on fisheries. The community is approximately 40 mi closer to fishing grounds than Unalaska and is one of the busiest fishing ports in the world.⁹⁷ Akutan's proximity to the Bering Sea brought the crab and fish processing industry in the late 1940s, at first through floating processors, followed by the construction of a shore-based processing plant in the 1980s by Trident Seafoods.⁹⁸ In addition, community leaders reported that commercial vessels up to 125 ft in length use Akutan as their base of operation during fishing seasons. In addition, there was an increase in the number of visits by commercial vessels under 125 ft in Akutan between 2005 and 2010. However, visits by vessels 125 ft and over became less frequent during those years.

Akutan is eligible to participate in the Community Development Quota (CDQ) program and is represented by the Aleutian Pribilof Islands Community Development Association. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.⁹⁹ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. The community is located in Federal Reporting Area 519, International Pacific Halibut Commission (IPHC) Regulatory Area 4B, and the Aleutian Islands Sablefish Regulatory Area.

⁹⁶ Marine Stewardship Council. (n.d.). *Fisheries in the MSC program*. Retrieved February 1, 2013 from: <http://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/bsai-pollock>.

⁹⁷ Aleutians East Borough. (n.d.). Retrieved December 9, 2011 from: http://www.aeboro.org/index.asp?Type=B_BASIC&SEC=%7B8500E0-9F88-43B2-AEE0-E3919CE04345%7D

⁹⁸ Ibid.

⁹⁹ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

Processing Plants

Trident Seafoods Corporation was founded in 1973, and by the year 2000 was employing 4,000 people annually throughout Alaska and the Pacific Northwest. It is a remote and self-contained facility on the island of Akutan at the eastern end of the Aleutian Islands chain and is the largest seafood production facility in North America, processing pollock, cod, halibut and crab.¹⁰⁰ During its peak seasons in the winter and summer it can accommodate as many as 825 employees. Trident employees and stockholders funded the 1998 creation of the village of Akutan's 14,000 sq-ft Safe Harbor Church and Community Center. In addition Trident continues to fund non-profit community services, fishing vessel safety training, school activities, and scholarship programs in the Akutan community. The Akutan facility provides room and board at a nominal cost, as well as air transportation to Akutan from Seattle and back to its seafood processors.¹⁰¹ According to a survey conducted by the AFSC in 2011, the plant employs a maximum of 1000 workers and does not rely on public infrastructure or services, as it is located outside the city limits of Akutan. From Akutan, the plant can be reached by road or boat.

Fisheries-Related Revenue

The majority of fisheries-related revenue collected between 2000 and 2010 came from Shared Fisheries Businesses Taxes, although revenue also came from raw fish taxes, Fisheries Resource Landings Taxes, Extraterritorial Fish Taxes, boat haul fees, and harbor usage fees. In 2010, Akutan received \$1.40 million in fisheries-related revenue, compared to \$1.24 million in 2000; a 13% decrease after adjusting for inflation.¹⁰² However, it should be noted that data regarding revenue acquired from raw fish taxes was not available for 2010. Fisheries-related revenue peaked in 2006 at \$2.09 million. In a survey conducted by the AFSC in 2011, community leaders reported that Akutan received \$12,000 in funding and grants from APICDA (their CDQ entity) in 2010. Information regarding fisheries-related revenue can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that crab, pollock, cod, and halibut are the major commercial fisheries prosecuted by residents of Akutan. The crab fishery runs from October to December, pollock is fished from January to May, cod is fished from January to May, and halibut fishing runs from March to November. Gear types used by residents include trawl, pots, and longline.

¹⁰⁰ Alaska Seafood Marketing Institute. (2011). Directory of Alaska Seafood Suppliers. Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

¹⁰¹ Trident Seafoods. (n.d.). Retrieved from: <http://tridentseafoods.com>.

¹⁰² Inflation calculated using Anchorage CPI for 2010 from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

In 2010, 11 residents, or 12.9% of the estimated permanent population, held 13 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 8 residents held 13 CFEC permits. Of the CFEC permits issued 2010, 54% were for halibut, compared to 31% in 2000; 38% were for groundfish, compared to 46% in 2000; and 8% were for salmon, compared to 8% in 2000. In addition, 4 residents held 4 Federal Fisheries Permits (FFP) and 6 residents held 6 License Limitation Program (LLP) groundfish permits. In 2010, residents held 288,622 shares of halibut quota on nine accounts, compared to 73,959 shares on six accounts in 2000. No residents held sablefish quota in 2010; however, 428,834 shares was held on one account between 2000 and 2003. No residents held crab quota between 2010 and when the program began.

Of the CFEC permits issued in 2010, 77% were actively fished, compared to 62% in 2000. This varied by fishery from 100% of halibut permits, to 60% of groundfish and 0% of salmon permits. In addition, 50% of FFP and 33% of LLP groundfish permits were actively fished in that year. Fisheries prosecuted by residents of Akutan in 2010 included statewide longline halibut and statewide mechanical jig miscellaneous saltwater finfish fisheries.¹⁰³

Residents held 19 commercial crew licenses in 2010, compared to 18 in 2000. In addition, residents held majority ownership of 6 vessels that year, compared to 7 in 2000. In 2010, Akutan ranked 3rd of 67 communities reporting landings in terms of total pounds landed and 4th of 67 communities in terms of ex-vessel revenue earned from landings in the community. In that year, 152 vessels landed 315.60 million lbs total, representing a 35% reduction in lbs landed compared to 2002. However, ex-vessel revenue increased during that time from \$66.32 million to \$82.66 million. Revenue from landings peaked in 2005 at \$84.19 million. By fishery, 48.66 million lbs of Pacific cod valued at \$11.34 million ex-vessel was landed in Akutan in 2010, compared to 32.82 million lbs valued at \$6.82 million in 2002; a decrease of \$0.07 per pound landed after adjusting for inflation.¹⁰⁴ Other landings made in Akutan for 2010 are considered confidential. Residents landed 51,119 lbs of halibut valued at \$230,393 ex-vessel in 2010 and 179,296 lbs of Pacific cod valued at \$105,535 ex-vessel in 2009. All other landings made by Akutan residents between 2000 and 2010 are considered confidential. Information regarding commercial fishing trends can be found in Table 4 through 10.

¹⁰³ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁰⁴ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Akutan: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$729,000	\$576,565	\$596,183	\$734,653	\$713,568	\$784,220	\$895,000	\$420,784	\$420,784	n/a	n/a
Shared Fisheries Business Tax ¹	\$471,396	\$608,271	\$722,455	\$664,084	\$726,704	\$805,674	\$800,320	\$912,683	\$905,045	\$951,055	\$1.09 M
Fisheries Resource Landing Tax ¹	\$38,036	\$53,967	\$59,443	\$53,668	\$67,556	\$111,004	\$118,678	\$234,365	\$165,290	\$218,721	\$307,561
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	\$70,000	\$100,000	\$60,000	\$60,000	n/a	\$274,731	\$240,000	\$270,000	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	\$5,400	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$2,000	\$2,000	\$2,000	\$6,500	\$4,000	\$6,000	\$2,604	\$5,700	\$3,700	\$4,000	\$4,000
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$1.24 M</i>	<i>\$1.31 M</i>	<i>\$1.48 M</i>	<i>\$1.52 M</i>	<i>\$1.57 M</i>	<i>\$1.71 M</i>	<i>\$2.09 M</i>	<i>\$1.81 M</i>	<i>\$1.76 M</i>	<i>\$1.17 M</i>	<i>\$1.40 M</i>
<i>Total municipal revenue⁵</i>	<i>\$1.02 M</i>	<i>\$1.45 M</i>	<i>\$1.82 M</i>	<i>\$1.18 M</i>	<i>\$1.73 M</i>	<i>\$1.95 M</i>	<i>\$1.77 M</i>	<i>\$1.77 M</i>	<i>\$2.56 M</i>	<i>\$2.65 M</i>	<i>\$2.65 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Akutan: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	6	6	6	6	6	6	6	6	6	6	6
	Active permits	0	0	1	1	1	1	0	0	1	1	2
	% of permits fished	0%	0%	16%	16%	16%	16%	0%	0%	16%	16%	33%
	Total permit holders	6	6	6	6	6	6	6	6	6	6	6
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	n/a	n/a	n/a	1	1	1	2	2	2	3	4
	Fished permits	n/a	n/a	n/a	1	1	1	1	2	2	2	2
	% of permits fished	n/a	n/a	n/a	100%	100%	100%	50%	100%	100%	67%	50%
	Total permit holders	n/a	n/a	n/a	1	1	1	2	2	2	3	4
Crab (CFEC) ²	Total permits	2	0	0	0	1	0	0	0	0	0	0
	Fished permits	2	0	0	0	1	0	0	0	0	0	0
	% of permits fished	100%	n/a	n/a	n/a	100%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	0	0	0	1	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	4	5	5	7	7	7	7	7	7	8	7
	Fished permits	4	3	5	5	7	6	7	7	5	6	7
	% of permits fished	100%	60%	100%	71%	100%	86%	100%	100%	71%	75%	100%
	Total permit holders	4	5	5	7	7	7	7	7	7	8	7
Herring (CFEC) ²	Total permits	0	0	0	1	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	1	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Akutan: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	2	2	0	0	0	0
	Fished permits	0	0	0	0	0	0	1	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	0%	50%	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	2	2	0	0	0	0
Groundfish (CFEC) ²	Total permits	6	4	4	5	4	4	2	2	5	5	5
	Fished permits	2	0	1	1	1	1	0	2	3	2	3
	% of permits fished	33%	0%	25%	20%	25%	25%	0%	100%	60%	40%	60%
	Total permit holders	6	3	3	4	3	4	2	2	5	5	5
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>13</i>	<i>10</i>	<i>10</i>	<i>14</i>	<i>13</i>	<i>14</i>	<i>12</i>	<i>10</i>	<i>13</i>	<i>14</i>	<i>13</i>
	<i>Fished permits</i>	<i>8</i>	<i>3</i>	<i>6</i>	<i>6</i>	<i>9</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>8</i>	<i>8</i>	<i>10</i>
	<i>% of permits fished</i>	<i>62%</i>	<i>30%</i>	<i>60%</i>	<i>43%</i>	<i>69%</i>	<i>50%</i>	<i>67%</i>	<i>90%</i>	<i>62%</i>	<i>57%</i>	<i>77%</i>
	<i>Permit holders</i>	<i>8</i>	<i>8</i>	<i>8</i>	<i>11</i>	<i>10</i>	<i>11</i>	<i>9</i>	<i>9</i>	<i>11</i>	<i>11</i>	<i>11</i>

Note: n/a indicates that no data were reported for that year.

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Akutan: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Akutan ²	Total Net Lbs Landed In Akutan ^{2,5}	Total Ex-Vessel Value Of Landings In Akutan ^{2,5}
2000	18	3	1	7	8	118	--	--
2001	8	3	1	5	8	100	--	--
2002	19	5	1	6	8	106	482,482,064	\$66,322,070
2003	23	3	1	5	7	122	--	--
2004	15	3	1	4	5	125	--	--
2005	10	5	1	7	6	134	492,576,883	\$84,185,627
2006	14	3	1	4	4	101	--	--
2007	15	3	1	4	3	110	--	--
2008	15	3	1	7	6	136	--	--
2009	16	4	1	6	5	130	294,394,455	\$77,094,939
2010	19	4	1	6	5	152	315,596,221	\$82,664,747

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Akutan: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	6	73,959	25,343
2001	6	73,959	25,343
2002	6	73,959	25,343
2003	7	169,635	57,797
2004	7	169,635	40,352
2005	8	249,255	58,781
2006	8	249,255	57,242
2007	8	249,255	49,382
2008	8	249,255	52,970
2009	8	249,255	43,573
2010	9	288,622	46,101

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Akutan: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	428,834	43,177
2001	1	428,834	44,409
2002	1	428,834	45,309
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Akutan: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Akutan: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	32,815,837	--	--	--	--	--	--	--	48,661,516
Pollock	--	--	445,304,392	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	478,120,229	--	--	--	--	--	--	--	48,661,516
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	\$6,818,283	--	--	--	--	--	--	--	\$11,340,438
Pollock	--	--	\$46,432,867	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	\$53,251,150	--	--	--	--	--	--	--	\$11,340,438

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Akutan Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	51,119
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	179,296	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	179,296	--	51,119
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	\$230,393
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	\$105,535	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	\$105,535	--	\$230,393

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Due to its remote location, non-Alaska resident sportfishing is limited in Akutan. In 2010, there were three sportfishing licenses sold to residents, none of which were sold in the community. The number of sportfishing licenses sold to residents of Akutan peaked at 13 in 2004, which was the same year the Alaska Peninsula-Aleutian Islands ADF&G Harvest Survey Area saw the greatest number of resident angler days fished. There were no sport fish or charter businesses operating in the community between 2000 and 2010. In 2010, angler days fished totaled 5,297 for saltwater fisheries, compared to 10,534 in 2000. In that year, non-Alaska resident anglers accounted for 38.4% of saltwater angler days fished, compared to 15.8% in 2000. In addition, there were 33,635 total freshwater angler days fished in 2010, compared to 44,976 in 2000. In that year, non-Alaska residents accounted for 58.4% of freshwater angler days fished, compared to 39.6% in 2000.

In a survey conducted by the AFSC in 2011, community leaders reported the presence of shore-based recreational fishing by residents and non-Alaska residents, as well as by private

boat. Local private anglers typically target pink, chum, coho, and sockeye salmon, halibut, and rockfish. Information regarding sportfishing trends can be found in Table 11.

Subsistence Fishing

Subsistence resources are used by residents of Akutan to supplement their incomes and diet. In a survey conducted by the AFSC in 2011, community leaders reported that the three most important subsistence resources to the community are seals, ducks, and salmon. There is also considerable amount of halibut harvested by residents.

According to a 2009 ADF&G survey, salmon, non-salmon fish, and marine invertebrates made up an estimated 80% of subsistence harvests in Akutan. Also in that year, marine mammals made up an estimated 8% of subsistence harvests, and terrestrial mammals, birds, eggs, and wild plants made up an estimated 12%.¹⁰⁵ Information on salmon subsistence somewhat limited, and residents reported harvesting only 30 fish between 2000 and 2009. In 2010, 16 residents held Subsistence Halibut Registration Certificates (SHARC). In that year, residents reported harvesting 790 lbs of halibut on nine SHARC, compared to 9,612 lbs on 39 SHARC in 2003. Reported subsistence halibut harvests declined sharply since they peaked in 2005 (15,011 lbs). Halibut harvesting peaked in 2005 when an estimated 15,011 lbs of halibut was harvested on 47 SHARC. Marine mammals are harvested extensively in Akutan. An estimated 52 Steller sea lions and 111 harbor seals were harvested between 2000 and 2008. In addition, one sea otter was reported harvested in 2004. According to ADF&G's *Community Subsistence Information System*,¹⁰⁶ species that have been harvested and/or used by residents of Akutan includes mussels, butter clams, cockles, Dungeness crab, hair crab, horse clams, king crab, limpets, octopus, Pacific littleneck clams, razor clams, chitons, scallops sea cucumber, sea urchin, shrimp, snails, Tanner crab, blue whale, fur seals, humpback whale, mink whale, sei whale, Steller sea lion, rockfish, sculpin, Dolly Varden, flounder, grayling, greenling, herring, mackerel, Pacific cod, rainbow trout, sablefish, smelt, sole, and pollock. Information regarding subsistence trends can be found in Tables 12 through 15.

¹⁰⁵ Fall, J. A. (2011). *Continuity and Change in Subsistence Harvests in Three Bering Sea Communities: Akutan, Emmonak, and Togiak*. Retrieved July 6, 2012 from: <http://seagrant.uaf.edu/conferences/2011/wakefield-people/presentations/fall-akutan-emmonak-togiak.pdf>

¹⁰⁶ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 11. Sport Fishing Trends, Akutan: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Akutan ²
2000	0	0	8	3
2001	0	0	2	3
2002	0	0	4	5
2003	0	0	1	3
2004	0	0	13	1
2005	0	0	5	1
2006	0	0	4	0
2007	0	0	1	5
2008	0	0	0	2
2009	0	1	5	0
2010	0	0	3	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Akutan: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Akutan: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	2	2	n/a	n/a	n/a	n/a	2	n/a	n/a
2004	3	3	1	n/a	n/a	n/a	28	n/a	n/a
2005	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Akutan: 2003-2010.

Year	SHARC issued	SHARC fished	SHARC halibut lbs harvested
2003	50	39	9,612
2004	50	41	14,985
2005	49	47	15,011
2006	47	38	12,412
2007	46	16	3,603
2008	17	13	6,029
2009	17	9	2,993
2010	16	3	790

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Akutan: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	4	26	n/a
2001	n/a	n/a	n/a	n/a	15	14	n/a
2002	n/a	n/a	n/a	n/a	3	10	n/a
2003	n/a	n/a	n/a	n/a	9	11	n/a
2004	n/a	1	n/a	n/a	5	10	n/a
2005	n/a	n/a	n/a	n/a	5	9	n/a
2006	n/a	n/a	n/a	n/a	2	2	n/a
2007	n/a	n/a	n/a	n/a	5	12	n/a
2008	n/a	n/a	n/a	n/a	4	17	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

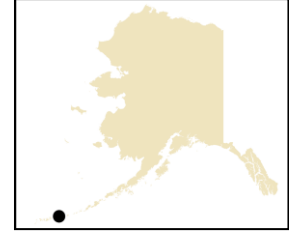
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Atka (AT-ka)



People and Place

*Location*¹⁰⁷

Atka is located on Atka Island, 1,200 mi southwest of Anchorage and 350 mi west of Unalaska. The area encompasses 8.7 square mi of land and 27.4 square mi of water. Atka was incorporated as a Second-class city in 1988, is located in the Aleutians West Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*¹⁰⁸

In 2010, there were 61 residents, ranking Atka 288th of 352 communities in Alaska in terms of population size. Between 1990 and 2010, the population declined by 16.4%. Between 2000 and 2009, the population fell by 22.8% with an average annual growth rate of -2.68%, which was well below the statewide average annual growth rate of 0.75% and indicative of a steadily declining population. In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the estimated number of permanent residents was 72 in 2010, while the estimated number of seasonal or transient residents was 12. Atka typically has seasonal workers living in the community between March and August with the population peaking from April through July. This peak in population is thought to be entirely driven by employment in the fisheries sectors. Information regarding population trends can be found in Table 1.

Atka was predominately an Aleut (Unangas) community in 2010. In that year, 95.1% of the population reported themselves as American Indian or Alaska Native, compared to 80.4% in 2000; and 4.9% identified themselves as White, compared to 6.5% in 2000. Those identifying themselves as two or more races dropped from 10.9% in 2000 to 0% in 2010. No residents reported themselves as Hispanic or Latino in 2010. Information regarding racial and ethnic trends can be found in Figure 1.

The average household size in 2010 was 2.54, compared to 3.60 in 1990 and 2.69 in 2000. In that year there were 43 total housing units, compared to 26 in 1990 and 41 in 2000. Of the households surveyed in 2010, 23.3% were owner-occupied, compared to 63.4% in 2000; 32.6% were renter-occupied, compared to 14.6% in 2000; 37.2% were vacant, compared to 12.2% in 2000; and 7% were occupied seasonally, compared to 9.8% in 2000. There were no residents living in group quarters in 2010, compared to six in 2000.

The gender distribution of Atka residents was relatively skewed in 2010 at 59.0% male, and 41.0% female. This was less even than both the distribution statewide (52.0% male, 48.0%

¹⁰⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

female), and in 2000 (50.0% male, 50.0% female). The median age that year was 35.5 years, which was somewhat higher than the statewide median of 33.8 years and identical to the median in 2000.

Compared to 2000, the population structure in 2010 was more irregular. In that year, 31.2% of residents were under the age of 20, compared to 31.4% in 2000; 16.4% were over the age of 59, compared to 13.0% in 2000; 39.6% were between the ages of 30 and 59, compared to 44.5% in 2000; and 13.2% were between the ages of 20 and 29, compared to 10.8% in 2000.

Table 1. Population in Atka from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	73	-
2000	92	-
2001	-	92
2002	-	102
2003	-	94
2004	-	93
2005	-	90
2006	-	73
2007	-	74
2008	-	73
2009	-	71
2010	61	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Atka: 2000-2010 (U.S. Census).

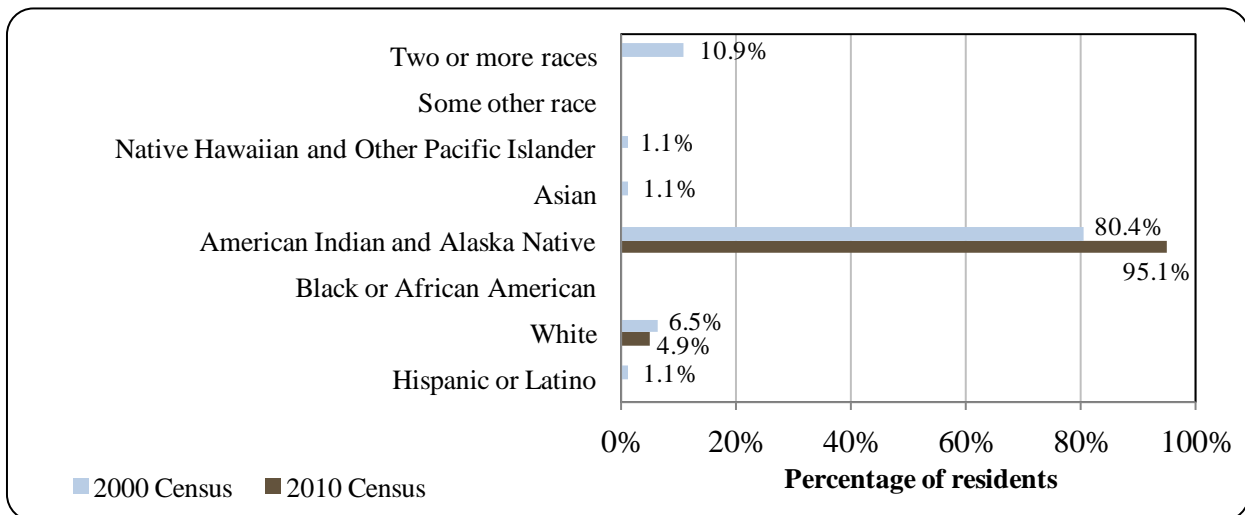
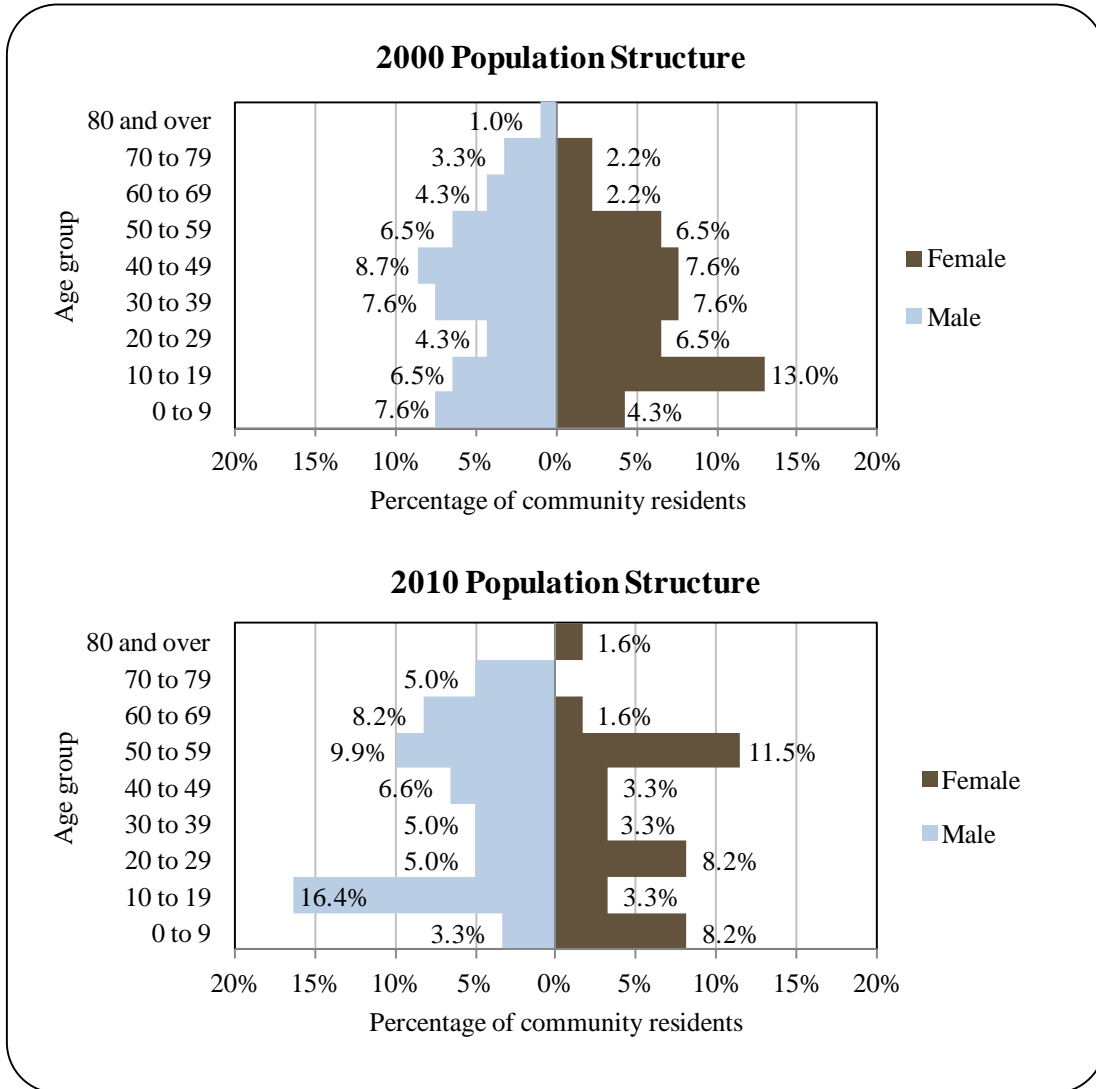


Figure 2. Population Age Structure in Atka Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution by age cohort was significantly less even in 2010 than in 2000, with notable male biases among many age ranges. In 2010, the greatest absolute gender difference occurred in the 10 to 19 range (16.4% male, 3.3% female), followed by the 60 to 69 (8.2% male, 1.6% female) and 70 to 79 (5.0% male, 0.0% female) ranges. Of those three, the greatest relative gender difference occurred in the 70 to 79 range. Information regarding Atka’s population structure can be found in Figure 2.

According to the U.S. Census’ 2006-2010 American Community Survey (ACS),¹⁰⁹ an estimated 71.4% of residents aged 25 years and older held a high school diploma or higher

¹⁰⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 14.3% had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 14.3% had a 9th to 12th grade education but no degree, compared to an estimated 5.8% of Alaska residents overall; and an estimated 14.3% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall. No residents were estimated to hold a post-secondary degree in 2010.

*History, Traditional Knowledge, and Culture*¹¹⁰

There is evidence of human occupation of the Aleutian Islands dating back at least 8,000 years; however, it is believed that humans were populating North America at least 13,000 years ago during the end of the last glacial maximum. Archaeological sites dating back over 11,000 years have been found on Prince of Wales Island, lending evidence to a possible coastal migration route.¹¹¹

The island has been occupied by Unangas for at least 2,000 years. Unangas speak the western dialect, known since the Russian era as "Aleut". Recent archaeological evidence indicates that the present village site may have had human use since prehistoric times. The first contact with Russians occurred in 1747, and Atka became an important trade site and safe harbor for Russians. In 1787, a number of hunters were enslaved and relocated to the Pribilofs to work in the fur seal harvest. The townsite was settled in the 1860s. After the end of the sea otter hunting era in the late 1800s, Atka had no viable cash economy. Reindeer were introduced to the island in 1914. During the 1920s, Atka became relatively affluent due to fox farming. After the Japanese attacked Unalaska and seized Attu and Kiska in June 1942, the U.S. Government evacuated Atka residents to the Ketchikan area and burned it to the ground to prevent Japanese forces from using it and advancing. The community was rebuilt by the U.S. Navy after the war, and residents were allowed to return. Many Attu villagers, released from imprisonment in Japan in 1945, relocated to Atka. This exposure to the outside world brought many changes in the traditional culture and attitudes in the community.

Natural Resources and Environment

Atka lies in a maritime climate zone and temperatures range from 20 to 60 °F (-7 to 16 °C). Precipitation averages 60 inches per year, and snowfall averages 61 inches per year. There are frequent winds and severe storms in the winter and calm, foggy weather in summer.¹¹²

Atka Island is part of the Aleutian Islands Unit of the Alaska Maritime National Wildlife Refuge (AMNWR), which covers 3.4 million acres of the Aleutian Islands, Pribilof Islands, and areas around the Chukchi Sea.¹¹³ The local environment is characterized by tundra which transitions to upland mountainous regions. Steep topographical relief and shallow soils prevent

¹¹⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹¹ National Park Service. (n.d.). *Archaeological Overview of Alaska*. Retrieved May 30, 2012 from: <http://www.nps.gov/akso/akarc/early.htm>.

¹¹² See footnote 110.

¹¹³ US Fish and Wildlife Service. (n.d.) *Alaska Maritime National Wildlife Refuge*. Retrieved December 28, 2011 from: <http://alaska.fws.gov/nwr/akmar/units.htm>.

many trees from growing in the Aleutians, and trees that are found often consist of introduced spruce. Local flora includes many grasses, sedges, lichens, mosses, wildflowers, and heath plants. Wild rye often grows near beaches. Marine fish are diverse and abundant, and include pollock, herring, skates, smelt, cod, rockfish, sablefish, greenling, sculpin, halibut, flounder, crab, shellfish, shrimp, and all five species of Pacific salmon. Freshwater species include whitefish, arctic lamprey, Dolly Varden and arctic char, sculpin, arctic grayling, northern pike, burbot, and sheefish. Marine mammals include 11 species of whale, dolphin, porpoise, sea otter, fur seal, Steller sea lion, walrus, harbor seal, and elephant seal. Over 250 species of birds migrate through the Aleutian Islands Unit of the AMNWR.¹¹⁴

Although Atka does not have a hazard mitigation plan, the Aleutians East Borough identified several natural hazards which potentially impact Aleutian communities, including volcanic eruptions, earthquakes, coastal flooding and erosion, ground failure, tsunami, and extreme weather. All of these hazards have records of occurrence in the area and have a high potential for future occurrence.¹¹⁵

According to the Alaska Department of Environmental Conservation (DEC),¹¹⁶ there were no significant environmental remediation projects active within Atka in 2010.

Current Economy¹¹⁷

Atka's economy is based on subsistence living and wages earned from the halibut fishery. A small local fish processing plant, Atka Pride Seafoods, operates seasonally to serve the local fleet. They currently process halibut and sablefish. A number of offshore fish processors carry out crew changes through Atka. Year-round income opportunities in the village are limited to education- and government-related work. A reindeer herd of over 2,500 head provides a source of food.¹¹⁸ Top employers in 2010¹¹⁹ included the City of Atka, Village Safe Water, Aleutian Pribilof Island Association, Atka Pride Seafoods Inc. Aleutian School District, Aleutian Pribilof Islands Community Development Association (APICDA), Atka Native Store, and Atxam Corporation. In a survey conducted by the AFSC in 2011, community leaders reported that the community's economy is reliant on commercial fishing and recreational hunting/fishing.

In 2010,¹²⁰ the estimated per capita income was \$27,542 and the estimated median household income was \$90,000, compared to \$17,980 and \$30,938 in 2000, respectively.¹²¹ After adjusting for inflation by converting 2000 values to 2010 dollars,¹²² the real per capita income

¹¹⁴ Ibid.

¹¹⁵ Aleutians East Borough. (2010). *Multi-Jurisdictional Hazards Mitigation Plan*. Retrieved December 28, 2011 from: <http://www.aleutianseast.org/vertical/Sites/%7BEBDABE05-9D39-4ED4-98D4-908383A7714A%7D/uploads/%7B5F7E9057-83A3-4DBA-B144-073C3F6461D6%7D.PDF>.

¹¹⁶ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved June 6, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>

¹¹⁷ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁸ See footnote 110.

¹¹⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²¹ See footnote 109.

¹²² Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

(\$22,460) and real median household income (\$40,683) indicate significant increases in both individual and household earnings. In 2010, Atka ranked 83rd of 305 communities from which per capita income was estimated, and 14th of 299 communities from which median household income was estimated.

It should be noted that Atka's small population size may have prevented the ACS from accurately portraying economic conditions.¹²³ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, total wages earned by Atka residents in 2010 was \$1.03 million.¹²⁴ When compared with the 2010 population, per capita income equals \$16,834; suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census.¹²⁵ The per capita income estimate based on ALARI data is likely more accurate than the 2010 ACS estimate, as \$90,000 was confirmed as unlikely based on estimates given by the community directly.

According to 2006-2010 ACS estimates,¹²⁶ 68.4% of residents aged 16 years and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 0.0%, compared to an estimated 5.9% statewide; and an estimated 4.2% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 76.9% worked in the private sector and an estimated 23.1% worked in the public sector. Again, it is likely that the 2010 ACS misrepresented economic conditions within Atka due to the community's small population size. According to 2010 ALARI employment data, the unemployment rate was 18.4% based on unemployment insurance claimants.

By industry, most (38.5%) employed residents were estimated to work in finance, real estate, or insurance sectors; followed by public administration sectors (23.1%) and non-public administration service sectors (15.4%). By occupation type, most (46.2%) employed residents were estimated to hold management or professional positions; followed by natural resource, construction, or maintenance positions (30.8%); sales or office positions (15.4%); and production, transportation, or material moving positions (7.7%). Information regarding employment trends can be found in Figures 3 and 4.

Overall there were strong variations among most industry sectors and occupation types between 2000 and 2010. There was a significant increase in the proportion of residents employed in finance, insurance, real estate, and non-public administration sectors; while there was a significant decrease in arts, entertainment, recreation, accommodations, food services, education services, health care, and social assistance sectors. By occupation type, there was a significant increase in the proportion of management, professional, natural resources, construction, and maintenance positions; while there was a significant decrease in the proportion of service, sales, and office positions. It should be noted that while it is possible that the significant shifts can be attributed to economic regime changes, it is also likely the ACS sampling methods were unable

¹²³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²⁴ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹²⁵ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²⁶ See footnote 123.

to capture economic conditions accurately. ALARI estimated that in 2010, most (58.5%) private or state employees worked in local government sectors; followed by education or health service sectors (14.6%); manufacturing sectors (12.2%); financial sectors (7.3%); and professional or business sectors (7.3%).

In 2010, no individuals characterized themselves as working in natural resource-based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

Figure 3. Local Employment by Industry in 2000-2010, Atka (U.S. Census).

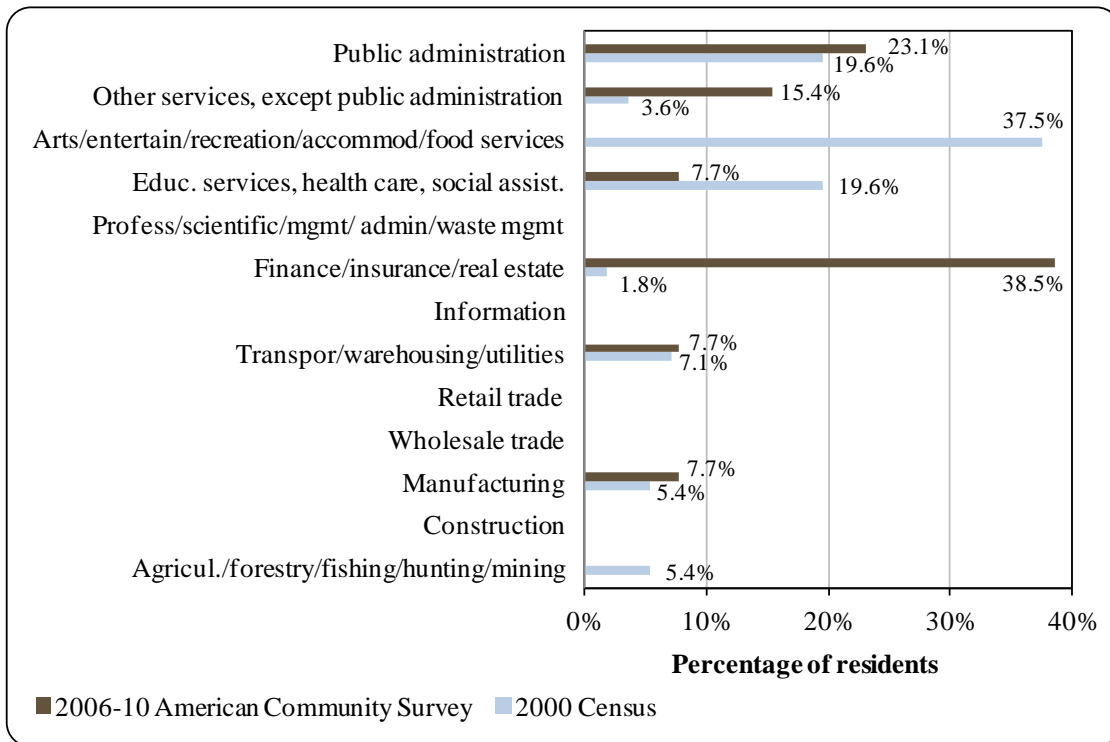
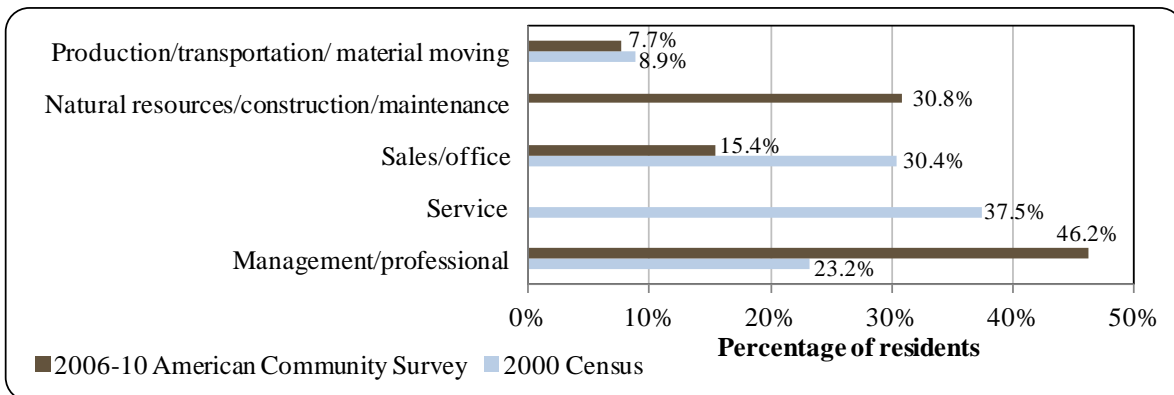


Figure 4. Local Employment by Occupation in 2000-2010, Atka (U.S. Census).



Governance¹²⁷

Atka is a Second-class city with a mayoral form of government. The community has a seven member city council and 10 municipal employees which include a fire chief, Village Public Safety Officer (VPSO), and Anchorage-based City Administrator. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal government, and an Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Atxam Corporation). The regional ANCSA chartered Native Corporation representing Atka is the Aleut Corporation. Total ANCSA land entitlement in the area is over 100,000 acres. The closest National Marine Fisheries Service (NMFS), U.S. Bureau of Citizenship and Immigration Services (BCIS), and Alaska Department of Fish and Game (ADF&G) offices are located in Unalaska, 350 mi east. As of 2010, the city administered a 10% bed tax and 2% raw fish tax.

In 2010, total municipal revenue was \$833,779, compared to \$243,643 in 2000; a 165% increase after adjusting for inflation.¹²⁸ In addition, the community was allocated \$99,561 from the state Community Revenue Sharing program, which accounted for approximately 12% of the municipal budget that year. In contrast, Atka received \$27,706 in State Revenue Sharing in 2000, which accounted for approximately 11% of the municipal budget that year. Municipal revenue estimates include only general fund revenues, and include capital project and business related funds. Information regarding municipal finances can be found in Table 2.

Infrastructure

Connectivity and Transportation

Atka has a state-owned, city-maintained 4,800-ft by 100-ft asphalt, lighted runway. Scheduled air services are available three times weekly from Unalaska. Planes can be chartered from Cold Bay or Unalaska. Freight service is provided from April to October. The city dock and port facility is located 5 mi from town in Nazan Bay.¹²⁹ Roundtrip airfare between Anchorage and Unalaska in June 2012 was \$958.¹³⁰

Facilities

The community system was constructed in 1978 and was expanded in 1982 to a new housing area. Water is supplied by a stream and wooden reservoir dam northwest of the city. Water is treated and stored in a 130,000-gal water tank before distribution. All homes are connected to the piped water and sewer system and are plumbed. Sewage is piped to a central septic system. Wastewater flows untreated through outfall lines into Nazan Bay. Garbage is collected twice a week.¹³¹

¹²⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁸ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

¹²⁹ Ibid.

¹³⁰ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

¹³¹ See footnote 127.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Atka from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$243,643	n/a	\$27,706	n/a
2001	\$249,155	n/a	\$26,744	n/a
2002	\$306,036	n/a	\$26,736	n/a
2003	\$245,396	n/a	\$26,840	n/a
2004	\$301,820	n/a	-	n/a
2005	\$288,960	n/a	-	n/a
2006	\$306,160	n/a	-	n/a
2007	\$418,695	n/a	-	n/a
2008	\$693,672	n/a	-	n/a
2009	\$736,251	n/a	\$99,724	n/a
2010	\$833,779	n/a	\$99,561	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Econ Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

In a survey conducted by the AFSC in 2011, community leaders reported on general and fisheries-related infrastructure and services present or under development in the community. These include a fishing cleaning station, barge landing area, dock improvements, dock utilities, dock access, pilings, broadband internet access, road improvements, airport improvements, general utility improvements, alternative energy projects, emergency response systems, telephone service, fire department, post office, and fire department improvements. In addition, there are plans for dockside fuel tanks, a breakwater, harbor dredging, a jetty, dry dock space, haulout facilities, U.S. Environmental Protection Agency (EPA) certified cleaning station, sewage treatment station, and a new landfill. Fisheries-related businesses located in the community include fish processors, fishing gear sales, boat repair (machine shop, mechanical services, and hydraulics), small vessel haulout facilities (less than 60 tons), commercial fishing vessel moorage, tackle sales, bait sales, commercial cold storage facilities, marine refrigeration, boat fuel sales, fishing gear storage, ice sales, water taxi, and air taxi.

According to a Community Development Plan created by the City of Atka in 2006,¹³² development projects completed or marked as ongoing include housing improvements and

¹³² City of Atka. (2006). *Community Development Plan*. Retrieved December 28, 2011 from: <http://www.commerce.state.ak.us/dca/plans/Atka-GCP-2006.pdf>.

repair, a new clinic, ambulance services, road and bridge repair, community enrichment programs, fish marketing, processor improvements, a restaurant, and a new post office. Projects that the community would like to pursue include an airport terminal, additional rental housing, a recreation center, and a larger general store.

Medical Services

The Atka Village Clinic is a Primary Health Care Facility, regional Emergency Medical Service provider, and Community Health Aid Program (CHAP) site. Acute and long-term care is provided in Unalaska.

*Educational Opportunities*¹³³

Yakov E. Netsvetov School provides Kindergarten through 12th grade instruction. As of 2011, there were 10 students enrolled and one teacher employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Unangas have occupied Atka Island for at least 2,000 years and perhaps as long as 4,500 years.¹³⁴ During this time, the local inhabitants have relied extensively on a subsistence lifestyle. Today, residents of Atka participate heavily in commercial, recreational, and subsistence fisheries.

Previous to Alaska's purchase in 1867, American schooners were fishing for cod in the Aleutian Islands and Okhotsk Sea regions. By the end of the nineteenth century, salmon canneries were being established in western Alaska and on the eastern portion of the Alaska Peninsula. No large-scale commercial seafood processing operation was undertaken in the Aleutian area during those years however. In 1916, Pacific American Fisheries, Inc. established a cannery at Makushin Bay, Unalaska. In those days, adverse weather conditions typically kept the small seine fleet close to Unalaska and Umnak islands. Following the 1924 White Act, newly protected fisheries began to proliferate throughout the Aleutian region. The implementation of a 1928 Executive Order removed Akun, Akutan, Tigalda, Umnak, and Unalaska Islands from an earlier established wildlife reserve, opening up further opportunities. The International Packing Company fished the Aleutian area between 1924 and 1942 and operated a floating processor in the regional through 1941. Pink, sockeye, and chum salmon were popular species.¹³⁵ In 1982, local residents formed the Atka Fishermen's Association and began fishing commercially for halibut. The first seafood processing plant was built in 1987, and Atka Pride Seafoods was formed following Atka's entry into the Community Development Quota (CDQ) program. Dock

¹³³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹³⁴ Veltre, D. W. (1998). Prehistoric Maritime Adaptations in the Western and Central Aleutian Islands, Alaska. *Arctic Anthropology*, 35(1), 223-233.

¹³⁵ Atkinson, C.E. (n.d.). A Brief Review of the Salmon Fishery in the Aleutian Islands Region. Retrieved May 20, 2012 from: [http://www.npafc.org/new/inpfc/INPFC%20Bulletin/Bull%20No.1/Bull1%20p93-104%20\(Atkinson\).pdf](http://www.npafc.org/new/inpfc/INPFC%20Bulletin/Bull%20No.1/Bull1%20p93-104%20(Atkinson).pdf).

facilities were completed in 1997.¹³⁶ Popular commercial fisheries within the Bering Sea and Aleutian Islands Management Area include red king crab, snow crab, walleye pollock, golden king crab, Tanner crab, weathervane scallops, Dungeness crab, Pacific cod, flatfish, sablefish, Pacific salmon, Pacific herring, and halibut.

Aerial surveys of Pacific herring biomass began in the Alaska Peninsula and Aleutian Islands region in 1979, when large congregations of herring were documented in coastal waters between Adak and Port Heiden. No herring sac roe harvests have occurred within the Aleutian Islands region due to lack of interest. Herring food and bait fisheries began in the Eastern Aleutian Islands area in 1929, occurring intermittently until 1981, when a Dutch Harbor food and bait fishery began operating annually. In 2004, an exploratory herring fishery was established in the vicinity of Adak Island. This fishery has attracted very little interest, and no harvests have occurred since it was established.¹³⁷

Groundfish were first commercially harvested in the Bering Sea and Aleutian Islands (BSAI) region in 1864, when a single schooner fished for Pacific cod in the Bering Sea. Most fishing effort during the early cod fishery was concentrated north of Unimak Island and the Alaska Peninsula. Pacific halibut was commercially harvested within the region as early as the late 1800s as well; however, halibut did not reach North American markets until 1928. Foreign fleets had a large presence within the BSAI region throughout much of the 20th century, targeting pollock, sablefish, turbot, perch, and other groundfish. Foreign fleets were phased out during the 1980s as fishing fleets became increasingly “Americanized”. Today, walleye pollock is the largest groundfish fishery in the BSAI region in terms of lbs landed and ex-vessel value. Pacific cod is the second largest fishery, followed by various flatfish including arrowtooth flounder, rock sole, and yellowfin sole. Other important commercial species include sablefish, rockfish, and Atka mackerel.¹³⁸

According to a survey conducted by the AFSC in 2011, community leaders reported that Atka participates in the fisheries management process in Alaska through a paid staff member who attends North Pacific Fishery Management Council (NPFMC) meets and/or Board of Fisheries meetings. In addition, Atka relies on regional organizations to provide information on fisheries management issues.

Atka is located in Federal Reporting Area 541, International Pacific Halibut Commission (IPHC) Regulatory Area 4A, and the Aleutian Islands Sablefish Regulatory District. Atka is eligible for participation in the CDQ program and is represented by APICDA. The CDQ program was established in an effort to address social and economic hardships imposed on BSAI fishing communities from cost prohibitive entry requirements into groundfish, halibut, and crab fisheries. Non-profit corporations, created under CDQ program requirements, are provided with an apportionment of quota allowing for direct investments by CDQ entities into local infrastructure and services.¹³⁹

¹³⁶ See footnote 132.

¹³⁷ Bernard, A. C. (2011). *Alaska Peninsula-Aleutian Islands Management Area Herring Sc Roe and Food and Bait Fisheries: Annual Management Report 2010*. Alaska Department of Fish and Game. Fishery Management Report No. 11-06. Retrieved February 4, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-06.pdf>.

¹³⁸ North Pacific Fishery Management Council. (2012). *Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area*. Retrieved February 4, 2013 from: <http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/fmp/BSAI/BSAI.pdf>.

¹³⁹ Ibid.

Processing Plants

Atka Pride Seafoods is a subsidiary of APICDA. Since 1994, Atka Pride has processed seafood on the island of Atka in the western region of the Aleutian Islands chain. From June through September Atka Pride processes halibut and sablefish. In regard to local infrastructure projects, APICDA has constructed a small dock (and attendant floating barges), a major dock facility, a water catchment system and pipeline to the city dock, and a hydro-electricity facility. Between 2006 and 2008, its infrastructure plans included construction of a boat harbor, widening of the face of the Atka City Dock, development of a fuel supply business, and extension of the local airport runway.¹⁴⁰ The plant relies on public docks, water services, and power/electricity (except in summer months), and in 2010 employed a maximum of seven workers.¹⁴¹

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, the Atxam Corporation, operates a fish processing plant in Atka and shares a mailing address with Atka Pride Seafoods, although its port location code is listed as Adak.

According to a survey conducted by the AFSC in 2011, community leaders reported that three residents are employed permanently in the seafood processing sector.

Fisheries-Related Revenue

Overall, Atka received \$449,358 in fisheries-related taxes and fees in 2010. This represented a 141% increase in fisheries-related revenue from 2000 after adjusting for inflation by converting 2000 values to 2010 dollars.¹⁴² During that time, Atka saw large increases in revenue received from Fisheries Resource Landing Taxes, and harbor fees. In 2010, Fisheries Resource Landing Taxes made up almost half of fisheries-related revenue that year.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

In a survey conducted by the AFSC in 2011, community leaders reported that services funded by fisheries-related revenue include harbor maintenance, road construction and maintenance, water and wastewater systems, law enforcement, and fire protection. In 2010, the community received \$100,000 from its CDQ entity (APICDA). Information regarding fisheries-related revenue trends can be found in Table 3.

Commercial Fishing

In 2010, four residents, or 6.6% of the population, held a total of four permits issued by the Commercial Fisheries Entry Commission (CFEC), all of which were for halibut. This represented a decline from 2000 when 9 residents held 17 CFEC issued permits. In that year, 53% were for halibut, 24% were for sablefish, 18% were for groundfish, and 6% were for salmon. In addition, residents held 228,323 shares of halibut quota on nine accounts in 2010, compared to 234,999 shares held in 2000. Residents held 257,848 shares of sablefish quota on one account in 2000. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP)

¹⁴⁰ Aleutian Pribilof Island Community Development Association. (n.d.) Retrieved from: <http://apicda.com/>.

¹⁴¹ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

¹⁴² Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

or License Limitation Program (LLP) permits for groundfish or crab. No residents held crab quota between 2010 and when the program began.

In 2010, residents held 7 commercial crew licenses, compared to 19 in 2000. In addition, residents held majority ownership of three vessels that year, compared to six in 2000. Of the CFEC permits held in 2010, 100% were actively fished, compared to 59% in 2000. The only fishery prosecuted by residents of Atka that year was for statewide longline halibut.

In 2010, Atka ranked 41st of 67 communities in terms of total lbs landed and 35th in terms of ex-vessel value of landings. Total lbs landed and ex-vessel value of landings in Atka between 2000 and 2010 are considered confidential, with the exception of 2009 when no landings were reported. Landings reported by Atka residents between 2000 and 2010 are also considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

In a survey conducted by the AFSC in 2011, community leaders reported that between 2005 and 2010, the community did not see a change in the number of commercial vessels or vessels smaller than 60 ft visiting Atka. In addition, vessels larger than 60 ft, charter/party boats, and private vessels typically do not visit the community.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Atka: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$5,776	\$20,441	n/a	\$25,989	\$32,795	\$23,169	\$22,350	\$26,085	\$74,740	\$15,181	\$26,000
Shared Fisheries Business Tax ¹	\$105,484	\$102,961	\$124,299	\$108,606	\$123,586	\$148,210	\$146,589	\$141,586	\$127,498	\$138,302	\$180,824
Fisheries Resource Landing Tax ¹	\$26,598	\$41,259	\$46,089	\$33,872	\$34,767	\$70,807	\$82,080	\$158,278	\$101,137	\$142,545	\$201,634
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$6,150	\$7,000	\$5,400	\$5,200	\$4,000	\$10,000	\$6,000	\$6,300	\$6,000	\$36,828	\$40,900
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries- related revenue⁴</i>	<i>\$144,007</i>	<i>\$171,661</i>	<i>\$175,788</i>	<i>\$173,667</i>	<i>\$195,148</i>	<i>\$252,186</i>	<i>\$257,019</i>	<i>\$332,249</i>	<i>\$309,374</i>	<i>\$332,856</i>	<i>\$449,358</i>
<i>Total municipal revenue⁵</i>	<i>\$243,643</i>	<i>\$249,155</i>	<i>\$306,036</i>	<i>\$245,396</i>	<i>\$301,820</i>	<i>\$288,960</i>	<i>\$306,160</i>	<i>\$418,695</i>	<i>\$693,672</i>	<i>\$736,251</i>	<i>\$833,779</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Atka: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	9	9	8	6	7	6	3	7	4	2	4
	Fished permits	7	6	6	5	5	4	3	7	4	1	4
	% of permits fished	78%	67%	75%	83%	71%	67%	100%	100%	100%	50%	100%
	Total permit holders	9	9	8	6	7	6	3	7	4	2	4
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Atka: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	4	5	1	4	5	4	1	2	2	0	0
	Fished permits	3	4	0	3	3	3	0	1	1	0	0
	% of permits fished	75%	80%	0%	75%	60%	75%	0%	50%	50%	n/a	n/a
	Total permit holders	4	5	1	4	5	4	1	2	2	0	0
Groundfish (CFEC) ²	Total permits	3	2	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	3	2	1	1	1	1	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	1	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	1	1	1	1	1	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>17</i>	<i>17</i>	<i>11</i>	<i>12</i>	<i>14</i>	<i>12</i>	<i>4</i>	<i>9</i>	<i>6</i>	<i>2</i>	<i>4</i>
	<i>Fished permits</i>	<i>10</i>	<i>10</i>	<i>6</i>	<i>8</i>	<i>8</i>	<i>7</i>	<i>3</i>	<i>8</i>	<i>5</i>	<i>1</i>	<i>4</i>
	<i>% of permits fished</i>	<i>59%</i>	<i>59%</i>	<i>55%</i>	<i>67%</i>	<i>57%</i>	<i>58%</i>	<i>75%</i>	<i>89%</i>	<i>83%</i>	<i>50%</i>	<i>100%</i>
	<i>Permit holders</i>	<i>9</i>	<i>9</i>	<i>8</i>	<i>6</i>	<i>7</i>	<i>6</i>	<i>3</i>	<i>7</i>	<i>4</i>	<i>2</i>	<i>4</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Atka: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Atka ²	Total Net Lbs Landed In Atka ^{2,5}	Total Ex-Vessel Value Of Landings In Atka ^{2,5}
2000	19	1	1	6	6	10	--	--
2001	17	1	1	5	5	9	--	--
2002	3	2	1	4	4	9	--	--
2003	10	2	1	3	2	7	--	--
2004	9	2	1	3	2	6	--	--
2005	3	1	1	3	2	5	--	--
2006	2	1	1	2	2	7	--	--
2007	7	1	1	2	2	6	--	--
2008	10	1	1	2	3	6	--	--
2009	2	0	1	1	2	0	--	--
2010	7	1	1	3	4	10	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Atka: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	9	234,999	83,584
2001	9	125,230	52,933
2002	9	212,209	76,419
2003	9	211,952	76,333
2004	9	211,952	51,316
2005	9	211,952	41,282
2006	9	211,952	30,517
2007	9	215,775	26,788
2008	9	215,775	34,592
2009	9	228,323	36,791
2010	9	228,323	42,487

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Atka: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	257,848	25,961
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Atka: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Atka: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Atka Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing by non-Alaska resident anglers is limited in Atka due to its remote location. No sportfishing licenses were sold in the community between 2000 and 2010. In addition, no sport fish guide businesses were registered to be active in the community during that time. Only three Atka residents held sportfishing licenses in 2010.

Atka is located in the Aleutian Islands ADF&G Harvest Survey Area, which includes all Alaskan waters, including drainages, between Cape Douglas and the community of Naknek. In 2010, angler days fished totaled 5,297 for saltwater fisheries and 33,635 for freshwater fisheries. In that year, non-Alaska resident anglers accounted for 38.4% of saltwater and 58.4% of freshwater angler days fished, compared to 15.8% and 39.5% in 2000, respectively. Between 2000 and 2010, there were no reports of charter businesses operating within Atka.

According to a survey conducted by the AFSC in 2011, community leaders reported that species targeted by shore-based and private vessel based anglers include all five species of Pacific

salmon, halibut, rockfish, and clams. Information regarding recreational fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Atka: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Atka ²
2000	0	0	3	0
2001	0	0	0	0
2002	0	0	6	0
2003	0	0	2	0
2004	0	0	1	0
2005	0	0	1	0
2006	0	0	4	0
2007	0	0	2	0
2008	0	0	1	0
2009	0	0	3	0
2010	0	0	3	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September

Subsistence Fishing

Salmon, halibut, and cod have been important subsistence resources in the Aleutian Islands for thousands of years. On average, Aleutian Island households harvest 1,292 lbs of fish, game, wild plants, and marine mammals each year.¹⁴³

According to 2005 interviews conducted by the U.S. Fish and Wildlife Service (USFWS),¹⁴⁴ the community historically harvested sockeye salmon at Korovin Bay during the summer. In the past, community members would set up camps and traps on the shore until USFWS shut them down around 1949. Another fish trap was built in 1991 and used for several years but was abandoned when subsistence users switched to gill nets. Elders reported that sockeye salmon were abundant in Korovin Lake and that in some years the lake filled to capacity. Some people in Atka travel west to Adak in private vessels to troll for Chinook salmon. Nuclear tests on Amchitka Island are perceived by many subsistence users to have been seriously detrimental to the fish in the region.

In a survey conducted by the AFSC in 2011, community leaders reported that Atka residents harvest fish, hunt marine and terrestrial birds and mammals, and gather local vegetation for subsistence purposes. In addition, a reindeer herd is maintained on Atka Island as a local source of meat. Information provided by the ADF&G is limited and data on household subsistence participation and subsistence salmon harvests are not available.

According to the ADF&G *Community Subsistence Information System*,¹⁴⁵ species which residents of Atka have used and/or harvested include chitons, mussels, butter clams, cockles, Dungeness crab, hair crab, horse clams, limpets, octopus, Pacific littleneck clams, pinkneck clams, razor clams, rock jingles, scallops, sea anemone, sea cucumber, sea urchin, shrimp, snails, squid, Tanner crab, king crab, fur seal, harbor seal, ringed seal Steller sea lion, whale, arrowtooth flounder, Atka mackerel, black rockfish, brook trout, sculpin, Dolly Varden, Arctic grayling, greenling roe, herring (roe and food/bait), lingcod, mahi mahi, Pacific cod, rainbow trout, Irish lord, red rockfish, sablefish, steelhead, swordfish, sole, shark, tuna, and walleye pollock. In 2010, 1 resident held a Subsistence Halibut Registration Certificate (SHARC), although there were no reported harvests between 2006 and 2010. In 2008, an estimated 7,000 lbs of marine mammals were harvested, a significant increase from 2000 when an estimated 942 lbs were harvested. Marine mammal harvests peaked in 2003 at an estimated 16,986 lbs harvested. Between 2000 and 2008, an estimated 503 marine mammals were harvested. Data regarding sea lion and seal harvests are unavailable. Information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that expanding the community's seafood processor is one of the current challenges for the portion of Atka's

¹⁴³ U.S. Fish and Wildlife Service. (2005). *Subsistence Fisheries Harvest Assessment and Traditional Ecological Knowledge, Lower Alaska Peninsula and Aleutian Islands*. Retrieved June 13, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/02-032Final.pdf>.

¹⁴⁴ Ibid.

¹⁴⁵ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

economy that is based on fishing. In addition, above all other management actions the creation of the CDQ program has had the greatest impact on the community.

Table 12. Subsistence Participation by Household and Species, Atka: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Atka: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Atka: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	13	4	1,625
2004	13	9	1,032
2005	12	4	795
2006	4	n/a	n/a
2007	4	n/a	n/a
2008	3	n/a	n/a
2009	3	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Atka: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	1	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Cold Bay



People and Place

*Location*¹⁴⁶

Cold Bay is located in the Izembek National Wildlife Refuge (NWR) at the western end of the Alaska Peninsula. It lies 634 mi. southwest of Anchorage and 180 mi northeast of Unalaska. The area encompasses 54.4 sq mi of land and 16.6 sq mi of water. It was incorporated as a Second-class city in 1982 and is under the jurisdiction of the Aleutians East Borough.

*Demographic Profile*¹⁴⁷

In 2010, there were 108 residents, ranking Cold Bay 240th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 27%. Between 2000 and 2009, the population declined by 4.55% with an average annual growth rate of -3.31%, which was much lower than the statewide average of 0.75% and reflective of the steep decline following a population spike in 2002. In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were an estimated 60 permanent residents living in Cold Bay in 2010. The community's population reaches its annual peak in September and is somewhat driven by employment in fishing sectors. Information regarding population trends can be found in Table 1.

The racial and ethnic composition of Cold Bay is relatively mixed, with the majority of residents (74.1%) identifying themselves as White in 2010, compared to 71.6% in 2000. Also in that year, 12.0% of residents identified themselves as American Indian or Alaska Native, compared to 17.0% in 2000; 1.9% identified themselves as Black or African American, compared to 3.4% in 2000; 1.9% identified themselves as Asian, compared to 4.5% in 2000; 9.3% identified themselves as two or more races, compared to 1.1% in 2000; and 0.9% identified themselves as some other race, compared to 0.0% in 2000. In addition, 4.6% of residents identified themselves as Hispanic or Latino in 2010, compared to 2.4% in 2000. Racial and ethnic composition remained somewhat unchanged between 2000 and 2010. Information regarding trends in race and ethnicity in Cold Bay can be found in Figure 1.

In 2010, the average household size was 2.33, compared to 2.7 in 1990 and 2.28 in 2000. In that year, there were 82 total housing units, compared to 73 in 1990 and 98 in 2000. Of the households surveyed in 2010, 6% were owner-occupied, compared to 3% in 2000; 50% were renter-occupied, compared to 34% in 2000; 7% were vacant, compared to 46% in 2000; and 37% were occupied seasonally, compared to 17% in 2000. In 2010 there was one person living in group quarters, compared to six in 2000.

¹⁴⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Gender distribution in Cold Bay was skewed in 2010 at 61.2% male and 38.8% female. This was significantly less even than the statewide distribution (52% male, 48% female), and slightly more even than the 2000 distribution (64.7% male, 35.3% female). The median age that year was 44.8 years, which was significantly older than the statewide median of 33.8 years and 2000 median of 34 years.

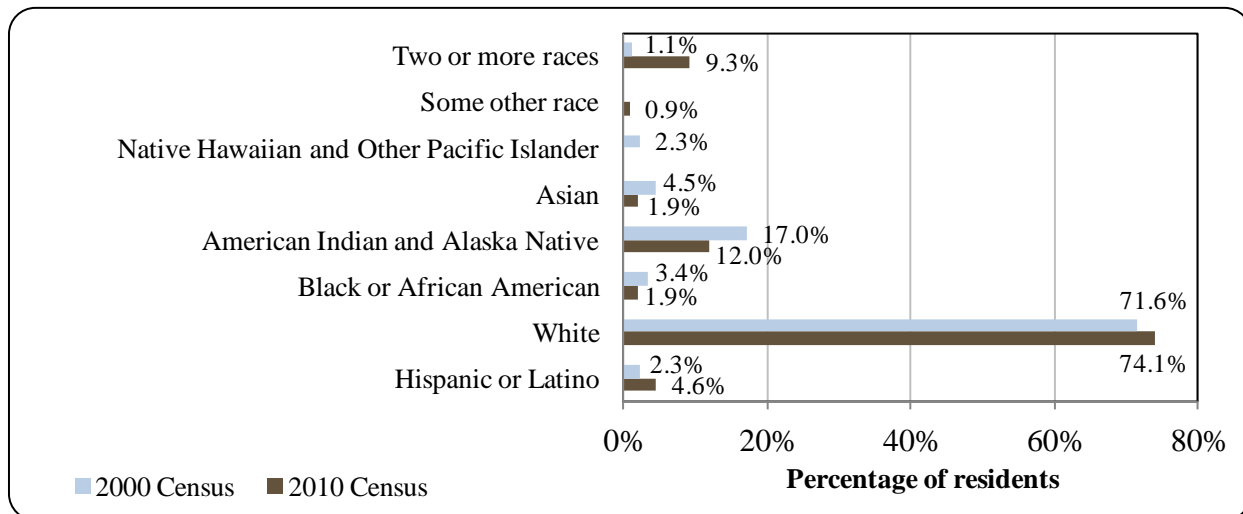
Table 1. Population in Cold Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	148	-
2000	88	-
2001	-	75
2002	-	117
2003	-	95
2004	-	89
2005	-	89
2006	-	87
2007	-	72
2008	-	89
2009	-	84
2010	108	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

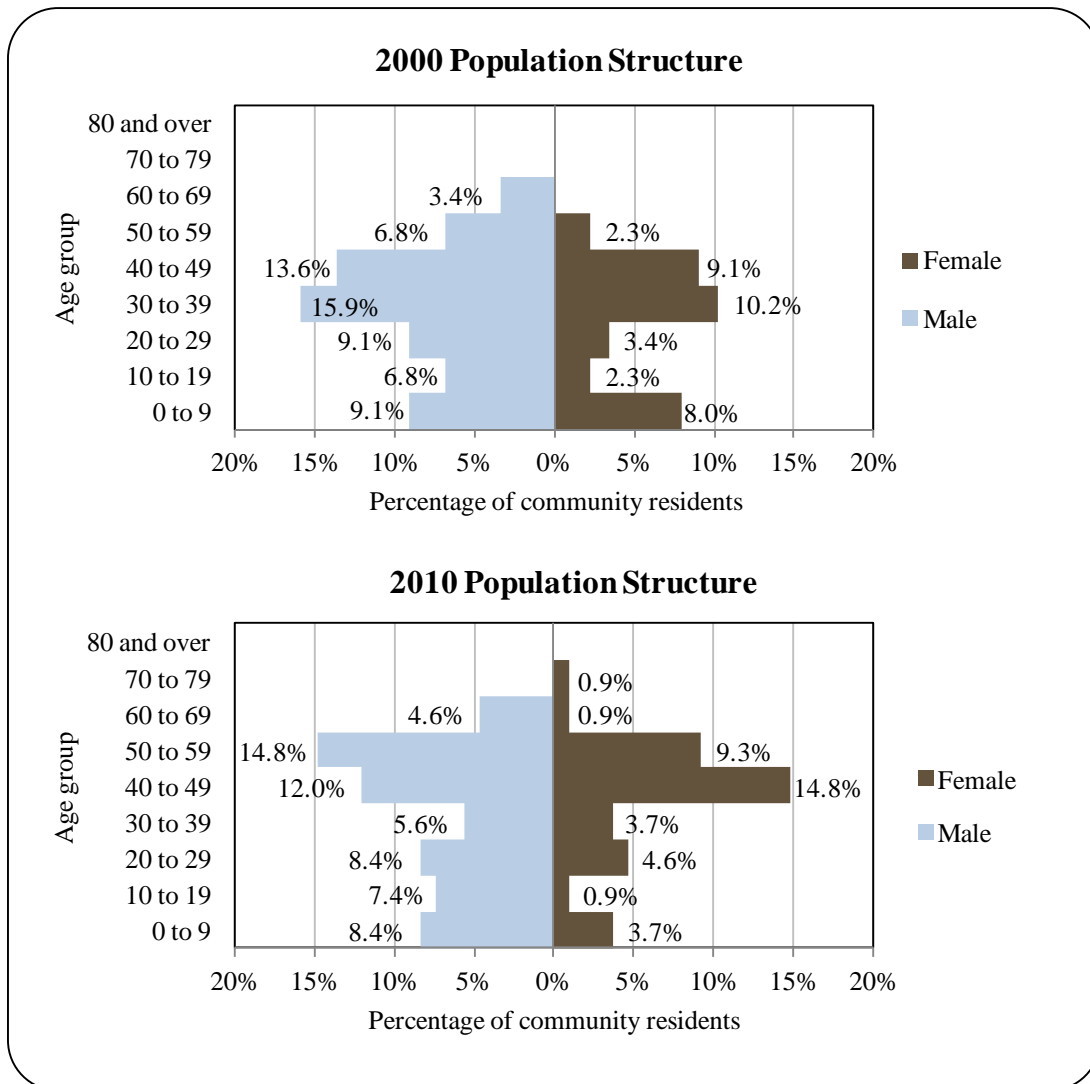
Figure 1. Racial and Ethnic Composition, Cold Bay: 2000-2010 (U.S. Census).



The population structure in 2010 was slightly more constricted than it was in 2000 as the population aged. In that year, 20.4% of residents were under the age of 20, compared to 26.2% in 2000; 6.4% were over the age of 59, compared to 3.4% in 2000; 60.7% were between the ages of 30 and 59, compared to 57.9% in 2000; and 13.0% were between the ages of 20 and 29, compared to 12.5% in 2000.

Overall gender distribution by age cohort was about the same in both 2000 and 2010. In 2010, the greatest absolute gender difference occurred within the 10 to 19 range (7.4% male, 0.9% female), followed by the 50 to 59 (14.8% male, 9.3% female) and 0 to 9 (8.4% male, 3.7% female) ranges. Of those three, the greatest relative gender difference occurred within the 10 to 19 range. Information regarding trends in Cold Bay’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Cold Bay Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹⁴⁸ estimated that 100% of residents aged 25 years and higher held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. In this same time period, an estimated 25% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; and estimated 20% had an Associate's degree, compared to an estimated 8% of Alaska residents overall; and an estimated 35% of residents had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall. No residents were estimated to hold a graduate or professional degree between 2000 and 2010.

History, Traditional Knowledge, and Culture

Archaeological sites dating to the last ice age indicate the area around Cold Bay was once inhabited by a large Eastern Aleut population.¹⁴⁹ Additional archaeological data indicates that the first inhabitants of the area may have arrived approximately 6,000 years ago. The first historic record of the area is from 1827, when the Russian captain Count Feodor Petrovich Lutke named the largest lagoon to the north of Cold Bay after his surgeon, Karl Izembek. Additional features in the area were also named after crew aboard the Russian sloop "Moller," including Moffet Lagoon and Cape Glazenap. During World War II, the U.S. military established a base at Cold Bay, staffing it with 40,000 soldiers during its lifetime. At its peak, Cold Bay was home to approximately 9,000 military personnel (although estimates have gone as high as 60,000). By 1942, the base supported military aircraft, communications equipment, and other facilities. The military facilities were abandoned in 1950; however, the U.S. Air Force did maintain a presence in support of a Distant Early Warning Station built at Grant Point in 1958. In that year, the Federal Aviation Administration (FAA) established facilities at Outer Marker Road, and the remainder of the military land was transferred to the FAA and Bureau of Land Management (BLM) in 1961. The Izembek NWR was established in 1960 and the Izembek State Game Refuge in 1971.¹⁵⁰

Natural Resources and Environment

The community has a maritime climate, with temperatures ranging from 25 to 60 °F (-4 to 16 °C). The average annual rainfall is 36 inches, and average annual snowfall is 55 inches. Wind speeds of 30 mph are common for Cold Bay.¹⁵¹

Cold Bay resides in the Izembek NWR, which was designated a Globally Important Bird Area in 2001.¹⁵² The local surface geology consists primarily of glacial outwash and alluvium

¹⁴⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁴⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁰ Alaska Department of Fish and Game. (2010). *Izembek State Game Refuge Management Plan*. Retrieved February 16, 2012 from: http://www.adfg.alaska.gov/static/lands/protectedareas/_management_plans/izembek_plan.pdf.

¹⁵¹ See footnote 149.

¹⁵² U.S. Fish and Wildlife Service. (n.d.). *Izembek National Wildlife Refuge*. Retrieved February 16, 2012 from: <http://izembek.fws.gov/wildland.htm>.

consistent with coastal plains in the region. The lagoons to the north of Cold Bay are thought to have formed by emerging coastlines formed from tectonic activity, wind, and offshore currents. Lowland areas are commonly made up of volcanic ash, unconsolidated sands, silts, and gravel. Upland soils mostly consist of volcanic ash. Organic soils consist of sedge peat and moss.¹⁵³ Vegetation is limited due to unproductive shallow or poorly drained soils. Vegetation types are consistent with low shrub tundra, wetlands, and moist herbaceous meadows. There are scattered alder stands in mid-slope areas east of Cold Bay.¹⁵⁴ Terrestrial wildlife present in the area include brown bears, caribou, moose, wolverine, red foxes, river otters, wolves, mink, porcupine, hares, shrews, voles, lemmings, mice, and ground squirrels. Local fish include all five species of Pacific salmon, Arctic char, Dolly Varden, stickleback, steelhead trout, Pacific sand lance, yellowfin sole, sculpin, turbot, smelt, greenling, cod, whitefish, and herring. Marine mammals present in the area include sea otters, northern fur seals, walrus, harbor seals, mink whales, killer whales, gray whales, and Steller sea lions. There are also approximately 80 species of birds that frequent the area as well.¹⁵⁵

Localized mineral resources include titanium sands, iron, and gold concentrations in the Moffet Lagoon and Moffet Point areas. However, mineral prospecting in the Izembek NWR is advised against. In addition, the 2005 Bristol Bay Area Plan designated tidelands adjacent to the Izembek NWR off-limits to new mineral prospects. Uplands are closed to mining or mineral entry under federal law and currently development can only be approved offshore. Cold Bay is located close to oil and gas exploration areas of interest, although of the 26 test wells drilled around the Alaska Peninsula between 1902 and 1985, none produced commercially viable quantities of either. However, there are several coal bed methane sites which could prove viable in the future.¹⁵⁶

Cold Bay is susceptible to natural hazards including earthquakes, volcanoes, tsunamis, and severe weather events. According to the *Aleutians East Multi-Jurisdictional, Multi-Hazards Mitigation Plan*, damage from an earthquake, volcanic eruption, or tsunami would be critical with a projected 25% of critical facilities damaged or destroyed. Severe weather events could result in limited damage, and would not likely result in severe casualties or extensive damage to infrastructure. There is a high probability of an earthquake or volcanic event occurring, while the probability of a tsunami or severe weather event is moderate.¹⁵⁷

The Alaska Department of Environmental Conservation is in the process of cleaning up contaminants left from the now defunct Fort Randall. During World War II, the military base was consistently supplied with 4,000 to 5,000 fifty-five gal drums containing heating oil, lubricants, solvents, pesticides, and volatile fuels. In 1998, 2,138 buried drums were removed from a disposal area, and in 2001 approximately 4,760 cubic yards of contaminated soil were

¹⁵³ See footnote 150.

¹⁵⁴ U.S. Fish and Wildlife Service. (2004). *Impact Analysis of Off-Road Vehicle Use for Subsistence Purposes on Refuge Land and Resources Adjacent to the King Cove Access Project*. Retrieved February 16, 2012 from: <http://izembek.fws.gov/pdf/impanalysis.pdf>.

¹⁵⁵ See footnote 150.

¹⁵⁶ Ibid.

¹⁵⁷ WHPacific. (2010). *Communities of the Aleutians East Borough Multi-Jurisdictional Multi-Hazards Mitigation Plan*. Retrieved February 16, 2012 from: <http://www.aleutianseast.org/vertical/Sites/%7BEBDABE05-9D39-4ED4-98D4-908383A7714A%7D/uploads/%7B5F7E9057-83A3-4DBA-B144-073C3F6461D6%7D.PDF>.

treated and backfilled. Other cleanup projects in the area include asphalt seeps and underground fuel tank leaks near the airport.¹⁵⁸

Current Economy¹⁵⁹

Cold Bay's local economy is complex and tied to the region as a whole. Although a federal presence has been reduced greatly following the closing of Fort Randall, the state owned airstrip remains an active resupply and emergency stop for air traffic crossing the Pacific Ocean. The deep water port has the potential to be developed into a regional center as well. The Izembek NWR provides recreational opportunities for bird and hunting enthusiasts, and tourism is a top development priority in Cold Bay. Finally, Cold Bay is part of a commercial fishing network connecting King Cove, Sand Point, and False Pass. However, in a survey conducted by the AFSC in 2011, community leaders reported that there is not a fishing industry in Cold Bay. There have been efforts towards economic diversification in the region following the Bristol Bay commercial salmon crash of the late 1990s, and because of the city's past reliance on federal employment.¹⁶⁰ Top employers in 2010¹⁶¹ included Peninsula Airways, State of Alaska, City of Cold Bay, Aleutians East Borough School District, G&K Inc., Eastern Aleutian Tribes Inc., Frosty Fuels LLC, CK Enterprises LLC, and Aleutians East Borough.

In 2010,¹⁶² the estimated per capita income was \$26,136 and the estimated median household income was \$44,167, compared to \$20,037 and \$55,750 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,¹⁶³ the real per capita income (\$26,358) and real median household income (\$73,310) indicate that while individual earnings remained relatively unchanged, household earnings decreased significantly. In 2010, Cold Bay ranked 94th of 305 Alaskan communities from which per capita income was estimated, but only 166th of 299 Alaskan communities for from which median household income was estimated.

Cold Bay's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁶⁴ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$1.48 million in total wages in 2010.¹⁶⁵ When matched with the population in 2010, the per capita income equals \$13,720, which is significantly less than the 2010 ACS estimate, suggesting that caution should be used when comparing 2010 ACS and 2000 Census figures.¹⁶⁶ It should be noted that ALARI and

¹⁵⁸ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved February 16, 2012 from: <http://www.dec.state.ak.us/spar/csp/sites/coldbayfr.htm>.

¹⁵⁹ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁶⁰ Stadum Group. (1999). *Overall Economic Development Plan*. Retrieved February 16, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Cold%20Bay-VP-1999.pdf>.

¹⁶¹ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹⁶² U.S. Census American Community Survey 2006-10 Estimates.

¹⁶³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁶⁴ See footnote 148.

¹⁶⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁶⁶ See footnote 161.

Census income figures are based on wage earnings and do not take into account the value of subsistence to the community.

According to 2006 to 2010 estimates,¹⁶⁷ 65% of residents aged 16 years or older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 0.0%, compared to 5.9% statewide; and an estimated 8.3% of residents were living below the poverty line, compared to 9.5% statewide. Because of Cold Bay's small population size, it is possible that the 2010 ACS misrepresented local unemployment. The 2010 ALARI database estimated that, based on unemployment insurance claimants, the unemployment rate was 8.3%.¹⁶⁸

Of those employed in 2010, an estimated 61.5% worked in the public sector, while an estimated 38.5% worked in the private sector. By industry, most (53.8%) were estimated to be working in public administration sectors in that year; followed by wholesale trade sectors (23.1%), transportation, warehousing, and utilities sectors (15.4%), and professional, scientific, management, administrative, and waste management sectors (7.7%). By occupation type, most (38.5%) were estimated hold sales or office positions, followed by management or professional positions (30.8%), natural resource, transportation, or material moving positions (15.4%), and service positions (15.4%). Overall, the 2006-10 ACS purported a strong shift towards public administration and wholesale trade sectors between 2000 and 2010. However, it should be noted that sampling techniques may not have captured the true scope of industry representation. This may account for the apparent reduction in economic diversity in those years. According to 2010 ALARI estimates, most (26.8%) employed residents worked in trade, transportation, and utilities sectors; followed by local government sectors (26.8%); and state government sectors (12.2%). Information regarding employment trends can be found in Figures 3 and 4.

No individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

¹⁶⁷ See footnote 148.

¹⁶⁸ See footnote 161.

Figure 3. Local Employment by Industry in 2000-2010, Cold Bay (U.S. Census).

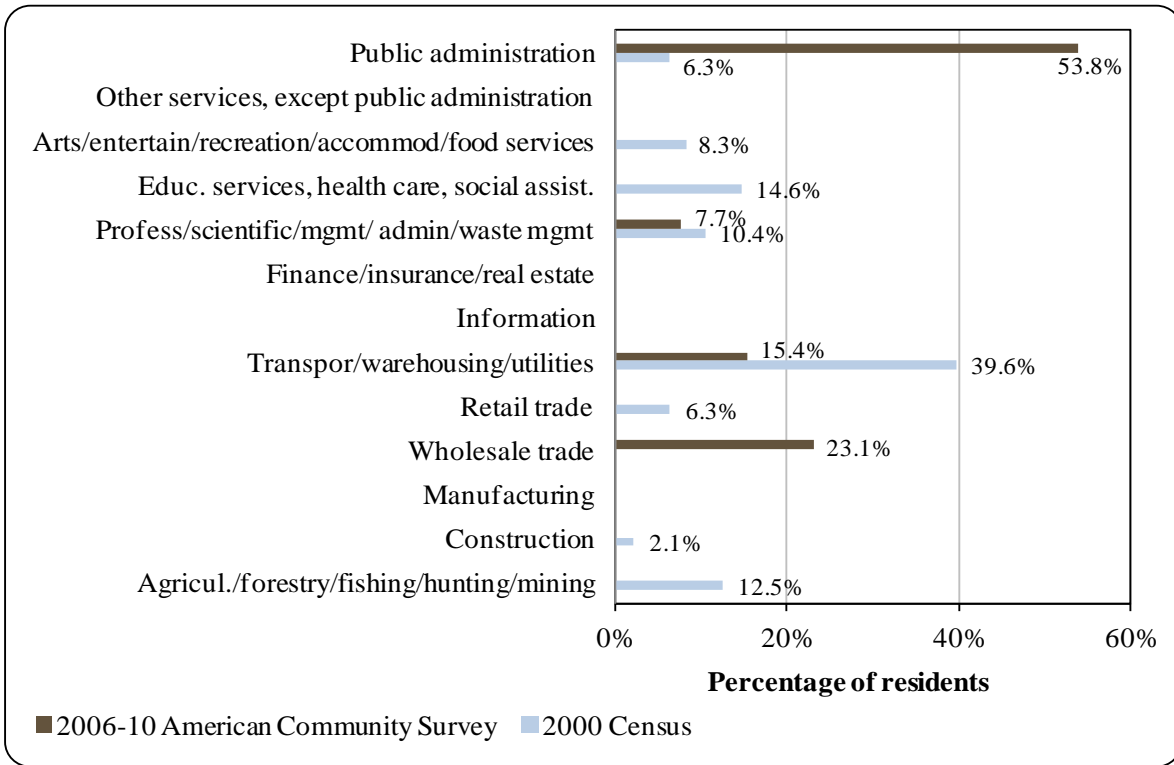
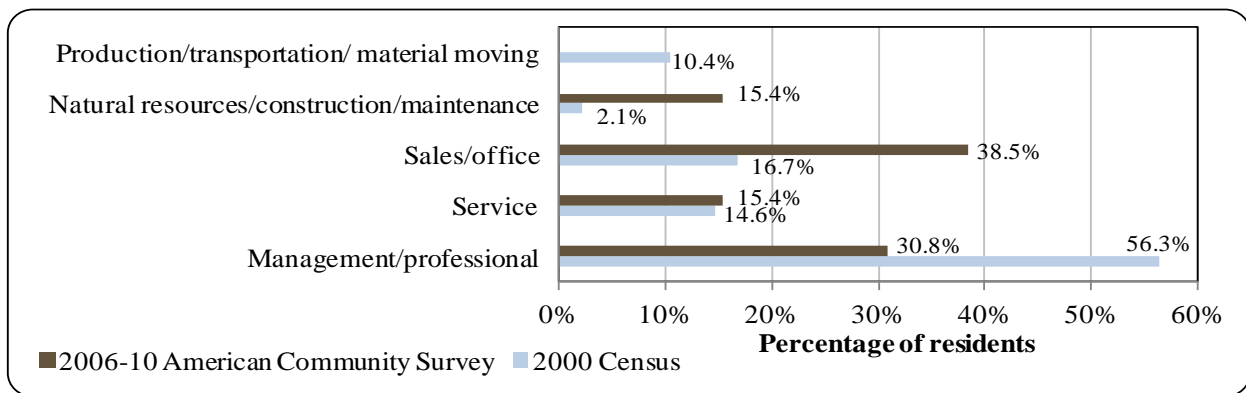


Figure 4. Local employment by occupation in 2000-2010, Cold Bay (U.S. Census).



Governance

Cold Bay is a Second-class city with a mayoral form of government. The community was not included in the Alaskan Native Claims Settlement Act (ANCSA) and does not have a federally recognized Tribal government. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services (BCIS) offices are located in Unalaska, 179 mi southwest. There is a seasonally operated Alaska Department of Fish and Game (ADF&G) office located in the community, which is open during summer months. The closest permanent ADF&G office is located in Sand Point, 90 mi to the east.

Taxes administered by the city in 2010 included a 10% accommodations tax and \$0.04 per gallon fuel tax. The borough administers a 2% raw fish tax. When adjusted for inflation,¹⁶⁹ total municipal revenues increased 100.2% between 2000 and 2010 from \$248,547 to \$643,343. In 2010, most locally generated revenues were collected from utilities rents and local tax revenues. In addition, \$171,324 was collected that year from insurance reimbursements for dock repairs. Most outside revenues were generated from Community Revenue Sharing and raw fish tax refunds. In that year, Cold Bay received \$100,591 in state allocated Community Revenue Sharing, which accounted for 15.6% of the municipal budget. This was a proportional increase from 2000, when \$29,470 in State Revenue Sharing accounted for 11.9% of the municipal budget. Fisheries-related state and federal grants received by the City included a \$26,316 for a state matching grant for the city dock and \$25,000 for construction of dockside electrical utilities. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Cold Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$248,547	n/a	\$29,470	\$51,316
2001	\$259,540	n/a	n/a	n/a
2002	\$439,345	n/a	\$26,000	n/a
2003	\$603,171	n/a	\$28,500	n/a
2004	\$358,583	n/a	-	n/a
2005	\$349,769	n/a	-	n/a
2006	\$395,600	n/a	-	n/a
2007	\$418,382	n/a	-	n/a
2008	\$662,862	n/a	-	n/a
2009	\$607,546	n/a	\$99,711	n/a
2010	\$643,343	n/a	\$100,591	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁶⁹ Inflation calculated using the 2010 Anchorage CPI from the Alaska Department of Labor: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

Connectivity and Transportation

A state-owned 10,415-ft long by 150-ft wide paved and lighted runway with a 6,235-ft long by 150-ft wide paved crosswind runway, an FAA flight service station, and a seaplane base are available. Cold Bay is a regional transportation center and provides scheduled flights to surrounding communities. The community has a dock but wants to develop a breakwater, boat harbor, and boat launch. Marine cargo services are available monthly from Seattle, but not from Anchorage. The state ferry operates bi-monthly from Kodiak to Cold Bay between May and October. There are approximately 40 mi. of local gravel roads.¹⁷⁰ In 2009, a new Public Lands Bill was signed into law that could allow for the construction of an access road connecting Cold Bay and King Cove in exchange for expansions of the Izembek NWR.¹⁷¹ The price for roundtrip airfare between Cold Bay and Anchorage in June 2012 was \$831.¹⁷²

Facilities

Water is supplied to the community by one well and stored in a 213,000-gal tank. Most residents are connected to a piped water and sewer system. A few homes have individual wells and septic systems. The sewage treatment plant can process up to 45,000 gal a day. Residents transport their own refuse to the landfill, located 1.5 mi north of the community.¹⁷³ In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed since 2000 or under development include a fish cleaning station, dockside electrical and water utilities, dock improvements, broadband internet access, road improvements, water treatment facilities, landfill improvements, community center improvements, school improvements, telephone service, and post office improvements. There is 650 ft of dock space for transient moorage; however, there is no space available for permanent moorage. Vessels up to 320 ft long can use moorage in Cold Bay. Cold Bay facilities can accommodate the following Coast Guard regulated vessels, rescue vessels, cruise ships, ferries, and fuel barges. The community currently lacks a harbor or breakwater, although there are plans for future development. Fisheries-related businesses and services located in the community include fishing gear sales, small vessel (less than 60 tons) haulout facilities, tackle sales, recreational fishing vessel moorage, bait sales, fish lodges, and boat fuel sales. Residents of Cold Bay typically go to Unalaska, King Cove, and Sandpoint for fisheries-related services and businesses that are not available locally. Public services available in the community include medical services and a public library. Visitor accommodations include the Cold Bay Lodge, Bayview Bed and Breakfast, and the Bearfoot Inn. Public safety services are provided by local State Troopers. Fire and rescue services are provided by the Alaska Department of Transportation and Cold Bay Fire and Rescue.¹⁷⁴

¹⁷⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷¹ Aleutians East Borough. (n.d.). Retrieved February 17, 2012 from: http://www.aleutianseast.org/index.asp?Type=B_BASIC&SEC={F01C70F6-028E-4181-83DD-90BC0F27E9FE}.

¹⁷² Airfare was calculated using lowest fare from www.orbitz.com. (Retrieved November 22, 2011).

¹⁷³ See footnote 170.

¹⁷⁴ Ibid.

*Medical Services*¹⁷⁵

Anna Livingston Memorial Clinic provides general healthcare and is a Community Health Aid Program site. Nearby King Cove Medical Clinic is a qualified Emergency Care Center.

*Educational Opportunities*¹⁷⁶

Cold Bay School offers preschool through twelfth grade instruction. As of 2011, there were 13 students enrolled and two teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Previous to Alaska's purchase in 1867, American schooners were fishing for cod in the Aleutian Islands and Okhotsk Sea regions. By the end of the nineteenth century, salmon canneries were being established in western Alaska and on the eastern portion of the Alaska Peninsula. No large-scale commercial seafood processing operation was undertaken in the Aleutian area during those years however. In 1916, Pacific American Fisheries, Inc. established a cannery at Makushin Bay, Unalaska. In those days, adverse weather conditions typically kept the small seine fleet close to Unalaska and Umnak islands. Following the 1924 White Act, newly protected fisheries began to proliferate throughout the Aleutian region. The implementation of a 1928 Executive Order removed Akun, Akutan, Tigalda, Umnak, and Unalaska Islands from an earlier established wildlife reserve, opening up further opportunities. The International Packing Company fished the Aleutian area between 1924 and 1942 and operated a floating processor in the regional through 1941. Pink, sockeye, and chum salmon were popular species.¹⁷⁷

Popular commercial fisheries within the Bering Sea and Aleutian Islands Management Area include red king crab, snow crab, walleye pollock, golden king crab, Tanner crab, weathervane scallops, Dungeness crab, Pacific cod, flatfish, sablefish, Pacific salmon, Pacific herring, and halibut. Aerial surveys of Pacific herring biomass began in the Alaska Peninsula and Aleutian Islands region in 1979, when large congregations of herring were documented in coastal waters between Adak and Port Heiden. No herring sac roe harvests have occurred within the Aleutian Islands region due to lack of interest. Herring food and bait fisheries began in the Eastern Aleutian Islands area in 1929, occurring intermittently until 1981, when a Dutch Harbor food and bait fishery began operating annually. In 2004, an exploratory herring fishery was established in the vicinity of Adak Island. This fishery has attracted very little interest, and no harvests have occurred since it was established.¹⁷⁸

¹⁷⁵ Ibid.

¹⁷⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁷⁷ Atkinson, C.E. (n.d.). A Brief Review of the Salmon Fishery in the Aleutian Islands Region. Retrieved May 20, 2012 from: [http://www.npafc.org/new/inpfc/INPFC%20Bulletin/Bull%20No.1/Bull1%20p93-104%20\(Atkinson\).pdf](http://www.npafc.org/new/inpfc/INPFC%20Bulletin/Bull%20No.1/Bull1%20p93-104%20(Atkinson).pdf).

¹⁷⁸ Bernard, A. C. (2011). *Alaska Peninsula-Aleutian Islands Management Area Herring Sc Roe and Food and Bait Fisheries: Annual Management Report 2010*. Alaska Department of Fish and Game. Fishery Management Report No. 11-06. Retrieved February 4, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-06.pdf>.

Groundfish were first commercially harvested in the Bering Sea and Aleutian Islands (BSAI) region in 1864, when a single schooner fished for Pacific cod in the Bering Sea. Most fishing effort during the early cod fishery was concentrated north of Unimak Island and the Alaska Peninsula. Pacific halibut was commercially harvested within the region as early as the late 1800s as well; however, halibut did not reach North American markets until 1928. Foreign fleets had a large presence within the BSAI region throughout much of the twentieth century, targeting pollock, sablefish, turbot, perch, and other groundfish. Foreign fleets were phased out during the 1980s as fishing fleets became increasingly “Americanized.” Today, walleye pollock is the largest groundfish fishery in the BSAI region in terms of lbs landed and ex-vessel value. Pacific cod is the second largest fishery, followed by various flatfish including arrowtooth flounder, rock sole, and yellowfin sole. Other important commercial species include sablefish, rockfish, and Atka mackerel.¹⁷⁹

Cold Bay’s history is associated with its establishment as a military base; therefore, there was very little historical participation in North Pacific Fisheries. The community’s efforts to diversify its economy following the closure of the military base included commercial fishing as residents began participating in salmon, halibut, and groundfish fisheries. However, in a survey conducted by the AFSC in 2011, community leaders reported that no commercial fishing vessels use Cold Bay as a base of operations during fishing seasons and most residents likely fish out of King Cove. In addition, the community does not participate actively in the fisheries management process in Alaska. In 2010, Cold Bay became eligible for participation in the Community Quota Entity program. However, it has not yet formed a non-profit entity eligible to purchase quota shares. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.

Cold Bay is located in Federal Reporting Area 610, International Pacific Halibut Commission (IPHC) Regulatory Area 3B, and the Western Gulf of Alaska (GOA) Sablefish Regulatory District.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Cold Bay does not have a registered processing plant. The closest seafood processor is located in King Cove.

¹⁷⁹ North Pacific Fishery Management Council. (2012). *Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area*. Retrieved February 4, 2013 from: <http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/fmp/BSAI/BSAI.pdf>.

Fisheries-Related Revenue

The majority of Cold Bay's fisheries-related revenue comes from port and dock usage fees. Revenues from this source increased steadily from \$6,000 in 2000 to \$34,000 in 2010. Other sources of fisheries-related revenue come from a Shared Fisheries Business Tax and Fisheries Resource Landings Tax. In 2010, the community received \$56,153 in fisheries-related taxes and fees, compared to \$21,433 in 2000. In a survey conducted by the AFSC in 2011, community leaders reported that revenue raised by fisheries-related taxes and fees goes towards port infrastructure projects and maintenance. Information regarding fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 2 residents, or 1.9% of the population, held 4 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 3 residents held 3 CFEC permits. Of the CFEC permits held that year, 50% were for salmon, compared to 100% in 2000; 25% were for groundfish, compared to 0% in 2000; and 25% were for halibut, compared to 0% in 2000. Also in that year, 2 residents held 2 License Limitation Program (LLP) groundfish permits. No residents held Federal Fisheries Permits (FFP) between 2000 and 2010. Residents held 64,445 shares of halibut quota on 1 account between 2006 and 2010. No residents held sablefish or crab quota share between 2010 and when the programs began.

In 2010, 6 residents held commercial crew licenses, compared to 1 in 2000. In addition, residents held majority ownership of 3 vessels, compared 6 in 2000. Of the CFEC permits held that year, 75% were actively fished, compared to 100% in 2000. This varied by fishery from 100% of groundfish and halibut permits, to 50% of salmon permits. Fisheries prosecuted by residents in 2010 included Alaska Peninsula set gillnet salmon, Gulf of Alaska longline miscellaneous saltwater finfish and statewide longline halibut.¹⁸⁰

No landings were reported in the community between 2000 and 2010, although landings were reported by residents. Those landings are considered confidential with the exception of salmon landings in 2001. In that year, residents landed 161,948 lbs of salmon valued at \$79,835 ex-vessel, which amounts to approximately \$0.70 per pound ex-vessel after accounting for inflation¹⁸¹ and without taking species composition into consideration. In a survey conducted by the AFSC in 2011, community leaders reported that an average halibut season lasted July through November, an average coho or sockeye salmon season runs from August through September. Information regarding commercial fisheries trends can be found in Tables 4 through 10.

¹⁸⁰ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁸¹ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics. Retrieved March 15, 2011 from <http://www.bls.gov/ppi/#data>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Cold Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$15,433	\$10,863	\$8,027	\$7,028	\$8,056	\$9,569	\$10,498	\$11,969	\$9,508	\$11,827	\$11,734
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	\$14	\$854	\$629	\$1,468	\$1,001	\$2,538	\$1,731	\$2,813
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$7,606*
Port/dock usage ²	\$6,000	n/a	\$2,500	\$15,000	\$22,200	\$33,000	\$33,000	\$33,000	\$35,000	\$18,375	\$34,000
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$21,433	\$10,863	\$10,527	\$22,042	\$31,110	\$43,198	\$44,966	\$45,971	\$47,046	\$31,933	\$56,153
Total municipal revenue⁵	\$248,547	\$259,540	\$439,345	\$603,171	\$358,583	\$349,769	\$395,600	\$418,382	\$662,862	\$607,549	\$643,343

Note: n/a indicates that no data were reported for that year.

*Source: Alaska Fisheries Science Center 2011 Community Surveys.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Cold Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	2	2	2	2	2
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	2	2	2	2	2
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	1	0	0	1	1	1	1	1	1	1
	Fished permits	0	1	0	0	1	1	1	1	1	1	1
	% of permits fished	n/a	100%	n/a	n/a	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	0	1	0	0	1	1	1	1	1	1	1
Herring (CFEC) ²	Total permits	0	0	0	0	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	1	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Cold Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	1	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	2	0	0	4	1	0	1	1	1	1
	Fished permits	0	0	0	0	2	0	0	0	0	0	1
	% of permits fished	n/a	0%	n/a	n/a	50%	0%	n/a	0%	0%	0%	100%
	Total permit holders	0	1	0	0	1	1	0	1	1	1	1
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	3	4	3	3	4	4	4	4	2	3	2
	Fished permits	3	4	3	3	3	3	2	2	1	1	1
	% of permits fished	100%	100%	100%	100%	75%	75%	50%	50%	50%	33%	50%
	Total permit holders	3	4	3	3	4	4	4	3	2	3	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>3</i>	<i>8</i>	<i>3</i>	<i>3</i>	<i>10</i>	<i>6</i>	<i>5</i>	<i>6</i>	<i>4</i>	<i>5</i>	<i>4</i>
	<i>Fished permits</i>	<i>3</i>	<i>5</i>	<i>3</i>	<i>3</i>	<i>6</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>3</i>
	<i>% of permits fished</i>	<i>100%</i>	<i>63%</i>	<i>100%</i>	<i>100%</i>	<i>60%</i>	<i>67%</i>	<i>60%</i>	<i>50%</i>	<i>50%</i>	<i>40%</i>	<i>75%</i>
	<i>Permit holders</i>	<i>3</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>2</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Cold Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Cold Bay ²	Total Net Lbs Landed In Cold Bay ^{2,5}	Total Ex-Vessel Value Of Landings In Cold Bay ^{2,5}
2000	1	0	0	6	3	0	0	\$0
2001	1	0	0	4	0	0	0	\$0
2002	2	0	0	3	0	0	0	\$0
2003	4	0	0	2	0	0	0	\$0
2004	11	0	0	2	0	0	0	\$0
2005	8	0	0	5	1	0	0	\$0
2006	6	0	0	3	0	0	0	\$0
2007	4	0	0	4	2	0	0	\$0
2008	4	0	0	3	2	0	0	\$0
2009	3	0	0	4	2	0	0	\$0
2010	6	0	0	3	2	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Cold Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	1	64,445	12,898
2007	1	64,445	10,962
2008	1	64,445	12,959
2009	1	64,445	12,959
2010	1	64,445	11,770

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Cold Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Cold Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Cold Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Cold Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	161,948	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	161,948	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	\$79,835	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	\$79,835	--	--	--	--	--	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing has been growing in popularity in Cold Bay as the Izembek NWR continues to draw a diverse range of visitors to the region. While the community's remote location makes travel to Cold Bay costly, the port is capable of handling cruise ships, which visit periodically. In 2010, ADF&G reported there were no active sport fish guide businesses registered within the community, although the Cold Bay Lodge does advertize sportfishing services.¹⁸² Between 2000 and 2010, between 2 and 3 sport fish guide licenses were held in Cold Bay, with the exception of 2008 when only 1 was held. In 2010, residents were sold 62 sportfishing licenses, compared to 57 in 2000; and 72 sportfishing licenses were sold in the community, compared to 82 in 2000. Sportfishing license sales within the community peaked in 2002 at 121.

¹⁸² Cold Bay Lodge. (n.d.). *Homepage*. Retrieved February 17, 2012 from: <http://coldbaylodge.com/default.aspx>.

Cold Bay is located within the Alaska Peninsula and Aleutian Islands ADF&G Harvest Survey Area which includes all Alaskan waters, including drainages, between Cape Douglas and the community of Naknek. In 2010, overall angler days fished totaled 5,297 for saltwater fisheries, compared to 10,534 in 2000; and 33,635 for freshwater fisheries, compared to 44,976 in 2000. In that year, non-Alaska residents accounted for 38.4% of saltwater and 58.4% of freshwater angler days fished, compared to 15.8% and 39.5% in 2000, respectively. According to ADF&G Harvest Survey data, private anglers in Cold Bay target coho, sockeye, pink, and chum salmon, Dolly Varden char, halibut, lingcod, and Pacific cod. There is no kept/released charter information available for Cold Bay. In a survey conducted by the AFSC in 2011, community leaders reported that local recreational anglers on private boats typically target coho and sockeye salmon, and halibut. Information regarding sportfishing trends can be found in Table 11.

Subsistence Fishing

Cold Bay is federally designated as rural, and therefore eligible for subsistence harvesting on federal lands. While there is a grocer available in town, subsistence resources are still relied upon as supplies are limited. In a survey conducted by the AFSC in 2011, community leaders reported that residents rely on halibut, salmon, and waterfowl mostly for subsistence. Subsistence participation data is limited, and information on household participation is unavailable. According to species documented by ADF&G, sockeye salmon are harvested the most by residents, followed by coho, chum, pink, and Chinook salmon (Table 13). In 2008, 489 total salmon were reported harvested, compared to 630 reported in 2000. In 2010, 35 residents were issued Subsistence Halibut Registration Certificates (SHARC), compared to 18 in 2003. In that year, 3,760 lbs of halibut were reported harvested, compared to 2,265 reported in 2003. Reported halibut harvests peaked in 2010. In terms of subsistence marine mammal harvest, sea otters were the only species reported in ADF&G records. In 2007, 5 sea otters were reported harvested, compared to 1 reported in 2000. A total of 9 sea otters have been reported harvested between 2000 and 2010. No data are available regarding Steller sea lion, harbor seal, and spotted seal harvests. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 11. Sport Fishing Trends, Cold Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Cold Bay ²
2000	1	2	57	82
2001	1	2	48	101
2002	1	2	61	121
2003	2	3	52	108
2004	2	3	50	68
2005	1	2	52	88
2006	0	2	54	84
2007	1	2	59	98
2008	1	1	50	89
2009	2	2	58	82
2010	0	3	62	72

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.
<http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Cold Bay: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Cold Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	16	16	n/a	26	50	1	553	n/a	n/a
2001	17	16	n/a	n/a	27	n/a	597	n/a	n/a
2002	21	20	n/a	15	n/a	n/a	497	n/a	n/a
2003	20	15	n/a	13	n/a	1	593	n/a	n/a
2004	24	24	5	23	35	n/a	729	n/a	n/a
2005	29	29	6	2	158	6	501	n/a	n/a
2006	30	26	n/a	25	25	7	601	n/a	n/a
2007	31	27	n/a	2	151	n/a	552	n/a	n/a
2008	29	23	n/a	18	n/a	16	455	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Cold Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	18	13	2,265
2004	17	13	2,711
2005	24	14	2,772
2006	23	17	3,341
2007	28	16	2,060
2008	26	13	1,737
2009	24	15	2,996
2010	35	17	3,760

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Cold Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	1	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	2	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	1	n/a	n/a	n/a	n/a	n/a
2007	n/a	5	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

False Pass



People and Place

*Location*¹⁸³

The community of False Pass is located on the eastern shore of the easternmost Aleutian Island, Unimak, on Isanotski Strait, midway between the Bering Sea and the Gulf of Alaska. Located 646 air mi southwest of Anchorage, False Pass encompasses 26.8 sq mi of land and 41.4 sq mi of water. False Pass was incorporated as a Second-class city in 1990, and is under the jurisdiction of the Aleutians East Borough. It is included in the Aleutian Islands Recording District.

*Demographic Profile*¹⁸⁴

In 2010, there were 35 residents, making False Pass the 311th largest community in Alaska out of 352 total communities. Between 1990 and 2010, the population declined by 48.5%. Between 2000 and 2009, the population fell by 35.9%, with an average annual growth rate of -4.2% indicating a steady rate of decline (Table 1).

False Pass is predominately Unangan. In 2010, 77.1% of residents identified themselves as American Indian or Alaska Native, compared to 62.5% in 2000; 20.0% identified themselves as White, compared to 26.6% in 2000; and 2.9% identified themselves as Asian, compared to 0.0% in 2000. Further information regarding racial and ethnic trends within False Pass can be found in Figure 1.

In 2010, the average household size in False Pass was 2.33, compared to 2.90 in 1990 and 2.91 in 2000. In that year, there were a total of 40 housing units, compared to 36 in 1990 and 40 in 2000. Of the households surveyed in 2010, 20% were owner-occupied, compared to 28% in 2000; 18% were renter-occupied, compared to 28% in 2000; 58% were vacant, compared to 40% in 2000; and 5% were occupied seasonally, compared to 5% in 2000. No residents lived in group quarters between 1990 and 2010.

In 2010, the gender makeup in False Pass was 54.3% male and 45.7% female, which was more uneven than both the statewide distribution (52.0% male, 48.0% female) and distribution in 2000 (50.0% male, 50.0% female). The median age that year was 32.8 years, which was lower than the statewide median of 33.8 years, but higher than the 2000 median of 31.5 years.

False Pass' population structure was irregular in both 2000 and 2010. While this may be attributed to a relatively small population size, it may also point towards a transient and variable population. This is supported by False Pass' role as an operating center for the Bristol Bay and Bering Sea fishing fleets.¹⁸⁵ Because of this, it is difficult to discern a trend in the community's

¹⁸³ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁸⁵ See footnote 183.

population structure. In 2010, 31.5% of residents were under the age of 20, compared to 37.5% in 2000; 20.2% were over the age of 59, compared to 6.3% in 2000; 40.3% were between the ages of 30 and 59, compared to 45.3% in 2000; and 8.7% were between the ages of 20 and 29, compared to 11.0% in 2000.

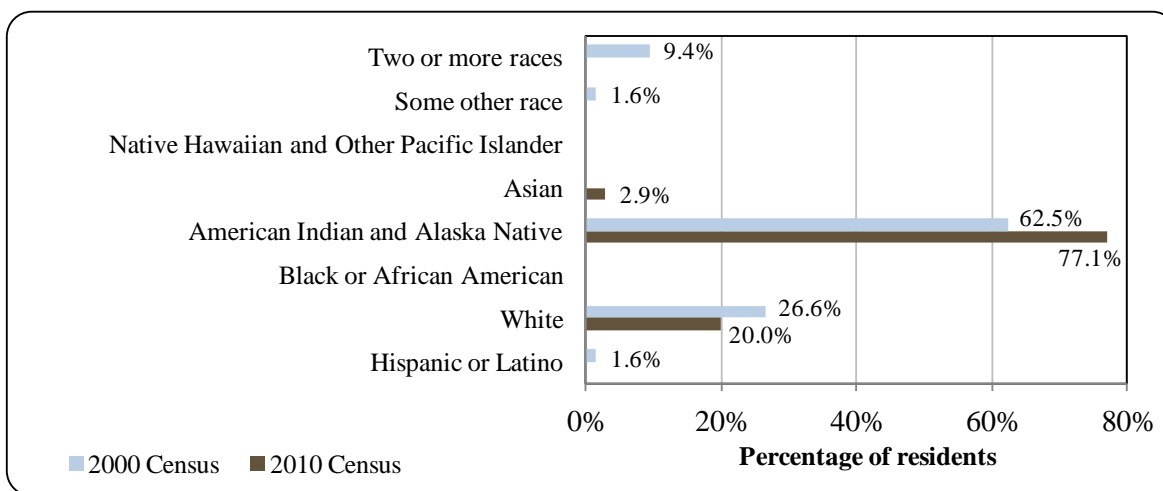
Table 1. Population in False Pass from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	68	-
2000	64	-
2001	-	69
2002	-	79
2003	-	69
2004	-	63
2005	-	63
2006	-	54
2007	-	45
2008	-	39
2009	-	41
2010	35	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

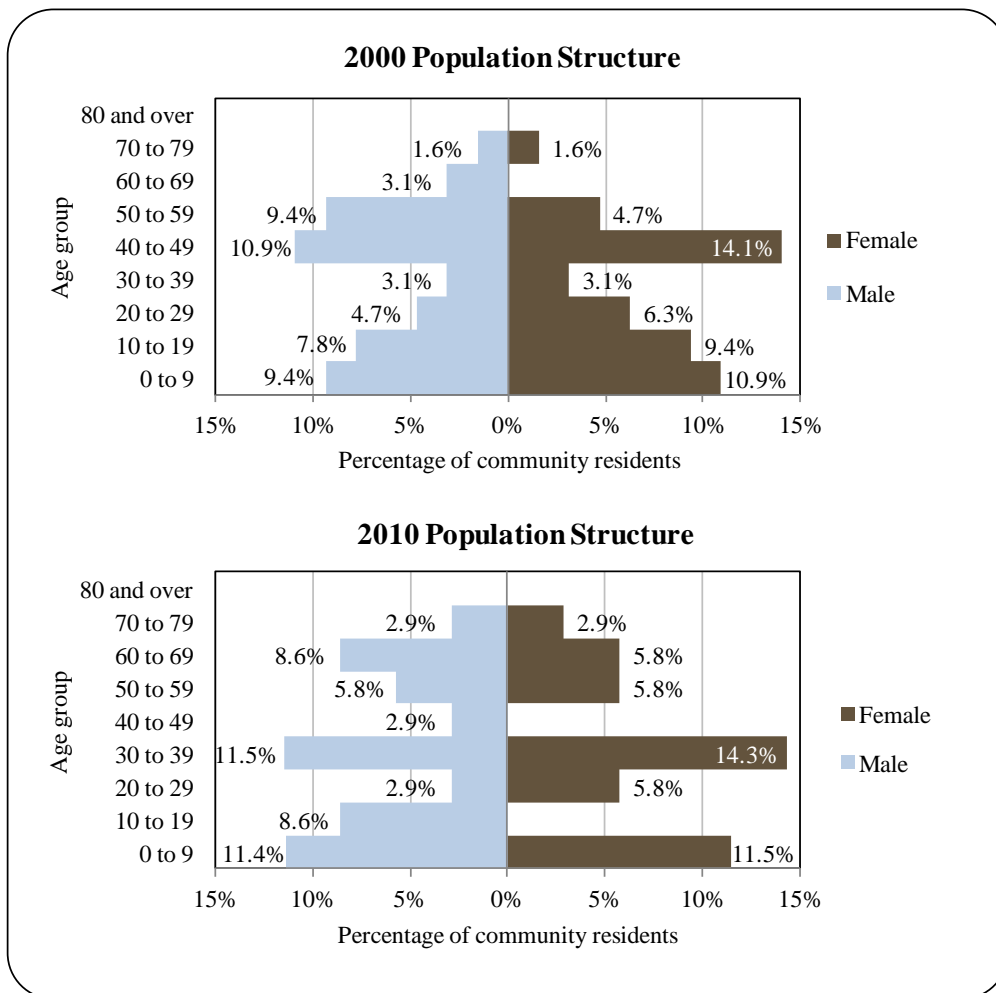
Figure 1. Racial and Ethnic Composition, False Pass: 2000-2010 (U.S. Census).



Gender distribution by age cohort was less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 10 to 19 range (8.6% male, 0.0% female), followed by the 20 to 29 (5.8% female, 2.9% male) and 40 to 49 (2.9% male, 0.0% female) ranges. Of those three, the greatest relative gender difference occurred within the 10 to 19 range. Information regarding False Pass' population structure can be found in Figure 2.

In terms of educational attainment, an estimated 100% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall, according to the 2006-10 American Community Survey (ACS).¹⁸⁶ Also in that year, an estimated 60.0% of residents had some college but no degree, compared to an estimated 28.3% of Alaska residents overall. No residents were estimated to hold a post-secondary degree in 2010.

Figure 2. Population Age Structure in False Pass Based on the 2000 and 2010 U.S. Decennial Census.



¹⁸⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*¹⁸⁷

The False Pass area has been inhabited since prehistory by Aleuts or Unangan. At the time of Russian contact during the fur trade in the eighteenth Century, the area had the largest population of Aleuts anywhere in the Aleutian Islands, with twelve Aleut settlements on Unimak Island alone. Disease and war during the Russian fur trade destroyed most of the Aleut settlements in the area, and the Russians consolidated the remnants of the surviving villages into one newly created village on the tip of the Alaska Peninsula on Isanotski Strait, opposite the present community of False Pass. This village was called Morzhovoi.

The P.E. Harris Company from Seattle established a salmon cannery in False Pass in 1919, and the community grew with an increasingly large and diverse population. Alaska Natives immigrated from Akutan, Unalaska, Morzhovoi, Sanak Island, Ikatan and elsewhere, attracted to the opportunities provided by the cannery. A local post office was established at this time. After Alaska became a U.S. Territory, new immigrants, mostly of Scandinavian origin, began to settle in the area. They brought with them commercial fishing and fish preservation technologies, most importantly salting. The first commercial fisheries in the area were thus focused on salted cod and salmon. In addition, hunting and trapping has been an important means of subsistence for the people of False Pass. People from this area have often moved between nearby towns in the area in response to cannery and school closures. History, family ties and social networks continue to provide links between local Native communities in the area, and intra-community cohesion is strong.¹⁸⁸

Isanotski Strait, accessible by vessels up to 200 ft in length, is the major pass between the Gulf of Alaska and the Bering Sea. For this reason, both Isanotski Strait and the community of False Pass have long been called “the Pass” by fishermen from all over southwestern Alaska. Despite its name, there is nothing “false” about the pass; because the north entrance to Isanotski Strait is shallow, it was historically very difficult for non-motorized sailing vessels to navigate the channel, so the sailing ship captains gave it the name “False Pass” and the name stuck. False Pass is situated in a volcanic region, but this is not considered to pose an immediate threat.

Natural Resources and Environment

False Pass lies in the maritime climate zone. Temperatures range from 11 to 55 °F (-12 to 13 °C). Annual snowfall averages 56 inches, with total annual precipitation of 33 inches. Prevailing southeast winds are constant and often strong during winter. Fog is common during summer months.¹⁸⁹ Unimak Island’s maritime climate subjects it to frequent cyclonic storms

¹⁸⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸⁸ Black, Lydia T. et al. (1999). *The History and Ethnohistory of the Aleutians East Borough*. Richard Pierce, Katherine L. Arndt, and Sarah McGowan (eds.). Fairbanks, AK: Limestone. See also Reedy-Maschner, K. (2009). Entangled Livelihoods: Economic Integration and Diversity in the Western Arctic. *Alaska Journal of Anthropology* 7(2):135-146; and Reedy-Maschner, K. (2010). *Aleut Identities: Life and Society among Indigenous Commercial fishermen of the North Pacific*. McGill-Queen’s University Press.

¹⁸⁹ See footnote 187.

which cross the Pacific Ocean into the Bering Sea. The warmer Japanese Current regulates what would otherwise be a more frigid climate.¹⁹⁰

False Pass rests on a base of volcanic material which has been subsequently eroded by ice and water over time, even though the eastern end of Unimak Island, where False Pass is located, is the area of lowest volcanic activity on the island. Round Top volcano lies just west of False Pass and dominates the head of the broad glacial valley on which the community was built. Other volcanoes on eastern Unimak Island include Isanotski and Shishaldin peaks. Today, Isanotski is highly eroded and now represents just the core of the older mountain and is locally known as Ragged Jack.¹⁹¹

False Pass is largely surrounded by the Unimak Wilderness Area (designated in 1980) of the Izembek National Wildlife Refuge, which was designated a Globally Important Bird Area in 2001.¹⁹² The landscape of False Pass and Unimak Island is rugged and marked by a young geomorphology that is prone to earthquakes. In fact, the U.S. Geological Survey's Earthquake Hazards Program that has installed a continuously operating drum recorder seismograph in False Pass to monitor earthquake activity in the area. This seismograph is part of a large network of sensors that now make it possible to notify the public very quickly of potential destructive earthquake hazards.¹⁹³

The Bering Sea lowland on the north side of the island consists of a gently sloping plain rising gradually from the sea. The hilly north side is characterized by a dense growth of vegetation and numerous lakes, streams, and marshes.¹⁹⁴ Lowland areas are commonly made up of volcanic ash, unconsolidated sands, silts, and gravel. Upland soils mostly consist of volcanic ash. Organic soils consist of sedge peat and moss.¹⁹⁵ Major vegetation community types found on Unimak Island are consistent with dry coastal and mesic meadows, alpine tundra, and bog environments. Plant species range from grasses and sedges, to herbaceous and deciduous shrub thickets. Willow and green alder populate shrub thickets.¹⁹⁶

Terrestrial mammals found on Unimak Island include caribou, brown bear, wolf wolverine, river otter, red fox, mink, weasels, Arctic ground squirrel, dusky shrew, collared lemming, and root vole. Unimak Island is the only island within the Aleutian chain that supports an indigenous caribou herd. There are many species of birds which nest on Unimak Island; however, two Species of Conservation Concern are present, including the Aleutian Tern and

¹⁹⁰ U.S. Fish and Wildlife Service. (2010). *Management Alternatives for the Unimak Island Caribou Herd – Environmental Assessment*. Retrieved July 24, 2012 from: http://alaska.fws.gov/nwr/planning/nepa/pdf/izembek_ea.pdf.

¹⁹¹ Black, Lydia T. et al. (1999). *The History and Ethnohistory of the Aleutians East Borough*. Richard Pierce, Katherine L. Arndt, and Sarah McGowan (eds.). Fairbanks, AK: Limestone. See also Reedy-Maschner, K. (2009). Entangled Livelihoods: Economic Integration and Diversity in the Western Arctic. *Alaska Journal of Anthropology* 7(2):135-146; and Reedy-Maschner, K. (2010). *Aleut Identities: Life and Society among Indigenous Commercial fishermen of the North Pacific*. McGill-Queen's University Press.

¹⁹² U.S. Fish and Wildlife Service. (n.d.). *Izembek National Wildlife Refuge*. Retrieved February 16, 2012 from: <http://izembek.fws.gov/wildland.htm>.

¹⁹³ Ibid.

¹⁹⁴ See footnote 190.

¹⁹⁵ Alaska Department of Fish and Game. (2010). *Izembek State Game Refuge Management Plan*. Retrieved February 16, 2012 from:

http://www.adfg.alaska.gov/static/lands/protectedareas/_management_plans/izembek_plan.pdf.

¹⁹⁶ See footnote 190.

Short-eared Owl. In addition, there is an endemic population of Tundra Swans living on the Island.¹⁹⁷

Fisheries resources in the vicinity include all five species of Pacific salmon, Dolly Varden, steelhead trout, herring, halibut, cod, sablefish, yellowfin sole, walleye pollock, sandlance, and several rockfish species. Shellfish include crab, bidarkis (chitons), octopus, shrimp, razor clam, and sea urchins. Marine mammals include Steller sea lion, walrus, whales, porpoise, sea otter, and seals.¹⁹⁸

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation sites active within or around False Pass in 2010.¹⁹⁹

Current Economy²⁰⁰

False Pass' economy, like its neighbors, is reliant on salmon, herring, halibut, and crab fisheries. The local economy is mainly driven by commercial salmon fishing and fishing-related services, and is supplemented by subsistence practices and government. False Pass' central location at the end of the Alaskan Peninsula makes it an important refueling and supply stop for the Bristol Bay, Bering Sea and northern Gulf of Alaska fishing fleets. Top employers in 2010²⁰¹ included: the City of False Pass, Isanotski Corp., Bering Pacific Seafoods LLC, and Aleutians East Borough School District.

In 2010,²⁰² the estimated per capita income was \$25,147 and the estimated median household income was \$19,688, compared to \$21,465 and \$49,375 in 2000, respectively. However, after adjusting for inflation by converting 2000 values into 2010 dollars,²⁰³ the real per capita income (\$28,226) and real median household income (\$64,927), indicating a decline in both individual and household earnings. In 2010, False Pass ranked 106th of 305 communities from which per capita income was estimated, and 278th of 299 communities from which median household income was estimated.

False Pass' small population size may have prevented the American Community Survey from accurately portraying economic conditions.²⁰⁴ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents aged 18 and over earned \$301,674 in

¹⁹⁷ Ibid.

¹⁹⁸ The Stadum Group. (1999). *Overall Economic Development Plan*. Retrieved July 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/FalsePass-EDP-1999.pdf>.

¹⁹⁹ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved July 24, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Aleutians>.

²⁰⁰ Unless otherwise noted, all monetary data are reported in nominal values.

²⁰¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²⁰² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁰³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁰⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

total wages in 2010.²⁰⁵ When matched with the total Decennial Census population for 2010, the per capita income equals \$8,619, which is significantly less than the 2010 ACS estimate, suggesting that caution should be used when comparing 2010 ACS and 2000 Decennial Census figures.²⁰⁶ However, it should be noted that False Pass was not recognized as “distressed” by the Denali Commission, which estimated that greater than 30% of residents earned more than \$16,120 in 2010.

According to 2006-2010 ACS estimates, 90% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 20%, compared to an estimated 5.9% statewide, and no residents were estimated to live below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Again, it should be noted that it is possible that the 2006-2010 ACS misrepresented employment figures. According to ALARI estimates, the unemployment in 2010 was 11.8% based on unemployment insurance claimants.²⁰⁷

By industry, most (28.6%) employed residents were estimated to work in professional, scientific, management, administrative, and waste management sectors; followed by retail trade sectors (28.6%); manufacturing sectors (28.6%); and agriculture, forestry, fishing, hunting, and mining sectors (14.3%) (Figure 3). By occupation type, most (28.6%) employed residents were estimated to hold production, transportation, or material moving positions; followed by sales or office positions (28.6%); service positions (28.6%); and natural resources, construction, or maintenance positions (14.4%) (Figure 4). Employment by industry sector varied significantly between 2000 and 2010 (Figure 3); displaying a homogenization of industry employment in 2010, compared to 2000. Again, this may likely be attributed to False Pass’ small population preventing the 2006-2010 ACS from accurately capturing economic conditions. Employment by occupation type may have been affected as well. There were significant proportional declines in the number of management, professional, natural resources, construction, and maintenance positions, while there were significant proportional increases in production, transportation, material moving, and service positions. According to 2010 ALARI estimates, most (41.2%) of those employed worked in local government sectors; followed by financial service sectors (17.6%); manufacturing sectors (11.8%); trade transportation, and utilities sectors (11.8%); and educational and health service sectors (11.8%).

²⁰⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²⁰⁶ See footnote 201.

²⁰⁷ Ibid.

Figure 3. Local Employment by Industry in 2005-2009, False Pass (U.S. Census).

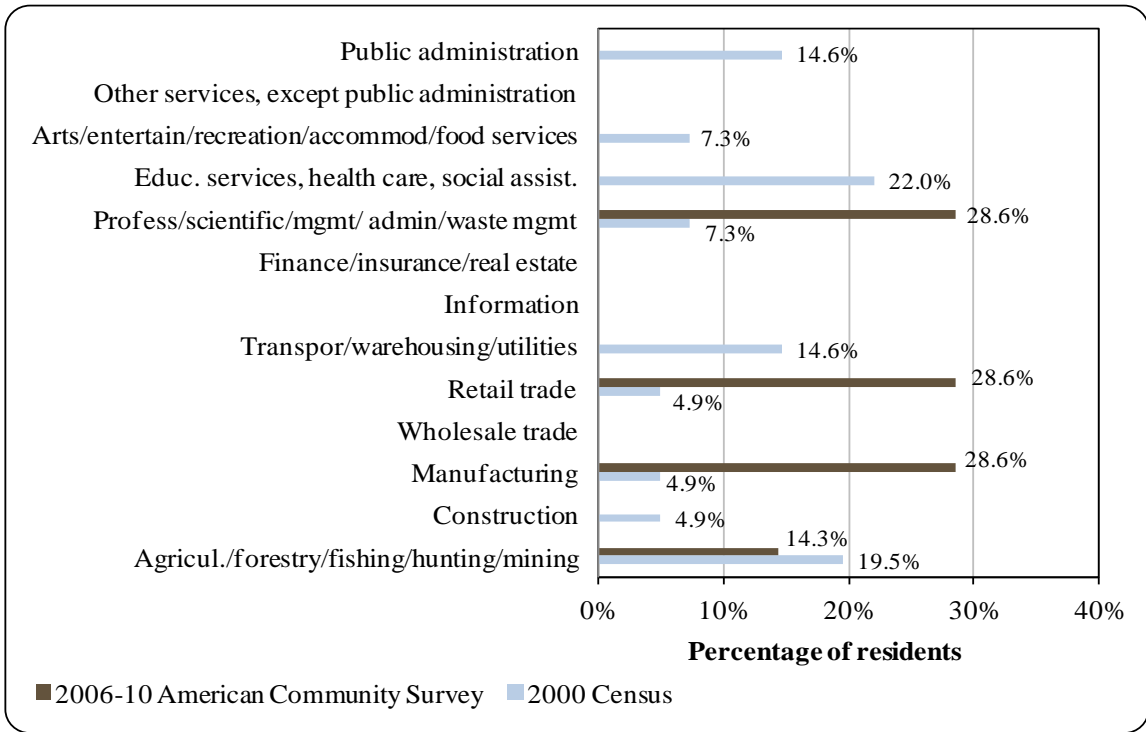
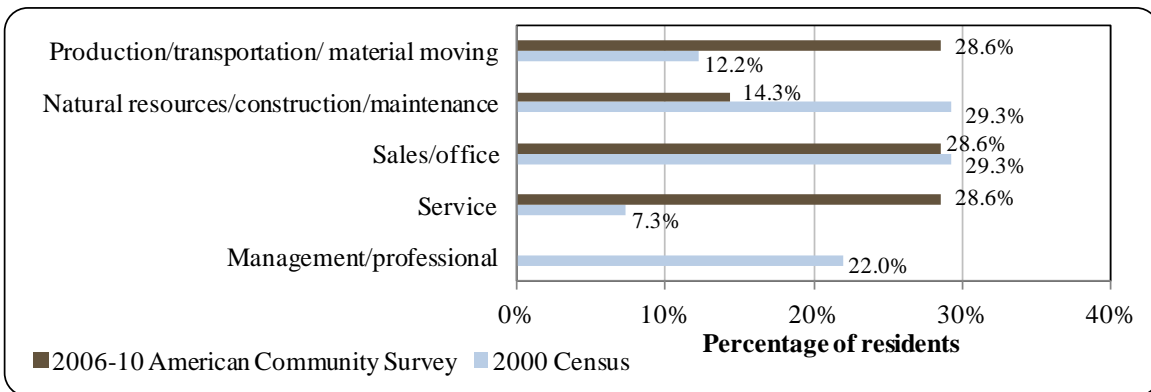


Figure 4. Local Employment by Occupation in 2005-2009, False Pass (U.S. Census).



Governance

False Pass is a Second-class city and was incorporated in 1990. It is governed locally by a mayor and seven-member city council that meets monthly. Taxes in False Pass include a 6% bed tax and a 2% fish tax implemented by the city on local commercial landings and a 3% Sales and Use Tax on goods and services. There is also a 2% raw fish tax from the borough based on all landings in the borough. The Aleutian Pribilof Islands Association, Inc., a federally recognized non-profit tribal organization of the Aleut people in Alaska which contracts with federal, state and local governments, also provides services in False Pass including public safety (Village

Public Safety Officers) and health programs (emergency, elders, behavioral, outreach and advocacy oriented programs).

False Pass is a member of the regional for-profit Aleut Corporation under the Alaska Natives Claims Settlement Act (ANCSA). Isanotski Corporation is the local Native village corporation. The total land entitlement under ANCSA is almost 80,000 acres. The False Pass Tribal Council is federally recognized and eligible for funding and services from the Bureau of Indian Affairs (BIA). False Pass belongs to the Aleutians East Borough, which is responsible for many services.

The nearest National Marine Fisheries Service Regional Office is in Unalaska, as is the nearest Bureau of Citizenship and Immigration Services. The nearest Alaska Department of Fish and Game (ADF&G) office is seasonally located in Cold Bay (between May and October), while the nearest permanent office is located in Unalaska.

Table 2. Selected Municipal, State, or Federal Revenue Streams for False Pass Municipal Government from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$572,853	\$20,299	\$25,946	n/a
2001	\$626,668	\$9,350	\$24,978	n/a
2002	\$579,441	\$6,485	\$24,979	\$2,500,000
2003	\$1,183,061	\$15,970	\$25,507	\$4,000,000
2004	\$1,165,020	\$20,280	n/a	\$10,000,000
2005	\$624,844	\$15,433	n/a	n/a
2006	\$471,281	\$15,804	n/a	n/a
2007	\$476,253	\$12,008	n/a	\$1,020,000
2008	\$974,058	\$30,541	n/a	n/a
2009	\$547,977	\$54,797	\$97,989	n/a
2010	\$464,111	\$30,541	\$98,056	n/a

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

When adjusted for inflation,²⁰⁸ total municipal revenues declined by 37.4% between 2000 and 2010, from \$571,853 to \$464,111. Total revenues peaked in both 2003 (\$1.18 million) and 2004 (\$1.17 million) thanks to sizable capital grants and contributions. In 2010, most locally generated revenues was collected from utility rents, marine service fees, sales taxes, raw fish taxes, and clinic fees. Most outside revenues were generated from state revenue sharing and Aleutian Pribilof Island Community Development Association (APICDA) contributions.

In 2010, sales tax accounted for 6.6% of the total municipal budget, compared to 3.5% in 2000. Also in that year, state allocated Community Revenue Sharing accounted for 21.1% of total municipal revenues, compared to 4.5% from State Revenue Sharing in 2000. Sales tax revenue peaked in 2009 at \$54,797. Fisheries-related federal and state grants awarded between 2000 and 2010 included: \$1.02 million for boat harbor rehabilitation, \$10.5 million for harbor construction, and \$1.5 million for small boat harbor construction. Further information regarding municipal revenues can be found in Table 2.

Infrastructure

Connectivity and Transportation

False Pass is accessible only by air and sea. Its location offers protection from ocean swells, and coves within the pass itself provide safe anchorages during severe weather. The pass is almost always free of sea ice. Unimak Pass, at the western end of Unimak Island, is used only by the largest oceangoing ships; the north channel of Isanotski Strait into the Bering Sea has navigation buoys so that passage is routine and safe. The price for roundtrip airfare between Cold Bay (the closest large airport) and Anchorage in June 2012 was \$831.²⁰⁹ Peninsula Airways provides service to False Pass via Cold Bay. Reeve Aleutian Airways ceased scheduled service to False Pass in 2000.²¹⁰

Facilities

There are no hotels in False Pass, but short-term accommodations are available at the Isanotski Bed and Breakfast, which opened in 1974. Water is derived from a nearby spring and reservoir and is treated and stored in a 60,000-gal tank. Most homes are connected to the piped water system. Residents use individual septic tanks for sewage disposal; the city operates a septic sludge tanker and sludge disposal site. All homes are fully plumbed. Wastewater from seafood processing flows directly into an outfall line. The City collects refuse twice a week. There is a public library and a local post office was established around 1919.²¹¹

The City Dock accommodates the Alaska State Ferry and is also used for general cargo. At the base of the dock are the Isanotski Grocery Store and Tribal Warehouse. Farther north is a recently constructed small boat harbor. Next to the small boat harbor is the Bering Pacific

²⁰⁸ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

²⁰⁹ Airfare was calculated using lowest fare from www.orbitz.com. (Retrieved November 22, 2011).

²¹⁰ The Stadum Group. (1999). *Overall Economic Development Plan*. Retrieved July 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/FalsePass-EDP-1999.pdf>.

²¹¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Seafoods plant (see *Processing Plants* section below). To the north of the processing plant is a gear (crab pot) storage area.²¹²

Medical Services

Local healthcare is provided by the King Cove Medical Clinic, which is operated by the Eastern Aleutian Tribes Inc. Public safety is provided by city police and Village Public Safety Officers associated with the Aleutian Pribilof Islands Association, Inc. Because of its isolated location, False Pass is part of the Southern Emergency Medical Services Region. Emergency Services have coastal and air access. Emergency service is provided by volunteers and health aides. The closest emergency care center is located in Unalaska. The closest major hospital is located in Anchorage.

*Educational Opportunities*²¹³

False Pass is within the Aleutians East School District and in 2011, two teachers instructed 12 students in levels kindergarten through 12th grade at the False Pass School.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries^{214,215}

The residents of False Pass have long been engaged in North Pacific fisheries, beginning with Aleuts or Unangan peoples who fished and continue to fish in the waters surrounding False Pass. Scandinavians, Scots, and other northern Europeans moved into the Eastern Aleutians around the late nineteenth century. Around that time, Sand Point, King Cove, False Pass, and Nelson Lagoon were established around newly formed commercial fisheries. As mentioned earlier, the P.E. Harris & Co. from Seattle established a salmon cannery in False Pass in 1919. That event invoked the growth and diversity of the community. Alaska Natives immigrated from Akutan, Unalaska, Morzhovoi, Sanak Island, Ikatán and elsewhere, attracted to the opportunities provided by the cannery. After Alaska became a U.S. Territory, new immigrants, mostly of Scandinavian origin, began to settle in the area. They brought with them commercial fishing and fish preservation technologies, most importantly salting. The first commercial fisheries in the area were thus focused on salted cod and salmon.

Sockeye salmon caught by fish trap was supplied to the P.E. Harris cannery for many years until traps were outlawed following statehood in 1959. Salmon was also purchased from independent seiners and gillnetters. In 1962, P.E. Harris & Co. changed its name to Peter Pan Seafoods, Inc. The company's regional influence grew in 1965 when it purchased the western operations of Pacific American Fisheries, which included canneries in King Cove and Port Moller.

²¹² City of False Pass. (n.d.). Community Page. Retrieved July 24, 2012 from: http://unimak.us/city_false_pass.shtml.

²¹³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²¹⁴ Martinson, C. (n.d.). Unimak Area Website. Retrieved July 25, 2012 from: <http://unimak.us/contact.shtml>.

²¹⁵ See footnote 212.

In 1981, the Peter Pan cannery burned, putting an end to salmon processing in False Pass. Following the fire, local salmon fishermen delivered catch to the processing plant in King Cove. Facilities that survived the fire provided support for the salmon fleet until Peter Pan Seafoods closed the property in 2004. In 2008, Bering Pacific Seafoods, LLC began processing salmon in a plant owned by its parent company, APICDA.

Commercial cod fishing began in the late nineteenth century and continued until the middle 1930s when declining cod stocks made it unprofitable to fish commercially. Cod stocks became so depressed that local fishermen could not even catch enough for subsistence purposes. By 1972, cod numbers began to increase, with the most abundant populations near Sanak Island, 15 mi from False Pass. The modern cod fishery developed in 1997, when the state took over cod management in Gulf of Alaska (GOA) waters. The state Board of Fisheries allocates a percentage of GOA cod to smaller pot or jig gear vessels, which along with reducing bycatch, allows smaller entrants more access to the fishery. Important cod fishing areas include the Ikatán-Sanak area outside of False Pass, and Shumagin Island area outside of Sandpoint.

Halibut has been an important subsistence fish in the Eastern Aleutians for thousands of years. However, a commercial halibut fishery did not develop in False Pass until after World War II, when a market for halibut finally developed. Commercial halibut fishing in the North Pacific began in 1888 off the coast of Washington state. Following its inception, the fishery expanded up the Pacific coast through British Columbia, Canada, and Southeast Alaska. Fishing effort was initially conducted by two-person dories that delivered catch to small sailing vessels, where the fish was processed and stored. During the 1920s, the commercial halibut fishery extended to Unimak Pass as schooners began to be outfitted with diesel engines and mechanical gear. The initial False Pass area halibut fishery was conducted by Washington based schooners that would transport their catch directly back to the Seattle area. Halibut stocks were becoming depressed as early as 1915 due to over-fishing. Negotiations by both the United States and Canada led to the signing of the *Halibut Convention of 1923*. However, halibut stocks remained low in years following its signing. The Magnuson-Stevens Fisheries Conservation and Management Act of 1976 helped to quasi-nationalize the fishery; however, derby-style fishing effort was still stressing halibut stocks. An effort to limit access to the fishery in 1982 was met with opposition until 1995 when a halibut quota share system was introduced.

Crab fisheries, like groundfish, are managed by the state within a 3 nautical mile (nmi) zone extending from the coast. Fisheries within the remainder of the 200 mi Exclusive Economic Zone (EEZ) are federally managed. Golden king crab populate areas of high relief along the continental shelf surrounding the Aleutian Islands and Bering Sea. Red king crab is found in abundance within Bristol Bay, as well as along the northern Aleutian Islands region.

ADF&G manages commercial salmon fisheries in the False Pass regions, and local fishermen typically conduct fishing effort within the Northwestern, Southwestern, and Unimak districts. The Limited Entry Salmon Fishing Permit designation for the area is “Area M”. False Pass is involved in the Community Development Quota (CDQ) program under APICDA, which provides mechanisms for the distribution of money from a fishing quota in the Bering Sea to community development initiatives. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the

Bering Strait and Aleutian Islands region.²¹⁶ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

False Pass is located between Federal Reporting Area 610 and 518, and next to International Pacific Halibut Commission (IPHC) Regulatory Area 3B. In addition, it is located adjacent to Western Gulf of Alaska and Bering Sea Sablefish Regulatory Districts.

Processing Plants

Bering Pacific Seafoods is operated by APICDA in False Pass. APICDA's Bering Sea sablefish quota and its Bristol Bay Red King crab quota are processed at the facility, as are sockeye salmon and halibut. APICDA funded a project to extend power and water to the local dock due to the absence of a small boat harbor. It also secured money to construct a boat harbor in False Pass in 2006, which is the location of the present Bering Pacific Seafoods facility. APICDA's other infrastructure projects have included: a gear storage warehouse (owned by the False Pass Tribal Council); improvements to the airport and runway; and development of the False Pass Store, Fuel Farm, and Ship Supply.²¹⁷

Fisheries-Related Revenue

False Pass received fisheries-related revenue from several sources between 2000 and 2010 included raw fish taxes, Shared Fisheries Business Taxes, Fisheries Resource Landings Taxes, and port/dock usage fees. In 2010, the community received a total of \$75,777 in known fisheries-related revenue, mostly from raw fish taxes. This represented a decline in revenues from 2000, when \$277,609 was raised. Known fisheries-related revenue dropped to its lowest level in 2006 before recovering somewhat between 2007 and 2010. Information regarding fisheries-related revenue trends can be found in Table 3. It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget. However, municipal revenue is provided in Table 3 as a reference point.

Commercial Fishing

In 2010, 6 residents, or 17.1% of the total population, held 13 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 12 residents held 25 CFEC permits. Of the CFEC permits held in 2010, 54% were for salmon, compared to 40% in 2000; 15% were for groundfish, compared to 24% in 2000; 8% were for herring, compared to 29% in 2000; 15% were for halibut, compared to 12% in 2000; and 8% were for crab, compared to 0% in 2000. In addition, one resident held one License Limitation Program (LLP) groundfish permit, and two residents held two Federal Fisheries Permits (FFP). Residents held 246,444 shares of halibut quota on three accounts in 2010, compared to 309,631 shares held on three accounts in 2000. In addition, residents held 190,306 shares of sablefish quota in 2001 and

²¹⁶ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

²¹⁷ Aleutian Pribilof Island Community Development Association. (n.d.). *Company Website*. Retrieved September 16, 2011 from: <http://www.apicda.com/>.

70,805 shares in 2000. No residents held crab quota between 2010 and when the program began in 2005.

Residents held 7 commercial crew licenses in 2010, compared to 13 in 2000. Also in that year, residents held majority ownership of 13 vessels, compared to 15 in 2000. Of the CFEC permits held in 2010, 77% were actively fished, compared to 76% in 2000. This varied by fishery from 100% of halibut and crab permits, to 86% of salmon permits, 50% of groundfish permits, and 0% of herring permits. Fisheries prosecuted by False Pass residents in 2010 included: Alaska Peninsula pot Tanner crab, statewide longline halibut, GOA miscellaneous saltwater finfish, and Alaska Peninsula purse seine, drift gillnet, and set gillnet salmon.²¹⁸ Landings made in False Pass between 2000 and 2010 are considered confidential; however, 31 vessels made landings in the community, compared to 8 in 2000. No landings were made in 2003, 2005, 2006, 2007, and 2008. In 2010, False Pass ranked 46th out of 67 communities that received landings that year and 45th overall in terms of total ex-vessel revenue earned.

Landings by False Pass residents in were considered confidential in 2010, with the exception of salmon landings. In that year, residents landed 992,925 lb of salmon valued at \$523,854 ex-vessel; compared to 1.11 million pounds valued at \$507,312 ex-vessel in 2000; a decline of \$0.10 per pound landed after adjusting for inflation²¹⁹ and without considering the species composition of landings. In addition, residents landed 986,694 lb of Pacific cod valued at \$234,049 in 2004. Further information regarding commercial fishing trends can be found in Tables 4 through 10.

²¹⁸Alaska Commercial Fisheries Entry Commission (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²¹⁹ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of False Pass: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$225,354	\$208,419	\$200,000	\$160,000	\$85,000	\$167,000	\$6,380	\$6,000	\$10,000	\$10,000	\$35,832
Shared Fisheries Business Tax ¹	\$38,827	\$95,546	\$68,371	\$13,866	\$13,195	\$8,725	\$9,500	\$10,883	\$8,407	\$10,705	\$11,828
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	\$13	\$33	\$369	\$1,328	\$910	\$2,244	\$1,566	\$2,317
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	\$13,428	\$25,270	\$40,000	\$30,000	\$9,100	\$6,300	\$12,710	\$5,920	\$17,800	\$18,500	\$25,800
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$277,609</i>	<i>\$329,235</i>	<i>\$308,371</i>	<i>\$203,866</i>	<i>\$128,208</i>	<i>\$182,394</i>	<i>\$29,918</i>	<i>\$23,713</i>	<i>\$38,451</i>	<i>\$40,771</i>	<i>\$75,777</i>
<i>Total municipal revenue⁵</i>	<i>\$572,853</i>	<i>\$626,668</i>	<i>\$579,441</i>	<i>\$1.18 M</i>	<i>\$1.17 M</i>	<i>\$624,844</i>	<i>\$471,218</i>	<i>\$476,253</i>	<i>\$974,058</i>	<i>\$547,977</i>	<i>\$464,111</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, False Pass: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	1	1	1	1	1	1	1	0	0	0	0
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	3	3	3	1	1	1	2	2	2	2	2
	Fished permits	0	0	0	1	1	1	2	1	1	2	2
	% of permits fished	0%	0%	0%	100%	100%	100%	100%	50%	50%	100%	100%
	Total permit holders	3	3	3	1	1	1	2	2	2	2	2
Crab (CFEC) ²	Total permits	0	2	1	0	0	5	2	2	2	1	1
	Fished permits	0	1	1	0	0	2	0	1	1	0	1
	% of permits fished	n/a	50%	100%	n/a	n/a	40%	n/a	50%	50%	0%	100%
	Total permit holders	0	2	1	0	0	4	2	2	2	1	1
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	3	3	3	3	3	3	3	2	2	2	2
	Fished permits	2	2	3	3	3	3	3	2	2	2	2
	% of permits fished	67%	67%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	3	3	3	3	3	3	3	2	2	2	2
Herring (CFEC) ²	Total permits	5	3	4	1	1	3	1	1	1	1	1
	Fished permits	3	2	0	0	0	2	1	0	0	0	0
	% of permits fished	60%	67%	0%	0%	0%	67%	100%	0%	0%	0%	0%
	Total permit holders	3	2	2	1	1	3	1	1	1	1	1

Table 4 cont'd. Permits and Permit Holders by Species, False Pass: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	1	1	2	1	0	0	0	1	0
	Fished permits	1	1	1	1	2	0	0	0	0	1	0
	% of permits fished	100%	100%	100%	100%	100%	0%	n/a	n/a	n/a	100%	n/a
	Total permit holders	1	1	1	1	2	1	0	0	0	1	0
Groundfish (CFEC) ²	Total permits	6	11	12	9	9	10	5	2	3	3	2
	Fished permits	4	7	11	3	4	4	2	2	3	2	1
	% of permits fished	67%	64%	92%	33%	44%	40%	40%	100%	100%	67%	50%
	Total permit holders	4	7	8	5	5	5	4	2	2	2	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	10	9	10	10	10	8	8	6	6	6	7
	Fished permits	9	7	8	7	8	7	6	4	5	5	6
	% of permits fished	90%	78%	80%	70%	80%	88%	75%	67%	83%	83%	86%
	Total permit holders	10	9	10	9	8	7	7	5	6	6	6
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>25</i>	<i>29</i>	<i>31</i>	<i>24</i>	<i>25</i>	<i>30</i>	<i>19</i>	<i>13</i>	<i>14</i>	<i>14</i>	<i>13</i>
	<i>Fished permits</i>	<i>19</i>	<i>20</i>	<i>24</i>	<i>14</i>	<i>17</i>	<i>18</i>	<i>12</i>	<i>9</i>	<i>11</i>	<i>10</i>	<i>10</i>
	<i>% of permits fished</i>	<i>76%</i>	<i>69%</i>	<i>77%</i>	<i>58%</i>	<i>68%</i>	<i>60%</i>	<i>63%</i>	<i>69%</i>	<i>79%</i>	<i>71%</i>	<i>77%</i>
	<i>Permit holders</i>	<i>12</i>	<i>11</i>	<i>13</i>	<i>9</i>	<i>8</i>	<i>7</i>	<i>7</i>	<i>6</i>	<i>6</i>	<i>7</i>	<i>6</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in False Pass: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In False Pass ²	Total Net Lb Landed In False Pass ^{2,5}	Total Ex-Vessel Value Of Landings In False Pass ^{2,5}
2000	13	2	0	15	13	8	--	--
2001	12	2	0	14	12	25	--	--
2002	15	2	0	16	10	33	--	--
2003	5	0	0	12	9	0	0	\$0
2004	12	1	0	12	10	2	--	--
2005	5	0	0	11	9	0	0	\$0
2006	6	0	0	12	9	0	0	\$0
2007	8	0	0	8	8	0	0	\$0
2008	8	0	1	13	14	0	0	\$0
2009	9	1	1	13	15	9	--	--
2010	7	1	1	13	17	31	--	--

Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of False Pass: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lb)
2000	3	309,631	91,813
2001	3	246,170	77,757
2002	2	134,856	42,852
2003	3	206,887	65,383
2004	3	206,887	59,542
2005	3	206,887	50,137
2006	4	335,698	68,521
2007	3	206,887	35,191
2008	3	206,887	41,603
2009	3	206,887	41,603
2010	3	246,444	45,011

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of False Pass: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lb)
2000	1	70,805	6,296
2001	1	190,306	18,628
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	1	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of False Pass: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in False Pass: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	0	--	0	0	0	0	--	--
Finfish	--	--	--	0	--	0	0	0	0	--	--
Halibut	--	--	--	0	--	0	0	0	0	--	--
Herring	--	--	--	0	--	0	0	0	0	--	--
Other Groundfish	--	--	--	0	--	0	0	0	0	--	--
Other Shellfish	--	--	--	0	--	0	0	0	0	--	--
Pacific Cod	--	--	--	0	--	0	0	0	0	--	--
Pollock	--	--	--	0	--	0	0	0	0	--	--
Sablefish	--	--	--	0	--	0	0	0	0	--	--
Salmon	--	--	--	0	--	0	0	0	0	--	--
<i>Total²</i>	--	--	--	0	--	0	0	0	0	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
Finfish	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
Halibut	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
Herring	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
Other Groundfish	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
Other Shellfish	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
Pacific Cod	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
Pollock	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
Sablefish	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
Salmon	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--
<i>Total²</i>	--	--	--	\$0	--	\$0	\$0	\$0	\$0	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by False Pass Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	812,342	801,996	--	986,694	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	1,114,426	1,067,956	675,722	558,684	774,511	1,351,552	747,157	1,281,952	2,945,079	2,313,150	992,925
<i>Total²</i>	<i>1,114,426</i>	<i>1,880,298</i>	<i>1,477,718</i>	<i>558,684</i>	<i>1,761,205</i>	<i>1,351,552</i>	<i>747,157</i>	<i>1,281,952</i>	<i>2,945,079</i>	<i>2,313,150</i>	<i>992,925</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	\$203,211	\$172,196	--	\$234,049	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$507,312	\$218,192	\$251,928	\$255,261	\$384,429	\$672,596	\$303,109	\$391,827	\$1,050,735	\$744,340	\$523,854
<i>Total²</i>	<i>\$507,312</i>	<i>\$421,403</i>	<i>\$424,124</i>	<i>\$255,261</i>	<i>\$618,478</i>	<i>\$672,596</i>	<i>\$303,109</i>	<i>\$391,827</i>	<i>\$1,050,735</i>	<i>\$744,340</i>	<i>\$523,854</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Early in the 2000-2010 period, one sport fish guide business was reported to be active in False Pass. However, beginning in 2002, no active sport fish guide businesses were registered in the community. No sportfishing licenses were sold locally between 2000 and 2010. The number of sportfishing licenses purchased by False Pass residents, irrespective of the location of the point of sale, declined from 13 in 2000 to 1 in 2010. The minimal recreational fishing activity reported in False Pass may be due in part to the remoteness of the community and the infrequency of transportation from larger population centers. Additionally, the community does not have the facilities to support a significant tourism industry.

False Pass is located within the Alaska Peninsula and Aleutian Islands Recreational Harvest Survey Area which includes all Alaskan waters, including drainages, between Cape Douglas and the community of Naknek. Although there is no sportfishing in False Pass itself, there is data showing the presence of sportfishing in this region. In 2010, there were a total of 5,297 saltwater and 33,635 freshwater angler days fished in the region, compared to 10,534 and 44,976 in 2000, respectively. In that year, non-Alaska residents accounted for 38.4% of saltwater and 58.4% of freshwater angler days fished in the region, compared to 15.8% and 39.5% in 2000, respectively. Further, information regarding sportfishing trends can be found in Table 11.

Subsistence Fishing

Many residents of False Pass supplement their incomes and diet with subsistence resources. Unimak Island host a diverse range of terrestrial and aquatic fauna (*see Natural Resources*) available for subsistence use. Local subsistence flora includes cow parsnip, purple orchid, wild rye grass, and monks hood.²²⁰ According to data reported by (ADF&G), there has been considerable subsistence harvest of chum, coho, sockeye, and pink salmon species. In 2008, residents reported harvesting 228 salmon, compared to 1,437 in 2000. Reported salmon harvests peaked in 2003 at 2,582 fish. Reported salmon harvests varied greatly between 2000 and 2008; however, 2007 and 2008 marked years of significant decline in harvests compared to previous years. Between 2003 and 2010, residents of False Pass also relied on Subsistence Halibut Registration Certificates (SHARC) issued by NMFS. In 2010, one SHARC was issued and fished, a decline compared to 13 issued and 9 fished in 2003. In that year, an estimated 200 lb of halibut were harvested, compared to 1,752 in 2003. Estimated halibut harvests peaked in 2004 at 2,337 lb harvested on 10 SHARC. In terms of subsistence marine mammal harvests, an estimate of 21 total harbor seals were harvested between 2000 and 2005, with an average of 3.5 harbor seals harvested each year.

According to ADF&G *Community Subsistence Information System* data,²²¹ residents of False Pass have historically harvested or used butter clams, chitons, cockles, Dungeness crab, hair crab, king crab, limpets, mussels, Pacific littleneck clams, razor clams, scallops, sea urchin, shrimp, snails, softshell clams, Tanner crab, fur seal, gray whale, Steller sea lion, burbot, capelin, Dolly Varden, flounder, greenling, herring, herring spawn on kelp, Pacific cod, Pacific tom cod,

²²⁰ Martinson, C. (n.d.). Unimak Area Website. Retrieved July 25, 2012 from: <http://unimak.us/contact.shtml>.

²²¹ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

rainbow trout, rockfish, sablefish, sculpin, sole, steelhead trout, and suckers. Further information regarding subsistence trends can be found in Figures 12 through 15.

Table 11. Sport Fishing Trends, False Pass 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in False Pass ²
2000	1	0	13	0
2001	1	1	13	0
2002	0	0	8	0
2003	0	0	6	0
2004	0	0	8	0
2005	0	0	5	0
2006	0	0	8	0
2007	0	0	5	0
2008	0	0	3	0
2009	0	0	1	0
2010	0	0	1	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, False Pass: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, False Pass: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	6	5	6	104	605	32	690	n/a	n/a
2001	4	3	11	111	172	125	248	n/a	n/a
2002	14	10	32	78	269	41	662	n/a	n/a
2003	18	9	6	310	588	236	1,472	n/a	n/a
2004	8	6	5	32	424	39	445	n/a	n/a
2005	7	4	37	200	268	317	1,054	n/a	n/a
2006	5	3	3	80	117	100	150	n/a	n/a
2007	3	2	n/a	8	90	32	74	n/a	n/a
2008	3	3	6	50	55	64	53	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, False Pass: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	13	9	1,753
2004	13	10	2,337
2005	10	8	1,495
2006	11	12	963
2007	8	5	175
2008	3	n/a	n/a
2009	3	n/a	n/a
2010	1	1	200

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, False Pass: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	3	n/a
2001	n/a	n/a	n/a	n/a	n/a	3	n/a
2002	n/a	n/a	n/a	n/a	n/a	3	n/a
2003	n/a	n/a	n/a	n/a	n/a	3	n/a
2004	n/a	n/a	n/a	n/a	n/a	3	n/a
2005	n/a	n/a	n/a	n/a	n/a	6	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

King Cove



People and Place

*Location*²²²

King Cove is located on the south side of the Alaska Peninsula, on a sand spit fronting Deer Passage and Deer Island. It is 18 miles southeast of Cold Bay and 625 miles southwest of Anchorage. King Cove is in the Aleutians East Borough and the Aleutian Islands Recording District. The City's area encompasses 25.3 square miles of land and 4.5 square miles of water.

*Demographic Profile*²²³

In 2010, there were 938 residents in King Cove, making it the 70th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 108%. Between 2000 and 2010, there was an average annual growth rate of 18.4%, which was significantly above the statewide average of 0.75% (Table 1). It is important to note that, in a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the 2010 Decennial Census population count may have been inflated, including approximately 400 individuals that do not reside in the community permanently. Community leaders estimated 450 permanent residents in 2010.

In 2010, the greatest number of King Cove residents identified themselves as American Indian and Alaska Native (38.4% of the total population), along with 36.5% that identified as Asian, 16.2% identifying as White, 4.6% identifying with two or more races, 3.2% as 'some other race', and 1% identifying themselves as Black or African American (Figure 1). In addition, 11.2% of residents identified as Hispanic or Latino in 2010. The percentage of the population identifying as Asian increased by 36.2% between 2000 and 2010 although the most significant increase was with the percent of the population identifying as Hispanic or Latino which increased by over 50%. During this same time period, the percentage of the population identified as American Indian and Alaska Native declined by nearly 18%.

In 2010, the average household size in King Cove was 2.76, a slight decline from 2.9 persons per household in 1990 and 2000. The decline in household size may be related to the growth in number of households in King Cove over this period, increasing from 144 occupied housing units in 1990 to 170 in 2000, and 181 occupied housing units in 2010. Of the 229 housing units surveyed for the 2010 Decennial Census, 41.9% were owner-occupied households, 37.1% were renter-occupied households. In that same year, 48 housing units were vacant, compared to 37 in 2000. The number of King Cove residents living in group quarters increased over this period, from 189 in 1990 to 299 in 2000, and 438 in 2010.

²²² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

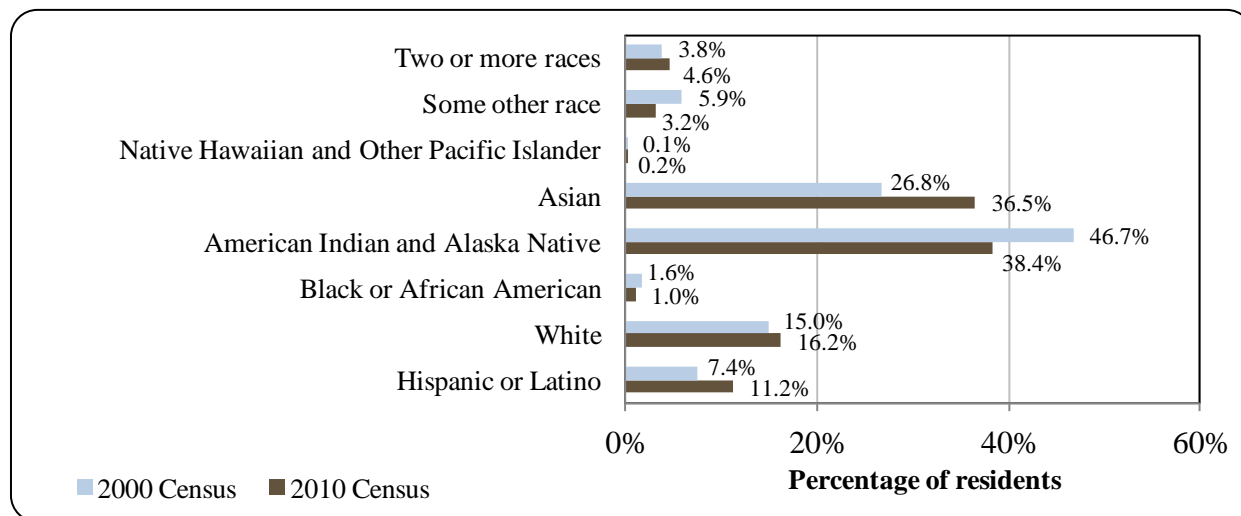
Table 1. Population in King Cove from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	451	-
2000	792	-
2001	-	694
2002	-	787
2003	-	728
2004	-	725
2005	-	724
2006	-	745
2007	-	754
2008	-	750
2009	-	744
2010	938	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, King Cove: 2000-2010 (U.S. Census).



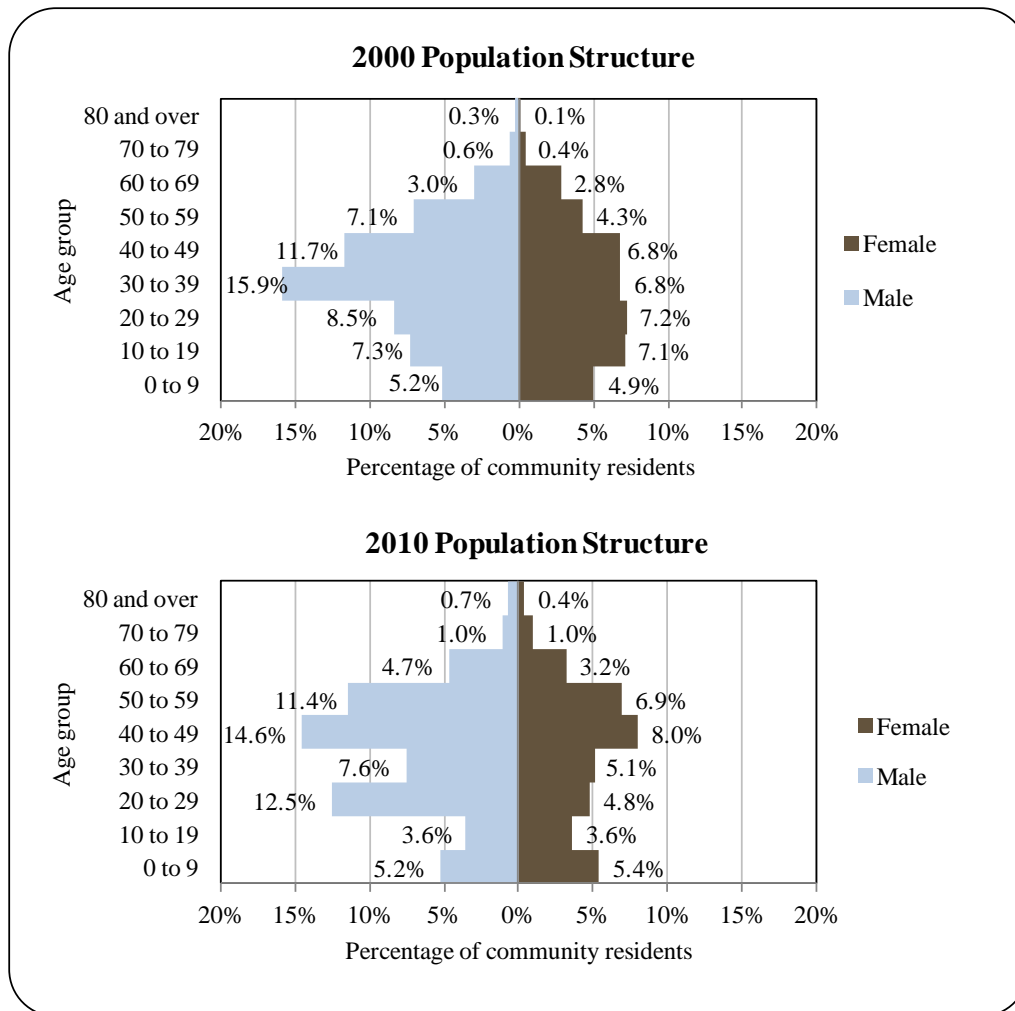
In the 2011 AFSC survey, community leaders reported that King Cove's population reaches a yearly peak between June and August and peaks again between February and March. They indicated that these population fluctuations are entirely driven by employment in fishing sectors. Community leaders indicated that the 2010 Decennial Census count of 938 included approximately 450 year-round residents, while a seasonal workforce and transient population made up the remainder. In 2010, the gender makeup of King Cove's population (based on the U.S. Census) was 61.5% male and 38.4% female – substantially more weighted towards males than the gender distribution statewide (52.0% male, 48.0% female). It is of note that the population was much more balanced between males and females in 2000 (51.3% male, 48.7% female). The median age was estimated to be 41.2 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska of 33.8 years.

Compared with 2000, the population structure in 2010 was somewhat more constricted amongst the youngest and oldest age groups while becoming less constricted amongst the middle age group. In that year, 17.8% of residents were under the age of 20, compared to 24.5% in 2000; 11.0% were over the age of 59, compared to 7.2% in 2000; 53.6% were between the ages of 30 and 59, compared to 52.6% in 2000; and 17.3% were between the ages of 20 and 29, compared to 15.7% in 2000. Age distribution by gender cohort continued to be skewed towards males in 2010, as it was in 2000. In 2010, the greatest absolute gender difference occurred within the 20 to 29 age range (12.5% male, 4.8% female), followed by the 40 to 49 (14.6% male, 8.0% female) and 50 to 59 (11.4% male, 6.9% female) ranges. Two age groups – those 70 to 79 and 10 to 19 – had perfectly matched gender distributions in 2010. Further information regarding trends in King Cove's population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²²⁴ estimated that 71.8% of residents aged 25 and over held a high school diploma or higher degree in 2010, significantly less than the estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 9.9% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 18.3% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 17.3% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 12.1% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and 1.6% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

²²⁴ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 2. Population Age Structure in King Cove Based on the 2000 and 2010 U.S. Decennial Census.



History, Traditional Knowledge, and Culture

Archaeological evidence suggests that Aleut (Unanga and Alutiiq) peoples have occupied the Alaska Peninsula for approximately 9,000 years.^{225,226} Excavation of a village site near the middle of King Cove suggests that Aleut people have been utilizing this site for at least 4,000 years.²²⁷ King Cove was named after the first recorded settler, a man named Robert King, who had settled there in the early 1800s. The site was originally called ‘King’s Cove’, and the name

²²⁵ LaRoche and Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

²²⁶ WHPacific. 2010. *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from: <http://www.aleutianseast.org/>.

²²⁷ Agdaagux Tribe of King Cove. 2007. *Comprehensive Community Environmental Plan, Updated Version*. Retrieved September 14, 2012 from <http://www.anthc.org/chs/ces/hve/upload/KVC-Updated-Env-Plan-Recycling-Plan.pdf>.

was eventually shortened to ‘King Cove’.²²⁸ The modern community of King Cove grew starting in 1911, the year that Pacific American Fisheries (PAF) built a salmon cannery. Early settlers were Unangan, Scandinavian, and other European fishermen. Of the first 10 founding families, 5 had a European father and an Aleut mother.²²⁹ Many of these early settlers were employed at the King Cove cannery, and Aleut people came from neighboring villages of Belkofski, Sanak, and False Pass to work in the cannery and purchase supplies.²³⁰ A Chinese workforce was also brought to King Cove to work in the cannery. In 1965, the major portion of PAF’s assets was sold to a consolidated firm of Peter Pan Seafoods and Taiyp Gyogyo KK.²³¹ The cannery was partially destroyed by a fire in 1976.²³² Today, Peter Pan Seafoods continues to operate the King Cove facility, which currently has the largest salmon canning capacity of any plant in Alaska.²³³ King Cove remains economically tied to commercial fishing and fish processing, as well as traditional subsistence practices.²³⁴

The City of King Cove first incorporated as a 2nd Class City in 1947, and gained 1st Class City status in 1974. Development in King Cove was initially concentrated near the head of the cove, and in recent years it has expanded into a small valley southeast of the cove.²³⁵ Scandinavians have historically influenced the cultural, economic, and social structures in the community, and today King Cove is a mixed non-Native and Unangan Aleut community.²³⁶

Natural Resources and Environment

King Cove lies in the maritime climate zone. Temperatures average 25 to 55 °F, with extremes from -9 to 76 °F. Annual snowfall averages 52 inches, and total annual precipitation averages 33 inches. Fog during summer and high winds during winter can limit accessibility.²³⁷ The landscape surrounding King Cove is dominated by a series of mostly glaciated volcanoes, and the coastline is characterized by rocky headlands and sandy beaches.²³⁸

King Cove is located at the southern boundary of the Pavlof Unit of the Alaska Peninsula National Wildlife Refuge (NWR). Other protected areas in the vicinity of King Cove include the Alaska Maritime NWR, which includes islands off the southern coast of the Alaska Peninsula, and the Izembek National Wildlife Refuge (NWR) to the north and west of the community. The Alaska Peninsula NWR and Alaska Maritime NWR were both established under the Alaska National Interest Land Conservation Act (ANILCA) of 1980. With a total area of 3.7 million acres, the Alaska Peninsula NWR extends as far west as False Pass and east beyond Chignik

²²⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²⁹ City of King Cove. 1981. *Community Comprehensive Plan*. Retrieved September 14, 2012 from <http://www.commerce.state.ak.us/dca/plans/King%20Cove-CP-1981.pdf>.

²³⁰ See footnote 227.

²³¹ Radke, A.. C. 2002. *Pacific American Fisheries, Inc: History of a Washington State Salmon Packing Company, 1890-1966*. Ed. B. S. Radke. McFarland and Company, Inc., Publishers. North Carolina.

²³² See footnote 227.

²³³ Peter Pan Seafoods, Inc. 2012. *Facilities: King Cove*. Retrieved September 17, 2012 from http://www.ppsf.com/facilities/index.aspx#king_cove.

²³⁴ See footnote 227.

²³⁵ See footnote 229.

²³⁶ See footnote 228.

²³⁷ Ibid.

²³⁸ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

Bay, and includes a separate eastern unit south of Ugashik. It hosts a dramatic landscape of towering mountain peaks, including a number of active volcanoes, rolling tundra, and rugged coastlines. Salmon return to the rivers of the Alaska Peninsula NWR, supporting brown bear populations. Other land mammals include wolverine, the 7,000-animal Northern Alaska Peninsula caribou herd, wolves, and moose. It is of note that no black bears are found in the Alaska Peninsula NWR. Marine mammals living along the coastline include sea otters, harbor seals, sea lions, and migrating whales. The Alaska Peninsula NWR also provides important habitat for migrating birds.²³⁹

The Alaska Maritime NWR hosts a similar array of species in the Alaska Peninsula region. However, it contains a greater diversity overall, as it spans four time zones,²⁴⁰ stretching from the Aleutian Islands to the Southeast Alaska Panhandle. It was created in part to promote a program of scientific research on marine ecosystems. The Alaska Maritime NWR “protects breeding habitat for seabirds, marine mammals, and other wildlife on more than 2,500 islands, spires, rocks, and coastal headlands.”²⁴¹

The 417,533-acre Izembek NWR was established in 1960 as “a refuge, breeding ground, and management area for all forms of wildlife.” The Izembek NWR hosts the Pavlof and Shishaldin Volcanoes and Izembek Lagoon. The Lagoon provides habitat for an extraordinary abundance and diversity of waterfowl and shorebirds, and was the first site in the United States to be designated a Wetland of International Importance by the Ramsar Convention in 1986, and in 2001 was also designated a Globally Important Bird Area by the American Bird Conservancy. In addition to providing critical habitat for hundreds of thousands of migrating birds, the Izembek NWR supports a similar range of animal species as the Alaska Peninsula NWR.²⁴²

Deposits of gold and silver and copper are known to be present in the region between False Pass and Belkofski, but there are currently no active mining operations. There are no significant deposits of coal in the area, and land-based oil and gas potential is not well known.²⁴³ Reserves of oil and natural gas are thought to be present on the outer continental shelf in the Bristol Bay Basin along the northern edge of the Aleutian Islands and Alaska Peninsula. However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010, Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.²⁴⁴ On March 31,

²³⁹ U.S. Fish and Wildlife Service. (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved March 23, 2012 from <http://www.fws.gov/refuges/profiles/index.cfm?id=74512>.

²⁴⁰ “Technically, the Alaska Maritime Refuge spans 4 time zones (Pacific, Yukon, Alaska, and Bering). In 1983 almost all the state was consolidated under Alaska Time (standard and daylight) - one hour behind Pacific Time of the West Coast. Only the central and western Aleutian Islands observe Hawaii-Aleutian Time, two hours behind Pacific Time.” Quote retrieved June 11, 2012 from <http://alaskamaritime.fws.gov/howbig.htm>.

²⁴¹ U.S. Fish and Wildlife Service (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved January 4, 2012 from <http://alaskamaritime.fws.gov/>.

²⁴² U.S. Fish and Wildlife Service. 2011. *Izembek National Wildlife Refuge*. Retrieved January 4, 2012 from <http://izembek.fws.gov/>.

²⁴³ See footnote 238.

²⁴⁴ Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.²⁴⁵

Natural hazards with the potential to impact King Cove include earthquakes, volcanic activity, tsunami, severe weather, and erosion, with high probability of earthquake or volcanic eruption, moderate probability of tsunami or severe weather, and low probability of erosion. The possible damage from an earthquake, volcanic eruption, or tsunami is considered to be critical, with potential to result in complete shutdown of critical facilities for more than one week, or in which more than 10% of property would be severely damaged. Possible damage from severe weather or erosion is considered to be limited. Areas of King Cove that are most susceptible to erosion include one-half mile of road along Gould's Lagoon and the main road to the small boat harbor, which has been washed out by tidal activity in the past. The road along Gould's Lagoon is currently armored against coastal erosion.²⁴⁶

According to the Alaska Department of Environmental Conservation, no active environmental cleanup sites were located near King Cove as of August 2012.²⁴⁷

Current Economy²⁴⁸

In the 2011 AFSC survey, community leaders indicated that 75% of economic activity in King Cove is based on direct and indirect fishing activity. Between 2000 and 2010, the number of commercial fishery permit holders, crew license holders, and vessel owners residing in King Cove all declined, but all of these numbers represented a large percentage of the population. On average over the 2000-2010 period, the number of state permit holders was equivalent to 7.8% of the local population, the number of vessel owners was equivalent to 10.2%, and the number of crew license holders was equivalent to 19.2%. Subsistence activities supplement local incomes. Primary subsistence resources harvested include salmon, caribou, geese, and ptarmigan.²⁴⁹

Based on household surveys conducted for the 2006-2010 ACS,²⁵⁰ in 2010, the per capita income in King Cove was estimated to be \$22,038 and the median household income was estimated to be \$50,500. This represents a decrease from the per capita reported in 2000 (\$17,791) and a slight increase from the median household income reported in 2000 (\$45,893). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,²⁵¹ both per capita and median household incomes appear to have decreased over the decade, from a real per capita income in 2000 of \$23,395 and a real median household income of \$60,349. In 2010,

²⁴⁵ The White House, Office of the Press Secretary. March 31, 2010. *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

²⁴⁶ WHPacific. 2010. *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from: <http://www.aleutianseast.org/>.

²⁴⁷ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

²⁴⁸ Unless otherwise noted, all monetary data are reported in nominal values.

²⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁵¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

King Cove ranked 135th of 305 Alaskan communities with per capita income data, and 130th in median household income, out of 299 Alaskan communities with household income data that year.

Although King Cove's small population size may have prevented the ACS from accurately portraying economic conditions,²⁵² additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for King Cove in 2010 is \$5,900.^{253,254} However, despite this evidence for a decline in income between 2000 and 2010, King Cove did not meet the Denali Commission's criteria as a "distressed community" in 2010. It is important to note that community leaders indicated in the 2011 AFSC survey that the 2010 Decennial Census population count may have been inflated, including approximately 400 individuals that do not reside in the community permanently. If this is the case, this ALARI per capita income estimate may be low. However, if community leaders' estimate of 2010 population (450 permanent residents) is used instead to calculate per capita income, the figure still remains much lower than the ACS estimate for 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a greater percentage of King Cove residents were estimated to be in the civilian labor force (87%) than in the civilian labor force statewide (68.8%). In the same year, 10% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 0.2%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment, based on the ALARI database, indicates that the unemployment rate in King Cove was much higher in 2010 (19.3%), almost twice the statewide unemployment rate estimate of 11.5%.²⁵⁵ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Also based on the 2006-2010 ACS, a majority of the King Cove workforce was estimated to be employed in the private sector (89.5%), along with 7.9% in the public sector, and 2.4% estimated to be self-employed. Of the 506 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number was estimated to be working in manufacturing (83%), and some were also estimated to be working in educational services, health care, and social assistance (5.7%), public administration (3.2%), retail trade (2.6%), and agriculture, forestry, fishing, hunting, and mining (2.4%), along with very small numbers in other industries (Figure 3). The number of individuals employed in fishing industry is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. Between 2000 and 2010, local employment by industry became more heavily concentrated, with 24.3% more of the employed workforce estimated to be employed in

²⁵² While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁵³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

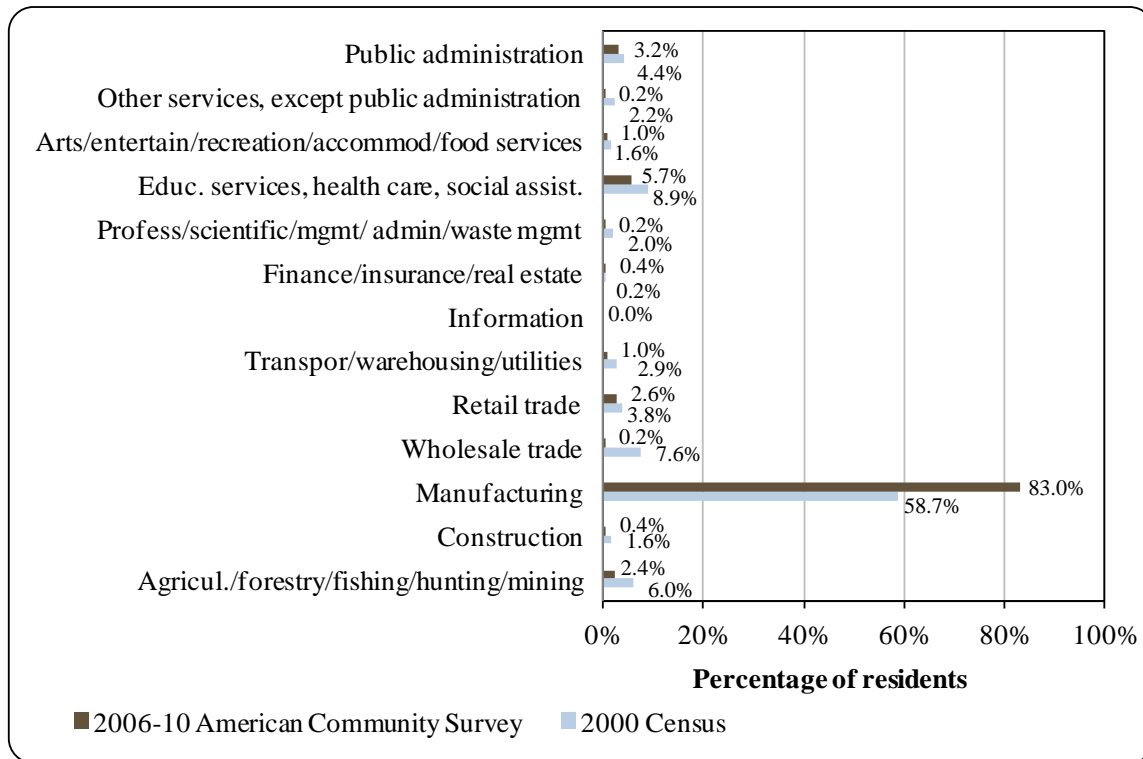
²⁵⁴ See footnote 250.

²⁵⁵ See footnote 253.

manufacturing in 2010. At the same time, the percentage of the local workforce estimated to be employed declined.

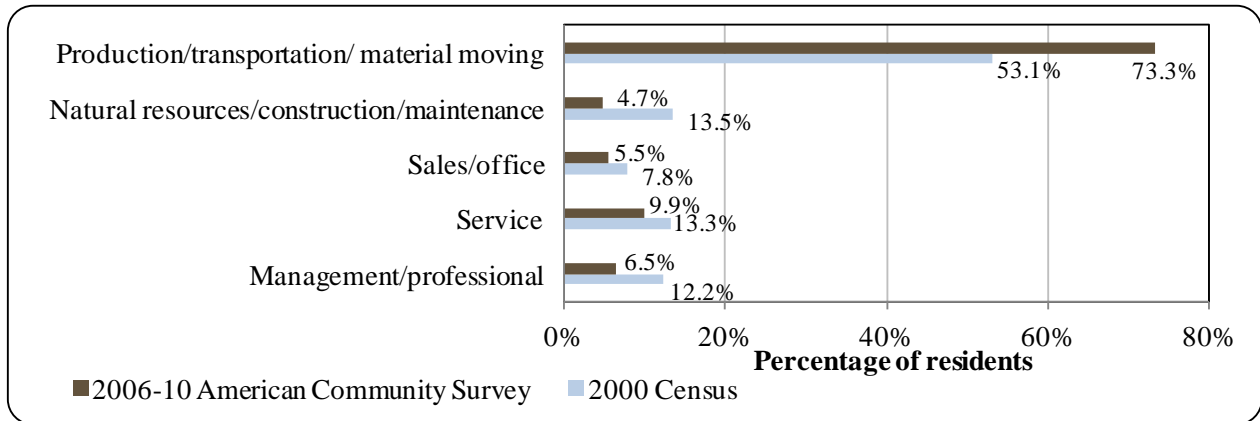
By occupation type, 2006-2010 ACS estimates indicate that a majority (73.3%) of employed residents hold production, transportation, or material moving positions, along with 9.9% holding service occupation positions, 6.5% with management or professional positions, 5.5% with sales and office positions, and 4.7% with natural resources, construction, or maintenance positions (Figure 4). As with employment by industry sector, employment by occupation type became more concentrated between 2000 and 2010, with 20% more of the labor force employed in production, transportation, and material moving occupations in 2010 compared to 2000, and a commensurate decrease in the percentage employed in all other occupation categories. Data reported in the ALARI database supports ACS estimates, suggesting that the most common occupations in King Cove were production, transportation, or material moving positions, meat processors, and fish workers. Other common occupations in King Cove in 2010 included educational, housekeeping, health, or administrative services, and mechanical and maintenance workers.²⁵⁶ It is important to note that ALARI statistics shows the highest percentage of the workforce involved in local government, while the ACS estimates that the vast majority of the workforce is employed in manufacturing. As noted earlier in this section, in the 2011 AFSC survey, community leaders reported that the 2010 Decennial Census population figure may have been overestimated by almost 400 individuals. This could account for conflicts in labor force and industry employment figures between the 2006-2010 ACS and the 2010 ALARI database.

Figure 3. Local Employment by Industry in 2000-2010, King Cove (U.S. Census).



²⁵⁶ Ibid.

Figure 4. Local Employment by Occupation in 2000-2010, King Cove (U.S. Census).



Governance

King Cove is a 1st Class City located in the Aleutians East Borough. Incorporated in 1947, King Cove has “Strong Mayor” form of government, which includes a mayor, a seven-person city council, seven-person school board, five-person planning commission, and a number of municipal employees. The City administers a 4% sales tax and a 2% fish tax, and the Borough also collects a 2% fish tax. In addition, the City collects a \$100,000 Fisheries Business Impact Tax.²⁵⁷ In the 2011 AFSC survey, community leaders reported that the Fisheries Business Impact Tax is collected from Peter Pan Seafoods, and is used to support the City’s General Fund, providing police, emergency response, and public works funding.

Annual municipal revenue appears to have stayed relatively stable from 2000 to 2005, averaging almost \$1.5 million per year, with an almost 50% increase from 2005 to 2006, followed by an average of almost \$2.5 million between 2006 and 2010. Total sales tax revenues varied between \$434,863 in 2004 and \$1,775,000 in 2009. King Cove also received approximately \$25,000 per year in State Revenue Sharing contributions from 2000 to 2003, and Community Revenue Sharing contributions of \$16,994 in 2008 and just over \$130,000 per year in 2009 and 2010.

In addition, King Cove received a variety of fisheries-related grants between 2000 and 2010. In 2000 and 2001, the Alaska Department of Commerce, Community, and Economic Development’s Division of Community and Regional Affairs (DCRA) granted the community \$25,000 per year for construction of a harbor house and warehouse. Funds were also received in 2000 and 2001 for development of an access road to Lenard Harbor; \$26,663 were supplied by the Denali Commission in 2001, and a private funding source granted \$34,500 in 2001. Funds for upgrades to the north boat harbor were received from various sources from 2007 to 2009, including \$440,000 in 2007 and \$400,000 in 2008 from the DCRA, \$93,500 in 2007 and \$59,000 in 2008 from the State of Alaska, \$1.5 million from the Denali Commission in 2009, and \$3 million from the Alaska Department of Transportation and Public Facilities (DOT&PF) in 2009.

²⁵⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

For information on selected municipal, state, and federal revenue streams between 2000 and 2010, see Table 2.

King Cove was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity recognized by the Bureau of Indian Affairs (BIA) is the Agdaagux Tribe of King Cove. The Native village corporation is the King Cove Corporation, which manages 128,646 acres of land.²⁵⁸ King Cove belongs to the Aleut Corporation, the regional Native corporation of the eastern Alaska Peninsula and Aleutian Islands.²⁵⁹

King Cove is also a member of the Aleutian Pribilof Islands Association (APIAI), one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.²⁶⁰ APIAI provides services including cultural heritage, health, education, social, psychological, employment, vocational training, environment, natural resources, and public safety services.²⁶¹

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of King Cove from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,477,300	\$1,011,597	\$26,857	\$51,633
2001	\$1,539,000	\$1,165,613	\$25,885	\$59,500
2002	\$1,270,500	\$636,720	\$25,881	n/a
2003	\$1,055,000	\$926,188	\$26,020	n/a
2004	\$1,464,500	\$434,863	n/a	n/a
2005	\$1,760,616	\$1,370,134	n/a	n/a
2006	\$2,585,615	\$1,636,507	n/a	n/a
2007	\$2,163,000	\$1,506,588	n/a	n/a
2008	\$2,364,500	\$1,820,357	\$16,994	\$533,500
2009	\$2,565,500	\$1,775,000	\$134,260	\$459,000
2010	\$2,585,850	\$1,615,925	\$133,312	\$4,500,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

²⁵⁸ Ibid.

²⁵⁹ Aleut Corporation website. 2008. *Corporation*. Retrieved February 9, 2012 from <http://www.aleutcorp.com>.

²⁶⁰ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

²⁶¹ Aleutian Pribilof Islands Association. (n.d.) Retrieved January 3, 2012 from <http://www.apiai.com/>.

The closest regional office of the Alaska Department of Fish and Game (ADF&G) is located in Sand Point. Kodiak has the nearest National Marine Fisheries Service (NMFS) office, including a NOAA Fisheries Sustainable Fisheries Division and Enforcement Office, as well as the nearest office of the Alaska Department of Natural Resources. The nearest Alaska Department of Commerce, Community, and Economic Development office is in Dillingham, and the closest offices of the U.S. Bureau of Citizenship and Immigration Services are located in Unalaska and Kodiak. However, the Anchorage offices of these agencies may be more accessible to people from the Alaska Peninsula region.

Infrastructure

Connectivity and Transportation

King Cove is accessible by air and sea only. A state-owned 3,500 feet long by 100 feet wide gravel runway is available. Gale force crosswinds are common, as the airport lies in a valley between two volcanic peaks. Currently a hovercraft provides regular service to nearby Cold Bay, which enjoys more stable flying conditions. Cold Bay Airport also has a longer runway allowing the airport to handle larger planes.²⁶² Scheduled air service is available to King Cove with Peninsula Airways, connecting through Cold Bay. As of September, 2012, roundtrip airfare between King Cove and Anchorage was \$1,226.²⁶³ However, flights from King Cove to Cold Bay are canceled about 50% of the time due to thick fog or high winds.

A high priority for local transportation has long been construction of an access road between King Cove and Cold Bay to provide a more reliable link to the outside world during emergencies. In 2004, construction began on a combined road and hovercraft system to provide better access between King Cove and Cold Bay via a temporary hovercraft terminal north of King Cove at Lenard Harbor. Completion of this initial phase of the project was expected by September, 2012.^{264,265} As of the Fall of 2012, the City of King Cove awaited a final decision on a proposed land transfer that would allow the access road to be extended directly to Cold Bay. The land transfer would increase the size of the Izembek and Alaska Peninsula NWRs in exchange for the 206 acres needed to construct a single-lane road corridor.²⁶⁶ A final decision from the U.S. Secretary of the Interior was expected sometime between November 2012 and January 2013.²⁶⁷ The City of King Cove currently maintains approximately 5.65 miles of local

²⁶² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶³ The price was calculated September 17, 2012 using <http://www.penair.com/>.

²⁶⁴ Aleutians East Borough. 2002. *King Cove Access Project and KCAP – Road to the Northeast Corner*. Retrieved September 17, 2012 from <http://www.aleutianseast.org/>.

²⁶⁵ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

²⁶⁶ See footnote 264.

²⁶⁷ City of King Cove, Office of the Mayor. August 8, 2012. *Mayor Newsletter*. Retrieved September 17, 2012 from <http://www.cityofkingcove.com/August%202012%20newsletter.pdf>.

roads and 4.5 miles of state road between the City and the airport. The airport road was paved in 2004, and there are plans for primary local roads to be paved.²⁶⁸

In addition to air travel and limited road access, the state ferry provides bi-monthly service to King Cove between May and October. As of summer 2012, a roundtrip fare from Homer to King Cove on the Alaska state ferry was \$512, and roundtrip between King Cove and Dutch Harbor was \$214.²⁶⁹ Peter Pan Seafoods allows the ferry and marine cargo services to use one of its three docks for a fee. One of the other two docks owned by Peter Pan is used for off-loading fish and transferring supplies to tenders and the fishing fleet, and the final dock is used as a fuel dock. In addition, one public deep-water dock is available in King Cove. The dock can be used by fuel and cargo barges, the state ferry, and large fishing vessels. In addition, a new harbor south of the city dock was constructed in 2000.²⁷⁰ The new harbor is operated by the City and provides additional moorage for larger vessels ranging between 60 and 150 feet in length.²⁷¹

Facilities

Water in King Cove is derived from Ram Creek using a sheet pile dam that stores about 980,000 gallons of unfiltered water. The City of King Cove operates water and sewage systems. A piped sewage collection system connects all homes and facilities to central septic tanks. Two lift stations and tanks provide primary (20,000 gallons) and secondary treatment (84,000 gallons) of waste, with discharge through an outfall line. All residents are connected to the piped water system, and all homes are fully plumbed.²⁷² In the 2011 AFSC survey, community leaders reported that King Cove has made substantial investment in utilities in the last two to three decades, including water and sewer pipelines, water and sewage treatment, roads and airport infrastructure, police, fire and emergency response, landfill, the school, community center, telephone service, and alternative energy sources.

Since initial construction in 1995, a hydroelectric facility on Delta Creek has provided a majority of electricity to the community of King Cove, along with three backup diesel generators.²⁷³ Upgrades to the Delta Creek hydroelectric plant were completed in 2008,²⁷⁴ and as of August 2012, construction had begun on an additional hydroelectric facility at Waterfall Creek, with an expected completion date of late 2013.²⁷⁵ The Peter Pan Seafoods facility operates its own power source and is not connected to the city electrical grid. The City collects garbage twice a week before depositing it in an unpermitted, Class 3 landfill.²⁷⁶ The City of King Cove actively promotes waste reduction and recycling in the community to help alleviate

²⁶⁸ Agdaagux Tribe of King Cove. 2007. *Comprehensive Community Environmental Plan, Updated Version*. Retrieved September 14, 2012 from <http://www.anthc.org/chs/ces/hve/upload/KVC-Updated-Env-Plan-Recycling-Plan.pdf>.

²⁶⁹ Alaska Marine Highway System. 2011. *Fare Tables*. Retrieved September 17, 2012 from <http://www.dot.state.ak.us/amhs/fares.shtml>.

²⁷⁰ City of King Cove. 2006. *Draft Comprehensive Community Plan*. Retrieved September 14, 2012 from <http://www.commerce.state.ak.us/dca/plans/KingCove-CP-2006.pdf>.

²⁷¹ See footnote 262.

²⁷² Ibid.

²⁷³ See footnote 270.

²⁷⁴ Renewable Energy Alaska Project. October 17, 2009. "King Cove hydro project keeps costs down, provides heat for school district." Retrieved September 17, 2012 from <http://alaskarenewableenergy.org/2009/10/king-cove-hydro-project-keeps-costs-down-provides-heat-for-school-district/>.

²⁷⁵ See footnote 267.

²⁷⁶ See footnote 270.

pressure on the landfill, which is nearing capacity.²⁷⁷ Recycling is currently provided for aluminum only, and expansion of the recycling program to include plastics, glass, paper, and cardboard is desired.²⁷⁸

Community facilities in King Cove include a community center, public library, recreation center, and a teen center. Safety services are provided by the city police department, a Village Public Safety Officer in King Cove and state troopers posted in Dillingham. The City also maintains its own volunteer fire and rescue squad. Visitor accommodations are provided by B-N-W Bed and Breakfast.²⁷⁹ In a survey conducted by the AFSC in 2011, community leaders reported that King Cove also has a post office and that telephone and broadband internet service are both in place. Cable service is also available locally.²⁸⁰

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that 3,700 feet of dock space is available for permanent vessels to moor at in King Cove. An additional 4,000 feet of dock space is available to transient vessels for mooring. Community leaders reported that vessels up to 150 feet long can use moorage, and that the community can handle rescue vessels (e.g., Coast Guard), cruise ships, ferries, and fuels barges. According to community leaders, new dock space has been constructed within the last 10 years, along with upgrades to existing dock structures, including addition of water and electricity serving the dock. Also within the last 10 years, a barge landing area and breakwater were completed, and fuel tanks were also made available at the dock. Community leaders also noted substantial investments in fisheries-related infrastructure prior to the last 10 years, including construction of a jetty, dry dock space, haul out facilities, and roads serving dock space. Today, community leaders also noted the presence of multiple fishing support businesses in King Cove, including fishing gear sales and repairs, tackle and bait sales, bookkeeping, boat fuel sales, dry dock storage, and boat repair services. The extent and availability of these services vary with the season. Community leaders indicate that residents typically travel to the cities of Homer, Kodiak, and Unalaska (Dutch Harbor) to access fisheries-related businesses and services not found in King Cove.

Medical Services

The King Cove Medical Clinic provides basic medical services in King Cove. The clinic is a qualified Emergency Care Center and a Community Health Aide Program site. Emergency Services have limited marine and air access. Emergency service is provided by 911 Telephone Service volunteers and the local health aide.²⁸¹ The nearest hospitals are located in Dillingham and Kodiak.

Educational Opportunities

²⁷⁷ See footnote 267.

²⁷⁸ See footnote 268.

²⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸⁰ Ibid.

²⁸¹ Ibid.

One school is located in King Cove. As of 2011, the King Cove School had 108 students and 12 teachers.²⁸²

²⁸² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the King Cove area for thousands of years. Villages and fish camps were often located at mouths of streams for access to both fresh water and abundant salmon runs.²⁸³ During Alaska's Russian period, salmon remained a subsistence resource, but soon after the purchase of Alaska by the United States in 1867, commercial exploitation of salmon was initiated.²⁸⁴ Herring was one of the earliest commercial fisheries, along with salmon, during the period when the product was salted for storing and shipment to be used for human consumption. Commercial harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.²⁸⁵ Halibut and groundfish fisheries began to develop in the Alaska Peninsula region by the 1920s with the development of diesel engines, which allowed fishing vessels to undertake longer trips.^{286,287}

The first salmon saltery was built in Alaska in 1868, and the first cannery was established in 1869.²⁸⁸ The modern community of King Cove grew around a PAF cannery that began operations there in 1911. Fishing and processing jobs attracted a mixed population of Unangan Aleut from the surrounding region, Scandinavians and other European fishermen. A Chinese workforce was also brought in to operate the cannery in its early years. In 1965, the major portion of PAF's assets was sold to a consolidated firm of Peter Pan Seafoods and Taiyp Gyogyo KK.²⁸⁹ The facility operated continuously until 1976, when it was partially destroyed by fire. Today, Peter Pan Seafoods continues to operate the King Cove facility, which is currently the largest salmon cannery in North America.^{290,291} Peter Pan Seafoods added crab processing as a strong secondary species at the King Cove facility, as well as halibut, cod, and pollock.²⁹² In addition to fisheries for these species, the King Cove fishing fleet has participated in fisheries for a variety of groundfish species, herring, octopi/squid, and sablefish in recent years.

²⁸³ Alaska Native Heritage Center. (n.d) *The Unangax & Alutiiq (Supiaq) People - Who We Are*. Retrieved January 4, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/unangax/.

²⁸⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²⁸⁵ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²⁸⁶ See footnote 284.

²⁸⁷ Thompson, W. F. and N. L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

²⁸⁸ See footnote 284.

²⁸⁹ Radke, A.. C. 2002. *Pacific American Fisheries, Inc: History of a Washington State Salmon Packing Company, 1890-1966*. Ed. Barbara S. Radke. McFarland and Company, Inc., Publishers. North Carolina.

²⁹⁰ Agdaagux Tribe of King Cove. 2007. *Comprehensive Community Environmental Plan, Updated Version*. Retrieved September 14, 2012 from <http://www.anthc.org/chs/ces/hve/upload/KVC-Updated-Env-Plan-Recycling-Plan.pdf>.

²⁹¹ Peter Pan Seafoods, Inc. 2012. *Facilities: King Cove*. Retrieved September 17, 2012 from http://www.ppsf.com/facilities/index.aspx#king_cove.

²⁹² City of King Cove. 2006. *Draft Comprehensive Community Plan*. Retrieved September 14, 2012 from <http://www.commerce.state.ak.us/dca/plans/KingCove-CP-2006.pdf>.

Pacific halibut fisheries are managed under the International Pacific Halibut Commission. In 1995, management of Alaskan halibut and sablefish fisheries shifted from limited entry to a system of Individual Fishing Quotas (IFQ). Motivations for the shift included overcapitalization, short seasons, and the derby-style fishery that led to loss of product quality and safety concerns. As a result of program implementation, the number of shareholders and total vessels participating in the halibut and sablefish fisheries declined substantially, and product quality has improved. This shift to catch shares has been controversial, raising concerns about equity of catch share allocation, reduced crew employment needs, and loss of quota from coastal communities to outside investors.²⁹³

Groundfish and crab fisheries that occur within three nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond three nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction.²⁹⁴ In the Gulf of Alaska (GOA), federally-managed groundfish fisheries target Pacific cod, walleye pollock, pelagic shelf rockfish, sablefish, and flatfish. Major state groundfish fisheries in the Alaska Peninsula region include a jig fishery for black rockfish out of Unalaska and a Pacific cod fishery, in addition to a statewide lingcod fishery, and a sablefish fishery in state waters for non-federal sablefish quota share holders. Management plans for state-waters fisheries are approved by the Alaska Board of Fisheries (BOF), and guideline harvest limits (GHL) are set by the ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition, the ADF&G manages lingcod fisheries in both state and EEZ waters off Alaska, and beginning in 1998, management of black rockfish and blue rockfish in the GOA was transferred from NMFS to ADF&G.²⁹⁵

Both Bristol Bay and the Kodiak area were historical centers of the red king crab fishery. Tanner crabs are also distributed through the GOA. The range of Dungeness crabs includes the Alaska Peninsula, eastern Aleutians, and Kodiak Island. Bering Sea and Aleutian Islands crab stocks are jointly managed by the North Pacific Fishery Management Council (NPFMC) and ADF&G, while GOA stocks are solely managed by the State of Alaska.^{296,297} The Kodiak red king crab fishery has been closed in recent years due to low abundance. However, parts of the Kodiak district have been open for Tanner crab harvest in recent years. The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the village of Togiak. Herring are harvested for bait in the vicinity of Unalaska when Togiak-spawning herring are in residence during the summer feeding period. On occasion, a herring sac roe fishery occurs near Port Moller when aerial surveys determine that a sufficient quantity of herring is present, and if processing capacity is available.²⁹⁸

King Cove is located in Pacific Halibut Fishery Regulatory Area 3B, Federal Statistical and Reporting Area 610, and the Western Gulf of Alaska Sablefish Regulatory Area. Because King Cove is not located on the Bristol Bay side of the Alaska Peninsula, the community is not

²⁹³ Fina, M.. 2011. "Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific." *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from

http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

²⁹⁴ See footnote 285.

²⁹⁵ Ibid.

²⁹⁶ Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFGredkingcrab.main>.

²⁹⁷ Alaska Dept. of Fish and Game. 2012. *Tanner Crab Species Profile*. Retrieved June 25, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFGtannercrab.management>.

²⁹⁸ See footnote 285.

eligible for the Community Development Quota program. The community is eligible for the Community Quota Entity (CQE) program. Aleutia, Inc. is a CQE with headquarters in Sand Point that also serves King Cove. In 2008, Aleutia Inc. reached an agreement with Peter Pan Seafoods to purchase processor quota shares on behalf of King Cove, Sand Point, Nelson Lagoon, False Pass, Cold Bay, and Akutan. Peter Pan Seafood in King Cove will process the product and assist with marketing.^{299,300}

A local advisory committee for the BOF is located in King Cove. The activities of the advisory committee include developing regulatory proposals; evaluating regulatory proposals and making recommendations to the BOF; providing a local forum for fish and wildlife conservation and use, including matters relating to habitat; advising the appropriate regional council on resources; and consulting with individuals, organizations, and agencies.³⁰¹ In the 2011 AFSC survey, community leaders reported that King Cove actively participates in fisheries management processes in Alaska through a variety of other avenues, including sending a paid staff member to NPFMC meetings. They also indicated that King Cove has a representative that sits on NPFMC committees or advisory groups, a representative that sits on regional fisheries advisory and/or working groups run by ADF&G, and a representative that participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process.

When asked to comment about current challenges to King Cove's fishing economy, community leaders responded that approximately 75% of the local economy is based on direct and indirect fishing activities, and given this, changes in quota, regulations, processor ownership, fluctuations in processing capacity, and limitations in access to King Cove between fishing seasons are the community's primary challenges. When asked to describe effects of management actions or policies on King Cove, community leaders indicated that crab rationalization significantly reduced the fleet, thereby reducing demand for moorage and moorage revenue in King Cove. In addition, approximately 15-20 local crab crew jobs were eliminated. In addition, the CDQ program has been a controversial issue for King Cove fishermen.

Processing Plants

Peter Pan Seafood's King Cove facility primarily processes salmon, and has the largest salmon canning capacity of any Alaska's processing facilities. The cannery also processes king, Tanner and snow crab, pollock, cod, salmon, halibut, and sablefish. Although the plant operates year-round, its peak seasons are in the winter and summer, when it employs up to 500 people.³⁰² The King Cove cannery was originally built by Bellingham-based PAF in 1911, and was sold to Peter Pan Seafoods in 1965.³⁰³

²⁹⁹ Aleutia.org website. 2012. Our Story. Retrieved September 18, 2012 from <http://www.aleutia.org/our-story>.

³⁰⁰ Bauman, Margaret. August 10, 2008. "Sand Point's Aleutia buys Bristol Bay crab processor shares." *Alaska Journal of Commerce*. Retrieved September 18, 2012 from <http://www.alaskajournal.com/Alaska-Journal-of-Commerce/August-2008/Sand-Points-Aleutia-buys-Bristol-Bay-crab-processor-shares/>.

³⁰¹ Southwest Alaska Municipal Conference. May 2010. *Southeast Alaska Comprehensive Economic Development Strategy*. Prepared for the U.S. Department of Commerce Economic Development Association. Retrieved December 21, 2011 from <http://www.swamc.org/>.

³⁰² Peter Pan Seafoods, Inc. 2012. *Facilities: King Cove*. Retrieved September 17, 2012 from http://www.ppsf.com/facilities/index.aspx#king_cove.

³⁰³ Radke, A. C. 2002. *Pacific American Fisheries, Inc: History of a Washington State Salmon Packing Company, 1890-1966*. Ed. Barbara S. Radke. McFarland and Company, Inc., Publishers. North Carolina.

Fisheries-Related Revenue

In 2010, King Cove received a total of \$2,585,850 in known fisheries-related revenue. A majority of this revenue was generated from harbor usage fees and the Shared Fisheries Business Tax. Overall, from 2000 to 2010, there was a 106.6% increase in known fisheries-related revenues. For more information on known fisheries-related revenues for King Cove between 2000 and 2010, see Table 3.³⁰⁴

It is important to note that, while no detailed information was reported regarding annual revenue from the raw fish tax between 2000 and 2010, community leaders indicated in the 2011 AFSC survey that, in 2010, combined revenues from local and state raw fish tax and the extraterritorial fish tax contributed \$2,000,000 to King Cove's Annual General Fund. Community leaders also reported that a variety of public services are at least partially funded by fisheries-related taxes and fees, including harbor maintenance, the health clinic, roads, the police force and fire protection, the recreation center, social services such as libraries, and general city administration. King Cove has local fishing-related fee programs that charge the fishing industry specifically to support public services and infrastructure.

Commercial Fishing

King Cove is one of the leading processing communities in Alaska, ranking 7th in landings and 11th in ex-vessel revenue out of 67 Alaskan ports that received landings in 2010. That year, seven fish buyers were present locally, and one shore-side processing facility was in operation. The total net poundage of landings in 2010 was 79,853,218, with total ex-vessel value of \$41,650,304 (Table 5). Between 2000 and 2010, King Cove residents were also highly engaged in commercial fisheries as state and federal permit holders, quota share account holders, crew members, and vessel owners.

Although the population of permanent residents increased in King Cove during the 2000-2010 period, the total number of King Cove residents engaged in commercial fishing declined. In 2000, there were 66 state permit holders and 201 crew license holders, and 94 fishing vessels were primarily owned by King Cove residents. By 2010, total state permits holders had fallen to 53, crew license holders to 132 and vessel owners to 70. There were also decreases in homeported vessels and total vessels landing catch in King Cove between 2000 and 2010. Information about the commercial fishing sector in King Cove is presented in Table 5.

In the 2011 AFSC survey, community leaders indicated that vessels homeporting in King Cove range in size from 35 feet to over 125 feet in length, and utilize gear types including trawl, pots, longline, gillnet, purse seine, and troll gear. They also indicated that most of the decline in fishing vessels in recent years has been a loss of the larger fleet – those vessels ranging from 60 to more than 125 feet in length. Specifically, they reported that one source of this decline is fewer Bering Sea crab boats coming to King Cove as a result of crab rationalization.

In 2010, the 53 King Cove state permit holders held a total of 116 Commercial Fisheries Entry Commission (CFEC) permits. Of these 116 CFEC permits, 51 (44%) were held in salmon fisheries, 35 (30.2%) were held in fisheries for groundfish, 17 (14.7%) were held in crab fisheries, 11 (9.5%) for halibut, and 2 (1.7%) in 'other shellfish' fisheries. CFEC permit statistics are presented in Table 4, and further details about permits are presented below.

³⁰⁴ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

A majority of the 51 salmon CFEC permits held by King Cove residents in 2010 were held in Peninsula-Aleutians area fisheries, including 20 in the Peninsula-Aleutians purse seine fishery, 15 in the drift gillnet fishery, and 13 in the set gillnet fishery. In addition, one permit was held in the Bristol Bay drift gillnet fishery that year, and two permits were held in the Bristol Bay set gillnet fishery. Overall, 78% of salmon permits held were actively fished in 2010. Both the total number of salmon CFEC permit holders and total permits held in King Cove declined slightly over the 2000-2010 period, while the percentage of permit actively fished remained relatively stable. It is important to note that, from 2000-2002, one King Cove resident also held a permit in the Kodiak purse seine fishery, but the permit was not actively fished in these three years.

Groundfish CFEC permits were held in 2010 in miscellaneous saltwater finfish fisheries using a variety of gear types, including longline, pot gear, mechanical jig, and otter trawl. The number of groundfish state permit holders decreased slightly from 2000 to 2010, as did the total number of groundfish CFEC permits held and the percentage of permits that were actively fished.

A majority of crab permits held in 2010 were for the Peninsula-Aleutians Tanner crab fishery. From 2000 to 2009, king crab CFEC permits were also held by King Cove residents in Bristol Bay and Dutch Harbor management areas. Prior to 2010, several Tanner crab permits were also held in the Bering Sea and Dutch Harbor management areas. In addition to king and Tanner crab, one Dungeness crab permit was held per year in 2001 and 2002, and again from 2005 to 2010. Until 2009, the permit was held in the Alaska Peninsula management area, while it was held for the Westward region in 2010. The total number of crab permits held in King Cove was variable from year-to-year, with spikes in permit ownership in 2001, 2005-2006, and 2010 reflecting increases in permit holders in the Peninsula-Aleutian Tanner crab pot gear fishery in those years.

The number of halibut CFEC permit holders and total halibut permits held in King Cove both decreased from 14 in 2000 to 11 in 2010. All halibut permits were associated with longline gear, and a majority of permits were for use on vessels under 60 feet in length. The number of herring CFEC permits held in King Cove declined from 12 in 2000 to 0 by 2010. Early in the 2000-2010 period, herring permits were held in the Bristol Bay and Peninsula-Aleutians roe herring fisheries, the Peninsula-Aleutians bait/food purse seine fishery, and the Alaska Peninsula food/bait gillnet fishery. From 2003 to 2009, the only remaining herring permits were held for the Bristol Bay roe herring purse seine fishery. Several sablefish and ‘other shellfish’ permits were held in some years during the 2000-2010 period. Sablefish permits were either held in the statewide mechanical jig fishery or the longline fishery excluding Southeast Alaska and Prince William Sound. All ‘other shellfish’ permits were held in the statewide octopi/squid pot gear fishery.

In addition to CFEC permits, King Cove residents held federal License Limitation Program (LLP) permits in groundfish and crab fisheries and also held a number of Federal Fisheries Permits (FFP) during the 2000-2010 period. Between 2000 and 2010, the number of King Cove residents holding LLPs stayed relatively stable, while the number of LLPs held declined slightly. From 2003 to 2010, the number of FFPs that were actively fished varied between 13 and 17, while 0 were actively fished from 2000 to 2002. Information about federal permits is presented in Table 4, along with CFEC permit statistics.

In addition to state and federal permits, between 2000 and 2010, King Cove residents held quota share accounts and quota shares in federal catch share fisheries for halibut, sablefish,

and crab. The number of halibut quota share account holders in King Cove ranged from 19 to 13 during the 2000-2010 period, with a generally decreasing trend over time. The total number of quota shares held varied between a high of 1,026,276 held in 2001 to a low of 849,123 held in 2004. The overall halibut IFQ allotment for account holders in King Cove initially increased to 14% higher than 2000 levels in 2002, before decreasing to 30-40% below 2000 levels during the 2006-2010 period. Information about federal halibut catch share participation is presented in Table 6. There were fewer sablefish quota share account holders in King Cove, with four in 2000 decreasing to one by 2010. The number of sablefish quota shares held also decreased, from 209,677 in 2000 to 456 in 2010. The overall sablefish IFQ allotment increased to almost 60% above 2000 levels in 2003 and 2004, before decreasing to just over 5% below 2000 levels in 2010. Information about federal sablefish catch share participation is presented in Table 7. The number of crab quota share account holders decreased from seven in 2005 (the first year quota share accounts were available) to four by 2010, with a similar decrease in quota shares held from 2,973,739 in 2005 to 1,216,882 in 2010. The overall crab IFQ allotment increased to almost 40% above 2005 levels in 2007, and then declined to over 15% below 2005 levels in 2009 and 2010. Information about federal crab catch share participation is presented in Table 8.

A majority of landings in King Cove were considered confidential between 2000 and 2010 due to the small number of fish buyers and/or participants in fisheries for each species. Salmon landings can be reported for four years during the period, averaging 18,765,378 net pounds valued at \$8,015,837 on average during these years. In addition, Pacific cod landings can be reported in 2001 only, when 19,092,707 net pounds were landed, valued at \$4,510,130 in ex-vessel revenue. Information about landings and ex-vessel revenue in King Cove is presented in Table 9.

More information can be reported regarding landings delivered by King Cove vessel owners in all locations. Salmon, Pacific cod, and halibut information can be reported for all years during the 2000-2010 period. On average, King Cove vessel owners landed 10,129,430 net pounds of salmon per year, valued at an average of \$2,761,334. Salmon landings and revenue generally increased over the 2000-2010 period, although they declined slightly in 2009 and 2010 following a 2008 peak. Pacific cod landings averaged 7,357,816 net pounds per year, valued at \$2,288,681 in ex-vessel revenue on average. Cod landings were relatively stable between 2000 and 2010. There appears to have been a peak in cod prices in 2007 and 2008, when ex-vessel revenue was higher than average relative to total landings. Halibut landings averaged 22,945 between 2000 and 2010, with an average of \$675,237 in ex-vessel revenues per year. Halibut landings appear to have been relatively stable from 2000 to 2005 before beginning to decline slightly, while the average price per pound appears to have increased over the decade. Landings and revenue for crab, herring, 'other groundfish', 'other shellfish', and pollock can be reported in some years during the 2000-2010, while sablefish details are considered confidential in all years due to the small number of participants. Information about landings made by King Cove vessel owners is presented in Table 10.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of King Cove: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$313,467	\$465,413	\$341,628	\$207,683	\$235,982	\$356,845	\$399,568	\$501,496	\$472,234	\$536,625	\$625,475
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	\$48	\$116	\$1,287	\$4,745	\$3,216	\$8,945	\$6,048	\$9,231
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	\$32,781	\$33,001	\$23,400	\$23,700	\$29,006	\$31,680	\$38,675	\$41,700	\$42,456	\$45,000	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$350,000	\$332,000	\$325,000	\$325,000	\$325,000	\$336,550	\$340,500	\$345,500	\$434,000	\$497,500	\$539,250
Port/dock usage ²	\$5,000	\$25,000	\$30,000	\$22,000	\$25,000	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$25,000
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$250,000
<i>Total fisheries-related revenue⁴</i>	<i>\$701,248</i>	<i>\$855,414</i>	<i>\$720,028</i>	<i>\$578,431</i>	<i>\$615,104</i>	<i>\$726,363</i>	<i>\$783,488</i>	<i>\$891,912</i>	<i>\$957,634</i>	<i>\$1,085,173</i>	<i>\$1,448,956</i>
<i>Total municipal revenue⁵</i>	<i>\$1,477,300</i>	<i>\$1,539,000</i>	<i>\$1,270,500</i>	<i>\$1,055,000</i>	<i>\$1,464,500</i>	<i>\$1,760,616</i>	<i>\$2,585,615</i>	<i>\$2,163,000</i>	<i>\$2,364,500</i>	<i>\$2,565,500</i>	<i>\$2,585,850</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, King Cove: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	43	43	41	41	39	38	39	38	36	36	36
	Active permits	16	18	17	16	16	16	17	17	19	14	15
	% of permits fished	37%	41%	41%	39%	41%	42%	43%	44%	52%	38%	41%
	Total permit holders	33	33	32	32	31	31	33	33	32	32	32
Crab (LLP) ¹	Total permits	13	13	13	12	12	10	10	10	10	10	10
	Active permits	2	2	2	2	2	1	1	1	1	1	1
	% of permits fished	15%	15%	15%	16%	16%	10%	10%	10%	10%	10%	10%
	Total permit holders	9	9	9	9	9	8	8	8	8	8	8
Federal Fisheries Permits ¹	Total permits	19	19	19	19	19	21	21	21	21	16	16
	Fished permits	0	0	0	15	14	14	17	15	14	13	14
	% of permits fished	0%	0%	0%	79%	74%	67%	81%	71%	67%	81%	88%
	Total permit holders	17	17	17	17	17	19	21	21	21	15	15
Crab (CFEC) ²	Total permits	12	35	9	8	9	23	18	8	11	12	17
	Fished permits	10	27	6	7	7	19	13	3	7	9	14
	% of permits fished	83%	77%	67%	88%	78%	83%	72%	38%	64%	75%	82%
	Total permit holders	7	28	4	5	6	19	15	8	11	12	17
Other shellfish (CFEC) ²	Total permits	1	0	0	0	1	1	1	0	0	0	2
	Fished permits	0	0	0	0	1	0	0	0	0	0	2
	% of permits fished	0%	-	-	-	100%	0%	0%	-	-	-	100%
	Total permit holders	1	0	0	0	1	1	1	0	0	0	2
Halibut (CFEC) ²	Total permits	14	15	12	12	11	10	12	12	12	12	11
	Fished permits	12	13	10	11	11	9	11	12	11	11	11
	% of permits fished	86%	87%	83%	92%	100%	90%	92%	100%	92%	92%	100%
	Total permit holders	14	14	12	12	11	10	11	12	12	12	11
Herring (CFEC) ²	Total permits	12	9	3	1	1	2	2	1	1	1	0
	Fished permits	5	2	0	0	0	1	1	0	0	0	0
	% of permits fished	42%	22%	0%	0%	0%	50%	50%	0%	0%	0%	-
	Total permit holders	7	5	2	1	1	2	2	1	1	1	0

Table 4 cont'd. Permits and Permit Holders by Species, King Cove: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	0	0	1	1	2	1	0	0	0	0
	Fished permits	1	0	0	0	1	0	0	0	0	0	0
	% of permits fished	100%	-	-	0%	100%	0%	0%	-	-	-	-
	Total permit holders	1	0	0	1	1	2	1	0	0	0	0
Groundfish (CFEC) ²	Total permits	45	53	40	41	33	31	34	28	34	32	35
	Fished permits	34	36	27	27	20	23	28	20	27	22	22
	% of permits fished	76%	68%	68%	66%	61%	74%	82%	71%	79%	69%	63%
	Total permit holders	30	33	24	24	21	19	24	19	26	23	25
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	60	57	56	59	55	56	55	57	57	51	51
	Fished permits	48	42	35	43	39	39	41	42	45	39	40
	% of permits fished	80%	74%	63%	73%	71%	70%	75%	74%	79%	76%	78%
	Total permit holders	56	51	47	49	48	56	50	49	48	45	46
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>145</i>	<i>169</i>	<i>120</i>	<i>122</i>	<i>111</i>	<i>125</i>	<i>123</i>	<i>106</i>	<i>115</i>	<i>108</i>	<i>116</i>
	<i>Fished permits</i>	<i>110</i>	<i>120</i>	<i>78</i>	<i>88</i>	<i>79</i>	<i>91</i>	<i>94</i>	<i>77</i>	<i>90</i>	<i>81</i>	<i>89</i>
	<i>% of permits fished</i>	<i>76%</i>	<i>71%</i>	<i>65%</i>	<i>72%</i>	<i>71%</i>	<i>73%</i>	<i>76%</i>	<i>73%</i>	<i>78%</i>	<i>75%</i>	<i>77%</i>
	<i>Permit holders</i>	<i>66</i>	<i>64</i>	<i>58</i>	<i>61</i>	<i>56</i>	<i>65</i>	<i>58</i>	<i>58</i>	<i>58</i>	<i>53</i>	<i>53</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in King Cove: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in King Cove ²	Total Net Pounds Landed in King Cove ^{2,5}	Total Ex-Vessel Value of Landings in King Cove ^{2,5}
2000	201	9	2	94	105	710	72,282,637	\$34,738,413
2001	160	5	2	92	100	552	82,828,353	\$21,522,169
2002	134	3	2	81	91	165	-	-
2003	138	3	1	87	92	214	-	-
2004	141	6	1	73	86	286	106,215,695	\$35,545,464
2005	137	3	1	75	84	344	-	-
2006	144	4	1	72	89	329	114,246,357	\$43,293,750
2007	136	1	1	67	83	164	-	-
2008	136	7	1	69	88	172	73,753,680	\$51,574,088
2009	137	3	1	66	83	150	-	-
2010	132	7	1	70	89	287	79,853,218	\$41,650,304

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of King Cove: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	18	984,525	273,412
2001	19	1,026,276	313,503
2002	14	941,654	297,990
2003	14	856,246	269,378
2004	14	849,123	243,263
2005	14	873,131	210,500
2006	13	870,625	174,179
2007	14	861,070	145,808
2008	15	942,576	188,766
2009	14	861,070	172,376
2010	15	956,543	173,999

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of King Cove: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	4	209,677	17,961
2001	3	46,206	3,423
2002	3	46,206	4,186
2003	3	46,206	6,204
2004	3	46,206	6,242
2005	3	46,206	5,275
2006	2	812	105
2007	1	456	55
2008	2	68,465	9,170
2009	1	456	36
2010	1	456	37

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of King Cove: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	7	2,973,739	85,871
2006	6	2,574,278	69,493
2007	6	2,574,278	102,221
2008	5	1,647,123	55,758
2009	5	1,469,628	35,518
2010	4	1,216,882	29,278

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in King Cove: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	19,092,707	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	30,053,150	-	-	-	24,033,674	-	-	-	9,278,249	-	11,696,440
<i>Total²</i>	<i>30,053,150</i>	<i>19,092,707</i>	-	-	<i>24,033,674</i>	-	<i>0</i>	-	<i>9,278,249</i>	-	<i>11,696,440</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	\$4,510,130	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$14,249,031	-	-	-	\$7,089,389	-	-	-	\$2,889,662	-	\$7,835,266
<i>Total²</i>	<i>\$14,249,031</i>	<i>\$4,510,130</i>	-	-	<i>\$7,089,389</i>	-	<i>\$0</i>	-	<i>\$2,889,662</i>	-	<i>\$7,835,266</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by King Cove Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	213,864	237,857	-	-	-	159,859	317,118	270,771	187,735	141,755	188,234
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	207,870	224,654	200,836	310,367	293,657	259,937	208,235	173,321	199,845	219,870	153,805
Herring	-	-	-	-	-	439,007	-	-	-	-	-
Other Groundfish	-	-	-	2,101	8,532	1,621	2,852	5,117	1,959	1,324	165,759
Other Shellfish	-	-	-	33	44,556	8,468	2,756	23,069	572	86	108,402
Pacific Cod	7,881,692	7,353,900	6,876,941	7,669,809	8,351,151	7,349,665	7,881,292	8,246,364	6,041,838	4,496,899	8,786,423
Pollock	-	30,855	-	-	400	176	1,532	1,391	1,089	3,041	3,149,387
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	5,357,488	7,395,961	5,107,369	11,326,572	11,587,245	14,891,475	8,660,259	14,111,291	16,966,365	12,807,917	3,211,783
<i>Total²</i>	<i>13660914</i>	<i>15243227</i>	<i>12185146</i>	<i>19308882</i>	<i>20285541</i>	<i>23110208</i>	<i>17074044</i>	<i>22831324</i>	<i>23399403</i>	<i>17670892</i>	<i>15763793</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$568,266	\$504,566	-	-	-	\$374,600	\$491,660	\$606,209	\$438,787	\$220,989	\$276,197
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$479,806	\$419,156	\$440,615	\$848,233	\$852,824	\$765,776	\$760,260	\$726,962	\$854,937	\$590,571	\$688,463
Herring	-	-	-	-	-	\$32,925	-	-	-	-	-
Other Groundfish	-	-	-	\$914	\$1,055	\$464	\$499	\$454	\$533	\$446	\$2,487
Other Shellfish	-	-	-	\$1	\$22,140	\$4,042	\$1,250	\$11,219	\$75	\$1	\$70,731
Pacific Cod	\$2,421,639	\$1,759,939	\$1,470,418	\$1,998,855	\$2,002,132	\$1,918,036	\$2,870,205	\$3,855,505	\$3,414,109	\$1,208,791	\$2,255,867
Pollock	-	\$3,416	-	-	\$6	\$4	\$23	\$40	\$44	\$509	\$403,346
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$1,706,491	\$1,107,291	\$1,002,144	\$1,702,621	\$2,229,185	\$3,416,369	\$2,668,357	\$3,931,361	\$6,138,886	\$4,441,961	\$2,030,003
<i>Total²</i>	<i>\$5,176,201</i>	<i>\$3,794,368</i>	<i>\$2,913,177</i>	<i>\$4,550,625</i>	<i>\$5,107,342</i>	<i>\$6,512,216</i>	<i>\$6,792,254</i>	<i>\$9,131,750</i>	<i>\$10,847,371</i>	<i>\$6,463,268</i>	<i>\$5,727,094</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In the 2011 AFSC survey, community leaders indicated that a majority of sportfishing activity in King Cove is local residents using private boats or fishing from shore. In addition, they noted that a significant number of non-residents fish from shore, made up mostly of transient workers who come to King Cove to work in the processing facility. This information is supported by the fact that few sport fish guides were present in King Cove between 2000-2010. Based on data reported by the ADF&G Division of Sport Fish, licensed sport fish guides were registered in King Cove in only a few years during the 2000-2010 period, and an active sport fish guide business was only present in one year. Sportfishing license statistics also support community leaders' description, showing that a similar number of licenses were sold to residents as the total number sold per year in King Cove. This indicates that only a small number of non-local anglers come to King Cove for sportfishing purposes. This information about the sportfishing sector in King Cove is presented in Table 11.

King Cove is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula/Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula/Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near King Cove is also displayed in Table 11.

Table 11. Sport Fishing Trends, King Cove: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in King Cove²
2000	0	0	75	84
2001	0	1	71	74
2002	1	6	72	91
2003	0	3	67	89
2004	0	3	76	86
2005	0	0	78	77
2006	0	0	88	84
2007	0	0	86	81
2008	0	1	83	79
2009	0	0	74	57
2010	0	0	55	45

Table 11 Cont. Sport Fishing Trends, King Cove: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Community leaders also reported in the 2011 AFSC survey that the primary targets of local sportfishing activity are coho and sockeye salmon, halibut, and crab. The Alaska Statewide Harvest Survey,³⁰⁵ conducted by ADF&G between 2000 and 2010, indicates that freshwater sportfishing in the King Cove area targets coho, sockeye, pink, and chum salmon, as well as Dolly Varden char, and saltwater fishing targets Pacific halibut, Pacific cod, Dungeness and Tanner crab, and hardshell clams. No kept/release log book data were reported for sportfishing charters out of King Cove between 2000 and 2010.³⁰⁶

³⁰⁵ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁰⁶ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Subsistence Fishing

Subsistence harvest activities remain an important aspect of King Cove's economy, supplementing wage income.³⁰⁷ In the 2011 AFSC survey, community leaders indicated that the most important marine and aquatic resources utilized for subsistence purposes by King Cove residents include salmon, halibut, and crab.

No information is available from ADF&G regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, a survey of 1992 subsistence activity conducted by ADF&G provides species-level information about harvest of marine invertebrates, non-salmon fish (not including halibut), and marine mammals at the household level. That year, the following species of marine invertebrates were harvested by the greatest number of King Cove households: black chitons (44% of households reported harvest), octopus (40% of households), sea urchin (23%), butter clams (21%), king crab (16%), Tanner crab (12%), Dungeness crab (11%), Pacific littleneck clams (5%), shrimp (3%), snails (3%), scallops (3%), hair crab (3%), cockles (1%), mussels (1%), pinkneck clams (1%), razor clams (1%), and sea cucumber (1%). Species of non-salmon fish reported as harvested by the greatest number of households included Dolly Varden (43% of households), Pacific cod (24%), red rockfish (12%), black rockfish (11%), herring (9%), greenling (5%), sculpin (5%), sablefish (4%), flounder (3%), pollock (3%), pike (1%), rainbow trout (1%), skates (1%), and steelhead (1%). In addition, 3% of households reported harvest of herring roe (spawn on kelp). The ADF&G survey also found that 11% of King Cove households participated in a harvest of harbor seal.³⁰⁸ In most cases, a greater number of households reported using these resources than the number involved in harvest, indicating the presence of sharing networks within the community, and possibly between communities.

For the 2000-2010 period, data are available from various management agencies regarding subsistence harvest of salmon, halibut, and marine mammals by King Cove residents. Between 2000 and 2008, the last year for which salmon data were available, the number of subsistence salmon permits issued to King Cove households varied from 52 to 69 per year. Sockeye and coho were the most targeted and harvested salmon species for subsistence in all years during this period (Table 13).

In 2010, a total of 87 Subsistence Halibut Registration Certificates (SHARC) were issued to King Cove residents, compared to 44 in 2003. In 2010, 27 SHARC cards were actively fished, and 6,004 pounds of halibut were harvested for subsistence purposes. This represents a decline in the average pounds harvested per active SHARC card. In 2004, when only 26 SHARC cards were actively fished, twice the volume was harvested compared to 2010 (Table 14).

Data were also available regarding harvest of some marine mammal species in King Cove. According to data reported by NMFS, subsistence harvest of sea otters ranged from 1 to 13 animals per year between 2000 and 2010. ADF&G reported that harbor seal subsistence harvest varied between 4 and 32 per year and Steller sea lion harvest varied between 1 and 12 per year, for those years in which data were reported. Information about subsistence harvest of marine mammals by King Cove residents is presented in Table 15.

³⁰⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁰⁸ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, King Cove: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, King Cove: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	53	45	33	592	3,726	202	2,505	n/a	n/a
2001	52	46	21	235	2,413	123	4,228	n/a	n/a
2002	63	54	35	415	2,424	77	4,395	n/a	n/a
2003	69	54	19	780	3,260	141	5,063	n/a	n/a
2004	62	54	19	448	2,965	175	4,748	n/a	n/a
2005	63	54	39	140	2,472	233	5,033	n/a	n/a
2006	53	46	14	480	2,042	361	4,087	n/a	n/a
2007	53	47	1	251	2,217	164	3,179	n/a	n/a
2008	56	44	8	457	2,739	291	3,052	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, King Cove: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	44	23	7,857
2004	48	26	12,029
2005	61	31	8,942
2006	70	38	8,017
2007	78	27	5,978
2008	82	43	7,319
2009	86	50	5,995
2010	87	27	6,004

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, King Cove: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	5	n/a	n/a	4	19	n/a
2001	n/a	12	n/a	n/a	3	22	n/a
2002	n/a	9	n/a	n/a	n/a	8	n/a
2003	n/a	8	n/a	n/a	n/a	11	n/a
2004	n/a	7	n/a	n/a	2	32	n/a
2005	n/a	n/a	n/a	n/a	3	22	n/a
2006	n/a	1	n/a	n/a	12	14	n/a
2007	n/a	1	n/a	n/a	1	4	n/a
2008	n/a	7	n/a	n/a	1	4	n/a
2009	n/a	13	n/a	n/a	n/a	n/a	n/a
2010	n/a	4	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nelson Lagoon



People and Place

*Location*³⁰⁹

Nelson Lagoon is situated on the northern coast of the Alaska Peninsula, on a narrow sand spit that separates the lagoon from the Bering Sea. The town is located 580 miles southwest of Anchorage. The community encompasses 135.3 square miles of land and 61.4 square miles of water. Nelson Lagoon is located in the Aleutian Islands Recording District and the Aleutians East Borough Census Area.

*Demographic Profile*³¹⁰

In 2010, there were 52 inhabitants in Nelson Lagoon, making it the 293rd largest of 352 total Alaskan communities with recorded populations that year. Nelson Lagoon first appears in U.S. Decennial Census records in 1970. Overall between 1990 and 2010, the population of Nelson Lagoon decreased by 37.3%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 24.1%, with an average annual growth rate of -0.63%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that approximately 20 seasonal fishing crew are based out of Nelson Lagoon between June and September, with an annual population peak in July. They also indicated that population fluctuations are entirely driven by employment in fishing sectors.

In 2010, a majority of Nelson Lagoon residents identified themselves as American Indian and Alaska Native (75%), 21.2% identified themselves as White, 1.9% as Asian, and 1.9% identified with two or more races. That year, 1.9% of Nelson Lagoon residents also identified themselves as Hispanic. Compared to 2000, individuals identifying as American Indian and Alaska Native made up 3.3% less of the population in 2010, while those identifying as White made up 7.9% more of the population. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Nelson Lagoon was 2.36, a slight decrease from 2.6 persons per household in 1990 and 2.68 persons per household in 2000. The number of households in Nelson Lagoon has also decreased over time, with 31 occupied households in 1990 and 2000, and 22 occupied housing units in 2010. Of the 32 total housing units surveyed for the 2010 U.S. Census, 46.9% were owner-occupied, 21.9% were rented, and 31.3% were

³⁰⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

vacant or used only seasonally. From 1990 to 2010, no residents of Nelson Lagoon lived in group quarters.

In 2010, the gender makeup of Nelson Lagoon’s population (51.9% male and 48.1% female) was similar to the state population as a whole, which was 52% male and 48% female. The median age of Nelson Lagoon residents was 29.5 years, younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 21.1% of Nelson Lagoon’s population was between 60 and 69 years of age, and no one was over 70. The overall population structure of Nelson Lagoon in 2000 and 2010 is shown in Figure 2.

Table 1. Population in Nelson Lagoon from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	83	-
2000	83	-
2001	-	79
2002	-	70
2003	-	64
2004	-	78
2005	-	66
2006	-	68
2007	-	69
2008	-	65
2009	-	60
2010	52	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nelson Lagoon: 2000-2010 (U.S. Census).

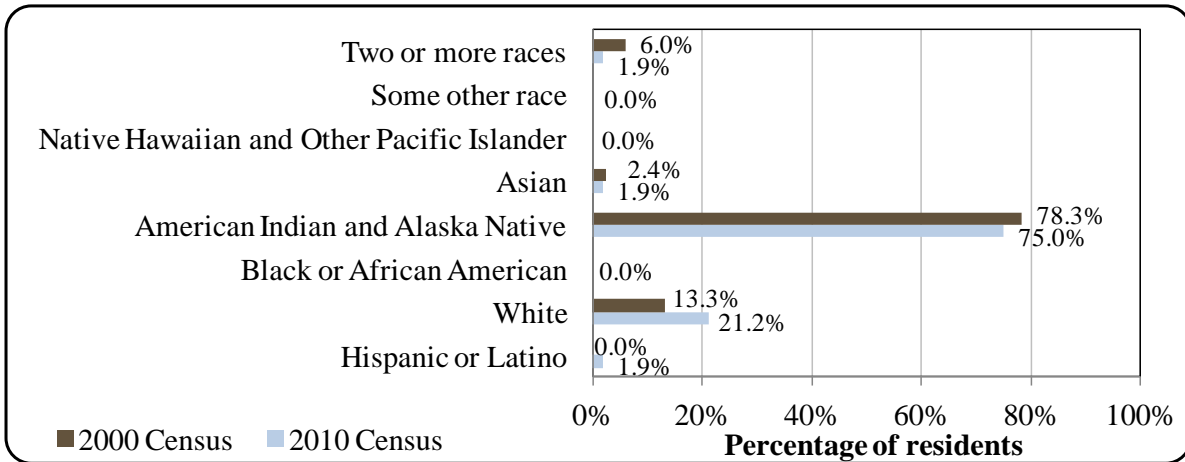
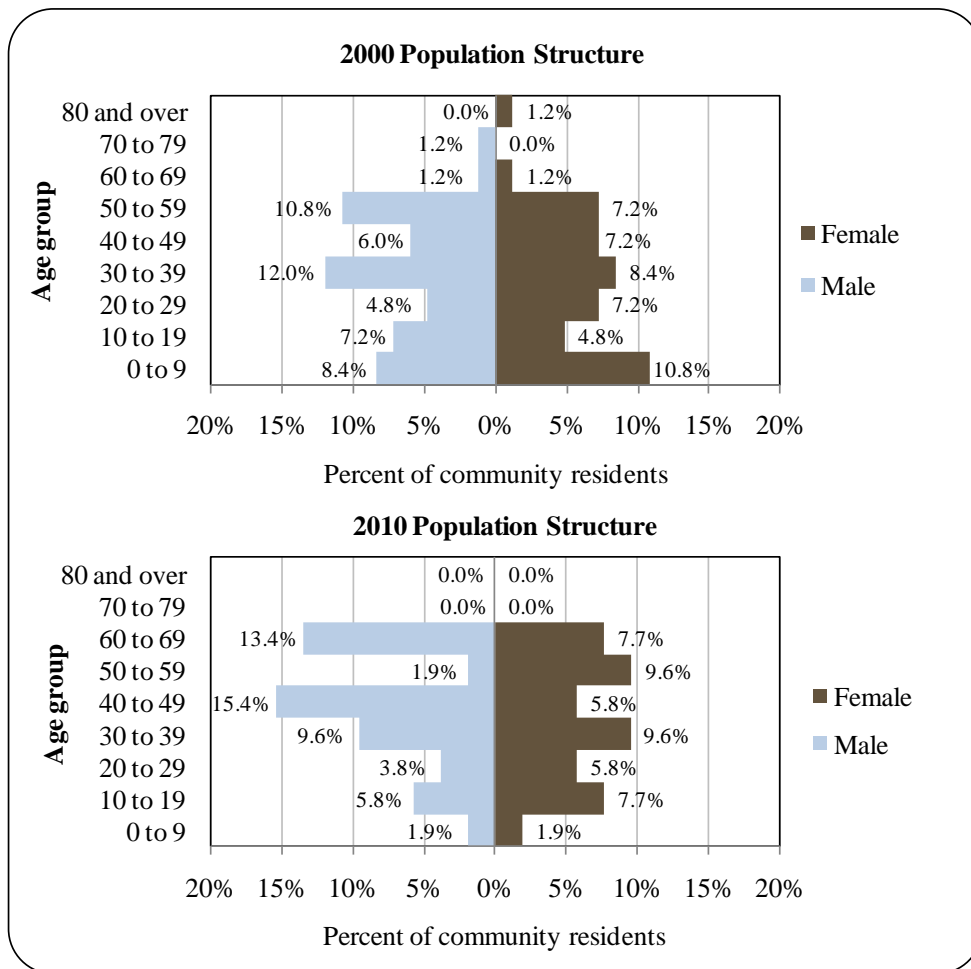


Figure 2. Population Age Structure in Nelson Lagoon Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),³¹¹ 47.1% of Nelson Lagoon residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 47.1% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 5.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 11.8% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 5.9% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 0% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Archaeological evidence suggests Unanga (Aleut) tribes have inhabited the Alaska Peninsula since the last ice age.³¹² Nelson Lagoon was historically used as a summer fish camp by the Aleut people. They were drawn to the site by the excellent resources of the lagoon and nearby Bear River.³¹³ Subsistence harvest of marine mammals and salmon has historically been of primary importance for the Aleut, and today salmon, Pacific halibut, octopus, shellfish, seal, and sea lion are an important part of the subsistence diet along with some harvest of land mammals.³¹⁴

The Lagoon was named in 1882 for Edward William Nelson of the U.S. Signal Corps, an explorer in the Yukon Delta region between 1877 and 1920. A salmon saltery operated from 1906 to 1917, which attracted Scandinavian fishermen, but there has been no cannery since. In 1965, a school was built, and the community began to be occupied year-round. The culture is focused on commercial fishing and subsistence activities. There is a strong community pride and loyalty among the residents, with a desire to maintain their lifestyle with slow, monitored growth and development that can be managed by the residents.³¹⁵

Natural Resources and Environment

Nelson Lagoon lies in the maritime climate zone. Frequent and dramatic weather changes occur, with a constant prevailing wind of 20 to 25 mph. Temperatures average 25 to 50 °F, with a range from -15 to 75 °F. Annual snowfall averages 56 inches, with a total precipitation of 33 inches.³¹⁶ Nelson Lagoon is located at the western tip of the Alaska Peninsula, on the northern

³¹¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³¹² WHPacific (2010). *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from: <http://www.aleutianseast.org/>.

³¹³ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹⁴ Alaska Native Heritage Center (n.d) *The Unangax & Alutiiq (Supiaq) People - Who We Are*. Retrieved January 4, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/unangax/.

³¹⁵ See footnote 313.

³¹⁶ Ibid.

coast bordering Bristol Bay. The northern and central portions of the Peninsula are generally flat and contain many lakes, while the southern portion is mountainous.³¹⁷

Protected Areas in the vicinity of Nelson Lagoon include the Izembek National Wildlife Refuge (NWR) to the west, the Alaska Peninsula NWR and Alaska Maritime NWR to the south. The 417,533 acre Izembek NWR was established in 1960 as “a refuge, breeding ground, and management area for all forms of wildlife.” The NWR hosts the Pavlof and Shishaldin volcanoes and Izembek Lagoon. The Lagoon provides habitat for an extraordinary abundance and diversity of waterfowl and shorebirds, and was the first site in the United States to be designated a Wetland of International Importance by the Ramsar Convention in 1986, and in 2001 it was also designated a Globally Important Bird Area by the American Bird Conservancy. In addition to providing critical habitat for hundreds of thousands of migrating birds, the Izembek NWR is also home to resident seabirds; marine mammals including harbor seals, sea otters, Steller sea lions, gray, orca, and minke whales; and land mammals, including brown bear, caribou, wolves, red fox, river otter, mink, wolverine, and many small mammals. Salmon spawn in NWR streams.³¹⁸

The Alaska Peninsula NWR and Alaska Maritime NWR were both established under the Alaska National Interest Land Conservation Act (ANILCA) of 1980. With a total area of 3.7 million acres, the Alaska Peninsula NWR extends as far west as False Pass and east beyond Chignik Bay, and includes a separate eastern unit south of Ugashik. It hosts a dramatic landscape of towering mountain peaks, including a number of active volcanoes, rolling tundra, and rugged coastlines. Salmon return to the rivers of the NWR, supporting brown bear populations. Other land mammals include wolverine, the 7,000-animal northern Alaska Peninsula caribou herd, wolves, and moose. It is of note that no black bears are found in the Alaska Peninsula NWR. Marine mammals along the coastline include sea otters, harbor seals, sea lions, and migrating whales. The Alaska Peninsula NWR also provides important habitat for migrating birds.³¹⁹

The Alaska Maritime NWR hosts a similar array of species in the Alaska Peninsula region. However, it contains a greater diversity overall, as it spans four time zones,³²⁰ stretching from the Aleutian Islands to the Southeast Alaska Panhandle. It was created in part to promote a program of scientific research on marine ecosystems. The Alaska Maritime NWR “protects breeding habitat for seabirds, marine mammals, and other wildlife on more than 2,500 islands, spires, rocks, and coastal headlands.”³²¹

At least eleven known minerals occur in the Nelson Lagoon area. Copper, gold, silver, lead, zinc, antimony, arsenic, and silver deposits have been identified. Ilmenite sands occur on the beaches near Nelson Lagoon. Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin along the northern edge of the Aleutian Islands and Alaska Peninsula.³²² However, given the importance of Bristol Bay fisheries to the

³¹⁷ Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

³¹⁸ U.S. Fish and Wildlife Service (2011). *Izembek National Wildlife Refuge*. Retrieved January 4, 2012 from <http://izembek.fws.gov/>.

³¹⁹ U.S. Fish and Wildlife Service. (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved March 23, 2012 from <http://www.fws.gov/refuges/profiles/index.cfm?id=74512>.

³²⁰ “Technically, the Alaska Maritime Refuge spans 4 time zones (Pacific, Yukon, Alaska, and Bering). In 1983 almost all the state was consolidated under Alaska Time (standard and daylight) - one hour behind Pacific Time of the West Coast. Only the central and western Aleutian Islands observe Hawaii-Aleutian Time, two hours behind Pacific Time.” Quote retrieved June 11, 2012 from <http://alaskamaritime.fws.gov/howbig.htm>.

³²¹ USFWS (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved January 4, 2012 from <http://alaskamaritime.fws.gov/>.

³²² See footnote 317.

nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010, Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.³²³ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.³²⁴

Natural hazards with the potential to impact Nelson Lagoon include earthquakes, tsunamis, severe weather, erosion, and volcanoes. Erosion is of immediate concern in Nelson Lagoon. As a result of global climate change, winter pack ice has declined, leaving the community more vulnerable to the action of severe winter storms. The U.S. Army Corps of Engineers has estimated an annual average erosion rate of 5 feet per year in Nelson Lagoon as a result of wind and tidal surges. Impacts of erosion include exposure of the community's water transmission line, resulting either in breaking as a result of wave action or freezing due to winter temperatures.³²⁵

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Nelson Lagoon as of May 2012.³²⁶

Current Economy³²⁷

Nelson Lagoon is situated in the middle of a rich and productive salmon fishing area.³²⁸ In 2010, 23 residents held commercial fishing permits (Table 4), primarily for salmon set and drift gillnet fisheries in the Alaska Peninsula region. In 2000, the number of residents holding commercial fishing permits was equal to 32.5% of the total local population, and the number of commercial crew license holders was equal to 28%. These percentages increased by 2010, when the number of permit holders was equivalent to 44% of the population, and crew license holders were equal to 31%. Subsistence activities balance the seasonal nature of the commercial fishery. Some trapping occurs.³²⁹

Based on household surveys conducted for the 2006-2010 ACS,³³⁰ in 2010, the per capita income in Nelson Lagoon was estimated to be \$15,608 and the median household income was estimated to be \$32,500. This represents a substantial decrease from the per capita and median household incomes reported in the year 2000 (\$27,596 and \$43,750, respectively). The decrease

³²³ U.S. Dept. of the Interior, Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

³²⁴ The White House, Office of the Press Secretary. March 31, 2010. *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

³²⁵ WHPacific (2010). *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from: <http://www.aleutianseast.org/>.

³²⁶ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³²⁷ Unless otherwise noted, all monetary data are reported in nominal values.

³²⁸ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³²⁹ Ibid.

³³⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

is even greater if inflation is taken into account by converting the 2000 values to 2010 dollars,³³¹ revealing a real per capita income in 2000 of \$36,288 and a real median household income of \$57,531. In 2010, Nelson Lagoon ranked 199th of 305 Alaskan communities with per capita income data, and 233rd in median household income, out of 299 Alaskan communities with household income data that year.

Although Nelson Lagoon's small population size may have prevented the ACS from accurately portraying economic conditions,³³² additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nelson Lagoon in 2010 is \$13,511.^{333,334} However, despite this evidence for a decline in income between 2000 and 2010, Nelson Lagoon did not meet the Denali Commission's criteria as a "distressed community" in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a similar percentage of Nelson Lagoon residents were estimated to be in the civilian labor force (70%) as in the civilian labor force statewide (68.8%). In the same year, 44% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 0%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Nelson Lagoon in 2010 was 3.9%, compared to a statewide unemployment rate estimate of 11.5%.³³⁵

Also based on the 2006-2010 ACS, 50% of the Nelson Lagoon workforce was estimated to be employed in the public sector, and 50% in the private sector. Of the 14 people aged 16 and over that were estimated to be employed in the civilian labor force, a majority were estimated to work in educational services, health care, and social assistance industries (64.3%) and in service occupations (64.3%). None of the civilian labor force was estimated to be working in fishing-related industries or occupations in 2010. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4. It is important to note that, compared to 2000, fewer industries and occupations appear to be represented in Nelson Lagoon in 2010. This could be due in part to a shift in methods employed by the U.S. Census Bureau to estimate employment statistics.³³⁶

³³¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³³² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³³³ See footnote 330.

³³⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³³⁵ Ibid.

³³⁶ See footnote 332.

Figure 3. Local Employment by Industry in 2000-2010, Nelson Lagoon (U.S. Census).

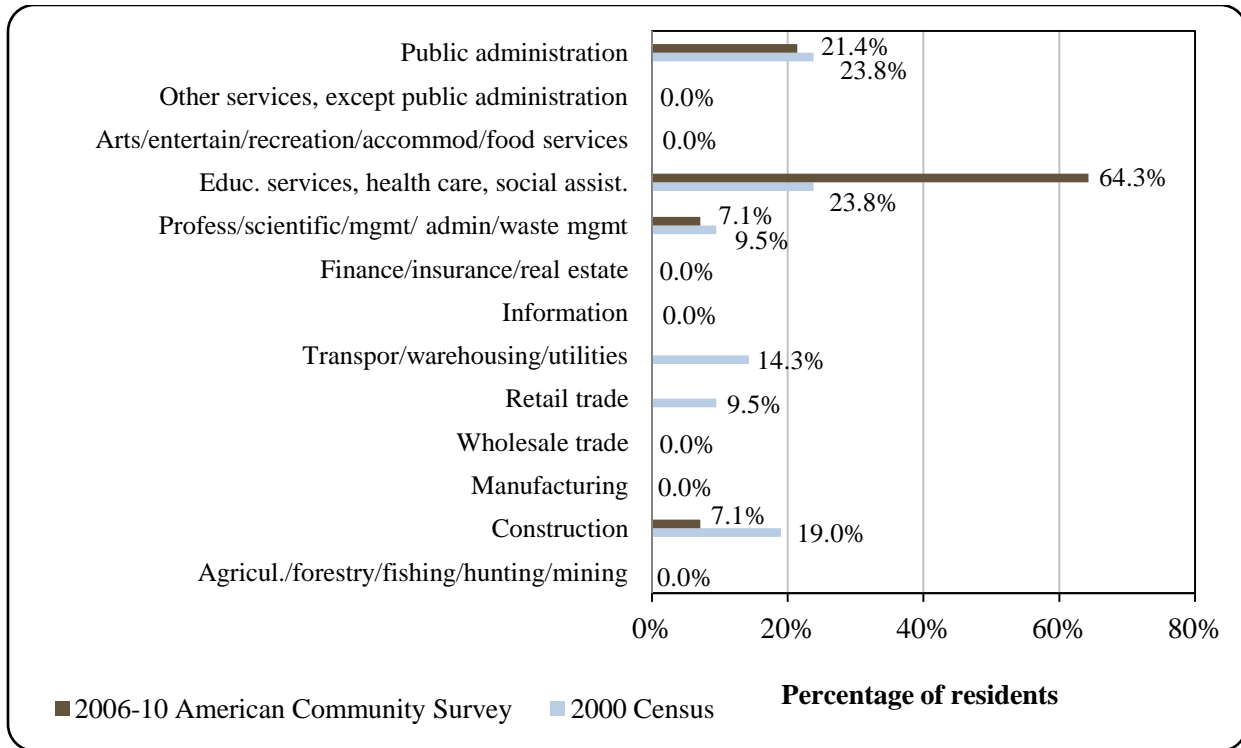
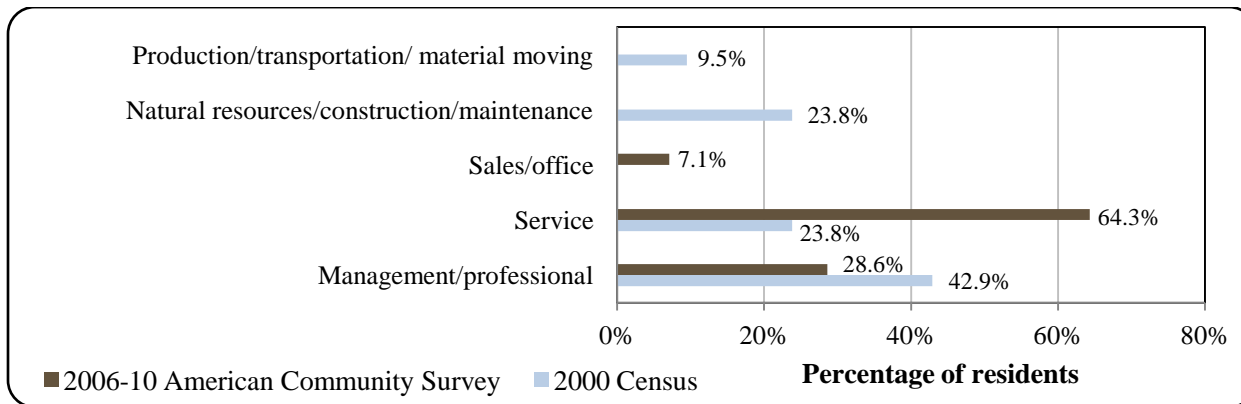


Figure 4. Local Employment by Occupation in 2000-2010, Nelson Lagoon (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 28 employed residents in Nelson Lagoon in 2010, of which 35.7% were employed in local government, 21.4 in education and health services, 14.3% in trade, transportation, and utilities, 14.3% in professional and business services, 7.1% in financial activities, 3.6% in information, and 3.6% in other industries.³³⁷ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

³³⁷ See footnote 334.

Governance

Nelson Lagoon is an unincorporated town in the Aleutians East Borough. No municipal revenue was reported and no taxes were administered by the community. The Borough administers a 2% raw fish tax, but does not levy a sales or property tax in Nelson Lagoon.³³⁸ In 2007 and 2008, Nelson Lagoon received Community Revenue Sharing contributions of \$40,000 and \$96,798, respectively. Also in 2007, Nelson Lagoon received a \$2,000,000 grant from the Economic Development Administration (EDA) for design and construction of a fish handling facility.^{339,340} For more information about the facility, see the *Processing Plants* and *Fisheries-Related Revenue* sections of this profile. Information about some of Nelson Lagoon’s revenue sources is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nelson Lagoon from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	\$40,000	\$2,000,000
2008	n/a	n/a	\$96,798	n/a
2009	n/a	n/a	\$118,366	n/a
2010	n/a	n/a	\$118,191	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

³³⁸ Alaska Dept. of Comm. And Rural Affairs (n.d.). *Community Information Summaries*. Retrieved November 16, 2011 from http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm.

³³⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

³⁴⁰ Aleutian Pribilof Island Community Development Association (n.d.). *About APICDA*. Retrieved October 17, 2012 from http://www.apicda.com/nelson_lagoon.html.

Nelson Lagoon was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Nelson Lagoon. The Native village corporation is the Nelson Lagoon Corporation, which manages 77,188 acres of land.³⁴¹ Nelson Lagoon belongs to the Aleut Corporation, the regional Native corporation of the eastern Alaska Peninsula and Aleutian Islands.³⁴²

Nelson Lagoon is also a member of the Aleutian Pribilof Islands Association (APIAI), one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.³⁴³ APIAI provides services including cultural heritage, health, education, social, psychological, employment, vocational training, environment, natural resources, and public safety services.³⁴⁴

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Sand Point and Port Moller. The Port Moller office is seasonal, operating between May and September. The nearest offices of the National Marine Fisheries Service (NMFS) and Bureau of Citizenship and Immigration Services (BCIS) are located in Unalaska and Anchorage. The nearest office of the Alaska Department of Commerce, Community, and Economic Development (DCCED) is located in Dillingham, and Anchorage has the closest office of the Alaska Department of Natural Resources (DNR).

Infrastructure

Connectivity and Transportation

Nelson Lagoon is accessible only by air and sea. A state-owned 4,000 feet long by 75 feet wide gravel runway serves regularly-scheduled flights.³⁴⁵ The price of a roundtrip ticket by plane from Nelson Lagoon to Anchorage in early June of 2012 was \$691.³⁴⁶ Nelson Lagoon also has a dock. Some freight is landed at the Peter Pan Seafoods dock, 30 miles away at Port Moller.³⁴⁷

Facilities

Water is derived from a lake about 10 miles from Nelson Lagoon and is treated. Water storage capacity is 600,000 gallons. All homes are connected to a piped water system operated by the Village Council. Individual septic systems enable households to have complete plumbing. A sewage lagoon is used for sewage treatment. The Village Council also operates a landfill, but no organized refuse collection services are available. A diesel powerhouse, operated by the

³⁴¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁴² Aleut Corporation (2008). *Corporation*. Retrieved February 9, 2012 from <http://www.aleutcorp.com>.

³⁴³ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

³⁴⁴ Aleutian Pribilof Islands Association (n.d.). *Homepage*. Retrieved January 3, 2012 from <http://www.apiai.com/>.

³⁴⁵ See footnote 341.

³⁴⁶ This price was calculated on November 21, 2011 using kayak.com.

³⁴⁷ See footnote 341.

Nelson Lagoon Electric Cooperative, provides power to the town.³⁴⁸ Public safety services are provided by a Village Public Safety Officer stationed in Nelson Lagoon.³⁴⁹ The nearest state trooper post is located in Cold Bay.³⁵⁰ Telephone and internet service is accessible in Nelson Lagoon, but no cable service provider is present. Community facilities include a washeteria operated by the Village Council, a community center and a school multipurpose room.³⁵¹

With regard to fishing-related infrastructure, Nelson Lagoon has a dock, harbormaster's office, and a warehouse.³⁵² In a survey conducted by the AFSC in 2011, community leaders reported that 150 feet of dock space is available for moorage of transient and public vessels up to 40 feet in length, but no space is available for permanent moorage. Additional infrastructure reported by community leaders includes a haulout facility for small boats (less than 60 tons) and a fish processing plant that is currently not operational (see the *Processing Plants* section of this profile). Community leaders also noted that residents travel to the communities of Port Moller, King Cove, and Sand Point to access fisheries-related businesses and services not available in Nelson Lagoon.

Medical Services

As of 2012, local health care is provided by the Nelson Lagoon Clinic, which is owned by the Village and operated by Eastern Aleut Tribes, Inc. The Nelson Lagoon Clinic is a Community Health Aide Program site. Emergency Services have coastal and air access. Emergency service is provided by volunteers and a health aide. Auxiliary health care is provided by Nelson Lagoon First Responders.³⁵³ However, as of June 2012, the status of clinic operations was in question. Closure of the Nelson Lagoon School means that the health aide will move somewhere else where her child can attend school.³⁵⁴ For more information, see the *Educational Opportunities* section. The nearest hospital to Nelson Lagoon is located in Dillingham.

Educational Opportunities

As of 2011, there was one school in the community, which offered preschool through 12th grade and had a total of seven students and one teacher. In 2012, the student body declined to six students. In late May 2012, a decision was made to close the school due to low enrollment.³⁵⁵

³⁴⁸ Ibid.

³⁴⁹ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

³⁵⁰ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

³⁵¹ See footnote 341.

³⁵² Ibid.

³⁵³ Ibid.

³⁵⁴ DeMarban, A. (2012). "Dwindling students means four more rural Alaska schools will close." *Alaska Dispatch*. Published June 5, 2012. Retrieved June 11, 2012 from <http://www.alaskadispatch.com/>.

³⁵⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Nelson Lagoon area for thousands of years. Villages and fish camps were often located at mouths of streams for access to both fresh water and abundant salmon runs.³⁵⁶ During Alaska's Russian period, salmon remained a subsistence resource, but soon after the purchase of Alaska by the United States. in 1867, commercial exploitation of salmon was initiated. The first salmon saltery was built in Alaska in 1868, and the first cannery was established in 1869.³⁵⁷ In Nelson Lagoon, a salmon saltery operated from 1906 to 1917, which attracted Scandinavian fishermen, but no cannery has operated in the community since.³⁵⁸

In addition to salmon, commercial fisheries that have played a role in Nelson Lagoon's history in recent years include groundfish, octopus, and herring fisheries. Major groundfish fisheries in the Alaska Peninsula region include a jig fishery for black rockfish out of Unalaska and a Pacific cod fishery in state waters (0-3 miles from the coast), in addition to a statewide lingcod fishery, and a sablefish fishery in state waters for non-federal sablefish quota share holders. Octopus is typically harvested only as bycatch in pot and trawl fisheries, but vessels working along the Alaska Peninsula can obtain a Commissioner's permit to specifically target octopus. Herring are harvested for bait in the vicinity of Unalaska when Togiak-spawning herring are in residence during the summer feeding period. On occasion, a herring sac roe fishery occurs near Port Moller when aerial surveys determine that a sufficient quantity of herring is present, and if processing capacity is available.³⁵⁹

Nelson Lagoon is located in Federal Statistical and Reporting Area 512 and the Bering Sea Sablefish Regulatory Area. The Village is located in a marine area closed to Pacific halibut harvest, but residents may be able to access nearby Pacific Halibut Fishery Regulatory Areas 4E to the north and east, 4A to the west, and 3B to the south. Nelson Lagoon is a member of the Aleutian Pribilof Island Community Development Association (APICDA), a Community Development Quota (CDQ) group that works to develop stable local economies in member communities through scholarships, vocational education activities, substance abuse programs, school grants, and infrastructure development, including matching funds for the construction of docks and harbors.³⁶⁰ Nelson Lagoon is not eligible to participate in the Community Quota Entity program. According to a survey conducted by the AFSC in 2011, community leaders reported that Nelson Lagoon is not directly involved in fisheries management processes in Alaska.

³⁵⁶ Alaska Native Heritage Center (n.d) *The Unangax & Alutiiq (Supiaq) People - Who We Are*. Retrieved January 4, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/unangax/.

³⁵⁷ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

³⁵⁸ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁶⁰ Aleutian Pribilof Island Community Development Association (2008). *About APICDA*. Retrieved January 2, 2012 from http://www.apicda.com/about_apicda.html.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, no registered processing plants were located in Nelson Lagoon. In 2007, Nelson Lagoon received a \$2,000,000 grant from the Economic Development Administration (EDA) for design and construction of a fish handling facility.^{361,362} The regional CDQ entity, the APICDA, provided a matching grant for a total of \$4,000,000 toward the facility.³⁶³ According to the 2011 AFSC survey, community leaders reported that the fish processing plant was present in Nelson Lagoon, but was not yet operational.

Local drift and set gillnetters have access to a processing facility in Port Moller, 30 miles east of Nelson Lagoon. Peter Pan Seafoods operates this remote processing (freezing) plant, which primarily processes sockeye salmon, as well as small amounts of Chinook, coho, and chum salmon. During the season, which runs from May through September, the Port Moller facility "supports a fleet of 105 drift gill netters and 30 set netters, both resident and non-resident fishermen."³⁶⁴ There are no year-round residents in Port Moller, but according to an AFSC survey of plant managers in 2011, during peak production (from June through August) the crew is made-up of 165 people. The Port Moller facility is self-sufficient and provides all housing and food for its workforce as well as its own electricity, water, and other supplies.³⁶⁵

According to ADF&G's Intent to Operate List, processing facilities are also located in nearby communities of False Pass, King Cove, and Sand Point. More information about these processing facilities can be found in the profiles for each of these communities.

Fisheries-Related Revenue

The only information about fishing-related revenue received by Nelson Lagoon between 2000 and 2010 came from the 2011 AFSC survey. Community leaders reported that, in 2010, the town received \$1,000 in revenue from public dock use fees (Table 3). In addition, community leaders noted that \$100,000 in funding or grants were received from the regional CDQ entity, the APICDA. In 2007, the APICDA also provided a matching grant to supplement \$2,000,000 in funding from the EDA, for a total of \$4,000,000 toward design and construction of a fish handling facility in Nelson Lagoon (see *Processing Plants* section of this profile.)³⁶⁶ Information about selected sources of fisheries-related revenue received in Nelson Lagoon is presented in Table 3.

Commercial Fishing

Between 2000 and 2010, Nelson Lagoon residents participated in commercial fisheries as permit holders, crew members, and vessel owners. In 2010, there were 23 Nelson Lagoon

³⁶¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

³⁶² Aleutian Pribilof Island Community Development Association (n.d.). *About APICDA*. Retrieved October 17, 2012 from http://www.apicda.com/nelson_lagoon.html.

³⁶³ See footnotes 360 and 362.

³⁶⁴ Peter Pan Seafoods. Inc. (2011). *Facilities*. Retrieved May 23, 2012 from <http://www.ppsf.com/facilities/index.aspx>.

³⁶⁵ Ibid.

³⁶⁶ See footnotes 360 and 362.

residents (equivalent to 44% of the local population) holding a total of 27 Commercial Fisheries Entry Commission (CFEC) permits. These included 26 salmon permits in Alaska Peninsula salmon set and drift gillnet fisheries, of which 89% were actively fished that year. The number of salmon permits and the percentage of permits actively fished remained relatively stable between 2000 and 2010. In 2010, one statewide mechanical jig ‘other groundfish’ permit was also held in Nelson Lagoon, but was not actively fished. Groundfish permit holdings increased from zero in 2000-2001 to three by 2004-2005, which included one lingcod mechanical jig permit, one ‘other groundfish’ mechanical jig permit, and one statewide ‘other groundfish’ pot gear permit. From 2005 to 2010, 0% of groundfish permits held by Nelson Lagoon residents were actively fished.

In years prior to 2010, Nelson Lagoon residents were also involved in CFEC fisheries for crab, ‘other shellfish’, and herring. One crab permit was held but not actively fished in 2000 in the Bering Sea Hair Crab pot gear fishery, and one active permit was held in 2005 in the Chignik Tanner Crab pot gear fishery. One ‘other shellfish’ permit was held in 2004 and 2005 in the statewide octopi/squid pot gear fishery. The permit was actively fished in 2004 but not in 2005. Several herring permits were also held by Nelson Lagoon residents between 2000 and 2002, but were not actively fished in any of these years. The permits were for the Alaska Peninsula herring roe gillnet fishery. Information about CFEC permit holdings is presented in Table 4.

Between 2000 and 2010, no Nelson Lagoon residents held Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) (Table 4). Likewise, no Nelson Lagoon residents held quota share accounts in the federal halibut, sablefish, or crab catch share fisheries between 2000 and 2010. Information about federal catch share participation is presented in Tables 6 through 8.

In 2010, a total of 16 Nelson Lagoon residents (equivalent to 31% of all residents) held commercial crew licenses, and 28 fishing vessels were primarily owned by Nelson Lagoon residents. The number of crew license holders varied between 16 and 23 over the 2000-2010 period, while the number of vessels owned by Nelson Lagoon residents remained stable, varying between 28 and 30. The number of vessels homeported in Nelson Lagoon was also very stable, varying between 43 and 46 over the period. Information about the commercial fishing sector in Nelson Lagoon is presented in Table 5. According to the 2011 AFSC survey, community leaders indicated that the vessels using Nelson Lagoon as a base of operations during the fishing season were primarily gillnet boats between 35 and 60 feet in length. They also noted that, compared to 5 years ago, there are currently more boats 35 feet and under and boats between 35 and 60 feet mooring in Nelson Lagoon. They indicated that the boats come to Nelson Lagoon from Port Moller when there is downtime in the fishery.

No landings or ex-vessel revenue were recorded in Nelson Lagoon (Tables 5 and 9), given the lack of fish buyers and shore-side processors in the community (Table 5). Information about landings and ex-vessel revenue generated by vessels owned by Nelson Lagoon residents is largely considered confidential between 2000 and 2010 due to the small number of participants, with the exception of salmon harvest data (Table 10). On average between 2000 and 2010, Nelson Lagoon vessel owners harvested 1,355,672 net pounds of salmon, with a low of 833,813 pounds in 2001 and a high of 2,058,330 pounds in 2004. The average ex-vessel value of the catch was \$812,702 per year, with a low value of \$408,497 in 2001 and a high value of \$1,253,872 in 2007, when 1,933,072 net pounds were landed. Note that the high value did not occur in the same year as the highest total landings. This may reflect variations in species composition of the harvest, differences in price from year to year, and possible differences in the location where vessel owners delivered their catches.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nelson Lagoon: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ^{2,3}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$1,000
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$1,000</i>
Total municipal revenue⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Nelson Lagoon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	1	0	0	0	0	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	1	0	0	0	0	0
	% of permits fished	0%	-	-	-	-	100%	-	-	-	-	-
	Total permit holders	1	0	0	0	0	1	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	1	0	0	0	0	0	0
	% of permits fished	-	-	-	-	100%	0%	-	-	-	-	-
	Total permit holders	0	0	0	0	1	1	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	3	2	2	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	-	-	-	-	-	-	-	-
	Total permit holders	3	2	2	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Nelson Lagoon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	1	1	3	3	2	2	2	1	1
	Fished permits	0	0	1	0	2	1	0	0	0	0	0
	% of permits fished	-	-	100%	0%	67%	33%	0%	0%	0%	0%	0%
	Total permit holders	0	0	1	1	2	3	2	2	2	1	1
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	27	28	27	26	27	27	27	27	27	27	26
	Fished permits	27	27	25	25	27	26	26	27	26	26	24
	% of permits fished	100%	96%	93%	96%	100%	96%	96%	100%	96%	96%	92%
	Total permit holders	27	26	26	26	25	24	24	24	26	24	23
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>31</i>	<i>30</i>	<i>30</i>	<i>27</i>	<i>31</i>	<i>32</i>	<i>29</i>	<i>29</i>	<i>29</i>	<i>28</i>	<i>27</i>
	<i>Fished permits</i>	<i>27</i>	<i>27</i>	<i>26</i>	<i>25</i>	<i>30</i>	<i>28</i>	<i>26</i>	<i>27</i>	<i>26</i>	<i>26</i>	<i>24</i>
	<i>% of permits fished</i>	<i>87%</i>	<i>90%</i>	<i>87%</i>	<i>93%</i>	<i>97%</i>	<i>88%</i>	<i>90%</i>	<i>93%</i>	<i>90%</i>	<i>93%</i>	<i>89%</i>
	<i>Permit holders</i>	<i>27</i>	<i>26</i>	<i>26</i>	<i>26</i>	<i>25</i>	<i>25</i>	<i>25</i>	<i>25</i>	<i>27</i>	<i>24</i>	<i>23</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nelson Lagoon: 2000-2010.

Year	Crew License Holders¹	Count Of All Fish Buyers²	Count Of Shore-Side Processing Facilities³	Vessels Primarily Owned By Residents⁴	Vessels Homeported⁴	Vessels Landing Catch In Nelson Lagoon²	Total Net Pounds Landed In Nelson Lagoon^{2,5}	Total Ex-Vessel Value Of Landings In Nelson Lagoon^{2,5}
2000	23	0	0	29	46	0	0	\$0
2001	19	0	0	29	45	0	0	\$0
2002	16	0	0	29	44	0	0	\$0
2003	16	0	0	28	43	0	0	\$0
2004	17	0	0	30	45	0	0	\$0
2005	22	0	0	30	46	0	0	\$0
2006	23	0	0	29	46	0	0	\$0
2007	22	0	0	28	44	0	0	\$0
2008	18	0	0	30	45	0	0	\$0
2009	20	0	0	29	44	0	0	\$0
2010	16	0	0	28	44	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Nelson Lagoon: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation in Nelson Lagoon: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nelson Lagoon: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for AFSC, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nelson Lagoon: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nelson Lagoon Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	958,778	833,813	1,399,687	1,757,073	2,058,330	1,507,931	1,081,281	1,933,072	1,105,954	1,307,206	969,268
<i>Total²</i>	<i>958,778</i>	<i>833,813</i>	<i>1,399,687</i>	<i>1,757,073</i>	<i>2,058,330</i>	<i>1,507,931</i>	<i>1,081,281</i>	<i>1,933,072</i>	<i>1,105,954</i>	<i>1,307,206</i>	<i>969,268</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$754,188	\$408,497	\$664,434	\$871,431	\$1,055,163	\$806,593	\$610,351	\$1,253,872	\$812,428	\$980,192	\$722,574
<i>Total²</i>	<i>\$754,188</i>	<i>\$408,497</i>	<i>\$664,434</i>	<i>\$871,431</i>	<i>\$1,055,163</i>	<i>\$806,593</i>	<i>\$610,351</i>	<i>\$1,253,872</i>	<i>\$812,428</i>	<i>\$980,192</i>	<i>\$722,574</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses were present in Nelson Lagoon, although one licensed sport fish guide was registered in the community in 2007, 2009, and 2010. The number of sportfishing licenses held by residents of Nelson Lagoon varied between 3 and 9 between 2000 and 2010, and the number of licenses sold in the town varied between 1 and 11. According to a survey conducted by the AFSC in 2011, community leaders indicated that Chinook, coho, and sockeye salmon are the primary targets of sportfishing activity in Nelson Lagoon, and that the local CDQ group, the APICDA, provides some funding to support sportfishing by local residents and clients.

Nelson Lagoon is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula/Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula/Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Nelson Lagoon is also displayed in Table 11.

The Alaska Statewide Harvest Survey,³⁶⁷ conducted by ADF&G between 2000 and 2010, did not include information about species targeted by private anglers in Nelson Lagoon, and no kept/release log book data were reported for sportfishing charters out of Nelson Lagoon between 2000 and 2010.³⁶⁸

Table 11. Sport Fishing Trends, Nelson Lagoon: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nelson Lagoon ²
2000	0	0	9	8
2001	0	0	8	5
2002	0	0	6	5
2003	0	0	3	1
2004	0	0	3	11
2005	0	0	5	1
2006	0	0	4	8
2007	0	1	9	4
2008	0	0	5	2
2009	0	1	8	1
2010	0	1	3	2

³⁶⁷ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁶⁸ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Nelson Lagoon: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Nelson Lagoon residents combine subsistence harvest of a wide variety of marine resources with employment opportunities in commercial fishing.³⁶⁹ In a survey conducted by the AFSC in 2011, Nelson Lagoon community leaders said that salmon are the most important subsistence resources utilized by local residents.

No information is available from ADF&G regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, a survey of 1987 subsistence activity conducted by ADF&G provides species-level information about harvest of marine invertebrates, non-salmon fish (not including halibut) and marine mammals at the household level. That year, the following species of marine invertebrates were harvested: cockles (69% of households), king crab (39%), softshell clams (15%), butter clams (8%), chitons (Bidarkis gumboots) (8%), Pacific littleneck clams (8%), and razor clams (8%). Tanner crab were also harvested by an unreported percentage of households. Three species of non-salmon fish were reported as harvested by Nelson Lagoon households in 1987: Dolly Varden (harvested by 46% of households), flounder (8%), and cod

³⁶⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

(unreported percentage of households harvesting). In addition, 8% of households were reported to harvest harbor seal that year.³⁷⁰

Between 2000 and 2010, data are available regarding subsistence salmon permits. In 2000, nine Nelson Lagoon households were issued subsistence salmon permits, and the number declined to two permits issued in 2008. In almost all years, sockeye were the most heavily harvested of the salmon species, followed in number by coho. A small number of Chinook were also reported as harvested each year, as well as chum in the year 2001 only. No subsistence harvest of pink salmon was reported by Nelson Lagoon households between 2000 and 2008. ADF&G did not report information regarding subsistence harvest of marine invertebrates or non-salmon fish (not including halibut) between 2000 and 2010. Information about subsistence salmon permits and harvest of marine invertebrates and non-salmon fish is presented in Table 13.

Between 2005 and 2010, one Nelson Lagoon resident per year was issued a Subsistence Halibut Registration Certificates (SHARC). No information was reported about the number of SHARC cards returned or the total pounds of subsistence halibut harvested by Nelson Lagoon residents during these years. This information about the subsistence halibut fishery is presented in Table 14.

Between 2000 and 2010, limited information was reported about subsistence harvest of marine mammals by residents of Nelson Lagoon. According to data reported by the U.S. Fish and Wildlife Service, 1 walrus was harvested in 2001, 2 sea otters in 2003, and 13 sea otters in 2005. No information was available from management agencies regarding harvest of beluga whale, Steller sea lion, harbor seal, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals by Nelson Lagoon residents is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Nelson Lagoon: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

³⁷⁰ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nelson Lagoon: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	9	8	8	n/a	136	n/a	430	n/a	n/a
2001	7	5	15	4	32	n/a	358	n/a	n/a
2002	4	3	7	n/a	95	n/a	187	n/a	n/a
2003	3	3	3	n/a	90	n/a	116	n/a	n/a
2004	4	4	7	n/a	140	n/a	105	n/a	n/a
2005	5	3	3	n/a	73	n/a	322	n/a	n/a
2006	3	3	5	n/a	52	n/a	149	n/a	n/a
2007	2	1	18	n/a	na	n/a	n/a	n/a	n/a
2008	2	2	9	n/a	n/a	n/a	12	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nelson Lagoon: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	1	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nelson Lagoon: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	1	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	2	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	13	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nikolski (*nih-COAL-skee*)



People and Place

*Location*³⁷¹

Nikolski is located on Nikolski Bay, on the southwest end of Umnak Island, one of the Fox Islands group in the Aleutian Chain. Nikolski is located 300 air miles southwest of False Pass (the western tip of the Alaska Peninsula), 116 air miles west of Unalaska, and 900 air miles from Anchorage. Nikolski is located in the Aleutian Islands Recording District and Aleutians West Census Area.

*Demographic Profile*³⁷²

In 2010, there were 18 inhabitants in Nikolski, making it the 329th largest of 352 total Alaskan communities with recorded populations that year. Nikolski is considered by some to be the oldest continuously inhabited settlement in the world, with archaeological evidence within the Village of Nikolski dating to 4,000 years ago, and additional archaeological sites on Umnak Island dating back 8,500 years. Nikolski first appeared in the U.S. Census in 1880, with 127 individuals reported to be living in the community.³⁷³ There has been a downward population trend since that time. Between 1990 and 2010, the population declined by almost 50%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 15.4%, with an average annual growth rate of -3.23%. These high percentages are in part reflective of the low population size in Nikolski; small variations in population number account for a larger percentage of the population than in larger communities.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that anywhere from 5 to 12 seasonal workers are present in Nikolski each year between July and November to work in seasonal hunting and fishing tourism positions. They also indicated that Nikolski's population is at its yearly peak during this period, which coincides with hunting season, and that local population fluctuations are only slightly driven by employment in fishing sectors.

In 2010, a majority of Nikolski residents identified themselves as American Indian and Alaska Native (94.4%) and the remaining 5.6% identified themselves as White. That year, no Nikolski residents identified themselves as Hispanic. Compared to 2000, individuals identifying as American Indian and Alaska Native made up 25.2% more of the population in 2010, while those identifying as White made up 25.2% less of the population. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

³⁷¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

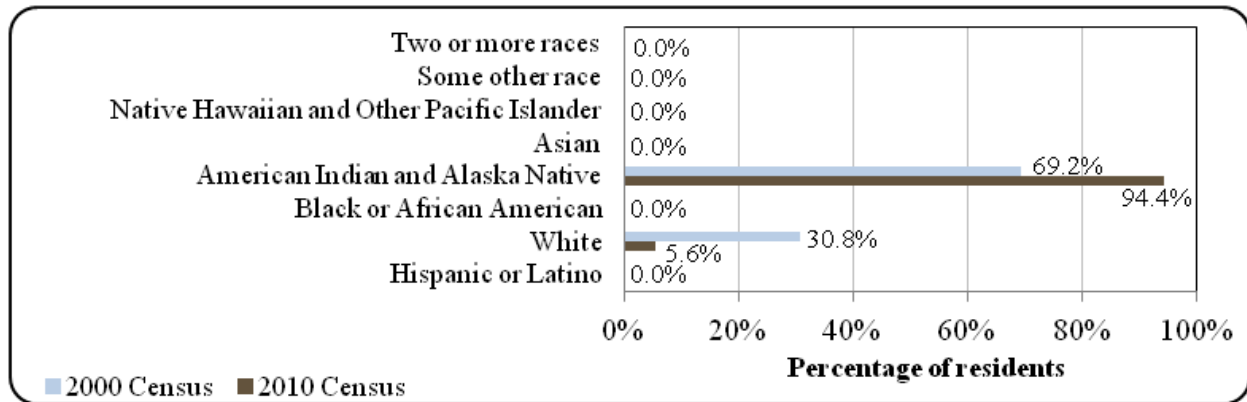
³⁷³ See footnote 371.

Table 1. Population in Nikolski from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	35	-
2000	39	-
2001	-	32
2002	-	34
2003	-	41
2004	-	36
2005	-	31
2006	-	31
2007	-	33
2008	-	27
2009	-	33
2010	18	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nikolski: 2000-2010 (U.S. Census).



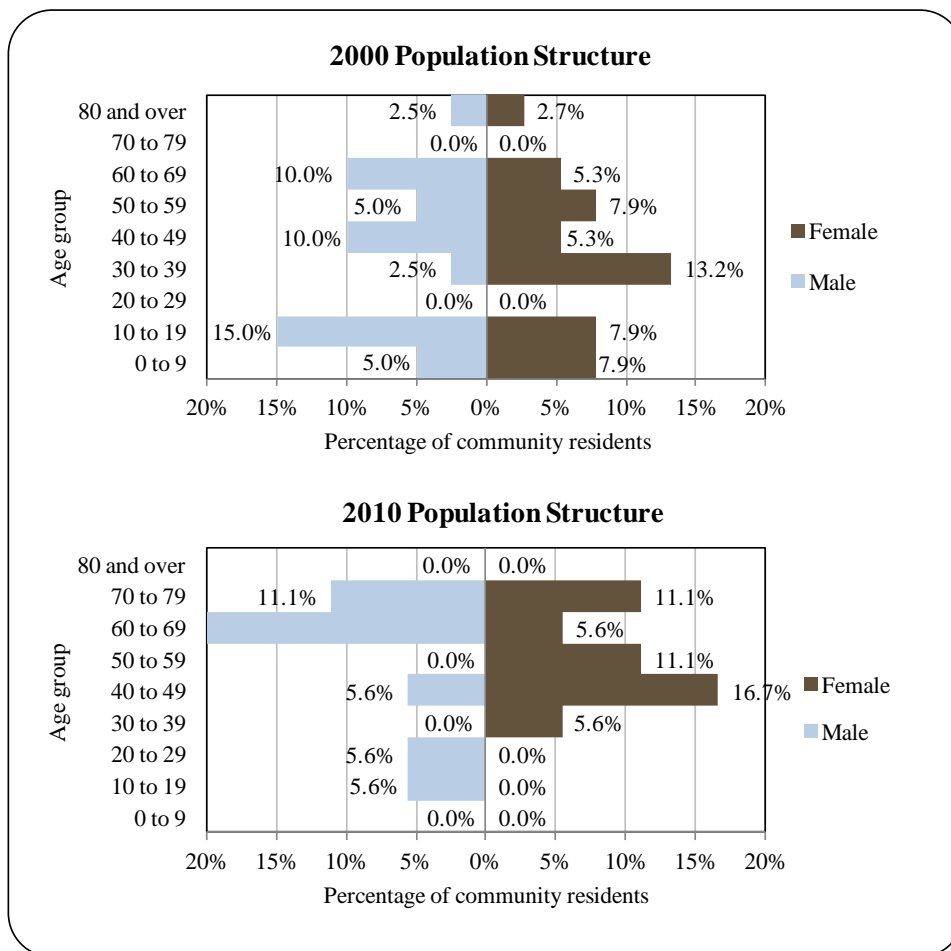
Household size in Nikolski increased between 1990 and 2000, from 1.8 to 2.6, and then decreased again to 1.38 persons per household in 2010. The number of households in Nikolski also decreased over time, with 19 occupied housing units in 1990, 15 in 2000, and 13 occupied housing units in 2010. Of the 23 total housing units surveyed for the 2010 U.S. Census, 47.8% were owner-occupied, 8.7% were rented, and 43.5% were vacant or used only seasonally. From 1990 to 2010, no residents of Nikolski lived in group quarters.

In 2010, there were an equal number of males and females living in Nikolski, compared to the state population as a whole, which had more males than females (52% male and 48% female). The median age of Nikolski residents was 63.5 years, significantly older than the

national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, half of Nikolski’s population was between 60 and 80 years of age, and there were no children between the ages of 0 and 9 residing in the community. There were also no females aged 10 to 29, and no males aged 30 to 39 or 50 to 59. The overall population structure of Nikolski in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),³⁷⁴ 100% of Nikolski residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Of these, 69.2% were estimated to have a high school diploma and no further education, compared to 27.4% of Alaskan residents overall; 30.8% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; and 0% were estimated to hold an Associate’s degree, Bachelor’s degree, or graduate or professional degree, compared to 8%, 17.4% and 9.6%, respectively, of Alaska residents overall.

Figure 2. Population Age Structure in Nikolski Based on the 2000 and 2010 U.S. Decennial Census.



³⁷⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Nikolski is thought by some to be the oldest continuously-occupied community in the world. The Chaluka archaeological site, in the village of Nikolski, shows evidence of 4,000 years of virtually continuous occupation. People were living in Nikolski before the pyramids were built, the Mayan calendar was invented, or the Chinese language was written.³⁷⁵ Archeological evidence found at the Anangula Blade site indicates that the region's earlier residents lived 9,000 years ago on Anangula Island. Anangula Island lies several miles offshore but probably was connected to Umnak Island in ancient times.³⁷⁶

Upon the arrival of the Russians in 1759, there were estimated to be approximately 2,000 – 2,500 Unangans living on Umnak Island in 20 villages. Interaction with the Russians greatly diminished the island's population, and by 1840 there were only two villages remaining. One of these was Nikolski (*Nikol'skoe*), which was used as a sea otter hunting site. Nikolski was formerly recorded by the Russians as "Recheshnoe," which means "river." In 1920, a boom in fox farming occurred on the island. The Unangan became affluent enough to purchase a relatively large boat, the "Umnak Native", which was wrecked in 1933. A sheep ranch was established in 1926 as part of the Aleutian Livestock Company. Today Nikolski is the only community on Umnak Island.^{377,378}

In June 1942, when the Japanese attacked Unalaska and seized Attu and Kiska, residents were evacuated to the Ketchikan area.³⁷⁹ The people of Nikolski were deposited at Ward Cove, a recreation facility near Ketchikan constructed by the Civilian Conservation Corps (CCC). The villagers quartered in the Ward Cove camp suffered the highest mortality rate of all the interned Unangans. Of the 72 Nikolski villagers who were evacuated in June of 1942, 19 perished due to inadequate housing, poor sanitation, and lack of medical care. Upon returning to their homes in 1945, villagers found that the U.S. military had continuously occupied their residences. There was extensive pilfering and looting of their property, and homes were destroyed or in need of massive repairs.³⁸⁰ The village was restored, but the traditional lifestyle and community attitudes were changed. Locals were allowed to return in 1944, but the exposure to the outside world brought about many changes in the traditional lifestyle and community attitudes. In the 1950s, the Air Force constructed a White Alice Communications System on the island, which provided some jobs. However, it was abandoned in late 1977.³⁸¹

Today, the residents that remain are largely of Unangan descent, and Aleut is spoken in three-quarters of all homes. Subsistence activities, sheep and raising cattle, and fishing-related employment sustain the community.³⁸²

³⁷⁵ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷⁶ Aleutians West Coastal Resource Service Area (2006). *Resource Inventory and Analysis*. Retrieved February 24, 2012 from http://www.alaskacoast.state.ak.us/Explore/AWCRSA_04_07/nikolski.html.

³⁷⁷ Ibid.

³⁷⁸ See footnote 375.

³⁷⁹ Ibid.

³⁸⁰ See footnote 376.

³⁸¹ See footnote 375.

³⁸² Ibid.

Natural Resources and Environment

Nikolski lies in a maritime climate zone. Temperatures range from 11 to 65 °F. Annual snowfall averages 41 inches, and total precipitation averages 21 inches. Strong winds are frequent during the winter and fog occurs during the summer, which limits accessibility.³⁸³ The topography where the community is located is a gently rolling plain with elevations reaching 500 feet north of the village. Vegetation in the vicinity of the village is primarily Arctic/alpine tundra and grasses that are typical of the Aleutian Islands Chain.³⁸⁴

The Aleutian Islands provide habitat for marine mammals, including the Steller sea lion, northern sea otter, and harbor seal. Most of the land mammals, including foxes, reindeer, and caribou, have been introduced by humans.³⁸⁵ No native land mammals inhabit most of the Aleutian Islands. Some islands close to the mainland along the Alaska Peninsula can be reached occasionally by strong swimmers such as bears and river otters.³⁸⁶ The principal marine fish are Pacific halibut, Pacific cod, rockfish, sablefish, yellowfin sole, pollock, sand lance, herring, and salmon. The Aleutian Islands are best known for its birds. More than 10 million nest on the islands each summer. Puffins, auklets, gulls, storm petrels, cormorants, terns, kittiwakes, murrelets, and murrelets are among the most abundant species.³⁸⁷

Parts of Umnak Island are included in the 1,300,000-acre Aleutian Islands Wilderness, which was included as part of the Alaska Maritime National Wildlife Refuge (NWR).³⁸⁸ The 3.4-acre NWR was established in 1980 to conserve marine mammals, seabirds and other migratory birds, and the marine resources upon which they depend.³⁸⁹ The Alaska Maritime NWR covers a great diversity of ecosystems beyond the immediate area of Nikolski, as it spans four time zones,³⁹⁰ stretching from the Aleutian Islands to the Southeast Alaska Panhandle. The Alaska Maritime NWR was created in part to promote a program of scientific research on marine ecosystems. The Alaska Maritime NWR “protects breeding habitat for seabirds, marine mammals, and other wildlife on more than 2,500 islands, spires, rocks, and coastal headlands.”³⁹¹

The community of Nikolski is interested in emergency response training to be better prepared for natural disasters including earthquakes, flooding, and volcanic eruptions.³⁹² The Alaska-Aleutian arc, also known as the “Pacific Ring of Fire,” is one of the world’s most active

³⁸³ Ibid.

³⁸⁴ See footnote 376.

³⁸⁵ Wilderness.net (n.d.). *Aleutian Islands Wilderness*. Retrieved February 24, 2012 from <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&WID=5>.

³⁸⁶ USFWS (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved January 4, 2012 from <http://alaskamaritime.fws.gov/>.

³⁸⁷ See footnote 385.

³⁸⁸ Ibid.

³⁸⁹ See footnote 386.

³⁹⁰ “Technically, the Alaska Maritime Refuge spans four time zones (Pacific, Yukon, Alaska, and Bering). In 1983 almost all the state was consolidated under Alaska Time (standard and daylight) - one hour behind Pacific Time of the West Coast. Only the central and western Aleutian Islands observe Hawaii-Aleutian Time, 2 hours behind Pacific Time.” Quote retrieved June 11, 2012 from <http://alaskamaritime.fws.gov/howbig.htm>.

³⁹¹ See footnote 386.

³⁹² Information Insights, Inc. (2006). *Nikolski Community and Economic Development Plan*. Retrieved February 24, 2012 from <http://www.commerce.state.ak.us/dca/plans/Nikolski-EDP-2006.pdf>.

earthquake areas in the world.³⁹³ Some of these earthquakes are associated with explosive volcanic eruptions.³⁹⁴ Umnak Island consists of two volcanic peaks and old lava flows and ash falls. Because Nikolski is located along the west-to-east storm tracks of the North Pacific, the community is also vulnerable to strong storms and accompanying winds.³⁹⁵

According to the Alaska Department of Environmental Conservation (DEC), there are no notable active environmental cleanup sites located in Nikolski as of May 2012.³⁹⁶

Current Economy³⁹⁷

Nikolski has a mixed subsistence and cash economy, although few cash employment opportunities are available within the community. Most residents support themselves by working outside the village for some portion of the year at crab canneries and on processing ships. The lack of a harbor and dock in Nikolski limits fisheries-related activities. The village is interested in developing a small value-added fish processing plant and a sportfishing lodge to provide employment and attract former residents who left Nikolski for economic reasons.³⁹⁸

The top employers in Nikolski in 2010 were the local Village Council and a sportfishing lodge called Ugludax Lodge.³⁹⁹ The Lodge is operated by a partnership between the Native village corporation, Chaluka Corporation, and the regional Community Development Quota (CDQ) group, the Aleutian Pribilof Island Community Development Association (APICDA).⁴⁰⁰ In addition, the APICDA purchased a sportfishing charter boat for Nikolski. Sheep, cattle, and horses graze over much of the island, and wage income is supplemented by subsistence activities, which provide a substantial part of the villagers' diets. Salmon, halibut, seals, and ducks are of particular importance for subsistence purposes.⁴⁰¹

Based on household surveys conducted for the 2006-2010 ACS,⁴⁰² in 2010, the per capita income in Nikolski was estimated to be \$13,410 and the median household income was estimated to be \$16,500. This represents a decrease from the per capita and median household incomes reported in the year 2000 (\$14,083 and \$38,750, respectively). The decrease is even

³⁹³ Sykes, L. R., J. B. Kisslinger, L. House, J. N. Davies and K. H. Jacob (1980). Rupture zones and repeat times of great earthquakes along the Alaska-Aleutian arc, 1784-1980. *Science* 19 December 1980, Vol. 210, no. 4476 pp 1343-1345.

³⁹⁴ U.S. Geological Survey (1998). Can Another Great Volcanic Eruption Happen in Alaska? Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

³⁹⁵ Aleutians West Coastal Resource Service Area (2006). *Resource Inventory and Analysis*. Retrieved February 24, 2012 from http://www.alaskacoast.state.ak.us/Explore/AWCRSA_04_07/nikolski.html.

³⁹⁶ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³⁹⁷ Unless otherwise noted, all monetary data are reported in nominal values.

³⁹⁸ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁹⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴⁰⁰ Nikolski Adventures (n.d.). *Welcome to Nikolski Adventures at Ugludax Lodge*. Retrieved February 23, 2012 from <http://www.nikolskiadventures.com/about.html>.

⁴⁰¹ See footnote 398.

⁴⁰² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

greater if inflation is taken into account by converting the 2000 values to 2010 dollars,⁴⁰³ revealing a real per capita income in 2000 of \$18,519 and a real median household income of \$50,956. In 2010, Nikolski ranked 221st of 305 Alaskan communities with per capita income data, and 288th in median household income, out of 299 Alaskan communities with household income data that year.

Although Nikolski's small population size may have prevented the ACS from accurately portraying economic conditions,⁴⁰⁴ additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nikolski in 2010 is \$14,148.⁴⁰⁵ This decline is reflected in the fact that the community was recognized as "distressed" by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁴⁰⁶ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a significantly smaller percentage of Nikolski residents was estimated to be in the civilian labor force (31.3%) compared to the civilian labor force statewide (68.8%). In the same year, no residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 12.5%, compared to a statewide unemployment rate of 5.9%. An alternative estimate of unemployment is based on the ALARI database, which indicates that the 2010 unemployment rate in Nikolski was 14.3%, compared to a statewide unemployment rate estimate of 11.5%.⁴⁰⁷

Also based on the 2006-2010 ACS, 100% of the Nikolski workforce was estimated to be employed in the public sector in 2010. The civilian labor force was estimated to consist of two individuals aged 16 and over. Compared to 2000, this represents a dramatic decline in the workforce, from 39 to 2. In addition, it is important to note that many fewer industries and occupations were represented in 2010 than in 2000. In 2010, both individuals in the civilian labor force were estimated to work in educational services, health care, and social assistance industries / service occupations. While the concentration of the workforce in fewer industries and occupations may be due to a real population decline in Nikolski, it is also important to note that the sampling methods utilized by the U.S. Census Bureau were altered between 2000 and 2010. The shift in sampling methods may also account for some of the differences observed in employment estimates.⁴⁰⁸ It is also important to note that, while none of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining in 2010, the

⁴⁰³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁰⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁰⁵ See footnotes 399 and 402.

⁴⁰⁶ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁴⁰⁷ See footnote 399.

⁴⁰⁸ See footnote 404.

number of individuals employed by fishing may be underestimated in census statistics. Fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 14 employed residents in Nikolski in 2010, of which 50% were employed in local government, 14.3% in education and health services, 14.3% in leisure and hospitality, 7.1% in natural resources and mining, 7.1% in manufacturing, and 7.1% in information.⁴⁰⁹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Nikolski (U.S. Census).

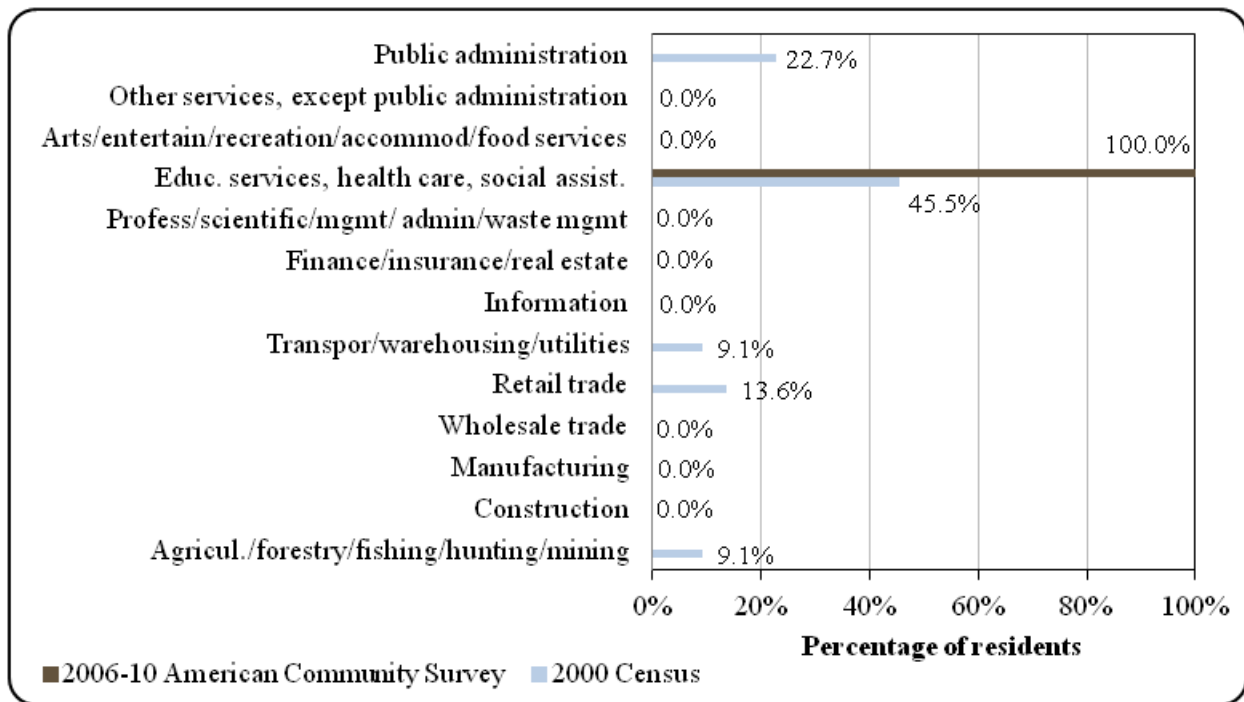
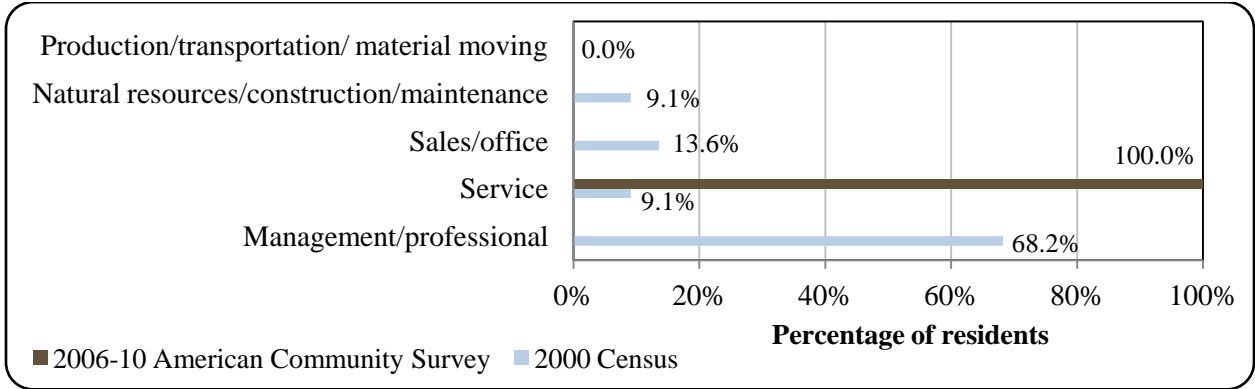


Figure 4. Local Employment by Occupation in 2000-2010, Nikolski (U.S. Census).

⁴⁰⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

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Governance

Nikolski is an unincorporated community, and is not located in an organized borough. No municipal revenue was reported and no taxes were administered by the town between 2000 and 2010. In addition, no State or Community Revenue Sharing contributions or fisheries-related grants were reportedly received by Nikolski during this period (Table 2).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nikolski from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Nikolski was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Nikolski. The local village Native corporation is the Chaluka Corporation, which manages 77,188 acres of land.⁴¹⁰ Nikolski belongs to the Aleut Corporation, the regional Native corporation of the western Alaska Peninsula and Aleutian Islands.⁴¹¹

Nikolski is also a member of the Aleutian Pribilof Islands Association, Inc., (APIAI), one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of

⁴¹⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴¹¹ Aleut Corporation website (2008). *Corporation*. Retrieved February 9, 2012 from <http://www.aleutcorp.com>.

services to villages in their regions.⁴¹² APIAI provides services including cultural heritage, health, education, social, psychological, employment, vocational training, environment, natural resources, and public safety services.⁴¹³

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Sand Point and Port Moller. The Port Moller office is seasonal, operating between May and September. The nearest National Marine Fisheries Service (NMFS) and Bureau of Citizenship and Immigration Services offices are located in Dutch Harbor, while Dillingham has the closest office of the Alaska Department of Commerce, Community, and Economic Development, and Kodiak has the nearest office of the Alaska Department of Natural Resources (DNR). However, the Anchorage offices of these agencies may be more accessible to Nikolski residents.

Infrastructure

Connectivity and Transportation

Nikolski is primarily accessible by air. A 3,512 feet long by 135 feet wide unlighted gravel runway is present in the village that provides passenger, mail, and cargo service. The airstrip used to be owned by the U.S. Air Force.⁴¹⁴ Peninsula Airways operates one roundtrip air taxi flight between Nikolski and Unalaska twice weekly, on Mondays and Thursdays.⁴¹⁵ The price of a roundtrip ticket between Nikolski and Unalaska in early June of 2012 was \$296, and a roundtrip ticket between Unalaska and Anchorage was \$964.⁴¹⁶ Nikolski currently has no landing or port facilities for ships. Barges deliver cargo once or twice a year. Goods and passengers are lightered 3 miles to the beach.⁴¹⁷

Facilities

Water in Nikolski is derived from a community well and surface water source and is chlorinated. The Nikolski Village Council operates a piped water system. All occupied homes are fully plumbed and connected to the pipe system. Homes have individual septic tanks, and the Village Council provides septic pumping services. There is no landfill or refuse collection service in Nikolski. Umnak Power Company's diesel generator is operated by the Village Council to provide electricity to the community. Police services are provided by state troopers stationed in Unalaska. Fire and rescue services are provided by the Nikolski Volunteer Fire Department. Visitor accommodations are available in town, including a trailer/hotel run by the Chaluka Corporation.⁴¹⁸ APICDA Joint Ventures also operates a hunting and fishing lodge just outside of Nikolski, in partnership with the Chaluka Corporation. The "Ugludax Lodge" is the westernmost fishing lodge in North America.⁴¹⁹

⁴¹² U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁴¹³ Aleutian Pribilof Islands Association (n.d.) Retrieved January 3, 2012 from <http://www.apiai.com/>.

⁴¹⁴ See footnote 410.

⁴¹⁵ Peninsula Airways (2011). *Homepage*. Retrieved February 23, 2012 from <http://www.penair.com/>.

⁴¹⁶ This price were calculated on November 21, 2011 using kayak.com.

⁴¹⁷ See footnote 410.

⁴¹⁸ Ibid.

⁴¹⁹ Nikolski Adventures (n.d.). *Welcome to Nikolski Adventures at Ugludax Lodge*. Retrieved February 23, 2012 from <http://www.nikolskiadventures.com/about.html>.

According to a survey conducted by the AFSC in 2011, community leaders reported that Nikolski has a water storage tank and a community center. They also indicated that development of an alternative energy source has been completed, and improvements are in process. In July, 2007, a wind turbine was installed in Nikolski to be integrated with the existing diesel power plant.⁴²⁰ As of 2011, further funding was being sought to complete the final phase of the wind-diesel project.⁴²¹

Regarding fisheries-related infrastructure, no docking facilities are present in Nikolski. According to the 2011 AFSC survey, the only fisheries-related service reported by community leaders was a fishing lodge. Community leaders also noted that residents of Nikolski most frequently travel to Unalaska and Atka to access fisheries-related businesses and services not available locally.

Medical Services

Local health care is provided by the Nikolski Health Clinic, which is owned by the Village and operated by the APIAI. The Nikolski clinic is a Community Health Aide Program site. Emergency Services have coastal and helicopter access. Emergency service is provided by volunteers.⁴²² The nearest hospitals are located in Dillingham and on Kodiak Island.

Educational Opportunities

One school building is present in Nikolski. However, as of the year 2011 there was no current student enrollment, and no teachers were working at the school.⁴²³ The school was closed in the fall of 2009 after fewer than 10 students were present during the annual statewide student counting period.⁴²⁴

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to people living in the Nikolski area for thousands of years. The ancestors of the modern Unangan relied heavily on harvests of marine mammals, along with harvest of birds, waterfowl, fish, and other marine life living on the extensive reefs surrounding the Aleutian Islands.⁴²⁵ Today subsistence remains a fundamental

⁴²⁰ Fredenberg, C. (2008). Nikolski Wind-Diesel Project. *Aleutian Pribilof Islands Association, Inc. Newsletter* Volume 25. Retrieved February 23, 2012 from http://www.apiai.com/apia_newsltr_april08_web.pdf.

⁴²¹ Native Village of Nikolski (2011). *Nikolski Renewable Energy Wind Project: Renewable Energy Fund Round V Grant Application*. Retrieved February 23, 2012 from <ftp://ftp.aidea.org/>.

⁴²² Ibid.

⁴²³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴²⁴ Yardley, W. (2009). Alaska Rural Schools Fight Off Extinction. *The New York Times*, printed November 25, 2009. Retrieved February 24, 2012 from <http://www.nytimes.com/2009/11/26/us/26alaska.html>.

⁴²⁵ Aleutians West Coastal Resource Service Area (2006). *Resource Inventory and Analysis*. Retrieved February 24, 2012 from http://www.alaskacoast.state.ak.us/Explore/AWCRSA_04_07/nikolski.html.

element of the Nikolski economy. Commercial and recreational fishing have both found an important place as well.⁴²⁶

Between 2006 and 2008, one Nikolski resident was involved in commercial fisheries for halibut and groundfish (Table 4). Commercial exploitation of halibut and groundfish first extended out along the Aleutian Islands chain in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁴²⁷ Today, major groundfish fisheries in the region include a jig fishery for black rockfish out of Unalaska and a Pacific cod fishery in state waters, (0-3 nautical miles (nmi) from the coast), in addition to a statewide lingcod fishery, and a sablefish fishery in state waters for non-federal sablefish quota share holders. Groundfish fisheries in state waters are managed the ADF&G and groundfish fisheries beyond 3 nmi are managed by NMFS.⁴²⁸ The International Pacific Halibut Commission sets yearly harvest limits for the Pacific halibut fishery in Alaskan waters in areas 4A, 4B, and the combined Area 4CDE.⁴²⁹

Nikolski is located in Pacific Halibut Fishery Regulatory Area 4A, the Bering Sea and Aleutian Islands (BSAI) Federal Statistical and Reporting Area 518, and the Bering Sea Sablefish Regulatory Area. To the south of Umnak Island, the marine area is encompassed by Gulf of Alaska (GOA) Federal and Statistical Reporting Area 610 and the Western GOA Sablefish Regulatory Area. It is also important to note that the state coastal waters surrounding Umnak Island have been designated by the coastal district as a ‘subsistence use area’.^{430,431}

Nikolski is a member of the APICDA, a CDQ group that works to develop stable local economies in member communities through scholarships, vocational education activities, substance abuse programs, school grants, and infrastructure development, including matching funds for the construction of docks and harbors.⁴³² Nikolski is not eligible to participate in the Community Quota Entity (CQE) program.

According to a survey conducted by the AFSC in 2011, community leaders reported that Nikolski is not directly involved in fisheries management processes in Alaska.

⁴²⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴²⁷ Thompson, W. F. and N. L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁴²⁸ Woodby, D, D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L. Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁴²⁹ International Pacific Halibut Commission website (n.d.). Retrieved March 26, 2012 from <http://www.iphc.int/>.

⁴³⁰ Aleutians West Coastal Resource Service Area and LaRoche & Associates (2006 revision). *Coastal Management Plan - Volume III. Final Draft Plan Amendment*. Retrieved March 26, 2012 from http://www.alaskacoast.state.ak.us/Explore/AWCRSA_04_07/pdf/pdf%20from%20word/volume%20III/vol3aug06.pdf.

⁴³¹ “Subsistence Use Areas are coastal habitat areas, used traditionally or occasionally in response to seasonal or cyclic resource abundance, where subsistence harvests of fish, wildlife, and other biological resources are conducted.” (Source: see footnote 430.)

⁴³² Aleutian Pribilof Island Community Development Association (2008). *About APICDA*. Retrieved January 2, 2012 from http://www.apicda.com/about_apicda.html.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Nikolski, although the Village is interested in developing a small value-added fish processing plant.⁴³³ According to a survey of processing plants conducted by the AFSC in 2011, the closest and most diversified processing port is Dutch Harbor/Unalaska. Other Aleutian Islands ports offering processing facilities are Atka and Akutan. More information about these processing facilities can be found in the profiles for each of these communities.

Fisheries-Related Revenue

The only information about fishing-related revenue received by Nikolski came from community leaders in a survey conducted by the AFSC in 2011. Community leaders reported that, in 2010, \$62,000 in funding or grants were received from APICDA. No other data were reported about fisheries-related revenue received by Nikolski between 2000 and 2010 (Table 3).

Commercial Fishing

Between 2000 and 2010, several Nikolski residents participated in commercial fisheries as permit holders, crew members, and vessel owners. One Nikolski resident held Commercial Fisheries Entry Commission (CFEC) permits from 2006 to 2008. A halibut permit was held in all three of these years in the statewide longline fishery using vessels under 60 feet in length and was actively fished in all 3 years. In addition, a resident held a groundfish CFEC permit in 2007 and 2008. In 2007, the groundfish permit was held for the statewide mechanical jig fishery, while in 2008, the permit was held for the statewide longline fishery using vessels under 60 feet. These groundfish permits were not actively fished in either 2007 or 2008. Between 2000 and 2010, no Nikolski residents held either Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP). Likewise, no Nikolski residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab between 2000 and 2010. Information about CFEC, FFP, and LLP permits is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

The number of crew license holders in Nikolski varied between zero and two during the 2000-2010 period. Between 2002 and 2004, one resident was the primary owner of a fishing vessel, and one fishing vessel was homeported in Nikolski. No fish buyers or shore-side processors were present in the community between 2000 and 2010. This information about the commercial fishing sector in Nikolski is presented in Table 5. According to a survey conducted by the AFSC in 2011, community leaders indicated that the number of fishing vessels coming to Nikolski has increased slightly over the past five years. They explained that fishing vessels have increasingly been used to bring cargo and fuel to the community, as air service has been reduced in recent years and fishing captains are more able to enter Nikolski Bay than fuel barges. No landings or ex-vessel revenue were recorded in Nikolski between 2000 and 2010 (Table 9), given the lack of fish buyers in the community (Table 5). Information about landings and ex-vessel revenue generated between 2002 and 2004 by the Nikolski-owned vessel is considered confidential (Table 10).

⁴³³ See footnote 426.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nikolski: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Nikolski: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	1	1	1	0	0
	Fished permits	0	0	0	0	0	0	1	1	1	0	0
	% of permits fished	-	-	-	-	-	-	100%	100%	100%	-	-
	Total permit holders	0	0	0	0	0	0	1	1	1	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Nikolski: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	1	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	0%	0%	-	-
	Total permit holders	0	0	0	0	0	0	0	1	1	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	0	0	0	0	0	0	1	2	2	0	0
	<i>Fished permits</i>	0	0	0	0	0	0	1	1	1	0	0
	<i>% of permits fished</i>	-	-	-	-	-	-	100%	50%	50%	-	-
	<i>Permit holders</i>	0	0	0	0	0	0	1	1	1	0	0

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nikolski: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Nikolski ²	Total Net Pounds Landed In Nikolski ^{2,5}	Total Ex-Vessel Value Of Landings In Nikolski ^{2,5}
2000	1	0	0	0	0	0	0	\$0
2001	1	0	0	0	0	0	0	\$0
2002	0	0	0	1	1	0	0	\$0
2003	1	0	0	1	1	0	0	\$0
2004	0	0	0	1	1	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	1	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	2	0	0	0	0	0	0	\$0
2010	1	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Nikolski: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nikolski: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nikolski: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nikolski: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nikolski Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	-	-	-	0	0	0	0	0	0
Finfish	0	0	-	-	-	0	0	0	0	0	0
Halibut	0	0	-	-	-	0	0	0	0	0	0
Herring	0	0	-	-	-	0	0	0	0	0	0
Other Groundfish	0	0	-	-	-	0	0	0	0	0	0
Other Shellfish	0	0	-	-	-	0	0	0	0	0	0
Pacific Cod	0	0	-	-	-	0	0	0	0	0	0
Pollock	0	0	-	-	-	0	0	0	0	0	0
Sablefish	0	0	-	-	-	0	0	0	0	0	0
Salmon	0	0	-	-	-	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Village of Nikolski has been working to increase sportfishing infrastructure in the community. With the help of the APICDA a charter boat was purchased, and there is interest in developing a sportfishing lodge.⁴³⁴ Aleutian Adventures, based in Anchorage, currently runs a fishing lodge located just outside the Village.⁴³⁵ According to a survey conducted by the AFSC in 2011, community leaders indicated the Nikolski economy relies heavily on sport hunting and fishing. They reported that the species targeted by sport fishermen in the Nikolski area include sablefish, Pacific halibut, and coho and pink salmon. They also indicated that all recreational fishing activity takes place using charter vessels, and neither local residents nor visitors use private vessels for sport purposes.

Sportfishing data reported by ADF&G suggests that, during the 2000-2010 period, one active sport fish guide businesses was only registered in Nikolski in 2004 and 2005. However, licensed sport fish guides were present in the community from 2000 to 2008. The number of Nikolski residents that purchased sportfishing licenses during the 2000-2010 period (irrespective of point of sale) varied between zero and five per year, and no sportfishing licenses were sold in Nikolski.

Nikolski is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. Information is only available for saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 days per year during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days per year. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Nelson Lagoon is also displayed in Table 11.

The Alaska Statewide Harvest Survey,⁴³⁶ conducted by ADF&G between 2000 and 2010, did not include information about species targeted by private anglers in Nikolski, and no kept/release log book data were reported for fishing charters out of Nikolski in 2010.

⁴³⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴³⁵ Nikolski Adventures (n.d.). *Welcome to Nikolski Adventures at Ugludax Lodge*. Retrieved February 23, 2012 from <http://www.nikolskiadventures.com/about.html>.

⁴³⁶ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Nikolski: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nikolski ²
2000	0	1	3	0
2001	0	2	2	0
2002	0	3	4	0
2003	0	3	5	0
2004	1	2	4	0
2005	1	3	3	0
2006	0	2	2	0
2007	0	2	1	0
2008	0	3	2	0
2009	0	0	0	0
2010	0	0	2	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Historically, the primary focus of Unangan subsistence activity was harvest of marine mammals, including seal, sea lion, and sea otter. Sea otters were harvested primarily for their pelts and to provide materials for clothing and jewelry. The traditional subsistence diet was supplemented by harvest of birds, waterfowl, fish, roots, berries, and marine life living on reefs in the region. Today, subsistence remains an important supplement to the income of Nikolski residents. Salmon, halibut, seals, and ducks are currently important subsistence resources.⁴³⁷

No information is available from ADF&G between 2000 and 2010 regarding per capita subsistence harvest, the percentage of households utilizing salmon, halibut, marine mammals, marine invertebrates, or non-salmon fish (not including halibut) for subsistence purposes (Table 12). Some data were reported regarding subsistence salmon permits. At least one Nikolski household was issued a subsistence salmon permit each year from 2000 to 2002, and again from 2006 to 2008. Relatively few salmon were reported harvested overall. Sockeye was the most heavily harvested salmon species by Nikolski households. This information is presented in Table 13.

No information is available regarding harvests of marine invertebrates and non-salmon fish from 2000 to 2010 (Table 13). An earlier ADF&G subsistence survey was conducted in Nikolski in 1990. Results of that survey provide some details regarding subsistence harvest patterns of marine invertebrate, marine mammal, and non-salmon fish species. According to the survey, species of marine invertebrates harvested by Nikolski residents in 1990 included butter, horse, Pacific littleneck, and razor clams; blue mussels; cockles; limpets; snails; red and unknown chitons; scallops; sea urchin; sea cucumber; Dungeness, hair, king, and Tanner crab; octopus; and shrimp. Of these species, the highest percentage of households harvested unknown chitons (36%), octopus (36%), limpets (14%), and blue mussels (7%). A greater percentage of households reported using several of these species than reported engaging in harvest, suggesting that sharing networks are present in Nikolski to distribute these resources among households. Species of non-salmon fish harvested by Nikolski residents in 1990 included Dolly Varden, rainbow trout, grayling, mackerel, Pacific cod, sablefish, Pacific tomcod, black and unknown rockfish, walleye pollock, Irish lord, bullhead and unknown sculpin, flounder, sole, smelt, greenling, and herring. The survey also noted harvest of greenling roe and herring roe. The greatest percentage of households reported harvesting Dolly Varden (71%), greenling (57%), Pacific cod (50%), and bullhead sculpin (14%). As in the case of marine invertebrates, in many cases a greater percentage of households reported using non-salmon fish species than were engaged in harvest, again suggesting the presence of sharing networks. In addition, Nikolski residents harvested the following species of marine mammal in 1990: blue whales, gray whales, humpback whales, minke whales, sei whales, an unknown species of whale, fur seals, and Steller sea lions.⁴³⁸

Between 2003 and 2009, data were reported by ADF&G regarding Subsistence Halibut Registration Certificates (SHARC). From 2003 to 2007, the number of SHARC cards issued to Nikolski residents varied between 16 and 18, declining to 2 recorded SHARC cards issued per

⁴³⁷ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴³⁸ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

year in 2008 and 2009. The number of SHARC cards reported to be actively fished was highest in 2006. That year, 18 cards were fished and 2,250 pounds of halibut were harvested. The highest subsistence halibut harvest was reported in 2005. That year, 3,984 pounds of halibut were harvested with 15 active SHARC cards. This information about the subsistence halibut fishery is presented in Table 14.

Some information about marine mammal harvest was also reported by management agencies during the 2000-2010 period. Subsistence harvest of marine mammals was high in Nikolski relative to the community’s population. As noted above, community leaders reported in the AFSC survey in 2011 that harbor seals are a primary subsistence resource for residents of Nikolski. Based on data reported by ADF&G, the number of harbor seals harvested varied from 2 to 17 per year, and several Steller sea lions were also harvested in most years during the period. No information was reported by management agencies regarding beluga whale, sea otter, walrus, polar bear, or spotted seal harvest between 2000 and 2010. This information about subsistence harvest of marine mammals by Nikolski residents is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Nikolski: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nikolski: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	1	1	n/a	n/a	n/a	24	n/a	n/a
2001	1	1	1	n/a	n/a	n/a	14	n/a	n/a
2002	1	1	n/a	n/a	3	n/a	177	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	1	1	1	n/a	n/a	n/a	13	n/a	n/a
2007	4	3	2	n/a	n/a	n/a	63	n/a	n/a
2008	2	2	n/a	n/a	n/a	n/a	41	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nikolski: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	16	7	1,852
2004	18	8	2,490
2005	18	15	3,984
2006	18	18	2,250
2007	16	5	1,418
2008	2	n/a	n/a
2009	2	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nikolski: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	1	2	n/a
2001	n/a	n/a	n/a	n/a	7	5	n/a
2002	n/a	n/a	n/a	n/a	1	3	n/a
2003	n/a	n/a	n/a	n/a	n/a	11	n/a
2004	n/a	n/a	n/a	n/a	2	6	n/a
2005	n/a	n/a	n/a	n/a	2	6	n/a
2006	n/a	n/a	n/a	n/a	n/a	17	n/a
2007	n/a	n/a	n/a	n/a	1	6	n/a
2008	n/a	n/a	n/a	n/a	n/a	7	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Port Moller

People and Place

Location

Port Moller is located on the Bristol Bay side of the Alaska Peninsula, 30 miles east of Nelson Lagoon and approximately 525 miles southwest of Anchorage. The site is located in the Aleutian Islands Recording District and the Aleutians East Borough Census Area.



Demographic Profile

A full demographic profile was not completed for Port Moller because sufficient information could not be obtained. Port Moller was selected for profiling given the presence of a shore-side processor where landings were made between 2000 and 2010 (see selection criteria in methods section). However, because it is not treated as a census designated place (CDP) by the U.S. Census, the Alaska Department of Commerce, Community, and Economic Development (DCCED), or other data sources, it was not possible to gather the same demographic information for Port Moller that is contained in the other community profiles.

Port Moller is a seasonal community based around the operations of a remote salmon processing (freezing) plant that is owned and operated by Peter Pan Seafoods. According to a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, plant managers indicated approximately 400 individuals are present as seasonal workers each year, including cannery employees and fishermen. They reported that workers are present between May and September, with an annual population peak in June and July. According to the cannery managers, population fluctuations are entirely driven by employment in fishing sectors.

No information is available from the U.S. Census or the Alaska Department of Labor regarding the population of Port Moller (Table 1). It has generally been regarded to have no resident population.⁴³⁹ However, as of December 2012, the Peter Pan Seafoods cannery office manager reported that the winter watchman resides at the cannery year-round, bringing the permanent population of Port Moller up to 1 individual.⁴⁴⁰

⁴³⁹ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁴⁴⁰ Information provided by the Peter Pan Seafoods cannery office manager during community review of this profile. Feedback received December 18, 2012.

Table 1. Population in Port Moller from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	n/a	-
2000	n/a	-
2001	-	n/a
2002	-	n/a
2003	-	n/a
2004	-	n/a
2005	-	n/a
2006	-	n/a
2007	-	n/a
2008	-	n/a
2009	-	n/a
2010	n/a	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

History, Traditional Knowledge, and Culture

Port Moller is located near the historical site of the Hot Springs Village archaeological excavations,⁴⁴¹ which indicate a human presence over 4,000 years old.⁴⁴² Evidence from shell middens indicates that historical peoples living in the area hunted marine and terrestrial mammals and birds, fished, and gathered marine invertebrates. Sea mammals utilized by past inhabitants included four kinds of seals, walrus, sea lion, and whales. Fish species included salmon, cod, halibut, flounder, herring, shark, and sculpin, and invertebrate species included mollusks, clams and mussels, and sea urchins.⁴⁴³

As of 1880, Port Moller was inhabited by Aleut people, although the village was located near the transition between Aleut and Eskimo settlement, and may have been used by both groups.^{444,445} Some Aleut people remained at the Port Moller village into the early 1900s.

⁴⁴¹ The Hot Spring Village is located 7 miles by skiff from the Peter Pan Seafoods cannery. This location information was provided by the Peter Pan Seafoods cannery office manager during community review of the profile. Feedback received July 19, 2012.

⁴⁴² Workman, W. and A. McCartney. 1998. "Coast to Coast: Prehistoric Maritime Cultures in the North Pacific." *Arctic Anthropology*, 35(1).

⁴⁴³ Kotani, Y. 1980. "Paleoecology of the Alaska Peninsula as Seen from the Hot Springs Site, Port Moller." *Senri Ethnological Studies*, Vol. 4. Retrieved May 24, 2012 from <http://www.adobe.com/support/downloads/detail.jsp?ftpID=4881>.

⁴⁴⁴ Weyer, E M. Jr. 1930. "Archaeological Material from the Village Site at Hot Springs, Port Moller, Alaska." *Anthropological Papers of the American Museum of Natural History*, Volume 31, Part 4. Retrieved May 24, 2012 from <http://digitallibrary.amnh.org/dspace/handle/2246/228>.

Norman Orloff was born in Port Moller and lived there as a young child. Before he passed away, Mr. Orloff spoke of watching the church at Port Moller collapse in the 1940s. During that period, the outside Bering Sea beach had changed course and destroyed many of the village homes. The people living in Port Moller were closely associated with the village at Bear River, just north of Port Moller. In 1965, some Aleut families originating from Bear River, Port Moller, and Herendeen Bay moved to Nelson Lagoon to live year-round following construction of a school there.⁴⁴⁶

In 1912, a Bellingham-based salmon packing company called Pacific American Fisheries (PAF) built a cannery just inside the Entrance Point sand spit in Moller Bay.⁴⁴⁷ The Port Moller facility was PAF's third Alaskan cannery, following the 1908 construction of a facility in Excursion Inlet in Southeast Alaska and a King Cove facility in 1911. In 1965, the major portion of PAF's assets was sold to a consolidated firm of Peter Pan Seafoods and Taiyo Gyogyo KK.⁴⁴⁸ Peter Pan Seafoods continues to operate the facility today.

Natural Resources and Environment

The Port Moller region has a maritime climate, with cool summers, relatively warm winters, and rain. Frequent and dramatic weather changes occur, with a constant prevailing wind of 20 to 25 mph. Snowfall averages 57 inches per year, with a total annual precipitation of approximately 33 inches. January temperatures average 25 °F, and July temperatures average 50 °F. Port Moller is located near the western tip of the Alaska Peninsula, on the northern coast bordering Bristol Bay. The northern and central portions of the Peninsula are generally flat and contain many lakes, while the southern portion is mountainous.⁴⁴⁹

Protected areas in the vicinity of Port Moller include the Alaska Peninsula National Wildlife Refuge (NWR) and Alaska Maritime NWR. The Alaska Peninsula NWR and Alaska Maritime NWR were both established under the Alaska National Interest Land Conservation Act (ANILCA) of 1980. With a total area of 3.7 million acres, the Alaska Peninsula NWR extends as far west as False Pass and east beyond Chignik Bay, and includes a separate unit south of Ugashik. It hosts a dramatic landscape of towering mountain peaks, including a number of active volcanoes, rolling tundra, and rugged coastlines. Salmon return to the rivers of the Alaska Peninsula NWR, supporting brown bear populations. Other land mammals include wolverine, the 7,000-animal Northern Alaska Peninsula caribou herd, wolves, and moose. It is of note that no black bears are found in the Alaska Peninsula NWR. Marine mammals living along the coastline include sea otters, harbor seals, sea lions, and migrating whales. The Alaska Peninsula NWR also provides important habitat for migrating birds.⁴⁵⁰

⁴⁴⁵ Dumond, D., L. Conton, and H. Shields. 1975. "Eskimos and Aleuts on the Alaska Peninsula: A Reappraisal of Port Moller Affinities." *Arctic Anthropology*, 12(1).

⁴⁴⁶ Historical information provided by the Peter Pan Seafoods cannery office manager during community review of this profile. Feedback received July 19, 2012.

⁴⁴⁷ Specific location information provided by the Peter Pan Seafoods cannery office manager during community review of the profile. Feedback received July 19, 2012.

⁴⁴⁸ Radke, A. C. 2002. *Pacific American Fisheries, Inc: History of a Washington State Salmon Packing Company, 1890-1966*. Ed. B. S. Radke. McFarland and Company, Inc., Publishers. North Carolina.

⁴⁴⁹ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁴⁵⁰ U.S. Fish and Wildlife Service. (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved March 23, 2012 from <http://www.fws.gov/refuges/profiles/index.cfm?id=74512>.

The Alaska Maritime NWR hosts a similar array of species in the Alaska Peninsula region. However, it contains a greater diversity overall, as it stretches from the tip of the Aleutian Islands to the Southeast Alaska Panhandle, and includes St. Matthew Island in the Bering Sea, Hagemeister Island in northern Bristol Bay, and two units bordering the Chukchi Sea. It was created in part to promote a program of scientific research on marine ecosystems. The Alaska Maritime NWR “protects breeding habitat for seabirds, marine mammals and other wildlife on more than 2,500 islands, spires, rocks and coastal headlands.”⁴⁵¹

In addition, the 131,269 acre Port Moller Critical Habitat Area was established in 1972. The area was created to protect habitat that supports migratory stopover areas for large number of ducks, geese, and shorebirds in the spring on their way to northern nesting grounds and in the fall on their return to southern wintering areas.^{452,453}

There are more than 100 prospects and mineral occurrences in the Port Moller region, primarily on the southern portion of the Alaska Peninsula. Mineral deposits include silver-gold, gold, copper, copper molybdenum, and lead-zinc. The most significant deposits include the Pyramid prospect (copper), the Apollo-Sitka and Shumagin prospects (gold), and Centennial prospect (polymetallic). The Port Moller region also has high potential for oil and gas development.⁴⁵⁴ Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin along the northern edge of the Aleutian Islands and Alaska Peninsula. However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010, Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.⁴⁵⁵ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.⁴⁵⁶

Natural hazards with the potential to impact Port Moller include earthquakes, tsunamis, severe weather, erosion, and volcanoes.⁴⁵⁷ The Port Moller Hot Spring Village site, a prehistoric Aleut/Eskimo settlement, is listed on the National Register of Historic Places.⁴⁵⁸ According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Port Moller as of July 2012.⁴⁵⁹

⁴⁵¹ USFWS (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved January 4, 2012 from <http://alaskamaritime.fws.gov/>.

⁴⁵² Alaska Dept. of Natural Resources. 2007. *Fact sheet: State of Alaska Legislatively Designated Areas*. Retrieved May 25, 2012 from <http://dnr.alaska.gov/Landrecords/docs/pdf/ldafct97.pdf>.

⁴⁵³ See footnote 449.

⁴⁵⁴ Ibid.

⁴⁵⁵ U.S. Dept. of the Interior, Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

⁴⁵⁶ The White House, Office of the Press Secretary. March 31, 2010. *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

⁴⁵⁷ WHPacific. 2010. *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from <http://www.aleutianseast.org>.

⁴⁵⁸ National Park Service (n.d.). *National Register of Historic Places*. Retrieved January 10, 2012 from: <http://nrhp.focus.nps.gov/>.

⁴⁵⁹ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy

According to a survey conducted by the AFSC in 2011, cannery managers indicated that fishing is the primary industry upon which the Port Moller economy depends. The Peter Pan Seafoods salmon cannery in Port Moller employs in a crew of over 150 people each summer,⁴⁶⁰ and provides a market for a sizeable fishing fleet. Port Moller also has a seasonal field office of the Alaska Department of Fish and Game (ADF&G). Port Moller is not considered a CDP according to the U.S. Census, and no information is reported regarding employment and income statistics.

Governance

Port Moller is not considered a CDP according to the U.S. Census. No information was reported regarding municipal revenue sources between 2000 and 2010 (Table 2). There are no governing bodies in Port Moller.

A seasonal field office of ADF&G is located in Port Moller. The office operates between May and September. The nearest year-round ADF&G office is located in Sand Point. Dillingham has the nearest office of the Alaska Department of Commerce, Community, and Economic Development. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Unalaska and Anchorage. Anchorage also has the closest office of the Alaska Department of Natural Resources.

Table 2. Selected Municipal, State, or Federal Revenue Streams for Port Moller from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁴⁶⁰ Results of a survey of processor plant managers conducted by the AFSC in 2011.

Infrastructure

Connectivity and Transportation

Port Moller is accessible via water or air. A private gravel airstrip is located at Port Moller, and the bay is accessible by floatplane. A few miles of roads and trails extend around the vicinity of Port Moller.⁴⁶¹ During the summer, Port Moller receives barge deliveries every two weeks from Seattle that supply not only the cannery at Port Moller, but also nearby communities such as Nelson Lagoon.⁴⁶²,⁴⁶³ As of early June 2012, roundtrip airfare from Anchorage to Port Moller, with a connection in King Salmon, cost \$1130.⁴⁶⁴

Facilities

Since the Peter Pan Seafoods cannery at Port Moller is a remote facility, it must be self sufficient in providing for all housing, food, electricity, water, and other supplies.⁴⁶⁵ According to a survey conducted by the AFSC in 2011, cannery managers reported that there are no other outside businesses or support services beyond those provided by Peter Pan Seafoods. They indicated that facilities and services provided at the cannery include a store, stockroom, machine shop, medical clinic, air strip, mess hall, and boat storage. These facilities are open from May through September only, and are available to the Peter Pan Seafoods fleet only, although they are available to transient vessels on an emergency basis for fuel, repairs, and/or medical needs. No police force is stationed at the cannery. The nearest state trooper post is located in Cold Bay.⁴⁶⁶

Cannery managers indicated in the 2011 AFSC survey that ongoing maintenance takes place on local utilities, including telephone and internet service, local roads, a diesel powerhouse, sewage and water treatment, the solid waste disposal site, and the breakwater. Improvements are ongoing to the emergency response system as well.

In addition to cold storage and seafood processing, a variety of fisheries-related facilities and services are available at the Port Moller cannery. Although no dock space is available, cannery managers indicated that the fishing fleet and tenders can tie up directly to the pilings of the dock. The existing dock facilities are capable of handling rescue vessels, such as the Coast Guard, fuel barges, and other smaller barges and freighters.

Cannery managers indicated that boat repair services at Port Moller include electrical, welding, mechanical services, machine shop, and hydraulics, as well as marine refrigeration services. Drydock storage, haul-out facilities, and a tidal grid are available for small boats (less

⁴⁶¹ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁴⁶² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁶³ Information on the frequency of barge deliveries provided by the Peter Pan Seafoods cannery office manager during community review of the profile. Feedback received July 19, 2012.

⁴⁶⁴ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

⁴⁶⁵ Peter Pan Seafoods Inc. 2011. *Facilities*. Retrieved May 23, 2012 from <http://www.ppsf.com/facilities/index.aspx>.

⁴⁶⁶ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

than 20 tons).⁴⁶⁷ Cannery managers noted that fishing gear, fuel, and ice are sold at the facility. They also indicated that improvements are ongoing to a barge landing area, fish cleaning station, the existing dock structure, water and electricity serving the dock, and haulout facilities. According to managers, Port Moller community members travel to King Cove, Homer, or Seattle to access fisheries-related businesses and services not available in Port Moller.

Medical Services

The Port Moller Medical Clinic, run at Peter Pan Seafoods' cannery facility, is a qualified emergency care center.⁴⁶⁸ However, it is important to note that the clinic is open seasonally from May to mid-September each year.⁴⁶⁹ The nearest hospitals are located in Dillingham and Kodiak.

Educational Opportunities

No schools were present in Port Moller between 2000 and 2010.⁴⁷⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest was historically important for indigenous people living in the Port Moller area. Archaeological evidence at an old village site at Port Moller indicate that local Aleut peoples hunted sea mammals, fished, and collected marine invertebrates, in addition to hunting land mammals. Salmon were one of the most important subsistence resources.⁴⁷¹ Soon after the purchase of Alaska by the United States in 1867, commercial exploitation of salmon was initiated. The first salmon saltery was built in 1868, and the first cannery was established in 1869.⁴⁷² The Port Moller salmon cannery was constructed by PAF in 1912.⁴⁷³ In a survey conducted by the AFSC in 2011, cannery managers indicated that the primary local fishery targets salmon, with a season running from June through September.

Port Moller is located in Federal Statistical and Reporting Area 512 and the Bering Sea Sablefish Regulatory Area. The immediate marine area is closed to Pacific halibut harvest. According to a survey conducted by the AFSC in 2011, cannery managers reported that Port

⁴⁶⁷ During community review of this profile, the Peter Pan Seafoods cannery office manager noted that the tidal grid only has the capacity to handle boats less than 20 tons. Feedback received July 19, 2012.

⁴⁶⁸ WHPacific. 2010. *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from <http://www.aleutianseast.org>.

⁴⁶⁹ Information provided by the Peter Pan Seafoods cannery office manager during community review of this profile. Feedback received July 19, 2012.

⁴⁷⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴⁷¹ Kotani, Y. 1980. "Paleoecology of the Alaska Peninsula as Seen from the Hot Springs Site, Port Moller." *Senri Ethnological Studies*, Vol. 4. Retrieved May 24, 2012 from <http://www.adobe.com/support/downloads/detail.jsp?ftpID=4881>.

⁴⁷² Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁴⁷³ Radke, A. C. 2002. *Pacific American Fisheries, Inc: History of a Washington State Salmon Packing Company, 1890-1966*. Ed. B. S. Radke. McFarland and Company, Inc., Publishers. North Carolina.

Moller actively participates in fisheries management processes in Alaska. They indicated that Port Moller has a paid staff member that attends North Pacific Fishery Management Council and/or Board of Fisheries meetings as well as a representative that sits on regional fisheries advisory and/or working groups run by ADF&G. In addition, they noted that Port Moller financially supports research organizations, industry coalitions, and trade associations, including the Alaska Seafood Marketing Institute and Concerned Area M Fishermen, an organization of salmon drift gillnetters and local Alaska Peninsula communities that works with the Alaska Board of Fisheries to advocate for preservation of Alaska Peninsula Fisheries.⁴⁷⁴

In the 2011 AFSC survey, cannery managers outlined challenges they observe to Port Moller's fishing economy. These include 1) increased fuel costs, which create direct and indirect impacts through the higher cost of goods and shipping, 2) the cost of complying with state and federal regulations such as Occupational Safety and Health Act, Oil Spill Response, Ammonia Response, and hazardous materials, and 3) the variability of fish catch volume and fish prices.

When asked which fisheries policies or management actions have affected Port Moller, cannery managers indicated that the opening of the Outer Port Heiden district by the Alaska Board of Fisheries resulted in the fleet moving north, allowing increased fishing area, but also leading to greater travel distance for tenders and overall reduction in the quality of fish. They also responded that effective ADF&G management and conservation ethic have provided consistent salmon runs for many years. Finally, a management action that had the greatest impact on Port Moller in recent years was the closure of the Nelson Lagoon area to salmon fishing in July 2010 due to low escapement. The loss of income from this fishery was hard on fishermen from the community of Nelson Lagoon, and also affected Peter Pan Seafoods/Port Moller as their processor. Further, cannery managers indicated that the 2011 salmon run was unusually poor, and harvest in Nelson Lagoon and the Bear River area in 2012 was even worse. There is concern that flooding in past years may have contributed to decreased viability of eggs and fry in the parent year of the 2011 and 2012 runs. These fluctuations in the fishery are of concern because the commercial salmon industry is the only economy sustaining Port Moller.⁴⁷⁵

Regarding potential future fisheries policy or management actions, cannery managers responded with concern about any activity that may affect habitat or close fishing areas, threatening the Port Moller facility's ability to operate. For example, they listed oil exploration, mining contamination, or closure due to protected or endangered species as possible events that would affect Port Moller's operations in the future.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there was one registered processing facility in Port Moller. Peter Pan Seafoods operates a remote processing (freezing) plant, which primarily processes sockeye salmon, as well as small amounts of Chinook, coho, and chum salmon. During the season, which runs from May through September, the Port Moller facility "supports a fleet of 105 drift gill netters and 30 set netters, both resident and non-resident fishermen."⁴⁷⁶ There are no year-round residents in Port Moller, but according to an AFSC

⁴⁷⁴ Concerned Area M Fishermen (n.d.). *Homepage*. Retrieved July 5, 2012 from <http://camfalaska.com/index.html>.

⁴⁷⁵ Information about 2011 and 2012 salmon runs provided by the Peter Pan Seafoods cannery office manager during community review of this profile. Feedback received December 18, 2012.

⁴⁷⁶ Peter Pan Seafoods Inc. 2011. *Facilities*. Retrieved May 23, 2012 from <http://www.ppsf.com/facilities/index.aspx>.

survey of plant managers in 2011, during peak production (from June through August) the crew is made up of 165 people. The Port Moller facility is self-sufficient and provides all housing and food for its workforce as well as its own electricity, water and other supplies.⁴⁷⁷

Fisheries-Related Revenue

Port Moller is not considered a CDP according to the U.S. Census. No information was reported regarding fisheries-related revenue sources between 2000 and 2010 (Table 3). However, according to a survey conducted by the AFSC in 2011, cannery managers indicated that \$2,000 in revenue was earned from dock use fees in 2010.

Commercial Fishing

Port Moller's primary engagement in commercial fisheries is through processing. Between 2000 and 2010, one shore-side processing facility operated in Port Moller, and the number of fish-buyers varied from one to three per year. Port Moller ranked 23rd with regard to landings volume, and 26th in ex-vessel revenue, out of 67 Alaskan ports that received landings in 2010. The number of vessels delivering catch in Port Moller varied from 50 to 171 per year, and the number of vessels homeported increased from 6 in 2000 to 12 in 2009 and 2010. According to a survey conducted by the AFSC in 2011, cannery managers reported that vessels basing out of Port Moller during the fishing season were primarily between 35 and 125 feet in length, with larger vessels serving as tenders. They observed that over the last 5 years the fleet has remained relatively stable, although the buyback associated with crab rationalization led to a decline in the number of vessels between 61 and 125 feet in length to hire for tendering. The gear type used by fishing vessels based out of Port Moller is principally gill net.

Port Moller is generally considered to have no permanent residents, although cannery managers indicated in the 2011 AFSC survey that one individual lives at the site year-round. Between 2000 and 2010, at least one individual held a state Commercial Fisheries Entry Commission (CFEC) permit registered to an address in Port Moller from 2007 to 2010, and at least one fishing vessel owner registered the vessel at an address in Port Moller from 2000 to 2001 and from 2007 to 2010. The CFEC permit was held in the Peninsula-Aleutian salmon drift gillnet fishery. During the 2000-2010 period, no Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were registered in Port Moller. Likewise, no quota share accounts in the federal halibut, sablefish or crab catch share fisheries were registered to Port Moller addresses between 2000 and 2010. Information about CFEC, FFP, and LLP permits is presented in Table 4, information about the commercial fishing sector in Port Moller is presented in Table 5, and information about federal catch share participation is presented in Tables 6 through 8.

Because there were three or fewer fish-buyers active in Port Moller each year from 2000 to 2010 (Table 5), information about landings and ex-vessel revenue generated in Port Moller is considered confidential due to the small number of participants (Table 9). Likewise, information about landings and ex-vessel revenue generated by vessels registered to a Port Moller address is considered confidential, given that fewer than three vessels were registered per year in 2000, 2001 and 2007-2010 (Table 10).

⁴⁷⁷ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by Port Moller:
 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Port Moller: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Port Moller: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	1	1	1	1
	% of permits fished	-	-	-	-	-	-	-	100%	100%	100%	100%
	Total permit holders	0	0	0	0	0	0	0	1	1	1	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	0	0	0	0	0	0	0	1	1	1	1
	<i>Fished permits</i>	0	0	0	0	0	0	0	1	1	1	1
	<i>% of permits fished</i>	-	-	-	-	-	-	-	100%	100%	100%	100%
	<i>Permit holders</i>	0	0	0	0	0	0	0	1	1	1	1

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Port Moller: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Port Moller ²	Total Net Pounds Landed in Port Moller ^{2,5}	Total Ex-Vessel Value of Landings in Port Moller ^{2,5}
2000	0	2	1	1	6	171	-	-
2001	0	2	1	1	8	148	-	-
2002	0	1	1	0	7	58	-	-
2003	0	1	1	0	8	50	-	-
2004	0	3	1	0	7	111	-	-
2005	0	2	1	0	7	138	-	-
2006	0	1	1	0	11	148	-	-
2007	0	1	1	1	11	55	-	-
2008	0	1	1	1	10	93	-	-
2009	0	1	1	1	12	124	-	-
2010	0	3	1	1	12	160	-	-

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Port Moller: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation in Port Moller: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation in Port Moller: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Port Moller: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Port Moller Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	0	0	0	0	0	-	-	-	-
Finfish	-	-	0	0	0	0	0	-	-	-	-
Halibut	-	-	0	0	0	0	0	-	-	-	-
Herring	-	-	0	0	0	0	0	-	-	-	-
Other Groundfish	-	-	0	0	0	0	0	-	-	-	-
Other Shellfish	-	-	0	0	0	0	0	-	-	-	-
Pacific Cod	-	-	0	0	0	0	0	-	-	-	-
Pollock	-	-	0	0	0	0	0	-	-	-	-
Sablefish	-	-	0	0	0	0	0	-	-	-	-
Salmon	-	-	0	0	0	0	0	-	-	-	-
<i>Total²</i>	-	-	0	0	0	0	0	-	-	-	-
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Finfish	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Halibut	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Herring	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Other Groundfish	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Other Shellfish	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Pacific Cod	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Pollock	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Sablefish	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Salmon	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-
<i>Total²</i>	-	-	\$0	\$0	\$0	\$0	\$0	-	-	-	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Limited sportfishing activity was reported in Port Moller during the 2000-2010 period. No active sport fish guide businesses were registered in Port Moller in any year during the decade, although at least one licensed sport fish guide was present in most years. Between 2003 and 2010, an average of 81 sportfishing licenses were sold in Port Moller, almost all of which were sold to individuals that were not residents of Port Moller. Only one license was purchased by a Port Moller resident in 2009 (Table 11). The office at the Peter Pan Cannery is the only ADF&G sportfishing license vendor in Port Moller, and typically fewer than 10 licenses are sold by the office each year. The higher numbers of licenses reported to have been sold in some years during the 2000-2010 period may reflect license sales at fishing lodges that are located in the Port Moller area, but not in the community itself.⁴⁷⁸

According to a survey conducted by the AFSC in 2011, cannery managers indicated that sportfishing takes place using private boats owned by local residents or non-residents, as well as fishing from the shore or dock. They reported that the most popular recreational species in Port Moller are Chinook and sockeye salmon, halibut, and crab.

Port Moller is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula/Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula/Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average) (Table 11). The Alaska Statewide Harvest Survey,⁴⁷⁹ conducted by ADF&G between 2000 and 2010, did not include information about species targeted by private anglers in Port Moller, and no kept/release log book data were reported for fishing charters out of Port Moller between 2000 and 2010.⁴⁸⁰

⁴⁷⁸ Information provided by the Peter Pan Seafoods cannery office manager during community review of this profile. Feedback received September 11, 2013.

⁴⁷⁹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴⁸⁰ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Port Moller: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Port Moller ²
2000	0	0	0	0
2001	0	1	0	0
2002	0	0	0	0
2003	0	1	0	74
2004	0	1	0	64
2005	0	1	0	131
2006	0	1	0	104
2007	0	1	0	74
2008	0	3	0	88
2009	0	3	1	63
2010	0	0	0	52

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

According to a survey conducted by the AFSC in 2011, three of the most important marine subsistence resources used by Port Moller community members are sockeye salmon, halibut, and king crab. Between 2000 and 2010, no information was reported by management agencies regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes (Table 12). Likewise, no information was reported regarding total harvest of marine invertebrates or non-salmon fish (not including halibut) (Table 13), subsistence halibut harvest (Table 14) or marine mammal harvest (Table 15). However, ADF&G did report information regarding annual subsistence salmon harvest in some years during the 2000-2010 period. According to ADF&G, from 2005 to 2008, between one and three subsistence salmon permits were issued to Port Moller households each year. Sockeye was the primary salmon species harvested, with between 200 and 500 fish harvested per year for those years in which data were available (Table 13).

Additional Information

The historic eruption of Mt. Katmai volcano took place on June 6, 1912, during the first year of operation of the Port Moller cannery. The cannery was in total darkness for several days as a result of the eruption, although no ash fell in the area because the wind was blowing away from the cannery.⁴⁸¹

Table 12. Subsistence Participation by Household and Species, Port Moller: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁴⁸¹ Radke, A.. C. 2002. *Pacific American Fisheries, Inc: History of a Washington State Salmon Packing Company, 1890-1966*. Ed. B. S. Radke. McFarland and Company, Inc., Publishers. North Carolina.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Port Moller: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	2	n/a	n/a	n/a	n/a	217	n/a	n/a
2007	3	2	n/a	n/a	n/a	n/a	381	n/a	n/a
2008	2	1	n/a	n/a	n/a	n/a	500	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Port Moller: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Port Moller: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Saint George



People and Place

Location^{482,483}

Saint George is located on the northeast shore of Saint George Island, the southern-most of the four Pribilof Islands. It lies 47 miles south of Saint Paul Island, 750 air miles west of Anchorage, and 250 miles northwest of Unalaska. Saint George is located in the Aleutian Islands Recording District and the Aleutians West Census Area, and is not located within an organized Borough. The community encompasses 34.8 square miles of land and 147.6 square miles of water.

*Demographic Profile*⁴⁸⁴

In 2010, there were 102 residents in Saint George, making it the 245th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population has decreased by 27%. The Saint George average annual growth rate between 2000 and 2009 was -3.18%, indicating a slow rate of decline. The change in population from 1990 to 2010 is provided in Table 1.

The majority of residents of Saint George in 2010 identified themselves as American Indian and Alaska Native (88.2%), with the remaining racial composition as follows: White (9.8%), Hispanic or Latino (1.0%), and two or more races (2.0%). The percentage of the population that identified themselves as American Indian and Alaska Native decreased by 3.9% between 2000 and 2010, with corresponding increases in the percentage of the population identifying themselves as White, Hispanic or Latino, and two or more races during that period. The change in racial and ethnic composition from 2000 to 2010 is provided in Figure 1 below.

In 2010, the average estimated household size in Saint George was 2.33, a decrease from 3.0 in 1990 and 2.98 in 2000. There has been a slight overall decrease in the estimated number of households from 45 in 1990, increasing slightly to 51 in 2000, and decreasing to an estimated 42 households in 2010. Of the 61 total housing units surveyed for the 2010 Decennial Census, 22 were owner-occupied, 20 were renter-occupied, and 19 were vacant. Throughout this period, four residents of Saint George were reported to be living in group quarters. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Saint George's population is composed entirely of year-round residents.

⁴⁸² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁸³ U.S. Fish and Wildlife Service. (2008). *Alaska Maritime National Wildlife Refuge: Wildlife Viewing*. Retrieved Feb. 22, 2013 from <http://alaskamaritime.fws.gov/visitors-educators/wildlifeviewing/pribilofs.htm>.

⁴⁸⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

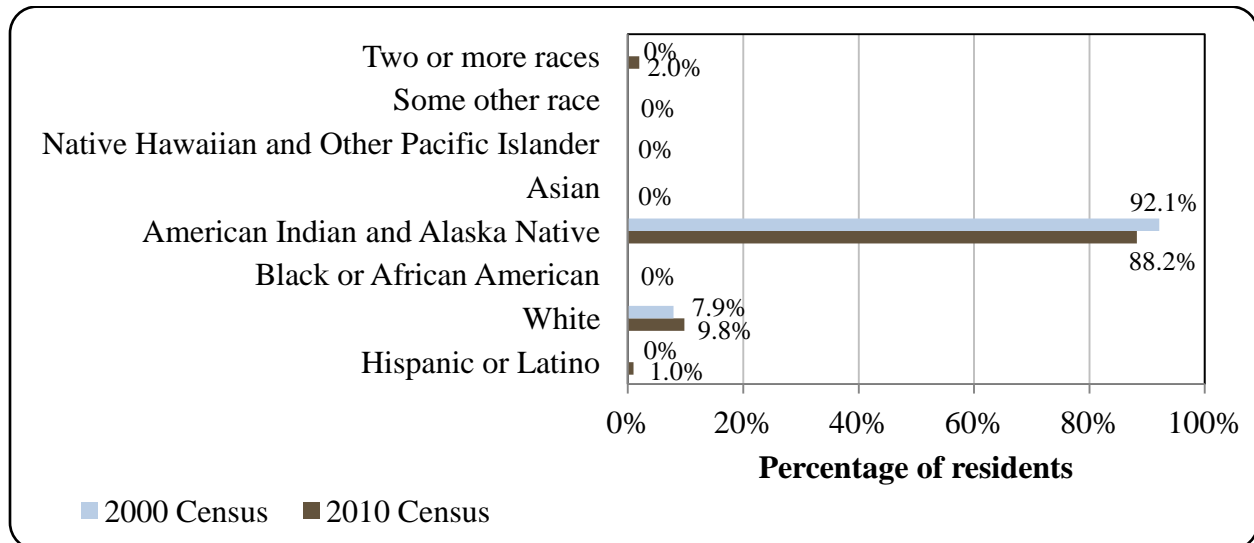
Table 1. Population in Saint George from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	138	-
2000	152	-
2001	-	146
2002	-	147
2003	-	148
2004	-	138
2005	-	129
2006	-	120
2007	-	114
2008	-	112
2009	-	111
2010	102	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

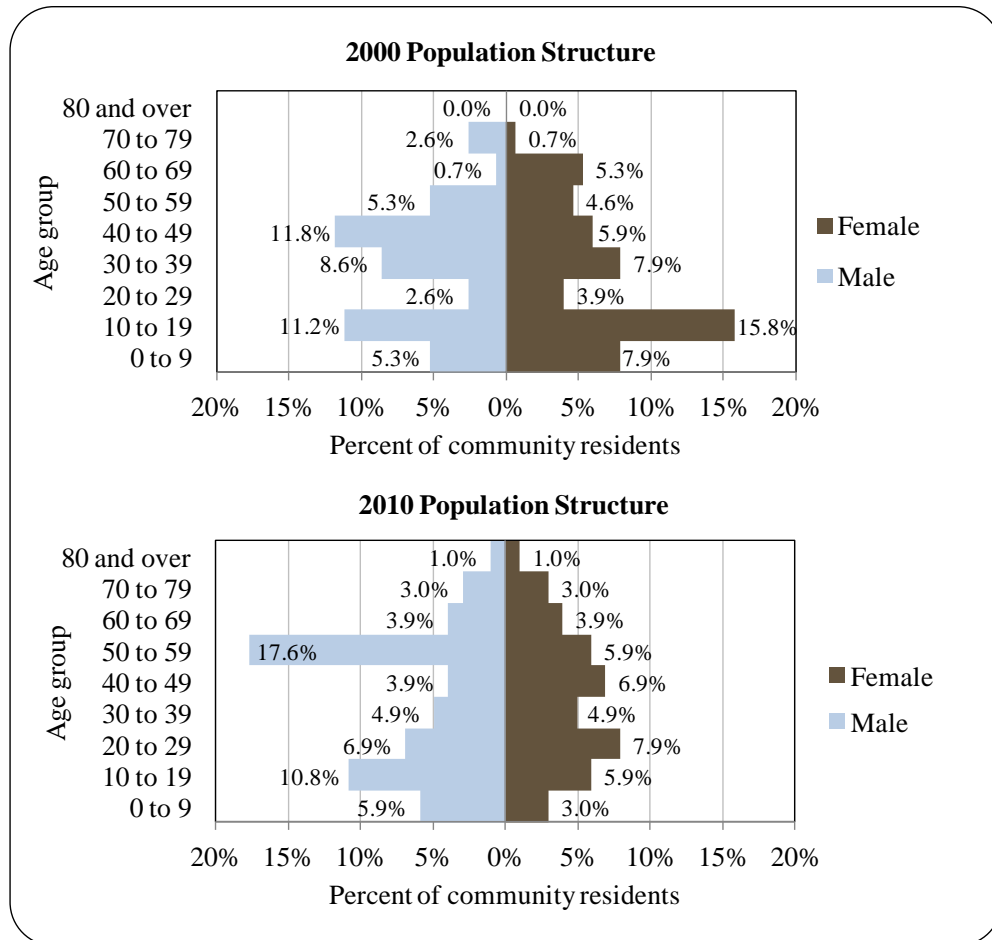
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Saint George: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Saint George was 58% male and 42% female, slightly skewed compared to the state as a whole (52% male, 48% female). The median age in Saint George was 39 years, higher than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the greatest percentage of residents fell within the age category 40-59 years old, with the next largest percentage for the age category 10-29 years old. Relatively few people were age 70 or older. The overall population structure of Saint George in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Saint George Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁴⁸⁵ 96.9% of residents aged 25 and over were estimated to hold a high school diploma or higher degree, compared to 90.7% of Alaskan residents overall. Also in 2010, an

⁴⁸⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

estimated 3.1% of the population had a less than ninth grade education, compared with 3.5% of Alaskan residents overall; an estimated 50% of the population held a high school diploma or equivalent, compared with 27.4% of Alaskan residents overall; an estimated 28.1% of residents had some college but no degree, compared with 28.3% of Alaskan residents overall; an estimated 9.4% held an Associate’s degree, compared with 8% of Alaskan residents overall; and an estimated 9.4% of residents held a Bachelor’s degree, compared with 17.4% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Saint George’s population is predominantly Aleut and Eskimo.⁴⁸⁶ Historically, the Aleuts traveled to the Pribilof Islands seasonally for hunting. Inspired by traditional Aleut stories, Gavriiff Pribilof of the Russian fur trading company, Lebedov Lastochkin Co., went on a search for the legendary “Seal Islands.” After a three-year search, Pribilof landed on Saint George Island in 1786, and named the island after his vessel. The following year, Pribilof and his party landed on the larger island to the north, which was named ‘Saint Peter and Saint Paul Island’ in honor of the day they made landfall – the Feast of Saints Peter and Paul. It is now known as Saint Paul Island.^{487,488} In 1788, the Russian American Company enslaved and relocated Aleuts from Siberia, Atka, and Unalaska to the Pribilofs to hunt fur seals. Their descendants continue to live on these two islands today.⁴⁸⁹

The United States’ purchase of Alaska from Russia in 1867 included the Pribilof Islands. Soon after the purchase, in 1868, the Islands were declared a special Federal Reserve with the purpose of managing fur seals and other fur-bearing species, and the federal government began to contract seal harvest to private companies.⁴⁹⁰ In 1870, the U.S. Government awarded the Alaska Commercial Company a 20-year sealing lease, and they provided housing, food, and medical care to the Aleuts in exchange for seal harvesting. In 1890, a second 20-year lease was awarded to the North American Commercial Company. However, fur seals were severely over-harvested, and poverty ensued. The 1910 Fur Seal Act ended private leasing on the islands and placed the community and fur seals under the U.S. Bureau of Fisheries. Food and clothing were scarce, social and racial segregation was practiced, and working conditions were poor.⁴⁹¹

During World War II, the Pribilof Aleuts were moved to Funter Bay on Admiralty Island in Southeast Alaska as part of the emergency evacuation of residents from the Bering Sea. Unlike other Aleutian residents, they were confined in an abandoned cannery and mine camp at Funter Bay. Later, in 1979, the Aleut Islanders received \$8.5 million in partial compensation for

⁴⁸⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁸⁷ City of St. George. 1988. *Comprehensive Development Plan*. Retrieved January 4, 2013 from <http://www.commerce.state.ak.us/dca/plans/SaintGeorge-CP-1988.pdf>.

⁴⁸⁸ NOAA Office of Response and Restoration. 2008. *Pribilof Islands: A Historical Perspective – Island History: The Russian Period*. Retrieved January 7, 2013 from http://docs.lib.noaa.gov/noaa_documents/NOS/ORR/TM_NOS_ORR/TM_NOS-ORR_17/HTML/Pribilof_html/Pages/history_Russian_period.htm.

⁴⁸⁹ See footnote 486.

⁴⁹⁰ 106th U.S. Congress. April 11, 2000. *Pribilof Islands Transition Act*. Retrieved August 21, 2012 from <http://www.gpo.gov/fdsys/pkg/CRPT-106hrpt569/html/CRPT-106hrpt569.htm>.

⁴⁹¹ See footnote 486.

the unfair and unjust treatment the federal administration subjected them to from 1870 to 1946.⁴⁹²

With Alaska Statehood in 1959, 70% of revenues from the commercial fur seal hunt began to go to the State of Alaska. This decrease in federal revenue, in combination with an unexplained decline in productivity of the seal population in the 1960s, led the federal government to begin phasing out of the Pribilof Islands. Federal sealing operations were consolidated in Saint Paul in 1972, leaving Saint George as a research station to monitor the status of the fur seal population. Many Saint George residents chose to relocate to Saint Paul or left the Pribilof Islands entirely, but a majority remained in the community.⁴⁹³

In 1983, Congress passed the Fur Seal Act Amendments, which brought government control of the commercial seal harvest and the federal presence in the Pribilof Islands to an end. The City of Saint George was incorporated in 1983, and responsibility for providing community services in Saint George and management of the fur seals was left to local entities. To help develop and diversify the local economy, \$8 million was provided to Saint George by the federal government.⁴⁹⁴ Today, the Marine Mammal Protection Act provides that marine mammals may be taken by Native Alaskans living in Alaska if such taking is 1) for subsistence purposes; or 2) is done for the purpose of creating and selling authentic native articles of handicrafts and clothing...; and 3) in each case, is not accomplished in a wasteful manner.⁴⁹⁵ Residents of Saint George continue to harvest approximately 500 fur seals per year for the purpose of subsistence, along with a variety of other subsistence resources including halibut and marine invertebrates. The community is also working to develop commercial fisheries and tourism.⁴⁹⁶

Today, residents are working to develop commercial fisheries and tourism.⁴⁹⁷ In a survey conducted by the AFSC in 2011, community leaders reported that Saint George has yet to fully transition their economy “from that of fur seals to that of fisheries.” Community leaders also expressed that “there has been inefficient attention and activity” to help the community of Saint George “despite Congressional mandates” to do so according to the Fur Seal Act Amendments of 1983.

Natural Resources and Environment

Saint George is the second-largest of the Pribilof Islands, at approximately 40 square miles in area. Like the other Pribilofs, Saint George Island is of volcanic origin, built by basalt lava flows 1.6 to 2.2 million years ago.⁴⁹⁸ The Island is ringed by 50 miles of steep cliffs rising up to 300 meters above sea level. These cliffs provide extensive habitat for ledge-nesting

⁴⁹² Information Insights, Inc. 2007. *Saint George Community Strategic Plan*. Prepared for the City of Saint George, Saint George Traditional Council, and Tanaq Corporation. Retrieved January 4, 2013 from <http://www.commerce.state.ak.us/dca/plans/SaintGeorge-CP-2007.pdf>.

⁴⁹³ Ibid.

⁴⁹⁴ See footnote 486.

⁴⁹⁵ Marine Mammal Protection Act of 1972, as amended 2007. *Section 101(b) - Exemptions for Alaska natives*. Retrieved August 20, 2012 from <http://www.nmfs.noaa.gov/pr/pdfs/laws/mmpa.pdf>.

⁴⁹⁶ See footnote 486.

⁴⁹⁷ Ibid.

⁴⁹⁸ Carleton College, Science Education Resource Center. (2012). *Resources of the Pribilof Islands*. Retrieved February 22, 2013 from http://serc.carleton.edu/research_education/nativelands/pribilofs/index.html.

seabirds.⁴⁹⁹ The climate of Saint George is controlled by the cold waters of the Bering Sea. Its maritime location results in cool weather year-round and a narrow range of mean temperatures, varying from 24 to 52 °F (-4.4 to 11.1 °C). Average annual precipitation is 23 inches, with 57 inches of snowfall. Cloudy, foggy weather is common during summer months.⁵⁰⁰

Information from the Saint George Tanaq Corporation indicates that, each summer, more than one million northern fur seals congregate on the shores of the Pribilof Islands. This is the largest gathering of marine mammals anywhere in the world. Approximately 250,000 of these animals, as well as a number of harbor seals and Steller sea lions, are found on Saint George Island. Northern fur seals spend most of the year ranging throughout the Pacific Ocean waters of the Soviet Union, Japan, Canada, and the United States, but when it comes time to breed they must come ashore. Seventy percent of the world's northern fur seal population chooses the cool, moist climate and rocky beaches of the Pribilofs for breeding, returning each year to the very beaches where they were born. Soon after coming ashore in spring, female seals give birth to their pups. Throughout the summer the beaches are vibrant with activity; seal pups playing, mother seals swimming out to sea to feed, and bulls fighting off competitors.⁵⁰¹

An international fur treaty, signed initially in 1911, safeguards the seals from being hunted at sea. The treaty stipulates that the United States and Russia must each restrict their sealing activities to the Pribilof and Commander Islands, and in return for accepting a ban on pelagic sealing, the United States, Russia, Japan, and Canada each receive a share of the pelts taken during the yearly commercial harvests. Commercial harvests, however, have ceased in recent years and the communities of Saint George and Saint Paul now undertake small subsistence harvests each summer. Most experts believe that without the treaty the seals would now be endangered. In 1910, prior to acceptance of the treaty, the seal herd reached its lowest level at about 300,000 animals. Today the total seal population numbers close to a million. If the treaty were to be abolished many people believe the seals would once again be hunted at sea, by fishermen who contend the seals reduce fish stocks and by those who want the seals for their valuable fur. Environmental groups including the Sierra Club and National Audubon Society cite the international fur seal treaty as an outstanding example of wildlife conservation management.⁵⁰²

According to the Alaska Department of Environmental Conservation (DEC), petroleum contamination has been identified at a number of properties on Saint George Island currently or previously owned by NOAA and its predecessor agencies, including residential and commercial areas of Saint George. Removal of contaminated soil began in 2006. Restoration activities are conducted according to an agreement between NOAA and the DEC. As of 2008, NOAA planned to apply for 'closed out' and 'conditionally closed' status on the Saint George sites, which would involve institutional controls and a long-term monitoring plan.⁵⁰³

⁴⁹⁹ Klostermann, M.R. and B.A. Drummond. (2012). *Biological monitoring at St. George Island, Alaska in 2012*. U.S. Fish and Wildlife Service Report, AMNWR 2012/08. Homer, Alaska. Retrieved March 1, 2013 from <https://absilcc.org/science/amnwr/Shared%20Documents/St%20George%202012.pdf>.

⁵⁰⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁰¹ Saint George Tanaq Corporation. 2012. *Island Wildlife*. Retrieved from <http://www.stgeorgetanaq.com/wildlife.html> on May 2, 2012.

⁵⁰² Ibid.

⁵⁰³ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved Feb. 21, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy⁵⁰⁴

The federally-controlled fur seal industry dominated the economy of the Pribilof Islands until 1983.⁵⁰⁵ As of 2010, top local employers included local government offices, the Native village corporation (Saint George Tanaq Corporation), private construction companies, Peninsula Airways, Inc., a private fuel company, and the Pribilof School District.⁵⁰⁶ Additionally, in a survey conducted by the AFSC in 2011, community leaders reported that the economy of Saint George relies upon commercial fishing, with primary emphasis on the halibut fishery. The Saint George Aquaculture Association also has salmon and shellfish programs. Subsistence harvest remains important in the community. Villagers harvest 500 fur seals each year for subsistence purposes. Halibut, reindeer, marine invertebrates, plants, and berries also contribute to the local diet.⁵⁰⁷

According to the 2006-2010 ACS,⁵⁰⁸ the estimated per capita income in Saint George in 2010 was \$19,242 and the estimated median household income was \$46,875, compared to \$21,131 and \$57,083 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁵⁰⁹ the real per capita income (\$27,787) and household income (\$75,063) indicated a substantial estimated decrease in both figures between 2000 and 2010. However, Saint George's small population size may have prevented the ACS from accurately portraying economic conditions.⁵¹⁰ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Saint George in 2010 was \$14,224, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁵¹¹

In 2010, Saint George ranked 159th of 305 Alaskan communities with per capita income that year, and 152nd out of 299 Alaskan communities with household income data. Based on the 2006-2010 ACS, in the same year, 47.4% of the population age 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was zero, compared to the statewide unemployment rate of 5.9%. Approximately 17.2% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Saint George are not reflective of the value of subsistence to the local economy. In addition, these unemployment

⁵⁰⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁰⁵ See footnote 500.

⁵⁰⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵⁰⁷ See footnote 500.

⁵⁰⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵⁰⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

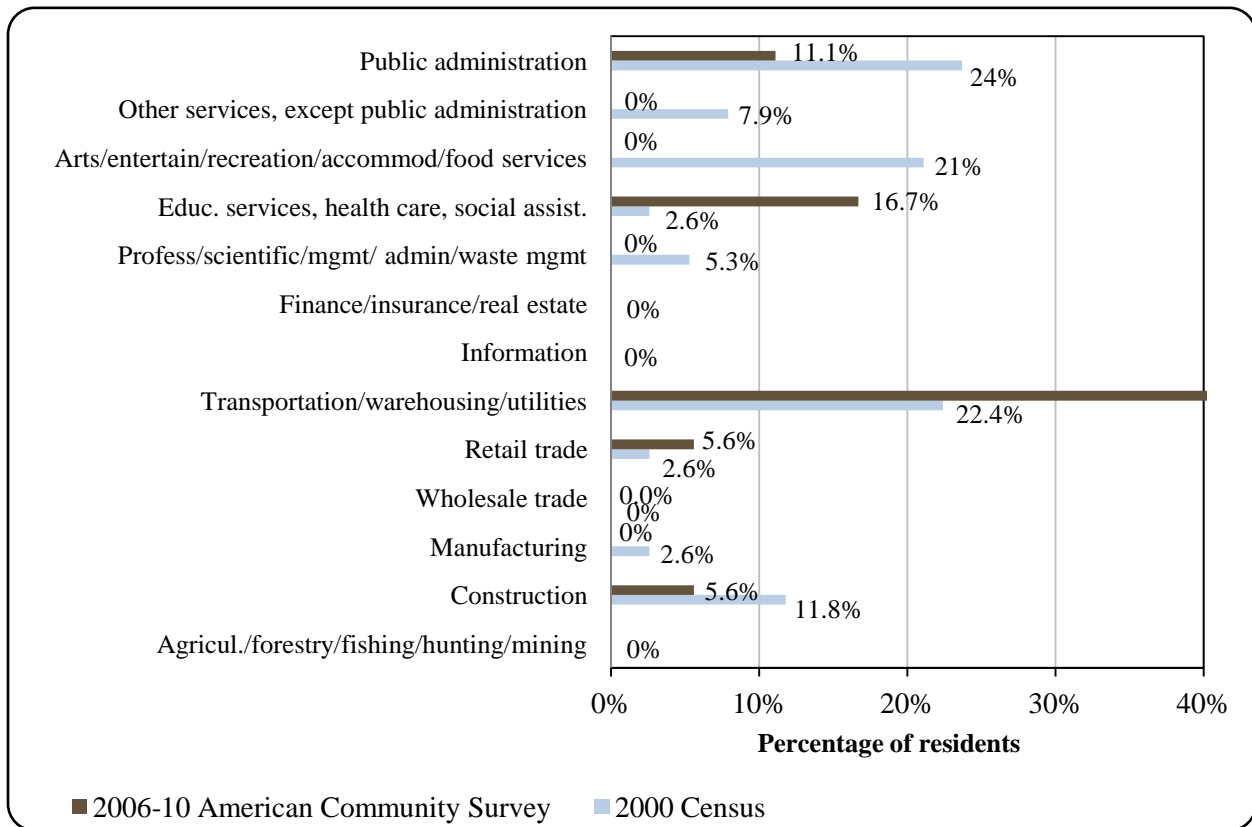
⁵¹⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵¹¹ See footnotes 506 and 508.

and poverty statistics are likely inaccurate given the small population of Saint George.⁵¹² An additional estimate of unemployment is based on the ALARI database, which suggests a higher unemployment of 16.9% in 2010, compared to a statewide unemployment rate estimate of 11.5%.⁵¹³

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the private sector (66.7%), with 33.3% employed in the public sector. Out of the 18 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in the following industries: transportation, warehousing, and utilities (27.8%), public administration (22.2%), construction (22.2%), education services, health care, and social assistance (11.1%), and wholesale trade (11.1%). When employment is considered in terms of occupation, a majority of workers were estimated to be employed in management and professional occupations (55.6%). Information about employment by industry is presented in Figure 3, and is broken down by occupation in Figure 4. No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

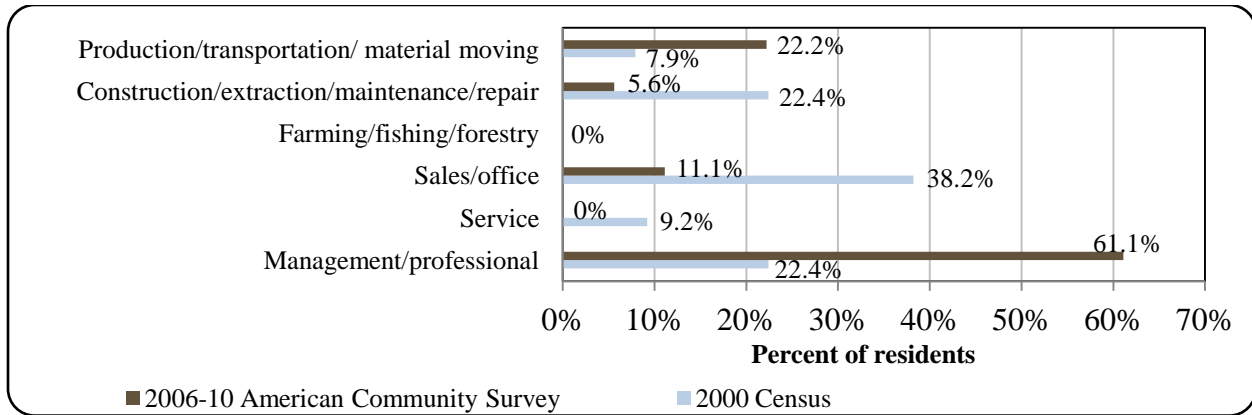
Figure 3. Local Employment by Industry in 2000-2010, Saint George (U.S. Census).



⁵¹² See footnote 510.

⁵¹³ See footnote 506.

Figure 4. Local Employment by Occupation in 2000-2010, Saint George (U.S. Census).



Governance

Saint George is a 2nd Class City and is not located within an organized borough. The City does not administer sales or property tax, but a 3% raw fish tax is collected. Annual municipal revenues reported in the City’s certified financial statements varied considerably from year to year. In addition to the raw fish tax revenues, locally-generated income sources in Saint George between 2000 and 2010 included charges for services such as electricity, water and sewer, refuse collection, equipment and building rentals, and harbor moorage, wharfage, lighterage, and storage. Outside revenue sources included state and federal grants and shared revenues. Sources of shared revenue included the State Revenue Sharing program (over \$25,000 per year from 2000 to 2003) and the Community Revenue Sharing program (just over \$100,000 per year in 2009 and 2010). Several fisheries-related grants were received by the City during the 2000-2010 period. These included \$10 million in 2002 and \$2.5 million in 2003 from the U.S. Army Corps of Engineers for use in harbor improvements/feasibility design and construction and harbor entrance channel deepening/construction, \$2 million in 2005 from the U.S. Economic Development Administration for construction of a new fish processing plant, and \$143,742 in Federal Emergency Management Agency (FEMA) disaster recovery assistance in 2006 following severe storms in October 2006.⁵¹⁴ The FEMA disaster funding was directed toward harbor planning and engineering. Information about selected municipal funding sources is displayed below in Table 2.

In addition to the City of Saint George, the community was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native Village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Aleut Community of Saint George Island. The Tribe is combined with Saint Paul as the Pribilof Islands Aleut Communities of Saint Paul and Saint George Islands. The Native village corporation for the Aleut Community of Saint George Island is the Saint George Tanaq Corporation, which manages 128,666 acres of land.⁵¹⁵ The Saint George Tanaq Corporation is involved in the local tourism industry on the island, offering both accommodations and guide services. The

⁵¹⁴ U.S. Dept. of Homeland Security. 2006. “New Disaster Declaration to Help Alaska Recover from October Storms.” *FEMA Website*. Retrieved July 9, 2012 from <http://www.fema.gov/news/newsrelease.fema?id=32110>.

⁵¹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Corporation also owns several subsidiary environmental, energy, and resource conservation consulting companies that provide services locally. The affiliated Tanaq Foundation provides educational scholarships to shareholders.⁵¹⁶ Many members of the Aleut Community of Saint George Island are also shareholders in the Aleut Corporation, the regional Native corporation of the eastern Alaska Peninsula, Aleutian and Pribilof Islands.⁵¹⁷

The Aleut Community of Saint George Island is also part of the Aleutian Pribilof Islands Association (APIA). The mission of APIA is to promote self-sufficiency and independence of the Unangax by advocacy, training, technical assistance, and economic enhancement, as well as to assist in meeting health, safety, and well-being of each Unangax community; and to promote, strengthen, and preserve the Unangax cultural heritage.⁵¹⁸

A field station of the National Marine Fisheries Service (NMFS) is located on Saint George Island, and the nearest larger NMFS office is located in Dutch Harbor, along with an office of the Alaska Department of Fish and Game (ADF&G). The nearest office of the Alaska Department of Commerce, Community, and Economic Development is located in Dillingham. The nearest offices of the U.S. Immigration and Customs Enforcement, Bureau of Citizenship and Immigration Services, and Alaska Department of Natural Resources are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Saint George from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,777,505	n/a	\$27,818	n/a
2001	\$1,867,776	n/a	\$26,857	n/a
2002	\$1,141,766	n/a	\$26,416	\$10,000,000
2003	\$576,065	n/a	\$26,947	\$2,500,000
2004	\$691,938	n/a	n/a	n/a
2005	\$523,830	n/a	n/a	\$2,000,000
2006	\$625,621	n/a	n/a	\$143,742
2007	\$1,435,568	n/a	n/a	n/a
2008	\$1,784,320	n/a	n/a	n/a
2009	\$911,495	n/a	\$101,714	n/a
2010	\$569,419	n/a	\$101,567	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

⁵¹⁶ St. George Tanaq Corporation. (2013). *Home, Tourism, Business Services, and Tanaq Foundation*. Retrieved Feb. 22, 2013 from <http://www.stgeorgetanaq.com/index.html>.

⁵¹⁷ Aleut Corporation. (2008). *Homepage*. Retrieved February 9, 2012 from <http://www.aleutcorp.com>.

⁵¹⁸ Aleutian Pribilof Islands Association (n.d.). *About Us*. Retrieved January 26, 2012 from <http://www.apiai.com/about.asp?page=about>.

Infrastructure

Connectivity and Transportation

Saint George is accessible only by air and sea. There are two airstrips: one is owned by the City, and the other, with a 4,980-ft-long by 150-ft-wide gravel runway, is owned by the State. Scheduled flights are provided to Saint Paul and the Alaska mainland. Most freight and supplies are delivered by ship from Anchorage on a monthly or bimonthly schedule; cargo from Seattle arrives five or six times a year. There are three docks: one is operated by the village corporation and an inner harbor and dock are located in Zapadni Bay, 5 miles from the City.⁵¹⁹ Roundtrip airfare to Anchorage in June 2012 was \$797.⁵²⁰

Facilities

There is a piped water and sewer system with four wells and 250,000 gallons of storage that provides water for the community and the harbor. All residences in the community are connected to the system and are plumbed. Sewage outfall discharges into the harbor. The City provides refuse collection services. Electricity is provided by the Saint George Municipal Electric Utility, which is operated by the city and powered by diesel generators. Law enforcement services are provided by Village Public Safety Officers in Dillingham, and fire and rescue services are provided by the Saint George EMS/First Responders. The City also maintains a city public safety building, a community center, and a school gym and library.⁵²¹

In a survey conducted by the AFSC in 2011, community leaders reported that Saint George has a barge landing area and a dock served by electricity, water, and roads, in addition to fuel tanks at the dock. Community leaders also noted that Saint George has a jetty, an airport/seaplane base, water and sewer pipelines, sewage treatment, water treatment, a landfill/solid waste site, telephone service, and a post office. While community leaders also reported that there is no dock space available for permanent vessels to moor, there is 200 ft of dock space available for transient vessels up to 200 ft in length.

Medical Services

The Saint George Clinic, which is owned by the Village Council and operated by the Aleutian Pribilof Island Association, Inc. (APIA), provides medical care to the residents of Saint George. The clinic is a Community Health Aid Program site. Emergency services have coastal and air access and are provided by volunteers.⁵²² The nearest hospital is in Dillingham.

⁵¹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵²⁰ Airfare was obtained on the Peninsula Airways website, <http://www.penair.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

⁵²¹ See footnote 519.

⁵²² Ibid.

*Educational Opportunities*⁵²³

There is one school, the Saint George School, which provides instruction for students from pre-school through 12th grade. In 2011, the school had 10 students and 1 teacher.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Pribilof Islands were historically used by Aleut people as a seasonal fishing and hunting site. Since the Aleuts were brought to Saint George Island by the Russians in the late 1700s, and permanent year-round settlements were established there, subsistence harvest of fur seal meat has remained fundamental to the local diet. Commercial fur seal harvest was also the basis of the wage economy in Saint George until 1983, when the U.S. Government ended the commercial seal harvest. Subsistence harvest of fur seals is governed by the Fur Seal Act of 1966 and the Marine Mammal Protection Act of 1972. Amendments were added to these Acts in 1985 and 1986, respectively, with the purpose “to limit the take of fur seals to a level providing for the subsistence needs of the Pribilof Aleuts using humane harvesting methods, and to restrict taking by sex, age, and season for herd management purposes.”⁵²⁴ Fur seal harvest is permitted for both subsistence purposes and for native handicrafts and clothing.⁵²⁵ Residents of Saint George utilize fur seals for both purposes today.^{526,527} In addition to fur seal, residents of Saint George have historically harvested seal, sea lion, and halibut for subsistence purposes.⁵²⁸

Saint George is located within Pacific Halibut Fishery Regulatory Area 4C, Federal Statistical and Reporting Area 513, and the Bering Sea Sablefish Regulatory Area. Today, the primary fishery in which Saint George residents are engaged is the commercial halibut fishery, while a small number participate in sablefish and other groundfish fisheries. Commercial exploitation of halibut and groundfish first extended into the Bering Sea region in the late 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁵²⁹

In 1995, management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable

⁵²³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁵²⁴ NOAA NMFS, Alaska Region. 2005. *Setting the Annual Subsistence Harvest of Northern Fur Seals on the Pribilof Islands: Final Environmental Impact Statement*. Retrieved July 9, 2012 from <http://www.fakr.noaa.gov/protectedresources/seals/fur/eis/final0505.pdf>.

⁵²⁵ Marine Mammal Protection Act of 1972, as amended 2007. *Section 101(b) - Exemptions for Alaska natives*. Retrieved August 20, 2012 from <http://www.nmfs.noaa.gov/pr/pdfs/laws/mmpa.pdf>.

⁵²⁶ NOAA Fisheries. 2008. *Pribilof Islands, A Historical Perspective - Document Library*. Retrieved August 20, 2012 from http://docs.lib.noaa.gov/noaa_documents/NOS/ORR/TM_NOS_ORR/TM_NOS_ORR_17/HTML/Pribilof_html/Pages/pribilof_documents_snp.htm.

⁵²⁷ City of Saint Paul, Alaska, WH Pacific, and Bechtol Planning and Development. November 17, 2008. *City of Saint Paul, Alaska Local Multi-Hazard Mitigation Plan DRAFT*. Retrieved August 20, 2012 from http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/St_Paul_LHMP.pdf.

⁵²⁸ Alaska Dept. of Fish and Game. 1985. *Alaska Habitat Management Guide, Southwest Region Volume II: Human Use of Fish and Wildlife*. Retrieved July 9, 2012 from <http://www.arlis.org/docs/vol11/C/AHMG/13907847v2.pdf>.

⁵²⁹ Thompson, W.F. and N.L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). In the Bering Sea – Aleutian Islands (BSAI) region, quota shares are also allocated to six Community Development Quota (CDQ) non-profit organizations representing 65 communities in Western Alaska.⁵³⁰ The CDQ non-profit representing the tribal community of Saint George is the Central Bering Sea Fishermen’s Association (CBSFA). In 2010, The CBSFA received an allocation of 690,625 pounds of CDQ halibut quota, all of which was allocated for harvest within Area 4C, the Subarea within which the Pribilof Islands are located.⁵³¹ However, a halibut Catch Sharing Plan developed for Areas 4C, 4D, and 4E provides that Area 4C allocations can be harvested in either Area 4C or 4D to provide additional harvesting opportunities to fishermen in Area 4C.⁵³² Total BSAI sablefish CDQ allocations in 2009 and 2011 were 1.3 million lbs in each year. No sablefish CDQ report was available from NOAA for the 2010 season.⁵³³ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the CDQ allocations.⁵³⁴ Saint George is not eligible to participate in the Community Quota Entity program.

In a survey conducted by the AFSC in 2011, community leaders indicated that Saint George actively participates in fisheries management processes in Alaska through sending a representative to participate in North Pacific Fishery Management Council (NPFMC) committees or advisory groups. In addition, they indicated that Saint George relies on regional organizations, such as the Southwest Alaska Municipal Conference, to provide information on fisheries management issues.

In the 2011 AFSC survey, Saint George community leaders outlined challenges that face the portion of the Saint George economy that relies on commercial fishing. They reported that fishing activity is currently limited due to incomplete development of the harbor and related infrastructure. They expressed the opinion that the U.S. Department of Commerce has not yet met obligations outlined in the Fur Seal Act Amendments of 1983 – to help transition Saint George’s economy from fur seal harvest to fisheries. According to the community leaders, this transition has not yet taken place, and the community requires direct fish/crab quota allocations and sufficient funding to complete necessary infrastructure development to allow development of commercial fishery activity. They also expressed the desire that the Fur Seal Act Amendments be recognized as “applicable law” under the Magnuson-Stevens Fishery Conservation and Management Act and by the NPFMC. They also noted high fuel costs as a limitation to development of local fisheries activity.

⁵³⁰ Fina, Mark. 2011. Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

⁵³¹ NOAA National Marine Fisheries Service. 2010. *Memorandum: 2010 Community Development Quota (CDQ) Halibut Allocations*. Retrieved January 8, 2013 from <http://www.fakr.noaa.gov/ram/10ifqcdqtac.pdf>.

⁵³² North Pacific Fishery Management Council. (n.d.). *Pacific Halibut Catch Sharing Plan for Area 4*. Retrieved January 8, 2013 from <http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/halibut/Area4CSP605.pdf>.

⁵³³ NOAA National Marine Fisheries Service. (n.d.). *IFQ Halibut/Sablefish Reports and CDQ Halibut Program Reports*. Retrieved February 22, 2013 from <http://www.fakr.noaa.gov/ram/ifqreports.htm>.

⁵³⁴ International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved October 16, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Saint George did not have a registered processing plant. That year, the nearest registered processing plant was located in Saint Paul.

However, it is important to note that, in 2008, APICDA Joint Ventures, Inc. (AJV) reached an agreement with Snopac Products, Inc. to purchase all of Snopac's crab processor quota shares and processing equipment located in Saint George. Snopac had not actively processed crab in Saint George since 2000. Local community leaders hoped the purchase would help revitalize the local economy.⁵³⁵

In addition, between 1999 and 2009, Puffin Seafoods, L.L.C. operated in Saint George. The facility, co-owned by AJV and the Saint George Fishermen's Association, purchased halibut caught by local Saint George fishermen from the Area 4C halibut CDQ allocation. Puffin Seafoods was dissolved in 2009. A new company was scheduled to be formed in 2010 around planned construction of a new seafood processing facility on Saint George Island.^{536,537} Federal grant money (\$2 million) was received from the EDA in 2005 toward construction of the new processing facility. According to the APICDA, the new facility was slated to be a joint venture between AJV and Snopac Products, Inc.⁵³⁸

Fisheries-Related Revenue

Between 2000 and 2010, Saint George received fisheries-related revenue from various sources, including a raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, and harbor usage fees, although data for some years for various revenue sources were not available (Table 3). The amount of revenue obtained from fisheries-related sources between 2000 and 2010 varied widely, from a high of \$763,896 in 2000 to \$10,213 in 2010.⁵³⁹

In a survey conducted by the AFSC in 2011, community leaders reported that maintaining the harbor and water and wastewater systems are at least partially supported or funded by the Shared Fisheries Business Tax. They also reported that Saint George received \$120,000 in funding or grants and \$23,000 in special allocations from a CDQ entity in 2010.

Commercial Fishing

While residents of Saint George held Federal Fisheries Permits and halibut, sablefish, and groundfish Commercial Fisheries Entry Commission (CFEC) permits, only the halibut permits were reported as actively fished during each year from 2000 to 2010 (Table 4). The percentage of halibut permits reported as fished in each year varied during that period from 33% to 100%. In

⁵³⁵ APICDA Joint Ventures, Inc. October 7, 2008. "APICDA Acquires Crab Processor Quota Shares." Retrieved July 9, 2012 from http://www.apicda.com/news_reports_archives/2008-AJV.crab.pdf.

⁵³⁶ Aleutian Pribilof Island Community Development Association. 1999. *Quarter 3 Report*. Retrieved July 9, 2012 from http://www.commerce.state.ak.us/bsc/cdq/pub/CDQ_Apicda_Qtr3_Report_99.pdf.

⁵³⁷ Aleutian Pribilof Island Community Development Association. 2009. *APICDA 2009 Annual Report*. Retrieved July 9, 2012 from http://www.apicda.com/News_Reports/Annual%20Reports/2009-Annual%20report.pdf.

⁵³⁸ APICDA. 2008. *About APICDA – Saint George*. Retrieved July 9, 2012 from http://www.apicda.com/st_george.html.

⁵³⁹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the City's financial statements.

2010, halibut CFEC permits were issued for the statewide longline vessel fishery using vessels under 60 ft. Sablefish CFEC permits were issued in 2010 for the statewide longline vessel fishery using vessels under 60 ft, and groundfish CFEC permits were issued for the statewide miscellaneous saltwater finfish longline fishery using vessels under 60 ft.

Between 2000 and 2010, data regarding total lbs landed and ex-vessel value are considered confidential due to the small number of participants (Table 5). However, there were five vessels owned by Saint George residents and homeported in Saint George, with three vessels landing catch in Saint George in 2010. That same year, there were five crew license holders in Saint George, and one fish buyer. The number of crew license holders, fish buyers, vessels owned primarily by residents, vessels homeported, and vessels landing catch in Saint George has varied between 2000 and 2010. In addition, from between 2001 and 2008, one registered shore-side processing facility was located in Saint George (see *Processing Plants* section above).

In 2010, there were eight halibut quota share holders in Saint George, holding a total of 146,384 shares of halibut quota and 29,579 lbs of halibut Individual Fishing Quota (IFQ) allotment (Table 6). Between 2000 and 2010, the number of halibut quota share holders decreased from 15 to 8, with corresponding decreases in the number of shares of halibut quota (383,289 to 146,384) and lbs of IFQ (97,796 to 29,579) held by Saint George residents. Between 2000 and 2010, no residents of Saint George held sablefish or crab quota share accounts or quota shares (Tables 7 and 8).

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing boats under 35 ft use Saint George as their base of operations during the fishing season.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Saint George: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$536,131	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$184,856	\$478,030	\$139,942	\$2,128	\$4,221	\$3,513	\$5,725	\$3,026	\$4,956	\$8,241	\$10,213
Fisheries Resource Landing Tax ¹	\$909	\$2,724	\$1,433	\$610	\$1,772	\$5,970	\$2,294	\$5,631	\$14,982	\$32,986	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$42,000	\$42,000	\$397,500	\$7,100	n/a	n/a	\$180,000	n/a	\$25,246	\$21,536	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$763,896	\$522,754	\$538,875	\$9,839	\$5,993	\$9,483	\$188,020	\$8,657	\$45,184	\$62,763	\$10,213
Total municipal revenue⁵	\$1,777,505	\$1,867,776	\$1,141,766	\$576,065	\$691,938	\$523,830	\$625,621	\$1,435,568	\$1,784,320	\$911,495	\$569,419

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Saint George: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	4	4	3	3	3	2	2	2	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	4	4	3	3	3	2	2	2	2	2
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	14	15	17	9	8	6	8	5	6	9	6
	Fished permits	9	9	10	5	6	2	5	5	6	6	5
	% of permits fished	64%	60%	59%	56%	75%	33%	63%	100%	100%	67%	83%
	Total permit holders	11	13	14	8	8	6	6	5	6	9	6
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 Cont. Permits and Permit Holders by Species, Saint George: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	1	0
	% of permits fished	-	-	-	-	-	-	-	-	-	100%	-
	Total permit holders	0	0	0	0	0	0	0	0	0	1	1
Groundfish (CFEC) ²	Total permits	0	0	0	1	1	1	2	1	1	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	1	1	1	2	1	1	2	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>14</i>	<i>15</i>	<i>17</i>	<i>10</i>	<i>9</i>	<i>7</i>	<i>10</i>	<i>6</i>	<i>7</i>	<i>12</i>	<i>9</i>
	<i>Fished permits</i>	<i>9</i>	<i>9</i>	<i>10</i>	<i>5</i>	<i>6</i>	<i>2</i>	<i>5</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>5</i>
	<i>% of permits fished</i>	<i>64%</i>	<i>60%</i>	<i>59%</i>	<i>50%</i>	<i>67%</i>	<i>29%</i>	<i>50%</i>	<i>83%</i>	<i>86%</i>	<i>58%</i>	<i>56%</i>
	<i>Permit holders</i>	<i>11</i>	<i>13</i>	<i>14</i>	<i>8</i>	<i>8</i>	<i>6</i>	<i>6</i>	<i>5</i>	<i>6</i>	<i>9</i>	<i>6</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Saint George: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Saint George ²	Total Net Pounds Landed In Saint George ^{2,5}	Total Ex-Vessel Value Of Landings In Saint George ^{2,5}
2000	3	1	0	11	11	8	--	--
2001	11	2	1	11	10	8	--	--
2002	5	2	1	14	12	9	--	--
2003	9	1	1	7	6	5	--	--
2004	9	1	1	6	5	4	--	--
2005	4	0	1	3	3	2	--	--
2006	5	1	1	3	3	2	--	--
2007	1	1	1	3	3	3	--	--
2008	2	2	1	5	5	4	--	--
2009	1	1	0	8	8	4	--	--
2010	5	1	0	5	5	3	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Saint George: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	15	383,289	97,796
2001	13	357,033	91,315
2002	13	357,033	91,316
2003	13	357,033	90,244
2004	12	357,033	76,448
2005	11	347,036	78,397
2006	11	314,840	63,095
2007	8	146,384	33,983
2008	8	146,384	32,211
2009	8	146,384	28,568
2010	8	146,384	29,579

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation in Saint George: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation in Saint George: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Saint George: 2000-2010.

	<i>Total Net Lbs¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Saint George Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	117,239	83,969	114,889	33,022	14,767	--	--	--	52,083	33,213	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>117,239</i>	<i>83,969</i>	<i>114,889</i>	<i>33,022</i>	<i>14,767</i>	--	--	--	<i>52,083</i>	<i>33,213</i>	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$302,016	\$104,961	\$143,611	\$49,566	\$38,084	--	--	--	\$225,155	\$69,914	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$302,016</i>	<i>\$104,961</i>	<i>\$143,611</i>	<i>\$49,566</i>	<i>\$38,084</i>	--	--	--	<i>\$225,155</i>	<i>\$69,914</i>	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The ADF&G Statewide Harvest Survey does not include the Pribilof Islands (including Saint George) in their survey regions; therefore, there are no data available on private angler harvest trends from the Statewide Harvest Survey for this area. The nearest survey region is the Alaska Peninsula/Aleutian Islands area.

In a survey conducted by the AFSC in 2011, community leaders reported that recreational fishing takes place on private boats owned by local residents, with halibut, rockfish, crab, and Pacific cod as the primary target species.

In 2010, there were no active sport fish guide businesses or licensed sport fish guides present in Saint George. While no sportfishing licenses were sold in the community, a total of one sportfishing license was sold to a resident of Saint George (irrespective of the location of the point of sale). The number of sportfishing licenses sold to residents of Saint George between 2000 and 2010 varied between one and four (Table 11).

Table 11. Sport Fishing Trends, Saint George: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Saint George ²	Saltwater Angler Days Fished – Non-Residents ³	Saltwater Angler Days Fished – Alaska Residents ³
2000	0	0	3	0	0	0
2001	0	0	4	0	0	0
2002	0	0	4	0	0	0
2003	0	0	3	0	0	0
2004	0	0	4	0	0	0
2005	0	0	2	0	0	0
2006	0	0	1	0	0	0
2007	0	0	1	0	0	0
2008	0	0	2	0	0	0
2009	0	0	3	0	0	0
2010	0	0	1	0	0	0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Villagers harvest 500 fur seals each year for subsistence purposes. Halibut, reindeer, marine invertebrates, plants, and berries also contribute to the local diet.⁵⁴⁰ According to a survey conducted by the AFSC in 2011, subsistence harvest is done by residents of Saint George and the three most important marine or aquatic resources are fur seals, halibut, and Pacific cod.

Data are not available during the 2000-2010 period regarding per capita subsistence harvest in Saint George, the percentage of Saint George households that utilized various marine resources for subsistence purposes, or total harvest of marine invertebrates or non-salmon fish (not including halibut) (Tables 12 and 13). Some information is available from an earlier subsistence survey about species of marine invertebrates, marine mammals, and non-salmon fish used by Saint George conducted by the ADF&G Division of Subsistence. Based on the survey, in 1994, the following species of marine invertebrates, marine mammals, and non-salmon fish were used for subsistence in Saint George: blue king crab, blue mussels, butter clams, hair crab, limpets, octopus, Pacific littleneck clams (steamers), razor clams, sea cucumber, sea urchin, snails, Tanner crab, snow crab, unknown king crab, and unknown Tanner crab. Marine mammals reported as harvested for subsistence use included fur seal (communal), fur seal (other), harbor seal, Steller sea lion, unknown seal, and unknown whale. Non-salmon fish reported as harvested for subsistence use included: Dolly Varden, lake trout, Pacific cod (gray), pike, rainbow trout, sablefish (black cod), sheefish, unknown flounder, unknown greenling, unknown rockfish, and unknown sculpin.⁵⁴¹

Data were available during the 2000-2010 period regarding annual subsistence harvest of halibut. Between 2003 and 2010, the number of Subsistence Halibut Registration Certificate (SHARC) cards issued by NMFS decreased from 31 to 4 (Table 14). In 2010, 14 of the 26 SHARC cards issued that year were reported as actively fished, for a total of 686 lbs of halibut harvested that year. This total represents a large decrease from 2007, when 3,736 lbs of halibut were harvested on 14 active SHARC cards.

In addition, limited data are available regarding the subsistence harvest of marine mammals between 2000 and 2010. Based on information reported by ADF&G, the number of Steller sea lions harvested by Saint George residents varied from 6 to 12 per year between 2000 and 2008. No information was reported by management agencies regarding subsistence harvest of harbor seal, spotted seal, beluga whale, sea otter, or walrus (Table 15).

In addition, no information was reported regarding annual subsistence harvest in Saint George between 2000 and 2010 (Table 13).

⁵⁴⁰ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵⁴¹ Ibid.

Table 12. Subsistence Participation by Household and Species, Saint George: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Saint George: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs. of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Saint George: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	31	16	2,041
2004	34	19	1,710
2005	32	14	2,017
2006	26	20	3,443
2007	26	14	3,736
2008	4	n/a	n/a
2009	3	n/a	n/a
2010	4	4	686

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Saint George: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	12	n/a	n/a
2001	n/a	n/a	n/a	n/a	7	n/a	n/a
2002	n/a	n/a	n/a	n/a	6	n/a	n/a
2003	n/a	n/a	n/a	n/a	9	n/a	n/a
2004	n/a	n/a	n/a	n/a	9	n/a	n/a
2005	n/a	n/a	n/a	n/a	9	n/a	n/a
2006	n/a	n/a	n/a	n/a	9	n/a	n/a
2007	n/a	n/a	n/a	n/a	9	n/a	n/a
2008	n/a	n/a	n/a	n/a	9	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and Suydam, R.S. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *Journal of Cetacean Research and Management* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage

Saint Paul

People and Place

Location^{542,543}



The community of Saint Paul is located on a narrow peninsula on the southern tip of Saint Paul Island, the largest of the four Pribilof Islands. It lies 47 miles north of Saint George Island, 240 miles north of the Aleutian Islands, 300 miles west of the Alaska mainland, and 750 air miles west of Anchorage. Saint Paul is located in the Aleutian Islands Recording District. The community encompasses 40.3 square miles of land and 255.2 square miles of water.

*Demographic Profile*⁵⁴⁴

In 2010, the U.S. Census determined that there were 479 residents in Saint Paul, making it the 122nd largest of 352 total Alaskan communities with recorded populations that year. However, the 2006-2010 American Community Survey (ACS) estimated that Saint Paul had 1,065 residents in 2010. The difference between the two population figures is likely due to the presence of seasonal workers, which play an important role in the economy of Saint Paul, and the timing of when the U.S. Census surveys were done in the community. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that an estimated 300 seasonal workers or transients live in Saint Paul for part of the year, mostly working in the construction, tour guide, and fishing industries (e.g., snow crab, halibut, and king crab). They also indicated that the population of Saint Paul reaches an annual peak in January when transient processors are present, and that the population peak is entirely driven by fisheries-related employment.

Based on the Alaska Department of Labor estimate of permanent residents, the average annual growth rate for Saint Paul between 2000 and 2009 was -1.64%, indicating slow population decline. Overall between 2000 and 2009, the population of Saint Paul decreased by 13.72%. The change in population from 1990 to 2010 is detailed in Table 1.

A majority of residents of Saint Paul in 2010 identified themselves as American Indian or Alaska Native (82.3%), while 11.1% identified themselves as White, 0.6% as Asian, 0.6% as 'some other race', 0.4% as Black or African American, 0.4% as Native Hawaiian or other Pacific Islander, and 4.8% identified as two or more races. In addition, 3.5% identified themselves as Hispanic or Latino in 2010. Compared to 2000, the percentage of the population identifying themselves as American Indian or Alaska Natives was 3.6% lower in 2010, and the percentages

⁵⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴³ City of Saint Paul, Alaska, WH Pacific, and Bechtol Planning and Development. November 17, 2008. *City of Saint Paul, Alaska Local Multi-Hazard Mitigation Plan DRAFT*. Retrieved August 20, 2012 from http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/St_Paul_LHMP.pdf.

⁵⁴⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

of the population identifying themselves as White and Native Hawaiian or other Pacific Islander also decreased over this period (by 1.9% and 0.4%, respectively). During the same period, the population of Saint Paul experienced corresponding increases in the percentage of the population identifying themselves as Asian, Hispanic or Latino, Black or African American, and two or more races. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Saint Paul was 2.81, a slight decrease from 3.6 in 1990 and 2.88 in 2000. However, there has been an overall increase in the total number of occupied households since 1990, from 154 in 1990 to 177 in 2000 to 162 in 2010. Of the 190 housing units surveyed for the 2010 Decennial Census, 91 were owner-occupied, 71 were renter-occupied, and 28 were vacant. There were 24 Saint Paul residents reported as living in group quarters in 2010.

The gender makeup in Saint Paul was slightly skewed in 2010, at 53% male and 47% female, similar to the state as a whole (52% male, 48% female). The population between 20 and 69 was slightly male biased both in 2000 and 2010. The median age in Saint Paul was 34.4 years, lower than the U.S. national average of 36.8 years and higher than the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 0-19 years old, with the next largest percentage for the category 40-59 years old. Relatively few people were 70 or older (Figure 2).

Table 1. Population in Saint Paul from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	763	-
2000	532	-
2001	-	527
2002	-	533
2003	-	539
2004	-	496
2005	-	492
2006	-	470
2007	-	446
2008	-	449
2009	-	459
2010	479	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15,

Figure 1. Racial and Ethnic Composition, Saint Paul: 2000-2010 (U.S. Census).

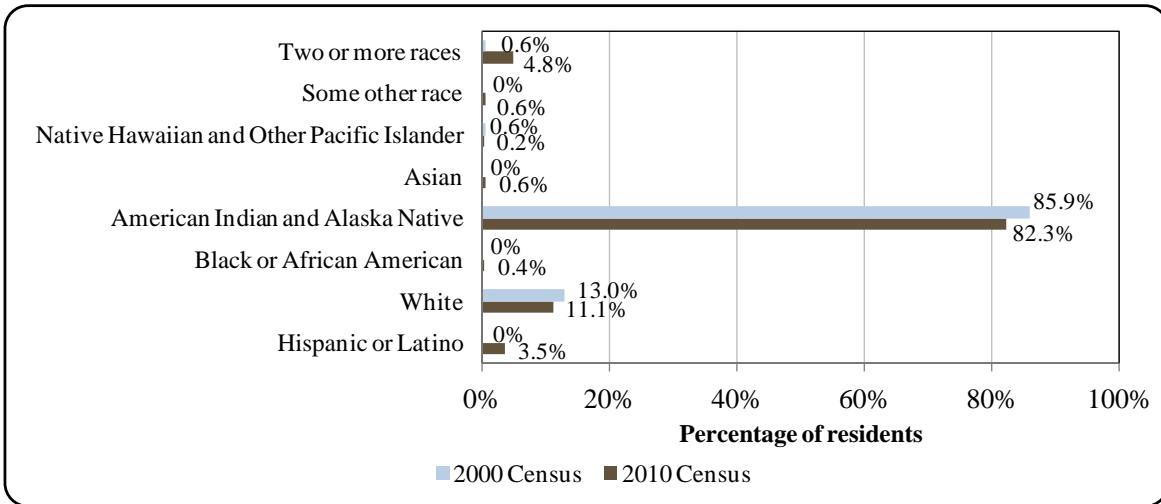
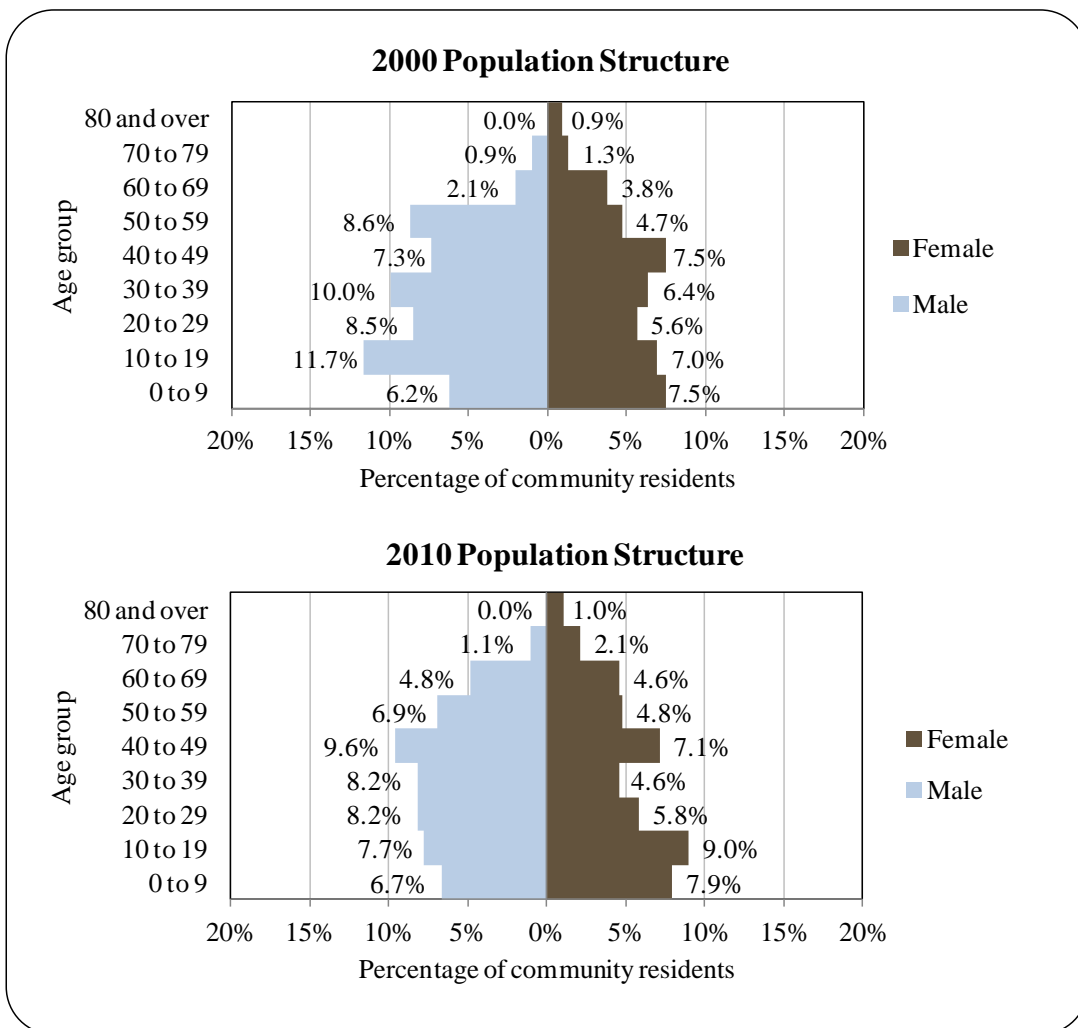


Figure 2. Population Age Structure in Saint Paul Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 ACS,⁵⁴⁵ 74% of Saint Paul residents age 25 and over were estimated to hold a high school diploma or higher, compared with 90.7% of Alaska residents overall. Also in 2009, 11.9% of the population had less than a ninth grade education, compared to 3.5% of Alaska residents overall; 14.1% had a 9th to 12th grade education but no diploma, compared with 5.8% of Alaska residents overall; 45.4% had a high school diploma or equivalent, compared with 27.4% of Alaska residents overall; 7% had some college but no degree, compared with 28.3% of Alaska residents overall; 10.2% held an Associate's degree, compared with 8% of Alaska residents overall; 11.1% held a Bachelor's degree, compared with 17.4% of Alaska residents overall; and 0.3% held a graduate or professional degree, compared with 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Saint Paul's population is predominantly Unangan Aleut.⁵⁴⁶ Historically, the Aleuts traveled to the Pribilof Islands seasonally for hunting. Inspired by traditional Aleut stories, Gavriiff Pribilof of the Russian fur trading company, Lebedov Lastochkin Co., went on a search for the legendary "Seal Islands." After three years, Pribilof landed on Saint George Island in 1786, and named the island after his vessel. The following year, Pribilof and his party landed on the larger island to the north, which was named 'Saint Peter and Saint Paul Island' in honor of the day they made landfall – the Feast of Saints Peter and Paul. It is now known simply as Saint Paul Island.⁵⁴⁷ In 1788, the Russian American Company enslaved and relocated Aleuts from Siberia, Atka, and Unalaska to the Pribilofs to hunt fur seals. Their descendants continue to live on these two islands today.⁵⁴⁸

The United States' purchase of Alaska from Russia in 1867 included the Pribilof Islands. Soon after the purchase, in 1868, the Islands were declared a special Federal Reserve with the purpose of managing fur seals and other fur-bearing species, and the federal government began to contract seal harvest to private companies.⁵⁴⁹ In 1870, the U.S. government awarded the Alaska Commercial Company a 20-year sealing lease, and they provided housing, food, and medical care to the Aleuts in exchange for seal harvesting. In 1890, a second 20-year lease was awarded to the North American Commercial Company. However, fur seals were severely over-harvested, and poverty ensued. The 1910 Fur Seal Act ended private leasing on the Islands and placed the community and fur seals under the U.S. Bureau of Fisheries. Food and clothing were scarce, social and racial segregation was practiced, and working conditions were poor.⁵⁵⁰

⁵⁴⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁴⁶ Information updated by a representative of the Aleut Community of Saint Paul Island during community review of this document, July 2012.

⁵⁴⁷ NOAA Office of Response and Restoration. 2008. *Pribilof Islands: A Historical Perspective – Island History: The Russian Period*. Retrieved January 7, 2013 from http://docs.lib.noaa.gov/noaa_documents/NOS/ORR/TM_NOS_ORR/TM_NOS-ORR_17/HTML/Pribilof_html/Pages/history_Russian_period.htm.

⁵⁴⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴⁹ 106th U.S. Congress. April 11, 2000. *Pribilof Islands Transition Act*. Retrieved August 21, 2012 from <http://www.gpo.gov/fdsys/pkg/CRPT-106hrpt569/html/CRPT-106hrpt569.htm>.

⁵⁵⁰ See footnote 548.

During World War II, the Pribilof Aleuts were moved to Funter Bay on Admiralty Island in Southeast Alaska as part of the emergency evacuation of residents from the Bering Sea. Unlike other Aleutian residents, they were confined in an abandoned cannery and mine camp at Funter Bay. Conditions were poor, with crowded quarters and inadequate heat and sanitation, leading to high rates of illness. Many elderly and young people died during this period. Later, in 1979, the Aleut Islanders received \$8.5 million in partial compensation for the unfair and unjust treatment the federal administration subjected them to from 1870 to 1946.^{551,552}

In 1983, Congress passed the Fur Seal Act Amendments, which brought government control of the commercial seal harvest and the federal presence in the Pribilof Islands to an end. Responsibility for providing community services and management of the fur seals was left to local entities. To help develop and diversify the local economy, \$12 million was provided to Saint Paul by the federal government. Commercial harvesting of fur seals on Saint Paul ceased in 1985.⁵⁵³ Today, the Marine Mammal Protection Act provides that marine mammals may be taken by Native Alaskans living in Alaska if such taking is 1) for subsistence purposes; or 2) is done for the purpose of creating and selling authentic native articles of handicrafts and clothing; and 3) in each case, is not accomplished in a wasteful manner.⁵⁵⁴ Residents of Saint Paul harvest fur seals for the purpose of both subsistence and Native arts and crafts.^{555,556}

Although subsistence has not historically been the focus of the local culture, today seal – and other resources such as halibut – are shared and exchanged with relatives living in other communities for salted or smoked salmon.⁵⁵⁷ The American Orthodox Church⁵⁵⁸ historically played a strong role in community cohesiveness. The sale of alcohol is limited to the tribal-owned package store and the tavern.⁵⁵⁹

Natural Resources and Environment

The climate of Saint Paul is sub-arctic maritime. The location in the Bering Sea results in cool weather year-round and a narrow range of mean temperatures, varying from 19 to 51 °F (-7.2 to 10.6 °C). Average annual precipitation is 25 inches, with snowfall of 56 inches. Heavy fog is common during summer months.⁵⁶⁰ Saint Paul is the largest of the four Pribilof Islands and lies the furthest north. It is approximately 16 miles long and 9 miles wide, with a maximum elevation of 655 ft. The Island is of volcanic origin, and the topography is characterized by lava

⁵⁵¹ Ibid.

⁵⁵² City of St. George. 1988. *Comprehensive Development Plan*. Retrieved January 4, 2013 from <http://www.commerce.state.ak.us/dca/plans/SaintGeorge-CP-1988.pdf>.

⁵⁵³ Ibid.

⁵⁵⁴ Marine Mammal Protection Act of 1972, as amended 2007. *Section 101(b) - Exemptions for Alaska natives*. Retrieved August 20, 2012 from <http://www.nmfs.noaa.gov/pr/pdfs/laws/mmpa.pdf>.

⁵⁵⁵ NOAA Fisheries. 2008. *Pribilof Islands, A Historical Perspective - Document Library*. Retrieved August 20, 2012 from http://docs.lib.noaa.gov/noaa_documents/NOS/ORR/TM_NOS_ORR/TM_NOS_ORR_17/HTML/Pribilof_html/Pages/pribilof_documents_snp.htm.

⁵⁵⁶ City of Saint Paul, Alaska, WH Pacific, and Bechtol Planning and Development. November 17, 2008. *City of Saint Paul, Alaska Local Multi-Hazard Mitigation Plan DRAFT*. Retrieved August 20, 2012 from http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/St_Paul_LHMP.pdf.

⁵⁵⁷ See footnote 548.

⁵⁵⁸ Information updated by a representative of the Aleut Community of Saint Paul Island during community review of this document, July 2012.

⁵⁵⁹ See footnote 548.

⁵⁶⁰ Ibid.

flows, volcanic cones, and volcanic debris. Inland, a tundra complex overlies the volcanic soil, made up of lichens, mosses, wildflowers, rock jasmine, Chickweed, and low-lying willows and scrubs. Along some stretches of the coastline, the volcanic rock is covered by coastal dunes and marine deposits inside shallow bays. In other coastal areas, headlands rise above sheer cliffs.^{561,562}

Wildlife present on Saint Paul Island includes over 248 species of migratory birds, blue fox (a sub-species of Arctic fox), and reindeer (descendants of a domesticated herd from the early 1900s).⁵⁶³ A majority of the northern fur seal in the Pribilof Islands have their rookeries on Saint Paul Island. Most of the Island is owned by the village Native corporation, Tanadgusix Corporation (TDX), which provides wildlife viewing tours.⁵⁶⁴ In 1982, a portion of Saint Paul Island known as the ‘seabird cliffs’ was purchased by the federal government to be added to the Pribilof Unit of the Alaska Maritime National Wildlife Refuge (NWR).⁵⁶⁵ Including all of its units, the Alaska Maritime NWR spans four time zones,⁵⁶⁶ stretching from the Aleutian Islands to the Chuckchi Sea Coast to the Southeast Alaska Panhandle. It was created in part to promote a program of scientific research on marine ecosystems. The Alaska Maritime NWR “protects breeding habitat for seabirds, marine mammals, and other wildlife on more than 2,500 islands, spires, rocks, and coastal headlands.”⁵⁶⁷

Natural hazards with the potential to impact the community of Saint Paul include earthquakes, tsunamis, severe weather, flooding, and erosion. The primary flooding risk in Saint Paul is from storm surges, which occur when ocean water is driven onshore by high winds during storms. Flooding events and coastal storms are the primary causes of coastal erosion on Saint Paul Island. Severe weather events that are likely to affect Saint Paul include severe winds, winter storms, heavy snow, and ice storms. Severe winds are a regular occurrence, resulting in extensive damage to structures in the community. Extreme cold temperatures are also common in the region. The probability of an earthquake in the area is considered low to moderate. There is minimal risk of tsunami damage to Saint Paul.⁵⁶⁸

According to the Alaska Department of Environmental Conservation (DEC), petroleum contamination has been identified at a number of properties on Saint Paul Island currently or previously owned by NOAA and its predecessor agencies. Restoration activities have been conducted according to an agreement between NOAA and the DEC, and currently no further remedial action is planned. Contaminated soil has been excavated and long-term soil and

⁵⁶¹ See footnote 556.

⁵⁶² Jordan, D.S. (1898). *The Fur Seals and Fur-seal Islands of the North Pacific Ocean*. Washington, D.C.: U.S. Department of the Treasury: Government Printing Office. p. 31.

⁵⁶³ See footnote 556.

⁵⁶⁴ U.S. Fish and Wildlife Service. 2008. *Alaska Maritime National Wildlife Refuge: Pribilof Islands – Wildlife Viewing*. Retrieved January 7, 2013 from <http://alaskamaritime.fws.gov/visitors-educators/wildlifeviewing/pribilofs.htm>.

⁵⁶⁵ U.S. Fish and Wildlife Service. 2008. *Alaska Maritime National Wildlife Refuge: Refuge Units – St. George Island, Pribilofs*. Retrieved January 7, 2013 from <http://alaskamaritime.fws.gov/units/StGeorge.htm>.

⁵⁶⁶ “Technically, the Alaska Maritime Refuge spans 4 time zones (Pacific, Yukon, Alaska, and Bering). In 1983 almost all the state was consolidated under Alaska Time (standard and daylight) - one hour behind Pacific Time of the West Coast. Only the central and western Aleutian Islands observe Hawaii-Aleutian Time, two hours behind Pacific Time.” Quote retrieved June 11, 2012 from <http://alaskamaritime.fws.gov/howbig.htm>.

⁵⁶⁷ USFWS (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved January 4, 2012 from <http://alaskamaritime.fws.gov/>.

⁵⁶⁸ See footnote 556.

groundwater monitoring is in place. Residents of Saint Paul obtain drinking water from a clean source located two miles north of the City.

Current Economy⁵⁶⁹

The federally-controlled fur seal industry dominated the economy of the Pribilofs until 1985, when commercial fur seal harvest came to an end.⁵⁷⁰ According to a survey conducted by the AFSC in 2011, Saint Paul community leaders indicated that the local economy has transitioned from fur-seal harvest to servicing the commercial fishing industry. They reported that fisheries are the primary economic driver in Saint Paul, and emphasized the importance of fish and crab processing to the local economy. Saint Paul is a port for the Central Bering Sea fishing fleet, and major harbor improvements have fueled economic growth. Several offshore processors are serviced out of Saint Paul, and shore-side plants process cod, crab, and halibut.⁵⁷¹ The Central Bering Sea Fishermen's Association (CBSFA) operates a cooperative in conjunction with the F/V Saint Paul, Trident Seafoods, and American Seafoods. Trident Seafoods is one of the top local employers.⁵⁷² A number of local residents are also involved in commercial fisheries as vessel owners, permit and quota share account holders, and crew license holders (see *Commercial Fisheries* section).

In addition to fisheries and seafood processing, top employers in Saint Paul in 2010 included the City of Saint Paul, the Tribal Government of Saint Paul, the local Native village corporation, Tanadgusix Corp., the Aleutian Pribilof Islands Association Inc., the Pribilof School District, local retailers, dredging and marine construction, and Peninsula Airways, Inc.⁵⁷³ In addition, fur seal rookeries and more than 210 species of nesting sea birds attract several hundred visitors to this remote location each year. Subsistence is also important to the local economy. Residents utilize halibut, fur seals (1,645 may be taken each year), reindeer, ducks, seabirds, marine invertebrates, plants, and berries for subsistence purposes.⁵⁷⁴

Based on the 2006-2010 ACS,⁵⁷⁵ the estimated per capita income in Saint Paul in 2010 was \$26,198, and the estimated median household income in 2010 was \$38,125, compared to \$18,408 and \$50,750 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁵⁷⁶ the real per capita income (\$24,206) increased between 2000 and 2010, while the real median household income (\$66,736) decreased substantially during the same period. In 2010, Saint Paul ranked 93rd of 305 Alaskan communities with per capita income that year, and 200th of 299 Alaskan communities with household income data.

⁵⁶⁹ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁷⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁷¹ Ibid.

⁵⁷² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵⁷³ Ibid.

⁵⁷⁴ See footnote 570.

⁵⁷⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵⁷⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

However, Saint Paul's small population size may have prevented the ACS from accurately portraying economic conditions.⁵⁷⁷ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Saint Paul in 2010 is \$13,628.⁵⁷⁸ This estimate is lower than both reported per capita income in 2000 and the 2010 ACS estimate, suggesting that caution is warranted when citing a real increase in per capita income in Saint Paul based on ACS estimates. Saint Paul did not meet the Denali Commission's primary criteria as a "distressed community" in 2010.⁵⁷⁹ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a much higher percentage of Saint Paul residents was estimated to be in the civilian labor force (91.4%) than in the civilian labor force statewide (68.8%). In the same year, 17.7% of local residents were estimated to be living below the poverty line, almost double the rate of Alaska residents overall (9.5%), and the unemployment rate was estimated to be 1.5%, much lower than the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 15.5%, compared to a statewide unemployment rate estimate of 11.5%.⁵⁸⁰

Based on the 2006-2010 ACS, the greatest number of workers was estimated to be employed in the private sector (96.1%), while 3.8% worked in the public sector, and 0.1% of workers were self-employed. Out of 866 people age 16 or older that were estimated by the 2006-2010 ACS to be in the civilian labor force, a majority worked in manufacturing industries (90.2%). Only small percentages of the population were estimated to work in other industries. Compared to 2000, the distribution of employment was much more concentrated in manufacturing in 2010, and a number of industries were no longer represented in employment estimates. It is important to keep in mind that the small population of Saint Paul may affect the representativeness of 2006-2010 ACS estimates, which could explain the dramatic shift in employment statistics between 2000 and 2010.⁵⁸¹ This information about employment by industry is presented in Figure 3.

Employment statistics by occupation show similar trends, with a large increase in production, transportation, and material moving occupations between 2000 and 2010, and a dramatic reduction in employment in natural resource, construction, and maintenance, service, and management and professional occupations. The percentage of the workforce estimated to be employed in sales and office occupations remained stable between 2000 and 2010. Employment is broken down by occupation in Figure 4.

⁵⁷⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁷⁸ See footnotes 572 and 575.

⁵⁷⁹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁵⁸⁰ See footnote 572.

⁵⁸¹ See footnote 577.

It is important to note that the number of individuals employed in fishing-related occupations and industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

Figure 3. Local Employment by Industry in 2000-2010, Saint Paul (U.S. Census).

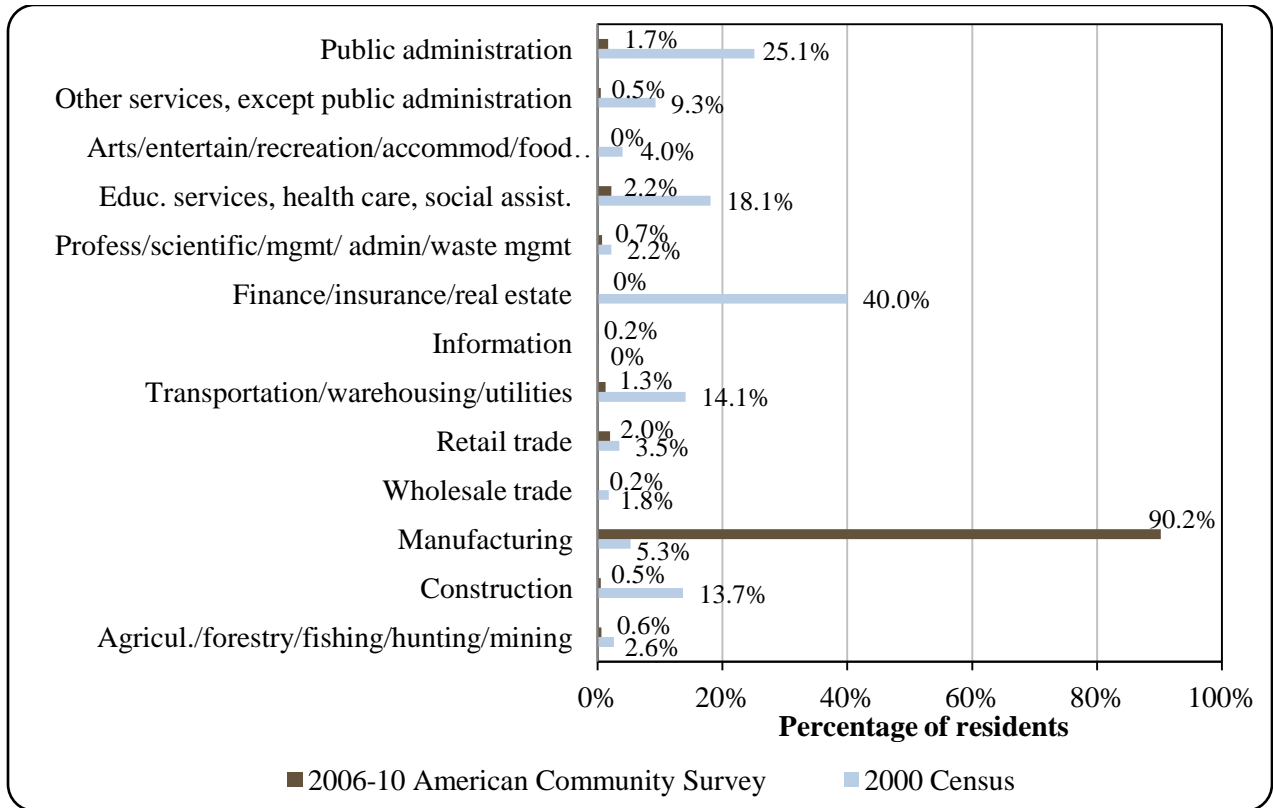
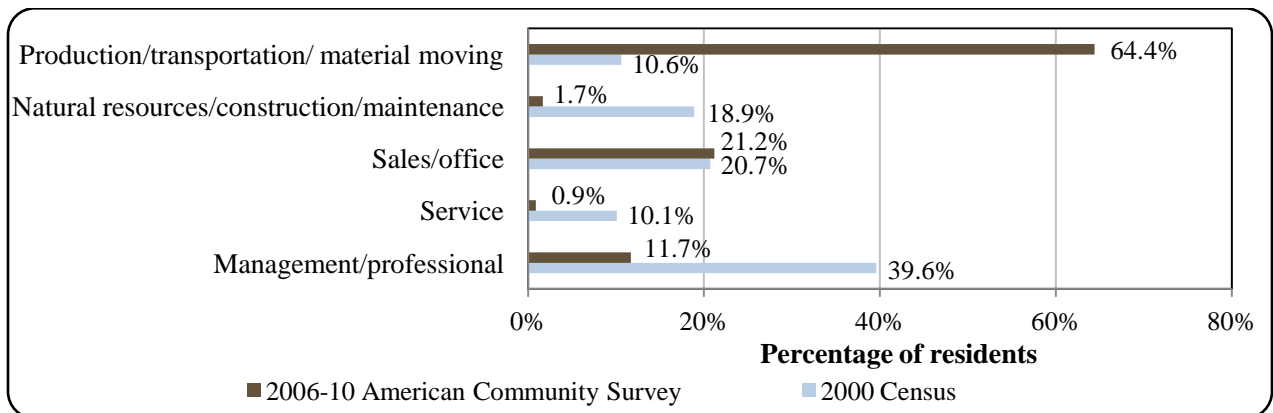


Figure 4. Local Employment by Occupation in 2000-2010, Saint Paul (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 230 employed residents in Saint Paul in 2010, of which 47.4% were employed in local government, 11.3% in financial activities, 9.6% in trade, transportation, and utilities, 8.7% in education and health services, 8.3% in manufacturing, 5.7% in construction, 2.2% in professional and business services, 0.9% in state government, 0.4% in leisure and hospitality, and 5.7% in other industries.⁵⁸² As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Governance

Saint Paul is a 2nd Class City governed by a mayor and a city council and is not located within an organized borough. The City has a “Strong Mayor” form of government, with a seven-person city council including the mayor, a five-person school board, five-person planning commission, and several municipal employees. As of 2010, the City administered a 3% sales tax and a raw fish tax, and did not administer a property tax.^{583,584} In addition to sales tax revenues, other locally-generated revenue sources in Saint Paul during the 2000-2010 period included local raw fish tax revenue, and charges for services such as day care, building rentals, equipment rental and repairs, emergency medical services, and financial services. Outside revenue sources included shared funds from the State of Alaska, a contract for maintenance of the airport, and a variety of capital and special project grants. Sources of shared revenue included the State Revenue Sharing program from 2000 to 2003 (between \$30,000 and \$40,000 per year), the state Community Revenue Sharing program in 2009 and 2010 (just under \$120,000 each year), and the state fish tax refunds, among others. Grants were received from state and federal agencies for capital projects, including a number of fisheries-related grants. These U.S. Army Corps of Engineers funding for harbor upgrades, a local boat basin project, improvements to the Saint Paul small boat harbor, harbor improvements (processor space), and construction of a small boat harbor (Phases I, II, and III), and U.S. Economic Development Agency funding for harbor dredging. Other grants included a Bureau of Indian Affairs (BIA) funding for a road project and state funds for remodel and repair of buildings, renovation of the local boat basin, and fire and public safety upgrades. Information about select aspects of revenue sources in Saint Paul is presented in Table 2. Also see the *Fisheries-Related Revenue* section for more information about local and state fish tax revenues.

Saint Paul was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native Village. The authorized traditional entity, recognized by the BIA, is the Aleut Community of Saint Paul Island. The Tribe is combined with Saint George as the ‘Pribilof Islands Aleut Communities of Saint Paul and Saint George Islands’. The Native village corporation for the Aleut Community of Saint Paul Island is the Tanadgusix Corporation (TDX), which manages 154,376 acres of land.⁵⁸⁵ The TDX Corporation owns several subsidiary

⁵⁸² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵⁸³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁸⁴ Information updated by a representative of the Aleut Community of Saint Paul Island during community review of this document, July 2012.

⁵⁸⁵ See footnote 583.

companies that provide services to commercial, industrial, and public sectors.⁵⁸⁶ Many members of the Aleut Community of Saint Paul Island are also shareholders in the Aleut Corporation, the regional Native corporation of the eastern Alaska Peninsula, Aleutian Islands, and Pribilof Islands.⁵⁸⁷

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Saint Paul from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$4,667,354	\$328,695	\$42,789	\$82,000
2001	\$1,923,734	\$289,323	\$43,856	\$51,080
2002	\$2,027,097	\$295,654	\$29,472	\$116,393
2003	\$1,895,355	\$282,483	\$29,503	\$20,191,279
2004	\$2,041,007	\$317,580	n/a	\$117,000
2005	\$2,304,279	\$367,281	n/a	\$473,277
2006	\$2,035,136	\$321,610	n/a	\$259,740
2007	\$3,496,630	\$351,610	n/a	\$2,162,440
2008	\$7,732,471	\$459,921	n/a	\$35,000
2009	\$4,747,988	\$466,700	\$118,956	\$620,000
2010	\$5,327,029	\$466,925	\$119,020	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

The Aleut Community of Saint Paul Island is also part of the Aleutian Pribilof Islands Association (APIA). The mission of APIA is to promote self-sufficiency and independence of the Unangax by advocacy, training, technical assistance, and economic enhancement, as well as to assist in meeting health, safety, and well-being of each Unangax community; and to promote, strengthen, and preserve the Unangax cultural heritage.⁵⁸⁸

A field station of the National Marine Fisheries Service (NMFS) is located on Saint Paul Island, and the nearest larger NMFS office is located in Dutch Harbor, along with an office of the Alaska Department of Fish and Game (ADF&G). The nearest office of the Alaska Department of Commerce, Community, and Economic Development is located in Dillingham. The nearest offices of the U.S. Bureau of Citizenship and Immigration Services, and Alaska Department of Natural Resources are located in Anchorage.

⁵⁸⁶ Tanadgusix Corporation (n.d.). *About TDX*. Retrieved on May 10, 2012 from <http://www.tanadgusix.com/index.html>.

⁵⁸⁷ Aleut Corporation 2008. *Homepage*. Retrieved February 9, 2012 from <http://www.aleutcorp.com>.

⁵⁸⁸ Aleutian Pribilof Islands Association (n.d.). *About Us*. Retrieved January 26, 2012 from <http://www.apiai.com/about.asp?page=about>.

Infrastructure

Connectivity and Transportation

Saint Paul is accessible by sea and air only. Most supplies and freight arrive by ship. There is a breakwater, 700 ft of dock space, and a barge off-loading area. Regularly scheduled flights are also available. The state-owned asphalt runway is 6,500 ft long and 150 ft wide.⁵⁸⁹ Round-trip airfare to Anchorage for travel during June 2012 was \$797.⁵⁹⁰

Facilities

Water is supplied by wells and an aquifer and is treated. There are two wooden tanks; one is 500,000 gallons, and the other is 300,000 gallons. All 175 homes and facilities are connected to the piped water and sewer system and are fully plumbed. The City provides refuse collection services. A landfill, burn box, and sludge and used oil disposal site are available.⁵⁹¹ In the 2011 AFSC survey, community leaders reported that a water treatment facility is in use, improvements to water and sewer pipelines are expected in 2013, and a new landfill is expected to be in use by 2020. Electricity in Saint Paul is provided by a diesel powerhouse. A small wind turbine has been erected and currently provides power and hot water to the village corporation's airport facility and hotel, but it is not yet connected to the municipality's electric grid. Police services are provided in Saint Paul by the City Police Department, and fire and rescue services are provided by Saint Paul Emergency Medical Services (EMS) Rescue Squad. Other community facilities include a youth center sponsored by the village corporation, a city auditorium, a school gymnasium and school library, and a public library. In addition, the APIA sponsors a senior center meals program.⁵⁹² In the 2011 AFSC survey, community leaders also noted the presence of a food bank, a small recreation center, and a limited publicly subsidized housing program. Community leaders also noted that many public social services are primarily accessible to permanent residents, which some services, such as the library and medical facilities, are also available for seasonal processing workers.

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that Saint Paul has four docks. Since the late 1980s, the city dock has been served by electricity and water, and has been connected to the road system since 1984. A breakwater was completed at the city dock in 1990, and fuel tanks have been available since 1994; Trident's dock has had a breakwater and been connected to these various amenities since 1994; other local docks are expected to receive electricity and water, as well as a breakwater, within the next 10 years. In addition, a fish cleaning station and haul out facilities are expected to be available within the next 10 years. A barge landing area has also been in place in Saint Paul since before 2000. In total, community leaders reported that 450 ft of dock space is available for transient vessel moorage at Saint Paul harbor facilities, but no dock space is available for permanent vessel moorage. Vessels up to 200 ft long may use moorage in Saint Paul, though those vessels

⁵⁸⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁹⁰ Airfare was obtained on the Peninsula Airways website at <http://www.penair.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

⁵⁹¹ See footnote 589.

⁵⁹² Ibid.

must have a shallow draft. They also indicated that Saint Paul facilities are capable of handling small rescue boats, small cruise ships, and fuel barges.

Community leaders also reported in the 2011 AFSC survey that a variety of fisheries-related businesses and services are available in Saint Paul. These include fish processing plants and commercial cold storage, fishing gear storage, gear repair (for halibut longline gear only), moorage of small recreational vessels, haulout facilities for small boats (less than 60 tons), sale of bait, boat fuel, and ice, and very limited sale of fishing gear. For those fisheries-related businesses and services not available in Saint Paul, community leaders indicated that local residents most frequently travel to Unalaska, Anchorage, or Seattle.

Medical Services

Medical services are provided to the community by the Saint Paul Health Center, which is owned by the Regional Health Corporation and operated by the APIA. The health center is a Community Health Aid Program site. The clinic is a qualified Emergency Care Center, and emergency services have coastal and air access. Alternate health care is provided by the Saint Paul Emergency Medical Services Rescue Squad. Emergency service is provided by 911 telephone service volunteers and a health aide.⁵⁹³ The nearest hospital is located in Dillingham, but most local residents travel to Anchorage to access medical facilities there.⁵⁹⁴

Educational Opportunities

The Saint Paul School provides instruction for students from pre-school through 12th grade. In 2011 the school had 78 students and 10 teachers.⁵⁹⁵ Online distance learning classes are also available for through the University of Alaska.⁵⁹⁶

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Pribilof Islands were historically used by Aleut people as a seasonal fishing and hunting site. Since the Aleuts were brought to Saint George Island by the Russians in the late 1700s, and permanent year-round settlements were established there, subsistence harvest of fur seal meat has remained fundamental to the local diet. Commercial fur seal harvest was also the basis of the wage economy in Saint Paul until 1983, when the U.S. government ended the commercial seal harvest. Subsistence harvest of fur seals is governed by the Fur Seal Act of 1966 and the Marine Mammal Protection Act of 1972. Amendments were added to these Acts in 1985 and 1986, respectively, with the purpose “to limit the take of fur seals to a level providing for the subsistence needs of the Pribilof Aleuts using humane harvesting methods, and to restrict taking

⁵⁹³ Ibid.

⁵⁹⁴ Information updated by a representative of the Aleut Community of Saint Paul Island during community review of this document, July 2012.

⁵⁹⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁵⁹⁶ University of Alaska. (n.d.). *Distance Learning*. Retrieved August 21, 2012 from <http://www.alaska.edu/distance/>.

by sex, age, and season for herd management purposes.⁵⁹⁷ Fur seal harvest is permitted for both subsistence purposes and for native handicrafts and clothing.⁵⁹⁸ Residents of Saint Paul utilize fur seals for both purposes today.^{599,600} In addition to fur seal, residents of Saint Paul have historically harvested seal, sea lion, and halibut for subsistence purposes.⁶⁰¹

Saint Paul is located within Pacific Halibut Fishery Regulatory Area 4C, Federal Statistical and Reporting Area 513, and the Bering Sea Sablefish Regulatory Area. Today, the greatest number of Saint Paul residents participates in the commercial halibut fishery, while a smaller number of residents are also involved in fisheries for groundfish, crab, and salmon.

Commercial exploitation of halibut and groundfish first extended into the Bering Sea region in the late 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁶⁰² Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission. In 1995, management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). In the Bering Sea – Aleutian Islands (BSAI) region, quota shares are also allocated to six Community Development Quota (CDQ) non-profit organizations representing 65 communities in Western Alaska.⁶⁰³ The CDQ non-profit representing the tribal community of Saint Paul is the Central Bering Sea Fishermen’s Association (CBSFA). In 2010, The CBSFA received an allocation of 690,625 lbs of CDQ halibut quota, all of which was allocated for harvest within Area 4C, the Subarea within which the Pribilof Islands are located.⁶⁰⁴ However, a halibut Catch Sharing Plan developed for Areas 4C, 4D, and 4E provides that Area 4C allocations can be harvested in either Area 4C or 4D to provide additional harvesting opportunities to fishermen in Area 4C.⁶⁰⁵ Total BSAI sablefish CDQ allocations in 2009 and 2011 was 1.3 million lbs in each year. No sablefish CDQ report was available from NOAA for the 2010 season.⁶⁰⁶ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain

⁵⁹⁷ NOAA NMFS, Alaska Region. 2005. *Setting the Annual Subsistence Harvest of Northern Fur Seals on the Pribilof Islands: Final Environmental Impact Statement*. Retrieved July 9, 2012 from <http://www.fakr.noaa.gov/protectedresources/seals/fur/eis/final0505.pdf>.

⁵⁹⁸ Marine Mammal Protection Act of 1972, as amended 2007. *Section 101(b) - Exemptions for Alaska natives*. Retrieved August 20, 2012 from <http://www.nmfs.noaa.gov/pr/pdfs/laws/mmpa.pdf>.

⁵⁹⁹ NOAA Fisheries. 2008. *Pribilof Islands, A Historical Perspective - Document Library*. Retrieved August 20, 2012 from http://docs.lib.noaa.gov/noaa_documents/NOS/ORR/TM_NOS_ORR/TM_NOS-ORR_17/HTML/Pribilof_html/Pages/pribilof_documents_snp.htm.

⁶⁰⁰ City of Saint Paul, Alaska, WH Pacific, and Bechtol Planning and Development. November 17, 2008. *City of Saint Paul, Alaska Local Multi-Hazard Mitigation Plan DRAFT*. Retrieved August 20, 2012 from http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/St_Paul_LHMP.pdf.

⁶⁰¹ Alaska Dept. of Fish and Game. 1985. *Alaska Habitat Management Guide, Southwest Region Volume II: Human Use of Fish and Wildlife*. Retrieved July 9, 2012 from <http://www.arlis.org/docs/vol1/C/AHMG/13907847v2.pdf>.

⁶⁰² Thompson, W.F. and N.L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁶⁰³ Fina, Mark. 2011. Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

⁶⁰⁴ NOAA National Marine Fisheries Service. 2010. *Memorandum: 2010 Community Development Quota (CDQ) Halibut Allocations*. Retrieved January 8, 2013 from <http://www.fakr.noaa.gov/ram/10ifqcdqtac.pdf>.

⁶⁰⁵ North Pacific Fishery Management Council. (n.d.). *Pacific Halibut Catch Sharing Plan for Area 4*. Retrieved January 8, 2013 from <http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/halibut/Area4CSP605.pdf>.

⁶⁰⁶ NOAA National Marine Fisheries Service. (n.d.). *IFQ Halibut/Sablefish Reports and CDQ Halibut Program Reports*. Retrieved February 22, 2013 from <http://www.fakr.noaa.gov/ram/ifqreports.htm>.

portion of the CDQ allocations.⁶⁰⁷ Saint Paul is not eligible to participate in the Community Quota Entity program.

Bering Sea crab fisheries also play an important role in the local economy in Saint Paul, which is the location of one of the largest crab processing plants in the region.⁶⁰⁸ Large scale commercial exploitation of crab in the Bering Sea began in the 1950s with the development of king crab fisheries. The Pribilof Islands were an historical center of the red king crab fishery, and also one of the few sites where larger concentrations of blue king crab are found.⁶⁰⁹ In the 1960s, a fishery for hair crab also developed in the Pribilof Islands, originally pioneered by the Japanese, and taken over by American vessels beginning in 1979.⁶¹⁰ Other commercial crab species that are distributed in the Bering Sea include golden king crab, Tanner crab, snow crab, grooved Tanner crab, triangle Tanner crab, and scarlet king crab.⁶¹¹ A number of these crab stocks are in depressed condition. Low stock abundance has led to the closure of the Pribilof Island red and blue king crab fisheries^{612,613} and the Bering Sea hair crab fishery⁶¹⁴ through the last decade. Bering Sea and Aleutian Islands crab stocks are jointly managed by the North Pacific Fishery Management Council (NPFMC) and ADF&G.⁶¹⁵

Most BSAI king, Tanner, and snow crab fisheries were included under a 2005 rationalization program. The program was proposed in response to overcapitalization and very short seasons in these fisheries. The crab rationalization program allocated harvest shares to historical license holders as well as to CDQ non-profit entities. In addition, processors were issued processing shares, and community interests were protected through community landing requirements. Regional landing requirements have been particularly important in maintaining landings in remote communities such as Saint Paul. The crab rationalization program has been credited with improving safety and fuel savings in BSAI crab fisheries, and also resulted in a significant reduction of the total number of vessels involved in the fishery. For many communities, a problematic result of the program has been a dramatic reduction in employment for crew members.⁶¹⁶

In the 2011 AFSC survey, community leaders indicated that the community of Saint Paul participates in the fisheries management process in Alaska through a variety of mechanisms. The Mayor and many other residents of Saint Paul⁶¹⁷ attend North Pacific Fisheries Management Council meetings and/or Board of Fisheries meetings, and a representative of Saint Paul

⁶⁰⁷ International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved October 16, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

⁶⁰⁸ See footnote 603.

⁶⁰⁹ Woodby, D, D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁶¹⁰ Tide, C. 2007. *A Brief Overview of the Bering Sea Hair Crab Fishery and the Vessel Limited Entry Program*. Prepared for the State of Alaska Commercial Fisheries Entry Commission. Retrieved January 8, 2013 from <http://www.cfec.state.ak.us/RESEARCH/07-1N/Rpt07-1N.pdf>.

⁶¹¹ See footnote 609.

⁶¹² Alaska Dept. of Fish and Game. 2013. *Red King Crab Species Profile*. Retrieved January 8, 2013 from <http://www.adfg.alaska.gov/index.cfm?adfg=redkingcrab.printerfriendly>.

⁶¹³ NOAA National Marine Fisheries Service. 2012. *Crab Fishery Seasons and TAC*. Retrieved January 8, 2013 from <https://alaskafisheries.noaa.gov/sustainablefisheries/crab/crfaq.htm#tac>.

⁶¹⁴ See footnotes 609 and 610.

⁶¹⁵ See footnotes 609 and 612.

⁶¹⁶ See footnote 603.

⁶¹⁷ Information updated by a representative of the Aleut Community of Saint Paul Island during community review of this document, July 2012.

participates in North Pacific Fisheries Management Council committees or advisory groups. In addition, Saint Paul relies on regional organizations to provide information on fisheries management issues. Saint Paul also supports research organizations, industry coalitions, and trade associations, such as the CBSFA.

When asked to comment on challenges facing Saint Paul's fisheries economy, community leaders indicated that reduced government funding threatens continued maintenance of the breakwater, harbor dredging and other continuous infrastructure maintenance needs, as the fishing industry itself cannot fully finance these efforts. In addition, CDQ quota allocations were identified as a primary issue affecting the community. Community leaders reported that the community protections component of the crab rationalization program has been critical for Saint Paul. They reported that the CDQ program is a major contributor to the community through the CBSFA's outreach and social programs. When asked to comment on past or future fisheries management actions that affect Saint Paul, community leaders emphasized the importance of fishery management to prevent stock collapse. Specifically, potential future management actions of concern to the community of Saint Paul include the right of first refusal, emergency relief, and crab stock research. These issues have the potential to affect Saint Paul positively or negatively, depending on their outcomes.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there were three shore-side processors in Saint Paul, and nine fish buyers, including Peter Pan Seafoods, Inc., Trident Seafoods Corporation, Royal Aleutian Seafoods, Inc., 57 Degrees North/Central Bering Sea Fishermen's Association, Aleutia, and Aleutian Pribilof Island Community Development Association (APICDA) Joint Venture, Inc.

57 Degrees North is a subsidiary of CBSFA and began operations in 1990.⁶¹⁸ CBSFA's mission in Saint Paul is "to develop a viable, self-sustaining, independent fisheries development organization," and the company has purchased a large amount of CDQ crab quota shares.⁶¹⁹ 57 Degrees North does not actually own and operate a seafood processing facility. The plant contracts with Saint Paul's Trident Seafoods Corporation to use Trident's actual physical processing facility.

Trident Seafoods was founded in 1973, and by the year 2000 was employing 4,000 people annually throughout Alaska and the Pacific Northwest. Trident's Saint Paul operation, which began in 1995, is the largest crab production facility in the world.⁶²⁰ In addition to snow and hair crab, it processes Chinook salmon, halibut, sablefish, Pacific cod, and pollock.⁶²¹ In 2010, the plant employed between three and 260 workers, with the largest number of workers employed between January and March.⁶²² Trident provides room and board at a nominal cost for processing plant workers as well as free air transportation to Saint Paul from Seattle and back.

⁶¹⁸ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

⁶¹⁹ Central Bering Sea Fishermen's Association (n.d.). *Homepage*. Retrieved on May 10, 2012 from <http://cbsfa.com/index1.html>.

⁶²⁰ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

⁶²¹ Trident Seafoods Corporation (n.d.). *Homepage*. Retrieved on May 10, 2012 from <http://tridentseafoods.com/>.

⁶²² This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

Fisheries-Related Revenue

Saint Paul receives fisheries-related revenue from a local raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resources Landing Tax, harbor usage fees, and, in 2010, fees from leasing of land for storage, marine fuel sales tax, and wharfage (Table 3). The amount of fisheries-related revenue received by Saint Paul from these sources varied widely between 2000 and 2010, with a high of almost \$3 million in 2010.⁶²³

In the 2011 AFSC survey, community leaders reported that revenue from fisheries-related sources at least partially supported or funded harbor maintenance, roads, police, enforcement, fire protection, and general administration. In addition, community leaders reported that the Aleut Community of Saint Paul received \$23 million in funding or grants from their CDQ non-profit, the CBSFA, in 2010. They indicated that funding from the CBSFA pays for services to the local halibut fleet, such as dock launch and retrieval, crane operation and maintenance, special processing equipment, dock security, refuse removal, and dock lighting.

Commercial Fishing

The community of Saint Paul is highly engaged in processing these species. In 2010, Saint Paul Island ranked 18th in landings and 13th in ex-vessel revenue out of 67 Alaskan ports that received landings in 2010. That year, nine fish buyers were present locally, and three shore-side processing facilities were in operation. In total, 19,417,036 net lbs were landed at Saint Paul Island processing facilities in 2010, generating a total of \$33,480,688 in ex-vessel revenue (Table 5). The higher ranking with respect to ex-vessel revenue reflects the relatively high value of species landed and processed on Saint Paul Island. In the 2011 AFSC survey, community leaders indicated that the most important fishing seasons in Saint Paul include opilio crab from January through April, Bristol Bay king crab from October through November, halibut from June through September, and Saint Matthews Island blue king crab between in September and October.

In addition to processing, Saint Paul residents were also involved in commercial fisheries between 2000 and 2010 as permit and quota share account holders, vessel owners, and crew license holders. Over this period, the total number of state-issued Commercial Fisheries Entry Commission (CFEC) permits held in Saint Paul decreased from 43 in 2000 to between 23 and 26 held between 2004 and 2010. The total number of permit holders also decreased, from approximately 30 in 2000 and 2001 to 21 in 2010. In all years during this period, a majority of CFEC permits were held for halibut. Early in the decade, Saint Paul residents also held several CFEC permits for sablefish, groundfish, and ‘other shellfish.’ The groundfish permits were held for ‘miscellaneous saltwater finfish’, and the ‘other shellfish’ permit was held for octopi/squid. Of these, two groundfish permits were actively fished in 2000 only. In addition, one salmon CFEC permit was held in all years during the 2000-2010 period in the Atka/Amlia Islands set gillnet fishery, but was not actively fished in any of these years. One Lower Yukon salmon gillnet permit was held and actively fished in 2007, and one Bristol Bay drift gillnet permit was held in 2009 and 2010, and actively fished in 2009.

In all years between 2000 and 2010, a majority of halibut CFEC permits held in Saint Paul were associated with longline gear for use on vessels under 60 ft in length, while a small number were also associated with hand troll gear or longline gear on vessels over 60 ft in length.

⁶²³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

A high percentage of halibut permits were actively fished each year by Saint Paul residents. Information about CFEC permits is presented in Table 4.

In addition to CFEC permits, Saint Paul residents held federal License Limitation Program (LLP) permits in groundfish and crab fisheries as well as Federal Fisheries Permits (FFP). A higher number of LLP permits were held in 2003 and 2004. In both of these years 100% of the 5 crab LLP permits were actively fished, while 71% (five out of seven) groundfish LLPs were actively fished. A smaller number of LLP permits were held in other years during the 2000-2010 period. FFP were held in from 2008 to 2010 only, and one FFP was actively fished in each of these years (Table 4).

In 2010, 16 Saint Paul residents held quota share accounts in the federal catch share fishery for halibut and were allocated individual fishing quota (IFQ). While the number of halibut IFQ shareholders decreased between 2000 and 2010, the overall number of halibut quota shares held increased slightly during the same period. Despite this increase, the overall halibut IFQ allotment (in lbs) decreased between 2000 and 2010 (Table 6). No residents of Saint Paul held quota share accounts in the federal sablefish catch share fishery between 2000 and 2010 (Table 7). One resident of Saint Paul held a quota share account in a federal crab catch share fishery in 2009 and 2010, although no crab quota share accounts holders were present in Saint Paul from 2005 to 2008. In 2009 and 2010, the number of crab quota shares held remained stable and the annual IFQ allotment increased slightly (Table 8).

Between 2000 and 2010, there was an overall decrease in the number of Saint Paul residents who held crew licenses, as well as the number of vessels owned primarily by Saint Paul residents and vessels homeported in Saint Paul. In a survey conducted by the AFSC in 2011, community leaders reported that only halibut vessels under 60 ft using long line and jig line (by hand or by fishing pole) use Saint Paul as their base of operations during the fishing season, since all the crab vessels that land catch in Saint Paul are transient vessels. Community leaders also noted that there are fewer crab boats in Saint Paul since the 1999 snow crab population crash and subsequent crab rationalization, fewer local halibut boats as the population has declined, fewer cod as prices have dropped, and fewer pollock (trans-shipping) as quota allocations dropped or as fishing grounds moved.

While the number of fish buyers and shore-side processing facilities in Saint Paul remained stable between 2000 and 2010, the number of vessels landing catch in Saint Paul increased substantially, from 68 to 119. Corresponding with this increase in vessels landing catch in Saint Paul, total net lbs landed and ex-vessel value of those landings also increased between 2000 and 2010. Overall landings and revenue data are reported for all years in the 2000-2010 period except 2002 and 2005-2007; data for these four years are considered confidential due to the small number of fish buyers present (Table 5).

At the level of individual fisheries, landings and ex-vessel value information in for landings in Saint Paul is considered confidential for most years due to a small number of participants (Table 9). When considering landings and ex-vessel value generated by Saint Paul vessel owners between 2000 and 2010, including deliveries in multiple ports, most data were also confidential, with the exception of halibut landings (and Pacific cod in the year 2000 only). Landings and ex-vessel value of halibut between 2000 and 2010 varied considerably with no discernible trend (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Saint Paul: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ²	\$448,081	\$442,391	\$621,291	\$601,253	\$507,446	\$562,490	\$575,397	\$685,607	\$1,349,981	\$1,154,002	\$1,146,552
Shared Fisheries											
Business Tax ¹	\$97,195	\$1,812,387	\$292,437	\$216,321	\$317,557	\$331,633	\$367,781	\$308,914	\$442,125	\$586,561	\$979,528
Fisheries Resource											
Landing Tax ¹	\$33,987	\$75,253	\$18,000	\$21,472	\$20,726	\$30,477	\$14,405	\$21,995	\$45,660	\$205,006	\$270,208
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish											
tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$397,057	\$375,589	\$387,589	\$292,500	\$293,000	\$309,000	\$309,000	\$402,000	\$407,200	\$359,000	\$437,500
Port/dock usage ^{2,3}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$71,285
Land lease											
(storage) ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$4,373
Marine fuel sales											
tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$20,000
Wharfage ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$52,229
<i>Total fisheries-related revenue⁴</i>	<i>\$976,320</i>	<i>\$2,705,620</i>	<i>\$1,319,317</i>	<i>\$1,131,546</i>	<i>\$1,138,729</i>	<i>\$1,233,600</i>	<i>\$1,266,584</i>	<i>\$1,418,516</i>	<i>\$2,244,966</i>	<i>\$2,304,569</i>	<i>\$2,981,675</i>
<i>Total municipal revenue⁵</i>	<i>\$4,667,354</i>	<i>\$1,923,734</i>	<i>\$2,027,097</i>	<i>\$1,895,355</i>	<i>\$2,041,007</i>	<i>\$2,304,279</i>	<i>\$2,035,136</i>	<i>\$3,496,630</i>	<i>\$7,732,471</i>	<i>\$4,747,988</i>	<i>\$5,327,029</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Saint Paul: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	7	7	1	1	1	2	2	2
	Active permits	0	0	0	5	5	0	0	0	1	1	1
	% of permits fished	-	-	-	71%	71%	-	-	-	50%	50%	50%
	Total permit holders	1	1	1	2	2	1	1	1	2	2	2
Crab (LLP) ¹	Total permits	0	0	0	5	5	0	0	0	0	4	3
	Active permits	0	0	0	5	5	0	0	0	0	0	0
	% of permits fished	-	-	-	100%	100%	-	-	-	-	-	-
	Total permit holders	0	0	0	1	1	0	0	0	0	1	1
Federal Fisheries Permits ¹	Total permits	5	5	5	4	4	4	5	6	7	6	6
	Fished permits	0	0	0	0	0	0	0	0	1	1	1
	% of permits fished	-	-	-	-	-	-	-	-	14%	17%	17%
	Total permit holders	5	5	5	4	4	4	4	5	6	5	5
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	35	36	32	28	22	21	22	22	24	24	22
	Fished permits	25	26	24	21	16	17	17	18	22	20	21
	% of permits fished	71%	72%	75%	75%	73%	81%	77%	82%	92%	83%	95%
	Total permit holders	30	31	29	25	20	20	21	21	23	23	21
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4. Cont. Permits and Permit Holders by Species, Saint Paul: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	5	3	0	0	0	0	0	0	0	0	0
	Fished permits	2	0	0	0	0	0	0	0	0	0	0
	% of permits fished	40%	-	-	-	-	-	-	-	-	-	-
	Total permit holders	4	2	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	1	1	1	1	1	1	2	1	2	2
	Fished permits	0	0	0	0	0	0	0	1	0	1	0
	% of permits fished	-	-	-	-	-	-	-	50%	-	50%	-
	Total permit holders	1	1	1	1	1	1	1	2	1	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>43</i>	<i>41</i>	<i>33</i>	<i>29</i>	<i>23</i>	<i>22</i>	<i>23</i>	<i>24</i>	<i>25</i>	<i>26</i>	<i>24</i>
	<i>Fished permits</i>	<i>27</i>	<i>26</i>	<i>24</i>	<i>21</i>	<i>16</i>	<i>17</i>	<i>17</i>	<i>19</i>	<i>22</i>	<i>21</i>	<i>21</i>
	<i>% of permits fished</i>	<i>63%</i>	<i>63%</i>	<i>73%</i>	<i>72%</i>	<i>70%</i>	<i>77%</i>	<i>74%</i>	<i>79%</i>	<i>88%</i>	<i>81%</i>	<i>88%</i>
	<i>Permit holders</i>	<i>30</i>	<i>31</i>	<i>29</i>	<i>25</i>	<i>20</i>	<i>20</i>	<i>21</i>	<i>22</i>	<i>23</i>	<i>23</i>	<i>21</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Saint Paul: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Saint Paul ²	Total Net Pounds Landed In Saint Paul ^{2,5}	Total Ex-Vessel Value Of Landings In Saint Paul ^{2,5}
2000	65	6	3	28	26	68	6,338,010	\$11,626,508
2001	59	7	2	27	26	92	11,139,143	\$13,004,125
2002	52	3	1	25	23	99	--	--
2003	52	5	2	24	22	79	9,038,330	\$15,196,985
2004	33	4	2	16	16	77	7,970,216	\$13,584,756
2005	36	3	2	15	15	72	--	--
2006	36	3	2	16	16	76	--	--
2007	41	3	2	17	17	35	--	--
2008	50	9	2	18	18	99	27,253,018	\$48,433,767
2009	46	8	3	18	19	90	24,865,462	\$36,408,108
2010	53	9	3	19	20	119	19,417,036	\$33,480,688

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Total only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Saint Paul: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	22	1,479,229	373,105
2001	21	1,318,888	331,941
2002	21	1,318,888	331,996
2003	20	1,318,888	328,171
2004	20	1,318,888	279,714
2005	20	1,267,175	283,167
2006	20	1,439,061	288,351
2007	20	1,458,438	327,982
2008	18	1,149,628	251,219
2009	17	1,479,524	283,333
2010	16	1,602,974	311,753

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Saint Paul: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Saint Paul: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	1	35,569,158	1,300,720
2010	1	35,569,158	1,388,538

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Saint Paul: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	--	0	0	--	--	--	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	1,155,322	1,387,455	--	1,098,754	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	154,897
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>1,155,322</i>	<i>1,387,455</i>	<i>0</i>	<i>1,098,754</i>	<i>0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0</i>	<i>0</i>	<i>154,897</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$2,095,179	\$2,419,022	--	\$2,051,404	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	\$5,544
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$ 2,095,178</i>	<i>\$ 2,419,021</i>	<i>--</i>	<i>\$ 2,051,404</i>	<i>\$0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>\$0</i>	<i>\$0</i>	<i>\$ 5,544</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Saint Paul Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	1,107,956	1,075,644	657,357	427,757	377,163	437,595	495,665	563,316	1,036,896	638,456	771,832
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	54,418	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>1,162,374</i>	<i>1,075,644</i>	<i>657,357</i>	<i>427,757</i>	<i>377,163</i>	<i>437,595</i>	<i>495,665</i>	<i>563,316</i>	<i>1,036,896</i>	<i>638,456</i>	<i>771,832</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$2,009,399	\$1,874,911	\$839,927	\$798,653	\$996,133	\$1,006,469	\$1,750,193	\$1,983,999	\$3,730,680	\$1,328,169	\$2,983,980
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$14,989	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$2,024,388</i>	<i>\$1,874,911</i>	<i>\$839,927</i>	<i>\$798,653</i>	<i>\$996,133</i>	<i>\$1,006,469</i>	<i>\$1,750,193</i>	<i>\$1,983,999</i>	<i>\$3,730,680</i>	<i>\$1,328,169</i>	<i>\$2,983,980</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The ADF&G Statewide Harvest Survey does not include the Pribilof Islands (including Saint Paul) in their survey regions; therefore, there are no data available on sportfishing by private anglers from the Statewide Harvest Survey for this area. The nearest survey region is the Alaska Peninsula/Aleutian Islands area. According to a survey conducted by the AFSC in 2011, community leaders indicated that halibut are targeted by recreational fishermen using private boats owned by local residents. The ADF&G reports that Chinook salmon, coho salmon, sockeye salmon, Dolly Varden char, northern pike, halibut, rockfish, Pacific cod, razor clams, and hardshell clams are targeted by recreational anglers in Saint Paul.

In 2010, there were no sport fish guide businesses or sport fish guide licenses held by residents of Saint Paul. Also in 2010, there were seven sportfishing licenses sold to residents of Saint Paul (irrespective of the location of the point of sale) and no sportfishing licenses sold within the community. The number of sportfishing licenses sold to Saint Paul residents decreased overall between 2000 and 2010. A small number of licenses were sold in Saint Paul in some years during this period (Table 11).

Table 11. Sport Fishing Trends, Saint Paul: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold In Saint Paul ²	Saltwater Angler Days Fished – Non-Residents ³	Saltwater Angler Days Fished – Alaska Residents ³
2000	0	0	23	2	n/a	n/a
2001	0	0	18	2	n/a	n/a
2002	0	0	8	5	n/a	n/a
2003	0	0	9	4	n/a	n/a
2004	0	0	14	0	n/a	n/a
2005	0	0	10	0	n/a	n/a
2006	0	0	14	6	n/a	n/a
2007	0	0	10	6	n/a	n/a
2008	0	0	12	1	n/a	n/a
2009	0	0	10	0	n/a	n/a
2010	0	0	7	0	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Long before the permanent settlement of the Pribilof Islands, Aleut people began traveling here seasonally to hunt. Following the establishment of permanent villages, subsistence has remained central to local culture. Today, halibut and seal are shared and exchanged with relatives living in other communities for salted or smoked salmon.⁶²⁴ In a survey conducted by the AFSC in 2011, community leaders reported that halibut, reindeer, fur seals, and sea lions are some of the most important subsistence resources utilized by residents of Saint Paul. Although information about fur seals is not reported in the Tables below, it is important to emphasize that fur seals are an important component of local subsistence harvest. Saint Paul residents are permitted to harvest up to 1,645 fur seals per year in Saint Paul for subsistence purposes.⁶²⁵

No information is available from ADF&G regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, data were available regarding annual subsistence fishing participation for salmon and halibut. Between 2000 and 2008, one or two households held subsistence salmon permits in some years, and no details were reported regarding the total number or species of salmon harvested (Table 13). More detailed information is available regarding halibut subsistence harvest during this period. Between 2003 and 2010, the number of Saint Paul residents holding a valid Subsistence Halibut Registration Certificate (SHARC) issued by NMFS declined from 250 to 41 (Table 14). The data show that the number of SHARC cards fished and the amount of halibut harvested (in lbs) also decreased between 2003 and 2010.

Limited information was reported by management agencies regarding subsistence harvest of marine mammal species between 2000 and 2010. According to ADF&G, between 2000 and 2008, 17 Steller sea lions were harvested on average each year for subsistence purposes. No information was available from NMFS regarding beluga whale harvest, from the U.S. Fish and Wildlife Service regarding sea otter, walrus, or polar bear harvest, or from ADF&G regarding harvest of harbor seal or spotted seal (Table 15).

In addition to the data reported in Tables 12 through 15, an early 1990s survey conducted by the ADF&G provides additional information regarding species of marine invertebrates, marine mammals, and non-salmon fish harvested by Saint Paul residents. According to the survey, in 1994, marine invertebrate species harvested by Saint Paul households included blue king crab, blue mussels, butter clams, hair crab, limpets, octopus, Pacific littleneck clams, razor clams, sea cucumber, sea urchin, snails, Tanner crab, snow crab, unknown king crab, and unknown Tanner crab. Marine mammals reported as harvested for subsistence use included fur seal (communal), fur seal (other), harbor seal, Steller sea lion, unknown seal, and unknown whale. Non-salmon fish species reported as harvested for subsistence use included: Dolly Varden, lake trout, Pacific cod, pike, rainbow trout, sablefish, sheefish, flounder, greenling, rockfish, and sculpin.⁶²⁶

⁶²⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶²⁵ Ibid.

⁶²⁶ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Saint Paul: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Saint Paul: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Saint Paul: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	250	82	19,744
2004	249	36	10,683
2005	218	24	7,738
2006	244	29	5,971
2007	246	17	11,342
2008	42	15	4,607
2009	44	16	7,280
2010	41	6	4,425

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Saint Paul: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	17	n/a	n/a
2001	n/a	n/a	n/a	n/a	12	n/a	n/a
2002	n/a	n/a	n/a	n/a	18	n/a	n/a
2003	n/a	n/a	n/a	n/a	13	n/a	n/a
2004	n/a	n/a	n/a	n/a	9	n/a	n/a
2005	n/a	n/a	n/a	n/a	19	n/a	n/a
2006	n/a	n/a	n/a	n/a	20	n/a	n/a
2007	n/a	n/a	n/a	n/a	22	n/a	n/a
2008	n/a	n/a	n/a	n/a	20	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Sand Point



People and Place

*Location*⁶²⁷

Sand Point is situated on Humboldt Harbor on Popof Island, located off the southern coast of the Alaska Peninsula. The community is 570 air miles southwest of Anchorage. Sand Point is in the Aleutian Islands Recording District, the Aleutians East Census Area, and the Aleutians East Borough. The City boundaries encompass 7.8 square miles of land and 21.1 square miles of water.

*Demographic Profile*⁶²⁸

In 2010, the U.S. Census determined that there were 976 residents in Sand Point, making it the 67th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population has increased by 5.15%. The Sand Point annual growth rate between 2000 and 2009 was 0.3%, indicating a slow rate of growth. The change in population between 1990 and 2010 is detailed in Table 1.

A majority of residents of Sand Point in 2010 identified themselves as American Indian or Alaska Native (39%), with the remaining racial composition as follows: Asian (34.7%), White (17%), Hispanic or Latino (6.1%), two or more races (5.2%), Black or African American (2.5%), some other race (1.3%), and Native Hawaiian or other Pacific Islander (0.2%). The percentage of the population identifying themselves as American Indian or Alaska Native decreased by 3.3% between 2000 and 2010, with decreases also reported in the percentages of the population identifying themselves as White (10.7%), Hispanic or Latino (7.5%), some other race (0.9%), and Native Hawaiian or other Pacific Islander (0.1%). During the same period, there were increases in the percentage of the population identifying themselves as Asian (11.5%), Black or African American (1%), and two or more races (2.5%). The change in racial and ethnic composition from 2000 to 2010 is provided in Figure 1 below.

In 2010 the average household size was estimated to be 2.54, a slight decrease from 2.8 in 1990 and 2.67 in 2000. However, there has been a slight overall increase in total estimated number of households, from 242 in 1990 to 229 in 2000 to 246 in 2010. Of the 290 housing units surveyed for the 2010 Decennial Census, 146 were owner-occupied, 100 were renter-occupied, and 44 were vacant. An estimated 350 Sand Point residents were living in group quarters in 2010. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that an estimated 1,500 people come to Sand Point each year as seasonal workers or transients, primarily to work in the cannery or on fishing boats.

⁶²⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶²⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

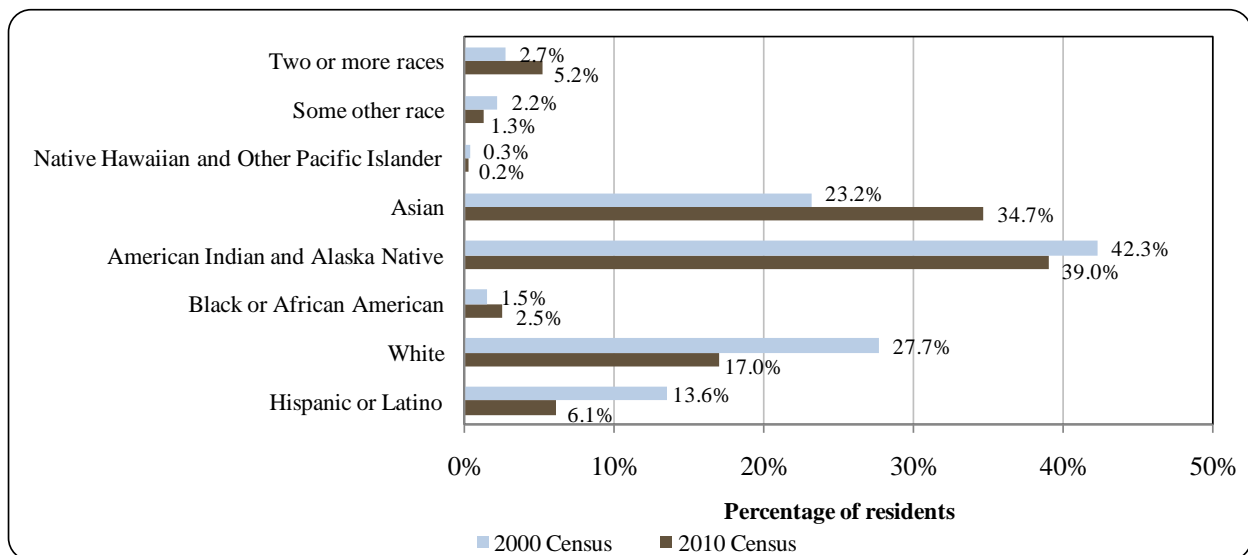
Table 1. Population in Sand Point from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	878	-
2000	952	-
2001	-	921
2002	-	919
2003	-	950
2004	-	911
2005	-	940
2006	-	891
2007	-	992
2008	-	958
2009	-	1,001
2010	976	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

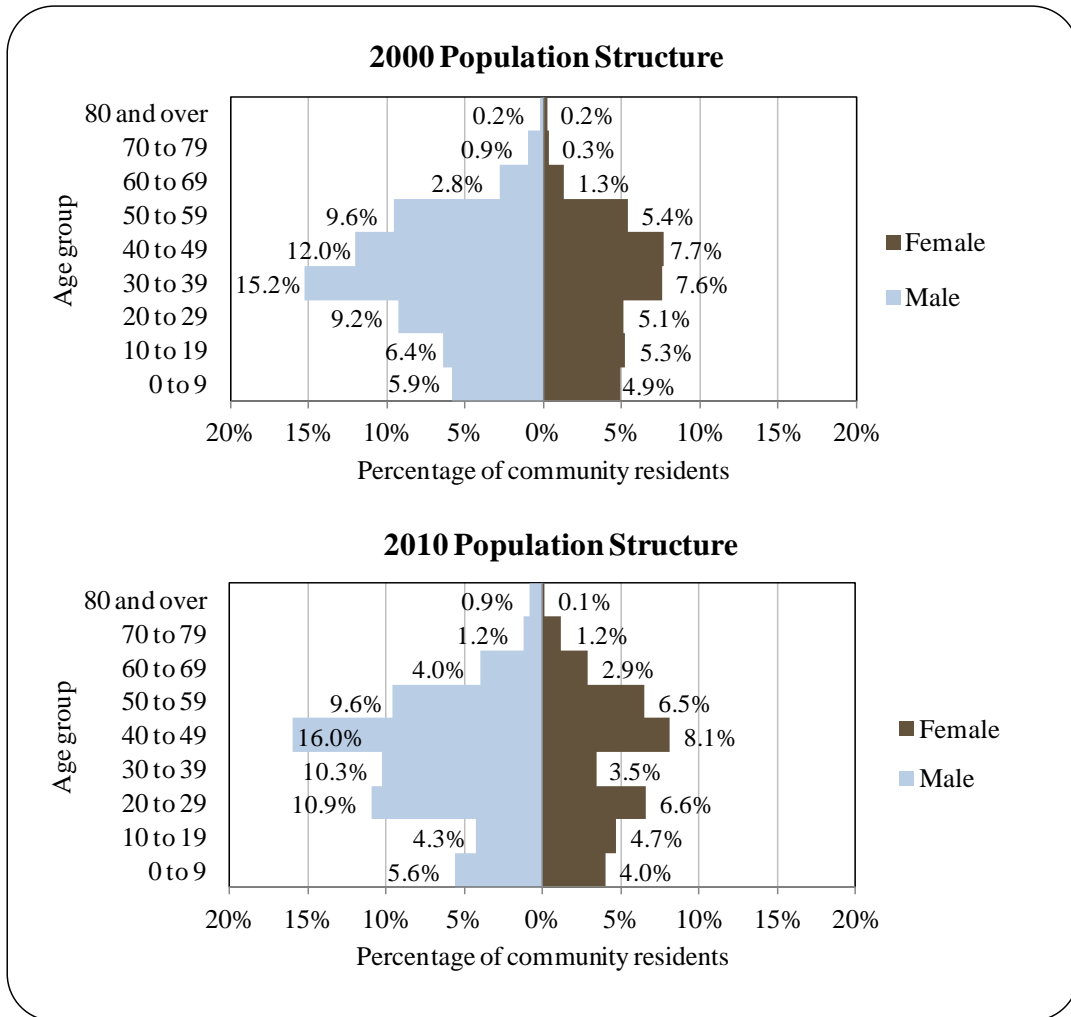
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Sand Point: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Sand Point was skewed, at 62.5% male and 37.5% female, much more heavily skewed than the state as a whole (52% male, 48% female). The age classes between 20 and 59 are more heavily skewed towards males. The median age in Sand Point was 40.1 years, higher than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 40-59 years old, with the next largest percentage for the age category 20-39 years old. Relatively few people were 70 or older (Figure 2).

Figure 2. Population Age Structure in Sand Point Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁶²⁹ 66.3% of Sand Point residents aged 25 and over were estimated to hold a high school diploma or higher degree, compared to 90.7% of Alaskan residents overall. Also in 2010, 19.8% of Sand Point residents had less than a ninth grade education, compared with 3.5% of Alaska residents overall; 13.9% had a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 29.2% had a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; 16% had some college but no degree, compared to 28.3% of Alaska residents overall; 12.9% held an Associate's degree, compared with 8% of Alaska residents overall; 7.3% held a Bachelor's degree, compared with 17.4% of Alaska residents overall; and 0.8% held a graduate or professional degree, compared with 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Sand Point is located in the Shumagin Islands, which are thought to take their name from a Russian sailor named Mikita Shumagin who accompanied Vitus Bering in his exploration of the Pacific. The Island on which Sand Point is located, Popof Island, was named after Russian fur traders Silva and Ivan Popof who traded and hunted furs there in the 1760s. The Aleutian Islands and western portion of the Alaska Peninsula have been inhabited by Aleut people for thousands of years. Prior to the arrival of Europeans, the population of Aleuts in the Sand Point region is estimated to have ranged between 12,000 and 20,000 people. Following the arrival of Russian explorers and fur traders, the population of Aleuts declined by 80 or 90 percent as a result of disease, warfare, malnutrition, and forced labor as sea otter hunters.⁶³⁰

The present community of Sand Point was founded in 1898 as a cod fishing a trading station by a San Francisco fishing company. The original inhabitants included Scandinavian fishermen and Aleuts from surrounding villages. In the early 1900s, Sand Point served as a repair and supply center for gold mining operations including the Apollo Mine on nearby Unga Island. After both the mining and fur industries declined, the local economy turned to fish processing.^{631,632,633} In 1931, Alaska Pacific Salmon Company opened a salmon cannery on Humboldt Harbor, several miles from the community of Sand Point,⁶³⁴ and Aleutian Cold Storage built a halibut processing plant in 1946.⁶³⁵

The Sand Point city government was incorporated in 1966. Today, Sand Point is home to the largest fishing fleet in the Aleutian Chain, and commercial fishing is a fundamental element

⁶²⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaska communities with small populations that have a low probability of being adequately sampled.

⁶³⁰ URS Corporation. (2004). City of Sand Point Comprehensive Community Development Plan. Prepared for the City of Sand Point. Retrieved March 8, 2013 from <http://www.commerce.state.ak.us/dca/plans/SandPoint-CP-2004.pdf>.

⁶³¹ Ibid.

⁶³² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶³³ Shumagin Corporation. (n.d.). *Sand Point and the Shumagin Islands: Sand Point Today*. Retrieved March 8, 2013 from <http://www.shumagin.com/Pages/History.html>.

⁶³⁴ Ibid.

⁶³⁵ See footnote 632.

of local culture. The fish processing industry brings a large seasonal transient population.⁶³⁶ Likewise, subsistence activities are foundational to local culture, and participation in subsistence harvest is very common among local residents. Important local subsistence resources include salmon and a variety of other fish, and land mammals such as moose and caribou.⁶³⁷ The history of Russian involvement in the area is reflected in the presence of the St. Nicholas Chapel, a Russian Orthodox Church that was built in 1933 and is now on the National Register of Historical Places.⁶³⁸

It is of note that many shareholders enrolled as members of Pauloff Harbor and Unga Native village corporations have relocated and now live in Sand Point.⁶³⁹

Natural Resources and Environment

The Shumagin Island group is of volcanic origin, and is made up of 15 primary islands and many smaller islands.⁶⁴⁰ Popof Island rises to a maximum elevation of 1,480 ft. Its coastline is rocky and irregular with many cliffs and bluffs and few protected bays.⁶⁴¹ Popof Island is naturally treeless. Vegetation consists primarily of tundra and alder and willow shrub.⁶⁴² Sand Point is located in a maritime climate zone. Temperatures range from -9 to 76 °F (-22.8 to 24.4 °C). Annual snowfall averages 52 inches, and annual precipitation averages 44.68 inches.⁶⁴³

Popof Island is home to numerous bird species, including eagles, cormorants, kittiwakes, puffins, and ptarmigans. Marine mammal species in the area include sea otters, sea lions, seals, and migrating whales. Terrestrial mammal species include ermine, mink, and ground squirrels. A large herd of buffalo is also present on Popof Island, managed by the local Native village corporation (Shumagin Corporation).^{644,645} The buffalo were first introduced in 1955 by private individuals,⁶⁴⁶ and are now managed by the local Native village corporation of the Qagan Tayagungin Tribe, the Shumagin Corporation.⁶⁴⁷

Sand Point is located within the Alaska Peninsula unit of the Alaska Maritime National Wildlife Refuge (NWR). In total, the Alaska Maritime NWR stretches from the tip of the Aleutian Islands to the Southeast Alaska Panhandle, and includes St. Matthew Island in the Bering Sea, Hagemester Island in northern Bristol Bay, and two units bordering the Chukchi Sea. It was created in part to promote a program of scientific research on marine ecosystems. The Alaska Maritime NWR “protects breeding habitat for seabirds, marine mammals, and other wildlife on more than 2,500 islands, spires, rocks, and coastal headlands.”⁶⁴⁸

⁶³⁶ Ibid.

⁶³⁷ See footnote 630.

⁶³⁸ See footnote 632.

⁶³⁹ Ibid.

⁶⁴⁰ See footnote 633.

⁶⁴¹ See footnote 630.

⁶⁴² WHPacific. (2010). *Communities of the Aleutians East Borough Multi-Jurisdictional Multi-Hazards Mitigation Plan*. Retrieved February 16, 2012 from: <http://www.aleutianseast.org/vertical/Sites/%7BEBDABE05-9D39-4ED4-98D4-908383A7714A%7D/uploads/%7B5F7E9057-83A3-4DBA-B144-073C3F6461D6%7D.PDF>.

⁶⁴³ See footnote 632.

⁶⁴⁴ See footnote 642.

⁶⁴⁵ See footnote 630.

⁶⁴⁶ See footnote 633.

⁶⁴⁷ See footnote 642.

⁶⁴⁸ U.S. Fish and Wildlife Service (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved January 4, 2012 from <http://alaskamaritime.fws.gov/>.

The Qagan Tayagungin Tribe Environmental Department was developed in 2000 with funding from the Environmental Protection Agency's Indian General Assistance Program funds. Many projects have been done with these program funds over the years including an Abandoned Drum Clean-up in collaboration with the City of Sand Point and the Unga Tribe, an Environmental Youth Group that meets weekly, annual Earth Day fairs, water testing in Sand Point's salmon streams, working with Aleutian Housing to have energy assessments done on houses in Sand Point, developing environmental education, and more. The Qagan Tayagungin Tribe Environmental Department was recognized and given an award for helping to improve the environmental health of the community and making a difference in Alaska at the 14th Annual Alaska Tribal Conference on Environmental Management in 2008.⁶⁴⁹

Natural hazards to which Sand Point has been identified to have high vulnerability include earthquakes and volcano activity. The community has also been classified at medium vulnerability to tsunamis and severe weather events.⁶⁵⁰

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in the Sand Point area as of March 2013.⁶⁵¹

Current Economy⁶⁵²

Sand Point is home to the largest fishing fleet in the Aleutian Chain. A Trident Seafood plant processes bottomfish species, pollock, salmon, grinds fish meal and provides fuel and other services. Peter Pan Seafoods owns a storage and transfer station. Locals participate in subsistence consumption of fish and caribou.⁶⁵³ In addition to the seafood industry, top local employers in Sand Point in 2010 included the Aleutians East Borough School District, local government offices, the Shumagin Corporation, health and other community services, local retailers, Peninsula Airways, Inc., and the State of Alaska.⁶⁵⁴

According to the 2006-2010 ACS,⁶⁵⁵ the estimated per capita income in Sand Point in 2010 was \$22,610, and the estimated median household income in 2010 was \$63,750, compared to \$21,954 and \$55,417 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁶⁵⁶ the real per capita income (\$28,869) and the real median household income in 2000 (\$72,873) indicate a substantial decrease in these income measures between 2000 and 2010. However, Sand Point's small population size may have

⁶⁴⁹ The Qagan Tayagungin Tribe of Sand Point. 2009. *Homepage*. Retrieved January 31, 2012 from <http://www.qtribe.org>.

⁶⁵⁰ See footnote 642.

⁶⁵¹ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved March 8, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁶⁵² Unless otherwise noted, all monetary data are reported in nominal values.

⁶⁵³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁵⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁵⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁵⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

prevented the ACS from accurately portraying economic conditions.⁶⁵⁷ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Sand Point in 2010 is \$7,920, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2010.⁶⁵⁸

In 2010, Sand Point ranked 130th of 305 Alaskan communities with per capita income that year, and 68th out of 299 Alaskan communities with household income data. Based on the ACS, in the same year, 92.8% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 5.8%, compared to the statewide unemployment rate of 5.9%. Approximately 9% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskan residents overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Sand Point are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Sand Point. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 16.6%.

Based on the 2006-2010 ACS, the greatest percentage of workers was employed in the private sector (94.1%), while 3.9% worked in the public sector and 2.1% were self-employed. Of the 1060 people age 16 and over that were estimated to be in the civilian labor force in 2010, a majority was estimated to work in the manufacturing industry (82.2%). Only small percentages of the population were estimated to work in other industries. Compared to 2000, the distribution of employment was much more concentrated in manufacturing in 2010. It is important to keep in mind that the small population of Sand Point may affect the representativeness of 2006-2010 ACS estimates, which could explain the dramatic shift in employment statistics between 2000 and 2010.⁶⁵⁹ This information about employment by industry is presented in Figure 3.

Employment statistics by occupation show similar trends, with a large increase in production, transportation, and material moving occupations between 2000 and 2010, and a reduction in employment in other occupations. Employment is broken down by occupation in Figure 4. In 2010, 2.8% of the workforce was estimated to be employed in natural resource industries that include fishing, and 3.3% was estimated to work in natural resource occupations that could include fishing. It is important to note that the number of individuals employed in fishing is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly, given the data reported in the *Commercial Fishing* section below.

⁶⁵⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaska communities with small populations that have a low probability of being adequately sampled.

⁶⁵⁸ See footnotes 654 and 655.

⁶⁵⁹ See footnote 657.

Figure 3. Local Employment by Industry in 2000-2010, Sand Point (U.S. Census).

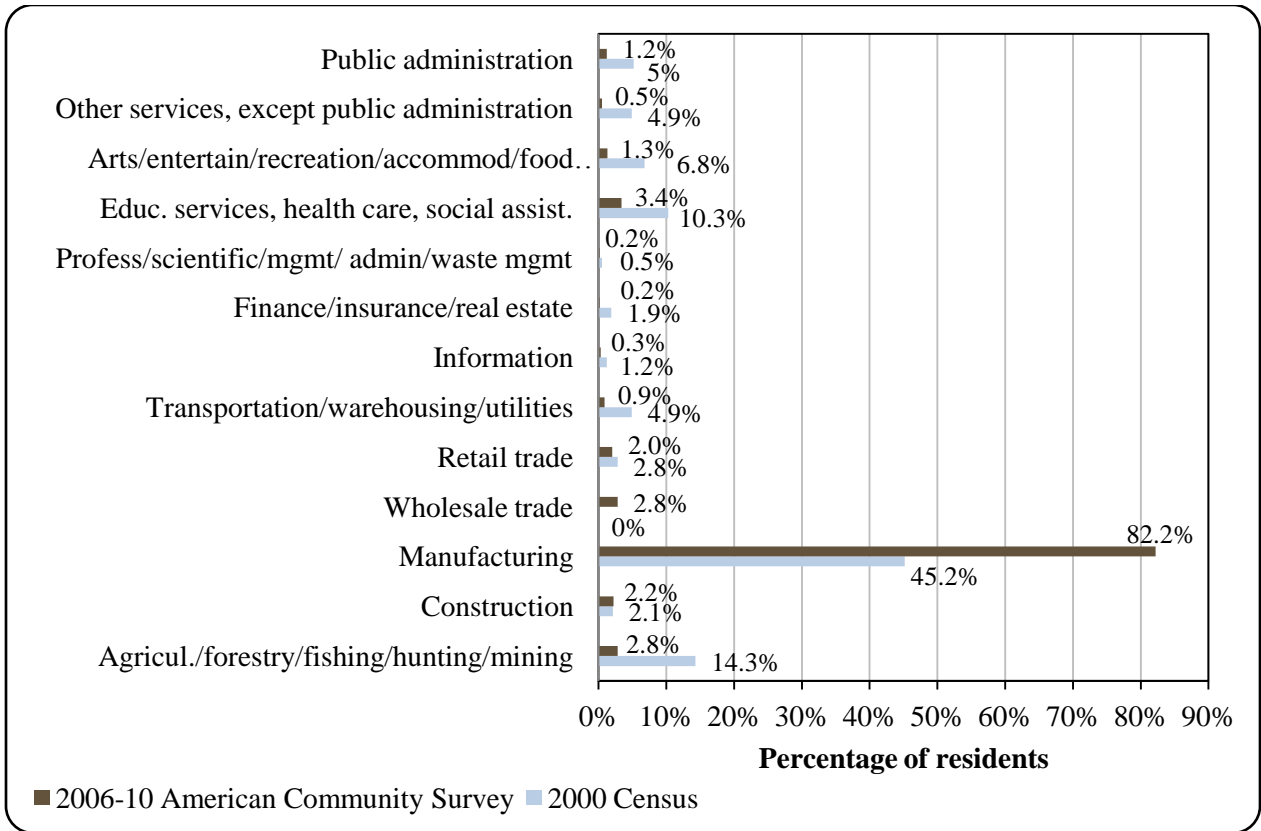
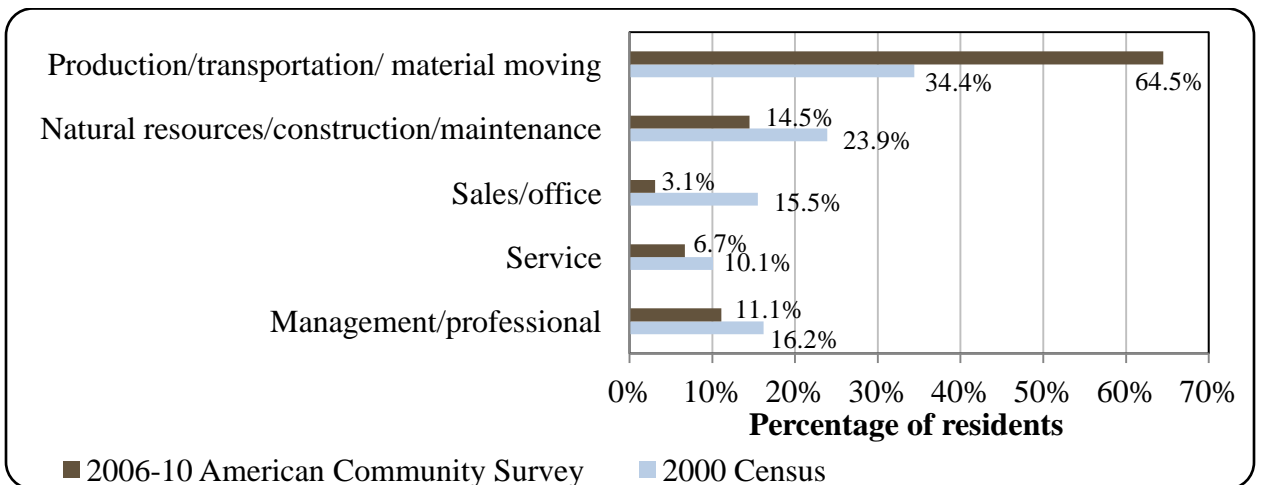


Figure 4. Local Employment by Occupation in 2000-2010, Sand Point (U.S. Census).



Governance

The City of Sand Point is a 1st Class City governed by a mayor and city council. It is located within the Aleutians East Borough. As of 2010, the City administered a 3% sales tax, a 7% bed tax, and a 2% raw fish tax (in addition to the 2% raw fish tax administered by the Borough).⁶⁶⁰ In addition to local tax revenues, other locally-generated revenue sources in Sand Point during the 2000-2010 period included building and equipment rentals, business license fees, harbor revenues from moorage, wharfage, use of the lift, and storage, and receipts from bingo/pull tab/concessions. Outside revenue sources included shared funds from various state and federal programs, as well as grants. Shared funds were received from the State Revenue Sharing program from 2000 to 2003 (just over \$25,000 per year) and the Community Revenue Sharing program in 2009 and 2010 (approximately \$145,000 per year). Of the grants received during the 2000-2010 period, several were fisheries-related. These included grants for harbor improvements and construction, in addition to a ferry dock warehouse, a city dock warehouse, and float construction for the harbor.

More than \$1 million in sea lion mitigation funds contributed to higher than average total municipal revenue in 2002. According to city leaders, sea lion mitigation payments were used to build a warehouse for fishermen and to assist in payment of utility bills.⁶⁶¹ The higher total in 2006 can be explained by receipt of a more than \$2 million grant from the Denali Commission for construction of a new health clinic in Sand Point. Information about selected revenue sources is presented in Table 2. Also see the *Fisheries-Related Revenue* section for more information about shared state fish tax revenues.

Many Native community members residing in Sand Point are members of the three Native Tribes located in the community. The Qagan Tayagungin Tribe of Sand Point Village, the Native Village of Unga, and Pauloff Harbor Village were all included under the Alaska Native Claims Settlement Act (ANCSA), and are federally recognized by the Bureau of Indian Affairs. Three Native village corporations are also located in Sand Point. The Shumagin Corporation is the village corporation associated with the Qagan Tayagungin Tribe, the Unga Corporation is associated with the Native village of Unga, and the Sanak Corporation is associated with the Pauloff Harbor Tribe.⁶⁶² Many members of the Tribes are also shareholders in the Aleut Corporation, the regional Native corporation of the eastern Alaska Peninsula, Aleutian and Pribilof Islands.⁶⁶³

In addition, the Tribes are members of the Aleutian Pribilof Islands Association (APIAI), one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁶⁶⁴ APIAI provides services including cultural heritage, health, education, social, psychological, employment, vocational training, environment, natural

⁶⁶⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁶¹ Southwest Alaska Municipal Conference. 2001. *Steller Sea Lion Mitigation Program*. Retrieved October 21, 2013 from <http://www.swamc.org/files/SSL%2010%20Yr%20Review-%20FINAL.pdf>.

⁶⁶² Ibid.

⁶⁶³ Aleut Corporation. (2008). *Homepage*. Retrieved February 9, 2012 from <http://www.aleutcorp.com>.

⁶⁶⁴ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

resources, and public safety services.⁶⁶⁵ Additionally, a company called Eastern Aleutian Tribes, Inc., formed in 1991, provides medical, dental, and behavioral health services to the three Native Tribes in Sand Point as well as four other Aleut Tribes from the Aleutian Islands and Alaska Peninsula.⁶⁶⁶

The Alaska Department of Fish and Game (ADF&G) has an office in Sand Point. Dillingham has the nearest office of the Alaska Department of Commerce, Community, and Economic Development. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Unalaska and Anchorage. Anchorage also has the closest office of the Alaska Department of Natural Resources.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Sand Point from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$3,340,445	\$397,888	\$27,275	n/a
2001	\$3,737,101	\$360,360	\$26,308	\$70,000
2002	\$5,363,671	\$326,640	\$26,303	\$2,700,000
2003	\$2,932,229	\$342,075	\$28,465	n/a
2004	\$2,030,458	\$466,137	n/a	\$10,000,000
2005	\$3,055,154	\$483,742	n/a	n/a
2006	\$6,159,831	\$633,862	n/a	n/a
2007	\$2,572,588	\$642,588	n/a	\$2,000,000
2008	\$2,303,490	\$663,749	n/a	\$200,000
2009	\$2,372,476	\$718,017	\$144,872	n/a
2010	\$2,216,255	\$673,355	\$146,202	\$1,100,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Sand Point has a state-owned airport with a 5,213 ft long by 150 ft wide asphalt runway. Direct flights to Anchorage are available. Marine facilities include a 25-acre boat harbor with four docks, 134 boat slips, a harbormaster office, barge off-loading area, and a 150-ton lift. Regular barge services supply the community. The state ferry operates between Sand Point and

⁶⁶⁵ Aleutian Pribilof Islands Association (n.d.). *Homepage*. Retrieved January 3, 2012 from <http://www.apiai.com/>.

⁶⁶⁶ Eastern Aleutian Tribes, Inc. (n.d.) *Home*. Retrieved October 21, 2013 from <http://www.eatribes.org/>.

Unalaska, Akutan, False Pass, Cold Bay, and King Cove between May and October.⁶⁶⁷ According to a representative of the Qagan Tayagungin Tribe, residents of Sand Point were paying \$1,094 for a roundtrip airfare between Sand Point and Anchorage as of Fall 2013.⁶⁶⁸

Facilities

The Sand Point water supply is derived from Humboldt Creek and is filtered and chlorinated. The City operates a piped water and sewer system that serves 170 households and 22 businesses, all of which are fully plumbed. The City also operates a landfill which has been relocated in recent years.⁶⁶⁹ Electricity is provided to the community by TDX Power, a subsidiary of the Tanadgusix Corporation, the Native village corporation of the Aleut Community of Saint Paul. TDX Power operates a diesel powerhouse in Sand Point, supplemented by two large windmills.⁶⁷⁰ Fire and rescue services are provided by Sand Point Emergency Medical Services (EMS). The City Police Department provides local law enforcement service.⁶⁷¹ The nearest state trooper post is located in the City of Cold Bay.⁶⁷²

In a survey conducted by the AFSC in 2011, community leaders reported that a number of infrastructure projects have been completed in the last 10 years, including a fish cleaning station, a barge landing area, roads serving the dock space, pilings, a breakwater, harbor dredging, a jetty, dry dock space, haulout facilities, broadband internet access, roads, an airport/seaplane base, water and sewer pipelines, a diesel powerhouse, sewage treatment, water treatment, a new landfill/solid waste site, a community center/library, a police department, emergency response, fire department, and school, telephone service, and a post office. In addition, community leaders indicate that projects in progress include electricity serving the dock, water serving the dock, and alternative energy. Projects planned for the next ten years include construction of new dock space, improvements to existing dock structures, fuel tanks at the dock, and an EPA certified boat cleaning station. In the same survey, community leaders report that Sand Point has 1800 ft of dock space available for both permanent and transient vessels up to 127 ft long. Sand Point is capable of handling rescue vessels, cruise ships, ferries, and fuel barges. For fisheries-related businesses and services not available in Sand Point, community leaders indicated that residents typically travel to Anchorage, Seward, or Kodiak.

Medical Services

Medical services are provided by the Sand Point Community Health Clinic, which is owned by the City and operated by the Eastern Aleutian Tribes, Inc. The clinic is a Community Health Aid Program site.⁶⁷³ According to an Emergency Trauma Technician stationed in Sand Point, the nearest qualified Emergency Care Center is located in Cold Bay. The nearest hospital is located in Dillingham. However, the only direct flights out of Sand Point go to Anchorage, and

⁶⁶⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁶⁸ Personal communication from a Qagan Tayagungin Tribal leader. Email sent Oct. 9 and received Oct. 17, 2013.

⁶⁶⁹ See footnote 667.

⁶⁷⁰ See footnote 668.

⁶⁷¹ See footnote 667.

⁶⁷² Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁶⁷³ See footnote 667.

all medivac flights bring patients to hospitals in Anchorage.⁶⁷⁴ Emergency Services have limited marine and air access, and are provided by 911 Telephone Service volunteers and a health aide. Alternate health care is available through Sand Point Emergency Medical Services.⁶⁷⁵

*Educational Opportunities*⁶⁷⁶

The Sand Point School provides instruction for students from pre-school through 12th grade. In 2011, the school had 133 students and 14 teachers. Students in Sand Point also have access to the Aleutians East Correspondence School for grades 7 through 12, though in 2010, the school did not have any students enrolled or any teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Sand Point area for thousands of years. Villages and fish camps were often located at mouths of streams for access to both fresh water and abundant salmon runs.⁶⁷⁷ During Alaska's Russian period, salmon remained a subsistence resource, but soon after the purchase of Alaska by the United States in 1867, commercial exploitation of salmon was initiated.⁶⁷⁸ Herring was one of the earliest commercial fisheries, along with salmon, during the period when the product was salted for storing and shipment.⁶⁷⁹ Halibut and groundfish fisheries began to develop in the Alaska Peninsula region by the 1920s with the development of diesel engines, which allowed fishing vessels to undertake longer trips.^{680,681}

Between 2000 and 2010, Sand Point residents were highly engaged in federal and state fisheries for groundfish and crab, as well as state fisheries for salmon, halibut, and herring. Groundfish and crab fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. The Peninsula-Aleutian salmon fishery is managed by ADF&G. Sand Point is located in Federal Statistical and Reporting Area 610, the Western Gulf of Alaska (GOA) Sablefish Regulatory Area, Pacific

⁶⁷⁴ See footnote 668.

⁶⁷⁵ See footnote 667.

⁶⁷⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶⁷⁷ Alaska Native Heritage Center (n.d) *The Unangax & Alutiiq (Supiaq) People - Who We Are*. Retrieved January 4, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/unangax/.

⁶⁷⁸ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶⁷⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁶⁸⁰ Ibid.

⁶⁸¹ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

Halibut Fishery Regulatory Area 3B, and the Southeastern District of the South Peninsula subarea of the Peninsula-Aleutian salmon fishery.

Groundfish fisheries target a variety of species, including pollock, Pacific cod, sablefish, Atka mackerel, lingcod, and various rockfish and flatfish species. In addition to federal groundfish fisheries that take place in the Central and Western Gulf of Alaska (GOA), parallel fisheries takes place in the South Alaska Peninsula region for Pacific cod, walleye pollock, and Atka mackerel. Parallel fisheries take place at the same time as the federal fisheries for these species, and the Total Allowable Catch (TAC) set by NMFS applies to both fisheries. In addition to the parallel Pacific cod fishery, beginning in 1997, a ‘state-waters fishery’ for Pacific cod was initiated in the South Alaska Peninsula area. It is managed under a guideline harvest limit (GHL) determined by ADF&G, and is not conducted as a parallel fishery. ADF&G also has separate GHL’s and seasons for sablefish, lingcod, black rockfish, and blue rockfish fisheries in the western GOA region.⁶⁸²

Herring are harvested for bait in the vicinity of Unalaska when Togiak-spawning herring are in residence during the summer feeding period. On occasion, a herring sac roe fishery occurs near Port Moller when aerial surveys determine that a sufficient quantity of herring is present, and if processing capacity is available. Red and golden king crab and Tanner crab occur throughout the Bering Sea and Aleutian Islands, as well as the Gulf of Alaska. The Alaska Peninsula and eastern Aleutian Islands are a historical center of the Dungeness crab fishery.⁶⁸³

Sand Point participates in the Community Quota Entity (CQE) program, and has established a CQE non-profit called Aleutia, Inc. As of Fall 2013, Aleutia, Inc. held four non-trawl groundfish License Limitation Program permits for lease to eligible community members, but had not acquired commercial halibut Individual Fishing Quota or halibut charter permits.⁶⁸⁴ In addition, in 2008, Aleutia, Inc. purchased processor quota shares.⁶⁸⁵ For more information see the *Processing Plants* section below.

Sand Point is not eligible to participate in the Community Development Quota (CDQ) program. In a survey conducted by the AFSC in 2011, community leaders reported that the annual variation in population in Sand Point is “entirely” driven by employment in the fishing sectors and that Sand Point’s economy relies on fishing and on sport hunting and fishing.

Processing Plants

ADF&G’s 2010 Intent to Operate list indicated that Trident Seafoods was the only processing plant operating in Sand Point that year. Trident Seafoods Corporation was founded in 1973, and by the year 2000 was employing 4,000 people annually throughout Alaska and the Pacific Northwest. Its Sand Point facility is located on Popof Island in the Shumagin Islands and began operations in 1979.⁶⁸⁶ The plant operates year-round and processes Pacific cod, sablefish, halibut, pollock, salmon, other assorted bottomfish, and crab. The facility employs between 50 and 420 employees depending on the season.⁶⁸⁷ Their peak season is from January to April (during which time they have about 400 employees) and they process gray cod and pollock

⁶⁸² See footnote 679.

⁶⁸³ Ibid.

⁶⁸⁴ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

⁶⁸⁵ Aleutia (n.d.). *About Us*. Retrieved on May 2, 2012 from <http://www.aleutia.org/our-story>.

⁶⁸⁶ Source: AFSC survey of processing plant managers in 2011.

⁶⁸⁷ Ibid.

during this time. The Sand Point facility provides room and board at a nominal cost for processing plant workers as well as free air transportation to Sand Point from Seattle and back.⁶⁸⁸

It is important to note that, between 2005 and 2007, the CQE entity for Sand Point - Aleutia, Inc. – was also registered on ADF&G's Intent to Operate list. In addition to processing and marketing sockeye salmon caught by local fishermen, Aleutia, Inc. provides support and education to fishermen. In 2008, Aleutia purchased processor quota shares of Bristol Bay red king and Tanner crab and signed an agreement for the crab to be processed by Peter Pan Seafood in King Cove, Alaska.⁶⁸⁹ According to testimony by Aleutia marketing consultant Karen Montoya to the North Pacific Fisheries Management Council in February, 2010, the contract signed in 2008 led to significant losses on the part of Aleutia, and the CQE non-profit was engaged in efforts to renegotiate contract terms.⁶⁹⁰

Fisheries-Related Revenue

Sand Point receives fisheries-related revenue from a 2% city raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, and the Extraterritorial Fish Tax. In addition, in a survey conducted by the AFSC in 2011, community leaders reported that Sand Point received revenue from fees associated with fishing gear storage on public land in 2010. In the same survey, community leaders indicated that the following public services are at least partially supported by revenue from fisheries-related sources: harbor maintenance, hospital/medical clinic/emergency response, roads, social services, water and wastewater systems, and police/enforcement/fire protection.

Revenue received from fisheries-related sources is detailed in Table 3. The amount of revenue received from the raw fish tax between 2000 and 2010 remained relatively stable, while the revenue received from the Shared Fisheries Business Tax increased substantially during that same period. Also between 2000 and 2010, revenue received from the fisheries resource landing tax went from zero to a high of \$34,120 in 2009, remaining high at \$22,721 in 2010. Revenue received from the extraterritorial fish tax also varied annually between 2000 and 2010, ranging from \$11,222 in 2008 to a high of \$85,000 in 2010. The total fisheries-related revenue received by Sand Point varied considerably between 2000 and 2010 (Table 3).⁶⁹¹

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders indicated that Sand Point does not participate in the fisheries management process in Alaska. In addition, community leaders stated that commercial fishing boats from those under 35 ft to those over 125 ft that use Sand Point as their base of operations during the fishing season use the following gear types: trawl, pots, longline, gillnet, and purse seines. In 2010, 122 Sand Point residents held a total of 309 commercial fishing permits. Number of permits held and total permit holders declined slightly between 2000 and 2009, before rebounding to close to 2000 levels in 2010. In 2010,

⁶⁸⁸ Trident Seafoods Company. *Alaska Plants: Sand Point*. Retrieved on May 2, 2012 from http://www.tridentseafoods.com/company/plants_alaska.php#Saint.

⁶⁸⁹ See footnote 685.

⁶⁹⁰ Aleutians East Borough. March 16, 2012. Testimony offered to the North Pacific Fisheries Management Council by Karen Montoya, Feb. 2010. Published in Fish News. Retrieved July 9, 2012 from <http://www.aleutianseast.org>.

⁶⁹¹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Sand Point residents held groundfish and crab License Limitation Program (LLP) permits, Federal Fisheries Permits, and crab, halibut, herring, groundfish, and salmon Commercial Fisheries Entry Commission (CFEC) permits. Between 2000 and 2010, the number of groundfish LLP permits decreased slightly, though the number of permits reported to be actively fished remained relatively consistent throughout the period. The number of crab LLP permits held by Sand Point residents also decreased during the same time period, and no crab LLP permits were recorded as actively fished between 2005 and 2010. The number of Federal Fisheries Permits held by Sand Point residents also decreased between 2000 and 2009, though the number and percentage of permits reported as actively fished remained relatively constant.

The number of crab CFEC permits and the percentage of those permits reported as fished remained relatively low between 2000 and 2009 (with the exception of 2001 and 2005), but increased substantially in 2010. In 2010, crab CFEC permits were issued for the Alaska Peninsula Dungeness crab pot gear fishery using vessels under 60 ft, the Bristol Bay king crab pot gear fishery using vessels 60 ft or over, and the Bering Sea (using vessels 60 ft or over) and Peninsula-Aleutians (using vessels under 60 ft) Tanner crab pot gear fisheries.

The number of shellfish and sablefish CFEC permits remained low or at zero between 2000 and 2010, with varying percentages of permits reported as fished in years where those permits were held. The number of halibut CFEC permits held by Sand Point residents decreased slightly between 2000 and 2010, though the number of permits reported as fished remained stable during that period. In 2010, all but one of the halibut CFEC permits were issued for the statewide longline fishery using vessels under 60 ft, with the remaining permit issued for the statewide mechanical jig fishery.

The number of herring CFEC permits held decreased steadily between 2000 and 2010, and none of those permits were reported as fished between 2005 and 2010. Herring CFEC permits were issued in 2010 for the herring (roe and food/bait) purse seine fishery in Cook Inlet, and the Peninsula-Aleutians roe herring purse seine and herring for bait/food purse seine fisheries.

The number of groundfish CFEC permits held decreased from 2000 to 2010, and while the number of permits reported as fished has varied during this period, the 2010 number of permits fished was similar to that in 2000. Groundfish CFEC permits were issued in 2010 for the following miscellaneous saltwater finfish fisheries: statewide and Gulf of Alaska longline fisheries using vessels under 60 ft, statewide and Gulf of Alaska pot gear fisheries using vessels under 60 ft, statewide and Gulf of Alaska mechanical jig fisheries, statewide and Gulf of Alaska otter trawl fisheries using vessels under 60 ft, statewide otter trawl fishery using vessels between 90 and 125 ft, and the Gulf of Alaska pot gear fishery using vessels 60 ft or over.

The number of salmon CFEC permits held remained relatively stable between 2000 and 2010, though the number of permits reported as fished decreased during the same period. In 2010, the majority of the salmon CFEC permits were issued for the Peninsula-Aleutians set gill net and purse seine fisheries. The remainder of the salmon CFEC permits was for the Prince William Sound and Peninsula-Aleutians drift gill net fisheries, the southeast purse seine fishery, the Lower Yukon gill net fishery, and the statewide power gurdy troll fishery. Data regarding commercial fishing permits held and percentages of those permits reported as fished are detailed in Table 4.

In 2010, there were 162 residents of Sand Point holding crew licenses, a decrease from the 224 crew license holders in 2000. The number of fish buyers in Sand Point has been variable between 2000 and 2010, though the number of shore-side processing facilities in Sand Point did

not change during that time. Both the number of vessels owned primarily by Sand Point residents and the number of vessels homeported in Sand Point have both decreased substantially between 2000 and 2010, and the number of vessels landing catch in Sand Point has been variable during the same period. While the landings and ex-vessel value of catch landed in Sand Point are considered confidential in some years due to a small number of participants, for years between 2000 and 2010 in which data were available both the landings and ex-vessel value have remained relatively stable (Table 5).

While the number of halibut quota share account holders and amount of annual individual fishing quota (IFQ) allotment have both decreased between 2000 and 2010, the number of halibut quota shares held decreased only slightly during this period (Table 6). The number of sablefish quota share holders has remained at either one or two between 2000 and 2010, though the number of quota shares and annual number of lbs of IFQ allotment have both decreased substantially – both a decrease overall between 2000 and 2010 and a major decrease from ten-year highs in 2003 and 2004 (Table 7). While the number of crab quota share holders increased by just one, from two to three, between 2005 and 2010, the number of crab quota shares held increased more than tenfold during this period (from 253,569 to 4,097,380), as did the annual IFQ allotment (from 1,517 lbs to 142,125 lbs) (Table 8).

With the exception of landings and ex-vessel value for salmon in 2002, 2004-2006, and 2010, the landings and ex-vessel value of catch landed in Sand Point between 2000 and 2010 are considered confidential due to a small number of participants (Table 9). For years in which salmon data are not confidential, both landings and ex-vessel value decreased during over the course of the years reported. For landings and ex-vessel value of catch landed by Sand Point vessel owners, data on landings and ex-vessel value for the species reported are variable from year to year (Table 10). Overall, however, total landings and ex-vessel value for all non-confidential species and years indicate that landings and ex-vessel value have decreased slightly between 2000 and 2010.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Sand Point: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$501,097	\$310,741	\$295,659	\$419,971	\$526,295	\$597,372	\$605,291	\$595,703	\$595,703	n/a	\$500,689
Shared Fisheries											
Business Tax ¹	\$143,428	\$187,913	\$164,248	\$130,981	\$169,756	\$232,890	\$237,386	\$249,235	\$245,123	\$268,867	\$341,610
Fisheries Resource											
Landing Tax ¹	n/a	n/a	n/a	\$546	\$1,147	\$4,438	\$18,223	\$15,193	\$32,201	\$34,120	\$22,721
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	\$29,141	\$36,453	\$30,000	\$28,875	\$27,474	\$27,474	\$40,000	\$12,522	\$11,222	\$22,518	\$85,000
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$15,000
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$673,666</i>	<i>\$535,107</i>	<i>\$489,907</i>	<i>\$580,374</i>	<i>\$724,672</i>	<i>\$862,174</i>	<i>\$900,900</i>	<i>\$872,653</i>	<i>\$884,249</i>	<i>\$325,505</i>	<i>\$965,020</i>
<i>Total municipal revenue⁵</i>	<i>\$3,340,445</i>	<i>\$3,737,101</i>	<i>\$5,363,671</i>	<i>\$2,932,229</i>	<i>\$2,030,458</i>	<i>\$3,055,154</i>	<i>\$6,159,831</i>	<i>\$2,572,588</i>	<i>\$2,303,490</i>	<i>\$2,372,476</i>	<i>\$2,216,255</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Sand Point: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	63	59	54	53	54	54	49	49	47	50	50
	Active permits	24	23	21	25	20	18	16	14	17	19	21
	% of permits fished	38%	38%	38%	47%	37%	33%	32%	28%	36%	38%	42%
	Total permit holders	49	46	43	44	43	43	41	41	39	41	41
Crab (LLP) ¹	Total permits	6	6	4	4	4	4	3	3	3	3	3
	Active permits	1	1	1	1	1	1	0	0	0	0	0
	% of permits fished	16%	16%	25%	25%	25%	25%	-	-	-	-	-
	Total permit holders	5	5	4	4	4	4	3	3	3	3	3
Federal Fisheries Permits ¹	Total permits	46	47	48	36	36	37	27	27	28	30	32
	Fished permits	0	0	0	26	23	23	16	16	20	20	23
	% of permits fished	-	-	-	72%	64%	62%	59%	59%	71%	67%	72%
	Total permit holders	37	38	39	30	30	31	22	22	23	26	28
Crab (CFEC) ²	Total permits	6	40	8	10	7	42	13	12	12	10	59
	Fished permits	6	32	6	7	6	31	3	3	8	5	55
	% of permits fished	100%	80%	75%	70%	86%	74%	23%	25%	67%	50%	93%
	Total permit holders	4	37	7	10	7	35	13	11	11	9	55
Other shellfish (CFEC) ²	Total permits	1	2	2	1	2	0	0	0	0	0	0
	Fished permits	0	1	1	1	2	0	0	0	0	0	0
	% of permits fished	-	50%	50%	100%	100%	-	-	-	-	-	-
	Total permit holders	1	2	2	1	2	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	51	50	49	47	45	40	40	37	39	41	44
	Fished permits	37	38	40	39	32	29	29	27	32	34	35
	% of permits fished	73%	76%	82%	83%	71%	73%	73%	73%	82%	83%	80%
	Total permit holders	48	47	48	46	44	39	40	37	39	41	43
Herring (CFEC) ²	Total permits	20	16	13	16	12	8	5	5	5	4	4
	Fished permits	7	6	4	3	1	0	0	0	0	0	0
	% of permits fished	35%	38%	31%	19%	8%	-	-	-	-	-	-
	Total permit holders	13	12	11	13	11	7	4	4	4	3	3

Table 4 Cont. Permits and Permit Holders by Species, Sand Point: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	2	4	4	3	0	0	0	0	1	0
	Fished permits	0	1	0	0	1	0	0	0	0	1	0
	% of permits fished	-	50%	-	-	33%	-	-	-	-	100%	-
	Total permit holders	1	2	4	4	3	0	0	0	0	1	0
Groundfish (CFEC) ²	Total permits	145	136	134	119	109	97	78	76	101	89	100
	Fished permits	67	66	74	82	73	60	32	40	69	51	64
	% of permits fished	46%	49%	55%	69%	67%	62%	41%	53%	68%	57%	64%
	Total permit holders	83	82	75	73	71	61	52	53	67	60	73
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	108	113	109	107	100	97	95	102	101	98	102
	Fished permits	90	89	66	63	66	65	66	68	73	70	72
	% of permits fished	83%	79%	61%	59%	66%	67%	69%	67%	72%	71%	71%
	Total permit holders	99	101	99	100	92	94	83	91	90	86	90
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>332</i>	<i>359</i>	<i>319</i>	<i>304</i>	<i>278</i>	<i>284</i>	<i>231</i>	<i>232</i>	<i>258</i>	<i>243</i>	<i>309</i>
	<i>Fished permits</i>	<i>207</i>	<i>233</i>	<i>191</i>	<i>195</i>	<i>181</i>	<i>185</i>	<i>130</i>	<i>138</i>	<i>182</i>	<i>161</i>	<i>226</i>
	<i>% of permits fished</i>	<i>62%</i>	<i>65%</i>	<i>60%</i>	<i>64%</i>	<i>65%</i>	<i>65%</i>	<i>56%</i>	<i>59%</i>	<i>71%</i>	<i>66%</i>	<i>73%</i>
	<i>Permit holders</i>	<i>122</i>	<i>127</i>	<i>126</i>	<i>127</i>	<i>119</i>	<i>116</i>	<i>101</i>	<i>102</i>	<i>111</i>	<i>104</i>	<i>122</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Sand Point: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Sand Point ²	Total Net Pounds Landed In Sand Point ^{2,5}	Total Ex-Vessel Value Of Landings In Sand Point ^{2,5}
2000	224	4	1	223	210	153	72,981,686	\$18,588,830
2001	188	1	1	220	215	189	--	--
2002	159	10	1	190	183	405	97,944,831	\$26,573,949
2003	148	3	1	167	161	290	--	--
2004	149	9	1	164	159	269	86,148,477	\$30,374,591
2005	150	7	1	150	151	269	93,646,280	\$27,882,581
2006	152	6	1	135	147	224	72,290,356	\$28,872,829
2007	148	2	1	135	152	157	--	--
2008	177	3	1	146	159	182	--	--
2009	164	3	1	137	156	164	--	--
2010	162	6	1	146	170	214	78,304,715	\$30,421,325

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Sand Point: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	45	2,724,455	757,064
2001	44	2,465,830	753,512
2002	42	2,621,757	830,327
2003	44	2,791,611	879,503
2004	41	2,783,956	797,357
2005	41	2,612,005	631,310
2006	37	2,105,001	420,410
2007	32	1,849,800	314,272
2008	35	2,343,555	470,017
2009	35	2,460,922	493,758
2010	35	2,465,946	449,399

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Sand Point: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	2	23,102	2,089
2001	2	116,848	11,501
2002	1	300	32
2003	2	426,910	53,705
2004	2	426,910	61,225
2005	1	300	35
2006	1	300	35
2007	1	300	33
2008	1	300	32
2009	1	300	27
2010	1	300	25

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Sand Point: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	2	253,569	1,517
2006	2	253,569	1,280
2007	2	253,569	1,680
2008	2	253,569	1,679
2009	3	416,719	8,320
2010	3	4,097,380	142,125

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Sand Point: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	0	--	0	0	0	--	--	--	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	28,863,221	--	23,574,017	16,719,491	13,231,056	--	--	--	9,089,712
<i>Total²</i>	--	--	28,863,221	--	23,574,017	16,719,491	13,231,056	--	--	--	9,089,712
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	\$0	--	\$0	\$0	\$0	--	--	--	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	\$8,255,438	--	\$6,279,596	\$4,912,568	\$3,908,452	--	--	--	\$5,336,486
<i>Total²</i>	--	--	\$8,255,438	--	\$6,279,596	\$4,912,568	\$3,908,452	--	--	--	\$5,336,486

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Sand Point Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	108,862	--	--	213,310	299,278	--	--	302,446	317,012	395,817
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	777,100	763,731	858,088	736,557	615,387	538,937	475,544	389,799	573,309	460,167	445,000
Herring	805,617	1,312,296	--	2,681,384	--	--	--	--	--	--	--
Other Groundfish	140,818	680,345	230,665	150,814	140,123	383,623	442,280	593,727	488,092	377,286	1,269,800
Other Shellfish	--	--	--	--	43,837	9,103	26,085	37,243	76,191	111,152	64,665
Pacific Cod	16,945,958	9,924,303	12,294,708	15,566,806	11,296,767	9,208,541	6,775,190	6,100,615	10,743,364	6,870,095	12,386,041
Pollock	17,867,765	34,732,559	18,527,921	15,633,226	24,083,884	25,995,991	17,672,451	15,683,692	14,555,894	13,590,457	20,330,562
Sablefish	--	248	--	--	--	--	--	--	--	--	--
Salmon	13,448,654	14,162,953	10,428,739	10,625,351	18,754,943	23,425,250	15,351,124	17,919,669	22,269,490	18,202,041	6,740,394
<i>Total²</i>	<i>49,985,912</i>	<i>61,685,297</i>	<i>42,340,121</i>	<i>45,394,138</i>	<i>55,148,251</i>	<i>59,860,723</i>	<i>40,742,674</i>	<i>40,724,745</i>	<i>49,008,786</i>	<i>39,928,210</i>	<i>41,632,279</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	\$201,992	--	--	\$561,498	\$484,761	--	--	\$599,050	\$473,891	\$616,674
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$1,987,899	\$1,511,047	\$1,726,029	\$2,101,899	\$1,759,422	\$1,576,750	\$1,722,896	\$1,598,566	\$2,408,705	\$1,223,436	\$1,993,777
Herring	\$158,701	\$214,356	--	\$299,673	--	--	--	--	--	--	--
Other Groundfish	\$11,185	\$14,658	\$10,189	\$5,079	\$3,103	\$17,814	\$9,246	\$9,606	\$12,996	\$10,761	\$31,806
Other Shellfish	--	--	--	--	\$15,377	\$4,533	\$15,612	\$20,266	\$38,881	\$41,797	\$15,986
Pacific Cod	\$5,156,260	\$2,271,348	\$2,620,802	\$4,192,678	\$2,654,980	\$2,349,188	\$2,512,910	\$2,853,454	\$6,093,535	\$1,728,923	\$3,068,679
Pollock	\$2,286,447	\$3,988,594	\$1,981,817	\$1,663,685	\$2,304,807	\$2,844,016	\$2,173,080	\$1,889,187	\$2,712,007	\$2,237,366	\$2,694,182
Sablefish	--	\$4	--	--	--	--	--	--	--	--	--
Salmon	\$5,788,863	\$2,641,086	\$2,222,205	\$2,374,366	\$4,809,803	\$7,101,755	\$4,995,200	\$6,466,371	\$9,603,816	\$7,174,956	\$4,228,263
<i>Total²</i>	<i>\$15,389,355</i>	<i>\$10,843,085</i>	<i>\$8,561,041</i>	<i>\$10,637,379</i>	<i>\$12,108,989</i>	<i>\$14,378,818</i>	<i>\$11,428,943</i>	<i>\$12,837,450</i>	<i>\$21,468,990</i>	<i>\$12,891,130</i>	<i>\$12,649,366</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Based on available ADF&G sportfishing statistics, minimal sportfishing activity was reported in Sand Point between 2000 and 2010. One active sport fish guide business was registered in the community in 2002 only, while between two and four licensed sport fish guides were reported to be present from 2000 to 2004. No businesses or licensed guides were present from 2005 to 2010. In 2010, 71 sportfishing licenses were sold in the community of Sand Point, of which 56 licenses were purchased by community residents (Table 11). According to a representative of the Qagan Tayagungin Tribe, the low number of licenses purchased by residents underestimates the amount of sportfishing activity engaged in by residents of Sand Point. For example, a large number of youth in the community actively participate in sportfishing, and individuals under the age of 16 are not required to purchase a sportfishing license. In addition, there is limited or no enforcement related to sportfishing in Sand Point, resulting in a lower total number of licenses purchased. The tribal representative anticipates that purchases of sportfishing licenses will increase as a local sportfishing derby continues to grow.⁶⁹²

Sand Point is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Sand Point is also displayed in Table 11.

In a survey conducted by the AFSC in 2011, community leaders confirmed this by reporting that Chinook, coho, and sockeye salmon, halibut, crab, shrimp, and clams are targeted by recreational fishermen that use boats based in Sand Point. Community leaders also noted that some recreational fishing in Sand Point takes place on charter/party boats, private boats owned by local residents, and private boats owned by non-residents.

Table 11. Sport Fishing Trends, Sand Point: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Sand Point²
2000	0	3	38	50
2001	0	3	44	66
2002	1	4	39	51
2003	0	4	33	38
2004	0	2	40	41
2005	0	0	55	75
2006	0	0	54	127
2007	0	0	62	78
2008	0	0	47	64
2009	0	0	54	46
2010	0	0	56	71

⁶⁹² Personal communication from a Qagan Tayagungin Tribal leader. Email sent Oct. 9 and received Oct. 17, 2013.

Table 11, Cont. Sport Fishing Trends, Sand Point: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

According to a survey conducted by the AFSC in 2011, community leaders indicated that salmon, halibut, and crab are the three most important subsistence marine or aquatic resources to the residents of Sand Point. Data were not available from ADF&G regarding per capita subsistence harvest or the percentage of Sand Point households that utilized various marine resources for subsistence purposes between 2000 and 2010 (Table 12). Some data were available from management agencies, however, regarding total subsistence harvest numbers of salmon, halibut and some marine mammals. These data are presented below. However, it is important to note that, according to a representative of the Qagan Tayagungin Tribe, these subsistence data that are available from management agencies significantly underestimate the level of engagement of local residents in subsistence harvest; not all residents engaged in salmon and halibut subsistence harvest acquire subsistence permits, and even fewer return surveys.⁶⁹³

Available data about annual subsistence salmon harvest show a decrease between 2000 and 2010 in the number of subsistence salmon permits issued, the number of those permits reported as fished, and the number of salmon harvested (Table 13). Available data regarding annual subsistence halibut fishing participation, based on participation in the Subsistence Halibut

⁶⁹³ See footnote 692.

Registration Certificate (SHARC) program, show an overall increase between 2003 and 2007 in the number of SHARC cards issued and the number actively fished. The total lbs of halibut reported harvested was at its maximum in 2005, when 1,581,787 lbs were harvested on 5,941 active SHARC cards. The number of SHARC cards issued and actively fished declined subsequent to 2007, along with the lbs of halibut harvested per year (Table 14).

Finally, some information was reported by various management agencies regarding subsistence harvest of marine mammals by Sand Point residents between 2000 and 2010. According to available data provided by the U.S. Fish and Wildlife Service (FWS), between one and five sea otters were harvested (for those years in which data were reported). The FWS also reported harvest of one walrus by Sand Point residents in 2010 only. In addition, ADF&G reported Steller sea lion harvest ranging from 1 to 8 animals per year and harbor seal harvest ranging from 4 to 49 animals per year (for those years in which data were reported). No information was reported by NMFS regarding beluga whale harvest, and ADF&G did not report harvest of spotted seal by Sand Point residents between 2000 and 2010. This information about marine mammal harvest in Sand Point is presented in Table 15.

Although no information is available during the 2000-2010 period regarding total marine invertebrate and non-salmon fish harvest by Sand Point residents (Table 13), some species-level information is provided from a 1992 subsistence survey conducted by the ADF&G Division of Subsistence. Results of the survey indicate that the following species of marine invertebrates were used for subsistence in Sand Point in 1992: black (small) chitons, butter clams, cockles, Dungeness crab, hair crab, horse clams (gaper), king crab, limpets, mussels, octopus, Pacific littleneck clams (steamers), pinkneck clams, razor clams, red (large) chitons, scallops, sea cucumber, sea urchin, shrimp, snails, Tanner crab, and unknown crab. Non-salmon fish species reported as harvested for subsistence in 1992 included: black rockfish, brook trout, burbot, capelin (grunion), cutthroat trout, Dolly Varden, eel, eulachon (hooligan candlefish), greenling, herring, herring roe/unspecified, herring spawn on kelp, lingcod, mackerel, Pacific cod (gray), pike, rainbow smelt, rainbow trout, red rockfish, sablefish (black cod), sea perch, sheefish, skates, smelt, starry flounder, steelhead, unknown char, unknown cod, unknown flounder, unknown greenling, unknown rockfish, unknown sculpin, unknown smelt, unknown sole, unknown whitefish, walleye pollock, whitefish, and yellowfin sole. In addition, marine mammals reported as harvested for subsistence in 1992 included harbor seal, Steller sea lion, and unknown whale.⁶⁹⁴

⁶⁹⁴ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Sand Point: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Sand Point: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	62	49	296	919	647	674	4,282	n/a	n/a
2001	61	49	330	1,394	840	766	4,600	n/a	n/a
2002	31	24	102	1,000	283	375	2,019	n/a	n/a
2003	30	26	171	1,088	258	489	2,069	n/a	n/a
2004	24	22	92	385	147	359	1,813	n/a	n/a
2005	35	31	67	320	1,083	456	2,952	n/a	n/a
2006	30	26	51	261	165	447	1,557	n/a	n/a
2007	38	29	55	156	190	420	2,269	n/a	n/a
2008	46	35	63	406	683	1,001	2,003	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Sand Point: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	73	21	4,819
2004	351	109	15,140
2005	321	100	21,417
2006	365	133	20,214
2007	364	138	24,615
2008	342	130	25,013
2009	137	70	11,759
2010	130	26	4,220

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Sand Point: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	5	15	n/a
2001	n/a	2	n/a	n/a	5	11	n/a
2002	n/a	2	n/a	n/a	n/a	15	n/a
2003	n/a	4	n/a	n/a	1	14	n/a
2004	n/a	1	n/a	n/a	n/a	15	n/a
2005	n/a	n/a	n/a	n/a	n/a	15	n/a
2006	n/a	5	n/a	n/a	6	4	n/a
2007	n/a	5	n/a	n/a	8	49	n/a
2008	n/a	1	n/a	n/a	3	31	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	1	n/a	n/a	n/a	n/a

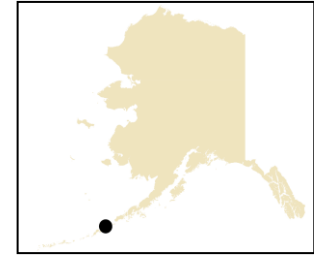
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Unalaska (un-uh-LASS-kuh)



People and Place

*Location*⁶⁹⁵

Unalaska overlooks Iliuliuk Bay and Dutch Harbor on Unalaska Island in the Aleutian Chain. It lies 800 air mi from Anchorage (a two- to three-hour flight) and 1,700 mi northwest of Seattle. The name Dutch Harbor is often applied to the portion of the city on Amaknak Island, which is connected to Unalaska Island by bridge. Unalaska is located within the Aleutians West Census Area and is not under the jurisdiction of a borough. The community encompasses 111.0 sq mi of land and 101.3 sq mi of water.

*Demographic Profile*⁶⁹⁶

In 2010, there were 4,376 residents in Unalaska, making it the 26th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the Alaska Department of Labor and Workforce Development (DOLWD) estimated that the average annual growth rate was -1.81%, indicating a declining population. This was reflected in the overall growth rate of -14.5%. However, the U.S. Decennial Census indicated that the population of Unalaska increased between 2000 and 2010. Based on both estimates, the population of Unalaska increased between 1990 and 2010. The change in population between 1990 and 2010 is provided in Table 1.

In a survey conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that approximately 2,500 seasonal or transient workers come to Unalaska each year. Community leaders also noted that the population of Unalaska reaches its annual peak between January 15th and April 1st each year (during Pollock “A” Season), and that this annual peak in population is “entirely” driven by employment in the fishing sectors.

In 2010, a majority of Unalaska residents identified themselves as White (39.2%) and Asian (32.6%). Other ethnic groups present in Unalaska that year included Hispanic or Latino (15.2%), some other race (7.4%), Black or African American (6.9%), American Indian and Alaska Native (6.1%), two or more races (5.6%), and Native Hawaiian and Other Pacific Islander (2.2%). Between 2000 and 2010, the percentage of the population identifying themselves as White, American Indian and Alaska Native, and some other race decreased, with corresponding increases in the percentage of the population identifying themselves as Asian, two or more races, Native Hawaiian and Other Pacific Islander, Black or African American, and Hispanic or Latino. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

⁶⁹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁹⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

The average household size in Unalaska in 2010 was 2.46, a slight decrease from 2.50 persons per household in 1990 and 2.51 in 2000. The total number of households in Unalaska increased from 575 in 1990 to 834 in 2000 and 927 in 2010. Of the 1,106 households surveyed in 2010, 21% were owner-occupied, compared to 19% in 2000; 63% were renter occupied, compared to 66% in 2000; 13% were vacant, compared to 11% in 2000; and 3% were occupied seasonally, compared to 4% in 2000. Also in that year, 2,099 residents lived in group quarters, compared to 2,192 in 2000.

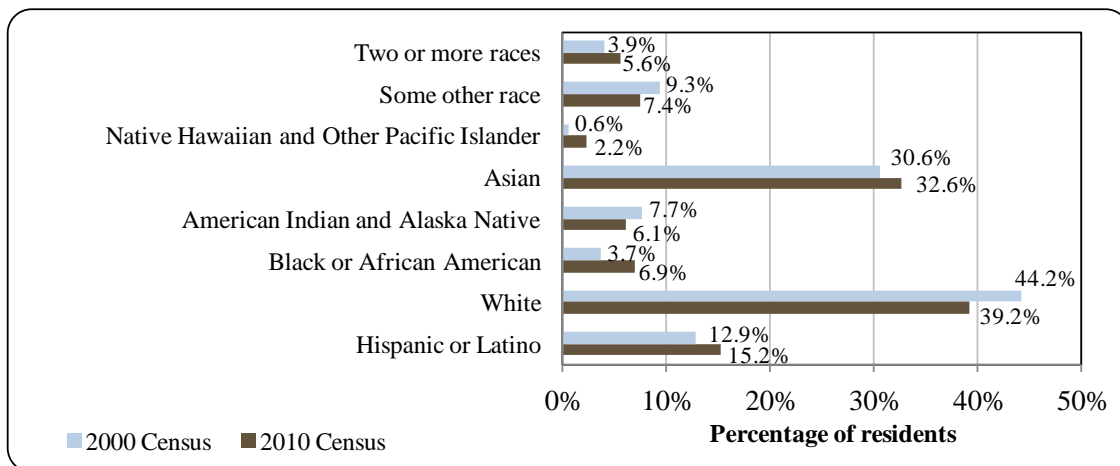
Table 1. Population in Unalaska from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	3,089	-
2000	4,283	-
2001	-	4,248
2002	-	4,035
2003	-	4,370
2004	-	4,363
2005	-	4,299
2006	-	4,028
2007	-	3,652
2008	-	3,549
2009	-	3,662
2010	4,376	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

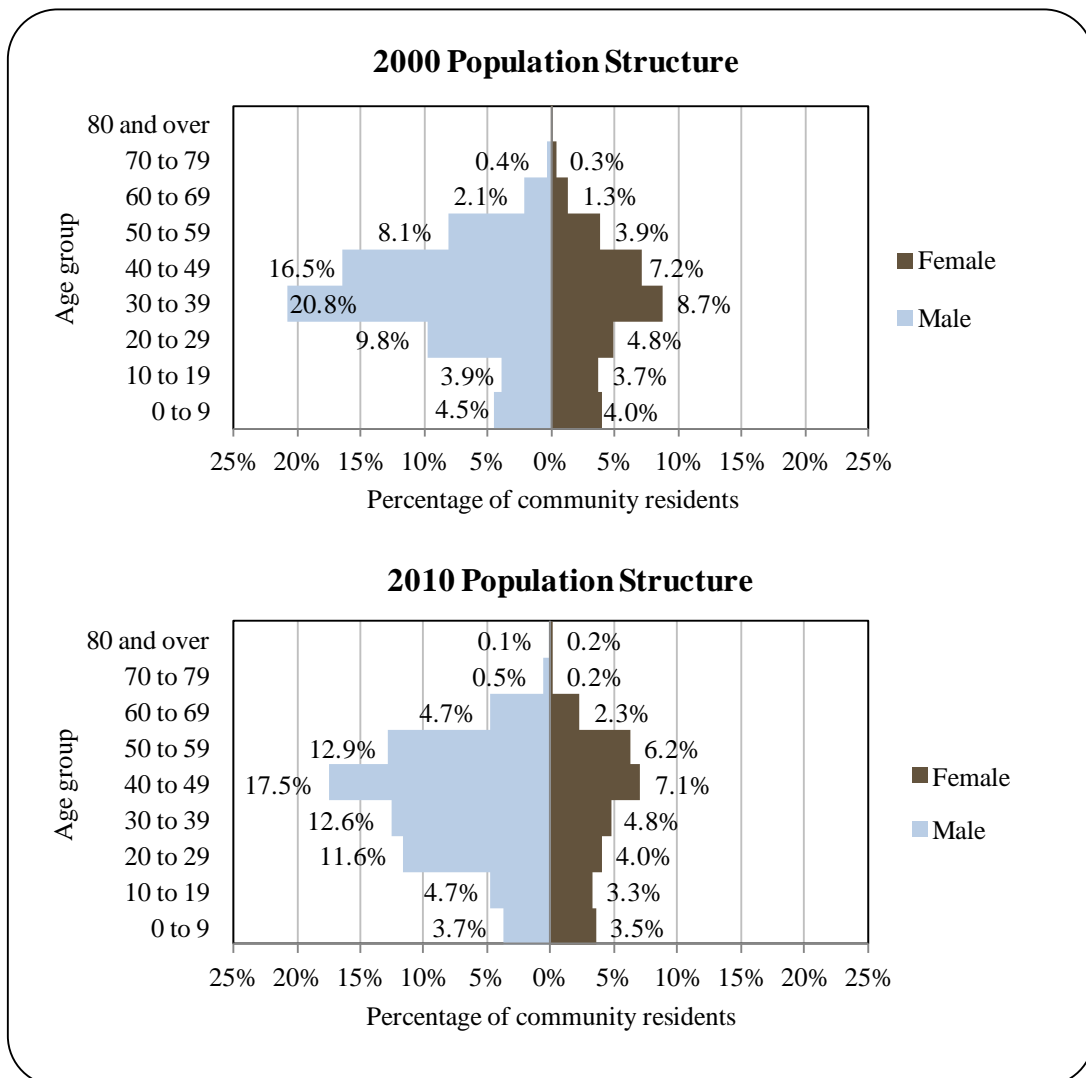
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Unalaska: 2000-2010 (U.S. Census).



In 2010, the gender distribution in Unalaska was 68.4% male and 31.6% female, which was substantially more skewed than the state as a whole (52.0% male, 48.0% female), and similar to the distribution in 2000 (66.1% male, 33.9% female). The median age that year was 40.7 years, which was higher than both the statewide median of 33.8 years, and 2000 median of 36.5 years. The largest percentage of the population fell within the age group 40 to 59 years old, with the next largest percentage in the age group 20 to 39 years old. Relatively few individuals were age 70 or older, and only a small percentage of the population was age 19 or younger. The overall population structure of Unalaska in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Unalaska Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the 2006-10 American Community Survey (ACS)⁶⁹⁷ estimated that 65.3% of Unalaska residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, 22.1% were estimated to have less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; 12.5% were estimated to have a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; 30.2% were estimated to have a high school diploma or equivalent, compared to an estimated 27.4% of Alaska residents overall; 22.7% were estimated to have some college but no degree, compared to an estimated 28.3% of Alaska residents overall; 3.2% were estimated to have an Associate's degree, compared to an estimated 8.0% of Alaska residents overall; 7.7% were estimated to have a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and 1.6% were estimated to have a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*⁶⁹⁸

It is believed that the first inhabitants to the area came across the Bering Land Bridge approximately 10,000 years ago. Archaeological sites on Anangula Island, near Nikolski, are thought to be around 8,000 years old and provide some of the earliest evidence of human occupation of the area.⁶⁹⁹

Russian ships first reached the Aleutians in 1741, lured by the abundance of fur bearing animals. At the time of Russian contact, there was thought to be around 16,000 Aleut inhabitants on the island chain, and more than 3,000 Unangan (known since the Russian era as "Aleuts") lived in 24 settlements on Unalaska and Amaknak Islands in 1759.⁷⁰⁰ During the beginning of Russian occupation, many social and cultural upheavals took place in the Aleutians, often to the detriment of the indigenous population. Many local inhabitants were placed into slavery, while most others feel victim to diseases brought from Europe.⁷⁰¹ Unalaska became a Russian trading port for the fur seal industry in 1768. In 1787, many hunters and their families were enslaved and relocated by the Russian American Company to the Pribilof Islands to work the fur seal harvest.⁷⁰²

By the late eighteenth century, the Aleutians had for the most part been abandoned by Russians in favor of eastern trapping grounds. However, several strategic outposts remained including one in Iliuliuk Harbor. In 1825, the Russian Orthodox Church of the Holy Ascension of Christ was constructed. The founding priest, Ivan Veniaminov, composed the first Aleut writing system with local assistance and translated scripture into Aleut. Since Aleuts were not

⁶⁹⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁹⁹ Trych, Nyman & Hayes (1977). *City of Unalaska, Alaska: Recommended Community Development Plan*. (Retrieved June 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Unalaska-CP-1977.pdf>).

⁷⁰⁰ See footnote 698.

⁷⁰¹ See footnote 699.

⁷⁰² See footnote 698.

forced to give up their language or culture by the Russian Orthodox priests, the church became strong in the community. By 1830 and 1840, however, only 200 to 400 Aleuts lived in Unalaska.

By 1850, Russians abandoned the outpost due to the diminished availability of furs. American influence in Alaska increased as people migrated northward; drawn by furs, fishing, and whaling. Dutch harbor flourished in the 1880s as a coaling station and commercial trade center. The Klondike Gold Rush of the 1890s brought many ships to Dutch Harbor, lured by its position as a gateway to the gold fields of northwest Alaska. By the turn of the twentieth century, several seafood processors may have been in operation processing herring, salmon, and whale meat.⁷⁰³

As coal began to be replaced by oil as ship fuel, the coal trade began to diminish in Dutch Harbor. Fox farming became popular throughout the Aleutians in 1910, which brought economic relief to Unalaska until the Great Depression of the 1930s saw the demise of the fur industry.

The City of Unalaska was incorporated in March 1942. Dutch Harbor Naval Station and Fort Mears were established in Unalaska as diplomatic relations with the Japanese deteriorated. Other military installations were established on Hog Island and remote locations throughout the area. Permanent facilities including a major hospital complex, docking and fueling facilities, submarine drydocking and repair facilities, an airport, and extensive living and recreational facilities were built to serve military personnel stationed in Unalaska. During this time, many Native residents were evacuated to Southeast Alaska communities. On June 3, 1942, Japanese naval forces bombarded Dutch Harbor, damaging or destroying several facilities and killing dozens of U.S. military personnel. Following the war, many villages returned only to find their villages severely damaged or destroyed. The population of Unalaska following the conflict was reported to be about 300.⁷⁰⁴

Interest in fishery resources in the Aleutians began to increase around 1950 with the harvesting and processing of halibut, salmon, and king crab. The growth of the king crab fishery in the early 1960s greatly improved the local economic condition. Unalaska became a rapidly-growing and culturally-diverse community, primarily focused on fishing and fish-processing activities. Subsistence activities are important to both the Unangan community and many long-term non-Native residents, as well.

Unalaska has four sites that appear on the National Register of Historic Places. These include the Church of the Holy Ascension, the Dutch Harbor Naval Operating Base and Fort Mears, the S.S. *Northwestern* shipwreck site, and the Sitka Spruce Plantation.⁷⁰⁵

Natural Resources and Environment

January temperatures range from 25 to 35 °F (-3.9 to 1.7 °C); summers range from 43 to 53 °F (6.1 to 11.7 °C). Average annual precipitation is 58 inches. The mean wind speed is 17 mph.⁷⁰⁶ In a survey conducted by the AFSC in 2011, community leaders reported that Unalaska's economy relies on the following natural resource-based industries: fishing, ecotourism, and sport hunting and fishing.

⁷⁰³ See footnote 699.

⁷⁰⁴ Ibid.

⁷⁰⁵ City of Unalaska (2005). *Unalaska Economic Development Plan*. Retrieved June 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Unalaska-EDP-2004.pdf>.

⁷⁰⁶ See footnote 698.

The Aleutian Range was formed by volcanic outpourings which began around sixty million years ago, and have continued to shape the region since. Erosive forces shaped Unalaska Island, lending to its current, tempered form. Less than a million years ago, volcanic activity on the island diminished, and glaciers and streams began eroding the slopes of the then rugged landscape. The summit of Makushin Volcano eventually collapsed to form a caldera. Periods of glaciations covered most of the high country south of Makushin Volcano and smaller glaciers covered lower parts of the island. Much of Unalaska Island's surface has been scoured by glaciers, leaving cirques. Soils are generally thin and consist of glacial moraine and till, which is gravelly and unsorted in nature. Alluvial deposits exist around drainages, especially around Unalaska Creek. The Unalaska townsite is located on alluvial deposits resulting from stream deposition and wave formed beach deposits. Organic soils are humus and clay rich overlying volcanic materials. Much of the island's topography is steep and unsuitable for development. Groundforms vary from broad, flat valleys and coastlines, to steep mountainous ridges.⁷⁰⁷

Vegetation found in Unalaska consists primarily of alpine tundra. The cool climate, windy conditions, shallow soils, topography, and relative isolation prevent the establishment of larger vegetation types. Lowland areas support the diverse populations of lichens, heaths, and other tundra vegetation; while steeper slopes support less. Plant species include blueberry, crowberry, lichens, small shrubs, herbs, ferns, mosses, and grasses. Trees in the area were introduced artificially. Wildlife found in the Unalaska vicinity includes Steller sea lions, harbor seals, sea otters, and a variety of small terrestrial mammals, birds, and fish.⁷⁰⁸

Unalaska and the surrounding areas are home to a diverse array of wildflowers, berries, and medicinal plants, and wildlife such as seabirds, bald eagles, and a number of endemic birds not often seen outside the Aleutian Islands. Much of the land on Unalaska is privately owned by the Native-owned Ounalashka Corporation, and a land-use permit is required before visitors may explore the area. Makushin Volcano, at 6,680 ft, is the highest point on the island. The volcano steams regularly, but has not had an eruption since an ash discharge in 1980. The city, state, and private industry are investigating possibilities for tapping into the geothermal energy produced by the volcano.⁷⁰⁹

Natural hazards include earthquakes, tsunamis or seiches, and erosion caused by extreme weather events or land disturbance. Earthquake potential is considered high due to the elevated seismicity of the region. Unalaska falls within earthquake zones 3 and 4, which carry a high risk of substantial seismic damage. While tsunamis present a threat, the city is located north side of Unalaska Island which may lessen impacts of waves originating around the Aleutian Megathrust fault. Finally, there is the potential for flooding and erosion along coastal areas of Unalaska Island as well as throughout the Unalaska Creek valley. Damming and obstructions downstream of Unalaska Creek may produce more frequent flooding within upstream areas.⁷¹⁰

According to the Alaska Department of Environmental Conservation (DEC), there was one significant environmental remediation site active at Rocky Point, outside Dutch Harbor. As of 2002, the DEC reported hydrocarbon contaminants within groundwater, including diesel and gasoline range organics. Sources of contaminates include pre- and post-World War II fuel

⁷⁰⁷ Trych, Nyman & Hayes (1977). *City of Unalaska, Alaska: Recommended Community Development Plan*. (Retrieved June 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Unalaska-CP-1977.pdf>.)

⁷⁰⁸ Ibid.

⁷⁰⁹ Unalaska/Port of Dutch Harbor (2010). *Undiscovered, Unforgettable, Unalaska. Official 2010 Visitor Guide*. Unalaska/Port of Dutch Harbor Convention and Visitors Bureau.

⁷¹⁰ See footnote 707.

storage sites, which were operated under multiple entities. It is estimated that the history of these tank farms spans over 60 years, and that the facilities have been the site of numerous spills, leaks, and releases. The DEC has been working with Chevron, Delta Western, and the U.S. Army Corps. of Engineers since 1989 to identify the source and extent of contamination, as well as any responsible parties. As of 2002, ground and surface water contaminants were not believed to be a public health threat.⁷¹¹

Current Economy⁷¹²

Unalaska's economy is based on commercial fishing, fish processing, and fleet services, such as fuel, repairs, maintenance, trade, and transportation. The community enjoys a strategic position as the center of a rich fishing area and is used for transferring cargo between Pacific Rim trading partners. The Great Circle shipping route from major U.S. west coast ports to the Pacific Rim passes within 50 mi of Unalaska, and Dutch Harbor provides natural protection for fishing vessels. Onshore and offshore processors provide some local employment. However, non-resident workers are usually brought in during the peak season. In 2010, 31 residents held commercial fishing permits. Westward Seafoods, Unisea, Alyeska Seafoods, Icicle Seafoods, Trident Seafoods, and Royal Aleutian Seafoods process the commercial catch. Unalaska also has a small tourist industry.⁷¹³ Top employers in 2010⁷¹⁴ included Unisea, Westward Seafoods, the City of Unalaska, Horizon Lines of Alaska LLC, the Unalaska School District, Alyeska Seafoods, Safeway Inc., Pacific Stevedoring Inc., WSTN Pioneer Inc., and American President Lines Ltd.

In 2010,⁷¹⁵ the per capita income in Unalaska was estimated to be \$25,353 and the median household income was estimated to be \$80,625, compared to \$24,676 and \$69,539 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,⁷¹⁶ the real per capita income in 2000 is shown to have been \$32,449 and the real 2000 median household income was \$91,443. This shows that both per capita and household income decreased between 2000 and 2010. In 2010, Unalaska ranked 102nd of 305 Alaskan communities with per capita income that year, and 25th of 299 Alaskan communities with household income data.

However, Unalaska's small population size may have prevented the ACS from accurately portraying economic conditions.⁷¹⁷ Another understanding of per capita income is obtained

⁷¹¹ Alaska Dept. of Environmental Conservation (2002). *Contaminated Sites Program*. Retrieved June 12, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

⁷¹² Unless otherwise noted, all monetary data are reported in nominal values.

⁷¹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷¹⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁷¹⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁷¹⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁷¹⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by DOLWD. According to the ALARI database, residents earned a \$66.92 million in total wages in 2010.⁷¹⁸ When matched with the population in 2010, the per capita income equals \$15,293, suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census.⁷¹⁹ Again, because labor force data presented by DOLWD does not include self-employed residents, many residents working in fisheries sectors may not have been captured by estimates. This is an especially important consideration concerning Unalaska.

Based on the 2006-10 ACS,⁷²⁰ 97.3% of the population aged 16 and older was estimated to be in the civilian labor force, compared to a statewide rate of 68.8%. The local unemployment rate was 2.2%, compared to the statewide unemployment rate of 5.9%. Approximately 11.5% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Unalaska are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Unalaska. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 23.6%.

Based on household surveys conducted for the 2006-2010 ACS,⁷²¹ the greatest percentage of workers were employed in the private sector (95.0%), while 3.8% of workers were employed in the public sector and 1.1% were self-employed. By industry, most (82.6%) employed residents were estimated to work in manufacturing sectors in 2010; followed by transportation, warehousing, and utilities sectors (5.7%); and education service, health care, and social assistance sectors (2.0%). By occupation type, most (70.6%) employed residents were estimated to hold production, transportation, or material moving positions; followed by service positions (7.8%); management or professional positions (7.4%); natural resources, construction, or maintenance positions (7.4%); and sales or office positions (6.8%). Between 2000 and 2010 there was a significant proportional increase in employment in manufacturing sectors as well as in production, transportation, and material moving occupations. This may be attributed to evolving economic conditions; however, it may also be attributed to sampling, coverage, or measurement error within the ACS sample as a result of a high number of transient residents residing within the city. Unalaska is known to be one of the top commercial fishing ports in Alaska. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in farming, fishing, and forestry may be underestimated in Census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

According to 2010 ALARI estimates,⁷²² most (46.4%) of employed residents work in manufacturing sectors; followed by trade, transportation, and utilities (23.5%) and local government sectors (14.4%).

⁷¹⁸ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁷¹⁹ See footnote 717.

⁷²⁰ See footnote 715.

⁷²¹ Ibid.

⁷²² See footnote 714.

Figure 3. Local Employment by Industry in 2000-2010, Unalaska (U.S. Census).

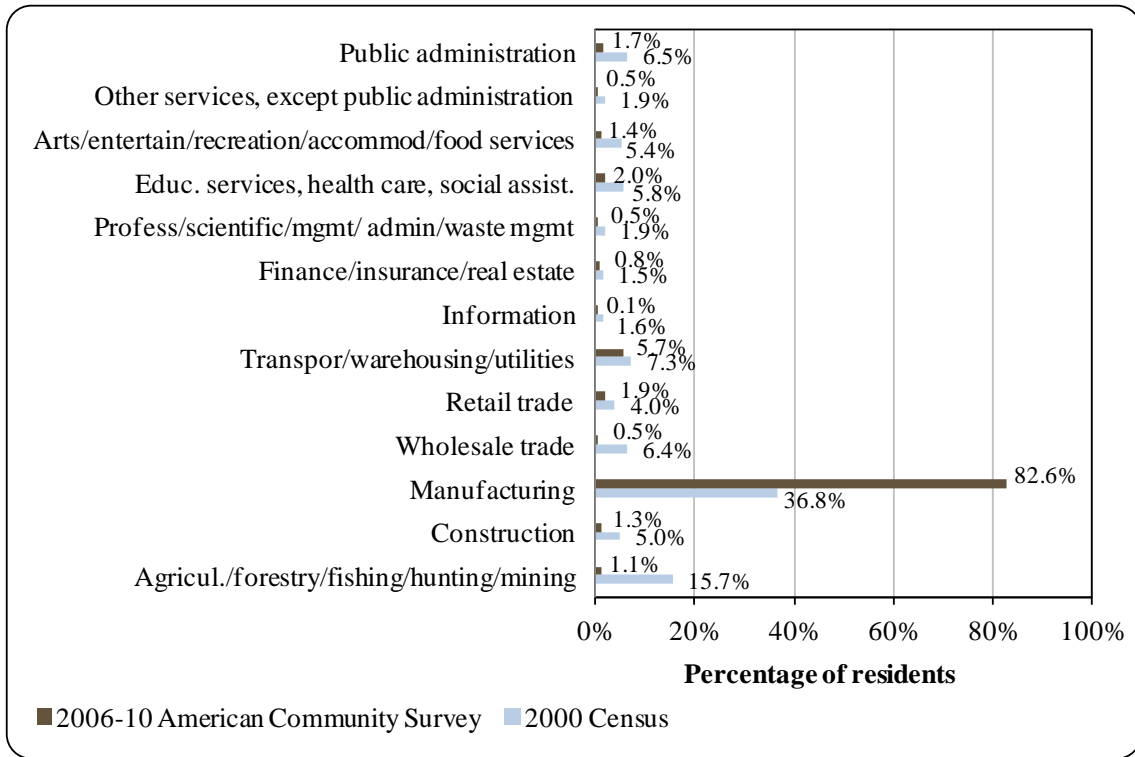
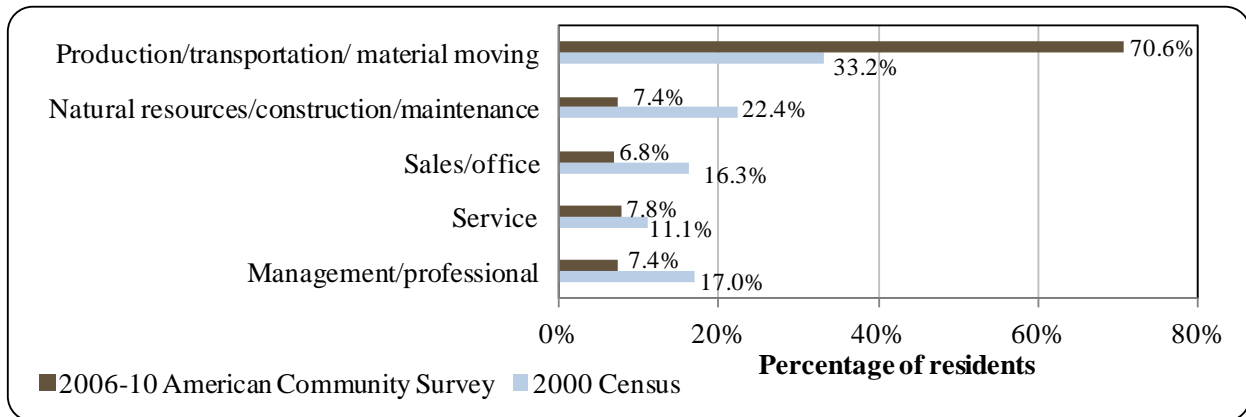


Figure 4. Local Employment by Occupation in 2000-2010, Unalaska (U.S. Census).



Governance

Unalaska is a First-class city that is not located within an organized borough. The city administers a 2% sales tax and a 2% raw fish tax. The total municipal revenue received by Unalaska in 2010 was approximately \$29.0 million, an amount which has increased overall since the year 2000. General fund revenues peaked in 2009 at approximately \$34.9 million. Sales tax revenue received by the city also increased between 2000 and 2010, though the peak years of sales tax revenue were in 2008 and 2009. Unalaska received State and Community Revenue

Sharing between 2000 and 2003 of approximately \$100,000-129,000 per year, and in 2009 and 2010, the amount of approximately \$278,000 per year. In addition, Unalaska received fisheries-related grants between 2000 and 2010 for projects including an assessment of fish and other biological waste from Unalaska Fish Oil, harbor and navigation improvements and construction, funds toward boat harbor maintenance, and funds toward improvements and construction for the Unalaska Little South America (LSA) harbor. Information about selected aspects of Unalaska’s community revenue is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Unalaska from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$19,413,550	\$3,269,242	\$129,402	\$5,000
2001	\$22,170,479	\$3,625,064	\$103,053	n/a
2002	\$20,015,517	\$5,233,203	\$106,462	\$7,500,000
2003	\$20,193,196	\$5,906,859	\$106,094	\$7,500,000
2004	\$22,933,930	\$6,350,610	-	n/a
2005	\$20,097,405	\$7,646,280	-	n/a
2006	\$21,895,565	\$6,049,831	-	\$5,324,500
2007	\$24,196,040	\$6,297,674	-	n/a
2008	\$31,338,570	\$11,036,560	-	n/a
2009	\$34,903,838	\$10,431,035	\$277,152	\$1,500,000
2010	\$28,984,464	\$8,733,038	\$279,655	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Unalaska was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Ounalashka Corporation. Unalaska also is represented by the Aleut Corporation, a regional Native corporation. The Aleut Corporation is committed to promoting economic, cultural, and social growth for its shareholders through its subsidiaries, partnerships and foundation. The Aleut Corporation is one of the 13 regional Native corporations that were established in 1972 under ANCSA. The Aleut Corporation received a settlement of \$19.5 million, 66,000 acres of surface lands, and 1.572 million acres of subsurface estate. Lands selected by the Aleut Corporation include areas on the Alaska Peninsula and the Aleutian, Shumagin, and Pribilof Islands. Among the Corporation’s holdings is the village site of Attu and numerous historical and cemetery sites throughout the Aleut Region. Operations of the Aleut Corporation and subsidiaries include Government Contracting, Telecommunications,

Environmental Remediation, Fuel Sales, and Real Estate Management. The Company also participates in various partnerships, joint ventures and other business activities.⁷²³

Both the Alaska Department of Fish and Game (ADF&G) and the National Marine Fisheries Service (NMFS) hold offices in Unalaska. The nearest office of the Alaska Department of Natural Resources is located in Homer. The nearest office of the Alaska Department of Commerce, Community, and Economic Development is located in Dillingham. The nearest offices of the Bureau of Citizenship and Immigration Services and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Daily scheduled flights serve the community at the state-owned 3,900 ft long by 100 ft wide paved runway. A seaplane base is also available. In June 2012, round-trip airfare between Unalaska and Anchorage was \$958.⁷²⁴ The state ferry operates on a bi-monthly schedule from Kodiak between April and October. There are 10 major docks in Unalaska; three are operated by the city. The International Port of Dutch Harbor serves fishing vessels and shipping, with 5,200 ft of moorage and 1,232 ft of floating dock. The small boat harbor provides 238 moorage slips. The Unalaska Marine Center and U.S. Coast Guard dock offers cargo, passenger, and other port services.⁷²⁵

*Facilities*⁷²⁶

Water is supplied by a dam at Pyramid Creek and Unalaska Creek and a water reservoir at Icy Creek. It is then chlorinated and stored in a tank. All homes and on-shore fish processors are served by the city's piped water system. Piped sewage receives primary treatment before discharge into Unalaska Bay. Nearly all households have plumbing; a few homes use septic tanks or privies. The city has a class-1 lined 6-acre landfill and baler; recycling and hazardous waste disposal is provided. All shore-based processors generate their own electrical power.

Law enforcement is provided by the city police department, a state troopers post, and a Village Public Safety Officer. Fire and rescue services are provided by the Unalaska Fire/Emergency Medical Services and the Unalaska Search and Rescue Divers. The city maintains a community center, city hall, and city jail. Senior services are provided by the Unalaska Senior Citizens, Incorporated, and the Father Ishmail Gromoff Senior Center. There are both public and school libraries in Unalaska, and Unalaska also has the Museum of the Aleutians and the Aleutian World War II Historical Park.

According to a survey conducted by the AFSC in 2011, community leaders reported that the following infrastructure projects have been completed within the past 10 years: fish cleaning

⁷²³ Aleut Corporation: Corporation (n.d.). *Homepage*. Retrieved on May 11, 2012 from <http://www.aleutcorp.com/index.php>.

⁷²⁴ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

⁷²⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷²⁶ Ibid.

station, improvements to existing dock structure, electricity serving the dock, water serving the dock, harbor dredging, dry dock space, a jetty, and a school. Community leaders also noted that the following infrastructure projects are in progress: barge landing area, construction of new dock space, and a breakwater. In the same survey, community leaders noted that Unalaska has 7,026 ft of space available for permanent vessels to moor and 2,305 ft of dock space available for transient vessels, and that vessels up to 200 ft long can use moorage in Unalaska including rescue vessels, cruise ships, ferries, and fuel barges. Community leaders reported that public moorage facilities earned \$501,313 in revenue in 2010.

*Medical Services*⁷²⁷

Medical services are provided by the Oonalaska Wellness Center, which is owned by a Tribal non-profit and operated by the Aleutian Pribilof Island Association, Incorporated. The center is a Community Health Aid Program site. The center is a qualified Emergency Care Center. Emergency services have limited highway, marine, and airport access and are provided by 911 telephone services volunteers and a health aide. Alternate health care is provided by the Unalaska Fire/Emergency Management Services. The nearest qualified Emergency Care Center is located in Akutan and the nearest hospital is located in Soldotna.

*Educational Opportunities*⁷²⁸

There are two schools in Unalaska. Eagle's View Elementary School provides instruction to students in pre-school through sixth grade. In 2011 the school had 212 students and 17 teachers. The Unalaska Junior/Senior High School provides instruction to students in grades seven through 12. In 2011 the school had 203 students and 15 teachers.

Involvement in North Pacific Fisheries

*History and Evolution of Fisheries*⁷²⁹

In the early 20th century, seafood processing of salmon, herring, and salt cod was established in Unalaska; although major fisheries were not established until the late 1920s. By the 1940s, the military presence in the region overshadowed commercial fishing, and Dutch Harbor was mostly repurposed as a naval port.

Following World War II the community entered a period of economic depression until the 1960s when halibut, salmon, and king crab fisheries began to develop in earnest. During the 1970s, the Bering Sea/Aleutian Islands (BSAI) king crab fishery brought about an economic boom. During that time, there was a dramatic increase in the number of commercial fishing vessels and seafood processors within the community.

By 1979, the Port of Dutch Harbor was a leading U.S. commercial fishing port as crab harvests boomed during the 1970s. Between 1975 and 1977, the Tanner crab harvest jumped

⁷²⁷ Ibid.

⁷²⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁷²⁹ City of Unalaska (2005). *Unalaska Economic Development Plan*. Retrieved June 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Unalaska-EDP-2004.pdf>.

from 7 million lbs to an estimated 50 million lbs. King crab harvests grew to an excess of 60 million lbs by 1977.⁷³⁰ The king crab fishery continued to sustain a local boom until stocks collapsed in the early 1980s. The collapse led to an economic bust until 1986, when Unalaska transitioned to a groundfish-based economy. Rapid growth occurred in the BSAI pollock fishery between 1988 and 1992.

By 1992, Dutch Harbor was the number one U.S. port in amount and value of commercial fish landed. In the years following, the commercial fishing and fish processing industry grew rapidly and diversified. Today, major varieties of fish processed in Unalaska include king, Tanner (*bairdi*) and snow (*opilio*) crab, pollock, Pacific cod, salmon, herring, halibut, sablefish, turbot, Atka mackerel, and rockfish.

Although the majority of Unalaska residents depend on income derived directly or indirectly from the commercial fishing and fish processing industry, few have ownership interest in major sea-food related firms. Many of the largest shore-side fish processors are wholly- or partially-owned by Japanese interests. Many other large processor vessels (motherships), or floating processor barges are owned by non-Alaskan firms. Many commercial vessels are non-Alaskan owned as well, although this trend has been changing.

Unalaska is located in the Aleutian Island Chain. The area is included in Federal Statistical and Reporting Area 610, Pacific Halibut Fishery Regulatory Area 4A, and the Western Gulf of Alaska Sablefish Regulatory Area. Unalaska is not eligible to participate in the Community Development Quota or Community Quota Entity programs.

In a survey conducted by the AFSC in 2011, community leaders reported that Unalaska participates in the fisheries management process in Alaska through a paid staff member who attends North Pacific Fishery Management Council (NPFMC) and/or Board of Fisheries meetings, a representative who participates in NPFMC committees or advisory groups, and a representative who sits in on regional fisheries advisory and/or working groups conducted by ADF&G. In addition, Unalaska relies on regional organizations to provide information on fisheries management issues. Finally, Unalaska financially supports research organization, industry coalitions, and trade associations related to North Pacific fisheries.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, two processing facilities were in operation in Unalaska. Alyeska Seafood Inc. is a shore-based processor that began operations in Unalaska in 1986. The plant employs a between 50 and 500 workers each year. The plant provides living accommodations to the majority of its employees and can accommodate 500 people.⁷³¹ Unisea Inc. is a large processing facility that began operations in Unalaska in 1975. The plant employs between 400 and 1,250 workers each year. In 2010, the plant employed a total of 1,222 in the months of February and March.⁷³²

⁷³⁰ Trych, Nyman & Hayes (1977). *City of Unalaska, Alaska: Recommended Community Development Plan*. (Retrieved June 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Unalaska-CP-1977.pdf>.)

⁷³¹ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

⁷³² *Ibid.*

Fisheries-Related Revenue

Unalaska receives fisheries-related revenue from a 2% raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, and harbor usage fees. The total fisheries-related revenue received by Unalaska increased slightly between 2000 and 2010.⁷³³ In 2010, fisheries-related revenue peaked at approximately \$19.8 million, compared to approximately \$11.0 million in 2000. Information about reported fisheries-related revenue received by the community of Unalaska between 2000 and 2010 is provided in Table 3.

In a survey conducted by the AFSC in 2011, community leaders reported that the following public services are at least partially supported or funded by the raw fish tax, Shared Fisheries Business Tax, Fisheries Resource Landing Tax, or the marine fuel sales tax: maintaining the harbor, hospital/medical clinic/emergency response, educational scholarships, roads, social services, water and wastewater systems, roads, and police/enforcement/fire protection.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In Unalaska in 2010, there were 42 permit holders that held a total of 95 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for crab, halibut, herring, sablefish, groundfish, and salmon. Overall, the number of CFEC permits and permit holders decreased between 2000 and 2010, though the number of permits reported as fished remained relatively stable. Between 2000 and 2010, the number of crab CFEC permit holders and permits held remained relatively stable, as did the number/percentage of permits reported as fished. Crab CFEC permits issued in 2010 were for the Cook Inlet Dungeness crab pot fishery, the westward Dungeness crab pot fishery using vessels 60 ft in length or over, the Dutch Harbor, Aleutian CDQ (Aleutian Pribilof Island Community Development Association), Bering Sea, and Bristol Bay king crab pot fisheries using vessels 60 ft or over. Other crab CFEC permits issued in 2010 were for the Dutch Harbor Tanner crab pot fishery using vessels under 60 ft, the Peninsula-Aleutians, Dutch Harbor, and Bering Sea Tanner crab pot fisheries using vessels 60 ft or over, and the Kodiak Tanner (*bairdi*) crab pot fishery using vessels up to 120 ft. The number of salmon CFEC permits and permit holders increased between 2000 and 2010, though the percentage of those permits reported as fished actually decreased during this period. Salmon CFEC permits issued in 2010 were for the Prince William Sound, Chignik, and Peninsula-Aleutians purse seine fisheries, the Prince William Sound, Peninsula-Aleutians, and Bristol Bay drift gill net fisheries, the Peninsula-Aleutians set gill net fishery, and the statewide hand troll fishery. The number of groundfish and halibut CFEC permits and permit holders decreased between 2000 and 2010, though in both fisheries the percentage of permits reported as fished increased during this period. Halibut CFEC permits issued in 2010 were for the statewide longline vessel fisheries using vessels under 60 ft and 60 ft or over. Groundfish CFEC permits issued in 2010 were for the following statewide miscellaneous saltwater finfish fisheries: longline using vessels under 60 ft, pot gear using vessels under 60 ft, mechanical jig, longline

⁷³³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

vessels 90 ft or over, otter trawl using vessels between 90 and 125 ft, and otter trawl using vessels over 125 ft. The number of sablefish and herring CFEC permits and permit holders experienced an increase followed by a decrease between 2000 and 2010. Sablefish permits issued in 2010 were for the statewide longline and pot gear fisheries using vessels under 60 ft. Herring CFEC permits issued in 2010 were for the Bristol Bay roe herring (purse seine and gill net) fisheries and the Alaska Peninsula herring food/bait gillnet fishery. During that same period, the percentage of sablefish CFEC permits reported as fished increased, while the percentage of herring CFEC permits reported as fished decreased.

The number of Federal Fisheries Permits and permit holders increased and then decreased between 2000 and 2010, while the percentage of those permits reported as fished increased overall during that same period. There were 17 permit holders that held 22 groundfish License Limitation Program (LLP) permits in 2010, representing an increase in number of permits and permit holders between 2000 and 2010. The number of groundfish LLP permits reported as fished also increased during this period. Also in 2010, there were five individuals holding seven crab LLP permits, both of which represent a slight increase from the amount of permits and permit holders in 2000. Between 2000 and 2010, the number of crab LLP permits reported as fished remained between zero and three each year. Information on commercial fishing permits and permit holders by species between 2000 and 2010 is presented in Table 4.

In 2010, there were 181 crew license holders, 14 fish buyers, and seven shore-side processing facilities in Unalaska, all of which represent decreases from the number of crew license holders (197), fish buyers (29), and shore-side processing facilities (8) in 2000. Between 2000 and 2010 there was also an overall decrease in the number of vessels owned primarily by Unalaska residents and in vessels homeported in Unalaska. The number of vessels landing catch in Unalaska also decreased between 2000 and 2010, as did the total number of net lbs landed in Unalaska. The amount of ex-vessel value of the catch landed in Unalaska briefly increased between 2000 and 2010, though in 2010 the amount of ex-vessel revenue from catch landed in Unalaska was similar to the amount of ex-vessel revenue in 2000. Information regarding characteristics of the commercial fishing sector in Unalaska between 2000 and 2010 is provided in Table 5. Unalaska was the top port in Alaska in landings and ex-vessel revenue in 2010, ranking first in landings and ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings.

Between 2000 and 2010, the number of halibut quota share account holders and the number of quota shares held increased substantially, though the halibut Individual Fishing Quota (IFQ) allotment (in lbs) increased only slightly (Table 6). The number of sablefish quota share account holders increased and then decreased between 2000 and 2010, as did the number of quota shares held and the sablefish IFQ allotment (Table 7). Between 2005 and 2010, the number of crab quota share account holders decreased from three to two, while the total number of quota shares and the crab IFQ allotment increased slightly (Table 8).

For at least some years between 2000 and 2010, the number of lbs landed (and the associated ex-vessel revenue) for finfish, herring, and salmon is considered confidential due to a small number of participants. For years and species for which data are not considered confidential, the total number of lbs landed in Unalaska decreased overall between 2000 and 2010. Both landings and associated ex-vessel revenue decreased steadily between 2000 and 2010 for halibut, herring, other groundfish, and Pacific cod landed in Unalaska. In contrast, landings and associated ex-vessel revenue increased steadily for sablefish during this same period. For other shellfish and pollock, landings and associated ex-vessel revenue experienced an increase

followed by a decrease during this period. Information on landings and ex-vessel revenue by species in Unalaska between 2000 and 2010 is presented in Table 9.

When landings and ex-vessel revenue are examined by vessel owner residence, for vessels owned by Unalaska residents, both overall landings and overall ex-vessel value increased between 2000 and 2010. During this period, landings and ex-vessel revenue for crab, finfish, herring, other groundfish, other shellfish, pollock, and sablefish are considered confidential for some or all years due to a small number of participants. For years in which data were available, both landings and associated ex-vessel revenue increased between 2000 and 2010 for crab, halibut, herring, Pacific cod, and salmon. While landings of other shellfish increased between 2000 and 2010, the ex-vessel revenue of those landings decreased during the same period. Also between 2000 and 2010, the landings and associated ex-vessel revenue for other groundfish and sablefish both decreased. Information on landed lbs and ex-vessel revenue by species by Unalaska residents between 2000 and 2010 is presented in Table 10.

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing vessels between 35 and 60 ft, from 61 to 125 ft, and over 125 ft use Unalaska as their base of operations during the fishing season. Community leaders also noted that the predominant gear types used by these vessels include: trawl, pots, longline, gillnet, purse seine, and jig. In the same survey, community leaders reported that, for fishing-related businesses that are not available in Unalaska, people travel to Seattle, WA, Kodiak, AK, and Seward, AK.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Unalaska: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$3,431,229	\$3,077,083	\$3,339,469	\$3,662,645	\$4,190,139	\$3,888,475	\$4,193,082	\$4,076,762	\$4,690,713	\$4,633,809	\$3,596,623
Shared Fisheries Business Tax ¹	\$2,483,670	\$3,249,218	\$3,179,798	\$2,838,536	\$3,272,188	\$3,659,452	\$3,446,661	\$3,749,004	\$3,554,414	\$3,877,701	\$4,547,085
Fisheries Resource Landing Tax ¹	\$2,224,904	\$2,813,251	\$3,000,184	\$4,183,141	\$2,579,844	\$3,876,282	\$3,736,810	\$4,889,966	\$4,717,052	\$5,200,898	\$4,040,106
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$2,891,500	\$2,923,670	\$3,020,200	\$3,093,100	\$3,856,650	\$4,068,250	\$4,229,750	\$4,164,750	\$4,166,750	\$3,996,950	\$3,849,539
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$3,743,700
<i>Total fisheries-related revenue⁴</i>	<i>\$11.03 M</i>	<i>\$12.06 M</i>	<i>\$12.54 M</i>	<i>\$13.78 M</i>	<i>\$13.90 M</i>	<i>\$15.49 M</i>	<i>\$15.61 M</i>	<i>\$16.88 M</i>	<i>\$17.13 M</i>	<i>\$17.71 M</i>	<i>\$19.78 M</i>
<i>Total municipal revenue⁵</i>	<i>\$19.41 M</i>	<i>\$22.17 M</i>	<i>\$20.02 M</i>	<i>\$20.19 M</i>	<i>\$22.93 M</i>	<i>\$20.10 M</i>	<i>\$21.90 M</i>	<i>\$24.20 M</i>	<i>\$31.34 M</i>	<i>\$34.90 M</i>	<i>\$28.98 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city brings in each year from all sources, including fisheries-related revenue streams. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Unalaska: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	15	16	19	19	19	19	19	22	25	23	22
	Active permits	6	6	6	4	6	10	10	11	10	12	10
	% of permits fished	40%	37%	31%	21%	31%	52%	52%	50%	40%	52%	45%
	Total permit holders	12	12	14	14	13	13	14	16	17	17	17
Crab (LLP) ¹	Total permits	5	5	5	5	5	5	5	5	7	7	7
	Active permits	1	2	1	0	3	3	3	2	2	3	2
	% of permits fished	20%	40%	20%	0%	60%	60%	60%	40%	28%	42%	28%
	Total permit holders	3	3	3	3	3	3	3	3	4	4	5
Federal Fisheries Permits ¹	Total permits	15	15	15	22	28	29	19	19	21	16	16
	Fished permits	1	1	1	13	12	13	12	13	12	10	11
	% of permits fished	7%	7%	7%	59%	43%	45%	63%	68%	57%	63%	69%
	Total permit holders	15	15	15	18	22	23	18	18	19	15	15
Crab (CFEC) ²	Total permits	22	19	15	22	44	60	25	34	26	25	23
	Fished permits	13	11	10	10	26	30	12	22	14	17	14
	% of permits fished	59%	58%	67%	45%	59%	50%	48%	65%	54%	68%	61%
	Total permit holders	12	8	6	13	26	42	16	26	17	17	15
Other shellfish (CFEC) ²	Total permits	4	2	1	0	10	8	6	2	0	0	0
	Fished permits	0	0	0	0	3	1	0	0	0	0	0
	% of permits fished	0%	0%	0%	n/a	30%	12%	0%	0%	n/a	n/a	n/a
	Total permit holders	4	2	1	0	10	8	6	2	0	0	0
Halibut (CFEC) ²	Total permits	25	28	30	24	24	21	19	22	17	21	20
	Fished permits	20	17	24	18	19	16	14	17	16	16	19
	% of permits fished	80%	61%	80%	75%	79%	76%	74%	77%	94%	76%	95%
	Total permit holders	23	26	27	21	20	20	18	21	17	20	20
Herring (CFEC) ²	Total permits	1	11	19	22	19	8	4	6	3	5	6
	Fished permits	0	6	15	17	13	1	2	2	1	2	1
	% of permits fished	0%	55%	79%	77%	68%	13%	50%	33%	33%	40%	17%
	Total permit holders	1	10	17	20	18	7	3	5	3	4	4

Table 4 Cont. Permits and Permit Holders by Species, Unalaska: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	7	10	10	20	9	7	5	8	9	9	6
	Fished permits	5	5	7	6	5	4	5	7	8	8	5
	% of permits fished	71%	50%	70%	30%	56%	57%	100%	88%	89%	89%	83%
	Total permit holders	7	10	9	15	7	6	4	7	8	8	5
Groundfish (CFEC) ²	Total permits	46	44	49	49	42	45	32	31	27	23	22
	Fished permits	22	15	19	22	18	18	20	17	14	12	15
	% of permits fished	48%	34%	39%	45%	43%	40%	63%	55%	52%	52%	68%
	Total permit holders	40	33	34	35	32	31	27	25	20	18	17
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	8	6	8	8	17	18	20	16	15	15	18
	Fished permits	5	5	4	4	10	10	8	7	5	7	9
	% of permits fished	63%	83%	50%	50%	59%	56%	40%	44%	33%	47%	50%
	Total permit holders	8	6	7	7	15	16	17	14	13	13	15
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>113</i>	<i>120</i>	<i>132</i>	<i>145</i>	<i>165</i>	<i>167</i>	<i>111</i>	<i>119</i>	<i>97</i>	<i>98</i>	<i>95</i>
	<i>Fished permits</i>	<i>65</i>	<i>59</i>	<i>79</i>	<i>77</i>	<i>94</i>	<i>80</i>	<i>61</i>	<i>72</i>	<i>58</i>	<i>62</i>	<i>63</i>
	<i>% of permits fished</i>	<i>58%</i>	<i>49%</i>	<i>60%</i>	<i>53%</i>	<i>57%</i>	<i>48%</i>	<i>55%</i>	<i>61%</i>	<i>60%</i>	<i>63%</i>	<i>66%</i>
	<i>Permit holders</i>	<i>54</i>	<i>57</i>	<i>58</i>	<i>57</i>	<i>62</i>	<i>63</i>	<i>50</i>	<i>54</i>	<i>40</i>	<i>42</i>	<i>42</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Unalaska: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Unalaska ²	Total Net Lbs Landed In Unalaska ^{2,5}	Total Ex-Vessel Value Of Landings In Unalaska ^{2,5}
2000	197	29	8	42	53	350	790,615,622	\$174,458,581
2001	193	33	8	44	56	364	952,112,511	\$163,550,512
2002	197	37	9	50	51	345	1,033,813,180	\$192,495,740
2003	220	31	9	39	44	317	1,031,927,937	\$213,171,334
2004	228	26	7	59	55	312	1,041,336,167	\$193,029,153
2005	212	23	6	52	54	297	1,032,293,981	\$215,908,691
2006	206	24	7	41	42	239	1,042,595,882	\$212,957,412
2007	197	26	6	44	47	241	919,210,055	\$226,415,140
2008	198	19	7	31	36	245	718,780,458	\$278,039,242
2009	236	17	7	33	36	204	583,538,417	\$184,465,644
2010	181	14	7	33	37	196	598,832,454	\$177,265,345

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Unalaska: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
2000	23	764,445	233,257
2001	26	1,035,951	307,718
2002	29	1,163,263	363,817
2003	28	960,982	307,387
2004	31	978,516	232,401
2005	30	1,051,552	240,805
2006	30	1,357,183	292,388
2007	31	1,294,174	242,590
2008	29	1,470,877	303,688
2009	30	1,627,762	286,955
2010	30	1,621,798	262,700

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Unalaska: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
2000	3	1,304	106
2001	5	994,172	80,690
2002	8	1,410,481	131,777
2003	9	1,471,751	198,501
2004	6	1,047,896	140,762
2005	8	1,303,593	147,739
2006	9	1,685,377	220,527
2007	9	1,756,771	237,553
2008	9	1,756,771	223,439
2009	9	1,192,585	140,088
2010	6	645,879	71,437

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Unalaska: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
2005	3	5,409,814	169,993
2006	3	5,745,564	157,046
2007	3	5,745,564	242,422
2008	2	5,534,552	221,695
2009	2	5,534,552	176,972
2010	2	5,534,552	183,863

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-Vessel Revenue, by Species, in Unalaska: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	8,806,624	6,965,412	6,544,566	6,098,296	4,747,960	4,397,199	3,691,249	3,463,925	3,064,403	3,156,026	2,660,462
Herring	--	--	5,597,239	2,934,518	2,522,997	--	--	--	--	--	--
Other Groundfish	8,306,823	3,072,855	3,592,310	3,317,838	4,823,815	3,862,873	5,593,941	6,919,682	6,178,205	11,400,580	5,486,728
Other Shellfish	11,948	1,819,587	444,172	587,934	1,401,323	1,214,185	1,068,354	291,671	377,289	92,585	247,311
Pacific Cod	59,805,350	43,197,794	59,064,568	56,483,533	62,225,432	61,594,050	63,187,655	47,386,862	50,018,188	28,051,065	48,821,227
Pollock	693,722,181	877,220,689	936,318,660	938,304,905	943,518,287	935,392,356	939,634,886	825,014,409	617,217,587	507,772,449	509,608,605
Sablefish	896,536	1,199,068	2,024,173	1,827,679	1,962,169	2,091,137	1,807,935	2,571,450	1,263,663	1,360,998	1,256,158
Salmon	--	--	--	--	--	--	--	--	--	--	31,811
<i>Total²</i>	<i>771,549,462</i>	<i>933,475,405</i>	<i>1,013,585,688</i>	<i>1,009,554,703</i>	<i>1,021,201,983</i>	<i>1,008,551,800</i>	<i>1,014,984,020</i>	<i>885,647,999</i>	<i>678,119,335</i>	<i>551,833,703</i>	<i>568,112,302</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$21,814,085	\$13,415,663	\$14,233,950	\$17,324,784	\$13,611,667	\$12,609,283	\$13,684,654	\$14,569,818	\$11,538,993	\$8,267,668	\$12,056,952
Herring	--	--	\$927,805	\$380,769	\$385,998	--	--	--	--	--	--
Other Groundfish	\$487,656	\$185,751	\$266,567	\$162,943	\$294,398	\$103,209	\$142,740	\$207,562	\$120,783	\$159,454	\$141,715
Other Shellfish	\$23	\$37,282	\$8,903	\$170,291	\$604,535	\$248,262	\$149,953	\$47,102	\$77,184	\$5,053	\$26,548
Pacific Cod	\$17,981,796	\$10,500,953	\$12,380,529	\$15,762,947	\$14,325,809	\$16,131,747	\$24,824,574	\$22,299,230	\$28,870,146	\$6,905,765	\$13,760,274
Pollock	\$80,176,569	\$87,789,785	\$101,030,630	\$101,622,304	\$96,497,785	\$112,034,504	\$115,265,862	\$95,044,526	\$122,145,606	\$90,887,890	\$70,811,938
Sablefish	\$3,183,669	\$3,610,506	\$5,146,653	\$5,843,384	\$4,877,279	\$5,719,929	\$6,051,955	\$8,165,167	\$4,855,102	\$5,265,209	\$5,753,158
Salmon	--	--	--	--	--	--	--	--	--	--	\$0
<i>Total²</i>	<i>\$123,643,798</i>	<i>\$115,539,940</i>	<i>\$133,995,037</i>	<i>\$141,267,422</i>	<i>\$130,597,470</i>	<i>\$146,846,934</i>	<i>\$160,119,739</i>	<i>\$140,333,405</i>	<i>\$167,607,814</i>	<i>\$111,491,039</i>	<i>\$102,550,584</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-Vessel Revenue, by Species, by Unalaska Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	159,727	456,995	234,293	212,321	236,892	35,294	547,803	413,573
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	293,200	409,860	482,207	489,878	432,764	330,633	353,343	354,725	382,887	339,742	551,044
Herring	--	--	266,488	176,259	366,274	--	--	--	--	--	--
Other Groundfish	--	67,877	--	--	15,420	--	--	--	4,015	522	1,116
Other Shellfish	--	--	--	--	2,686	9,778	24,884	7,641	--	5,780	7,890
Pacific Cod	721,495	1,290,943	916,605	1,237,263	191,683	905,723	2,436,760	2,182,645	2,682,169	2,342,198	3,349,215
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	257,317	345,944	207,599	31,202
Salmon	343,552	557,698	109,544	--	741,275	1,630,368	1,324,132	1,740,565	906,240	978,220	1,066,270
<i>Total²</i>	<i>1,358,247</i>	<i>2,326,378</i>	<i>1,774,844</i>	<i>2,063,127</i>	<i>2,207,097</i>	<i>3,110,795</i>	<i>4,351,440</i>	<i>4,779,785</i>	<i>4,356,549</i>	<i>4,421,864</i>	<i>5,420,310</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	\$491,220	\$903,978	\$363,836	\$240,623	\$412,233	\$58,248	\$863,326	\$684,952
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$719,010	\$790,144	\$1,059,245	\$1,391,557	\$1,240,750	\$959,751	\$1,314,286	\$1,519,828	\$1,468,392	\$901,336	\$2,500,779
Herring	--	--	\$53,298	\$34,469	\$62,632	--	--	--	--	--	--
Other Groundfish	--	\$37,689	--	--	\$5,969	--	--	--	\$1,223	\$357	\$1,213
Other Shellfish	--	--	--	--	\$2,323	\$7,501	\$11,271	\$3,950	--	\$1,952	\$117
Pacific Cod	\$423,127	\$568,114	\$340,387	\$453,061	\$55,317	\$290,144	\$1,047,157	\$1,136,951	\$1,634,648	\$687,970	\$1,018,201
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	\$784,866	\$1,390,265	\$910,655	\$163,001
Salmon	\$222,378	\$217,649	\$55,047	--	\$343,263	\$594,151	\$527,539	\$616,483	\$536,866	\$607,317	\$853,144
<i>Total²</i>	<i>\$1,364,515</i>	<i>\$1,613,595</i>	<i>\$1,507,977</i>	<i>\$2,370,306</i>	<i>\$2,614,231</i>	<i>\$2,215,383</i>	<i>\$3,140,875</i>	<i>\$4,474,311</i>	<i>\$5,089,641</i>	<i>\$3,972,912</i>	<i>\$5,221,406</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In 2010, there were two sport fish guide businesses active in Unalaska, and two sport fish guide licenses were held by residents. Both the number of sport fish guide businesses and the number of sport fish guide licenses decreased between 2000 and 2010. Log book data for sportfishing charters out of Unalaska between 2000 and 2010 reported that the following species were kept/released on charters during this period: halibut, lingcod, other rockfish, pink salmon, pelagic rockfish, and shark.⁷³⁴

In 2010, there were 542 sportfishing licenses sold to Unalaska residents (irrespective of the location of the point of sale), a number which declined steadily between 2000 and 2010. However, in 2010 there were 1,163 sportfishing licenses sold in Unalaska, representing an overall increase between 2000 and 2010. This indicates the potential that visitors to Unalaska are participating in recreational fishing activities.

Unalaska is located within the Alaska Sport Fishing Survey Area R – Alaska Peninsula/Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the region (18,462 on average) than Alaska resident anglers (15,290 on average). This information about the sportfishing sector in and near Unalaska is also displayed in Table 11.

The Alaska Statewide Harvest Survey, conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Unalaska: all five species of salmon, Dolly Varden, Pacific halibut, rockfish, Pacific cod, Tanner crab, and razor clam.⁷³⁵

According to a survey conducted by the AFSC in 2011, community leaders reported that recreational fishing in Unalaska takes place from charter/party boats, private boats owned by local residents, private boats owned by non-residents, shore-based or dock fishing by local residents, shore-based or dock fishing by non-residents, and fishing on lakes, in rivers, and on ocean banks. In the same survey, community leaders indicated that the following saltwater species are targeted by recreational fishermen that use boats based in Unalaska: pink salmon, chum salmon, Chinook salmon, coho salmon, sockeye salmon, halibut, rockfish, crab, black cod/sablefish, shrimp, and octopus.

⁷³⁴ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁷³⁵ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Unalaska: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Unalaska ²
2000	3	14	843	795
2001	6	16	808	714
2002	4	12	744	794
2003	4	7	641	643
2004	5	9	621	684
2005	2	4	554	671
2006	2	3	567	640
2007	3	4	534	779
2008	1	1	542	769
2009	1	1	558	1,013
2010	2	2	542	1,163

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence activities are important to the Unangan community and to many long-term non-Native residents of Unalaska.⁷³⁶ According to a survey conducted by the AFSC in 2011, community leaders reported that the more important subsistence marine or aquatic resources to the residents of Unalaska are sockeye salmon, halibut, coho salmon, and crab. While data on subsistence participation by household and species were not available between 2000 and 2010 (Table 12), data are available for total harvest of subsistence resources at the species level.

According to 2005 U.S. Fish and Wildlife Service (USFWS)⁷³⁷ interviews, Unalaska residents reported that overall, local salmon numbers had diminished compared to decades prior. Poor conditions of local fish, including observed cysts or burns, had lead residents to suspect that waste outfalls and industrial pollutants were impacting local fish stocks. The effects of the Kuroshima oil spill in 1997 were also believed to have impacted shellfish populations. Several respondents mentioned the local practice of beached whale harvests. Other marine mammals mentioned in 2002 interviews included a heavy dependence on harbor seal, Steller sea lion, and Pribilof Islands' northern fur seals. Residents subsisting on these resources will often venture out in search of halibut, and will bring a rifle in case a seal presents itself. There is perceived competition with the commercial fishing industry for subsistence resources. Local residents complain of seasonal or transient residents crowding local subsistence areas and depleting fish stocks.

In 2008, the most recent year for which data were available for salmon harvesting, there were 199 subsistence salmon permits issued to Unalaska residents, a value which ranged from 172 subsistence salmon permits issued in 2007 to 226 permits issued in 2002. Also in 2008, 158 of the subsistence salmon permits were reported as fished. Subsistence salmon harvest between 2000 and 2008 included Chinook salmon, chum salmon, coho salmon, pink salmon, and sockeye salmon, though the amount of each species harvested for subsistence use varied from year to year during this period. Sockeye salmon were the primary species harvested under subsistence permits between 2000 and 2008 (Table 13). Information regarding subsistence harvest of marine invertebrates and non-salmon fish was not available during this period.

Between 2003 and 2009, the number of Subsistence Halibut Registration Certificate (SHARC) cards issued increased overall, as did the number of SHARC cards reported as fished. The number of pounds of halibut harvested for subsistence purposes using SHARC cards also increased during this period. However, in 2010 there was a significant drop in the number of SHARC held, SHARC fished, and halibut harvested. In that year, an estimated 12,610 pounds of halibut was harvested on 55 SHARC, compared to an estimated 29,306 pounds harvested on 76 SHARC in 2009. Information regarding subsistence halibut harvests can be found in Table 14.

Information about subsistence harvest of marine mammals was available between 2000 and 2008, with the exception of 2007. No known harvesting of beluga whales, sea otters, or walrus for subsistence purposes occurs in Unalaska. Harvest data were reported for sea lion and harbor seal harvest between 2000 and 2008, though the numbers of each species harvested decreased substantially during that period. The number of sea lions harvested decreased from 49

⁷³⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷³⁷ U.S. Fish and Wildlife Service. (2005). *Subsistence Fisheries Harvest Assessment and Traditional Ecological Knowledge, Lower Alaska Peninsula and Aleutian Islands*. Retrieved June 13, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/02-032Final.pdf>.

in 2000 to 3 in 2008, and the number of harbor seals harvested decreased from 34 in 2000 to 0 in 2008. Information on subsistence harvest of marine mammal resources is provided in Table 15.

Table 12. Subsistence Participation by Household and Species, Unalaska: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Unalaska: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	206	162	7	25	615	569	3,935	n/a	n/a
2001	202	168	6	77	724	786	4,258	n/a	n/a
2002	226	178	3	65	706	385	5,618	n/a	n/a
2003	220	172	24	40	572	378	5,094	n/a	n/a
2004	210	173	7	25	955	437	4,757	n/a	n/a
2005	208	146	6	14	423	527	4,055	n/a	n/a
2006	198	161	17	74	422	675	2,085	n/a	n/a
2007	172	122	14	43	254	683	2,649	n/a	n/a
2008	199	158	7	90	829	660	1,855	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Unalaska: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	92	50	10,860
2004	131	81	20,706
2005	150	88	17,417
2006	171	81	16,331
2007	176	82	13,250
2008	173	88	13,710
2009	164	76	29,306
2010	155	55	12,610

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Unalaska: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	49	34	n/a
2001	n/a	n/a	n/a	n/a	23	38	n/a
2002	n/a	n/a	n/a	n/a	10	14	n/a
2003	n/a	n/a	n/a	n/a	10	14	n/a
2004	n/a	n/a	n/a	n/a	11	29	n/a
2005	n/a	n/a	n/a	n/a	12	30	n/a
2006	n/a	n/a	n/a	n/a	9	9	n/a
2007	n/a	n/a	n/a	n/a	9	9	n/a
2008	n/a	n/a	n/a	n/a	3	0	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

The Museum of the Aleutians in Unalaska is the only archaeological research and museum storage facility for the Aleutian region. The Aleutian World War II Visitor Center contains informational exhibits about the men and women who served in the US Armed Forces in the Aleutian Islands during World War II, as well as about the removal and internment of the Unangax (Aleuts) during the war.⁷³⁸

When asked in a survey conducted by the AFSC in 2011 to describe the effects seen on Unalaska as a result of fisheries policies or management actions, community leaders reported that regulations resulting from the 2010 Steller sea lion protection measures have had impacts on harvesters, processors, and fishery support sector businesses. In addition, restrictive bycatch regulations on various species have impacted harvests, processors, and fisheries support sector businesses. Finally, Essential Fish Habitat closures have had impacts on Aleutian and Pribilof Island area. Positive impacts include catch share programs for pollock, crab, halibut, and sablefish.

According to community leaders, future salmon bycatch restrictions for chum salmon in the Bering Sea would have the potential to impact the Eastern Bering Sea Pollock “B” season. That season constitutes 60% of the annual Eastern Bering Sea pollock allocation. If restrictions result in the closure of the entire “B” season, impacts on Unalaska’s economy are expected.

⁷³⁸ Unalaska/Port of Dutch Harbor (2010). *Undiscovered, Unforgettable, Unalaska. Official 2010 Visitor Guide*. Unalaska/Port of Dutch Harbor Convention and Visitors Bureau.

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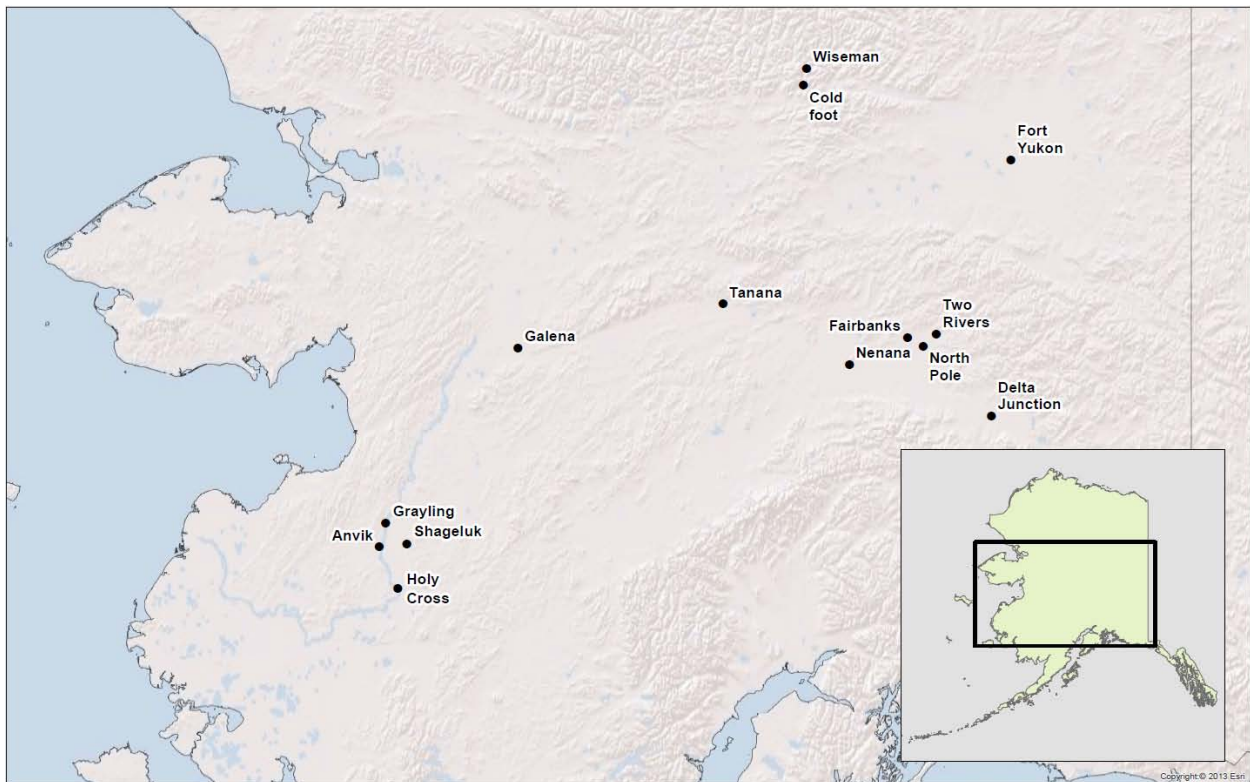
Regional Introduction: Interior Alaska

Communities

Anvik
Coldfoot
Delta Junction
Fairbanks
Fort Yukon

Galena
Grayling
Holy Cross
Nenana
North Pole

Shageluk
Tanana
Two Rivers
Wiseman



People and Place

Location

The majority of interior Alaskan communities lie on the banks of the middle and upper branches of the Yukon and Kuskokwim rivers as well as their tributaries. The vast area ranges from the community of Anvik (62.66° N by -160.21° W) to the Canadian border, and as far north as the community of Wiseman (67.41° N by -150.11° W). Fairbanks (64.84° N by -147.72° W) is the region's largest city and economic hub.

Demographic Profile

Interior Alaska consists of one borough (Fairbanks Northstar Borough), and two census areas (Southeast Fairbanks Census Area and Yukon-Koyukuk Census Area). A total of 14 communities met our criteria for profiling, of which only 5 exceeded 500 residents in 2010. In that year, the regional population was 110,198, of which 28.6% lived in the city of Fairbanks.¹

In 2010, 74.5% of residents identified themselves as White, 14.5% identified themselves as at least part American Indian or Alaska Native, 5.5% identified themselves as at least part Black or African American, 3.9% identified themselves as at least part Asian, and 0.7% identified themselves as at least part Native Hawaiian or Other Pacific Islander. In addition, 5.4% of residents identified themselves as Hispanic or Latino. It should be noted that most residents who identified themselves as White in 2010 were concentrated within the Fairbanks Northstar Borough, which is also where 88.6% of the region's total population resides. Because of this, region-wide statistics mask demographics found outside the region's population centers. For example, only 22.2% of residents within the Yukon-Koyukuk Census Area identified themselves as White, while 76.4% identified themselves as at least part American Indian or Alaska Native.²

Rural communities within the region have a mixed cash and subsistence economy. However, for most communities subsistence is the dominant form of livelihood. Many communities rely on construction, mining, and commercial fishing for seasonal wage employment. Permanent wage positions within smaller communities are often tied to the local government or schools. The communities of Coldfoot and Wiseman are dependent on traffic along the Dalton Highway. These communities depend on tourism, commercial trucking, and public lands management for employment. The city of Galena acts as a regional center for western interior Alaska, providing air transportation, retail, and government employment. The Fairbanks region includes Fairbanks, Two Rivers, North Pole, Delta Junction, and Nenana, and is the economic hub for interior Alaska. Major sectors include retail, transportation, mineral and petroleum support services, agriculture, governance, and military services.³ In 2010, overall regional per capita income was estimated at \$25,555 and overall median household income was estimated at \$65,813. Again, there were significant differences between rural and urban areas.

¹ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Ibid.

³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Fairbanks Northstar Borough had an estimated per capita income of \$30,395 and estimated median household income of \$79,824; while the Yukon-Koyukuk Census Area had an estimated \$18,614 and \$45,463 respectively.⁴

*History*⁵

Evidence of early human occupation of the southern Brooks Range is estimated to stretch back approximately 8,500 to 11,000 years according to Paleo-Arctic sites found in the upper Kobuk River region and Anaktuvuk Pass.⁶ Evidence of Proto-Athabaskan-Eyak traditions within the Yukon River region date back at least 6,000 years.⁷ Many distinct Athabaskan language groups populate interior Alaska including Deg Hit'an, Holikachuk, Koyukon, Kuskokwim, Tanana, Ahtna, Gwich'in, Han, and Tanacross.⁸ Extensive trade networks existed, connecting interior Athabaskans with coastal groups around the Norton Sound and Siberia.

In 1790, the Lebedev-Lastochkin Company began exploring the lower Yukon River in an effort to expand its fur trade operations. Soon after, the Russian-American Company began exploiting the area, and as resources declined effort was expanded into the western interior. By 1845, the Hudson's Bay Company had begun operating on the Porcupine River, and soon furs were being traded with Athabaskans along the upper Yukon River. In the latter part of the nineteenth century, the Western Union Telegraph Company began exploring the region as part of an effort to create a global telegraph network. Since attempts to run a telegraph line under the Atlantic Ocean had failed, it was decided that a line would instead be connected to Siberia via a cable running through the Bering Sea. Part of this undertaking involved the forming of an expeditionary team to collect information about the land through which the line would pass. This was the first time Americans explored Alaska's interior. Competition for furs escalated in the region, and by 1883 the Alaska Commercial Company held a monopoly, and the price of furs dropped. In 1886, gold was discovered at Fortymile River, and prospectors soon began filling the new mining district. As mining grew, so did the Yukon River's importance as a regional transportation route. Riverboats operated by the Alaska Commercial Company and the North American Trading and Transportation Company became the principle means of getting into interior Alaska.

By the start of the twentieth century, most prospectors were broke and the volatile fur trade left many competing for resources and wealth. By this time, Episcopalian and Roman Catholic missionaries had traveled throughout the interior, establishing mission schools. Economic hardship and the pressures of assimilation prompted many Athabaskans to abandon their semi-nomadic lifestyles for more permanent settlements where work could be found. Swelling populations of miners caused concern within the U.S. Government that violence could

⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵ Alaska Humanities Forum. (2004). *Alaska History and Cultural Studies*. Retrieved November 26, 2012 from: <http://www.akhistorycourse.org/>.

⁶ National Park Service. (1988). *Final Environmental Impact Statement: Wilderness Recommendation: Gates of the Arctic National Park and Preserve, Alaska*. Retrieved May 22, 2012 from: <http://babel.hathitrust.org/>.

⁷ National Park Service. (n.d.). *Archaeology of Interior Alaska*. Retrieved November 26, 2012 from: <http://www.nps.gov/akso/akarc/interior.htm>.

⁸ University of Alaska Fairbanks. (n.d.). *Alaska Native Knowledge Network*. Retrieved November 26, 2012 from: <http://www.ankn.uaf.edu/index.html>.

ensue if food or resources became scarce. In response to these concerns, several military posts were established along the Yukon River to keep order if needed.

In 1902, word spread of gold in the Tanana River valley. A settlement was established, and as word spread, more prospectors entered the region. By 1903, the settlement which would eventually become the city of Fairbanks had 1,200 residents. In addition to gold, the Tanana River Valley supported an experimental agricultural project headed by Dr. Charles Georgeson. Georgeson estimated that 100,000 acres of the Tanana region were suitable for crop production and dairy farming. By 1900, more than 300 bushels of potatoes were being cultivated.

By 1915, construction of a railroad connecting Fairbanks with Seward was underway. Tanana Athabaskans expressed concern over warnings by the U.S. Government concerning the impending influx of White settlers following the railroad's completion. It was also at that time, when the Tanana rejected proposals to establish a reservation system, which had significant implications on how U.S. Government-Alaska Native relations would evolve. The 1920s saw a revival of the fur industry as global demand peaked. Trappers would find seasonal work selling furs to the Alaska Commercial Company or to auctioneers in Seattle. It was also in the 1920s that the Alaska Railroad was completed, intensifying development of the Fairbanks region. The Tanana coal fields were being developed, and construction began on the 72-mile long "Davidson Ditch" which would bring 81 million gallons of water per day from the Chatanika River to the Fairbanks gold fields.

World War II brought intense development to the interior of Alaska. The Alaska Highway was built, linking Fairbanks with Canada and the rest of the contiguous United States. Military construction continued following the war's end, including Fort Wainwright and Eielson Air Force Base. Territorially operated airstrips were established in most villages, and air travel became a major method of transportation. This established Fairbanks as a regional transportation hub.

Land encroachment conflicts with Athabaskan groups began to rise during the 1960s resulting from proposals for a pipeline running from Prudhoe Bay to Valdez, effectively bifurcating important subsistence areas. The Alaska Native Claims Settlement Act (ANCSA) was passed in 1971 as a compromise, and 12 million acres of land and \$48.5 million was given to Doyon Ltd., interior Alaska's regional Native corporation. Work began on the pipeline in 1973, and a construction boom ensued. In 1977, the pipeline's completion caused a recession in Fairbanks, as many workers remained.

Today, the region remains closely tied to its resources. Many small traditional communities along the regions drainages depend principally upon subsistence resources. Other communities were established more recently around mining developments or along the highway system. These communities are largely dependent on the oil fields of northern Alaska and tourism. Fairbanks remains the economic and transportation hub for the region.

Natural Resources and Environment

Interior Alaska's weather is characterized by extremes. Winter temperatures average -12° F; summer temperatures average 61° F. But the seasonal temperature swing in this region is one of the widest on earth, with recorded winter lows of -78° F and summer highs of 93° F -- a swing of 171 degrees. The latitude in Interior Alaska also makes for a high degree of seasonal

variability of sunlight, with 4 hours of daylight in the winter and 21 hours of daylight in the summer. Precipitation in the region is relatively low, averaging 11.3 inches per year.⁹

Alaska's interior covers a vast and diverse range of environments. Much of the region was free of glacial ice during the Pleistocene and consists of various terrains ranging from rolling hills and flat lowlands sandwiched between the Alaska Range to the south, and the Brooks Range to the north. Much of the region has been shaped by the region's two major drainages: the Yukon and Kuskokwim rivers, which have left a series of oxbow and shallow circular lakes covering much of the flat lowlands. A relatively short growing season supports the spruce-dominated taiga forest which covers much of interior Alaska and northern Canada. Riparian areas are colonized by alder, willow, poplar, and aspen. Disturbed areas and bog environments are covered with willow, sedges, birch and Labrador-tea. Shrub communities are common in areas affected by wildfires. Continuous permafrost covers much of the region. Terrestrial wildlife includes beaver, mink, river otter, muskrat, marten, grizzly bear, black bear, wolf, red fox, caribou, moose, and snowshoe hare.¹⁰ Fishery resources include Arctic char, broad whitefish, burbot, Chinook salmon, coho salmon, chum salmon, Dolly Varden, Arctic grayling, humpback whitefish, lake trout, least cisco, longnose sucker, northern pike, rainbow trout, round whitefish, and sheefish.¹¹

Mineral resources within the region include gold, zinc, mercury, antimony, copper, molybdenum, tungsten, tin, silver, and lead. Extensive coal beds are also found throughout the region. Major mineral projects include: Donlin Gold, Nixon Fork, Usibelli Coal, Fort Knox, Pogo, Money Knob, Old Smokey, Livengood, and Fortymile.¹² The Tanana River Valley supports harvestable timber resources as well areas fit for crop cultivation.¹³

Governance

Regional governance is tied heavily to Fairbanks; although, Anvik, Grayling, Shageluk, and Holy Cross are significantly closer to the western Alaskan hub of Bethel. The City of Fairbanks hosts the seat for the Fairbanks Northstar Borough. In 2010, the Borough administered an 11.43 mills property tax, 8% accommodations tax, 8% tobacco tax, and 4% alcohol tax. Doyon Ltd., based in Fairbanks, is the regional ANCSA chartered Native corporation and has a land entitlement of 12.5 million acres and over 18,600 shareholders.¹⁴ The Fairbanks Native Association is the regional ANCSA chartered non-profit. With the exception of Coldfoot, Two Rivers, and Wiseman, every community profiled within the region is incorporated into a municipality. In addition, the communities of Anvik, Fort Yukon, Galena, Grayling, Holy Cross, Nenana, Shageluk, and Tanana have federally recognized Tribal councils and ANCSA chartered village corporations.

⁹ The Encyclopedia of Earth. (n.d.). *Interior Alaska-Yukon Lowland Taiga*. Retrieved November 26, 2012 from: http://www.eoearth.org/article/Interior_Alaska-Yukon_lowland_taiga.

¹⁰ Ibid.

¹¹ Alaska Department of Fish and Game. (n.d.). *Commercial Fisheries Overview: Yukon Management Area*. Retrieved July 31, 2012 from <http://www.ADF&G.alaska.gov/index.cfm?ADF&G=commercialbyareayukon.main>.

¹² Alaska Dept. of Commerce. (n.d.). *Minerals Development*. Retrieved November 26, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

¹³ Tryck, Nyman & Hayes. (1975). *Delta Junction Community Development Plan*. Retrieved March 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/DeltaJunction-CP-1975.pdf>.

¹⁴ Doyon Ltd. (n.d.). *Corporate Profile*. Retrieved November 27, 2012 from: http://www.doyon.com/corporate_profiles/index.aspx.

Grayling is the only community profiled within the region that is eligible for participation in the federal Community Development Quota (CDQ) program, and is represented by the Yukon Delta Fisheries Development Association. CDQ groups distribute a portion of commercial fishing proceeds to their various member communities and sponsor economic and infrastructural development.

Involvement in North Pacific Fisheries

Fisheries participation in interior Alaska is tied closely to the Yukon, Koyukuk, and Tanana rivers. Commercial salmon fishing is permitted within the 1,200 mile long main stem of the Yukon River, although most commercial fishing occurs within the River's lower reaches. Commercial fishing is also permitted in the lower 225 miles of the Tanana River, and lower 12 miles of the Anvik River. Large Chinook, chum, and coho salmon harvests from 1919 to 1921 led to the closure of commercial fishing on the Yukon River from 1925 to 1931 due to concerns over subsistence availability. Fishing was allowed again in 1932, but under tighter regulations. During the 1970s and 1980s, many residents began integrating commercial fishing with subsistence fishing; retaining a portion of their harvests for personal use.¹⁵ Due to salmon stock declines between 1998 and 2002, significant reductions in harvest limits have been made. Escapement limits and cross-border commitments to Canada have limited both commercial and subsistence Chinook salmon harvests for communities located on middle and upper Yukon drainages. In most upper Yukon River drainages, summer chum salmon are difficult to market because of transportation costs and flesh degradation caused by prolonged exposure to freshwater and sexual maturity. However, salmon roe quality is considered excellent.¹⁶

In 2010, there was one shoreside seafood processor in the region, located in Fairbanks;¹⁷ however, landings made that year are considered confidential.¹⁸ At the same time, residents of profiled communities landed a total of 5.99 million pounds of fish valued at \$5.24 million.¹⁹ In 2010, residents of the region held 365 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC), of which 43.6% were held in Fairbanks. However, only 30.1% of total permits held were actively fished. Of the total CFEC permits held in 2010, 75.3% were for salmon.²⁰ A total of 1.56 million shares of halibut and 696,651 shares of sablefish quota were held by residents of the region in 2010. Halibut quota was held by residents in the

¹⁵ Alaska Department of Fish and Game. (n.d.). *Commercial Fisheries Overview: Yukon Management Area*. Retrieved July 31, 2012 from <http://www.ADF&G.alaska.gov/index.cfm?ADF&G=commercialbyareayukon.main>.

¹⁶ Ibid.

¹⁷ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹⁸ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹⁹ Ibid.

²⁰ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

communities of Fairbanks, Delta Junction, and North Pole, while sablefish quota was only held by residents in the communities of Fairbanks and Delta Junction.²¹

In 2012, historically low Chinook returns prompted fishery closures and restrictions not seen in over 80 years. In that year, the commercial Chinook fishery, which had an average annual harvest value of \$1.5 million, was completely shut down. The commercial chum salmon fishery, which had been experiencing a rebound after years of depressed market conditions, was also severely restricted. Subsistence harvests were also severely restricted, causing concern in many communities over how to meet subsistence requirements before winter.²²

Subsistence is relied upon heavily in rural interior Alaska communities to supplement diets and income. Popular subsistence species include Chinook, chum, and coho salmon, Arctic grayling, broad and round whitefish, northern pike, burbot, and least cisco.²³ In 2008, residents within the region reported harvesting 129,939 salmon using 3,960 subsistence salmon permits issued by the Alaska Department of Fish and Game. At 52,224 fish, sockeye salmon accounted for the majority of reported harvests despite their limited availability in Yukon River drainages. However, it should be noted that 98.5% of reported sockeye harvests occurred in Fairbanks, Delta Junction, and North Pole. Many residents of these communities may have traveled to different locations to conduct harvests. At 50,297 fish, chum salmon accounted for the majority of reported salmon harvests in the remaining communities, followed by Chinook salmon.²⁴

Recreational fishing is a popular activity along the Yukon and Tanana rivers. Most recreational fishing effort is based out of Fairbanks due to its accessibility and developed visitor infrastructure. The Tanana River Management Area offers fishing opportunities for lake trout, Dolly Varden, Arctic grayling, burbot, Chinook and coho salmon, northern pike, rainbow trout, and sheefish.²⁵ The Yukon Drainage Management Area covers the entirety of the Yukon River drainage excluding the Tanana River. Popular species targeted include Arctic grayling, Dolly Varden, northern pike, burbot, late trout, rainbow trout, sheefish, and all five species of Pacific salmon.²⁶

In 2010, 32,599 sportfishing licenses were sold in profiled communities within the region, of which 79.3% were sold in Fairbanks alone. In that year, residents held a total of 27,894 sportfishing permits, most of which were held in Fairbanks and North Pole. There were a total of 30 registered sport fish guide businesses in the region, 14 of which were registered in

²¹ National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²² Alaska Department of Fish and Game. (2012). *2012 Alaska Chinook Salmon Fishery Disaster*. Retrieved November 27, 2012 from: <http://www.ADF&G.alaska.gov/index.cfm?ADF&G=hottopics.federalChinookdisaster>.

²³ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADF&G.alaska.gov/sb/CSIS/> (Accessed February 2011).

²⁴ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

²⁵ Alaska Department of Fish and Game. (n.d.). *Tanana River Management Area*. Retrieved November 27, 2012 from: <http://www.ADF&G.alaska.gov/index.cfm?ADF&G=ByAreaInteriorTanana.main>

²⁶ Alaska Department of Fish and Game. (n.d.). *Yukon Drainage Management Area*. Retrieved November 27, 2012 from: <http://www.ADF&G.alaska.gov/index.cfm?ADF&G=ByAreaInteriorYukonDrainage.fishingInfo#/harvest>.

Fairbanks. Other communities with registered sport fish guide businesses included Anvik, Delta Junction, Galena, Holy Cross, North Pole, and Two Rivers.²⁷

Regional Challenges

Seafood market accessibility and limited access to subsistence and commercial fishery resources are two major challenges facing interior Alaska communities. Many communities along the Yukon River have expressed interest in enhancing their local fisheries economy through increased marketing and processing capacity.²⁸ However, due to their remoteness, it is exceedingly difficult for many communities to get products to markets. Chinook salmon are considered a regional subsistence staple, and are preferred over chum or coho salmon. However, escapement requirements and low returns have limited harvesting, and recent poor returns have placed stress on many communities. The recent 2012 Chinook salmon crash exposes how vulnerable communities are to fluctuations in salmon runs.

Challenges facing the Fairbanks region include the residual effects of the 1970s oil boom, and its dependence on the military and extractable resources. The City's rapid growth during construction of the Trans-Alaska oil pipeline translated to an increase in cost of living, income disparity, and other associated social and economic challenges. Although mining and oil extraction industries are well established in the region, changing market and regulatory environments can lead to unforeseen and widespread impacts to the local economy.²⁹

²⁷ Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁸ Yukon River Drainage Fisheries Association. (2006). *Alaska Fishing Communities – Harvesting the Future*. Retrieved November 27, 2012 from: <http://seagrant.uaf.edu/conferences/fish-com2/ppts/klein.pdf>.

²⁹ Bradner, T. (2011). Fairbanks Economy Stable, Challenges Ahead. *Peninsula Clarion*. Retrieved November 27, 2012 from: <http://peninsulaclarion.com/news/2011-07-08/fairbanks-economy-stable-challenges-ahead>.



Anvik (AN-vick)

People and Place

*Location*³⁰

Anvik is located in Interior Alaska on the Anvik River, west of the Yukon River, 34 mi north of Holy Cross and 350 mi northwest of Anchorage. The area encompasses 9.5 sq mi of land and 2.4 sq mi of water. Anvik was incorporated as a second-class city in 1969. The community is located in the Yukon-Koyukuk Census Area and is not under the jurisdiction of a borough.

*Demographic Profile*³¹

In 2010, there were 85 residents in Anvik, ranking it 263rd of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 3.7%. However, between 2000 and 2009, the population fell by 27.9% with an average annual growth rate of -3.13%; well below the statewide average annual growth rate of 0.75% and indicative of a declining population. Information regarding population trends can be found in Table 1.

The population of Anvik was predominately Ingalik Athabaskan in 2010.³² In that year, 92.9% of residents identified themselves as American Indian or Alaska Native, compared to 90.4% in 2000; 3.5% identified themselves as White, compared to 8.7% in 2000; and 3.5% identified themselves as two or more races, compared to 0.0% in 2000. Information regarding Anvik's racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 2.58, compared to 2.5 in 1990 and 2.67 in 2000. In that same year, there were a total of 46 housing units, compared to 47 in 1990 and 49 in 2000. Of the households surveyed in 2010, exactly half were owner occupied, compared to 69.4% in 2000; 21.7% were renter occupied, compared to 10.2% in 2000; 13% were vacant, compared to 10.2% in 2000; and 15.2% were occupied seasonally, compared to none in 2000. Since 1990 there have not been any reports of residents living in group quarters.

Gender distribution was skewed in 2010 at 54.1% male and 45.9% female. This was less even than the distribution statewide (52.0% male, 48.0% female) and similar to the distribution in 2000 (54.8% male, 45.2% female). The median age that year was 29.8 years, which was younger than the statewide median of 33.8 years, and similar to the 2000 median of 28.5 years.

³⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³² See footnote 30.

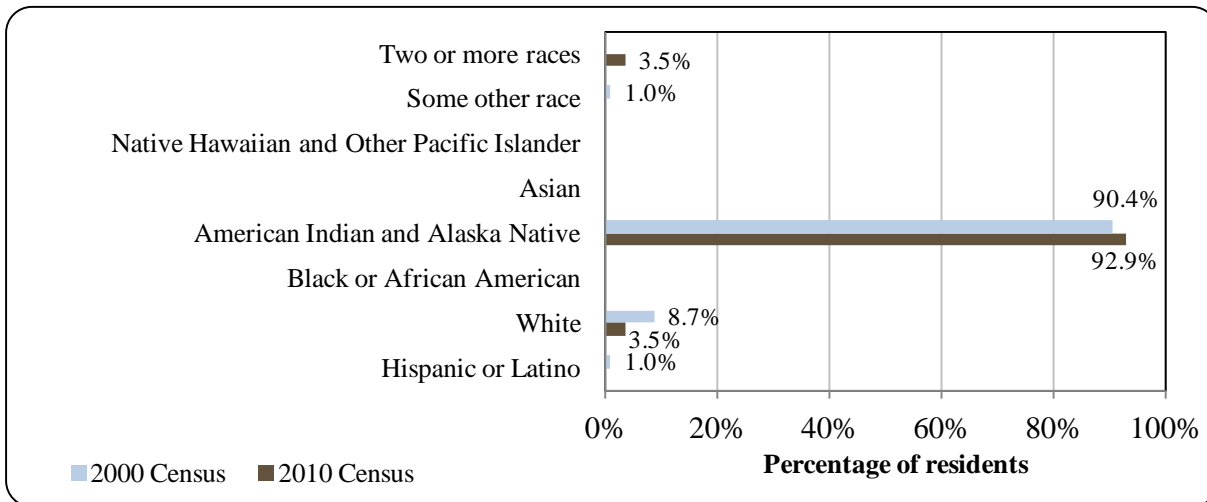
Table 1. Population in Anvik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	82	-
2000	104	-
2001	-	102
2002	-	107
2003	-	105
2004	-	100
2005	-	99
2006	-	88
2007	-	102
2008	-	84
2009	-	75
2010	85	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Anvik: 2000-2010 (U.S. Census).



The 2010 population structure was similar to 2000; although Anvik’s small population size resulted in some irregularity. In that year, 36.5% of residents were under the age of 20, compared to 41.2% in 2000; 16.6% were over the age of 59, compared to 7.8% in 2000; 32.9% were between the ages of 30 and 59, compared to 40.5% in 2000; and 14.1% were between the ages of 20 and 29, compared to 10.6% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 10 to 19 range (10.6% male, 4.7% female), followed by the 20 to 29 (9.4% female, 4.7% male) and 30 to 39 (9.4% male, 4.7% female) ranges. Of those three, the greatest relative gender difference occurred in the 10 to 19 range. Information regarding trends in Anvik's population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³³ estimated that 68.1% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 21.3% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 10.6% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; and an estimated 34.0% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall. No residents were estimated to hold a post-secondary degree in 2010.

*History, Traditional Knowledge, and Culture*³⁴

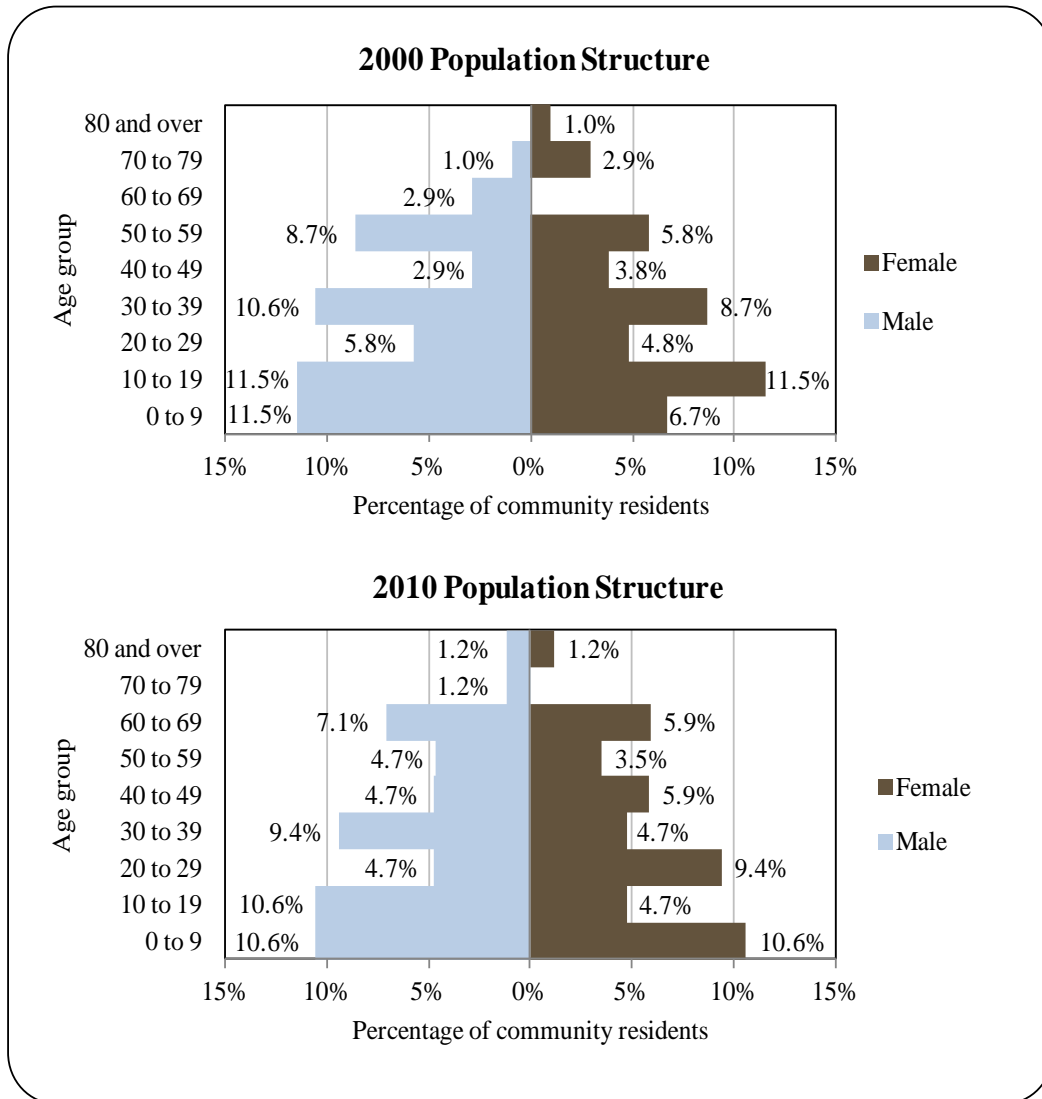
Historically, Anvik was a Deg Hit'an Athabaskan village, although it has also been referred to as Ingalik Athabaskan. Deg Hit'an translates as "the People of this area", describing those who historically lived in the Anvik-Shageluk area encompassing parts of the Anvik River, Innoko River, and areas along the Yukon River from Anvik to Holy Cross. Previous to contact with Russians and Americans, the area supported an extensive trade network connecting coastal and inland river communities. The Unalakleet people traded with the Sledge and King Island people, who in turn traded with Russian posts on the Kolyma River in Siberia. The Anvik River also provided a trade route between the lower Yukon area and the Norton Sound. Items traded often included dried and smoked fish, wooden tubs, dishes, bowls, and furs. First contact was reported in January of 1834 by Russian explorer Andrei Glazanov, who counted approximately 240 people living in the village. Within 4 years of Glazanov's visit, a smallpox epidemic swept through southwest Alaska and by 1842, the estimated population of 1,000 in the Anvik-Shageluk area had diminished to 699 according to the Russian explorer, Zagoskin. Anvik suffered extensive disease outbreaks in the years following European contact and the population declined by 20% between 1900 and 1914. During this time, many surviving residents and orphans of the epidemic moved from the old village of Tthogi qay xitl'ot, across the river to present day Anvik. By 1915, the old village was used only as a summer fish camp and later as a dog staging area.

Today the village is a contemporary subsistence community that maintains strong ties to its traditions. The traditional Deg Xinag Athabaskan dialect was fluently spoken by one elder in the community as of 2003 and revitalization efforts are in place. The sale of alcohol is prohibited in the community.

³³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁴ City of Anvik. (2004). *Anvik Comprehensive Community Plan*. Retrieved December 23, 2011 from: <http://www.commerce.state.ak.us/dca/plans/Anvik-CP-2004.pdf>

Figure 2. Population Age Structure in Anvik Based on the 2000 and 2010 U.S. Decennial Census.



Natural Resources and Environment

The climate of Anvik is continental, and characterized by temperature extremes ranging from -60 to 87 °F (-51 to 31 °C). Total precipitation averages 21 inches per year, and snowfall averages 110 inches per year. The Yukon River is ice-free from June through October.³⁵

Anvik is located at the confluence of the Anvik and Yukon rivers. The Anvik watershed includes a portion of the eastern flank of the Nulato hills, a north-south running range extending from the lower Yukon Delta to the Kotzebue Sound. The area is characterized by lowland wet tundra with meandering rivers, and scattered oxbow and shallow lakes. Uplands consist of

³⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

forested terraces, flat plains, and high bluffs. The community site itself occupies a natural levee of silt loam and fine sand.³⁶

Vegetation includes spruce stands which follow the Yukon River. Well-drained soils support white spruce, paper birch, and quaking aspen along slopes. Lowlands are forested with dwarf black spruce, sedges, mosses, and stunted shrubs. Mixed stands of balsam poplar, cottonwood, willow, and alder brush populate floodplains. Edible and useful plants include cranberries, blueberries, salmon or cloud berries, rose hips, Indian potatoes, wild celery, wild onion, wild rhubarb, and sour dock.³⁷

Anvik is approximately 13 mi south of the Innoko National Wildlife Refuge, which covers 3.85 million acres and provides habitat to a number of fish, waterfowl, big game, and fur-bearers. Terrestrial wildlife includes moose, bear, wolves, lynx, wolverine, river otter, beaver, porcupine, caribou, snowshoe hare, red fox, red squirrel, marten, muskrat, weasel, mink, shrews, voles, and mice. Aquatic wildlife includes king, coho, and chum salmon, northern pike, Dolly Varden, Arctic grayling, burbot, and whitefish.³⁸

Mineral deposits in the area include Wolf Creek Mountain mercury/antimony deposit to the west, Stuyahok and Arnold Kako gold deposits to the southwest, and McLeod copper/molybdenum deposit to the northeast.³⁹ A large-scale gold operation is being developed by Donlin Gold north of Crooked Creek to the southeast of Anvik. The mine is projected to operate for 25 years, with over 33 million ounces of gold speculated to be in the area.⁴⁰

Potential natural hazards to the community include flooding and bank erosion, wildfire, and earthquakes. Flood potential in the downtown area is high due to ice jamming and rapid snow melt. In addition, the seismic zone that Anvik is located in has the potential to produce earthquakes greater than magnitude 6 on the Richter scale.⁴¹

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active in Anvik in 2010.⁴²

Current Economy⁴³

Anvik has a mix of both a cash and subsistence economy; however, subsistence is the dominant form of livelihood for residents. When not participating in subsistence gathering or harvesting, residents earn income through seasonal and part time work, home gardening, or trapping. Local guiding businesses provide opportunities for residents to participate in the sportfishing and hunting sectors. Donlin Gold has increased employment in the region since it began a major mining project to the southeast.⁴⁴ Top employers in 2010⁴⁵ included Iditarod Area

³⁶ See footnote 34.

³⁷ Ibid.

³⁸ U.S. Fish and Wildlife Service. (n.d.). *Innoko National Wildlife Refuge*. Retrieved December 23, 2011 from: <http://www.fws.gov/refuges/profiles/WildHabitat.cfm?ID=75605>

³⁹ Alaska Department of Commerce. (n.d.). *Mineral Resources of Alaska*. Retrieved December 21, 2011 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>

⁴⁰ Donlin Gold. (n.d.) *Homepage*. Retrieved December 27, 2011 from: <http://www.donlingold.com/>

⁴¹ See footnote 34.

⁴² Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved March 6, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

⁴³ Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁴ See footnote 34.

⁴⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

School District, Anvik Traditional Council, City of Anvik, Deloy Ges Inc., and Doyon Drilling Inc.

In 2010,⁴⁶ the estimated per capita income was \$10,799 and the estimated median household income was \$14,583, compared to \$8,081 and \$21,250 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,⁴⁷ the real per capita income (\$10,626) and real median income (\$27,943) indicate that while individual earnings remained unchanged, household income declined. In 2010, Anvik ranked 260th of 305 communities from which per capita income was estimated, and 292nd of 299 communities from which median household income was estimated.

Anvik's small population size may have prevented the ACS from accurately portraying economic conditions.⁴⁸ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$842,849 in total wages in 2010.⁴⁹ When matched with the 2010 population, the per capita income equals \$9,916; suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census.⁵⁰ In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.⁵¹

According to 2006-2010 ACS estimates,⁵² 88.5% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 28.8%, compared to an estimated 5.9% statewide; and an estimated 39.7% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. However, these unemployment and poverty statistics are likely inaccurate given the small population of 85. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 26.2%.⁵³ Of those employed in 2010, an estimated 67.7% worked in the private sector and an estimated 32.3% worked in the public sector.

By industry, most (45.2%) employed residents were estimated to work in retail trade sectors in 2010; followed by education services, health care, and social assistance sectors (32.3%); transportation, warehousing, and utilities sectors (12.9%); and agriculture, forestry, fishing, hunting, and mining sectors (9.7%). By occupation type, most (32.3%) employed

⁴⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁵⁰ See footnote 45.

⁵¹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

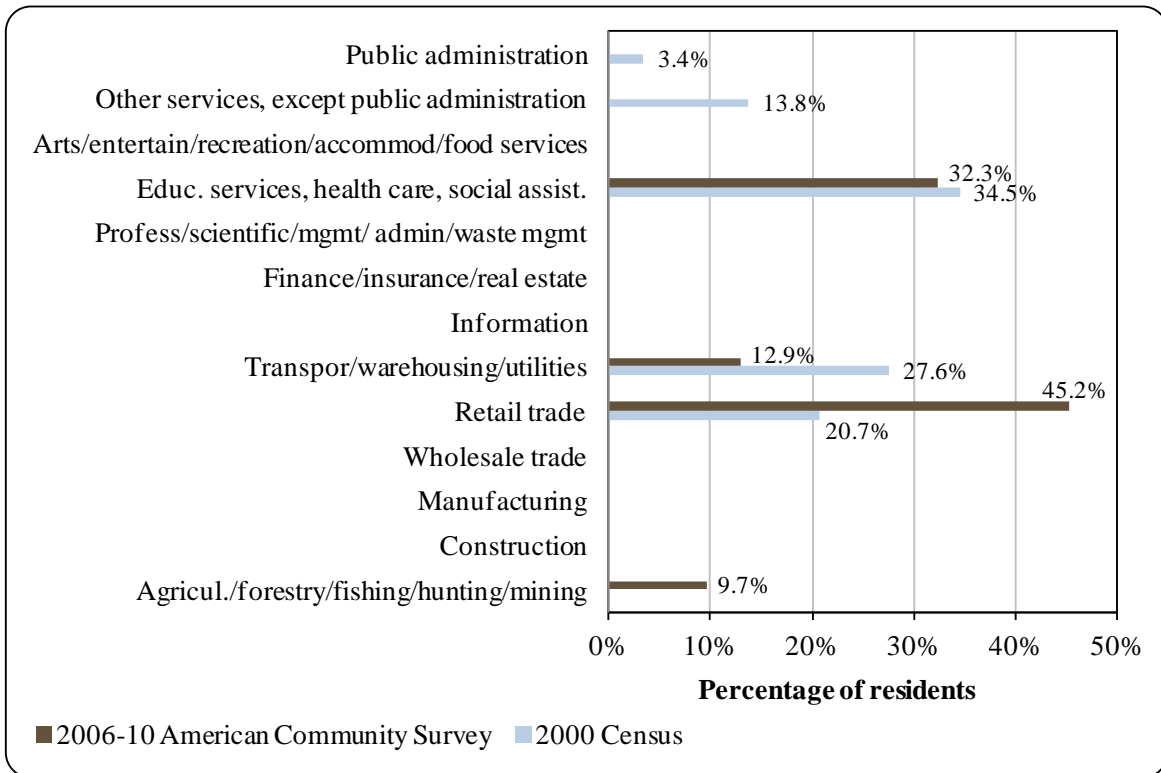
⁵² See footnote 48.

⁵³ See footnote 45.

residents were estimated to hold sales or office positions that year; followed by production, transportation, or material moving positions (25.8%); service positions (16.1%); management or professional positions (16.1%); and natural resources, construction, or maintenance positions (9.7%). There were significant variations in both industry sector employment and occupation types between 2000 and 2010. While it is possible that those shifts were attributed to changes in economic conditions, it is more likely that ACS sampling techniques did not accurately capture the scope of industry representation, which may account for the extreme variations. Information regarding employment trends can be found in Figures 3 and 4.

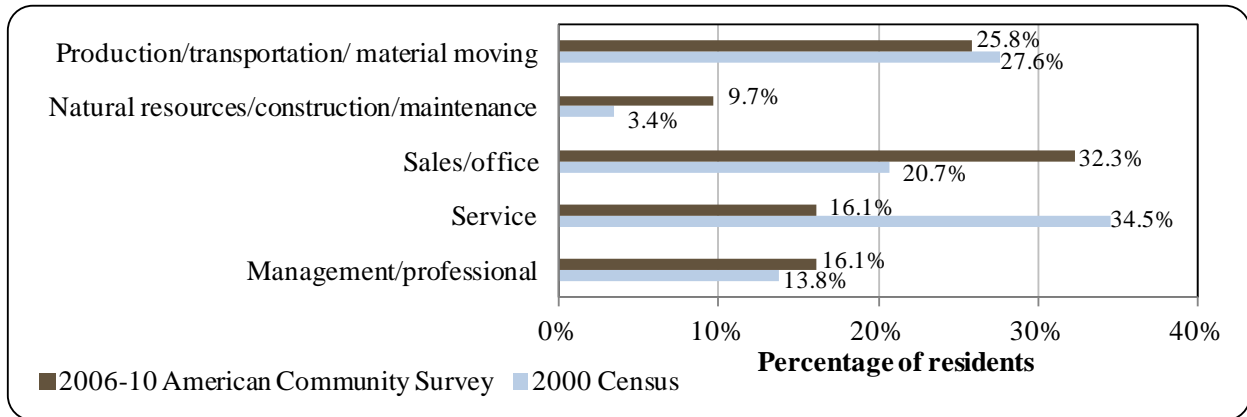
According to 2010 ALARI estimates,⁵⁴ most (72.5%) of employed residents were estimated to work in local government sectors; followed by financial sectors (7.8%) and natural resources and mining sectors (5.9%).

Figure 3. Local Employment by Industry in 2000-2010, Anvik (U.S. Census).



⁵⁴ Ibid.

Figure 4. Local Employment by Occupation in 2000-2010, Anvik (U.S. Census).



Governance

Anvik is a Second-class city with a mayoral form of government. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Native village council (Anvik Village) and Alaska Native Claims Settlement Act (ANCSA) chartered village Native corporation (Deloy Ges, Inc.). The regional ANCSA chartered Native Corporation is Doyon Ltd. The closest ADF&G and National Marine Fisheries Service (NMFS) offices are located in Bethel, 139 mi southwest. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage, 350 mi southeast.

In 2010, total municipal revenue peaked at \$206,064, compared to \$85,069 in 2000. In 2010, no taxes were administered by the city. However, state-allocated Community Revenue Sharing accounted for 48.4% of total municipal revenues that year, compared to 30.0% from State Revenue Sharing in 2000. In addition, there were several state and federal fisheries-related grants awarded to Anvik between 2000 and 2010 including, \$37,500 for a roe processing plant and \$371,600 for fish processing equipment and power access. Information regarding municipal budget trends can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Anvik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$85,069	n/a	\$28,901	\$37,500
2001	\$96,152	n/a	\$27,854	n/a
2002	\$118,000	n/a	\$27,851	n/a
2003	\$156,065	n/a	\$27,870	n/a
2004	\$144,646	n/a	-	n/a
2005	\$116,180	n/a	-	n/a
2006	\$83,745	n/a	-	n/a
2007	\$129,849	n/a	-	n/a
2008	\$177,148	n/a	-	\$371,600
2009	\$204,431	n/a	\$101,257	n/a
2010	\$206,064	n/a	\$100,285	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

The Anvik River, west of the Yukon River, allows access to the community during the summer by barge or float plane. The city would like to develop additional dock and harbor facilities. The state-owned 4,000-ft long by 75-ft wide, gravel airstrip provides year-round access. Three mi of local roads are used by All Terrain Vehicles (ATVs), snowmachines, and dog teams.⁵⁵ Roundtrip airfare between Anchorage and Anvik in June 2012 was \$646.⁵⁶

⁵⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁶ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

Facilities

The majority of homes have new individual water wells, piped sewage disposal, and complete plumbing. Treated well water is also available at the “washeteria.” Funds have been requested to complete the remaining unserved homes. In total, 13 homes need plumbing, 16 homes need a septic tank, and 4 new water wells need to be drilled. Blackwell School connected to the city water system when its own well went dry in 1999. The school has its own drainfield.⁵⁷ Additional businesses and services include fuel storage, a community center, fuel sales, a general store, and a teen center. Satellite communication services are provided by Bush Tell and AT&T. Internet services are provided by GCI. Alaska Rural Communications Services (ARCS) provides public television and KSKO public radio broadcasts regionally via transmitter. In addition, residents often use VHF (Very High Frequency) radios to communicate with neighboring communities. Visitor accommodations include Chase Enterprises Lodge and Anvik City Building and School. Public safety services are provided by Village Public Safety Office (VPSO) and state troopers based in Aniak. Fire and rescue services are provided by VPSO and Anvik volunteer fire department. Additional public facilities include a community hall, school gym, museum, and school/community library.⁵⁸

As of 2004, Anvik lacked commercial lodging/accommodations, restaurant/food services, and transportation rental and repair services. The community has plans to develop barge docking, vessel landing, barge staging, and vessel storage infrastructure.⁵⁹

Medical Services

The Anvik Health Clinic is a Primary Health Facility and Community Health Aid Program (CHAP) site. Acute and long term care is provided in Bethel.⁶⁰ Mental health services are provided in nearby McGrath and secondary or intermediate healthcare is provided in Aniak.⁶¹

Educational Opportunities

The Blackwell School provides a preschool through 9th grade education. As of 2011, there were 16 students enrolled and 3 teachers employed.⁶² K-12 education services are provided in McGrath. In addition, the University of Alaska Fairbanks (UAF) offers secondary educational opportunities through Interior-Aleutian Campus (IAC) McGrath Center.⁶³

⁵⁷ See footnote 55.

⁵⁸ City of Anvik. (2004). *Anvik Comprehensive Community Plan*. Retrieved December 23, 2011 from: <http://www.commerce.state.ak.us/dca/plans/Anvik-CP-2004.pdf>

⁵⁹ Ibid.

⁶⁰ See footnote 55.

⁶¹ See footnote 58.

⁶² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶³ See footnote 55.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historically, residents of the lower-middle Yukon River region followed seasonal subsistence practices, utilizing seasonal camps. This continued until missionary and governmental influences encouraged more sedentary lifestyles. However, mobility continued to be important for communities within the region, maintaining kinship ties and shared subsistence practices.

While subsistence harvesting remains the dominant form of fisheries participation practiced by residents, the community has also been developing both its commercial and recreational sectors. Residents of Anvik have held commercial fisheries permits since 1980,⁶⁴ and landings have historically been made in the community. Sport fish guide businesses in the area also provide services to private anglers. In 2003, residents participated in a brief Arctic lamprey opening using dip nets or locally made eeling sticks. Landings from this fishery were transported 20 mi upriver to Grayling and sold to Kwikpak Fisheries for \$1.25 per lb.⁶⁵ Anvik is located within the Yukon Fisheries Management Area District 4A and Alaska Game Management Unit 21E. Although the community is ineligible to participate in the Community Development Quota (CDQ) program, it is represented regionally through the Western Interior Regional Advisory Council on subsistence issues, as well as through the G.A.S.H. (Grayling, Anvik, Shageluk, Holy Cross) advisory committee to ADF&G.

The first recorded commercial harvest of salmon on the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure on the Yukon River between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s. Poor returns of Chinook salmon in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.⁶⁶ Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but restricted commercial harvest in 2008 and complete closure of Chinook harvest in 2009 led to declaration of a fishery disaster that year.⁶⁷ A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of Fisheries and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundance species, including gear and other management restrictions.⁶⁸

⁶⁴ Commercial Fisheries Entry Commission. (n.d.). Retrieved December 27, 2011 from: <http://www.cfec.state.ak.us/gpbycen/1980/290603.htm>

⁶⁵ See footnote 58.

⁶⁶ Clark, McGregor, Mecum, Krasnowski and Carroll. (2006). "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Department of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶⁷ Upton, Harold F. (2010). *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

⁶⁸ Alaska Department of Fish and Game. (2012). *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=hottopics.federalChinookdisaster>.

Currently, commercial salmon fishing takes place along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 sub-districts and 28 statistical areas. Fishing takes place with set and drift gillnets, and fish wheels are also allowed in Upper Yukon districts (Districts 4, 5, and 6). Subsistence fishermen also most often utilize these gear types. Many subsistence fishermen are also commercial fishermen.⁶⁹

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, the company Bonasila Inc. operates a seafood processing plant called Bonasila Roe Plant in Anvik.

Fisheries-Related Revenue

Between 2000 and 2010, Anvik did not record any fisheries-related revenue. Information regarding fisheries-related revenue trends can be found in Table 3.

Commercial Fishing

In 2010, 11 residents, or 12.9% of the population, held a total of 14 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 14 residents held 15 CFEC permits. Of the CFEC permits held in 2010, salmon made up 71%, compared to 100% in 2000; and "other" finfish made up 29%, compared to 0% in 2000. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. In addition, no residents held halibut, sablefish, and crab quota between 2010 and when the programs began.

No residents held commercial crew licenses in 2010, compared to one in 2000. In addition, no residents held majority ownership of any commercial vessels, compared to eight in 2000. Overall, 14% of the CFEC permits issued were actively fished in 2010, compared to 0% in 2000. This ranged by fishery from 50% of "other" finfish permits, to 0% of salmon permits. In that year, CFEC permits were fished exclusively in the statewide freshwater set gillnet fishery. Overall, permit activity remained relatively low between 2000 and 2010, averaging approximately 6% of total permits held between those years. No permits were fished between 2000 and 2002, as well as 2004 and 2005. Permit activity peaked in 2009 at 27% of total permits held, despite the fact that the total number of permits held remained relatively constant over the decade. This was entirely credited to a spike in salmon permit activity.

No landings were reported in Anvik in 2010; although landings were made in 2007 and 2008. Salmon landings peaked in 2007 when 32,057 lbs of salmon were landed in Anvik with an ex-vessel value of \$16,678. However, the value per-pound peaked in 2009, when 27,771 lbs of salmon was valued at \$17,780 in ex-vessel. Data regarding landings by residents between 2000 and 2009 are considered confidential. No landings were reported by residents in 2010. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁶⁹ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Anvik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$85,069</i>	<i>\$96,152</i>	<i>\$118,000</i>	<i>\$156,095</i>	<i>\$144,646</i>	<i>\$116,180</i>	<i>\$83,745</i>	<i>\$129,849</i>	<i>\$177,148</i>	<i>\$204,431</i>	<i>\$206,064</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Anvik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4. Cont'd. Permits and Permit Holders by Species, Anvik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	2	0	0	1	1	2	3	4
	Fished permits	0	0	0	1	0	0	0	0	1	1	2
	% of permits fished	n/a	n/a	n/a	50%	n/a	n/a	0%	0%	50%	33%	50%
	Total permit holders	0	0	0	2	0	0	1	1	2	3	4
Salmon (CFEC) ²	Total permits	15	15	14	14	14	14	14	13	13	11	10
	Fished permits	0	0	0	0	0	0	0	1	0	3	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	8%	0%	27%	0%
	Total permit holders	14	14	13	13	13	13	13	12	13	10	9
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>15</i>	<i>15</i>	<i>14</i>	<i>16</i>	<i>14</i>	<i>14</i>	<i>15</i>	<i>14</i>	<i>15</i>	<i>14</i>	<i>14</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>4</i>	<i>2</i>
	<i>% of permits fished</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>6%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>7%</i>	<i>7%</i>	<i>29%</i>	<i>14%</i>
	<i>Permit holders</i>	<i>14</i>	<i>14</i>	<i>13</i>	<i>13</i>	<i>13</i>	<i>13</i>	<i>13</i>	<i>12</i>	<i>13</i>	<i>10</i>	<i>11</i>

Note: n/a indicates that no data were reported for that year.

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Anvik: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Anvik ²	Total Net Lbs Landed In Anvik ^{2,5}	Total Ex-Vessel Value Of Landings In Anvik ^{2,5}
2000	1	0	0	8	10	0	0	\$0
2001	0	0	0	8	9	0	0	\$0
2002	0	0	0	8	9	0	0	\$0
2003	2	0	0	2	3	0	0	\$0
2004	0	0	0	11	13	0	0	\$0
2005	0	0	0	1	2	0	0	\$0
2006	0	0	0	1	2	0	0	\$0
2007	3	1	0	1	2	0	--	--
2008	0	0	0	1	2	0	0	\$0
2009	5	1	1	1	2	0	--	--
2010	0	0	1	0	1	0	0	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Anvik: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Anvik: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Anvik: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Anvik: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	--	0	--	0
Halibut	0	0	0	0	0	0	0	--	0	--	0
Herring	0	0	0	0	0	0	0	--	0	--	0
Other Groundfish	0	0	0	0	0	0	0	--	0	--	0
Other Shellfish	0	0	0	0	0	0	0	--	0	--	0
Pacific Cod	0	0	0	0	0	0	0	--	0	--	0
Pollock	0	0	0	0	0	0	0	--	0	--	0
Sablefish	0	0	0	0	0	0	0	--	0	--	0
Salmon	0	0	0	0	0	0	0	--	0	--	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>0</i>	<i>--</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	\$0	--	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	\$0	--	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	\$0	--	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	\$0	--	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	\$0	--	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	\$0	--	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	\$0	--	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	\$0	--	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	\$0	--	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>--</i>	<i>\$0</i>	<i>--</i>	<i>\$0</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Anvik Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	0
Finfish	--	--	--	--	--	--	--	--	--	--	0
Halibut	--	--	--	--	--	--	--	--	--	--	0
Herring	--	--	--	--	--	--	--	--	--	--	0
Other Groundfish	--	--	--	--	--	--	--	--	--	--	0
Other Shellfish	--	--	--	--	--	--	--	--	--	--	0
Pacific Cod	--	--	--	--	--	--	--	--	--	--	0
Pollock	--	--	--	--	--	--	--	--	--	--	0
Sablefish	--	--	--	--	--	--	--	--	--	--	0
Salmon	--	--	--	--	--	--	--	--	--	--	0
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	\$0
Halibut	--	--	--	--	--	--	--	--	--	--	\$0
Herring	--	--	--	--	--	--	--	--	--	--	\$0
Other Groundfish	--	--	--	--	--	--	--	--	--	--	\$0
Other Shellfish	--	--	--	--	--	--	--	--	--	--	\$0
Pacific Cod	--	--	--	--	--	--	--	--	--	--	\$0
Pollock	--	--	--	--	--	--	--	--	--	--	\$0
Sablefish	--	--	--	--	--	--	--	--	--	--	\$0
Salmon	--	--	--	--	--	--	--	--	--	--	\$0
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	\$0

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Anvik's remote location limits recreational fishing by non-Alaska residents; however, this has not prevented sportfishing outfitters from providing opportunities for both resident and non-Alaska resident private anglers. As of 2010, the Anvik River Lodge was the only sportfishing business in the area, although it was not registered as active that year. In that year, 31 residents held sportfishing licenses and 184 sportfishing licenses were sold in the community, compared to 22 and 74 in 2000, respectively. Sportfishing license sales peaked in 2010. According to ADF&G Harvest Survey data,⁷⁰ northern pike is the only species targeted by private anglers. However, there are further reports of chum, king, pink, and coho salmon, Arctic char, Dolly Varden char, and Arctic grayling being targeted.⁷¹ There is no kept/released charter log data available for Anvik.

Anvik is located in the Yukon River Drainage ADF&G Harvest Survey Area which includes all Yukon River drainages, from the south side of the Brooks Range to the Bering Sea, from the Canadian border to the Bering Sea, and all drainages of the Koyukuk and Alatna rivers. In 2010, there were a total of 9,134 freshwater angler days fished, compared to 11,223 in 2000. In that year, non-Alaska residents accounted for 43.6% of angler days fished, compared to 29.8% in 2000. Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Subsistence resources are heavily relied upon by residents to supplement incomes, preserve traditional values, and bolster a sense of community. Anvik's mixed subsistence/cash economy grew from a hunter-gatherer economy that existed in the area prior to Russian-American contact. The community participates in subsistence fishing, hunting, trapping, and gathering. According to ADF&G,⁷² an estimated 46% of households surveyed participated in non-salmon fish subsistence activities in 2002, totaling 174.23 lbs per capita. That same year, an estimated 46% of households surveyed were harvesting terrestrial mammals, totaling 104.32 lbs per capita. Non-salmon fish harvested by residents include whitefish, inconnu, northern pike, Arctic grayling, Longnose sucker, burbot, Alaska blackfish, and Arctic lamprey. Non-salmon fish are harvested year-round, with pre-breakup (March and April) pike, whitefish, and sheefish harvests commonly occurring. Following breakup, dipnets are commonly used to fish for whitefish during their spring migration. Through May and June, gillnets are used to harvest whitefish, pike, and sheefish. Although effort largely shifts to salmon during summer months, non-salmon fish continue to be harvested throughout the season. During the summer, residents also rely on fish wheels and hook and line gear.⁷³

⁷⁰ Alaska Department of Fish and Game. 2011. Alaska Sportfishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁷¹ Anvik River Lodge. (n.d.). Retrieved December 27, 2011 from: <http://www.anviklodge.com/fishing/index.htm>

⁷² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁷³ Brown, C., J. Burr, K. Elkin, and R. J. Walker. 2005. *Contemporary Subsistence Uses and Population Distribution of Non-Salmon Fish in Grayling, Anvik, Shageluk, and Holy Cross*. Alaska Department of Fish and

Table 11. Sport Fishing Trends, Anvik: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Anvik ²	Freshwater Angler Days Fished – Non-residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	0	6	22	74	3,345	7,878
2001	0	3	34	39	4,063	6,454
2002	0	2	26	72	5,761	9,194
2003	0	2	28	112	3,344	5,756
2004	0	2	33	110	5,479	7,613
2005	0	3	25	102	4,182	4,783
2006	0	3	27	129	3,607	7,816
2007	0	3	19	142	3,168	8,226
2008	0	5	13	72	2,573	10,400
2009	0	3	18	131	2,969	7,639
2010	0	2	31	184	3,983	5,151

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Whitefish comprise the most significant portion of non-salmon fish harvested in the region. Five different types of whitefish: broad, humpback, round, and least and Bering cisco are harvested locally. Whitefish eggs are valued in many communities where they are made into “Caviar.” Whitefish oil can also be rendered to make fat ice cream, also known as “snow ice cream.” Historically, residents would dam portions of a creek or slough in the fall and dipnet whitefish from pools. Northern pike make up a significant portion of the annual non-salmon subsistence harvest in Anvik. They are highly accessible, and available throughout the year. Pike are also important figures in cultural life, and are imbued with spiritual significance. Blackfish are known as “survival fish” in many Yukon River communities, as they often fed residents during times when food was scarce. Residents of Anvik report fishing for blackfish in lakes and sloughs near the village. Primary harvesting methods include dipnets and traps. Unlike most other non-salmon fish in the region, Arctic lamprey run at specific and often inconsistent times making it difficult to determine when harvests should occur. They are often boiled and rendered for oil, smoked, frozen, jarred, or used as dog food. Arctic grayling do not constitute a large portion of non-salmon subsistence harvests. Near Anvik, grayling can be found in the Anvik and Bonasila rivers, where they are typically harvested by hook and line or net. Burbot are harvested primarily in winter months while the fish are wintering outside of the Yukon River’s main stem. Burbot livers are considered a delicacy, and fish are both consumed by residents, and used as dog food. Sheefish are important for their year-round availability and oil-rich flesh, and can be found

Game. Technical Paper No. 289. Retrieved March 7, 2013 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp289.pdf>.

traveling up the Anvik River in search of spawning habitat. Sheefish are harvested in fish wheels and nets either set in-river during the summer, or under the ice during the winter and early spring. Spring is the preferred harvest time due to high oil and fat content. When prepared, sheefish are typically rendered for oil, although they can also be dried, smoked, boiled, or frozen. Sheefish eggs are typically fried or boiled. Longnose suckers are not harvested in significant amounts, and are primarily used as dog food. Suckers are mostly caught as by-catch in nets intended for chum salmon or whitefish harvests.⁷⁴

Of the species listed by ADF&G in Table 13, chum salmon were harvested most by residents, followed by Chinook, coho, and pink salmon. In 2008, residents reported harvesting 2,153 salmon, compared to 835 in 2000. Reported salmon harvests peaked in 2007 at 7,807 fish. In that year, there was a significant increase in reported chum harvests. While chum harvests were variable between 2000 and 2008, reported Chinook harvests increased steadily from 205 to 1,433. In 2002, there was a reported 16,143 lbs of non-salmon fish harvested. Yukon River salmon are typically harvested between late May and early October. Chinook, chum, and coho salmon make up the majority of subsistence harvests on the Yukon, although Chinook are desired most for consumptive purposes. Declining Chinook returns prompted a region-wide disaster declaration in 2009. Depressed returns resulted in commercial and subsistence fishing restrictions each year between 2009 and 2012, ultimately leading to widespread commercial and subsistence closures in 2012.⁷⁵

There is no documentation available on local subsistence marine mammal or halibut harvests between 2000 and 2010. Information regarding subsistence trends can be found in Tables 12 through 15.

⁷⁴ Ibid.

⁷⁵ Alaska Department of Fish and Game (2013). *Socioeconomic Effects of Chinook Salmon Declines*. Retrieved March 9, 2013 from: http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2012-2013/ayk/rcs/rc014_adfg_socioeconomiceffects.pdf.

Table 12. Subsistence Participation by Household and Species, Anvik: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	46%	174.23
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Anvik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	42	17	205	600	n/a	30	n/a	n/a	n/a
2001	38	33	608	123	13	n/a	n/a	n/a	n/a
2002	33	30	708	1,490	n/a	n/a	n/a	n/a	16,143
2003	32	26	1,286	1,023	12	240	n/a	n/a	n/a
2004	31	26	1,588	646	288	n/a	n/a	n/a	n/a
2005	35	30	1,206	1,026	406	n/a	n/a	n/a	n/a
2006	37	32	958	505	n/a	n/a	n/a	n/a	n/a
2007	34	29	1,321	5,679	807	n/a	n/a	n/a	n/a
2008	32	26	1,433	657	40	23	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Anvik: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Anvik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Coldfoot



People and Place

*Location*⁷⁶

Coldfoot is located at the mouth of Slate Creek on the east bank of the Middle Fork Koyukuk River. It lies at mile 175 of the Dalton Highway, formerly known as the North Slope Haul Road. The area encompasses 37.0 sq mi of land. Coldfoot is unincorporated, is located in the Yukon-Koyukuk Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁷⁷

In 2010, there were 10 residents living in Coldfoot, ranking it 343rd of 352 Alaskan communities in terms of population size. While the population was 13 in both 2000 and 2009, the average annual growth rate was -0.32%, which was lower than the statewide average of 0.75% and indicative of a variable population. Information regarding population trends can be found in Table 1.

In 2010, the majority of residents identified themselves as White (90%), while 10% identified themselves as American Indian or Alaska Native, compared to 2000 when 100% of residents identified themselves as White. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 1.67, compared to 2.17 in 2000. In that year, there were a total of 11 housing units, compared to 12 in 2000. Of the households surveyed in 2010, 18% were owner-occupied, compared to 0% in 2000; 36% were renter-occupied, compared to 50% in 2000; 0% were vacant, compared to 0% in 2000; and 45% were occupied seasonally, compared to 50% in 2000.

The gender distribution in 2010 was skewed at 60% male and 40% female. This was significantly more skewed than the distribution statewide (52% male, 48% female), and more even than the distribution in 2000 (69.2% male, 30.7% female). The median age in 2010 was 43.0 years, which was significantly older than the statewide median of 33.8 years and somewhat older than the 2000 median of 39.5 years.

Population structures in both 2000 and 2010 were irregular due to the small and transient population in Coldfoot. Gender distribution along age cohorts in 2010 was equal with the exception of the 50 to 59 range, which had a complete male bias (30% male, 0% female) and the 70 to 79 range, which had a complete female bias (10% female, 0% male). Information regarding population structure can be found in Figure 2.

⁷⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

The U.S. Census’ 2006-2010 American Community Survey (ACS) does not have information on Coldfoot; therefore, educational attainment estimates are not available for 2010.

Table 1. Population in Coldfoot from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	n/a	-
2000	13	-
2001	-	14
2002	-	11
2003	-	15
2004	-	10
2005	-	11
2006	-	13
2007	-	11
2008	-	12
2009	-	13
2010	10	-

¹ U.S. Census, 1990, 2000 and 2010 decennial census.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Coldfoot: 2000-2010 (U.S. Census).

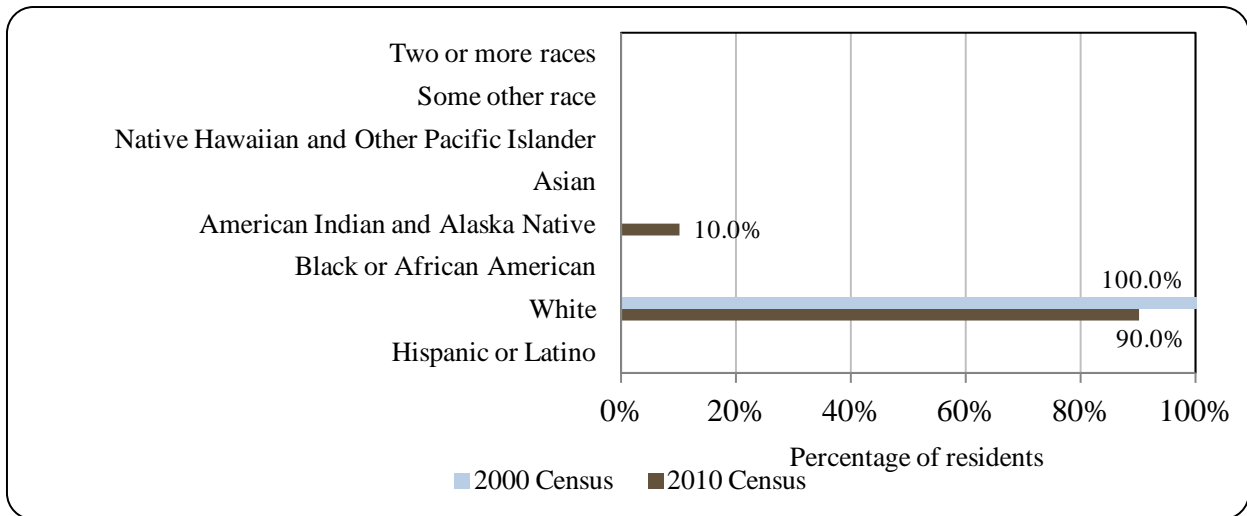
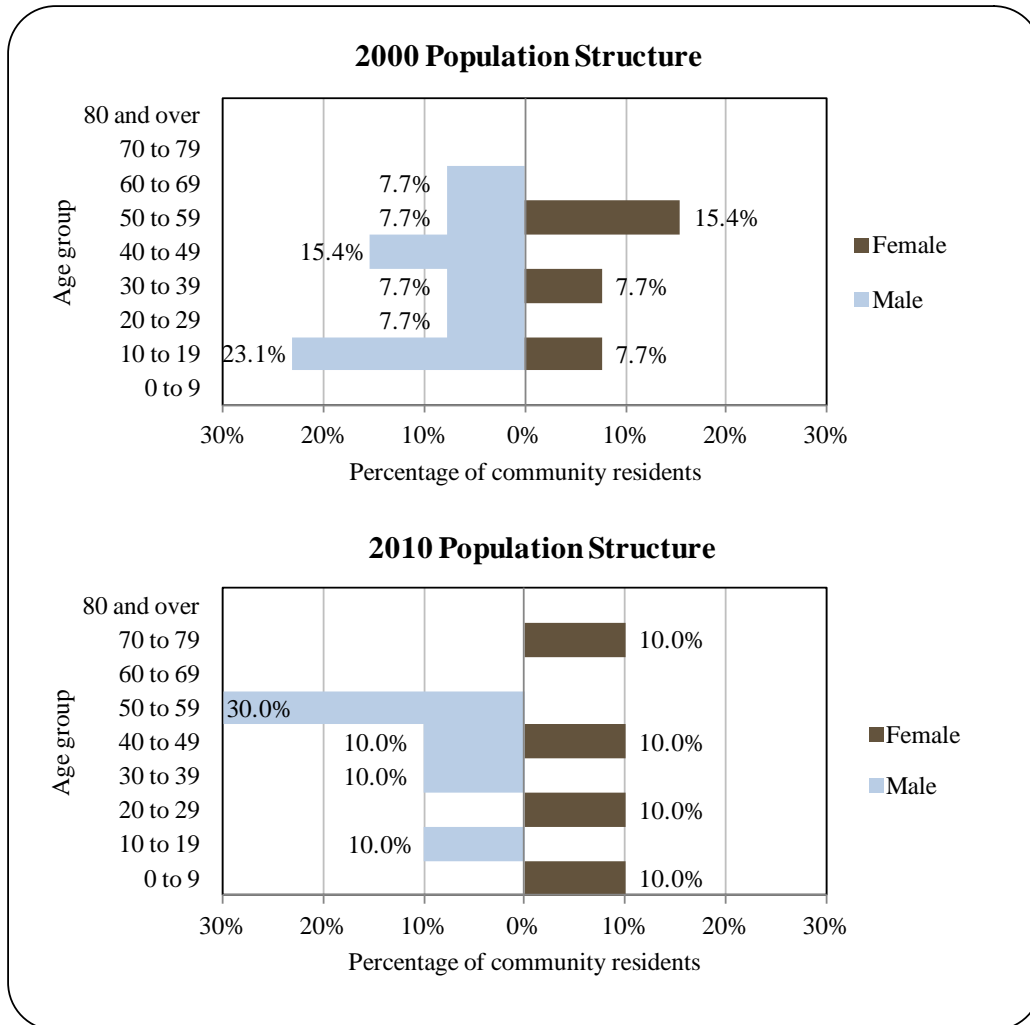


Figure 2. Population Age Structure in Coldfoot Based on the 2000 and 2010 U.S. Decennial Census.



*History, Traditional Knowledge, and Culture*⁷⁸

Occupation of the Brooks Range and northern Alaska can be traced back at least 10,000 years. During the last glacial maximum, successive waves of immigrants arrived in the Arctic, either through an ice free corridor connecting North America and Siberia, coastal routes along the Bering Land Bridge, or both.

The earliest traces of human occupation can be dated to approximately 8,500 to 11,000 years ago; however, there is some disagreement over ages within the archaeological record. Evidence related to an early American Paleo-Arctic tradition have been found in the vicinity of Itkillik Lake, the upper Kobuk River, and near Anaktuvuk Pass.⁷⁹

⁷⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

⁷⁹ National Park Service. (1988). *Final Environmental Impact Statement: Wilderness Recommendation: Gates of the Arctic National Park and Preserve, Alaska*. Retrieved May 22, 2012 from: <http://babel.hathitrust.org/>.

The northern Archaic people arrived in northern Alaska from southern forested regions about 6,500 years ago. By around 1,000 years ago, the Western Thule culture appeared in the archaeological record. The Thule spread throughout the Arctic, eventually reaching as far east as Greenland and Labrador. The Nunamiut culture, which occupied much of the Brooks Range and surrounding tundra, descended from the Thule. The south slope of the Brooks Range was traditionally occupied by central Athabaskan groups. In historic times, there were many interactions between northern Eskimo groups and central Athabaskan groups throughout the Brooks Range area.⁸⁰

In 1850, the central Brooks Range was still largely isolated from influences of European and American culture. The mountains were occupied by semi-nomadic bands of Nunamiut hunters. Kobuk Eskimos and Koyukon and Kutchin Athabaskans made seasonal journeys into the area as well. Principal activities during that time included hunting, fishing, and trading among coastal and interior groups. In the mid-1880s, American explorers began moving into the central Brooks Range. Around this time, waves of miners and trappers began occupying the area.⁸¹

Originally named Slate Creek, Coldfoot reportedly got its name in 1900 when gold prospectors traveled up the Koyukuk to this point, then got "cold feet," turned around, and departed. In 1902, Coldfoot had two roadhouses, two stores, seven saloons, and a gambling house. A post office was established in 1902 and was discontinued in 1912, when the mine and town were abandoned for mines in Nolan and Wiseman Creeks to the north.⁸²

Natural Resources and Environment⁸³

The climate of the area is strongly continental. Temperatures range from -14 to 50 °F (-26 to 10 °C). Annual precipitation averages 10 inches, and snowfall averages 63 inches per year.

Coldfoot is located in a valley within the southern portion of the Brooks Range and right outside the Gates of the Arctic National Park and Preserve (GANPP). The area is remote and rugged with ridges that reach elevations of 4,000 to 8,000 feet or more. The ridges are actually the northernmost expanse of the Rocky Mountain system. The geology of the region is shaped by tectonic uplift, deformation, folding, fracturing, and overlapping. Uplift, erosion, and heavy successive glaciations account for the landscape profile and U-shaped valleys. Subsurface geology consist of metamorphic quartz mica and chloritic schists which form belts along the south flanks of the Brooks Range.

Soils vary by location and are dependent on topography, aspect, fire history, drainage, permafrost, and parent material. Most mountainous areas in the region are characterized by thin, sandy soils. Hilly moraines and south-facing colluvial slopes consists of gravelly loams. There are also areas of thin peaty mat and occasional pockets of permafrost. Lower elevations are covered by a gray to brown silty loam overlain by a peaty organic layer. Soils often overlay continuous permafrost zones.

Regional vegetation is consistent with taiga (boreal forest), tundra, and shrub thicket types. Alpine tundra occurs in mountainous areas and may be populated with willows, dryas,

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸³ Ibid.

heather, lichens, grasses, sedges, and herbs. Moist tundra is found in moderately drained foothills and along valleys. Cottongrass dominates landscapes. Other plants include grasses, dwarf birch, willows, and Labrador tea. Taiga reaches its northern limit at around the southern border of the Brooks Range. As such, spruce stands are scattered and mixed with hardwoods such as birch or aspen. Other vegetation includes willows, blueberry, cranberry, bearberry, crowberry, lichens, mosses, Labrador tea, and poplar.

Mammals within the GANPP include brown/grizzly bears, moose, lemmings, voles, ground squirrel, marmot, beaver, mink, otter, wolverine, fox, wolf, lynx, marten, snowshoe hare, moose, caribou, and Dall sheep. Freshwater fish include Arctic grayling, lake trout, northern pike, Arctic char, whitefish, sheefish, salmon, long-nosed sucker, burbot, nine-spined stickleback, and slimy sculpin.

Minerals found in the region include copper, gold, lead, and zinc. There are several polymetallic deposits located at Wiseman, Nolan Creek, and Michigan Creek.⁸⁴ Placer mines have operated historically around the Nolan-Hammond River areas outside of Wiseman.

Environmental hazards primarily come in the form of extreme cold events, permafrost melt, wildfire, and erosion. Solifluction, or soil creep, is common on moderate slopes and can be associated with permafrost thaw. Smoke and haze associated with forest and tundra fires can degrade local air quality and irritate sensitive respiratory systems.

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Coldfoot as of 2010.⁸⁵

Current Economy⁸⁶

Most employment is in the form of government and services to road travelers. There are motels, a restaurant, a gas and service station, an RV park and dump station, a state trooper post, a State Fish & Wildlife officer, and a U.S. Bureau of Land Management field office.⁸⁷

Coldfoot was not included in the 2006-2010 ACS and because of this; economic estimates are not available for 2010. However, the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD) reported on economic characteristics for that year.⁸⁸ In that year, \$400,460 was reported in total wages,⁸⁹ which results in a per capita income of \$40,046 when matched with the 2010 Census population. In 2000,⁹⁰ the per capita income in Coldfoot was \$42,620 and the median household income was \$61,250; however, after adjusting for inflation by converting

⁸⁴ Alaska Department of Commerce. (n.d.). *Mineral Resources of Alaska*. Retrieved May 22, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁸⁵ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved March 9, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

⁸⁶ Unless otherwise noted, all monetary data are reported in nominal values.

⁸⁷ See footnote 82.

⁸⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸⁹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁹⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data). Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

2000 values to 2010 dollars,⁹¹ per capita income and median household income totals \$56,045 and \$80,543, respectively. It should be noted that the number of employed residents estimated by ALARI in 2010 exceeds the total population recoded in the 2010 Census. Because of this, the 2010 per capita estimate should be considered with caution.

According to 2010 ALARI estimates, 61.5% of employed residents worked in leisure or hospitality sectors; 15.4% worked in natural resources or mining sectors; 7.7% worked in construction sectors; 7.7% worked in trade, transportation, or utilities sectors; and 7.7% worked in state government. In 2000,⁹² 60% of employed residents worked in retail trade and 40% worked in construction. Information regarding employment can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Coldfoot (U.S. Census).

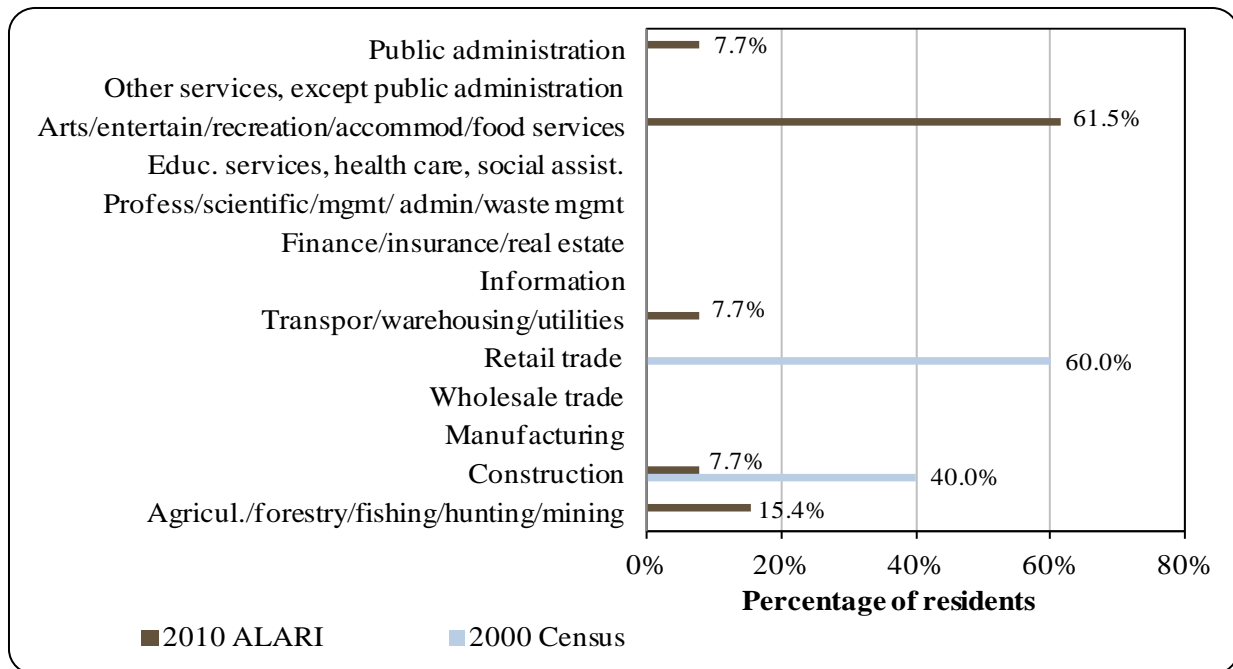
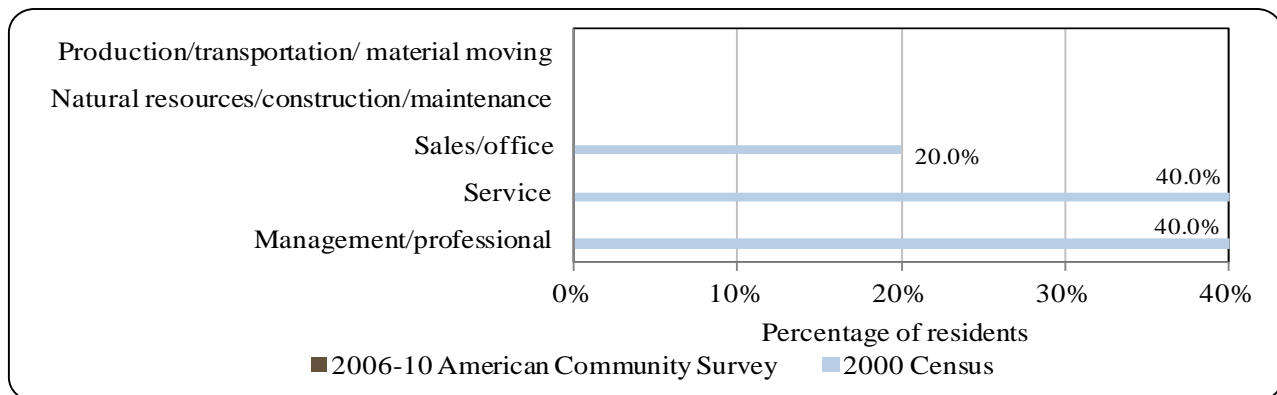


Figure 4. Local Employment by Occupation in 2000-2010, Coldfoot.



⁹¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁹² See footnote 90.

Governance

Coldfoot is unincorporated and not under the jurisdiction of a borough. In addition, the community was not included in the Alaska Native Claims Settlement Act (ANCSA) of 1971 and is not represented by a federally recognized Native traditional council. Because of its unincorporated status, Coldfoot is unable to levy taxes or keep a municipal budget (Table 2).

The closest Alaska Department of Fish and Game (ADF&G) and U.S. Bureau of Citizenship and Immigration Services offices are located in Fairbanks, 183 mi southeast. The closest National Marine Fisheries Service (NMFS) office is located in Anchorage, 419 mi south.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Coldfoot from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*⁹³

Coldfoot is located on the Dalton Highway. There is a state-owned 4,000-ft long by 100-ft wide gravel runway. Air charter services are available by appointment from Fairbanks. Local air services include Wright Air, which provides air charter services by appointment.

⁹³ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

*Facilities*⁹⁴

Residents use individual wells and septic tanks. There is no community-wide system. Visitor accommodations include Coldfoot Services and Arctic Acres Inn. Public safety services are provided by a local state trooper post. No other public services are available.

*Medical Services*⁹⁵

No medical services are provided within Coldfoot. The closest medical facilities are located in Fairbanks.

*Educational Opportunities*⁹⁶

No schools are located within Coldfoot.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Very little information is available regarding Coldfoot's historic participation in North Pacific fisheries. Several residents held sportfishing licenses in 2010. No residents held commercial fishing permits between 2000 and 2010.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Coldfoot does not have a registered processing plant. The closest seafood processing plant is located in Fairbanks.

Fisheries-Related Revenue

Coldfoot did not collect any fisheries-related taxes or fees between 2000 and 2010 (Table 3).

Commercial Fishing

Data on commercial fishing permits, vessel ownership, and crew licenses suggest that no commercial fishing of any kind was conducted by residents of Coldfoot between 2000 and 2010. This lack of activity is reflected in the fact that no data are reported in Tables 4 through 10.

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Coldfoot: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Coldfoot: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Coldfoot: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits</i> ²	<i>Permits</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Fished permits</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>% of permits fished</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	<i>Permit holders</i>	0	0	0	0	0	0	0	0	0	0	0

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Coldfoot: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Coldfoot ²	Total Net Lbs Landed In Coldfoot ^{2,5}	Total Ex-Vessel Value Of Landings In Coldfoot ^{2,5}
2000	1	0	0	0	0	0	0	\$0
2001	1	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	2	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	1	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ National Marine Fisheries Service. 2011. Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Coldfoot: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Coldfoot: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Coldfoot: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Coldfoot: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Coldfoot Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is not a major contributor to Coldfoot’s economy, and is practiced primarily by local residents. No sport fish guide businesses were active in the community between 2000 and 2010, and no residents held sport fish guide licenses. In addition, no sportfishing licenses were sold in the community during that time. In 2010, residents purchased six sportfishing licenses (irrespective of point of sale), compared to 17 in 2000 (Table 11).

Table 11. Sport Fishing Trends, Coldfoot: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sportfishing Licenses to residents ²	Sport Fishing Licenses Sold in Coldfoot ²
2000	0	0	17	0
2001	0	0	14	0
2002	0	0	24	0
2003	0	0	25	0
2004	0	0	23	0
2005	0	0	19	0
2006	0	0	13	0
2007	0	0	12	0
2008	0	0	13	0
2009	0	0	10	0
2010	0	0	6	0

Year	Saltwater		Freshwater	
	Angler days fished – Non-residents ³	Angler days fished – Alaska residents ³	Angler days fished – Non-residents ³	Angler days fished – Alaska residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Coldfoot is located in the Yukon River Drainage ADF&G Harvest Survey Area which includes all Yukon River drainages from the south side of the Brooks Range to the Bering Sea, from the Canadian border to the Bering Sea, and all drainages of the Koyukuk River and Alatna River. In 2010 there was a total of 9,134 freshwater angler days fished, compared to 11,223 in 2000 (Table 11). Of those, non-Alaska residents accounted for 43.6%, compared to 29.8% in 2000.

Subsistence Fishing

No information is available from management agencies regarding the extent of Coldfoot’s participation in subsistence fisheries between 2000 and 2010 (Tables 12 to 15).

Table 12. Subsistence Participation by Household and Species, Coldfoot: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Coldfoot: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Coldfoot: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Coldfoot: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Delta Junction

People and Place

*Location*⁹⁷

Delta Junction is located at the convergence of the Richardson and Alaska Highways, approximately 95 mi southeast of Fairbanks and 236 mi northeast of Anchorage. The city developed along the east bank of the Delta River, south of its junction with the Tanana River. The area encompasses 17.3 sq mi of land and no water. Delta Junction was incorporated as a Second-class city in 1960, is part of the Southeast Fairbanks Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁹⁸

In 2010, there were 958 residents in Delta Junction, ranking it 68th of 352 Alaskan communities in terms of population size. Overall, between 1990 and 2010 the population grew by 46.9%. Between 2000 and 2009, the population grew by 34.3% with an average annual growth rate of 7.2%, which was significantly greater than the statewide average of 0.75% and indicative of rapid population growth. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were 4,800 people living in Delta Junction in 2010, of which 800 were seasonal or transient according to state Permanent Fund Dividend (PFD) filings. This number vastly exceeds U.S. Census figures and could possibly include residents from nearby Fort Greely or the surrounding area. Employment brought to the area by the Pogo Mine and Fort Greely missile defense program may be driving this number as well. The population typically reaches its annual peak in August and is not at all driven by employment in fisheries sectors. Information about population trends can be found in Table 1.

The racial composition of Delta Junction is predominately White, with 88.1% of residents identifying themselves as such in 2010, compared to 91.4% in 2000. Also in that year, 3.2% of residents identified themselves as American Indian or Alaska Native, compared to 4% in 2000; 1.8% identified themselves as Black or African American, compared to 1.1% in 2000; 1.1% identified themselves as Asian, compared to 1% in 2000; and 4.2% identified themselves two or more races, compared to 2.4% in 2000. Residents identifying themselves as Native Hawaiian and Other Pacific Islander or some other race each made up less than 1% of the population in both 2000 and 2010. Hispanic or Latino residents made up 4.7% of the population in 2010 compared to 0.8% in 2000.

⁹⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

In 2010, the average household size was 2.83, compared to 2.69 in 2000 and 2.6 in 1990. In that year, there were 517 total housing units, compared to 422 in 2000 and 413 in 1990. Of the households surveyed in 2010, 40% were owner occupied, compared to 42% in 2000; 33% were renter-occupied, compared to 32% in 2000; 21% were vacant, compared to 19% in 2000; and 6% were occupied seasonally, compared to 7% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

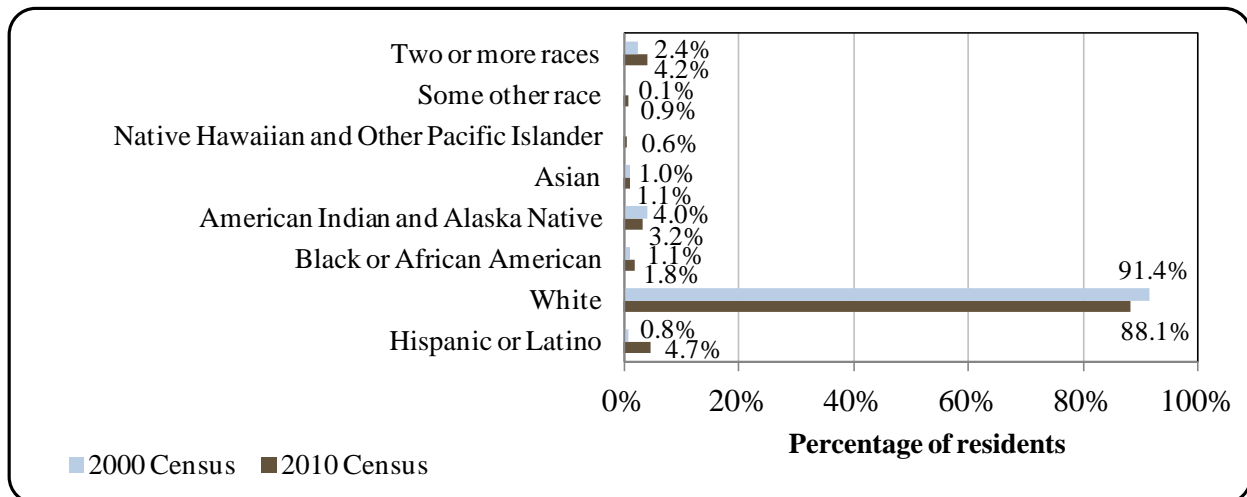
Table 1. Population in Delta Junction from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	652	-
2000	840	-
2001	-	876
2002	-	887
2003	-	961
2004	-	948
2005	-	989
2006	-	1,003
2007	-	999
2008	-	1,080
2009	-	1,128
2010	958	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Delta Junction: 2000-2010 (U.S. Census).

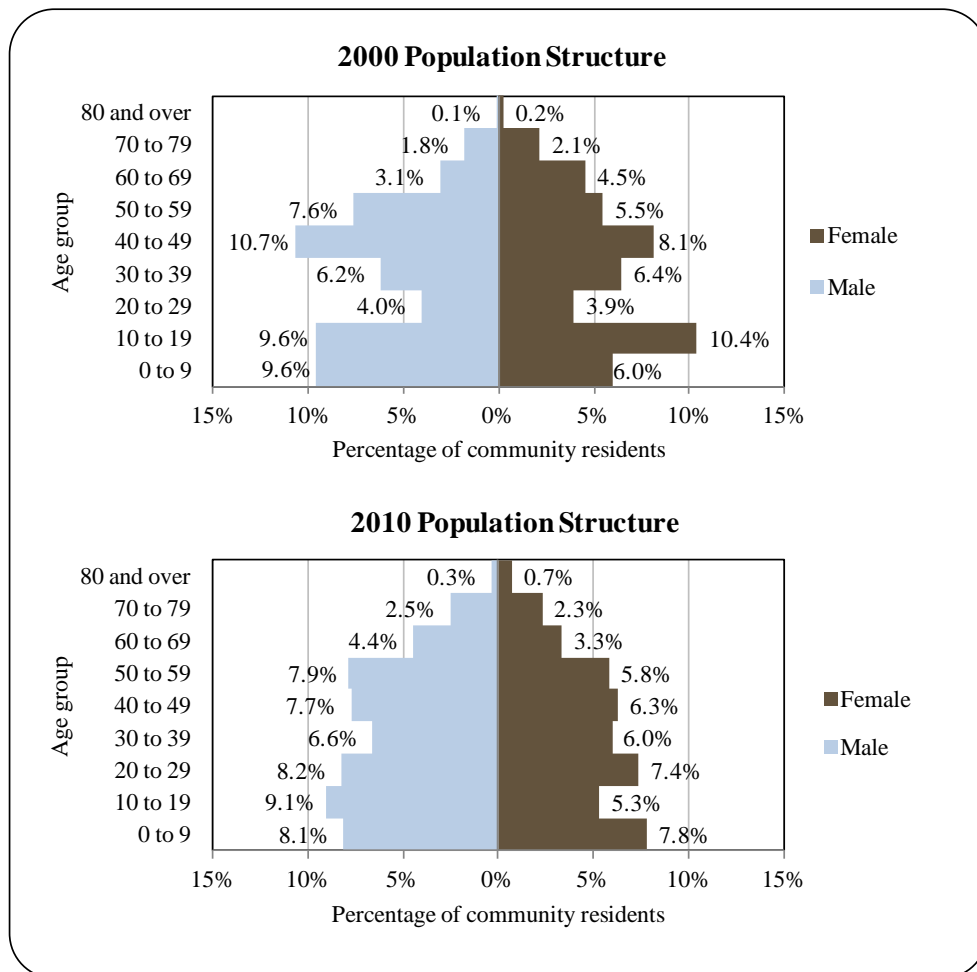


Compared with 2000, the population structure in 2010 was more stationary, with less variation among age cohorts. In that year, 30.3% of residents were under the age of 20, compared to 35.6% in 2000; 13.5% were over the age of 59, compared to 11.8% in 2000; 40.3% were between the ages of 30 and 59, compared to 44.5% in 2000; and 15.6% were between the ages of 20 and 29, compared to 7.9% in 2000.

The gender distribution of Delta Junction was somewhat skewed in 2010 at 54.9% male and 45.1% female (Figure 2). This was slightly less even than the statewide distribution that year (52% male, 48% female) as well as the 2000 distribution (52.9% male, 47.1% female). The median age in 2010 was 32.4, which was similar to the statewide median of 33.8 and younger than the 2000 median of 36.

Gender distribution by age cohort was slightly more even in 2010 than it was in 2000, with most cohorts reflecting male biases. In that year, the greatest absolute gender difference occurred in the 10 to 19 range (9.1% male, 5.3% female), followed by the 50 to 59 (7.9% male, 5.8% female) and 40 to 49 (7.7% male, 6.3% female) ranges. Of those three, the greatest relative gender difference occurred in the 10 to 19 range. Information regarding population structure can be found in Figure 2.

Figure 2. Population Age Structure in Delta Junction Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the 2006-2010 American Community Survey (ACS)⁹⁹ estimated that in 2010, an estimated 94.9% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 2.2% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 2.9% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 36.5% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 10.3% held an Associate's degree, compared to an estimated 8.0% of Alaska residents overall; an estimated 11.2% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 8.3% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹⁰⁰

Tanana Athabascan Indians occupied this site throughout most of the nineteenth and early twentieth Centuries. In 1899, the U.S. Army sent parties to investigate the Susitna, Matanuska, and Copper River valleys to find the best route for a trail north from Valdez through the Copper River Valley. By 1901, the army had completed the Trans-Alaska Military Road, which extended from Valdez to Eagle. In 1902, gold was discovered in the Tanana Valley, and shortly after, a spur trail was created from Gulkana on the Valdez-Eagle route to the new mining camp in Fairbanks. This trail became the Valdez-Fairbanks Trail. The Sullivan Roadhouse was built in 1905 by John and Florence Sullivan on a part of the Valdez-Fairbanks Trail known as the Donnelly-Washburn Cut-Off. This section of the trail was considered by many to be too steep, so the Alaska Road Commission built a new road which was 4 mi from the Sullivan Roadhouse. The Sullivans tore the roadhouse apart and rebuilt it alongside the new road.

Ongoing mining activity just north of Delta Junction in the Tenderfoot area and the Chisana Gold Strike of 1913 brought many prospectors and other travelers through the area. The Delta Junction area soon became known as Buffalo Center for the American bison that were transplanted there from the National Bison Range in Montana in 1928. In 1942, construction of the Alaska Highway began, and the Fort Greely military base was completed 5 mi to the south. In 1946, a dairy farm was established and in 1953, beef cattle were brought in by homesteaders. Delta Junction was incorporated as a Second-class city in 1960. Construction of the Trans-Alaska Pipeline between 1974 and 1977 brought a dramatic upswing to the population and economy. In August 1978, the state initiated the Delta Agricultural Project I, a 60,000-acre demonstration agricultural project. Twenty-two parcels, averaging 2,700 acres in size were sold by lottery. Today, Delta Junction is largely centered on agriculture and the military.

⁹⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment

This area of Interior Alaska experiences seasonal extremes. The average low temperature in January is -11 °F (-24 °C). The average high during July is 69 °F (21 °C). Recorded temperature extremes range from a low of -63 °F (-53 °C) to a high of 92 °F (33 °C). Average annual liquid equivalent precipitation is 12 inches, with an average annual snowfall of 37 inches.¹⁰¹

Delta Junction lies in the Tanana subregion of the Yukon River system and is located on a level river terrace within the Tanana lowlands. Glacial deposits and alluvium cover tracts of gentle slopes with little relief aside from periodic dunes and moraine. Soils in the area are nutrient rich and suitable for crop cultivation. These soils are primarily derived from glaciers and are a composite of partially decomposed organic materials overlying sandy loams and gravel. In addition, a shallow permafrost table is present in several locations where soils are poorly drained. Vegetation generally consists of a mix of wooded areas and shrub-lands. Well drained areas support stands of paper birch, quaking aspen, and white spruce. Poorly drained soils support alder, black spruce, willow, mosses, and sedges. Shrub areas include American green alder, Sitka alder, rose, cranberry, bunchberry, dogwood, and Labrador tea. Horsetails, lichens, ferns, and grasses populate the undergrowth. Woodland areas are home to wildlife such as black and grizzly bears, and moose. Fur-bearers include fox, lynx, wolves, otter, mink, marten, weasel, beaver, muskrat, and snowshoe hare. Tanana Valley drainages support grayling, northern pike, and chum, coho, and Chinook salmon.¹⁰²

Mineral resources in the region include deposits of silver, gold, tungsten, tin, molybdenum, zinc, and coal.¹⁰³ Sumitomo Metal Mining Pogo LLC operates the Pogo gold mine 38 mi northeast of Delta Junction.¹⁰⁴ Spruce and aspen provide ample timber resources for the region. The Tanana Valley 2011-2015 timber harvest schedule set aside 5,805 acres for timber sales for those years.¹⁰⁵ Agriculture is very important to the region. There is an estimated 150,000 acres of land suitable for agricultural development and crops such as potatoes, hardy vegetables, perennial grasses, oats, and barley are grown in the area. As of 2004, 102,000 acres of cropland were being cultivated in the area. Delta Junction also has one of four United States Department of Agriculture approved slaughterhouses in the state.

A range of outdoor activities are available to visitors including fishing, hunting, hiking, camping, and sightseeing. In addition, the community's location on the junction of the Richardson and Alaska Highways make it accessible to highway travelers.¹⁰⁶ Local attractions include Sullivan Road House, Rika's Roadhouse, Big Delta State Historical Park, the Alaska Pipeline, and several state recreation areas.

While Delta Junction is susceptible to most environmental hazards present in interior Alaska, threats from wildfire and crop damage resulting from invasive weeds and insects are of particular concern to the area. On average, 3,775 sq km burn in wildfires annually in Alaska,

¹⁰¹ Ibid.

¹⁰² Tryck, Nyman & Hayes. (1975). *Delta Junction Community Development Plan*. Retrieved March 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/DeltaJunction-CP-1975.pdf>.

¹⁰³ Ibid.

¹⁰⁴ Alaska Department of Natural Resources. (n.d.). *Pogo Mine*. Retrieved March 6, 2012 from: <http://dnr.alaska.gov/mlw/mining/largemine/pogo/>.

¹⁰⁵ Alaska Department of Natural Resources. (n.d.). *Five year schedule of timber sales*. Retrieved March 6, 2012 from: <http://forestry.alaska.gov/timber/delta.htm#fiveyear>.

¹⁰⁶ See footnote 102.

90% of which occur in interior Alaska.¹⁰⁷ These wildfires threaten timber stocks and population centers, as well as impact air quality in the area. There have been observations of over 35 invasive plant species in the Delta Junction area.¹⁰⁸ In 2003, cultivators reported no significant insect problems and only localized weed infestations.¹⁰⁹

While the Alaska Department of Environmental Conservation reports that no significant environmental remediation sites were active in Delta Junction in 2010, cleanup efforts were underway in nearby Fort Greely for soil and ground water contaminants. As of 2005, 59 sites throughout Fort Greely remained active.¹¹⁰

Current Economy¹¹¹

The economy of the Delta Junction region is diversified among agriculture, tourism, military, logging, and mining sectors. In 2001, Fort Greely was designated as a site for a national missile defense system, which substantially boosted the local economy following the planned closure of the base in 1995. Construction jobs related to the project brought hundreds of workers to the area and construction of the Pogo Mine site in 2004 brought additional employment.¹¹² Other major employers include the Delta/Greely School District and Alyeska Pipeline Services. Several state and federal highway maintenance staff are located in Delta Junction. There are also a number of small businesses that provide a variety of services. Delta Junction's location at the junction of two major highways has brought development based on services to travelers. Local farms produce barley, other grains and forage, potatoes, dairy products, cattle, and hogs. Wild buffalo are hunted by lottery only. Some private businesses provide buffalo and elk hunts. Lynx, fox, coyote, mink, and beaver are trapped. Ice fishing, skiing, and snow machining are winter sports, as is dog sledding, which is used for recreational transportation and trapping.¹¹³ Top employers¹¹⁴ in 2010 included: Delta/Greely School District, Wolverine Services LLC, Boeing Service Company, Norcon Inc., State of Alaska, Bechtel Construction Company, IGA Food Cache LLC, First Student Management LLC, Alaska Home Care Inc., and The Boeing Company.

In 2010,¹¹⁵ the estimated per capita income in Delta Junction was \$33,716 and the estimated median household income was \$85,139, compared to \$19,171 and \$43,500 in 2000,

¹⁰⁷ Wendler, G. et al. (2010). *Climatology of Alaskan Wildfires with Special Emphasis on the extreme year of 2004. Theories of Applied Climatology*. Retrieved March 7, 2012 from:

http://climate.gi.alaska.edu/papers/Climatology_Alaskan_wildfires.pdf.

¹⁰⁸ University of Alaska Anchorage. (n.d.). *Alaska Exotic Plant Clearinghouse*. Retrieved March 7, 2012 from: <http://aknhp.uaa.alaska.edu/maps/akepic/>.

¹⁰⁹ Delta Regional Economic Development Council. (2004). *Delta Junction Region Comprehensive Economic Development Strategy*. Retrieved March 7, 2012 from: <http://www.commerce.state.ak.us/dca/plans/DeltaJunction-EP-2004.pdf>.

¹¹⁰ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved from: <http://www.dec.state.ak.us/spar/csp/sites/ftgreely.htm>.

¹¹¹ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹² See footnote 109.

¹¹³ See footnote 100.

¹¹⁴ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹¹⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

respectively. After accounting for inflation by converting 2000 values with 2010 dollars,¹¹⁶ the real per capita income (\$25,210) and real median household income (\$57,202) indicate a significant rise in both individual and household incomes. In that year, Delta Junction ranked 39th of 305 communities from which per capita income was estimated, and 23rd of 299 communities from which median household income was estimated.

Delta Junction's small population size may have prevented the ACS from accurately portraying economic conditions.¹¹⁷ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD).¹¹⁸ According to the ALARI database, residents earned \$17.15 million in total wages in 2010.¹¹⁹ When matched with the population in 2010, the per capita income equals \$17,903, which is significantly lower than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.¹²⁰

According to 2006-2010 ACS estimates,¹²¹ 73.7% of residents aged 16 years and older were part of the civilian labor force and 3.2% were in the armed forces. In that year, unemployment was estimated at 10.4%, compared to an estimated 5.9% statewide; and 8.2% of residents were estimated to be living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Of those employed in the civilian labor force, an estimated 68.4% worked in the private sector, and estimated 21.4% worked in the public sector, and an estimated 10.2% were self-employed. By industry, Delta Junction's economy was relatively diverse. Most employed residents were estimated to be working in professional, scientific, management, administrative or waste management sectors (26.5%); followed by education services, health care and social assistance sectors (15.9%) and manufacturing sectors (10.2%). According to 2010 ALARI estimates, most (18.0%) employed residents worked in professional and business services; followed by local government (15.5%); trade, transportation, and utilities (14.8%); and construction sectors (9.7%).

In 2010,¹²² 1.2% of employed residents were estimated to be working in agriculture, forestry, fishing, hunting, and mining sectors. By occupation type, an estimated 35.8% held management or professional positions, an estimated 27.7% held sales or office positions, an estimated 17.5% held natural resources, construction, or maintenance positions, an estimated 15.5% held service positions, and an estimated 3.5% held production, transportation, or material moving positions.

While there were only modest differences in employment by occupation type between 2000 and 2010, there were significant differences in employment by industry. In 2010, there were notable increases in estimated employment in professional, scientific, management,

¹¹⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹¹⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹¹⁸ See footnote 114.

¹¹⁹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹²⁰ See footnote 114.

¹²¹ See footnote 117.

¹²² See footnote 115.

administrative, waste management, and manufacturing sectors. In that same year, there were also notable decreases in estimated employment in public administration, education services, health care, social assistance, and retail trade sectors. There is a possibility that these shifts resulted from jobs created by the Fort Greely missile defense program and Pogo mine; however, it should be noted that sampling techniques may not have captured the true scope of industry representation, particularly in resource based sectors. Information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Delta Junction (U.S. Census).

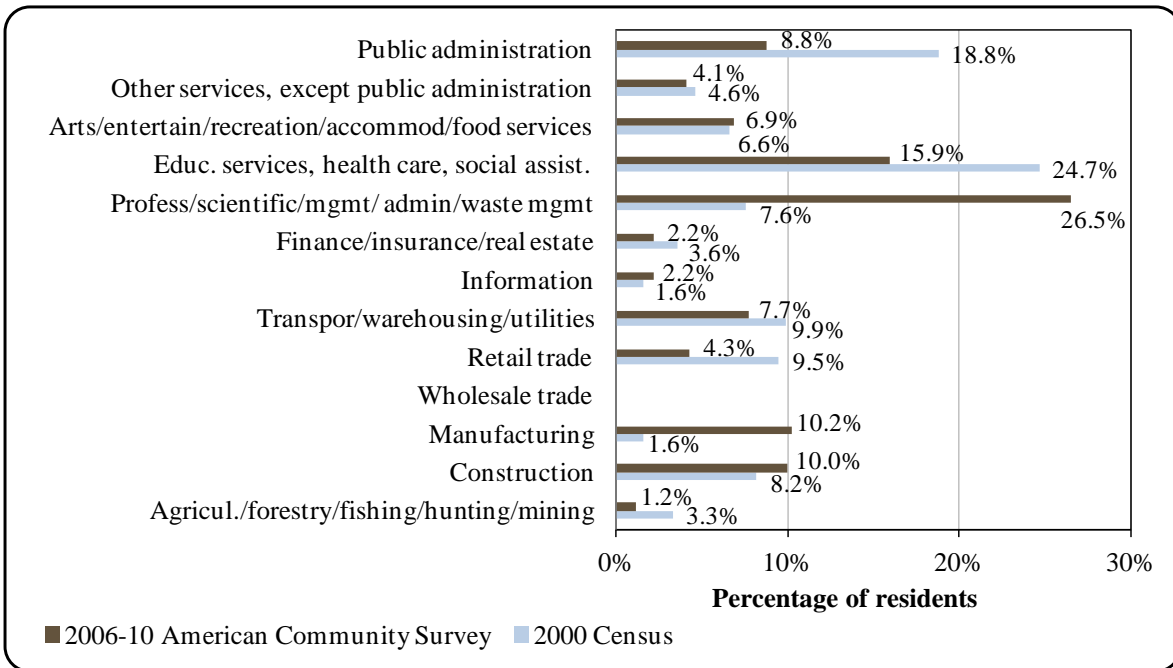
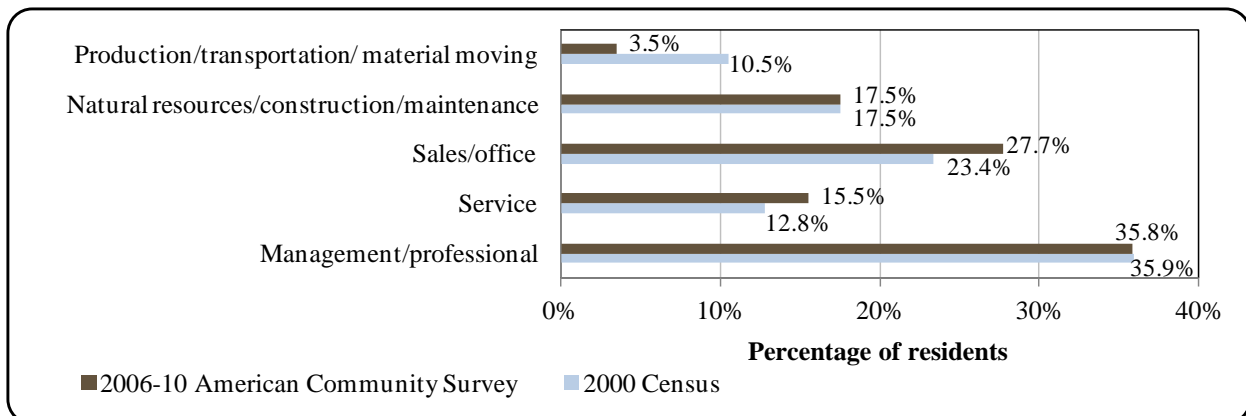


Figure 4. Local Employment by Occupation in 2000-2010, Delta Junction (U.S. Census).



Governance

Delta Junction is a Second-class city with a mayoral form of government. Delta Junction was not included in the Alaska Native Claims Settlement Act (ANCSA) and is not represented by a federally recognized Native traditional council. There is an Alaska Department of Fish and Game (ADF&G) office located in Delta Junction. The closest National Marine Fisheries Service (NMFS) office is located in Anchorage, 236 mi southwest. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Fairbanks, 95 mi northwest.

In 2010, Delta Junction did not administer any taxes. The total municipal budget that year was \$1.54 million, compared to \$573,517 in 2000; representing a 108% increase in revenues after accounting for inflation.¹²³ Most locally generated revenues were collected from landfill lease fees and various other municipal leases. Most outside revenues were collected from payments in lieu of taxes and Community Revenue Sharing.

In 2010, the city received \$149,973 in state allocated Community Revenue Sharing, which accounted for 10% of the total municipal budget in 2010. In 2000, \$25,923 in State Revenue Sharing accounted for 5% of the total municipal budget for that year. Between 2000 and 2010, Delta Junction did not receive any state or federal fisheries-related grants. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Delta Junction from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$541,652	n/a	\$25,923	n/a
2001	\$499,082	n/a	\$25,027	n/a
2002	\$379,982	n/a	\$25,027	n/a
2003	\$507,686	n/a	\$25,000	n/a
2004	\$582,064	n/a	-	n/a
2005	\$981,260	n/a	-	n/a
2006	\$1,076,460	n/a	-	n/a
2007	\$1,357,002	n/a	-	n/a
2008	\$1,317,674	n/a	-	n/a
2009	\$1,376,770	n/a	\$146,247	n/a
2010	\$1,543,300	n/a	\$149,973	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹²³ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

Connectivity and Transportation

Delta Junction is accessible by the Alaska and Richardson Highways. Buses provide transportation to Fairbanks and Whitehorse. The city offers a 2,500-ft long by 60-ft wide gravel airstrip with a 1,600-ft long by 60-ft wide dirt crosswind strip. There are five other privately-owned airstrips in the vicinity. Plans are underway for joint use of the Allen Airfield on Fort Greely. Snowmobiles are used for recreation.¹²⁴ Roundtrip airfare between Anchorage and Fairbanks in June 2012 was \$230.¹²⁵ Charter service to Delta Junction from Fairbanks is available by appointment, however rates vary.

Facilities

Households have individual septic systems, which range from 150 to 350 ft deep. Some residents use rain catchment systems. The Delta School has its own well-water system. Almost all homes are fully plumbed. Businesses and residences are dispersed over a large area, so a community system is not practical. Refuse is collected by a private firm, Delta Sanitation, and is deposited in the city-owned permitted landfill. The laundromat, Delta Laundry, is also operated privately. The city operates a sewage pit at the landfill site. Visitor accommodations are plentiful and include motels, lodges, campgrounds, and Recreational Vehicle parks. Public safety services are provided by the City Public Safety Office and a local state trooper post. Fire and rescue services are provided by the Delta Rescue Squad and Rural Deltana Volunteer Fire department. There is a gym pool, and movie theater at Fort Greely. There is one public library and three school libraries. Telephone, cable television, and broadband internet are all available.¹²⁶

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed since 2000 or under development include a new landfill or solid waste site, a new community center, and improvements to schools and the fire department. Delta Junction is located inland and does not possess port or harbor facilities. For businesses and services not available in Delta Junction, residents go to Valdez, Homer, and Kenai.

*Medical Services*¹²⁷

Basic health care is provided by the Delta Junction Family Medical Center and Delta Junction Public Health Center. The clinic is a qualified Emergency Care Center. Additional acute, long-term, or specialized services are provided by Fairbanks Memorial Hospital in Fairbanks.

¹²⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁵ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

¹²⁶ See footnote 124.

¹²⁷ Ibid.

Educational Opportunities

Delta Cyber School offers kindergarten through 12th grade instruction remotely. As of 2011, there were 175 students in attendance and 4 teachers employed. Delta Junction Elementary offers preschool through 5th grade instruction. As of 2011, there were 283 students in attendance and 19 teachers employed. Delta Junction Senior High School offers 9th through 12th grade instruction. As of 2011, there were 205 students in attendance and 17 teachers employed. Gerstle River School offers preschool through 12th grade instruction. As of 2011, there were 22 students in attendance and 3 teachers employed. New Horizons High School offers grade instruction. As of 2011, there were 12 students in attendance and one teacher employed.¹²⁸ The University of Alaska Fairbanks (UAF) offers cooperative extension services in association with Partners for Progress in Delta, Inc. Programs focus on vocational training for positions in local mining and defense sectors.¹²⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

History of participation in North Pacific Fisheries in the Tanana River Subregion is centered on subsistence harvesting. The original Tanana Athabascans in the area utilized a wide range of subsistence resources, including fish from the Tanana and Yukon Rivers. Until the twentieth century, Tananas would migrate throughout the region, taking advantage of seasonal resources. While the introduction of market economies in the area encouraged a more sedentary lifestyle, subsistence was still an important part of daily life. Today, grayling, whitefish, northern pike, and salmon are harvested for both subsistence and recreational purposes.¹³⁰ Chinook, chum, and coho salmon are caught as well. In a survey conducted by the AFSC in 2011, community leaders reported that Delta Junction participates in the fisheries management process in Alaska through a representative that sits on regional fisheries advisory and/or working groups run by ADF&G.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Delta Junction does not have a registered processing plant. Processing of recreational catch in the area is largely done by individual guide services. The closest registered seafood processing plant is located in Fairbanks. Santa's Smokehouse operates a family owned and operated plant in Fairbanks called Interior Alaska Fish Processors which processes halibut and all five species of salmon. Interior Alaska Fish Processors also processes sport-caught fish and game, and it smokes sport-caught salmon (all species but pink).¹³¹

¹²⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹²⁹ Partners for Progress in Delta, Inc. (n.d.). *Homepage*. Retrieved March 7, 2012 from: <http://www.partnersforprogressindelta.org/>.

¹³⁰ Kofinas, G. P. et al. (2010). Resilience of Athabaskan Subsistence Systems to Inter Alaska's Changing Climate. *Canadian Journal of Forest Research*, 40, 1347-1359.

¹³¹ Santa's Smokehouse (n.d.). *Homepage*. Retrieved from: <http://santassmokehouse.com/>.

Fisheries-Related Revenue

Between 2000 and 2010, Delta Junction did not report any fisheries-related revenue from taxes for fees with the exception of \$1,610 collected in Shared Fisheries Business Taxes in 2006. Information regarding fisheries-related revenues can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Although the city itself is not involved in commercial fisheries, many of its residents are. In 2010, 22 residents, or 2.3% of the population, held 48 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Five residents, held six CFEC permits in 2000. Overall number of permits increased steadily between 2000 and 2010, as did the number of permit holders. Of the CFEC permits held in 2010, 38% were for salmon, compared to 50% in 2000; 21% were for groundfish, compared to 17% in 2000; 19% were for sablefish, compared to 0% in 2000; 2% were for herring, compared to 0% in 2000; 15% were for halibut, compared to 33% in 2000; 4% were for crab, compared to 0% in 2000; and 2% were for other shellfish, compared to 0% in 2000. Also in 2010, three residents held four License Limitation Program (LLP) groundfish permits, and four residents held five Federal Fisheries Permits (FFP). The amount of halibut quota share being held in the community grew significantly from 1,987 shares on 2 accounts in 2000, to 1.2 million shares on 6 accounts in 2010. Also in 2010, residents held 412,778 shares of sablefish quota on 5 accounts, compared to 43,752 shares on 2 accounts in 2001. No residents held crab quota between 2010 and when the program began.

There were 19 residents who held commercial crew licenses in 2010, compared to 4 in 2000. In addition, residents held majority ownership of 14 vessels that year, compared to 24 in 2000. Of the CFEC permits issued in 2010, 67% were actively fished, compared to 33% in 2000. This varied by fishery from 89% of sablefish permits, to 86% of halibut, 67% of salmon, 60% of groundfish, and 0% of herring, crab, and “other” shellfish permits. Also in that year, 100% of groundfish LLP and 80% of FFP were fished. Overall permit activity averaged 74.1% between 2001 and 2010. Fisheries prosecuted by residents of Delta Junction in 2010 included: statewide longline halibut; statewide longline miscellaneous saltwater finfish; Gulf of Alaska longline miscellaneous finfish; statewide longline sablefish; Prince William Sound drift gillnet salmon; Cook Inlet drift gillnet salmon; and Alaska Peninsula drift gillnet salmon.¹³²

Between 2000 and 2010 there were no recorded landings in Delta Junction. However, there were landings made by residents of Delta Junction in other locations during that time. Based on non-confidential data provided in Table 9, the most profitable species landed by residents in 2010 was halibut. In that year, 316,546 lb was landed valued at \$1.4 million, compared to 148,976 lb valued at \$436,469 in 2003; an increase of \$0.46 per pound landed after accounting for inflation.¹³³ Salmon was the next most profitable species landed in 2010. In that

¹³² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹³³ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

year, 1.6 million lb valued at \$1.3 million was landed, compared to 211,056 lb valued at \$166,148 in 2001; a decrease of \$0.22 per pound landed after accounting for inflation,¹³⁴ and without considering the species composition of landings. Sablefish landings totaled 71,888 lb valued at \$405,351, compared to 9,492 lb valued at \$34,893 in 2003; an increase of \$0.51 per pound after accounting for inflation.¹³⁵ Pacific cod landings totaled 1.3 million lb valued at \$404,549, compared to 544,781 lb valued at \$185,603 in 2003; a decrease of \$0.17 per pound after accounting for inflation.¹³⁶ Other groundfish landings totaled 200,560 lb valued at \$65,860, compared to 58,140 lb valued at \$15,158 in 2003. Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹³⁴ Ibid.

¹³⁵ Ibid.

¹³⁶ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Delta Junction: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$1,610	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$1,610</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$541,652</i>	<i>\$499,082</i>	<i>\$379,982</i>	<i>\$507,686</i>	<i>\$582,064</i>	<i>\$981,260</i>	<i>\$1.08 M</i>	<i>\$1.36 M</i>	<i>\$1.32 M</i>	<i>\$1.38 M</i>	<i>\$1.54 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Delta Junction: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	4	4	4	5	3	3	3	4	4	4
	Active permits	0	4	3	3	3	3	3	3	3	4	4
	% of permits fished	n/a	100%	75%	75%	60%	100%	100%	100%	75%	100%	100%
	Total permit holders	0	2	2	2	3	3	3	3	3	3	3
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	1	2	3	4	5	6	7	8	9	10
Federal Fisheries Permits ¹	Total permits	1	1	1	7	7	7	5	6	6	5	5
	Fished permits	0	0	0	4	4	4	5	6	6	5	4
	% of permits fished	0%	0%	0%	57%	57%	57%	100%	100%	100%	100%	80%
	Total permit holders	1	1	1	5	5	5	5	5	5	4	4
Crab (CFEC) ²	Total permits	0	2	2	2	2	2	2	2	2	3	2
	Fished permits	0	1	1	0	0	2	1	0	0	0	0
	% of permits fished	n/a	50%	50%	0%	0%	100%	50%	0%	0%	0%	0%
	Total permit holders	0	2	2	2	2	2	2	3	2	3	2
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	1
Halibut (CFEC) ²	Total permits	2	4	3	7	8	8	9	8	10	9	7
	Fished permits	0	3	3	6	7	7	8	8	7	7	6
	% of permits fished	0%	75%	100%	86%	88%	88%	89%	100%	70%	78%	86%
	Total permit holders	2	4	3	7	7	7	9	8	10	9	7
Herring (CFEC) ²	Total permits	0	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	1	1	1	1	1	1	1	1	1	1

Table 4. Cont'd. Permits and Permit Holders by Species, Delta Junction: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	4	4	7	7	7	8	9	8	10	9
	Fished permits	0	4	3	5	7	6	8	8	8	9	8
	% of permits fished	n/a	100%	75%	71%	100%	86%	100%	89%	100%	90%	89%
	Total permit holders	0	3	4	6	6	6	8	9	8	10	9
Groundfish (CFEC) ²	Total permits	1	8	6	10	12	15	13	11	9	12	10
	Fished permits	0	5	4	7	6	7	9	8	7	9	6
	% of permits fished	0%	63%	67%	70%	50%	47%	69%	73%	78%	75%	60%
	Total permit holders	1	5	3	6	6	7	6	8	8	9	9
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	3	7	7	9	12	13	12	13	13	15	18
	Fished permits	2	6	6	8	10	12	10	12	10	12	12
	% of permits fished	67%	86%	86%	89%	83%	92%	83%	92%	77%	80%	67%
	Total permit holders	3	7	8	10	12	13	13	14	14	15	17
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>6</i>	<i>26</i>	<i>23</i>	<i>36</i>	<i>42</i>	<i>46</i>	<i>45</i>	<i>44</i>	<i>43</i>	<i>50</i>	<i>48</i>
	<i>Fished permits</i>	<i>2</i>	<i>19</i>	<i>17</i>	<i>26</i>	<i>30</i>	<i>34</i>	<i>36</i>	<i>36</i>	<i>32</i>	<i>37</i>	<i>32</i>
	<i>% of permits fished</i>	<i>33%</i>	<i>73%</i>	<i>74%</i>	<i>72%</i>	<i>71%</i>	<i>74%</i>	<i>80%</i>	<i>82%</i>	<i>74%</i>	<i>74%</i>	<i>67%</i>
	<i>Permit holders</i>	<i>5</i>	<i>9</i>	<i>8</i>	<i>12</i>	<i>14</i>	<i>15</i>	<i>18</i>	<i>18</i>	<i>20</i>	<i>19</i>	<i>22</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Delta Junction: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Delta Junction ²	Total Net Lb Landed In Delta Junction ^{2,5}	Total Ex-Vessel Value Of Landings In Delta Junction ^{2,5}
2000	4	0	0	24	18	0	0	\$0
2001	3	0	0	27	17	0	0	\$0
2002	8	0	0	20	14	0	0	\$0
2003	15	0	0	24	13	0	0	\$0
2004	12	0	0	13	11	0	0	\$0
2005	13	0	0	11	0	0	0	\$0
2006	16	0	0	9	0	0	0	\$0
2007	13	0	0	12	0	0	0	\$0
2008	11	0	0	14	1	0	0	\$0
2009	10	0	0	12	0	0	0	\$0
2010	19	0	0	14	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Delta Junction: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	2	1,987	196
2001	4	539,419	76,985
2002	5	836,319	120,933
2003	4	834,807	120,556
2004	5	977,696	146,957
2005	6	1,143,788	160,193
2006	9	1,433,226	201,388
2007	8	1,376,289	197,704
2008	6	1,376,289	186,929
2009	6	1,376,289	169,468
2010	6	1,185,591	133,366

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Delta Junction: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	2	43,752	3,735
2002	3	51,590	4,426
2003	3	37,751	3,839
2004	4	61,706	7,114
2005	5	244,694	27,972
2006	5	244,694	24,576
2007	5	242,622	23,715
2008	5	242,622	21,072
2009	6	420,616	41,839
2010	5	412,778	40,635

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Delta Junction: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Delta Junction: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Delta Junction Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	148,976	136,040	181,482	208,167	308,276	284,501	306,879	316,546
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	58,140	188,901	77,178	220,840	126,911	178,276	239,852	200,560
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	544,781	916,157	915,114	1,499,621	1,350,603	1,542,341	1,656,591	1,331,021
Pollock	--	--	--	19,382	4,352	4,002	52,325	58,271	47,716	32,655	--
Sablefish	--	--	--	9,492	--	13,114	44,694	83,918	52,969	73,132	71,888
Salmon	--	221,056	517,789	482,416	507,193	462,912	346,371	649,006	826,540	776,936	1,564,887
<i>Total²</i>	--	<i>221,056</i>	<i>517,789</i>	<i>1,263,187</i>	<i>1,752,643</i>	<i>1,653,802</i>	<i>2,372,018</i>	<i>2,576,985</i>	<i>2,932,736</i>	<i>3,086,045</i>	<i>3,484,902</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	\$436,469	\$416,581	\$575,234	\$799,281	\$1,386,910	\$1,256,486	\$946,873	\$1,440,852
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	\$15,158	\$31,054	\$14,098	\$55,950	\$38,457	\$80,977	\$85,537	\$65,860
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	\$185,603	\$276,590	\$295,715	\$625,517	\$704,862	\$955,895	\$566,467	\$404,549
Pollock	--	--	--	\$1,476	\$261	\$254	\$4,223	\$4,604	\$5,106	\$3,620	--
Sablefish	--	--	--	\$34,893	--	\$40,700	\$128,723	\$234,460	\$173,925	\$278,831	\$405,351
Salmon	--	\$166,148	\$207,919	\$272,258	\$363,259	\$432,226	\$392,447	\$573,523	\$630,493	\$643,506	\$1,324,073
<i>Total²</i>	--	<i>\$166,148</i>	<i>\$207,919</i>	<i>\$945,858</i>	<i>\$1,087,745</i>	<i>\$1,358,227</i>	<i>\$2,006,140</i>	<i>\$2,942,815</i>	<i>\$3,103,143</i>	<i>\$2,524,834</i>	<i>\$3,640,685</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is an important industry in Delta Junction. However, only one registered sport fish guide business was active at a time between 2000 and 2010 (with the exception of 2003, when there were two). The number of sport fish guide licenses held in the community declined significantly during that time from 31 in 2000 and 3 in 2010. This was likely attributed with the fact that the total number of registered sport fish guide businesses (active and inactive) declined as well during that period. The number of sportfishing licenses held by residents increased steadily from 1,396 in 2000, to 1,729 in 2010, with an average of 1,502 (note that the number of sportfishing licenses sold to residents greatly exceeds total population estimates). The number of sportfishing licenses sold in the community averaged at 69 between 2000 and 2009, before jumping to 2,502 in 2010. No kept/released charter log data are available for Delta Junction.

Delta Junction is located in Tanana River Drainage ADF&G Harvest Survey Area which includes the entire Tanana River watershed. In 2010, there was a total of 96,859 freshwater angler days fished, compared to 121,763 in 2000. Non-Alaska resident anglers accounted for 9.3% of angler days fished that year, compared to 9.5% in 2000. Combined angler days fished peaked in 2000. According to ADF&G harvest survey data, local private anglers target all five species of Pacific salmon, rainbow trout, Dolly Varden char, whitefish, burbot, Arctic grayling, and northern pike. There is no kept/released charter information available for Delta Junction. Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that many residents participate in subsistence fishing on the Gulkana and Copper Rivers. Because of this, there is concern over management of Copper River salmon. Of chief concern is the level of salmon escapement related to Gulf of Alaska commercial fishing and Gulkana River fish wheels. Of the species reported by ADF&G in Table 13, residents reported sockeye salmon harvesting the most, followed by coho and Chinook. In 2008, 6,354 salmon were harvested, compared to 6,058 in 2000. In that year, 6,048 sockeye salmon were harvested, compared to 5,723 in 2000. Three residents were issued Subsistence Halibut Registration Certificates (SHARC) by NMFS in 2005; however, no halibut was harvested that year. No data is available regarding subsistence participation by household, or subsistence harvests of marine invertebrates, non-salmon/halibut fish, and marine mammals. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 11. Sport Fishing Trends, Delta Junction: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Delta Junction ²
2000	1	31	1,396	61
2001	1	22	1,322	42
2002	1	24	1,279	31
2003	2	21	1,338	53
2004	1	15	1,466	53
2005	1	5	1,562	65
2006	1	4	1,639	67
2007	1	5	1,531	112
2008	1	5	1,621	116
2009	1	9	1,646	93
2010	1	3	1,729	2,502

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	n/a	n/a	11,517	110,246
2001	n/a	n/a	10,744	80,391
2002	n/a	n/a	9,733	98,884
2003	n/a	n/a	7,502	92,432
2004	n/a	n/a	11,853	104,633
2005	n/a	n/a	11,335	82,063
2006	n/a	n/a	8,216	71,461
2007	n/a	n/a	9,327	91,629
2008	n/a	n/a	7,613	64,722
2009	n/a	n/a	7,415	85,082
2010	n/a	n/a	9,025	87,834

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Delta Junction: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Delta Junction: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	333	312	140	2	193	n/a	5,723	n/a	n/a
2001	357	327	151	n/a	242	n/a	6,824	n/a	n/a
2002	268	237	127	n/a	36	n/a	4,539	n/a	n/a
2003	316	283	128	n/a	144	n/a	4,990	n/a	n/a
2004	362	309	145	n/a	173	n/a	6,055	n/a	n/a
2005	431	361	168	n/a	106	n/a	8,702	n/a	n/a
2006	445	384	208	n/a	183	n/a	8,165	n/a	n/a
2007	373	343	188	n/a	240	n/a	6,600	n/a	n/a
2008	423	360	131	n/a	175	n/a	6,048	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Delta Junction: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	3	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2010. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Delta Junction: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Fairbanks (FAIR-banks)



People and Place

*Location*¹³⁷

Fairbanks is located in central Alaska. This centrality though, seems more geographical than social or economical. The city, which is part of the Fairbanks North Star Borough and located in the Fairbanks Recording District, was founded on the banks of the Chena River in the Tanana Valley and in the very heart of interior Alaska. Fairbanks is 45 minutes away by plane from Anchorage and three hours from Seattle. It lies 358 road mi north of Anchorage. The area encompasses 31.9 sq mi of land and 0.8 sq mi of water. The arctic daylight variations have an important impact on Fairbanks lifestyle: 21 hours of daylight between May 10th and August 2nd each summer, and less than four hours of daylight between November 18th and January 24th each winter.

*Demographic Profile*¹³⁸

In 2010, there were 31,535 residents living in Fairbanks, ranking it the second largest city in Alaska. Between 1990 and 2010, the population increased by 2.2%. There was a slight decline in population from 2009 to 2010, but in general the population of Fairbanks remained unchanged. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that on average, there are seasonal workers living in Fairbanks from April through September. The population peaks between June and August; however, they are not thought to be driven by employment in fisheries sectors.

In 2010, the majority of Fairbanks residents identified themselves as White (66.1%), compared to 67.0% in 2000. Also in that year, 10.0% of residents identified themselves as American Indian or Alaska Native, compared to 10.0% in 2000; 9.0% identified themselves as Black or African American, compared to 11.0% in 2000; 3.6% identified themselves as Asian, compared to 3.0% in 2000; 0.8% identified themselves as Native Hawaiian and Other Pacific Islander, compared to 1.0% in 2000; 7.9% identified themselves as two or more races, compared to 7.0% in 2000; 2.6% identified themselves as some other race, compared to 2.0% in 2000. In addition, 9.0% of residents identified themselves as Hispanic or Latino, compared to 6.0% in 2000. Further information regarding trends in race and ethnicity can be found in Figure 1.

¹³⁷ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

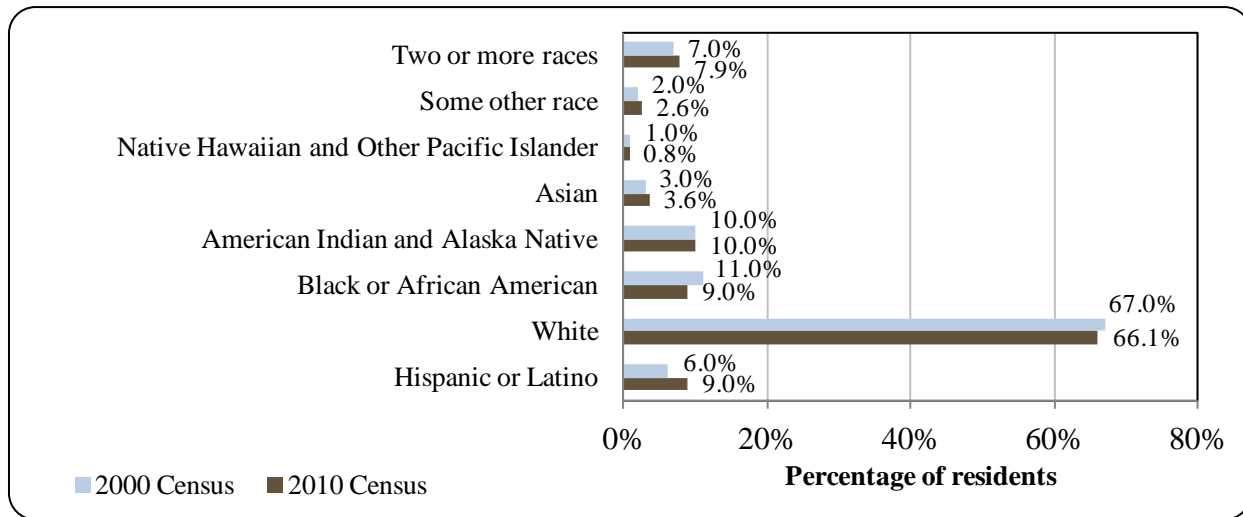
Table 1. Population in Fairbanks from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	30,843	-
2000	30,224	-
2001	-	29,521
2002	-	29,778
2003	-	28,929
2004	-	30,109
2005	-	31,115
2006	-	30,189
2007	-	31,801
2008	-	31,450
2009	-	32,506
2010	31,535	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Fairbanks: 2000-2010.



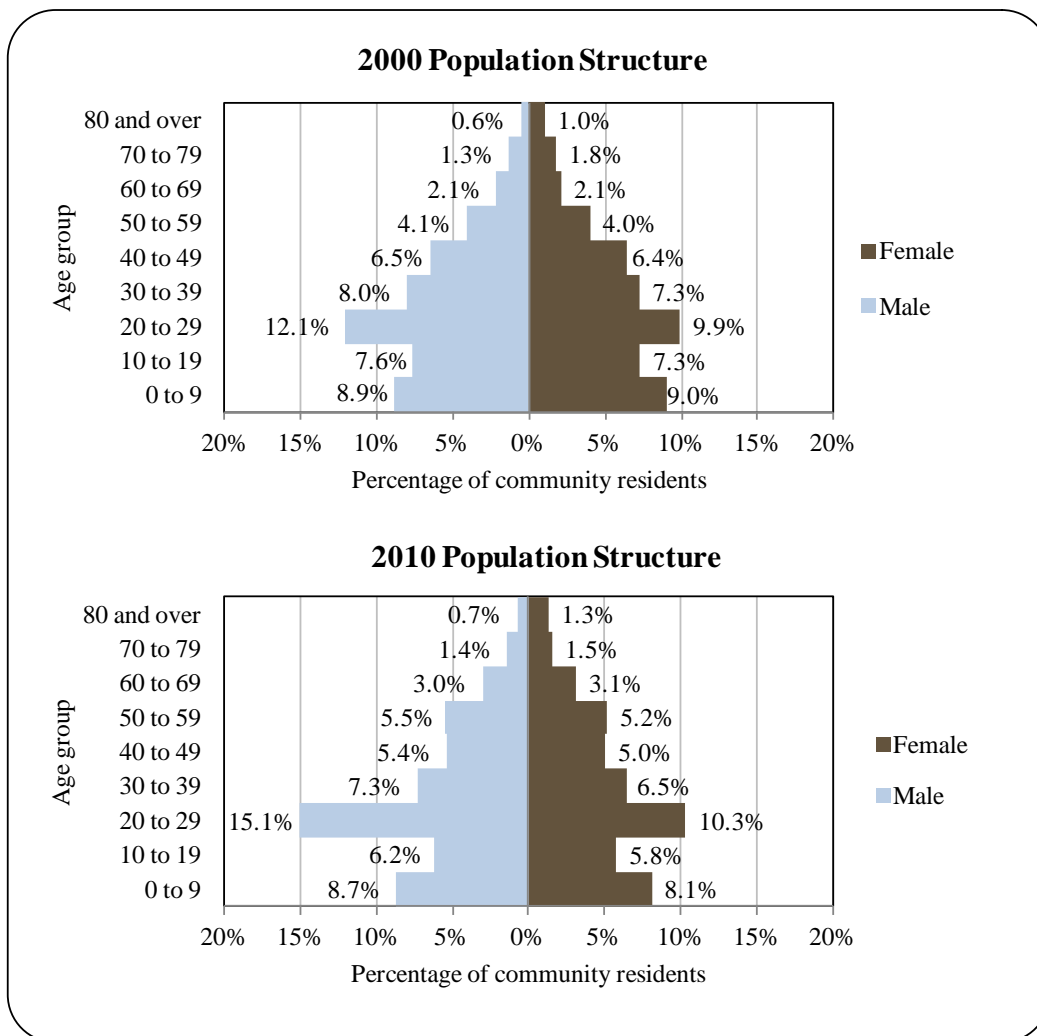
In 2010, the average household size was 2.52, a slight decline from 2.60 in 1990 and 2.56 in 2000. In that year, there were a total of 13,056 housing units, compared to 12,537 in 1990 and 12,357 in 2000. Of the households surveyed in 2010, 32% were owner-occupied, compared to 31% in 2000; 57% were renter-occupied, compared to 58% in 2000; 10% were vacant, compared to 9% in 2000; and 1% were occupied seasonally, compared to 1% in 2000. In addition, 2,518 residents lived in group quarters in 2010, compared to 1,899 in 2000.

In 2010, the gender makeup of Fairbanks was 53.2% male and 46.7% female. This was similar to the gender distribution statewide (52.0% male, 48.0% female) and less even than the distribution in 2000 (51.3% male, 48.7% female). The median age was 27.9 years, which was less than both state (33.8 years) and national (36.8 years) median age estimates.

Compared with 2000, the population structure in 2010 was somewhat more constricted. In that year, 28.8% of residents were under the age of 20, compared to 32.8% in 2000; 11.0% were over the age of 59, compared to 8.9% in 2000; 34.9% were between the ages of 30 and 59, compared to 36.3% in 2000; and 25.4% were between the ages of 20 and 29, compared to 22.0% in 2000.

Age distribution by age cohort was slightly less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 20 to 29 age range (15.1% male, 10.3% female), followed by the 30 to 39 (7.3% male, 6.5% female) and 0 to 9 (8.7% male, 8.1% female) ranges. Of those three, the greatest relative gender difference occurred in the 20 to 29 range. Further information regarding trends in Fairbanks' population structure can be found in Figure 2.

Figure 2. Population Age Structure in Fairbanks in 2000 and 2010 (U.S. Census).



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹³⁹ estimated that 89.3% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 3.3% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 7.4% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 30.8% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 11.8% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 6.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹⁴⁰

The Fairbanks region, the Tanana Valley, had been inhabited by Tanana Athabaskans for thousands of years prior to European interests. Tanana Athabaskans were strictly territorial and used hunting and gathering practices in their semi-nomadic way of life and dispersed habitation patterns. The boundaries of such systems of life were, presumably, fairly fluid and it may explain some references to the presence in the area of Koyukon Athabaskans, the northwest neighbors.

In 1901, E. T. Barnette established a trading post on the banks of the Tanana River, approximately seven miles from its confluence with the Yukon River. This trading post would later become the city of Fairbanks. Throughout its history, Fairbanks has been a boom and bust town. In 1902, rumors of gold in creeks around Fairbanks started to spread. Prospectors began to flood into Fairbanks, leading to the community's first population boom. Fairbanks was incorporated in 1903, and Barnette was elected as mayor. By 1908 there were 18,500 people living within the Fairbanks mining district. Mining prospects began to decline shortly after, and by 1920, the population had shrunk to 1,100. Advancements in mining led to a mining revival, and mining remained the region's most important industry until World War II. By the 1940s, a construction boom was underway as the military constructed airfields, roads, and communications systems. The 1968 Prudhoe Bay oil lease sale brought on an economic boom to Fairbanks, prompting the regional population to swell to over 74,000 people. Wages soared, and many oil workers received up to \$1,500 per week. However, the oil recession of 1978 devastated the local economy and by 1979, local unemployment was at 20%. Oil revenues recovered between 1980 and 1986, resulting in yet another boom environment in Fairbanks. Today, the city remains heavily reliant on oil, construction, military, and government services. The continuing uncertainty of the oil industry has a particularly significant effect on the city, compared to other communities in Alaska.¹⁴¹

¹³⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁴⁰ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴¹ Fairbanks Alaska Information Site (n.d.). *History of Fairbanks*. Retrieved March 12, 2013 from: <http://fairbanks-alaska.com/fairbanks-history.htm>

Natural Resources and Environment

Interior Alaska experiences seasonal temperature extremes. Average January temperatures range from -19 to -2 °F (-28 to -19 °C); average July temperatures range from 53 to 72 °F (12 to 22 °C). Annual precipitation averages 11.5 inches with 67.8 inches of snowfall. Temperatures have been recorded as low as -62 °F (-52 °C) in mid-winter and as high as 96 °F (36 °C) in summer. During the winter months, if the temperature drops below -20 °F (-29 °C), ice fog can occur. Fairbanks is known for its lingering summer days. When the solstice arrives, there are more than 22 hrs of daylight.¹⁴²

Fairbanks is located within the Tanana River valley, between the Alaska Range to the south, and the Yukon-Tanana Uplands to the north/northwest. Lowlands consist of moraines and outwash fans deposited by glaciers from the Alaska Range. The mountainous region to the south consists of alpine glaciers, U-shaped valleys, moraines, and alluvial fans. The Yukon-Tanana Uplands rise up to 2,000 ft above the valley floors, and consist of rounded, even-topped, unglaciated ridges with gentle slopes. Soils include alluvial and active floodplain deposits of gravel, sand, and silt. Upland areas consist of glacial deposits. Organic soils include brown and black peat, and organic silts. Permafrost in the area is discontinuous and varies in depth.¹⁴³

The broad outwash plain, south of Fairbanks, is populated by many drainages with small lakes occurring at blockages. The region provides habitat for animals relying on aquatic or riparian habitats including mink, marten, muskrat, beaver, and river otter. Streams are important spawning areas for Chinook, coho, and chum salmon. northern pike, whitefish, and burbot are common in larger lakes and rivers. Arctic grayling are common in smaller streams. Boreal forests dominate the landscape. Black spruce is found in bog environments, while white spruce and balsam poplar line rivers. Tall willow, resin birch, and alder shrub stands are scattered throughout the area. Permafrost flats support birch-heath shrubs and sedge tussocks. Low shrubs include resin birch, Labrador-tea, bog blueberry, and low-bush cranberry. There are over forty non-native plant species in the Tanana River Valley. Common invasive plant species include common dandelion, foxtail barley, and annual hawksbeard. Boreal forests in the area support moose, caribou, wolves, black bears, brown bears, weasel, lynx, marten, mink, red squirrels, and other rodents. Avian species in the area include black-capped and boreal chickadees, common redpolls, gray jays, ravens, black-backed and three-toed woodpeckers, northern flickers, hawk owls, horned owls, ptarmigan, and grouse.¹⁴⁴

Fishery resources include Arctic char, broad whitefish, burbot, Chinook salmon, coho salmon, chum salmon, Dolly Varden, Arctic grayling, humpback whitefish, lake trout, least cisco, longnose sucker, northern pike, rainbow trout, round whitefish, and sheefish.

Mineral resources include Fort Knox Gold Mine, which produces about 363,000 ounces of gold per year. Pogo Gold development is located 115 mi east of Fairbanks. Placer mines exist in the area, although on a small scale. Fourteen known or prospective mineral deposits exist east

¹⁴² Ibid.

¹⁴³ Alaska State Transportation Board (2008). *Draft Environmental Impact Statement: Alaska Railroad Corporation Construction and Operation of a Rail Line Between North Pole and Delta Junction, Alaska*. Retrieved July 18, 2012 from:

<http://www.stb.dot.gov/decisions/readingroom.nsf/fc695db5bc7ebe2c852572b80040c45f/86e5013e455643d48525751a0071fde4?OpenDocument>.

¹⁴⁴ Ibid.

of Fairbanks. The Tanana Valley State Forest contains approximately 1.8 million acres of forestland. In 2003, 1.77 million acres of lands were designated as harvestable.¹⁴⁵

Flooding and wildfire are the most prevalent environmental hazards in the area, although permafrost melt and land subsidence hazards have been increasing. Fires are common, and are mostly caused by summer lightning strikes along the foothills. Frequent flooding across active floodplains of the Tanana results in erosion and alluvial bar formation.¹⁴⁶

There are several notable environmental remediation sites located in and around Fairbanks according to the Alaska Department of Environmental Conservation (DEC).¹⁴⁷ The former Arctic Surplus Salvage Yard was treated for a wide range of surface soil and groundwater contaminants, including volatile and semi-volatile organic and inorganic compounds, polychlorinated biphenyls (PCBs), chlorinated pesticides, dioxins, lead, furans, and trichloroethylene (TCE). Cleanup was concluded in 2004, and the site is now available for industrial or commercial use. Contaminates do remain, and restrictions are in place to prevent people from coming into contact with hazardous materials.

Groundwater around Eielson Air Force Base has been contaminated with lead and volatile organic compounds such as trichloroethylene (TCE), benzene, and tetrachloroethylene (PCE). In addition, oils, solvents, and fuels have been discharged into the soils. Remediation efforts commenced in the 1990s, and contaminated soil was excavated and treated. Soil caps were put in place to limit human exposure. A fishing restriction was put in place for Garrison Slough, and people are advised against coming in contact with the water. As of 2012, most sites were in a long-term monitoring program to ensure that contaminate plumes are contained.

Petroleum contamination was first discovered at the derelict Universal Recycling Center in 1993 during a solid waste inspection. There was also evidence of possible dioxin contamination. Cleanup of the property commenced in 2005, and contaminated soils were removed. Groundwater monitoring was conducted in 2007, and no contaminants of concern were observed above cleanup levels.

In 2005, construction of a 54-acre housing project on Fort Wainwright unearthed an area with extensive polychlorinated biphenyl (PCB) contamination. As of 2009, all excavated materials from the construction site were tested for contamination and removed for treatment. Military related munitions were also found in the area and removed. Numerous groundwater monitoring wells were installed between 2005 and 2008.

Current Economy¹⁴⁸

Gold mining and exploration figures strongly in Fairbanks' social and environmental history. In 1901, a trading post was established on the Chena River and soon afterwards gold was discovered in the area and a new wave of the gold rush was underway. Prospectors inundated the trading post and the city of Fairbanks emerged around the old steamboat landing banks. The town, named after Indiana Senator Charles Fairbanks, boomed along with many other mining field communities. The passage of a local government law in 1900, which regularized

¹⁴⁵ Fairbanks North Star Borough (2003). *Comprehensive Economic Development Strategy*. Retrieved July 18, 2012 from: <http://www.commerce.state.ak.us/dca/plans/FairbanksNorthStarBorough-EDP-2003.pdf>.

¹⁴⁶ See footnote 143.

¹⁴⁷ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved July 20, 2012 from: <http://dec.alaska.gov/spar/csp/sites/arcticsurplus.htm>.

¹⁴⁸ Unless otherwise noted, all monetary data are reported in nominal values.

incorporation procedures and authorized the use of certain fees by city councils and school districts, gave Fairbanks security and tools to avoid the collapse that other boom towns suffered after the gold rush.

During the twentieth century, two major events transformed Fairbanks and the rest of Alaska: the Second World War and the oil boom of the seventies. In both cases major flow of resources and infrastructure construction fueled the growth and consolidation of Fairbanks as one of the main urban centers of the state. In the 1940s, initiated by the war effort and concern about the Japanese threat, the Alaska-Canada (Alcan) Highway was built. In the 1970s, coinciding with a world's oil shortage, the Trans-Alaska oil pipeline was established.

Fairbanks provides supplies, as well as private and public services, to most of interior Alaska and thus plays a central role in the region. This centrality is fundamental to understanding the organization and composition of Fairbanks' economic system. By virtue of this centrality Fairbanks has a high density of public institutions: City, Borough, state and federal government services of all sorts. The Eielson Air Force Base and Fort Wainwright are both large government service employers.

On a more local basis, tourism is also a significant part of the economy. The recently developed tourism sector attracts an estimated 325,000 visitors to Fairbanks each summer. The Alaska Railroad brings a significant number of summer visitors to the Fairbanks area from Anchorage and southcentral Alaska. The Tanana Chiefs Conference opened the Chena River Convention Center, which provides space for attracting a variety of events to the area, and several organizations teamed together to construct the Morris Thompson Cultural and Visitor Center.¹⁴⁹

The Tanana Valley is one of the most productive agriculture regions in the state. During the 1990s, Tanana Valley farmers planted 58.8% of the total acreage farmed in Alaska, which accounted for 33.1% of total crop production during that time. In addition, the number of farms in the Fairbanks North Star Borough increased by 4% between 1997 and 2002. Mining is a large contributor to the local economy. The amount of refined gold in the Eastern Interior Region of Alaska increased between 2000 and 2006, from 392,862 ounces to 474,900 ounces. Fairbanks functions as an important staging area for oil and gas exploration, development, and production in Alaska's northern and interior regions. The area is the midpoint of the 800-mi Trans-Alaska Pipeline System that runs south from Prudhoe Bay to Valdez. The pipeline also supplies refineries located within the Borough and the Alaska North Slope. In addition, oil and gas deposits comparable to those of Cook Inlet have been identified in the Yukon Flats region. The United States Geological Survey (USGS) reports that the region 200 mi from Fairbanks contains 5.5 trillion cubic feet of natural gas and 173 million barrels of oil.¹⁵⁰ Top employers in 2010¹⁵¹ included: the Fairbanks North Star School District, University of Alaska, State of Alaska, Banner Health System, Fred Meyer Stores Inc., Tanana Chiefs Conference, Safeway Inc., Fairbanks North Star Borough, and Fairbanks Gold Mining Inc.

¹⁴⁹ See footnote 145.

¹⁵⁰ Fairbanks North Star Borough (2008). *Comprehensive Economic Development Strategy*. Retrieved July 20, 2012 from: <http://www.commerce.state.ak.us/dca/plans/FairbanksNorthStarBorough-EDP-2008.pdf>.

¹⁵¹ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

In 2010,¹⁵² the estimated per capita income was \$26,373 and the estimated median household income was \$51,320, compared to \$19,814 and \$40,577 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,¹⁵³ the real per capita income (\$26,055) and real median household income (\$53,358) indicate that while individual earnings remained relatively unchanged, household earnings increased. In 2010, Fairbanks ranked 92nd of 305 communities from which per capita income was estimated, and 124th of 299 communities from which median household income was estimated.

According to the 2006-2010 ACS, an estimated 59.9% of residents aged 16 and older were part of the civilian labor force in 2010 and an estimated 12.9% were in the employed in the Armed Forces. In that year, unemployment was estimated at 4.5%, compared to an estimated 5.9% statewide; and an estimated 11.0% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in the civilian labor force, an estimated 73.1% worked in the private sector, an estimated 22.1% worked in the public sector, an estimated 4.7% were self-employed, and an estimated 0.1% were unpaid family workers.

By industry, most (20.2%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by retail trade sectors (20.0%); arts, entertainment, recreation, accommodations, and food service sectors (11.7%); and construction sectors (10.2%) (Figure 3). Agriculture, forestry, fishing, and mining sectors made up 1.5% of sector employment in 2010. However, this may not accurately portray the importance of fisheries within the community, as is reflected in the *Commercial Fisheries* section.

By occupation type, most (30.4%) employed residents were estimated to hold sales or office positions in 2010; followed by management or professional positions (27.2%); service positions (19.6%); natural resources, construction, or maintenance positions (13.0%); and production, transportation, or material moving positions (9.8%) (Figure 4).

¹⁵² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Figure 3. Local Employment by Industry in 2000-2010, Fairbanks (U.S. Census).

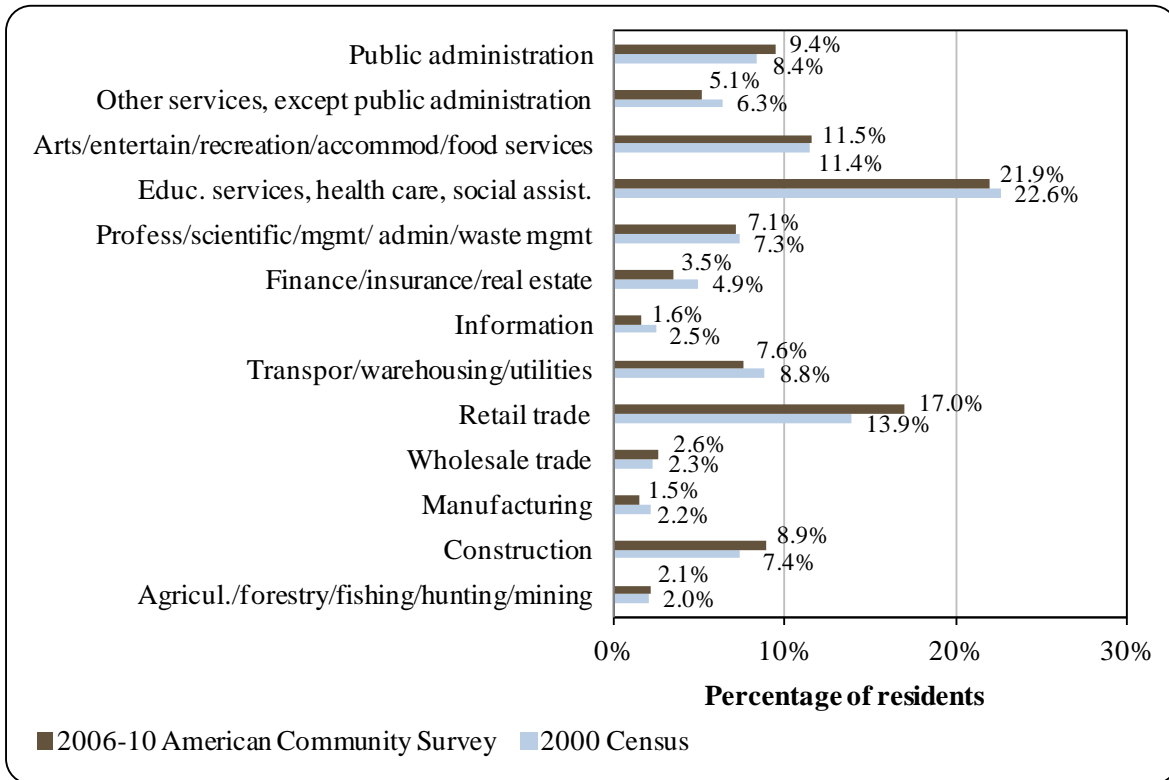
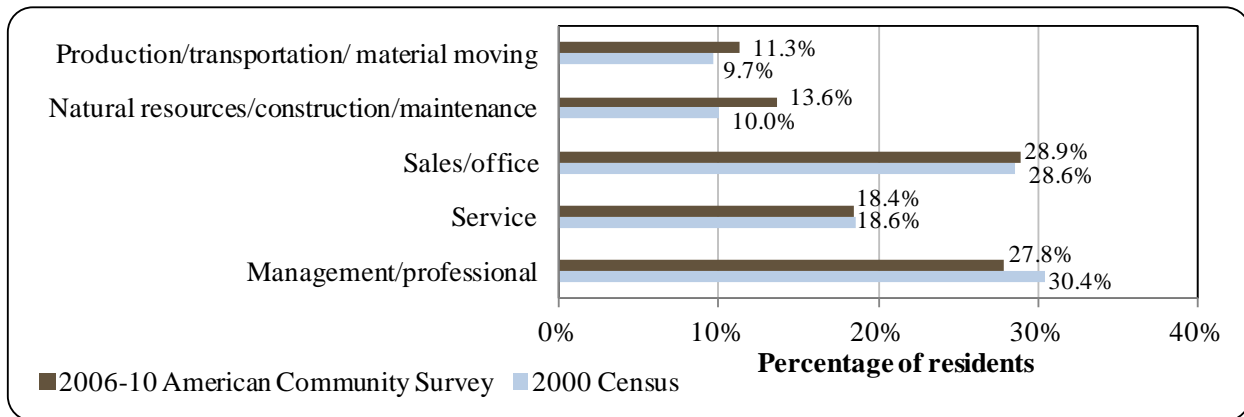


Figure 4. Local Employment by Occupation in 2000-2010, Fairbanks (U.S. Census).



Overall, there were areas of significant variation in sector and occupational employment between 2000 and 2010. Most notably, there were significant proportional declines in professional, scientific, management, administrative, and waste management sectors; while there were significant proportional increases in public administration and retail trade sectors. In addition, there were significant proportional declines in the number of service positions; while there were significant proportional increases in the number of management and professional positions.

Governance

Fairbanks was incorporated in 1903 and is a Home Rule City. The city imposes a 0.057% property tax and an 8% tax on tobacco. The Borough also implements property and tobacco taxes, 0.15% and 8%, respectively. In 2010, the City did not administer a sales tax. The total community revenue in 2010 was \$30,218,824, which increased by \$8,184,230 compared to 2000.¹⁵⁴ The state administered Community Revenue Sharing program allocated \$1,726,227 to Fairbanks in 2010, which is more than five times the amount allocated in 2000 (Table 2).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Fairbanks from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$22,140,114	n/a	\$300,533	n/a
2001	\$20,054,115	n/a	\$265,458	n/a
2002	\$22,548,441	n/a	\$265,831	n/a
2003	\$22,645,231	n/a	\$265,423	n/a
2004	\$21,170,164	n/a	n/a	n/a
2005	\$26,242,790	n/a	n/a	n/a
2006	\$29,420,482	n/a	n/a	n/a
2007	\$35,633,332	n/a	n/a	n/a
2008	\$37,384,876	n/a	n/a	n/a
2009	\$33,753,147	n/a	\$1,645,149	n/a
2010	\$31,285,189	n/a	\$1,726,227	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Fairbanks was not included in the Alaska Native Settlement Act (ANCSA) of 1971 and is not represented by a federally recognized Native traditional council. However, several Alaska Native institutions are based in Fairbanks. These include regional and local corporations as well as village councils: Denakkanaaga Inc. (regional Native non-profit.-Tribal Elders Council for Doyon Region), Doyon Limited (regional Native corporation), Fairbanks Native Association (regional Native non-profit providing social services) and the Tanana Chiefs Conference (regional health corporation-non-profit for Doyon Ltd.). Other local or regional institutions of the area are the Interior Regional Housing Authority (Housing Authority) the Alaska Sea Otter

¹⁵⁴ Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

Commission and the Fairbanks Community Food Bank. Permanent offices of both Alaska Department of Fish and Game (ADF&G) and Bureau of Customs and Immigration Services are located in Fairbanks. The nearest National Marine Fisheries Service office is in Anchorage.

Federal agencies with offices located within the Borough include U.S. District Court, Appellate Court, U.S. Fish & Wildlife Service, Federal Aviation Administration, U.S. Customs Service, Internal Revenue Service, Bureau of Land Management, National Parks Service, U.S. Department of Agriculture, and the U.S. Postal Service.

Infrastructure

Connectivity and Transportation

Fairbanks connects Anchorage with the North, Interior Alaska and Canada. It lies at the confluence of the Richardson Highway, George Parks Highway, Steese Highway, and Elliott Highway. Another major route, the Dalton Highway (formerly the North Slope Haul road) to Prudhoe Bay, begins about 75 mi north of town. The Alaska Railroad connects Fairbanks to Anchorage and Seward at the shoreline of the Gulf of Alaska.

The city is also easily reachable by air. The state-owned Fairbanks International Airport is regularly serviced by Alaska Airlines, Air North, Warbelow's Air Ventures, Larry's Flying Service, Marina Air, Frontier Flying Service, Arctic Circle Adventure, Midnight Sun Aviation, Interior Alaska Adventures, Tanana Air Service, Tatonduck Outfitters and Wright Air Service. The facility has an 11,800-ft asphalt runway, a heliport and a seaplane landing strip. A public seaplane base is also located on the Chena River. In addition, there are several privately-owned airstrips and heliports in the vicinity. Roundtrip airfare between Fairbanks and Anchorage in June 2012 was \$256.¹⁵⁵

Due to its geographic and climatic features, Fairbanks must import most of the goods that its population consumes. Goods are transported to Fairbanks by air and truck along the Alaska Railroad. The Borough operates a public transportation system, and cab companies and rental car services are available. Each summer, this city receives more than 300,000 visitors and has a correspondingly wide variety of accommodation possibilities.

Facilities

Fifteen circulating pump stations distribute treated water throughout the greater Fairbanks area. City water, sewer, and electric systems are operated by private companies. The Chena power site has four steam turbines fueled by coal and one oil-fueled generator. Garbage collection services are provided by the city for a fee, and refuse is hauled to the Class 1 Borough landfill on South Cushman. Fort Wainwright operates its own landfill. Fairbanks offers a wide range of visitor accommodations and attractions, comparable with other cities its size. Public safety services include city police and local state troopers. Fire and rescue services are provided by local fire department and Emergency Medical Services (EMS); Fort Wainwright Fire and EMS, Fairbanks Northstar Borough Fire and EMS, and U.S. Bureau of Land Management (BLM) Alaska Fire Service. Legal services include State Superior Court, District Court,

¹⁵⁵ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

Appellate Courts, and Fairbanks Correctional Center. Several community, youth, and senior service centers are available. Thirty-eight libraries are available, and five museums.¹⁵⁶

There are three undersea fiber optic cable systems which connect Alaska to the contiguous United States. Two systems connect Fairbanks to this undersea network. Communications services are provided by Alaska Communications Systems (ACS), General Communications Inc. (GCI), and AT&T/Alascom. Services include local and long distance telephone, cable, and broadband internet.¹⁵⁷

In a survey conducted by the AFSC in 2011, community leaders reported infrastructure projects completed between 2000 and 2010, or in progress as of 2010. These projects included new dock space, dock improvements, broadband internet improvements, road improvements, alternative energy projects, public safety improvements, fire service improvements, improvements to education services, and a state-run sport fish hatchery. As of 2010, there was 30 ft of dock space available for transient moorage at Fairbanks Northstar Borough Pioneer Park. Vessels up to 24 ft in length can use moorage in Fairbanks. Community leaders noted that there were less charter/party boats observed in Fairbanks in 2010 than in 2005. This was partially attributed to the Tanana Queen Riverboat halting service.

According to the 2011 AFSC survey, fisheries-related businesses and services available locally include fish processors, sportfishing gear sales, boat repair (welding and mechanical services), small vessel haul-out facilities, tackle sales, bait sales, commercial cold storage, vessel fuel sales, and air taxi services. Community leaders also noted that residents travel to Nenana, Valdez, and Seward for businesses and services not available locally. Additional public services include food banks, soup kitchens, job placement services, and publically subsidized housing.

Medical Services

Healthcare services in Fairbanks are provided by the Fairbanks Memorial Hospital, the Interior Neighborhood Health Clinic, Chief Andrew Isaac Health Center, Bassett Army Community Hospital/Fort Wainwright. In addition specialized care is provided by FNA Regional Center for Alcohol & Other Addictions, Fairbanks Pioneers' Home, and the Denali Center.

Educational Opportunities

As of 2011, the Fairbanks school district has 35 schools, a total of 872 teachers, and 14,285 students enrolled. The student-teacher ratio was 17.6.¹⁵⁸ The city is also home to the University of Alaska Fairbanks (UAF), which was founded in 1917 and as of 2010 had a total of 11,034 enrolled students.¹⁵⁹ UAF offers seven major research units including the Agricultural and Forestry Experiment Station, Arctic Region Supercomputing Center, the Geophysical Institute, the Institute of Marine Science, the Institute of Arctic Biology, the Institute of Northern Engineering, and the International Arctic Research Center. UAF offers 163 degree and 24

¹⁵⁶ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved November 15, 2011 from http://www.dced.state.ak.us/dca/commdb/CF_BLOCK.htm

¹⁵⁷ Fairbanks North Star Borough (2003). *Comprehensive Economic Development Strategy*. Retrieved July 18, 2012 from: <http://www.commerce.state.ak.us/dca/plans/FairbanksNorthStarBorough-EDP-2003.pdf>.

¹⁵⁸ Alaska Department of Education and Early Development (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁵⁹ See footnote 156.

certificates in 114 disciplines, and is the only doctoral degree granting institution in Alaska. UAF also encompasses eight regional campuses in rural and urban locations throughout the state. This includes campuses in Dillingham, Kotzebue, Bethel, Nome, the Interior-Aleutians Campus, and the Rural College.¹⁶⁰

Involvement in North Pacific Fisheries

*History and Evolution of Fisheries*¹⁶¹

Although the city of Fairbanks is over 300 mi from the Alaska coastline, it has historical ‘long distance’ involvement in the commercial fishing industry. The city is home to a substantial number of vessel owners, commercial permit holders, and registered crew members. There is also a commercial fish processing plant. In short, Fairbanks is proof that Alaska’s commercial fishing industry is as much about networks and inter-community linkages as it is about location.

Much of the sportfishing effort in the area takes place within the Tanana River ADF&G Management Area. The Tanana River is the second largest tributary system of the Yukon River. The Chena, Salcha, Chatanika, and Delta Clearwater rivers, Minto Flats, Harding, Fielding, and Table lakes, and various stocked waters are all popular areas for recreational and subsistence fishing. The most commonly targeted species include Chinook and coho salmon, Arctic grayling, burbot, northern pike, lake trout, and stocked rainbow trout.

The Chena River supports one of the largest Chinook salmon populations in the Alaskan portion of the Yukon River drainage. Adult Chinook enter the Tanana River between late June and the second week of July. The run ends in late July or early August. Chum salmon are primarily available in July and August and are typically targeted or caught incidentally along with Chinook. The Salcha River supports the largest Chinook salmon population in the Tanana River drainage. Run characteristics are similar to those found in the Chena River. However, coho salmon are not found in the Salcha River drainage.

Coho salmon migrate into small tributaries on the south side of the Tanana River drainage, and tributaries near Delta Junction host some of the largest known coho spawning concentrations in the Yukon River drainage. The Delta Clearwater River supports the largest recreational coho fishery within the Tanana River drainage. Coho are the last of the salmon species to enter the Yukon River system. They typically enter around mid-September, and runs peak by mid-October. Some have even reported seeing coho spawning as late as January. Spring fed tributaries in the area provide ideal habitat for juvenile coho.

During the late 1970s and mid-1980s, the Chena River Arctic grayling fishery was the largest in the state. During the latter part of the 1980s, the bag limit for Arctic grayling decreased following poor stock levels, and the fishery began to decline somewhat. The fishery was further restricted to catch-and-release by the Alaska Board of Fisheries in 1994, and fishing effort dropped off considerably. Stock assessments in 2005 showed a stable population; however, it is unlikely that the population would be able to sustain a large annual harvest similar to historic levels. Other Arctic grayling fisheries within the Tanana River drainage are found within the Chatanika River, Nenana River, Salcha River, Fielding Lake, the Goodpaster River, the Tok River drainage, Shaw Creek, and the Richardson Clearwater River.

¹⁶⁰ See footnote 157.

¹⁶¹ Brase, A. L. J., and B. Baker. 2011. *Fishery Management Report for Recreational Fisheries in the Tanana River Management Area, 2009*. Retrieved July 23, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-17>.

The Minto Flats, located about 35 mi west of Fairbanks, is a popular northern pike fishing and waterfowl hunting area. The Minto Lakes are thought to support the majority of the northern pike sport fishery within the Tolovana River drainage. During the winter, much of the waters within the Flats become anoxic, forcing fish to move to waters within the Chatanika and Tolovana rivers or other tributaries. From 1984 to 1986, the total harvest of northern pike from the Minto Flats area doubled, and many females were caught during the winter ice fishing season. After 1987, sportfishing for northern pike was closed between October 15 and May 31, and the bag limit was reduced. Estimated sport catch of northern pike peaked in 1994. Northern pike is also common in many smaller lakes, sloughs, and tributaries throughout the Tanana River drainage.

Burbot are commonly caught by set-line through ice during the winter. Prior to 1988, there was no bag limit for burbot if taken by hook and line. There was a 10 fish per day limit for fish taken by spear or bow and arrow. However, in 1988, bag limits of 15 fish per day in flowing waters, and 5 fish per day in lakes were established. Before regulations were established, burbot fishing primarily occurred in the Fielding and Tangle Lakes system. From 1981 to 1984, burbot harvests averaged 330 fish per year in those systems. Low recruitment eventually led to restrictions on catch.

The Chatanika River supports a large population of whitefish (humpback and least cisco). The only major whitefish sport fishery occurs on the Chatanika River. This fishery historically took place in September. Both humpback and least cisco were harvested, as were a small number of round whitefish. The fishery became very popular in the 1980s. Prior to 1988, the fishery was unregulated. However, as with many other recreational fisheries in the area, the implementation of regulations followed a decline in harvest levels in the late 1980s.

Lakes containing wild lake trout in the Tanana River Management Area include Harding, Fielding, Two Bit, Landmark Gap, Glacier, Sevenmile, and the Tangle lakes system. A new state-run hatchery began to produce a small number of lake trout in 2009.

While very little of Fairbanks' municipal revenue is fishing-related (Table 3), Fairbanks residents are engaged in North Pacific fisheries via their purchase and use of permits for a range of species (Table 4) and individual fishing quotas for halibut and sablefish (Tables 6 and 7). Salmon is the most targeted species, with 134 salmon permits issued to residents of Fairbanks in 2010.

Because Fairbanks is located more than 50 mi from the coast, the community is not located within a Federal Statistical and Reporting Area, a Pacific Halibut Fishery Regulatory Area, or a Sablefish Regulatory Area. Fairbanks is not eligible to participate in the Community Development Quota program or the Community Quota Entity program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, one shoreside processing facility was in operating in Fairbanks. Santa's Smokehouse operates a family owned and operated plant in Fairbanks called Interior Alaska Fish Processors, which processes halibut and all five species of Pacific salmon.¹⁶² Interior Alaska Fish Processors also processes sport-caught fish and game, and it smokes sport-caught salmon (all species but pink).¹⁶³

¹⁶² Alaska Seafood Marketing Institute (2011). Directory of Alaska Seafood Suppliers. Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

¹⁶³ Santa's Smokehouse (n.d.). *Homepage*. Retrieved November 15, 2011 from <http://santassmokehouse.com>.

Fisheries-Related Revenue

Fisheries-related revenue received by the City of Fairbanks is minimal, only including a small amount of revenue raised from the Shared Fisheries Business Tax (Table 3).

Commercial Fishing

In 2010, 146 residents, or less than 1% of the population, held 159 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 145 residents held 167 CFEC permits. Of the CFEC permits held in 2010, 85% were for salmon, compared to 77% in 2000; 7% were for herring, compared to 7% in 2000; 4% were for halibut, compared to 10% in 2000; 2% were for “other” shellfish, compared to 2% in 2000; and less than 1% were for sablefish, “other” groundfish, and crab. In addition, two residents held two Federal Fisheries Permits (FFP) and two residents held two License Limitation Program (LLP) groundfish permits. In 2010, residents held 376,376 shares of halibut quota on 15 accounts, compared to 457,129 shares on 22 accounts in 2000. Also in that year, residents held 283,873 shares of sablefish quota on one account, compared to 0 shares on one account in 2000. No residents held crab quota between 2010 and when the program began.

Residents held 79 commercial crew licenses in 2010, compared to 81 in 2000. In addition, residents held majority ownership of 30 vessels, compared to 102 in 2000. Of the CFEC permits held in 2010, 25% were actively fished, compared to 31% in 2000. This varied by fishery from 100% of halibut and sablefish permits, to 24% of salmon permits, 9% of herring permits, and 0% of “other” shellfish, “other” finfish, and groundfish permits. In addition, 50% of FFP and 0% of LLP were actively fished. Fisheries prosecuted by Fairbanks residents in 2010 included: statewide longline and mechanical jig halibut, statewide longline sablefish, southeast Alaska drift gillnet salmon, Bristol Bay drift gillnet salmon, Cook Inlet set gillnet salmon, Kodiak set gillnet salmon, Lower Yukon gillnet salmon, Norton Sound gillnet salmon, and statewide power troll salmon.

No landings were made in Fairbanks in 2000 and 2001, and landings between 2002 and 2010 are considered confidential. Landings made by Fairbanks residents in 2010 are considered confidential, with the exception of salmon. In that year, residents landed 1.09 million pounds of salmon valued at \$1.41 million ex-vessel; compared to 578,459 lb valued at \$347,747 ex-vessel in 2000; an increase of \$0.47 per pound landed after adjusting for inflation¹⁶⁴ and without considering the species composition of landings. Revenue from salmon landings peaked in 2010. In 2009, residents landed 23,222 lb of halibut valued at \$75,955 ex-vessel, compared to 13,455 lb valued at \$35,207 ex-vessel in 2000; a decrease of \$0.05 per pound landed after adjusting for inflation.¹⁶⁵ Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹⁶⁴ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

¹⁶⁵ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Fairbanks: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	\$163	\$279	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a			n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$163</i>	<i>\$279</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$22.14 M</i>	<i>\$20.05 M</i>	<i>\$22.55 M</i>	<i>\$22.65 M</i>	<i>\$21.17 M</i>	<i>\$26.24 M</i>	<i>\$29.42 M</i>	<i>\$35.63 M</i>	<i>\$37.38 M</i>	<i>\$33.75 M</i>	<i>\$31.29 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports in its annual municipal budgets. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Fairbanks: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	2	2	2	2	2	2	2	2	2	2	2
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	2	2	2	2	2
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	3	3	3	4	4	4	2	2	2	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	1	1
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%
	Total permit holders	3	3	3	4	4	4	2	2	2	2	2
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	1	4	2	1	1
	Fished permits	0	0	0	0	0	0	1	2	0	1	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	100%	50%	0%	100%	0%
	Total permit holders	0	0	0	0	0	0	1	4	2	1	1
Other shellfish (CFEC) ²	Total permits	3	2	1	1	1	1	1	2	2	2	3
	Fished permits	1	0	0	0	0	0	0	1	1	0	0
	% of permits fished	33%	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%
	Total permit holders	3	2	1	1	1	1	1	2	2	2	3
Halibut (CFEC) ²	Total permits	17	12	11	8	5	7	8	7	7	8	6
	Fished permits	7	9	8	6	5	7	6	7	5	8	6
	% of permits fished	41%	75%	73%	75%	100%	100%	75%	100%	71%	100%	100%
	Total permit holders	17	12	11	8	5	7	8	7	7	8	6
Herring (CFEC) ²	Total permits	12	7	7	7	7	6	9	9	8	10	11
	Fished permits	2	3	3	3	1	1	1	1	0	0	1
	% of permits fished	17%	43%	43%	43%	14%	17%	11%	11%	0%	0%	9%
	Total permit holders	11	7	7	7	7	6	9	9	8	10	11

Table 4 Cont. Permits and Permit Holders by Species, Fairbanks: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	2	2	2	0	3	0	0	0	1	1
	Fished permits	0	1	1	2	0	3	0	0	0	1	1
	% of permits fished	0%	50%	50%	100%	n/a	100%	n/a	n/a	n/a	100%	100%
	Total permit holders	1	2	2	2	0	2	0	0	0	1	1
Groundfish (CFEC) ²	Total permits	4	4	2	0	0	0	0	0	0	1	1
	Fished permits	2	0	1	0	0	0	0	0	0	1	0
	% of permits fished	50%	0%	50%	n/a	n/a	n/a	n/a	n/a	n/a	100%	%
	Total permit holders	4	3	2	0	0	0	0	0	0	1	1
Other Finfish (CFEC) ²	Total permits	2	2	2	2	2	2	2	2	2	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	2	2	2	1	1
Salmon (CFEC) ²	Total permits	128	124	124	130	130	134	135	135	140	140	135
	Fished permits	39	30	34	36	29	39	43	38	38	37	32
	% of permits fished	30%	24%	27%	28%	22%	29%	32%	28%	27%	26%	24%
	Total permit holders	121	116	117	124	128	129	130	129	132	132	131
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>167</i>	<i>153</i>	<i>149</i>	<i>150</i>	<i>145</i>	<i>153</i>	<i>156</i>	<i>159</i>	<i>161</i>	<i>164</i>	<i>159</i>
	<i>Fished permits</i>	<i>51</i>	<i>43</i>	<i>47</i>	<i>47</i>	<i>35</i>	<i>50</i>	<i>51</i>	<i>49</i>	<i>44</i>	<i>48</i>	<i>40</i>
	<i>% of permits fished</i>	<i>31%</i>	<i>28%</i>	<i>32%</i>	<i>31%</i>	<i>24%</i>	<i>33%</i>	<i>33%</i>	<i>31%</i>	<i>27%</i>	<i>29%</i>	<i>25%</i>
	<i>Permit holders</i>	<i>145</i>	<i>132</i>	<i>131</i>	<i>135</i>	<i>136</i>	<i>140</i>	<i>142</i>	<i>144</i>	<i>147</i>	<i>144</i>	<i>146</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Fairbanks: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Fairbanks ²	Total Net Pounds Landed In Fairbanks ^{2,5}	Total Ex-Vessel Value Of Landings In Fairbanks ^{2,5}
2000	81	0	3	102	41	0	0	\$0
2001	93	0	1	90	31	0	0	\$0
2002	55	5	2	88	35	0	--	--
2003	60	5	3	76	34	0	--	--
2004	53	4	3	87	34	0	--	--
2005	60	4	2	32	9	0	--	--
2006	52	5	2	40	10	0	--	--
2007	76	6	1	34	7	0	--	--
2008	70	2	2	34	7	0	--	--
2009	78	2	2	36	4	0	--	--
2010	79	1	1	30	5	0	--	--

Note: Cells showing “–” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Fairbanks: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	22	457,129	84,887
2001	25	473,675	99,633
2002	24	479,198	100,302
2003	23	457,522	97,058
2004	21	391,163	81,409
2005	21	369,050	74,438
2006	19	350,745	66,568
2007	16	340,141	55,101
2008	13	335,627	53,962
2009	15	376,376	52,756
2010	15	376,376	48,643

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation in Fairbanks: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	n/a	n/a
2001	1	263,141	27,250
2002	2	292,115	30,908
2003	2	312,847	39,892
2004	2	318,971	40,800
2005	2	374,254	41,287
2006	1	283,873	35,277
2007	1	283,873	33,043
2008	1	283,873	28,692
2009	1	283,873	25,869
2010	1	283,873	24,583

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation in Fairbanks: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data was reported for that year. Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Fairbanks: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	--	--	--	--	--	--	--	--	--
Finfish	0	0	--	--	--	--	--	--	--	--	--
Halibut	0	0	--	--	--	--	--	--	--	--	--
Herring	0	0	--	--	--	--	--	--	--	--	--
Other Groundfish	0	0	--	--	--	--	--	--	--	--	--
Other Shellfish	0	0	--	--	--	--	--	--	--	--	--
Pacific Cod	0	0	--	--	--	--	--	--	--	--	--
Pollock	0	0	--	--	--	--	--	--	--	--	--
Sablefish	0	0	--	--	--	--	--	--	--	--	--
Salmon	0	0	--	--	--	--	--	--	--	--	--
<i>Total²</i>	0	0	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	--	--	--	--	--	--	--	--	--
Finfish	\$0	\$0	--	--	--	--	--	--	--	--	--
Halibut	\$0	\$0	--	--	--	--	--	--	--	--	--
Herring	\$0	\$0	--	--	--	--	--	--	--	--	--
Other Groundfish	\$0	\$0	--	--	--	--	--	--	--	--	--
Other Shellfish	\$0	\$0	--	--	--	--	--	--	--	--	--
Pacific Cod	\$0	\$0	--	--	--	--	--	--	--	--	--
Pollock	\$0	\$0	--	--	--	--	--	--	--	--	--
Sablefish	\$0	\$0	--	--	--	--	--	--	--	--	--
Salmon	\$0	\$0	--	--	--	--	--	--	--	--	--
<i>Total²</i>	\$0	\$0	--	--	--	--	--	--	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds And Ex-Vessel Revenue, by Species, by Fairbanks Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	13,455	--	12,276	--	--	--	--	--	--	23,222	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	139	--	--	--	--	--	--	1,004	1,621	--
Groundfish											
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	578,459	578,459	759,886	626,138	710,142	835,931	619,093	1,224,488	909,097	719,426	1,090,201
<i>Total²</i>	<i>591,914</i>	<i>578,598</i>	<i>772,162</i>	<i>626,138</i>	<i>710,142</i>	<i>835,931</i>	<i>619,093</i>	<i>1,224,488</i>	<i>910,101</i>	<i>744,269</i>	<i>1,090,201</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$35,207	--	\$26,015	--	--	--	--	--	--	\$75,955	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	\$55	--	--	--	--	--	--	\$1,505	\$1,360	--
Groundfish											
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$347,747	\$377,673	\$324,873	\$342,695	\$537,153	\$461,665	\$923,986	\$686,925	\$752,425	\$911,759	\$1,414,934
<i>Total²</i>	<i>\$382,954</i>	<i>\$377,728</i>	<i>\$350,888</i>	<i>\$342,695</i>	<i>\$537,153</i>	<i>\$461,665</i>	<i>\$923,986</i>	<i>\$686,925</i>	<i>\$753,930</i>	<i>\$989,074</i>	<i>\$1,414,934</i>

Note: Cells showing "--" indicate that the data is considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Confidential data not included in annual totals.

Recreational Fishing

Due to the inland geographic location of Fairbanks, saltwater sport fishermen must travel a great distance to the coast, making freshwater sportfishing a more common form of recreational fishing in Fairbanks. The Tanana River watershed is a popular destination for private anglers, and a description of recreational fisheries was provided in the *History and Evolution of Fisheries* section.

In 2010, around 19% of sport fish guide businesses registered in Fairbanks were active, compared to 21% in 2000. The number of sport fish guide licenses held in the community declined significantly during that period from 105 in 2000, to 32 in 2010. The number of sportfishing licenses issued to residents has steadily increased, from 16,969 licenses in 2000 to 18,729 licenses in 2010. The number of sportfishing licenses sold in the community has increased as well, with 25,854 licenses sold in 2010 compared to 9,589 in 2000 (Table 11). Fairbanks is located within Alaska Sport Fishing Survey Area U – Tanana River drainage. This area includes the entire Tanana River watershed. Information is available about freshwater sportfishing activity only at this regional scale. In 2010, there were a total of 96,859 freshwater angler days fished, compared to 121,763 in 2000. In that year, non-Alaska residents accounted for 9.3% of total angler-days fished, compared to 10.4% in 2000.

According to ADF&G Harvest Survey data, local private anglers target all five species of Pacific salmon, landlocked salmon, rainbow trout, Dolly Varden, cutthroat trout, whitefish, burbot, Arctic grayling, northern pike, sheefish, Pacific halibut, rockfish, lingcod, Pacific cod, shark, smelt, steelhead trout, “other” finfish, Dungeness crab, Tanner crab, razor clams, hardshell clams, and shrimp.¹⁶⁶ No kept/released charter logbook data are available for Fairbanks. In a survey conducted by the AFSC in 2011, community leaders reported that local recreational fishing effort is done by charter boat, private boat, or by shore. Both residents and non-Alaska residents participate in recreational fisheries. Typically, Chinook salmon are the most popular species targeted. Information regarding recreational fishing trends can be found in Table 11.

¹⁶⁶ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sportfishing trends, Fairbanks: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Fairbanks ²	Freshwater Angler Days Fished – Non-residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	12	105	16,969	9,589	11,517	110,246
2001	14	94	16,940	10,058	10,744	80,391
2002	12	98	16,960	10,231	9,733	98,884
2003	9	90	17,841	23,027	7,502	92,432
2004	13	101	18,438	25,244	11,853	104,633
2005	6	37	18,044	24,577	11,335	82,063
2006	11	38	16,746	23,610	8,216	71,461
2007	6	42	18,413	26,331	9,327	91,629
2008	8	41	17,456	24,637	7,613	64,722
2009	7	33	17,675	24,177	7,415	85,082
2010	3	32	18,729	25,854	9,025	87,834

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]
² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]
³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Evidence of historic use of the Tanana River was documented by early Euro-American explorers. The subsistence fishery was essentially unrestricted until a regulatory system was put into place in 1964. In the beginning, permits were issued on an individual basis with no harvest limits or eligibility criteria. In 1971, the first harvest limits for salmon were imposed. These limits were 25 Chinook and 200 “other salmon” per person. Since then, restrictions on numbers of fish and fishing periods have been increased.¹⁶⁷

Many Fairbanks area residents participate in personal use fisheries on the Tanana River. In a 1980 ADF&G survey of Tanana River fishermen, 76.9% of respondents indicated that they lived in the greater Fairbanks area. Of those surveyed that year, 58.5% reported that subsistence harvest activities account for “half” or “some” of their annual meat consumption. Only 7.8% reported that subsistence activities account for “all” of their annual meat consumption.¹⁶⁸

In 2008, the city issued 3,077 subsistence salmon permits, which had grown slightly from 2,560 permits in 2000. Based on the subsistence salmon permits that were returned to ADF&G in 2008, sockeye salmon appeared to be by far the most common salmon species harvested for subsistence, with an estimated total of 35,765 harvested in 2008. Fairbanks residents also

¹⁶⁷ Caulfield, R. A. 1981. *Final Report of the Survey of Permit holders in the Tanana River Subsistence Salmon Permit Fishery*. Retrieved July 12, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp014.pdf>.

¹⁶⁸ Caulfield, R. A. 1980. *Interim Report on the Survey of Permit holders in the Tanana Subsistence Permit Fishery*. Retrieved July 12, 2012 from: <http://www.arlis.org/docs/vol1/10883183.pdf>.

reported subsistence harvests of Chinook, chum and coho salmon. Pink salmon were estimated to be the least harvested salmon for subsistence, with 41 harvested in 2008 (Table 13).

Residents of Fairbanks also rely on the use Subsistence Halibut Registration Certificates (SHARC) for subsistence harvest of halibut. In 2010, 7 SHARC were issued and an estimated 140 lb of halibut was harvested using one SHARC, compared to an estimated 567 lb harvested using 4 SHARC in 2004. In terms of marine mammal harvests, a total estimate of nine sea otters were harvested by residents in 2006 and 2007. In addition, an estimated three walrus were harvested by residents in 2000; however, no reports of walrus harvests in subsequent years are available. No information is available about harvests of other marine mammal species. Further information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Fairbanks: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Fairbanks: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	2,560	2,415	2,926	382	1,250	n/a	36,595	n/a	n/a
2001	2,825	2,496	2,407	408	808	2	42,183	n/a	n/a
2002	2,425	2,075	2,791	545	1,757	n/a	33,905	n/a	n/a
2003	2,404	2,074	2,841	2,492	2,290	n/a	31,241	n/a	n/a
2004	2,934	2,383	4,649	3,390	3,999	92	43,571	n/a	n/a
2005	3,208	2,666	4,680	9,501	3,940	9	51,915	n/a	n/a
2006	3,177	2,524	3,518	8,590	2,152	8	52,378	n/a	n/a
2007	3,291	2,811	4,319	6,566	1,549	n/a	54,854	n/a	n/a
2008	3,077	2,618	3,129	1,549	1,629	41	35,765	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Fairbanks: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	6	1	n/a
2004	10	4	567
2005	9	2	340
2006	6	n/a	n/a
2007	11	n/a	n/a
2008	5	2	85
2009	4	n/a	n/a
2010	7	1	140

Note: n/a indicates that no data was reported for that year.

Source: Fall, J.A., and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2010. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Fairbanks: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	3	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	5	n/a	n/a	n/a	n/a	n/a
2007	n/a	4	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

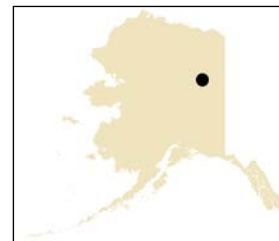
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Fort Yukon



People and Place

*Location*¹⁶⁹

Fort Yukon is located at the confluence of the Yukon and Porcupine Rivers, about 145 air miles northeast of Fairbanks. Fort Yukon is located in the Yukon-Koyukuk Census Area and the Fairbanks Recording District. The area encompasses 7.0 square miles of land and 0.4 square miles of water.

*Demographic Profile*¹⁷⁰

In 2010, there were 583 residents in Fort Yukon, ranking it the 102nd largest community in Alaska. Overall, between 1990 and 2010, the population has increased by 0.52%. However, between 2000 and 2009, the population declined by 1.7% with an average annual growth rate of -0.02%, which was below the statewide average of 0.75% and indicative of an almost flat population trend. Information regarding population trends can be found in Table 1.

The majority of Fort Yukon residents are Gwich'in Athabascan. In 2010, the majority (89.2%) of Fort Yukon residents identified themselves as American Indian or Alaskan Native, compared to 86.0% in 2000. Also in that year, 7.7% of residents identified themselves as White, compared to 11.0% in 2000; 0.5% identified themselves as Native Hawaiian and Other Pacific Islander, compared to 0.0% in 2000; 0.5% identified themselves as Black or African American, compared to 0.0% in 2000; 0.2% identified themselves as Asian, compared to 0.0% in 2000; 1.7% identified themselves as two or more races, compared to 3.0% in 2000; and 0.2% identified themselves as some other race, compared to 0.0% in 2000. In addition, 0.3% identified themselves as Hispanic or Latino, compared to 1.0% in 2000. As noted in Figure 1, even the most significant changes (increase in the Native population and decrease in the White population) are relatively minor overall. Further changes in racial and ethnic composition from 2000 to 2010 are shown in Figures 1.

In 2010, the average household size was 2.4, a slight decline from 2.8 in 1990 and 2.6 in 2000. There has been an increase of occupied households, from 205 in 1990 to 225 in 2000 to and 246. Of those occupied households surveyed in 2010, 72.7% were owner-occupied and of the 325 housing units reported in Fort Yukon, 24.3% were considered vacant. There were five residents living in group quarters in 2000, compared to two in 2010.

¹⁶⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

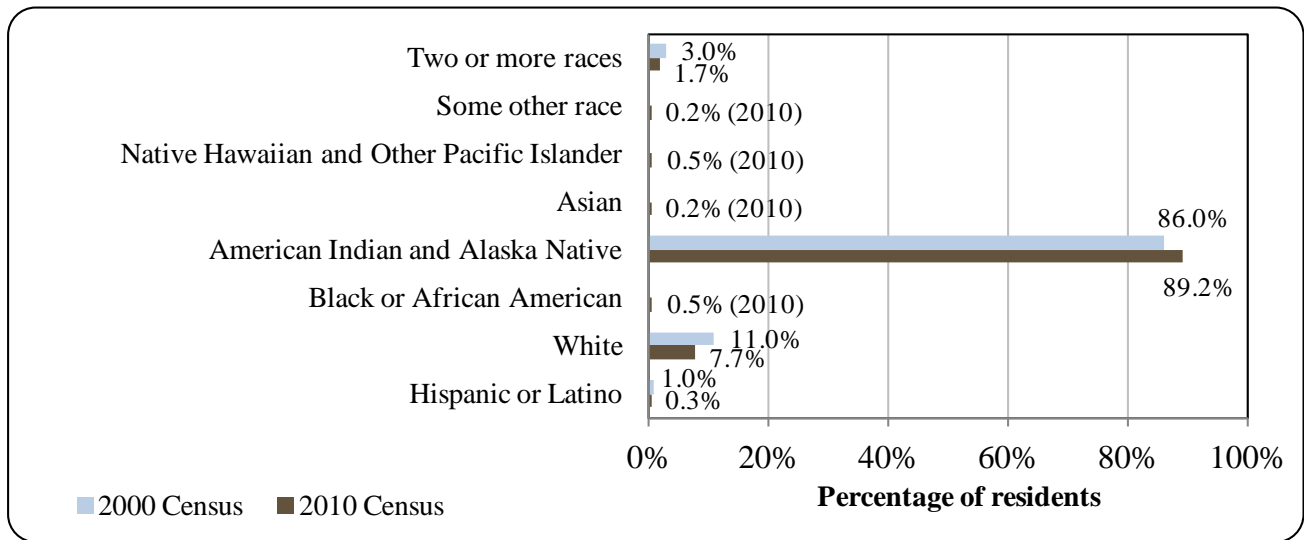
Table 1. Population in Fort Yukon from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	580	-
2000	595	-
2001	-	565
2002	-	569
2003	-	559
2004	-	593
2005	-	570
2006	-	595
2007	-	588
2008	-	585
2009	-	585
2010	583	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

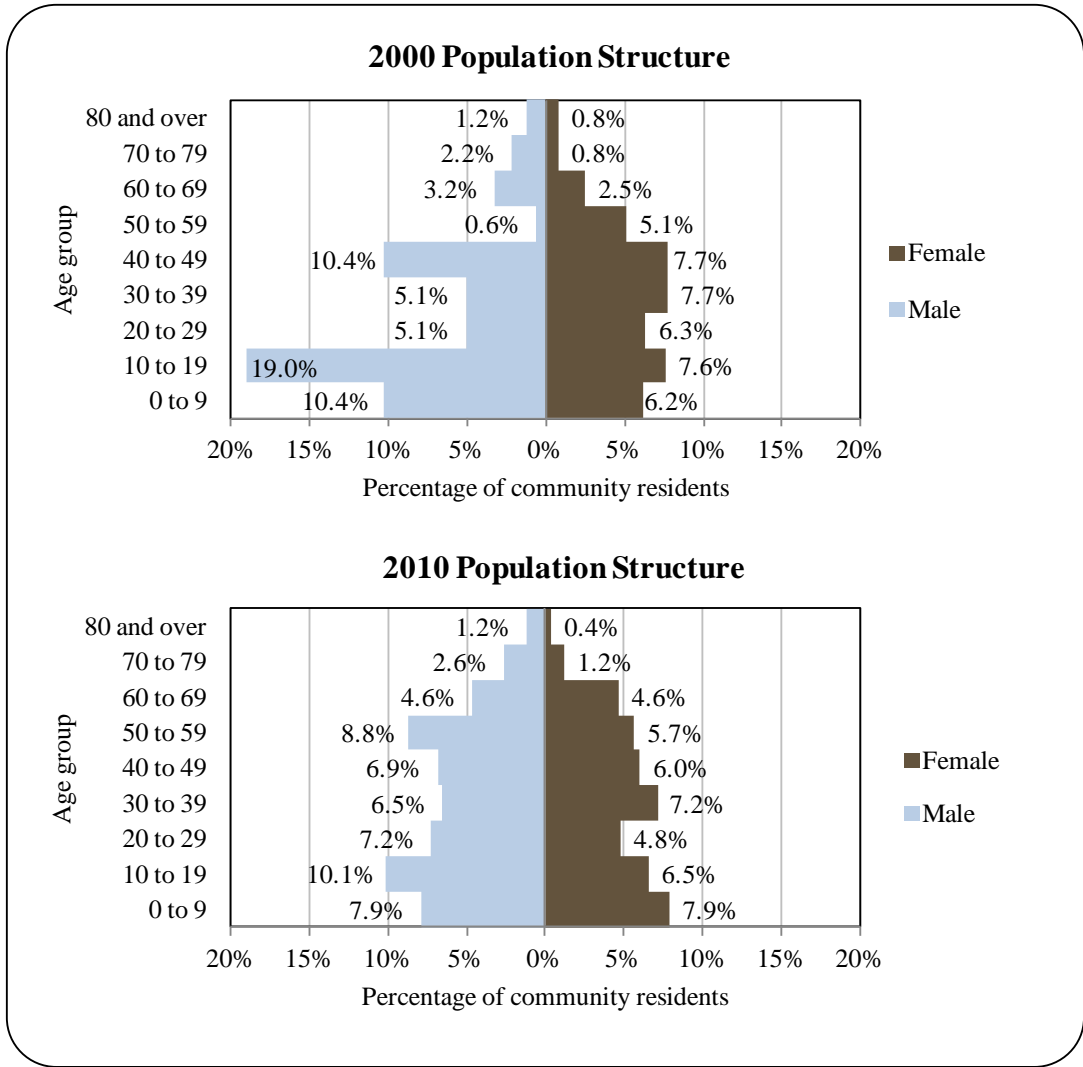
Figure 1. Racial and Ethnic Composition, Fort Yukon: 2000-2010 (U.S. Census).



In 2010, the gender makeup was 55.7% male and 44.2% female, and somewhat similar to the gender makeup of the state as a whole (52% male, 48% female; see Figure 2). In 2000, the gender makeup was 52.9% male and 47.1% female. The median age in 2010 was 33.7 years, which is slightly lower than both the U.S. national average of 36.8 years and the statewide average of 33.8 years.

The overall population structure of Fort Yukon in 2000 and 2010 is shown in Figure 1. In 2010, there was a relatively even spread of males and females across each age category, though the 10 to 19 and 50 to 59 age groups show the greatest difference in the spread of males and females. For example, in 2010, the 10 to 19 age group was 10.1% males and 6.5% females, and the 50 to 59 age group was 8.8% males and 5.7% females. This represents a significant change from the population structure in 2000, when there were a significantly disproportionate percentage of males in the population than females in the 0 to 9, 10 to 19, and 40 to 49 age categories. In addition, in 2000, there were relatively few residents in the male 50 to 59 age range (0.6%), whereas in 2010, 8.8% of the males were in this age category.

Figure 2. Population Age Structure in Fort Yukon Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹⁷¹ estimated that 71% of residents aged 25 and over held a high school diploma or higher degree in 2010, slightly less than the 91% of Alaskan residents overall that held a high school diploma or higher degree. Also in 2010, 13% of the population had less than a 9th grade education, compared to 4% of Alaskan residents overall; 16% had a 9th to 12th grade education but no diploma, compared to 6% of Alaskan residents overall; 31% had some college but no degree, compared to 28% of Alaskan residents overall; 5% earned an Associate's degree, compared to 8% of Alaskan residents overall; 2% earned a Bachelor's degree, compared to 17% of Alaskan residents overall; and 2% earned a graduate or professional degree, compared to 10% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The indigenous peoples of the territory surrounding Fort Yukon are primarily descendants of the Yukon Flats, Chandalar River, Birch Creek, Black River, and Porcupine River Gwich'in Athabascan tribes. Originally known as *Gwicyaa Zhee* or "house on the flats", the modern community of Fort Yukon took shape around a Hudson Bay Company outpost in Russian territory built by Alexander Murray in 1847. The Fort became an important trade center for the Gwich'in Indians, who inhabited the vast lowlands of the Yukon Flats and River valleys. By 1862, a mission school had been established.¹⁷²

Following the 1867 purchase of Alaska by the United States, in 1869 an American trapper named Moses Mercer with the Alaska Commercial Company took over operation of Fort Yukon from the Hudson Bay Company. American missionaries and trappers passed through Fort Yukon in the early years of American ownership, and the gold rush brought prospectors in the 1870s. In addition, some local economic activity was generated by the fur trade of the 1800s and whaling off the Arctic coast in the late 1800s and early 1900s. A post office was established in 1898. The Native population of the community was also impacted by major disease epidemics during this period. The first hospital was constructed in 1914 by the Episcopal Church, and the first plane landed in Fort Yukon in 1921. Much of the original settlement was destroyed in a large flood in 1949, and many residents and community buildings were moved to a new site on higher ground, east of the original town site. The U.S. Air Force built an aircraft control and warning site in Fort Yukon in 1955. Today, most residents of Fort Yukon are Gwich'in Indians.¹⁷³ Subsistence harvest activities are important to the local culture.¹⁷⁴

¹⁷¹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷² City of Fort Yukon (1996). *Comprehensive Plan*. Retrieved November 1, 2012 from <http://www.dced.state.ak.us/dca/plans/pub/FortYukonPlan.pdf>.

¹⁷³ Ibid.

¹⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment

Fort Yukon lies above a large geologic basin, the Yukon Basin. Winters are long and harsh, and the summers short but warm. After freeze-up of the Yukon River, the plateau is a source of cold, continental arctic air. Daily minimum temperatures between November and March are usually below 0 °F, and extended periods of -50 to -60 °F are common. Summer high temperatures range from 65 to 72 °F, and a high of 97 °F has been recorded. Total annual precipitation averages 6.6 inches, with 43.4 inches of snowfall. The Yukon River is ice-free from the end of May through mid-September.¹⁷⁵

Fort Yukon is located in the Yukon Flats, a 13,700-square-mile area of wetlands, forest, bog, and low-lying ground centered on the confluence of the Yukon River, Porcupine River, and Chandalar River in central Alaska. The area is characterized by meandering river channels, oxbow lakes, sloughs, alluvial fans, thaw lakes, sink holes, and sand dunes. Permafrost is present in the region, although discontinuous; the Yukon Flats region is a boundary zone between continuous permafrost to the north and areas of discontinuous permafrost to the south. The Yukon Flats lowland is bounded on the south by the Yukon-Tanana Upland Plateau, on the east by the Porcupine Plateau, on the north by the southern foothills of the Brooks Range, and on the northwest by the Hodzana Highland.¹⁷⁶

Small deposits of gold were discovered between Fort Yukon and Fort Selkirk in the 1870s.¹⁷⁷ However, according to the Alaska Department of Natural Resources and Division of Geological and Geophysical Surveys, there are no significant mineral deposits or mining activity in the Fort Yukon area.^{178,179}

According to the Alaska Department of Environmental Conservation (DEC), no notable environmental remediation sites were active in Fort Yukon as of 2012.¹⁸⁰ However, it is important to note that the U.S. Air Force Long Range Radar site in Fort Yukon was the focus of a remedial investigation in the early 1990s because of concern over contaminated groundwater and soil at the site. A human health assessment concluded that the level of toxins at the site posed no public health risk and the DEC determined no further action at the site was required.¹⁸¹

Current Economy 182

City, state, and federal agencies and the Native corporation are the primary employers in Fort Yukon. Specifically, the top employers in 2010¹⁸³ included Yukon Flats School District, Council of Athabascan Tribal Governments, Native Village of Fort Yukon, City of Fort Yukon

¹⁷⁵ Ibid.

¹⁷⁶ See footnote 172.

¹⁷⁷ Ibid.

¹⁷⁸ Alaska Department of Natural Resources (2011). *Mineral Resources of Alaska*. Map produced by the Division of Mining, Land, and Water, Abandoned Mine Lands Program. November 11, 2011.

¹⁷⁹ Szumigala, D.J., L.A. Harbo, and J.N. Adleman (2011). *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

¹⁸⁰ Alaska Dept. of Environmental Conservation (2012). *List of contaminated site summaries by region*. Retrieved July 31, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁸¹ See footnote 172.

¹⁸² Unless otherwise noted, all monetary data are reported in nominal values.

¹⁸³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved June 15, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Public Health Facility, City of Fort Yukon, Alaska Commercial Company, Tanana Chiefs Conference, Cruz Construction Inc., Gwandak Public Broadcasting Inc., and the Gwitchyaa Zhee Native Corporation. The school district is the largest employer. Winter tourism is becoming increasingly popular. The Bureau of Land Management (BLM) operates an emergency firefighting base at the airport and the U.S. Air Force operates a White Alice Communications System in Fort Yukon. Trapping and Native handicrafts also provide income. Residents rely on subsistence foods – salmon, whitefish, moose, bear, caribou, and waterfowl provide most meat sources.

The 2006-2010 American Community Survey (ACS)¹⁸⁴ estimated 212 residents as employed in that time period. An estimated 68.0% of residents aged 16 years and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 14.6%, compared to 5.9% statewide; and an estimated 20.6% of residents were living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed in 2010, an estimated 28.8% worked in the private sector and an estimated 71.2% worked in the public sector.

In 2010, the estimated per capita income was \$15,350 and the estimated median household income was \$37,083, compared to \$13,360 and \$29,375 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,¹⁸⁵ the real per capita income (\$17,568) and real median household income (\$38,628) indicate that both individual earnings and household earnings increased slightly. In 2010, Fort Yukon ranked 165th of 305 communities from which per capita income was estimated, and 243rd of 299 communities from which median household income was estimated.

Fort Yukon's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁸⁶ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development.¹⁸⁷ According to the ALARI database, residents earned \$6.96 million in total wages in 2010.¹⁸⁸ When paired with the 2010 Decennial Census population, the per capita income is \$11,943, which was significantly less than the 2010 ACS estimate and suggests that caution is warranted when citing an increase in per capita income in Fort Yukon based on ACS data.

Fort Yukon's economy was relatively diverse in 2010. By industry, most (33.5%) employed residents were estimated to work in public administration sectors; followed by education services, health care, and social assistance sectors (26.9%); and construction sectors (10.8%) (Figure 3). Compared with 2000, significant proportional increases occurred in construction, transportation, warehousing, and utilities sectors. However, there was a significant

¹⁸⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁸⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁸⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁸⁷ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁸⁸ See footnote 183.

drop in the percentage of the workforce estimated to be employed in agriculture, forestry, fishing, hunting, and mining sectors from 4.2% in 2000, to an estimated 0.0% in 2010.

By occupation type, most (35.4%) employed residents were estimated to hold management or professional positions in 2010; followed by natural resources, construction, or maintenance positions (29.2%); sales or office positions (14.2%); service positions (13.7%); and production, transportation, and material moving positions (7.5%) (Figure 4). Compared to 2000, significant proportional decreases occurred in sales and office occupations, and significant proportional increases occurred in natural resource, construction, and maintenance occupations. According to ALARI estimates, in 2010, residents were mostly employed as construction workers (20.3%), laborers and freight, stock, and material movers (17.8%), and teachers (14.5%).¹⁸⁹

Figure 3. Local Employment by Industry in 2000-2010, Fort Yukon (U.S. Census).

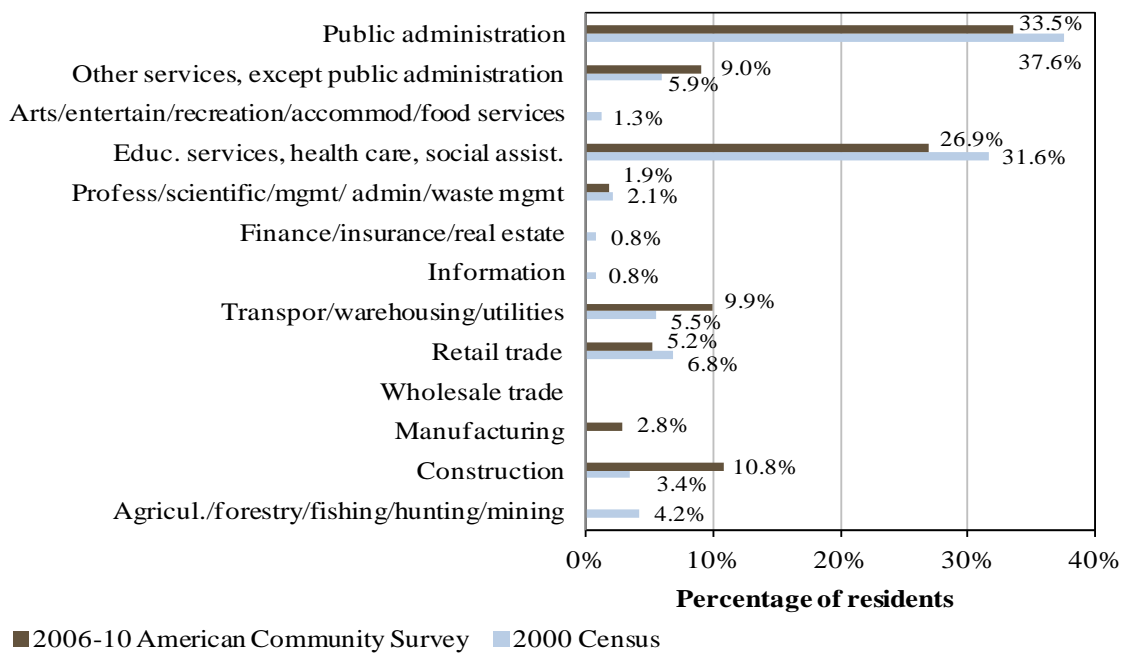
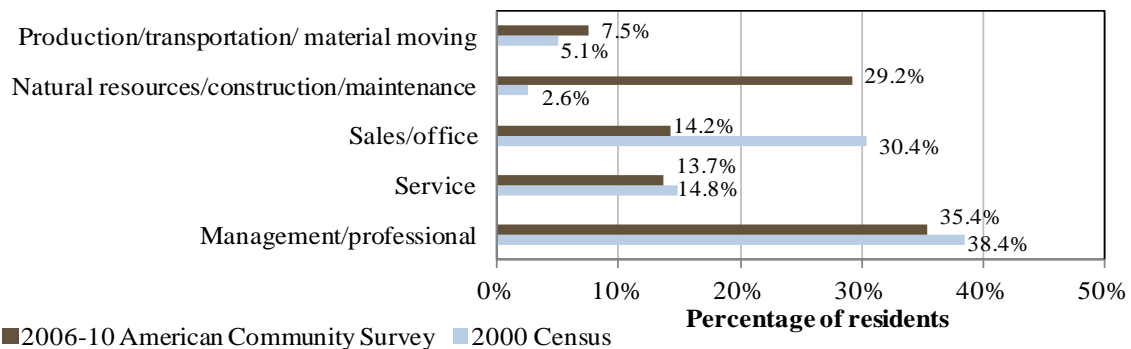


Figure 4. Local Employment by Occupation in 2000-2010, Fort Yukon (U.S. Census).



¹⁸⁹ Ibid.

Governance

Fort Yukon is a 2nd Class City governed by a manager, or “Strong Mayor”, form of government. There are seven city council members including the Mayor, seven school board members, and five municipal employees. The City administers a 3% sales tax. It was incorporated in 1959 and is not located in an organized borough.¹⁹⁰ The total municipal revenue increased over the decade, from \$1.8 million in 2000 to \$2.6 million in 2010. In addition to sales tax revenues, other locally-generated income sources in Fort Yukon during the 2000-2010 period included charges for city services such as water and sewer, construction, and the liquor store, rental revenue, gaming proceeds, and investment earnings. Outside revenue sources included various sources of shared revenue from the State of Alaska as well as state and federal grants. Shared revenue programs State Revenue Sharing (2000-2003) and Community Revenue Sharing (2010 and 2009). Although sizeable intergovernmental grant funding was received in Fort Yukon each year, none were reported to be fisheries-related. See Table 2 below for more details on selected revenue streams for Fort Yukon from 2000 to 2010.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Fort Yukon from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,753,370	\$102,733	\$16,220	n/a
2001	\$1,740,886	\$100,048	\$19,768	n/a
2002	\$1,669,725	\$115,408	\$19,825	n/a
2003	\$1,630,250	\$99,279	\$10,000	n/a
2004	\$1,605,794	\$113,899	\$40,000	n/a
2005	\$2,106,972	\$130,162	n/a	n/a
2006	\$2,211,445	\$131,094	n/a	n/a
2007	\$2,590,947	\$98,715	n/a	n/a
2008	\$2,642,001	\$104,104	n/a	n/a
2009	\$2,446,426	\$140,318	\$126,457	n/a
2010	\$2,556,682	\$143,316	\$125,945	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

¹⁹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Fort Yukon was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Gwichyaa Zhee Gwitch'in Tribe (formerly known as the Gwichyaa Zhee Gwitch'in Tribe).¹⁹¹ The local village Native corporation is Gwichyaa Zhee Corporation, which manages 214,479 acres of land. The regional Native corporation to which Fort Yukon belongs is Doyon, Limited. In addition, offices of the Canyon Village Traditional Council and the Council of Athabascan Tribal Governments, Incorporated are located in Fort Yukon. The Canyon Village Traditional Council was included under ANCSA, but has not yet received a land conveyance.¹⁹²

The Gwichyaa Zhee Gwitch'in Tribe and Canyon Village Traditional Council are both members of the Tanana Chiefs Conference, a tribal 501(c)(3) non-profit organization headquartered in Fairbanks. It is a consortium of 42 villages of Interior Alaska that works to meet “the health and social service challenges for more than 10,000 Alaska Natives spread across a region of 235,000 square miles in Interior Alaska.” The non-profit provides health and tribal development services, as well as educational and employment services to individuals of member tribes.¹⁹³ The Tanana Chiefs Conference is one of the 12 regional Alaska Native non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.¹⁹⁴ In addition, Both Gwichyaa Zhee and Canyon Village Tribal Councils are members of the Council of Athabascan Tribal Governments (CATG), a grassroots organization founded in 1985 to promote tribal self-governance. CATG provides health and education services to communities, and its Natural Resources Department manages “self-governance Annual Funding Agreements” with the U.S. Fish and Wildlife Service and U.S. Bureau of Land Management.¹⁹⁵

The closest offices of the Alaska Department of Natural Resources, Alaska Department of Fish and Game (ADF&G), Alaska Department of Commerce, Community, and Economic Development, and U.S. Bureau of Citizenship and Immigration Services are located in Fairbanks. Anchorage hosts the nearest office of the National Marine Fisheries Service (NMFS).

Infrastructure

Connectivity and Transportation

Fort Yukon is accessible by air year-round and by barge on the Yukon and Porcupine Rivers during the summer months. Heavy cargo is brought in by barge from the end of May through mid-September. There is a barge off-loading area but no dock. Riverboats and skiffs are used for recreation, hunting, fishing, and other subsistence activities. A state-owned 5,810 foot

¹⁹¹ Gwichyaa Zhee Gwitch'in Tribal Government (2010). *Welcome to the Gwichyaa Zhee Gwitch'in Tribal Government*. Retrieved November 1, 2012 from <http://www.fortyukon.org/index.html>.

¹⁹² See footnote 190.

¹⁹³ Tanana Chiefs Conference (2007). *History*. Retrieved January 9, 2012 from <http://www.tananachiefs.org/>.

¹⁹⁴ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹⁹⁵ Council of Athabascan Tribal Governments (Spring 2012). *Unity Newsletter*. Retrieved November 1, 2012 from <http://www.catg.org/UNITY/Unity-2012-Spring.pdf>.

long by 150 foot wide lighted gravel airstrip is available.¹⁹⁶ As of June 2012, roundtrip airfare from Anchorage to Fort Yukon costs \$599.¹⁹⁷ Hospital Lake, adjacent to the airport, is used by floatplanes. There are 17 miles of local roads and over 100 automobiles and trucks. The city transit bus system provides transport throughout the town. Snowmobiles and dog sleds are used on area trails or the frozen river, which becomes an ice road to nearby villages during winter.¹⁹⁸

Facilities

Electricity in Fort Yukon is provided by Gwitchyaa Zhee Utilities, which is operated by the Village corporation. Water is derived from two wells and is treated and stored in a 110,000-gallon tank. A combination of piped water, water delivery, and individual wells serve households. A flush/haul system, septic tanks, honey buckets, and outhouses are used for sewage disposal. Approximately half of all homes are plumbed. The piped water system and household septic tanks were installed in 1984. The Bureau of Land Management (BLM) operates an emergency firefighting base at the airport and the U.S. Air Force operates a White Alice Communications System in Fort Yukon. The City also has a youth center and a community center gym. In addition, a tribal council hall is under construction. The City maintains its own police force, fire department, and has an Emergency Medical Services (EMS) and Rescue Squad.¹⁹⁹

Medical Services

Medical services in Fort Yukon include the Fort Yukon Public Health Office and the Yukon Flats Health Center, both of which are operated by the Council of Athabascan Tribal Governments. The Yukon Flats Health Center is a qualified emergency care center. As an isolated town/sub-regional center, Fort Yukon is part of the Interior Emergency Medical Services Region. Emergency Services include river and air access and are within 30 minutes of a higher-level satellite health care facility. Emergency service is provided by 911 telephone service volunteers and a health aide. The nearest hospital is located in Fairbanks.

Educational Opportunities

The city of Fort Yukon has one school, which offers a pre-school through 12th grade education. As of 2011, the Fort Yukon School had 117 students and 14 teachers. In that same year, the Yukon Flats School District had a total of 7 schools, 31 teachers, and 264 students. The student/teacher ratio was 9.6, and 95% of students were Alaska Native.²⁰⁰

¹⁹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁹⁷ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

¹⁹⁸ See footnote 196.

¹⁹⁹ Ibid.

²⁰⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Fishing in Fort Yukon is shaped by a deep history of salmon fishing along the Yukon River. Historically, salmon was harvested for subsistence purposes by indigenous people living along the Yukon and Tanana Rivers, as well as for food for sled dogs. The first recorded commercial harvest of salmon in the Yukon River fishery took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s along the Yukon River. Poor returns in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.²⁰¹ Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but low returns required restricted commercial harvest in 2008 and complete closure of Chinook harvest in 2009. A fishery disaster was declared that year.²⁰² A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of Fisheries, and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundance species, including gear and other management restrictions.²⁰³

Like Yukon Chinook salmon runs, chum salmon runs have seen poor returns since 1998. A relatively strong run in 2007 led to some effort to redevelop the Yukon chum fishery, but this process is challenged by the need to reduce incidental harvest of co-migrating Chinook salmon. Further, beginning in 2008, the fall chum salmon run has not been large enough to provide for commercial opportunity. From 2008 to 2010, management actions have been taken to delay commercial fishing to provide for escapement and subsistence use.²⁰⁴

In years when commercial salmon fishing is open, fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 subdistricts, and 28 statistical areas. Fort Yukon is located in the Upper Yukon Area of the Yukon Salmon Fishery, in Subdistrict 5d. Chinook, chum, and coho are the three species of salmon that have significant runs far into Interior Alaska and Canada. Fishing in the Upper Yukon Area takes place using drift gillnets and fish weirs.²⁰⁵ Participation

²⁰¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²⁰² Upton, Harold F. 2010. *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

²⁰³ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalChinookdisaster>.

²⁰⁴ Wolfe, R.J. and C. Scott. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

²⁰⁵ See footnote 201.

rates by commercial fishermen on the middle and upper Yukon River have been much lower and more variable than on the lower Yukon River.²⁰⁶

The history and present involvement of Fort Yukon in commercial fishing is minimal, yet residents do engage in recreational and subsistence fishing. For example, in 2010, residents held a total of 176 sportfishing licenses and many residents were engaged in subsistence fishing, with salmon species being the most targeted for subsistence fishing, with 174 subsistence salmon permits issued in 2007 (see the *Recreational Fishing* and *Subsistence Fishing* sections of this profile). In 2010, one commercial salmon permit was issued, with one permit holder (see the *Commercial Fishing* section). In short, Fort Yukon is proof that communities of Alaska's interior rely on fishing, especially salmon resources, to thrive, even if their engagement in the commercial fishing sector is minimal.

Given that Fort Yukon is more than 400 miles from the coast, no federal fisheries regulatory areas are located within the immediate vicinity. Fort Yukon is not eligible for the Community Quota Entity program or the Community Development Quota program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Fort Yukon does not have a registered shore-side processing plant. The nearest processing plant is in Fairbanks.

Fisheries-Related Revenue

Based on the best available data and reporting system, Fort Yukon yielded no fisheries-related revenue between 2000 and 2010 (Table 3).

Commercial Fishing

While commercial salmon fishing is allowed along the entire 1,200-mile length of the mainstem Yukon River, Fort Yukon's involvement in commercial fishing is minimal. Between 2000 and 2010, one resident held one Upper Yukon salmon permit issued by the Commercial Fisheries Entry Commission (CFEC). However, that permit was not actively fished during those years. No residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits between 2000 and 2010. In addition, no residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab between 2000 and 2010. No commercial landings were reported in Fort Yukon between 2000 and 2010, nor did any residents of Fort Yukon report any commercial landings during this time period. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁰⁶ Alaska Department of Fish and Game. (n.d.). *Commercial Fisheries Overview: Yukon Management Area*. Retrieved July 31, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyareayukon.main>.

Table 3. Known Fisheries-Related Revenue (in U.S. dollars) Received by the Community of Fort Yukon: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal revenue⁵</i>	\$1,753,370	\$1,740,886	\$1,669,725	\$1,630,250	\$1,605,794	\$2,106,972	\$2,211,445	\$2,590,947	\$2,642,001	\$2,446,426	\$2,556,682

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species in Fort Yukon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species in Fort Yukon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>

Note: n/a indicates that no data were reported for that year.

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Fort Yukon: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Fort Yukon ²	Total Net Pounds Landed in Fort Yukon ^{2,5}	Total Ex-Vessel Value of Landings in Fort Yukon ^{2,5}
2000	1	0	0	0	0	0	0	\$0
2001	1	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	1	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Fort Yukon: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Fort Yukon: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Fort Yukon: 2000-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Fort Yukon: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Fort Yukon Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses or licensed sport fish guides present in Fort Yukon. However, a large number of Fort Yukon residents participated in sportfishing activities during this period. In 2010, a total of 176 Fort Yukon residents were issued sportfishing licenses (irrespective of point of sale), which represents approximately 30% of the population in that year. In most years between 2000 and 2010, fewer sportfishing licenses were sold in Fort Yukon than were issued to Fort Yukon residents, suggesting that some local residents travel elsewhere to undertake recreational fishing activities. Between 2000 and 2010, the number of sportfishing permits issued to Fort Yukon residents has ranged from 21 to 176, and the number of sportfishing licenses sold in the community during this same ranged from 0 to 155.

Fort Yukon is located within the Yukon River Drainage Alaska Sport Fishing Survey Area. Saltwater fishing in the region was minimal. There were no saltwater angler days fished reported in this survey area between 2004 and 2010. Between 2000 and 2004, the number of saltwater angler days fished by non-Alaska residents decreased from 81 in 2000 to 17 in 2004, but was minimal nonetheless. The number of saltwater angler days fished by Alaska residents was also minimal and was highly variable between 2000 and 2003, and there were no saltwater angler days fished by Alaska residents between 2004 and 2010. Freshwater fishing in the region was much more significant. Between 2000 and 2010, freshwater angler days fished varied considerably for both Alaska residents and non-Alaska residents. Alaska residents fished consistently more angler days in freshwater in this region between 2000 and 2010, averaging 7,355 angler days fished per year compared to an average of 3,861 angler days fished by non-Alaska residents. Further information about the sportfishing sector in and near Fort Yukon is presented in Table 11.

Table 11. Sport Fishing Trends, Fort Yukon: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Fort Yukon²
2000	0	0	21	0
2001	0	0	96	109
2002	0	0	107	93
2003	0	0	122	103
2004	0	0	69	72
2005	0	0	74	82
2006	0	0	85	69
2007	0	0	153	120
2008	0	0	158	127
2009	0	0	164	155
2010	0	0	176	148

Table 11. Cont. Sport Fishing Trends, Fort Yukon: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence fishing by residents of Fort Yukon is heavily focused on salmon on the Yukon River, and non-salmon fish also play an important role. Summer salmon subsistence activities are usually in full swing by June and early July as Chinook salmon begin to arrive and are harvested using set gill nets and fish wheels. The Chinook salmon run is followed by the chum salmon in mid-August. Northern pike and Arctic grayling are harvested with rod and reel, while sheefish are harvested in nets along with salmon. Fish wheels are used mainly in the late summer and fall for the late chum run, whereas nets are preferred for Chinook salmon. Freshwater fish species continue to be harvested throughout the winter. Along with the species noted above, common freshwater fish species utilized by Fort Yukon residents include several species of whitefish, cisco, burbot, and longnose sucker.²⁰⁷

Limited information is available from ADF&G regarding the participation of Fort Yukon households in subsistence harvest: 29% of households were estimated to participate in subsistence harvest of non-salmon fish in 2005, but no estimates were available regarding other

²⁰⁷ Sumida, V. A., and D. B. Anderson,. (1990). *Patterns of Fish and Wildlife Harvest for Subsistence in Fort Yukon, Alaska*. Alaska Dept. of Fish and Game Technical Paper No. 179. Retrieved November 1, 2012 from <http://www.arlis.org/docs/vol1/A/31109074.pdf>.

subsistence resources (Table 12). However, detailed information is available regarding subsistence harvest of salmon. Between 2000 and 2008, the number of subsistence salmon permits issued to Fort Yukon households ranged from 151 to 174. In 2008, the year for which the most recent data were available, Fort Yukon residents were estimated to have harvested 1,991 Chinook salmon, 14,482 chum salmon, 1,618 coho salmon, and 196 pink salmon, compared to 2000 when 976 Chinook salmon, 331 chum salmon, 120 coho salmon, and four sockeye salmon were harvested (Table 13).

According to ADF&G *Community Subsistence Information System* (CSIS) data, Fort Yukon residents have historically harvested or used non-salmon fish species including burbot, cisco, Dolly Varden, Arctic grayling, whitefish, trout, lamprey, northern pike, sheefish, and longnose sucker. The only official documentation of harvests of these species between 2000 and 2010, however, was in 2005, when harvest of almost 16,000 lbs of non-salmon fish was reported (Table 13).

No data were reported by management agencies regarding subsistence harvest of halibut (Table 14) or marine mammal species (Table 15) during the 2000-2010 period.

Additional Information

Fort Yukon is situated 8 miles north of the Arctic Circle, and is home to the largest Athabascan Village in the Interior. Many Native residents belong to the Gwich'in Indian Tribe. Fort Yukon rests on the most northern point of the Yukon River and visitors can find air services and tours to the Arctic Circle.

Table 12. Subsistence Participation by Household and Species, Fort Yukon: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	29%	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Fort Yukon: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	171	28	976	331	120	n/a	4	n/a	n/a
2001	174	46	2,361	2,498	972	n/a	69	n/a	n/a
2002	166	47	2,348	5,355	14	n/a	n/a	n/a	n/a
2003	164	56	4,004	10,137	244	n/a	n/a	n/a	n/a
2004	161	45	4,430	8,489	19	n/a	n/a	n/a	n/a
2005	151	57	3,591	8,155	394	n/a	n/a	n/a	15,954
2006	152	47	3,144	7,343	35	n/a	n/a	n/a	n/a
2007	152	47	3,144	7,343	35	n/a	n/a	n/a	n/a
2008	174	71	1,991	14,482	1,618	196	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Fort Yukon: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Fort Yukon: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Galena (guh-LEE-nuh)



People and Place

*Location*²⁰⁸

Galena is located on the north bank of the Yukon River, 45 miles east of Nulato and 270 air miles west of Fairbanks. It lies northeast of the Innoko National Wildlife Refuge. Galena is located in the Yukon-Koyukuk Census Area and the Nulato Recording District. The City encompasses 17.9 square miles of land and 6.1 square miles of water.

*Demographic Profile*²⁰⁹

In 2010, there were 470 residents in Galena, ranking it the 126th largest community in Alaska. Overall, between 1990 and 2000, the population has decreased by 43.6%. Between 2000 and 2009, the population decreased by 16.4% with an average annual growth rate of -2.36%, which was well under the statewide average of 0.75% growth. Information regarding population trends can be found in Table 1. In 2010, the majority of Galena residents identified themselves as American Indian and Alaska Native (63.6%), with 29.4% identifying themselves as White, 6.2% identifying themselves as of two or more races, 2.3% identified themselves as Hispanic or Latino, 0.6% identified themselves as Asian, and 0.2% identified themselves as of some other race. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Galena was 2.47. Also in 2010, there were a total of 190 occupied housing units, a slight decrease compared to 216 in 2000. Of those households surveyed in 2010, 51.1% were owner-occupied and 20.8% were renter-occupied. In that same year, 28.0% were vacant, compared to 16.6% in 2000. There were no residents living in group quarters in 2010, compared to 63 in 2000.

In 2010, the gender makeup in Galena was 51.2% male and 48.7% female, very similar to the state as a whole (52% male, 48% female). The median age was estimated to be 36.8 years, the same as the U.S. national average of 36.8 years and higher than the median age for Alaska, 33.8 years. The overall population structure of Galena in 2000 and 2010 is shown in Figure 2. In 2010, there was a relatively even spread of males and females across each age category, though the 50 to 59 age groups show the greatest difference in the spread of males and females. For example, in 2010, the 50 to 59 age group was 5.5% males and 8.7% females. This represents a significant change from the population structure in 2000, when there were more males in the population than females in all age categories. In addition, the percentage of the population that was age 60 or older more than doubled between 2000 (6.4%) and 2010 (14.8%).

²⁰⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²¹⁰ estimated that 86.8% of Galena residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 5.3% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 7.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 25.7% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 3.9% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 10.2% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 12.2% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

Table 1. Population in Galena from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	833	-
2000	675	-
2001	-	674
2002	-	698
2003	-	717
2004	-	691
2005	-	654
2006	-	636
2007	-	607
2008	-	581
2009	-	564
2010	470	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

²¹⁰ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 1. Racial and Ethnic Composition, Galena: 2000-2010 (U.S. Census).

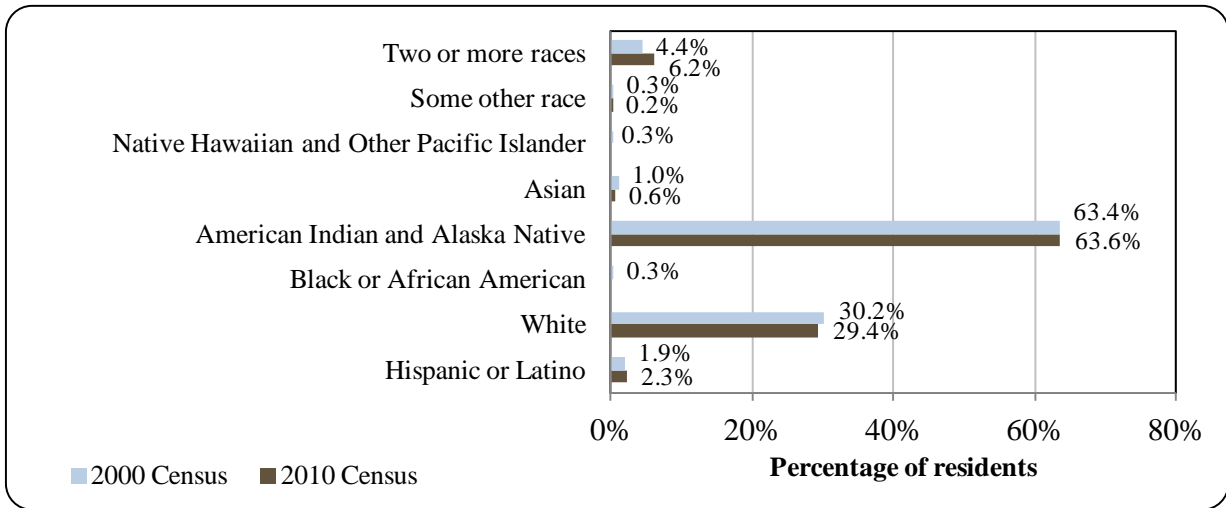
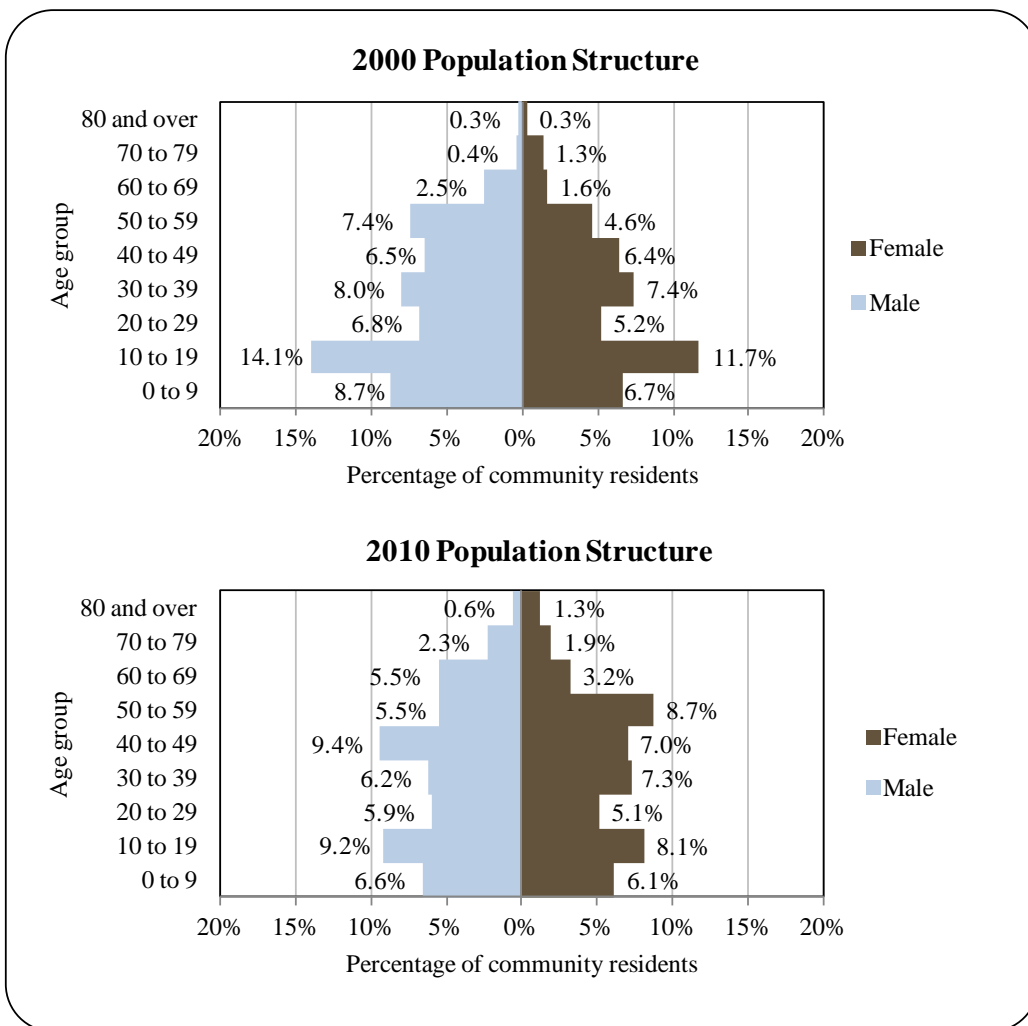


Figure 2. Population Age Structure in Galena Based on the 2000 and 2010 U.S. Decennial Census.



*History, Traditional Knowledge, and Culture*²¹¹

The Native peoples who have occupied the interior areas of Alaska have historically been the Athabaskan peoples whose prototype language was likely present in interior Alaska and the Yukon by at least 6000 B.C.²¹² The Koyukon Athabascans had spring, summer, fall, and winter camps throughout the Galena area as they followed wild game migrations. Twelve distinct summer fish camps have historically been situated on the Yukon River between the Koyukuk River and the Nowitna River. In 1918, Galena was established near an Athabaskan fish camp named Henry's Point. Lead ore mines were located nearby the community and Galena became a supply and trans-shipment point for the mines. Athabascans from the nearby community of Loudon, located 14 miles north, began moving to Galena in 1920 to work hauling freight for the mines or to sell wood. Many of Galena's current residents were originally from Loudon or are descendants of Loudon inhabitants.

In the mid-1920s a school was built in Galena, and a post office opened in 1932. In 1941-1942, during World War II, a military air field was built adjacent to the civilian airport, and the two facilities shared the runway and flight line facilities. This air field was designated Galena Air Force Station shortly after the split of the U. S. Air Force from the U. S. Army, which occurred as a result of the National Security Act of 1947. During the 1950s, the construction of additional military facilities at Galena and the nearby Campion Air Force Station, in support of Galena's mission as a forward operating base under the auspices of the 5072nd Air Base Group, headquartered at Elmendorf Air Force Base, near Anchorage, provided improvements to the airport and the local infrastructure, causing economic growth for the area.

In 1971, the year Galena was incorporated, another severe flood occurred which caused the community to move to Alexander Lake, approximately 1.5 miles east of the original site. At "New Town," the name for the new location, a city government was formed and new houses, schools, and facilities were built. During the mid 1970s the City established the Alexander Lake Subdivision and sold lots to the public. By 1978, a number of homes, a new medical clinic and high school were constructed in the new subdivision.

In the 1980s, the City installed a piped water and sewer system, cable television became available, and the State began a major river bank erosion project. It was also during this time that the U.S. Fish and Wildlife Service located refuge management staff in the community.²¹³

In 1993, the Air Force Station in Galena closed and the former military facilities are currently used by the Galena School District as a boarding school. These facilities are maintained under contract by Chugach Development Corporation.

Today, Galena's population is mixed Athabaskan and other non-Native Alaskan. Traditional festivals attract visitors from other river villages.

²¹¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved March 26, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²¹² National Park Service (n.d.). *Archaeology of the Tundra and Arctic Alaska*. Retrieved March 17, 2012, from <http://www.nps.gov/akso/akarc/arctiv.htm>

²¹³ City of Galena (1999). *Galena Comprehensive Plan, 1998 Update*. Prepared by University of Washington, Department of Urban Design and Planning, January 1999.

Natural Resources and Environment

The community of Galena is located on the north bank of the Yukon River in an area known as the Koyukuk flats region, an extensive lowland covering about 4,000 square miles at the conflux of the Yukon and Koyukuk Rivers. One characteristic of these lowlands is the numerous thaw lakes, or lakes formed by water that melts on top of permafrost, and dry lakes. The dry lakes are well drained soils, without permafrost. The vegetation of the region is, for the most part, a typical boreal forest, which includes black spruce bogs that have poorly drained soils, low brush bog comprised of tamarack, rose, grasses, sedges, rushes, fireweed, berries, mosses, and lichens, and stands of cottonwood and white spruce. This diversity has resulted in intermittent permafrost.²¹⁴

The Northern Unit of the Innoko National Wildlife Refuge (NWR; known locally as the Kaiyuh Flats) encompasses 750,800 acres. Located south of the Yukon River, its northeastern boundary is directly across the river from Galena. Established by the Alaska National Interest Lands Conservation Act in 1980, the Innoko NWR is meant to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, waterfowl, peregrine falcons, other migratory birds, black bear, moose, furbearers, and other mammals and salmon.²¹⁵ Galena is also headquarters for the Koyukuk NWR, which was also established in 1980. The Koyukuk NWR is home to a wide variety of birds, mammals and fish of the boreal forest. Thousands of waterfowl, primarily wigeon, pintail, scaup, white-fronted geese and Canada geese are joined by both trumpeter and tundra swan on the Koyukuk's lush breeding grounds each spring. Streams and lakes in the Koyukuk NWR also sustain large fish populations that support subsistence, commercial and sport fisheries. Chinook, coho and chum salmon migrate up the waters of the Yukon River and its tributaries, including the Koyukuk River. Resident fish, such as the predatory northern pike, spend their entire lives in refuge waters. The Koyukuk NWR's mosaic of forests, woodlands, tundra and grasslands are home to many northern mammals, from majestic moose to tiny shrews and voles. More than 140 bird species, 30 mammal species, and 14 fish species occur within the Koyukuk NWR.²¹⁶

Lead and gold mining has played a significant role in Galena's social and environmental history. In fact, some residents of Galena worked at the Illinois Creek gold mine, which opened in 1997 and is 50 miles southwest of Galena, until it closed in 2005. According to the Alaska Department of Natural Resources and Division of Geological and Geophysical Surveys, there are no mineral deposits currently being mined in Galena.²¹⁷

The area around Galena experiences a cold, continental climate with extreme temperature differences. The average daily high temperature during July is in the low 70s; the average daily low temperature during January ranges from 10 to below 0 °F. Sustained temperatures of -40 °F are common during winter. Extreme temperatures have been measured from -64 to 92 °F. Annual precipitation averages 12.7 inches, with 60 inches of snowfall. The Yukon River is ice-free from

²¹⁴ Ibid.

²¹⁵ U.S. Fish and Wildlife Service (n.d.) *Innoko National Wildlife Refuge*. Retrieved August 23, 2012 from http://innoko.fws.gov/management_wilderness.htm.

²¹⁶ U.S. Fish and Wildlife Service (n.d.) *Koyukuk National Wildlife Refuge*. Retrieved September 17, 2013 from <http://www.fws.gov/alaska/nwr/koyukuk/wildlife.htm>.

²¹⁷ Alaska Department of Natural Resources and Division of Geological and Geophysical Surveys (n.d.). *Alaska Division of Geological and Geophysical Surveys Homepage*. Retrieved August 1, 2012 from <http://www.dggs.dnr.state.ak.us/>.

mid-May through mid-October. Erosion and flooding have long been environmental risks present in the community of Galena.²¹⁸

According to the Alaska Department of Environmental Conservation, there were no notable environmental remediation sites active in 2010.²¹⁹

Current Economy²²⁰

Galena serves as the transportation, government, and commercial center for the western Interior. Federal, state, city, school, and village government jobs dominate, but Galena has many other jobs in air transportation and retail businesses. In 2010, 12 residents held commercial fishing permits. Other seasonal employment, such as construction work and Bureau of Land Management firefighting, provide some income.

The 2006-2010 American Community Survey (ACS)²²¹ estimated that 258 residents were employed in 2010, with 72.1% of residents aged 16 years in civilian labor force in 2010. In that year, unemployment was estimated at 5.1%, compared to 5.9% statewide; and an estimated 11.2% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in 2010, an estimated 64.0% worked in the private sector and an estimated 19.0% worked in the public sector and 0.0% of residents were self-employed.

In 2010, the estimated per capita income was \$25,994 and the estimated median household income was \$56,250, compared to \$22,143 and \$61,125 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,²²² the real per capita income (\$29,118) and real median household income (\$80,379) indicate that both individual earnings and household earnings increased. In 2010, Galena ranked 96th of 305 communities for which per capita income was estimated, and 94th of 299 communities for which median household income was estimated.

However, Galena's small population size may have prevented the ACS from accurately portraying economic conditions.²²³ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development.²²⁴

²¹⁸ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved March 26, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²¹⁹ Alaska Dept. of Environmental Conservation (n.d.) Retrieved July 31, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

²²⁰ Unless otherwise noted, all monetary data are reported in nominal values.

²²¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²²² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²²³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²²⁴ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

According to the ALARI database, residents earned \$8,992,335 million in total wages in 2010.²²⁵ When paired with the 2010 Decennial Census population, the per capita income is \$15,424 which was significantly less than the 2006-2010 ACS estimate and suggests that caution should be used when using ACS data.

Based on the 2006-2010 American Community Survey, by industry, most (48.4%) employed residents were estimated to work in education services, health care, and social assistance sectors; followed by public administration sectors (20.9) and transportation, warehousing and utility sectors (15.5%) (Figure 3). Compared with 2000, significant proportional increases occurred in finance, insurance, and real estate sectors, public administration sectors, construction, transportation, warehousing, and utilities sectors, and education services, health care, and social assistance sectors. However, there was a significant drop in the percentage of those estimated to be employed in arts, entertainment, recreation, accommodation, and food service sectors from 8.7% in 2000, to an estimated 0.0% in 2010.

By occupation type, most (39.5%) employed residents were estimated to hold management or professional positions in 2010; followed by sales or office positions (22.1%); service positions (15.9%); production, transportation, and material moving positions (15.1%); and natural resources, construction, or maintenance positions (7.4%). Compared to 2000, significant proportional decreases occurred in natural resources, construction, or maintenance positions, and significant proportional increases occurred in production, transportation, and material moving positions. According to ALARI estimates, in 2010, trade workers, construction workers, and state government workers made up the majority of occupations.²²⁶

Figure 3. Local Employment by Industry in 2000-2010, Galena (U.S. Census).

²²⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved August 4, 2012 from <http://live.laborstats.alaska.gov/alari/>

²²⁶ Ibid.

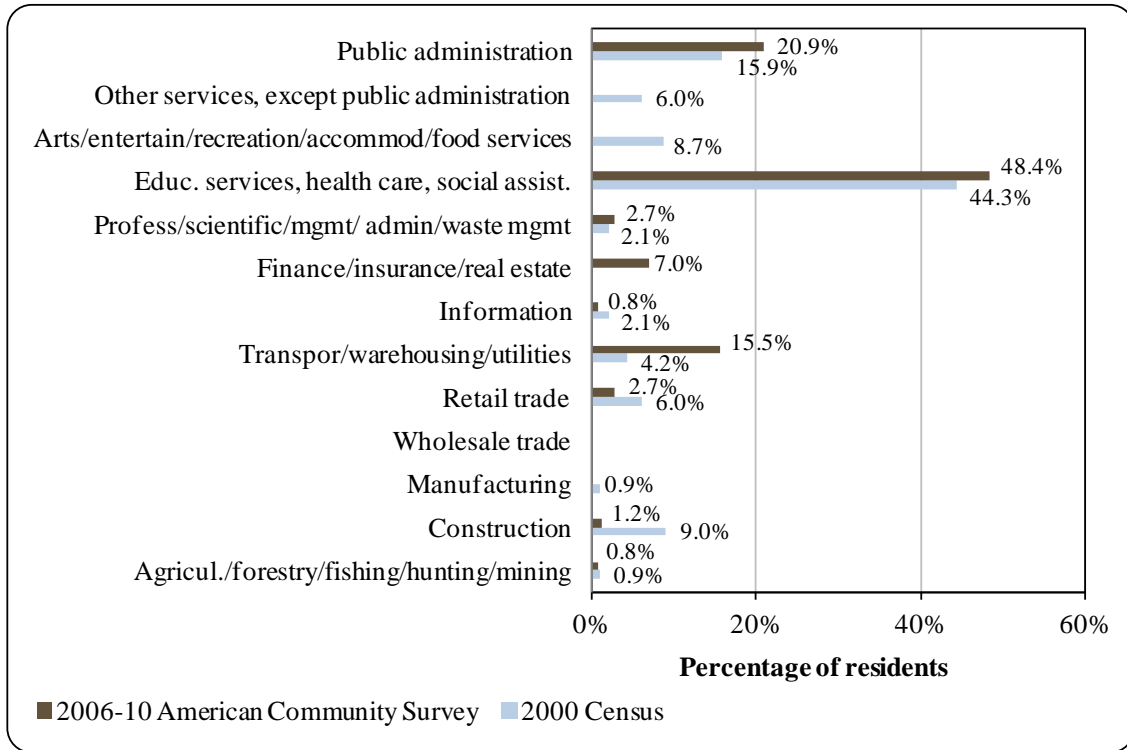
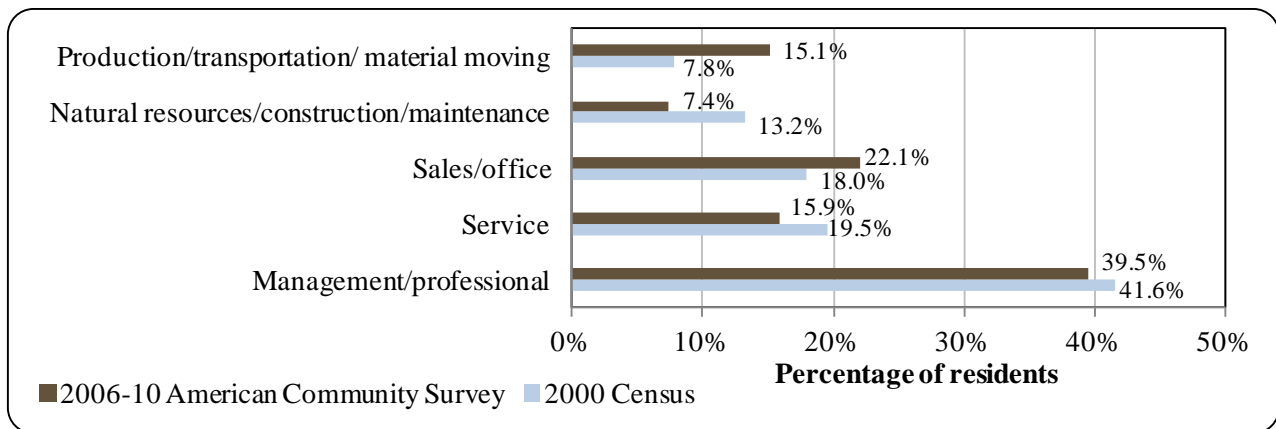


Figure 4. Local Employment by Occupation in 2000-2010, Galena (U.S. Census).



Governance

Galena is a 1st Class City and was incorporated in 1971. The City has a Manager form of government with a six-person city council including the Mayor, a five-person school board, and various municipal employees. Galena is not located within an organized borough. As of 2010, the City administered a 3% sales tax and did not levy a property tax.²²⁷ In addition to local tax revenues, locally-generated income sources in Galena between 2000 and 2010 included charges

²²⁷ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved March 26, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

for city public utilities and other services, fines, investment income, and land sales. Outside revenue sources included various sources of shared revenue as well as state and federal grants. In the early half of the decade (2000-2003), the City received some revenue from the State Revenue Sharing program. The State Revenue Sharing program ceased in 2004 and was replaced in 2008 by the Community Revenue Sharing program. Other shared revenues came from the SAFE Communities program (utilities, infrastructure, public safety, etc.), federal Payment In Lieu of Taxes dollars, and state raw fish tax refund dollars in 2001 only (see the *Fisheries-Related Revenue* section). Municipal revenues were higher than average in 2002 as a result of over \$6 Million in capital project grant funding for projects including water and sewer upgrades, a swimming pool, shop, and utilidor, the Galena Health Center, and a regional Vocational Education Center. The City also received \$1.99 total fisheries-related grant funding in 2005, 2007, and 2009 to design and construct a barge dock. See Table 2 below for more details on selected municipal, state or federal revenue streams for Galena from 2000 to 2010.

Galena was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Galena Village, also known as Louden Tribal Council. The local village Native corporation is Gana-A’Yoo, which manages 115,200 acres of land. The regional Native corporation to which Galena belongs is Doyon, Limited.²²⁸

The Galena Village is a member of the Tanana Chiefs Conference, a tribal 501(c)(3) non-profit organization headquartered in Fairbanks. It is a consortium of 42 villages of Interior Alaska that works to meet “the health and social service challenges for more than 10,000 Alaska Natives spread across a region of 235,000 square miles in Interior Alaska.” The non-profit provides health and tribal development services, as well as educational and employment services to individuals of member tribes.²²⁹ The Tanana Chiefs Conference is one of the 12 regional Alaska Native non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.²³⁰

The closest office of the Alaska Department of Fish and Game (ADF&G) is located within the city of Galena. The nearest Bureau of Citizenship and Immigration Services office is located in either Anchorage or Nome. Anchorage is also home to the nearest National Marine Fisheries Service (NMFS) office.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Galena from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$2,745,273	\$104,407	\$29,996	n/a
2001	\$3,821,777	\$156,337	\$28,962	n/a

²²⁸ Ibid.

²²⁹ Tanana Chiefs Conference (2007). *History*. Retrieved January 9, 2012 from <http://www.tananachiefs.org/>.

²³⁰ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

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2002	\$9,401,962	\$150,914	\$28,952	n/a
2003	\$3,040,321	\$123,142	\$29,056	n/a
2004	\$3,711,206	\$140,445	n/a	n/a
2005	\$3,090,406	\$175,970	n/a	\$300,000
2006	\$3,818,030	\$175,422	n/a	n/a
2007	\$3,353,592	\$178,361	n/a	\$71,077
2008	\$4,393,786	\$140,755	n/a	n/a
2009	\$3,814,531	\$198,039	\$125,588	\$1,624,062
2010	\$1,438,136	\$187,186	\$124,285	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Galena is reachable by air, water, and land. The community functions as a regional transport center for neighboring villages. A 7,254 foot paved and lighted runway, as well as a 2,786 foot gravel ski strip next to the main runway are present in the community. The state-owned Edward G. Pitka Sr. Airport provides the only year-round access.²³¹ As of June 2012, roundtrip airfare from Anchorage to Galena costs \$585.²³² Cargo barges are able to access the community on the river from mid-May through mid-October. A boat launch was recently completed. Locals use pickups, cars, snowmobiles, skiffs, and ATVs for transportation. The frozen rivers are used for travel during the winter to Ruby, Koyukuk, Kaltag, and Nulato. There is a winter trail to Huslia.²³³

Facilities

Electricity in Galena is provided by the City of Galena and water is derived from wells and is treated. Twenty-eight residences and the school are connected to a piped water and sewer system. One-hundred-ten households use a flush/haul system. Twenty households use honeybuckets, and others have individual septic tanks. Refuse collection and a landfill are provided by the City. The City began operating the landfill, located on the former Campion Air Force Station grounds, in 1997. There is a 200,000 gallon reservoir and a community leach field.

Medical Services

The primary medical clinic in Galena is the Edgar Nollner Health Center/Galena Public Health Office. The clinic is a qualified Emergency Care Center. X-Ray Laboratory Dental X-Ray and Dark Room are available. Galena is an isolated town/Sub-Regional Center it is found in the Interior Emergency Management Services Region. Emergency Services include limited highway river and airport access. Emergency service is provided by volunteers and a health aide. Telephone 911 service is available for response to fire only.²³⁴

*Educational Opportunities*²³⁵

As of 2012, the Galena City School district consisted of four schools, the Galena Interior Learning Academy (9th thru 12th grades, 183 students and 13 teachers), Interior Distance Education of Alaska (pre-school thru 12th grade, 3,626 students and 31 teachers), Sidney C. Huntington Elementary (pre-school thru 6th grade, 61 students and 8 teachers), and the Sidney C. Huntington Jr./Sr. High School (7th thru 12th grades, 50 students and 13 teachers).

²³¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved March 26, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²³² Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

²³³ See footnote 231.

²³⁴ Ibid.

²³⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Galena's fishing history is tied to a deep history of salmon fishing along the Yukon River. Indigenous people living along the Yukon and Tanana Rivers have long harvested salmon for subsistence purposes. Salmon was used for personal subsistence as well as food for sled dogs. The first recorded commercial harvest of salmon in the Alaskan portion of the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s along the Yukon. Poor returns in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.²³⁶ Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but low returns required restricted commercial harvest in 2008 and complete closure of Chinook harvest in 2009. A fishery disaster was declared that year.²³⁷ A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of Fisheries, and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundance species, including gear and other management restrictions.²³⁸

Like Yukon Chinook salmon runs, chum salmon runs have seen poor returns since 1998. A relatively strong run in 2007 led to some effort to redevelop the Yukon chum fishery, but this process is challenged by the need to reduce incidental harvest of co-migrating Chinook salmon. Further, beginning in 2008, the fall chum salmon run has not been large enough to provide for commercial opportunity. From 2008 to 2010, management actions have been taken to delay commercial fishing to provide for escapement and subsistence use.²³⁹

Some Yukon River communities have witnessed declining salmon runs and blame bycatch trends in the Bering Sea commercial fisheries. In 2008, the Yukon River Drainage Fisheries Association united key stakeholders in western Alaska to work through the North Pacific Fishery Management Council (NPFMC) toward the common goal of getting a hard cap put into place that would limit salmon bycatch in the Bering Sea/Aleutian Islands pollock fishery.²⁴⁰ For several years, the Bering Sea pollock industry has been working on developing a Chinook salmon excluder device for trawl gear, which allows salmon to escape from the trawl

²³⁶ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²³⁷ Upton, Harold F. 2010. *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

²³⁸ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalChinookdisaster>.

²³⁹ Wolfe, R.J. and C. Scott. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

²⁴⁰ Yukon River Drainage Fisheries Association (n.d.). *What we do: Accomplishments*. Retrieved August 10, 2012 from <http://www.yukonsalmon.org/whatwedo/accomplishments.htm>.

net underwater, while retaining pollock. The success of such devices relies on the different swimming behaviors of pollock and Chinook salmon. Through experimental fishery permits authorized by the NPFMC and NOAA Fisheries, various iterations have been tested, and their voluntary use by pollock skippers is increasing. Recently, the Gulf of Alaska (GOA) pollock industry has begun to consider how the Bering Sea Chinook salmon excluder might be adapted for the smaller GOA pollock fleet.²⁴¹

In years when commercial salmon fishing is open, fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 sub-districts and 28 statistical areas. Galena is located in the Upper Yukon Area of the Yukon salmon fishery, in District 4. Chinook, chum, and coho are the three species of salmon that have significant runs far into Interior Alaska and Canada. Fishing on the Upper Yukon takes place using drift gillnets and fish weirs.²⁴²

Galena is not eligible to participate in the Community Development Quota (CDQ) program or the Community Quota Entity (CQE) program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Galena does not have a registered shoreside processing plant. The nearest processing plant is in Unalakleet.

Fisheries-Related Revenue

Between 2000 and 2010, the only known fisheries-related revenue for the community of Galena was \$153 from Shared Fisheries Business Tax collections (Table 3).²⁴³

Commercial Fishing

Between 2000 and 2010, residents held a minimal number of permits issued by the Commercial Fisheries Entry Commission (CFEC). Of those permits issued, a majority were held in the Yukon River salmon fishery. In that time period, the number of salmon CFEC permit holders ranged from 25 to 31 and there was one herring CFEC permit holder each year between 2000 and 2010. Of the salmon CFEC permits issued in 2010, the majority were using fishwheels on the upper Yukon, with the remainder using gillnets on the upper Yukon and in Kotzebue. Of the herring CFEC permits issued in 2010, residents participated in gill net fishing in Norton Sounds. No residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits between 2000 and 2010. In addition, no CFEC permits were fished between 2000 and 2004, 2007, and 2009 to 2010. Also no residents held halibut, sablefish, or crab quota shares between 2000 and 2010 (Tables 6 to 8). Finally, between 2000 and 2010, no Galena residents made commercial landings, nor earned any ex-vessel revenue (Tables 9 and 10). All data on ex-vessel revenue earned by Galena residents between 2000 and 2004, as well as 2006, is confidential, so reporting trends for these time periods is not possible.

²⁴¹ North Pacific Fisheries Management Council (n.d.). *Salmon Bycatch*. Retrieved August 16, 2012 from <http://www.fakr.noaa.gov/npfmc/bycatch-controls/SalmonBycatch.html>.

²⁴² See footnote 236.

²⁴³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Between 2000 and 2010, the number of vessels homeported has ranged from zero to five, with five in 2003, and zero in 2010. The number of vessels primarily owned by Galena residents has followed a similar trend, with five in 2003 and zero in 2010. Between 2000 and 2010 the number of crew license holders has ranged from zero to two. As of 2010, there are no fish buyers or shoreside processors in Galena. Since no fish buyers were located in Galena, there were no fish landed and no revenue earned (Table 5).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Galena: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	\$153	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	n/a	\$153	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal revenue⁵</i>	\$2.7 M	\$3.8 M	\$9.4 M	\$3 M	\$3.7 M	\$3.1 M	\$3.8 M	\$3.4 M	\$4.4 M	\$3.8 M	\$1.4 M

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Galena: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1

Table 4 cont'd. Permits and Permit Holders by Species, Galena: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	30	30	30	29	27	26	25	25	26	26	26
	Fished permits	0	0	0	0	0	1	2	0	1	0	0
	% of permits fished	0%	0%	0%	0%	0%	4%	8%	0%	4%	0%	0%
	Total permit holders	31	31	30	29	27	26	26	25	26	26	26
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>31</i>	<i>31</i>	<i>31</i>	<i>30</i>	<i>28</i>	<i>27</i>	<i>26</i>	<i>26</i>	<i>27</i>	<i>27</i>	<i>27</i>
	<i>Fished permits</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>2</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>3%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>4%</i>	<i>8%</i>	<i>0%</i>	<i>4%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>32</i>	<i>32</i>	<i>31</i>	<i>30</i>	<i>28</i>	<i>27</i>	<i>27</i>	<i>26</i>	<i>27</i>	<i>27</i>	<i>27</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Galena: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Galena ²	Total Net Pounds Landed in Galena ^{2,5}	Total Ex-Vessel Value of Landings in Galena ^{2,5}
2000	2	0	0	2	3	0	0	\$0
2001	0	0	0	2	3	0	0	\$0
2002	0	0	0	2	3	0	0	\$0
2003	1	0	0	5	5	0	0	\$0
2004	1	0	0	1	2	0	0	\$0
2005	1	0	0	0	1	0	0	\$0
2006	1	0	0	1	1	0	0	\$0
2007	0	0	0	0	1	0	0	\$0
2008	2	0	0	0	1	0	0	\$0
2009	0	0	0	0	1	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Galena: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Galena: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Galena: 2000-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Galena: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Galena Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	–	–	–	–	–	0	–	0	0	0	0
Finfish	–	–	–	–	–	0	–	0	0	0	0
Halibut	–	–	–	–	–	0	–	0	0	0	0
Herring	–	–	–	–	–	0	–	0	0	0	0
Other Groundfish	–	–	–	–	–	0	–	0	0	0	0
Other Shellfish	–	–	–	–	–	0	–	0	0	0	0
Pacific Cod	–	–	–	–	–	0	–	0	0	0	0
Pollock	–	–	–	–	–	0	–	0	0	0	0
Sablefish	–	–	–	–	–	0	–	0	0	0	0
Salmon	–	–	–	–	–	0	–	0	0	0	0
<i>Total²</i>	–	–	–	–	–	0	–	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
Finfish	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
Halibut	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
Herring	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
Other Groundfish	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
Other Shellfish	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
Pacific Cod	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
Pollock	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
Sablefish	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
Salmon	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0
<i>Total²</i>	–	–	–	–	–	\$0	–	\$0	\$0	\$0	\$0

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses were registered in Galena. Over the same period, the number of licensed sport fish guides present in the community declined from 10 to 2. The number of sportfishing licenses sold to Galena residents (irrespective of point of sale) varied from 117 to 208 per year. Only a small number of licenses was sold in the community of Galena (zero to seven sold per year), indicating that most Galena residents travel to other communities to prepare for sportfishing activity. This may also indicate that sportfishing does not draw a large number of visitors to Galena.

Galena is located within Alaska Sport Fishing Survey Area Y – Yukon River drainages. Information is available about freshwater sportfishing activity only at this regional scale and saltwater fishing in the region was minimal given the distance of most of the Survey Area from the Bering Sea. In fact, from 2005 to 2010 no saltwater angler days were reported fished by either Alaska resident or non-Alaska resident anglers. Freshwater fishing in the region was much more significant. During the 2000-2010 period, freshwater angler days fished varied considerably for both Alaska residents and non-Alaska residents. Alaska residents fished consistently more angler days in freshwater in this region than non-Alaska residents, averaging 7,355 angler days fished per year compared to an average of 3,861 angler days fished by non-Alaska residents. This information about the sportfishing sector in and near Galena is presented in Table 11.

Table 11. Sport Fishing Trends, Galena: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Galena²
2000	0	10	195	7
2001	0	4	186	3
2002	0	8	205	4
2003	0	8	203	4
2004	0	7	208	3
2005	0	2	166	1
2006	0	2	183	1
2007	0	3	172	1
2008	0	1	163	1
2009	0	0	138	0
2010	0	2	117	2

Table 11 cont'd. Sport Fishing Trends, Galena: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Residents of Galena have been largely involved in subsistence salmon fisheries on the Yukon River. In addition to the salmon resource that is available during summer months,²⁴⁴ Galena residents have historically harvested or used non-salmon species including burbot, cisco, Dolly Varden char, Arctic grayling, whitefish, trout, lamprey, northern pike, sheefish, and sucker.²⁴⁵

Based on a household subsistence survey conducted by ADF&G, in 2010, 45% of Galena households were estimated to participate in salmon subsistence, along with 20% participating in halibut subsistence, 4% in marine invertebrate subsistence, and 52% in non-salmon fish (not including halibut) subsistence. No estimate was reported that year regarding participation in marine mammal subsistence. Additional estimates were available for 2006, when 6% of Galena households participated in halibut subsistence and 16% in non-salmon fish subsistence. In 2010, per capita subsistence harvest of land and sea-based resources by Galena residents was estimated

²⁴⁴ Alaska Department of Fish and Game (n.d.). *Yukon River Management: Fishing Information*. Retrieved August 8, 2010 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaSubsistenceYukon.fishingInfo>.

²⁴⁵ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

to be over 1,000 pounds (Table 12). Total harvest estimates of marine invertebrates and non-salmon fish in 2010 were estimated be 208 pounds and 108,780 pounds, respectively. An estimate of total non-salmon fish harvest was also available for 2006, when Galena residents reported harvest of 110,216 pounds of non-salmon fish (Table 13). It is of note that much of the subsistence harvest of whitefish is often used for dog food. As with the community of Tanana, approximately 200 miles to the east of Galena, the patterns of non-salmon fish harvest and use appear to reflect the community's focus on harvesting large quantities of fish for dog food. Whitefish species usually make up the majority of these harvests, and that these harvests are not exclusively used to feed dogs, but also provide a food source for households.²⁴⁶

Details are also available from 2000-2008 regarding subsistence salmon permits. During this period, the number of households that were issued salmon permits declined from 217 to 186, while the total number of permits returned varied between 44 and 64 per year. The primary salmon species targeted by Galena residents for subsistence were Chinook, chum, and coho. Pink and sockeye salmon were also harvested in some years during the period in small quantities. The highest volume Chinook harvest occurred in 2004, and coho salmon harvests were greatest in 2003 and 2004. The highest volume chum harvests during the 2000-2010 period occurred in 2005 (Table 13).

No Subsistence Halibut Registration Certificates (SHARC) were issued to residents of Galena between 2003 and 2010 (Table 14). In addition, no data were available from management agencies regarding marine mammal harvest was (Table 15).

²⁴⁶ Brown, C., D. Koster, and P. Koontz (2010). Traditional Ecological Knowledge and the Harvest Survey of Non-salmon Fish in the Middle Yukon River Region, Alaska, 2005-2008. Technical Paper No. 358. Alaska Department of Fish and Game. Division of Subsistence.

Table 12. Subsistence Participation by Household and Species, Galena: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	6%	n/a	n/a	16%	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	45%	20%	n/a	4%	52%	1,086

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Galena: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	217	59	789	1,384	71	n/a	21	n/a	n/a
2001	201	53	1,755	473	142	n/a	n/a	n/a	n/a
2002	171	54	1,525	1,061	169	50	60	n/a	n/a
2003	168	44	3,112	1,799	1,507	n/a	n/a	n/a	n/a
2004	160	45	3,296	2,369	1,307	n/a	n/a	n/a	n/a
2005	151	47	2,864	3,708	607	n/a	11	n/a	n/a
2006	155	48	2,380	2,837	137	n/a	n/a	n/a	110,216
2007	149	44	2,511	2,042	425	n/a	n/a	n/a	n/a
2008	186	64	2,233	2,122	558	31	29	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	208	108,780

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Galena: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Galena: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Grayling (GRAY-leeng)



People and Place

*Location*²⁴⁷

Grayling is located in Interior Alaska on the west bank of the Yukon River, east of the Nulato Hills. It is 18 air miles north of Anvik. Grayling is located in the Yukon-Koyukuk Census Area and the Kuskokwim Recording District. The area encompasses 10.9 square miles of land and 0.1 square miles of water.

*Demographic Profile*²⁴⁸

In 2010, there were 194 residents in Grayling, making it the 195th largest of 352 communities in Alaska with recorded populations that year. Between 1990 and 2000, the population decreased by 6.7%. According to Alaska Department of Labor estimates, the population continued to decline after 2000, with a low of 152 permanent residents recorded in 2008. However, the population appeared to increase again after 2008, returning to 2000 levels by 2010 (Table 1). According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that a small number of seasonal workers or transients are present each year in Grayling (10 individuals) during summer months. They also indicated that the annual population peak in June and July is mostly driven by employment in commercial and subsistence fishing.

In 2010, the majority of Grayling residents identified themselves as American Indian and Alaska Native (87.1%), compared to 88.1% in 2000; 6.7% identified themselves as White in 2010, compared to 7.2% in 2000; 6.2% identified themselves as of two or more races in 2010, compared to 4.1% in 2000; 0.0% identified themselves as Hispanic or Latino, compared to 1.0% in 2000; and for both 2000 and 2010, 0.0% of residents identified themselves as Asian, Native Hawaiian and Other Pacific Islander, Black or African American, or of some other race. Further information regarding trends in racial and ethnic composition from 2000 to 2010 can be found in Figure 1.

The number of households in Grayling increased between 1990 and 2010, from 51 occupied housing units in 1990 and 2000 to 55 in 2010. The population decline can be observed in the declining size of these households, from 4 persons per household in 1990 to 3.8 in 2000, and 3.53 in 2010. Of the 63 housing units surveyed in 2010, 57.1% were owner-occupied, 30.2% were rented, and 12.7% were vacant. No Grayling residents were reported to be living in group quarters between 1990 and 2010.

²⁴⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved January 17, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁴⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

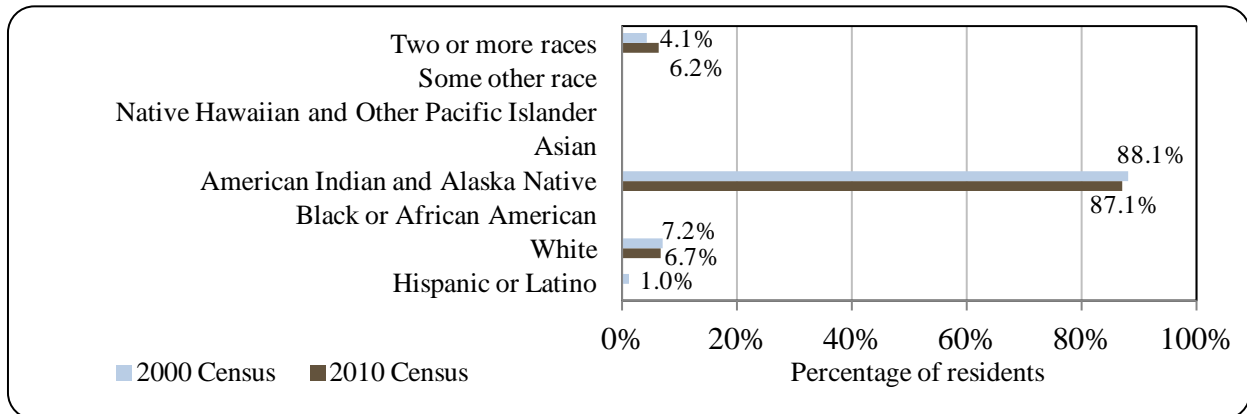
Table 1. Population in Grayling from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	208	-
2000	194	-
2001	-	202
2002	-	188
2003	-	162
2004	-	182
2005	-	171
2006	-	173
2007	-	164
2008	-	152
2009	-	177
2010	194	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

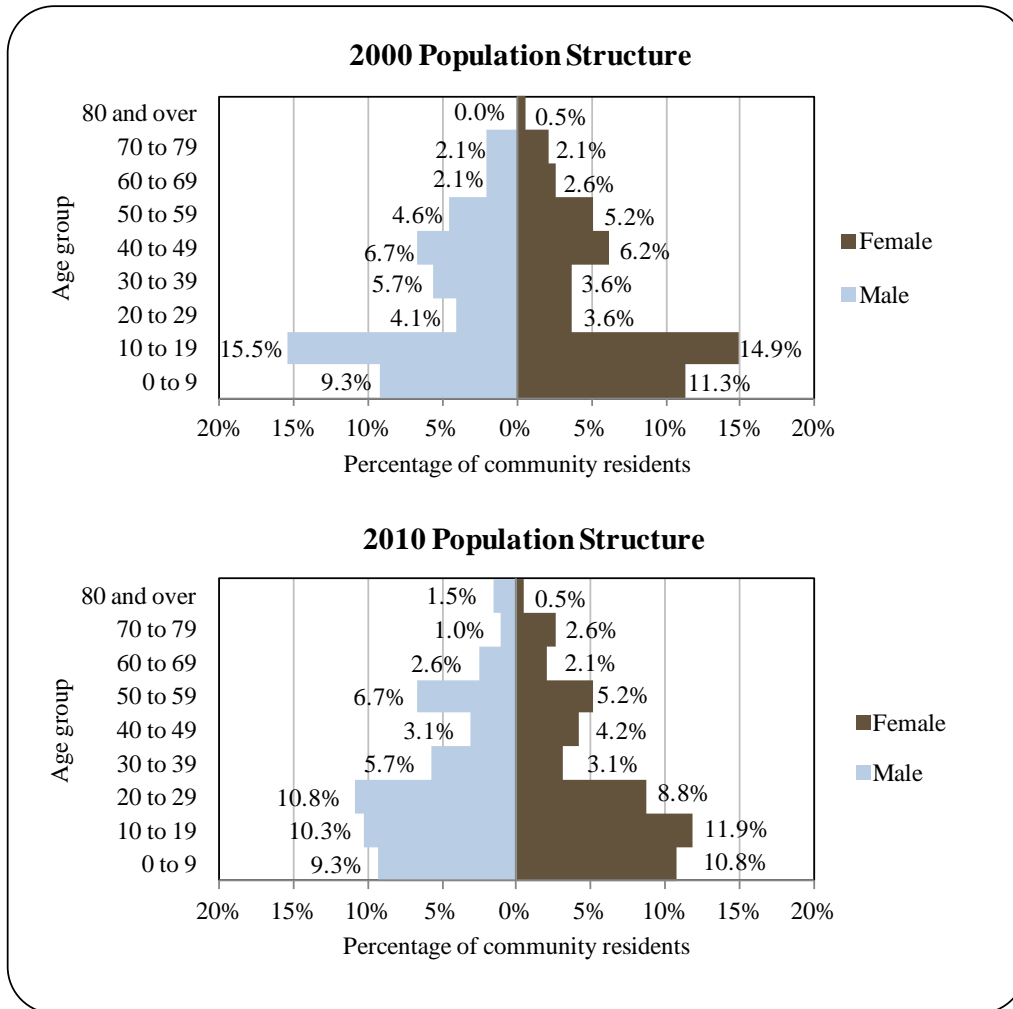
² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Grayling: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Grayling was 51% male and 48.9% female, similar to the gender distribution of the State as a whole (52% male, 48% female). That year, the median age was estimated to be 23.4 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, a smaller percentage of Grayling residents were under the age of 20 (42.3%) compared to 51% in 2000, and a higher percentage was age 60 or older (10.3%) compared to 9.3% in 2000. The overall population structure of Grayling in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Grayling Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)²⁴⁹ estimated that 54.4% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 26.7% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 18.9% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 10% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; no resident held a Bachelor’s degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 3.3% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

²⁴⁹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

The Grayling area was historically used for summer fish camps by the Deg Hit'an Athabascan people of the Anvik-Shageluk area (Ingalik) as well as the Doy Hit'an Athabascan (Holikachuk) who inhabited winter villages on the Innoko River north of Shageluk.^{250,251} During the summer of 1900, the steamer Nunivak stopped at Grayling and recorded 65 Native people living there. At that time, the people were suffering from epidemics of measles and influenza.²⁵² According to reports from the visit of the Nunivak, Grayling also had a store and a large wood yard to supply steamers at that time. Between 1962 and 1966, the inhabitants of the village of Holikachuk relocated to Grayling. Holikachuk was susceptible to spring flooding, and low water levels in the fall made the return trip from Yukon Fish camps to the winter village difficult. Today, the population of Grayling is made up of both Ingalik and Holikachuk Athabascan people. The village of Grayling is a contemporary subsistence community that maintains strong ties to its traditions. The sale of alcohol is prohibited in the community.²⁵³

Natural Resources and Environment

The climate of Grayling is continental, with long, cold winters and relatively warm summers. Temperature extremes range between -60 to 87 °F. Annual snowfall averages 110 inches, with 21 inches of total precipitation. The Yukon River is ice-free from June through October.²⁵⁴ Low-lands along the Yukon and Innoko rivers are made up of vast marshy flatland, with some forest cover of balsam poplar, willow, and alder within active floodplains. Well drained, south-facing upland slopes host forests of white spruce, paper birch, and quaking aspen, while permafrost, stunted black spruce, and tundra is typical of the poorly drained cold soils of north-facing slopes.²⁵⁵ Since Grayling is located in the Yukon River Basin, it is in a zone at risk of melting permafrost, which is expected to accelerate in the next 20 to 30 years if present warming trends continue, leading to large-scale environmental changes in the hydrology and water quality of the Yukon River and its major tributaries.²⁵⁶

Grayling is within the boundaries of the Innoko National Wildlife Refuge (NWR). One of the primary motivations for creation of the NWR was its importance as a waterfowl area in interior Alaska, noted for its wetlands that provide nesting, resting and staging areas. In addition, the NWR offers excellent raptor and moose habitat. The Innoko Refuge is made up of two units, totaling 4.6 million acres. The area was also established to fulfill treaty obligations and provide the opportunity for continued subsistence uses. Refuge lands are open to sport and subsistence hunting and fishing, as well as trapping.

²⁵⁰ VanStone, J. (1979). "Ingalik Contact Ecology: An Ethnohistory of the Lower-Middle Yukon, 1790-1935." *Fieldiana. Anthropology*. 71, pp. i, iii, v-vii, ix-xii, 1-273. (Retrieved October 3, 2012 from <http://www.jstor.org>.)

²⁵¹ City of Anvik. (2004). *Anvik Comprehensive Community Plan*. Retrieved December 23, 2011 from: <http://www.commerce.state.ak.us/dca/plans/Anvik-CP-2004.pdf>.

²⁵² See footnote 250.

²⁵³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁴ Ibid.

²⁵⁵ Interior Rivers Resource Conservation and Development Council. (1997). *Area Plan*. Retrieved October 24, 2012 from <http://www.commerce.state.ak.us/oed/>.

²⁵⁶ Hooper, R. P. (2003). Introduction. *Water and Sediment Quality in the Yukon River Basin, Alaska During Water Year 2001*. Paul F. Schuster, ed. U.S. Geological Survey. Open-File Report 03-427.

Local terrestrial wildlife includes moose, bear, wolves, lynx, wolverine, river otter, beaver, porcupine, caribou, snowshoe hare, red fox, red squirrel, marten, muskrat, weasel, mink, shrews, voles, and mice.²⁵⁷ Anadromous fish species found in the Grayling area include all five Pacific salmon species, Arctic lamprey, smelt, Arctic cisco, and additional freshwater species include northern pike, blackfish, stickleback, burbot and five species of whitefish.²⁵⁸ Edible and useful plants include cranberries, blueberries, salmon or cloud berries, rose hips, Indian potatoes, wild celery, wild onion, wild rhubarb, and sour dock.²⁵⁹

The Yukon-Kuskokwim delta is rich in mineral deposits. Gold was discovered in the Klondike area of the upper Yukon River in 1896, and prospectors began searching closer to Grayling – along the Innoko River – in 1898. Commercial quantities of gold were discovered in the Innoko Valley in 1906.²⁶⁰ As of 2010, the Iditarod and Innoko mining districts have produced more than 2.3 million ounces of gold.²⁶¹ Currently, a large-scale gold operation is being developed by Donlin Gold north of Crooked Creek, to the southeast of Grayling. The mine is projected to operate for 25 years, with over 33 million ounces of gold speculated to be in the area.²⁶² Additional mineral deposits in the region include Wolf Creek Mountain mercury/antimony deposit and Stuyahok and Arnold Kako gold deposits to the southwest, and McLeod copper/molybdenum deposits to the northeast.²⁶³

Natural hazard risks in the Yukon-Koyukuk Census Area include flooding, wildfire, earthquakes, snow and avalanche, severe weather, landslides and erosion. Shallow earthquakes in the region would be considered ‘intraplate’ earthquakes, which can have a magnitude of up to 7.0 on the Richter scale.²⁶⁴

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Grayling as of October, 2012.²⁶⁵

Current Economy²⁶⁶

Grayling has a mixed cash and subsistence economy. Subsistence is the dominant livelihood for many residents, including subsistence fishing, hunting, trapping, and berry picking. Important subsistence resources for Grayling residents include salmon, moose, black bear, small game, and waterfowl. Most wage employment is found through seasonal work.²⁶⁷ Some residents are also involved in commercial fisheries. According to the 2011 AFSC survey,

²⁵⁷ U.S. Fish and Wildlife Service. (2010). *Innoko National Wildlife Refuge*. Retrieved October 4, 2011 from <http://innoko.fws.gov/>.

²⁵⁸ See footnote 255.

²⁵⁹ See footnote 251.

²⁶⁰ See footnote 250.

²⁶¹ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. (2010). *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

²⁶² Donlin Gold. (n.d.) *Homepage*. Retrieved December 27, 2011 from: <http://www.donlingold.com/>

²⁶³ Alaska Dept. of Comm. (n.d.). *Mineral Resources of Alaska*. Retrieved December 21, 2011 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>

²⁶⁴ State of Alaska. (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

²⁶⁵ Alaska Dept. of Environmental Conservation. (2012). *List of Contaminated Site Summaries By Region*. Retrieved October 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

²⁶⁶ Unless otherwise noted, all monetary data are reported in nominal values.

²⁶⁷ See footnote 253.

community leaders reported that commercial and subsistence fishing are the most important natural resource-based industries in Grayling. They indicated that a new commercial fishery for Arctic lamprey (eel) began in 2003, and also expressed the hope that new commercial fishing opportunities will be developed in the region (see *History and Evolution of Fisheries* section).

Based on household surveys for the 2006-2010 ACS,²⁶⁸ in 2010, the per capita income in Grayling was estimated to be \$8,138 and the median household income was estimated to be \$32,656. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$7,049 and \$21,875, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,²⁶⁹ the real per capita income estimate in 2010 is shown to be \$9,269, slightly lower than the 2000 figure. The real median household income estimate is \$28,765, still lower than the 2006-2010 ACS estimates for 2010. In 2010, Grayling ranked 293rd of 305 Alaskan communities with per capita income data that year, and 231st in median household income, out of 299 Alaskan communities with household income data.

Grayling's small population size may have prevented the ACS from accurately portraying economic conditions.²⁷⁰ However, additional evidence for a decrease in per capita income between 2000 and 2010 is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Grayling in 2010 is \$5,369.^{271,272} The relatively low per capita income estimates for Grayling in 2010 from both data sources are reflected in the fact that the community was recognized as "distressed" by the Denali Commission,²⁷³ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It is important to note that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of personal use and subsistence within the local economy.

In 2010, a much smaller percentage of Grayling residents was estimated to be in the civilian labor force (36.1%) compared to the civilian labor force statewide (68.8%). In the same year, 13% of local residents were estimated to be living below the poverty line, higher than the statewide poverty rate estimate of 9.5%, and the unemployment rate was estimated to be 14.3%, more than twice the statewide unemployment rate of 5.9%.²⁷⁴ An additional estimate of

²⁶⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁶⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁷⁰ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁷¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²⁷² U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁷³ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

²⁷⁴ See footnote 272.

unemployment is based on the ALARI database, which shows a local unemployment rate of 24.3%, more than twice the state rate estimate of 11.5%.²⁷⁵

Also based on the 2006-2010 ACS, three-quarters of the employed civilian workforce in Grayling was estimated to be employed in the public sector (75%), while the remaining 25% was estimated to be employed in the private sector. Out of 32 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the 62.5% worked in educational services, health care and social services, 12.5% in public administration, 9.4% in retail trade, 9.4% in finance and insurance, and real estate and rental and leasing, and 6.3% in transportation, warehousing, and utilities industries (Figure 3). Compared to employment statistics in 2000, the most notable shifts in the distribution of employment by industry included an increased concentration of employment in education services, health care, and social services and public administration industries, and an apparent disappearance of arts, entertainment, recreation, accommodation, and food services (from 11.5% of the workforce in 2000 to 0% in 2010), and agriculture, forestry, fishing, hunting, and mining industries (from 3.8% of the workforce in 2000 to 0% in 2010). It is important to note that the number of individuals employed in the fishing industry is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

ALARI industry employment statistics differ slightly from ACS estimates, showing the highest percentage of employed residents (66.3%), and the next highest percentage working in education and health services (10.9%). In addition, ALARI estimates show a greater diversity of employment than ACS estimates, with 8.7% of the local workforce employed in trade, transportation, and utilities industries, 3.3% in manufacturing, 3.3% in financial activities, 2.2% in natural resources and mining, 2.2% in construction, 1.1% in professional and business services, 1.1% in state government, and 1.1% in other industries.²⁷⁶

Viewing employment from the perspective of occupation, 2006-2010 ACS estimates indicate that the highest percentages of the Grayling workforce were employed in service occupations in 2010 (50%). This represents a large increase from 15.4% of the total workforce employed in service occupations in 2000. The increase in employment in natural resource/construction/maintenance occupations was also substantial, from 0% in 2000 to 15.2% in 2010. These increases were balanced by decreased percentages of the workforce employed in other occupations in 2010 compared to 2000 (Figure 4).

²⁷⁵ See footnote 271.

²⁷⁶ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Grayling (U.S. Census).

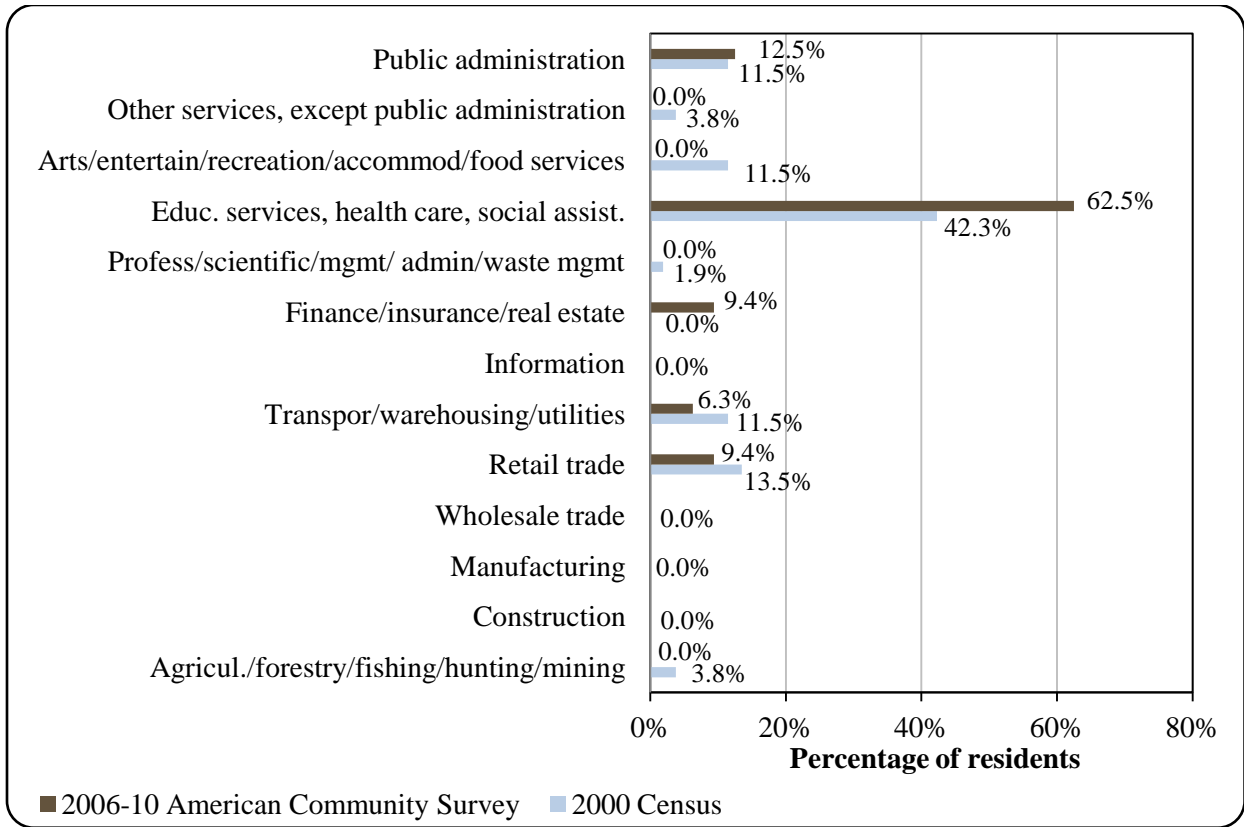
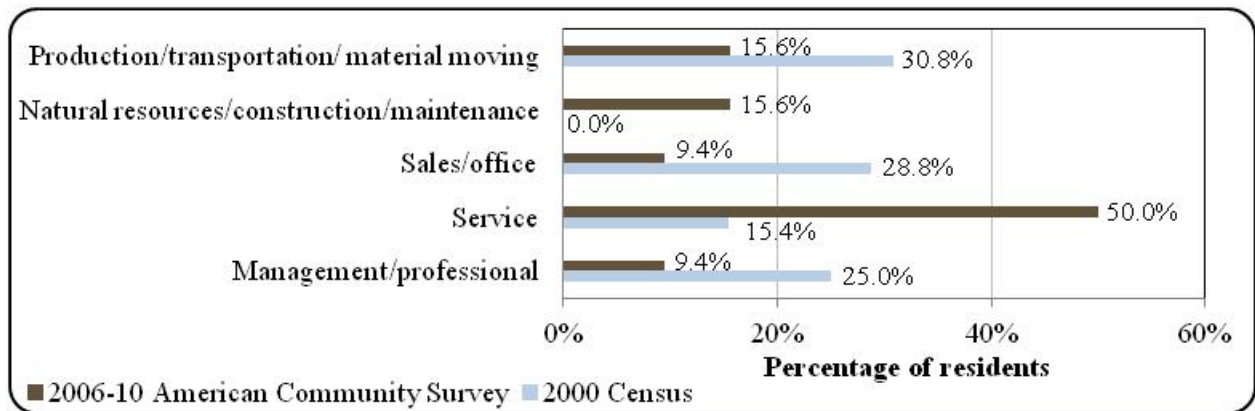


Figure 4. Local Employment by Occupation in 2000-2010, Grayling (U.S. Census).



Governance

Grayling is a 2nd Class City and is not located within and organized borough. The City was incorporated in 1969, and has a manager, or “Strong Mayor,” form of government, with a seven-person city council including the Mayor, a seven-person school board, and several municipal employees. No sales or property taxes are administered by the City.²⁷⁷ Locally-generated income sources during the 2000-2010 period included facilities leases, room and equipment rentals, and water, sewer, and washeteria service fees. Outside revenue sources included various shared revenues from state and federal programs, as well as capital project grants. The City received state contributions from the State Revenue Sharing program from 2000 to 2003 (approximately \$25,000 per year), and contributions from the Community Revenue Sharing program in 2009 and 2010 (just over \$100,000 per year), as well as telephone/electric co-op refunds and funds from the SAFE Communities program (local police, public safety, fire, and utilities funding). Grayling also received shared funds from both the state and federal Payment In Lieu of Taxes programs in some years during the 2000-2010 period. Capital/special projects grants were received toward upgrades to community facilities such as the washeteria and community hall, purchase and repair of heavy equipment, road maintenance, and other community projects. Between 2000 and 2010, no fisheries-related grants were received by the City of Grayling. This information about selected revenue streams is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Grayling from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$107,418	n/a	\$23,948	n/a
2001	\$208,198	n/a	\$28,000	n/a
2002	\$210,440	n/a	\$27,761	n/a
2003	\$150,224	n/a	\$27,000	n/a
2004	\$124,663	n/a	n/a	n/a
2005	\$72,485	n/a	n/a	n/a
2006	\$128,347	n/a	n/a	n/a
2007	\$123,688	n/a	n/a	n/a
2008	\$202,852	n/a	n/a	n/a
2009	\$145,623	n/a	\$107,478	n/a
2010	\$143,613	n/a	\$107,886	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

²⁷⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Grayling was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Organized Village of Grayling. The Native village corporation is the Hee-Yea-Lingde Corporation, which manages 92,160 acres of land. The regional Native corporation to which Grayling belongs is Doyon, Limited.²⁷⁸

Grayling is also a member village of the Tanana Chiefs Conference, a tribal 501(c)(3) non-profit organization headquartered in Fairbanks. It is a consortium of 42 villages of Interior Alaska that works to meet “the health and social service challenges for more than 10,000 Alaska Natives spread across a region of 235,000 square miles in Interior Alaska.” The non-profit provides health and tribal development services, as well as educational and employment services to individuals of member tribes.²⁷⁹ The Tanana Chiefs Conference is one of the 12 regional Alaska Native nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.²⁸⁰

The closest offices of the Alaska Department of Fish and Game (ADF&G) are located in Emmonak and Bethel, although the Emmonak office is only open during the summer season. The closest office of the Alaska Department of Commerce, Community and Economic Development is also in Bethel. However, the Anchorage and Fairbanks offices of these agencies may be more accessible to people living in Grayling than the coastal villages. Anchorage has the nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Natural Resources, and U.S. Bureau of Citizenship and Immigration Services.

Infrastructure

Connectivity and Transportation

Grayling is accessible year-round by air. The State owns and operates a 2,315 ft long by 60 ft wide gravel runway.²⁸¹ According to the 2011 AFSC survey, community leaders reported that improvements to the airport were completed within the last 10 years. As of fall, 2012, roundtrip airfare between Grayling and Anchorage was \$640.²⁸² During summer months, the community is also accessible by water, and receives both riverboat and barge service. Residents travel between Grayling and other area villages by skiff during summer, and ATVs, snowmobiles, and dog teams are common modes of overland transportation in the region. Currently there are no roads in Grayling.²⁸³ However, in the 2011 AFSC survey, community leaders noted that some roads are expected to be completed in the next 10 years.

²⁷⁸ Ibid.

²⁷⁹ Tanana Chiefs Conference. (2007). *History*. Retrieved January 9, 2012 from <http://www.tananachiefs.org/>.

²⁸⁰ U.S. Government Accountability Office. (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

²⁸¹ See footnote 277.

²⁸² Airfare retrieved October 24, 2012 from Era Aviation, <http://www.flyera.com/>.

²⁸³ See footnote 277.

Facilities

Water in Grayling is derived from an infiltration gallery²⁸⁴ at Grayling Creek, and is treated and stored before being distributed to homes via a city-operated pipe system. The piped water system serves all households in the village, and all but three residences are connected to the piped sewer system. The City maintains a sewage lagoon for collection and treatment of sewage. A landfill is also maintained by the City, but public refuse collection services are not provided. Individuals must haul their own garbage. Electricity in Grayling is provided by a diesel powerhouse operated by the Alaska Village Electric Cooperative.²⁸⁵ In the 2011 AFSC survey, community leaders indicated that improvements to the diesel powerhouse and the landfill have been completed in the last 10 years, and improvements to water and sewer treatment and pipe systems are planned to be completed within the next 10 years. In addition, community leaders indicated that alternative energy sources are expected to be added within the next 10 years.

Police service is provided by state troopers stationed in Aniak. Fire and rescue services are provided by the City Volunteer Fire Department. Additional community facilities include the Native village corporation building, and a teen center. Telephone service is available throughout the village, and internet is currently available at the school building only. No cable providers offer service locally.²⁸⁶ In the 2011 AFSC survey, community leaders also noted the presence of a U.S. post office, and indicated that broadband internet is expected within the next 10 years.

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that no dock space is available in Grayling. However, there is a barge landing area in the village, and community leaders indicated that vessels of up to 150 feet in length can be accommodated. Fuel barges are the primary vessel type that utilizes the barge landing area, and they indicated that the number of fuel barges visiting Grayling has increased over the past five years. Community leaders also reported that both boat fuel and fishing tackle are available for sale in Grayling, and indicated that residents most commonly travel to Emmonak, Galena, or Fairbanks to access fisheries-related businesses and services not available locally.

Medical Services

Medical services are provided locally at the Grayling Clinic. The clinic is owned by the City and operated by the Yukon-Kuskokwim Health Corporation. It is a Community Health Aid Program site. Emergency services have river and air access to Grayling, and local emergency service is provided by the health aide.²⁸⁷ The nearest hospital is located in Bethel.

²⁸⁴ Infiltration galleries are a type of well constructed near rivers or ponds to collect infiltrated surface waters. Since the water infiltrates through a layer of soil/sand, it is significantly free from suspended impurities including microorganisms usually present in surface water. (Definition retrieved February 22, 2012 from http://phys4.harvard.edu/~wilson/arsenic/conferences/Feroze_Ahmed/Sec_3.htm.)

²⁸⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸⁶ Ibid.

²⁸⁷ Ibid.

Educational Opportunities

One school is located in Grayling. The David Louis Memorial School offers preschool through 12th grade, and as of 2011 had 45 student and 5 teachers. Grayling is located in the Iditarod Area School District.²⁸⁸

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Deg Hit'an (Ingalik) and Doy Hit'an (Holikachuk) people have long fished the waters in and around Grayling for subsistence purposes. Historically, the Grayling area was utilized for summer fish camps by residents of the winter village sites of Shageluk and Holikachuk. Chinook salmon was the most important food fish, while chum and coho salmon were processed into dried fish, and chum salmon was an important food for sled dogs. The Deg Hit'an primarily used large basket traps for salmon harvest. They also used dip nets, which they would hold in the water as they drifted down river with the current in canoes. Coho fishing commonly continued into September, and some Deg Hit'an and Doy Hit'an people made fall trips to the coast to trade dried fish. In October, people returned to winter villages and began to focus on ice-gillnet fishing for whitefish, as well as harvest of northern pike, burbot, and Arctic lamprey.²⁸⁹

The first recorded commercial harvest of salmon on the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure on the Yukon River between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s. Poor returns of Chinook salmon in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.²⁹⁰ Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but restricted commercial harvest in 2008 and complete closure of Chinook harvest in 2009 led to declaration of a fishery disaster that year.²⁹¹ A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of Fisheries and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundance species, including gear and other management restrictions.²⁹²

²⁸⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁸⁹ VanStone, James. (1979). "Ingalik Contact Ecology: An Ethnohistory of the Lower-Middle Yukon, 1790-1935." *Fieldiana. Anthropology*. 71, pp. i, iii, v-vii, ix-xii, 1-273. (Retrieved October 3, 2012 from <http://www.jstor.org/>)

²⁹⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. (2006). "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²⁹¹ Upton, Harold F. (2010). *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

²⁹² Alaska Dept. of Fish and Game. (2012). *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=hottopics.federalChinookdisaster>.

Like Yukon Chinook salmon runs, chum salmon runs have seen poor returns since 1998. A relatively strong run in 2007 led to some effort to redevelop the Yukon chum fishery, but this process is challenged by the need to reduce incidental harvest of co-migrating Chinook salmon. Further, beginning in 2008, the fall chum salmon run has not been large enough to provide for commercial opportunity. From 2008 to 2010, management actions have been taken to delay commercial fishing to provide for escapement and subsistence use.²⁹³

In years when commercial salmon fishing is open, fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 subdistricts, and 28 statistical areas. Fishing takes place with set and drift gillnets, and fish wheels are also allowed in Upper Yukon districts (Districts 4, 5, and 6). Subsistence fishermen also most often utilize these gear types. Many subsistence fishermen are also commercial fishermen.²⁹⁴

In addition to salmon fishing, a commercial fishery for Arctic lamprey (also referred to as ‘eel’) began in November 2003 in the Grayling region. The annual lamprey run is brief, and the fishery lasts for only a few days each year. Eels are caught using dip nets or ‘eeling sticks’, and are brought to Grayling to be sold to the fish buyer, Kwik’pak Fisheries, LLC.²⁹⁵ Kwik’pak Fisheries is a subsidiary of the Community Development Quota (CDQ) group for the Yukon region, the Yukon Delta Fisheries Development Association (YDFDA).

Grayling is located in District 4 of the Upper Yukon River salmon fishery. It is also important to note that the ocean area into which the Yukon River flows is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Grayling is a member of the YDFDA, the CDQ group for the Yukon Delta. Grayling is not eligible to participate in the Community Quota Entity program.

In the 2011 AFSC survey, community leaders indicated that Grayling does not actively participate in fisheries management processes in Alaska. However, Grayling is represented regionally through the Western Interior Regional Advisory Council on subsistence issues, as well as through the G.A.S.H. (Grayling, Anvik, Shageluk, Holy Cross) advisory committee to ADF&G. Community leaders reported in the 2011 AFSC survey that a decline in commercial fishing activity in Grayling since the 1980s and 1990s has had a negative impact on the community, and expressed the hope that additional commercial fishing activity and job opportunities will be developed in Grayling.

Processing Plants

According to the ADF&G’s 2010 Intent to Operate list, Grayling does not have a registered processing plant. The nearest shore-side processing facility is a salmon roe processing facility in Anvik operated by Bonasila, Inc.²⁹⁶

In the 2011 AFSC community survey, community leaders reported that Kwik’pak Fisheries, LLC purchases eels harvested in the winter freshwater commercial fishery near Grayling. Kwik’pak Fisheries offers employment, training, and educational opportunities to area

²⁹³ Wolfe, R.J. and C. Scott. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

²⁹⁴ See footnote 290.

²⁹⁵ City of Anvik. (2004). *Anvik Comprehensive Community Plan*. Retrieved December 23, 2011 from: <http://www.commerce.state.ak.us/dca/plans/Anvik-CP-2004.pdf>.

²⁹⁶ Ibid.

residents and their families, and works to “enable Yupik families to continue the traditional lifestyle their people have practiced for thousands of years...fishing, hunting and living off the land.”²⁹⁷

Fisheries-Related Revenue

Between 2000 and 2010, no known fisheries-related revenue was generated in Grayling (Table 3).

Commercial Fishing

Between 2000 and 2010, Grayling residents participated in commercial fisheries as state permit holders, crew license holders, and vessel owners. The number of crew license holders declined over the period, from six in 2000 to one in 2010, while the number of Grayling residents that were the primary owner of a fishing vessel remained stable at one per year (with zero vessel owners reported in 2004). There was also one vessel homeported in Grayling in all years except 2004 (Table 5). In the 2011 AFSC survey, community leaders indicated that the only fishing vessels that base out of Grayling are under 35 feet in length, and typically use gillnet or beach seine gear. Community leaders also noted that the number of commercial fishing boats has remained stable over the past 5 years, although they reported that there are more boats under 35 feet in length than 5 years ago.

During the 2000-2010 period, Grayling residents held state-issued Commercial Fisheries Entry Commission (CFEC) permits in Upper Yukon salmon fisheries, including gillnet and fish wheel permits. The number of salmon permit holders and total salmon permits held both remained relatively stable over this period, with between 10 and 12 salmon permit holders and between 10 and 11 total permits held. However, few salmon permits were actively fished during the 2000-2010 period. In 2007, one Upper Yukon fish wheel permit was active, and in 2009, one Upper Yukon fish wheel and one Upper Yukon gillnet permit were actively fished. Beginning in 2003 with the start of the Arctic lamprey fishery, between 9 and 25 Grayling residents held ‘other finfish’ permits per year. In 2003 and 2010, 80% of total ‘other fishfish’ permits were actively fished, while 58% of other finfish permits were actively fished on average between 2003 and 2010. Information about CFEC permits in Grayling is presented in Table 4.

No Grayling residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits from 2000 to 2010 (Table 4). In addition, no residents participated in federal catch share fisheries for halibut, sablefish, or crab during this period (Tables 6, 7, and 8).

According to data reported by ADF&G and NMFS, no fish buyers or shore-side processing facilities were reported in Grayling during the 2000-2010 period, and no landings or revenue were recorded in the community (Table 5). However, this information conflicts with reports that Kwik’pak Fisheries, LLC has been purchasing Arctic lamprey in Grayling since 2003.²⁹⁸ However, given the lack of fish buyers reported in Grayling, landings or ex-vessel revenue information was also not lacking in the community during the 2000-2010 period (Table 9). Information about landings and revenue earned by vessel owners residing in Grayling, including all delivery locations, is considered confidential in most years due to the small number of participants (Table 10).

²⁹⁷ Kwikpak Fisheries. (n.d.). *Homepage*. Retrieved from: <http://kwikpakfisheries.com/>.

²⁹⁸ See footnote 295.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Grayling: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal revenue</i> ⁵	\$107,418	\$208,198	\$210,440	\$150,224	\$124,663	\$72,485	\$128,347	\$123,688	\$202,852	\$145,623	\$143,613

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Grayling: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4. Cont. Permits and Permit Holders by Species, Grayling: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	16	12	9	11	14	17	18	25
	Fished permits	0	0	0	13	0	0	8	1	9	10	20
	% of permits fished	-	-	-	81%	0%	0%	73%	7%	53%	56%	80%
	Total permit holders	0	0	0	16	12	9	11	14	17	18	25
Salmon (CFEC) ²	Total permits	10	10	10	11	11	11	11	11	11	11	11
	Fished permits	0	0	0	0	0	0	0	1	0	2	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	9%	0%	18%	0%
	Total permit holders	10	10	10	11	11	11	11	12	12	12	11
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>27</i>	<i>23</i>	<i>20</i>	<i>22</i>	<i>25</i>	<i>28</i>	<i>29</i>	<i>36</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>13</i>	<i>0</i>	<i>0</i>	<i>8</i>	<i>2</i>	<i>9</i>	<i>12</i>	<i>20</i>
	<i>% of permits fished</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>48%</i>	<i>0%</i>	<i>0%</i>	<i>36%</i>	<i>8%</i>	<i>32%</i>	<i>41%</i>	<i>56%</i>
	<i>Permit holders</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>22</i>	<i>19</i>	<i>16</i>	<i>19</i>	<i>24</i>	<i>26</i>	<i>27</i>	<i>34</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Grayling: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Grayling ²	Total Net Pounds Landed In Grayling ^{2,5}	Total Ex-Vessel Value Of Landings In Grayling ^{2,5}
2000	6	0	0	1	0	0	0	\$0
2001	7	0	0	1	0	0	0	\$0
2002	5	0	0	1	0	0	0	\$0
2003	2	0	0	1	0	0	0	\$0
2004	1	0	0	0	0	0	0	\$0
2005	2	0	0	1	0	0	0	\$0
2006	4	0	0	1	0	0	0	\$0
2007	3	0	0	1	0	0	0	\$0
2008	1	0	0	1	0	0	0	\$0
2009	7	0	0	1	0	0	0	\$0
2010	1	0	0	1	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Grayling: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Grayling: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Grayling: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Grayling: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Grayling Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	0	-	-	-	-	-	-
Finfish	-	-	-	-	0	-	-	-	-	-	-
Halibut	-	-	-	-	0	-	-	-	-	-	-
Herring	-	-	-	-	0	-	-	-	-	-	-
Other Groundfish	-	-	-	-	0	-	-	-	-	-	-
Other Shellfish	-	-	-	-	0	-	-	-	-	-	-
Pacific Cod	-	-	-	-	0	-	-	-	-	-	-
Pollock	-	-	-	-	0	-	-	-	-	-	-
Sablefish	-	-	-	-	0	-	-	-	-	-	-
Salmon	-	-	-	-	0	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	0	-	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	\$0	-	-	-	-	-	-
Finfish	-	-	-	-	\$0	-	-	-	-	-	-
Halibut	-	-	-	-	\$0	-	-	-	-	-	-
Herring	-	-	-	-	\$0	-	-	-	-	-	-
Other Groundfish	-	-	-	-	\$0	-	-	-	-	-	-
Other Shellfish	-	-	-	-	\$0	-	-	-	-	-	-
Pacific Cod	-	-	-	-	\$0	-	-	-	-	-	-
Pollock	-	-	-	-	\$0	-	-	-	-	-	-
Sablefish	-	-	-	-	\$0	-	-	-	-	-	-
Salmon	-	-	-	-	\$0	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	\$0	-	-	-	-	-	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to results of the 2011 AFSC survey, sportfishing in Grayling primarily occurs using private boats, and a majority of activity is by local residents. Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were present in Grayling. Until 2007, sportfishing licenses were not sold in the community, but between 2008 and 2010, an average of 37 licenses were sold per year. A greater number of licenses were sold in Grayling than were sold to Grayling residents in those years, indicating that despite the lack of active guide businesses, some non-resident private anglers may participate in sportfishing near Grayling (Table 11).

A number of guide business offer sportfishing trips in the Innoko River targeting northern pike, although these guide businesses are not based in Grayling. Sport fishermen often catch pike weighing more than 20 pounds in the area. Local residents in Grayling and other area

communities are concerned about the impact of increased recreational fishing activity on pike stocks.^{299,300}

The Alaska Statewide Harvest Survey,³⁰¹ conducted by ADF&G between 2000 and 2010, noted sport harvest of Arctic grayling in Grayling. No kept/release log book data were reported for fishing charters out of Grayling between 2000 and 2010.³⁰²

Grayling is located within Alaska Sport Fishing Survey Area Y – Yukon River Drainage. Information is available about both saltwater and freshwater sportfishing activity at this regional scale (Table 11). Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 81 non-Alaska resident angler days fished per year, and between 0 and 89 Alaska resident angler days fished per year. The low numbers reported for saltwater sportfishing make sense given that a majority of residents in Yukon drainage communities live a great distance from the ocean, and fishing activities take place primarily in fresh water. Between 2000 and 2010, Alaska resident anglers in the Yukon River drainage consistently fished more days in freshwater (4,783 –10,400 angler days per year) than non-resident anglers (2,573–5,761 angler days per year).

Table 11. Sport Fishing Trends, Grayling: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Grayling ²
2000	0	0	39	0
2001	0	0	9	0
2002	0	0	9	0
2003	0	0	19	0
2004	0	0	22	0
2005	0	0	8	0
2006	0	0	19	0
2007	0	0	2	0
2008	0	0	23	17
2009	0	0	8	39
2010	0	0	11	55

²⁹⁹ U.S. Fish and Wildlife Service, Office of Subsistence Management. (2003). *Subsistence and Recreational Use Issues and Information Meetings*. Final Report FIS-01-238. Retrieved October 24, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/01-238final.pdf>.

³⁰⁰ Brown, C, J. Burr,, K. Elkin,, and R. Walker,. (2005). *Contemporary Subsistence Uses and Population Distribution of Non-Salmon Fish in Grayling, Anvik, Shageluk, and Holy Cross*. Retrieved October 24, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp289.pdf>.

³⁰¹ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁰² Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Grayling: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

In the 2011 AFSC survey, community leaders indicated that Chinook, chum, and coho salmon are three of the most important subsistence fishing resources in Grayling. Non-salmon fish are also essential subsistence resources. Local fishers harvest Arctic lamprey and burbot in the Yukon River near Grayling, and travel further upstream to fish for pike, whitefish, and sheefish. Grayling residents also still travel to areas near the old village of Holikachuk to fish for pike, sheefish, whitefish, and blackfish in the lakes systems of the upper Innoko River.³⁰³ Northern pike has been identified as a particularly important subsistence species, and increased attention has been paid to management of pike stocks given poor returns of salmon to the Yukon River in recent years.³⁰⁴

According to data reported in ADF&G's Community Subsistence Information System, 68% of Grayling households were estimated to participate in harvest or use of non-salmon fish in

³⁰³ Brown, Caroline, Burr, John, Elkin, Kim, and Walker, Robert. (2005). *Contemporary Subsistence Uses and Population Distribution of Non-Salmon Fish in Grayling, Anvik, Shageluk, and Holy Cross*. Retrieved October 24, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp289.pdf> .

³⁰⁴ U.S. Fish and Wildlife Service, Office of Subsistence Management. (2003). *Subsistence and Recreational Use Issues and Information Meetings*. Final Report FIS-01-238. Retrieved October 24, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/01-238final.pdf>.

2002, while no estimates were reported regarding the percentage of households participating in subsistence harvest of salmon, halibut, marine mammals, or marine invertebrates, or the per capita subsistence harvest in Grayling between 2000 and 2010 (Table 12). In 2002, total estimated non-salmon fish harvest was reported to be 46,379 lbs (Table 13).

ADF&G also reported information regarding subsistence salmon permits issued to Grayling households between 2000 and 2008. During this period, the number of permits issued was relatively stable from year to year, varying between 46 and 50 per year, while the number of permits returned varied from 14 to 24 per year. Chinook and chum salmon were the two most heavily harvested salmon species during this period, averaging 1,610 Chinook and 1,244 chum harvested per year. Several hundred coho were also harvested in most years, and some pink and sockeye salmon harvest was reported in some years as well (Table 13).

No information was reported by management agencies regarding subsistence harvest of halibut (Table 14) or marine mammal species (Table 15) by residents of Grayling between 2000 and 2010.

Table 12. Subsistence Participation by Household and Species, Grayling: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	68%	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Grayling: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	49	24	840	758	372	n/a	18	n/a	n/a
2001	48	21	1,077	406	144	n/a	n/a	n/a	n/a
2002	46	16	2,249	1,363	30	30	n/a	n/a	46,379
2003	44	14	1,613	1,513	559	3	n/a	n/a	n/a
2004	44	22	1,869	1,396	233	n/a	n/a	n/a	n/a
2005	45	18	1,878	1,792	234	3	n/a	n/a	n/a
2006	49	14	1,702	1,335	224	n/a	n/a	n/a	n/a
2007	48	14	1,500	958	271	n/a	n/a	n/a	n/a
2008	50	15	1,761	1,672	25	200	6	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Grayling: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A., and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Grayling: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Holy Cross

People and Place

*Location*³⁰⁵



Holy Cross is located in Interior Alaska on the west bank of Ghost Creek Slough off the Yukon River. It is 40 miles northwest of Aniak, 420 miles southwest of Fairbanks, and 330 miles northwest of Anchorage. Holy Cross is located in the Yukon-Koyukuk Census Area and the Kuskokwim Recording District. The area encompasses 31.3 square miles of land and 6.2 square miles of water.

*Demographic Profile*³⁰⁶

In 2010, there were 178 residents in Holy Cross, making it the 206th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population decreased by 35.7%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 17.6% (Table 1). The average annual growth rate during this period was -0.80%, representing a steady decline over time. According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported a slightly higher year-round population in Holy Cross in 2010 (250 year-round residents) than the U.S. Census figure, and indicated that no seasonal workers or transients are present in the community at any point during the year. They also indicated that Holy Cross reaches an annual population peak when subsistence fishermen return from subsistence harvest activities in late summer or fall.

In 2010, a majority of Holy Cross residents identified themselves as American Indian and Alaska Native (91.6%), while 4.5% identified themselves as White, and 3.9% identified as two or more races (Figure 1). Compared to 2000, the percentage of the population that identified as American Indian and Alaska Native decreased by approximately 5%, while the percentages of the population identifying as either White or mixed race increased proportionally.

With the decline in population between 1990 and 2010, the total number of households declined from 86 to 64, and the average number of persons per household also decreased from 3.2 to 2.78 over the period. It is of note that the total number of occupied households in 2000 was the same as the number in 2010 (64), while household sizes were higher in 2000, with an average of 4 occupants per housing unit. Of the 93 housing units surveyed for the 2010 Decennial Census, 57% were owner-occupied, 35.5% were renter-occupied, and 7.5% were vacant. No Holy Cross residents were reported to be living in group quarters between 1990 and 2010.

³⁰⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁰⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

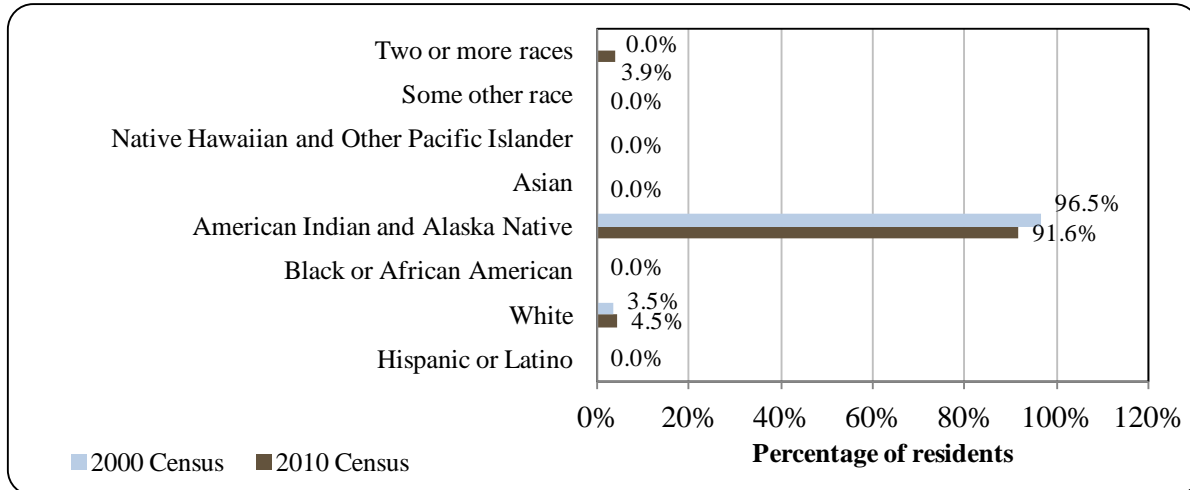
Table 1. Population in Holy Cross from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	277	-
2000	227	-
2001	-	227
2002	-	225
2003	-	203
2004	-	206
2005	-	206
2006	-	204
2007	-	199
2008	-	194
2009	-	187
2010	178	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/poppest.htm>.

Figure 1. Racial and Ethnic Composition, Holy Cross: 2000-2010 (U.S. Census).

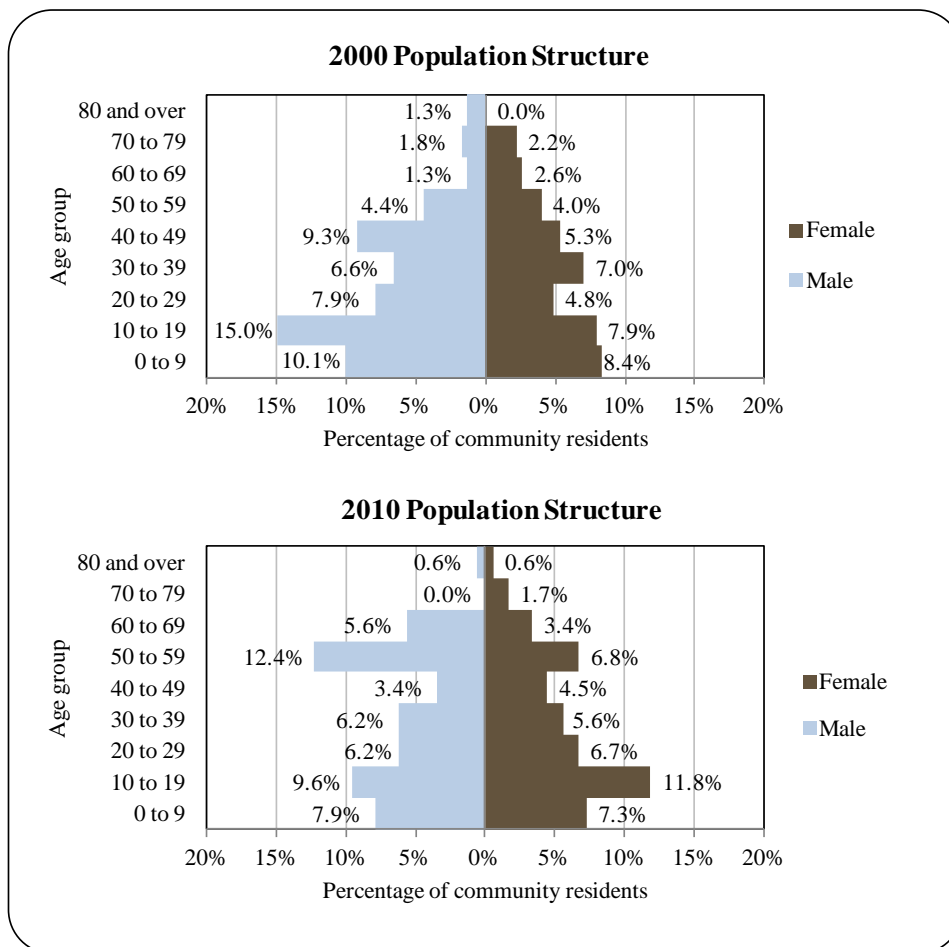


In 2010, the gender makeup in Holy Cross was 51.6% male and 48.3% female, similar to the population of the State as a whole, which was 52% male and 48% female. The median age was estimated to be 31 years in 2010, slightly lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 36.6% of the population was under the age of 20, and 11.8% of the Holy Cross population was age 60 or older. The population of Holy Cross was older on average in 2010 than in 2000, when 41.4% of the population had been under the age of 20 and 9.3% had been aged 60 or older. The slight decline in the percentage of the

population under the age of 20 could account for some of the decrease in household size observed between 2000 and 2010. The overall population structure of Holy Cross in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³⁰⁷ estimated that 85.8% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 6.7% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 7.5% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 22.5% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 2.5% of resident were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and no Holy Cross residents were estimated to have a graduate or professional degree, compared to 9.6% of Alaskans overall.

Figure 2. Population Age Structure in Holy Cross Based on the 2000 and 2010 U.S. Decennial Census.



³⁰⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Holy Cross is an Deg Hit'an Athabascan village, within the Ingalik language group.³⁰⁸ The culture of the Lower Yukon Deg Hit'an people was heavily influenced by the neighboring Kwikpamiut Eskimos, whose territory began just downriver from Holy Cross. The mouth of the Innoko River is thought to have been one of the primary locations of trade exchanges between the Yukon Eskimos and the Deg Hit'an.³⁰⁹ With regard to material culture, the Deg Hit'an Athabascan people's reliance of salmon fishing more closely resembled Eskimo tradition than that of Athabascan people living further inland.³¹⁰

First contact with Europeans in the Holy Cross region took place during an 1840s expedition led by Lt. Lavrentiy A. Zagoskin of the Russian-American Company, who was directed to explore the Yukon, Kuskokwim, and Innoko Rivers to locate possible portages in the Yukon-Kuskokwim delta.^{311,312} At the time of European contact, the communities of 'Anilukhtapak' and 'Koserefsky' were located near the present site of Holy Cross.³¹³ Several decades later, during an expedition through the Yukon delta during the winter of 1878-1879, American Edward Nelson reported a village called 'Askhomute' near the present site of Holy Cross, with a population at that time of 30 residents.^{314,315}

In 1888, a Roman Catholic missionary named Father Aloysius Robaut established a mission and boarding school at Holy Cross in 1888. Ingalik Indians from the surrounding area migrated to Holy Cross to be near the mission.^{316,317} The U.S. Postal Service opened a post office there in 1899 under the name of Koserefsky. The name of the village was changed to Holy Cross in 1912 after the mission.³¹⁸ The Yukon gold rush of the late 1800s brought a flood of American prospectors passing through the Holy Cross area. Gold was discovered in the Innoko Valley in 1906, increasing the importance of Holy Cross as a waystation during the early 1900s.³¹⁹

In the 1930s the Yukon River changed course, and an extensive sandbar began to form in front of the village of Holy Cross. By the mid-1940s, Holy Cross was only accessible via a narrow, shallow slough.^{320,321} Today, the slough is known as 'Ghost Creek Slough'.³²² The mission boarding school was closed in 1956, and the original mission and several other original

³⁰⁸ Alaska Native Knowledge Network. (2006). *Appendix A: Brief Description of Alaskan Athabascan Culture*. Retrieved March 22, 2013 from http://www.ankn.uaf.edu/curriculum/athabascan/athabascans/appendix_a.html.

³⁰⁹ VanStone, James. 1979. "Ingalik Contact Ecology: An Ethnohistory of the Lower-Middle Yukon, 1790-1935." *Fieldiana. Anthropology*. 71, pp. i, iii, v-vii, ix-xii, 1-273. (Retrieved October 3, 2012 from <http://www.jstor.org>.)

³¹⁰ VanStone, James. 1976. "The Yukon River Ingalik: Subsistence and the Fur Trade, and a Changing Resource Base." *Ethnohistory*. 23(3), pp. 199-212.

³¹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹² See footnote 309.

³¹³ Ibid.

³¹⁴ Baker, Marcus. 1906. *Geographic Dictionary of Alaska. Second Edition*. Prepared by James McCormick. Dept. of the Interior, U.S. Geological Survey.

³¹⁵ See footnote 311.

³¹⁶ Ibid.

³¹⁷ See footnote 309.

³¹⁸ Holy Cross Tribal Council. 2009. *History of the Council*. Retrieved October 1, 2012 from <http://www.holycrosstribe.org/history.html>.

³¹⁹ See footnote 309.

³²⁰ Ibid.

³²¹ See footnote 318.

³²² See footnote 311.

buildings were torn down at that time.³²³ The City of Holy Cross was incorporated in 1968. Today, subsistence and commercial fishing-related activities remain important to residents. The sale of alcohol is banned in the village.³²⁴

Natural Resources and Environment

Holy Cross is located in the Innoko Lowlands, an area of low tundra plains that extends from the Yukon-Kuskokwim Delta northeast between the Kaiyuh and Kuskokwim mountain ranges. Many navigable rivers run through the lowlands, including the Innoko River itself, which enters the Yukon River near Holy Cross.³²⁵ The tundra is covered by many sloughs and small lakes. The climate of Holy Cross is continental. Temperature extremes range from -62 and 93 °F. Annual snowfall averages 79 inches, with 19 inches of total precipitation per year. The Yukon River is ice-free from June through October.³²⁶

The diversity of animal species present in the Innoko Lowlands is typical of interior Alaska, including black and brown bear, moose, caribou, beaver, mink, lynx, fox, porcupine, river otter, muskrat, wolf, wolverine, marten, hare, squirrel, and weasel. The three species of salmon most common in the Yukon and its tributaries are Chinook, chum, and coho. Other freshwater fish found in area rivers and lakes include Arctic grayling, Dolly Varden, northern pike, blackfish, and burbot. The area provides nesting grounds for many bird species, including a variety of ducks, geese, swans, cranes, and loons. Bird species that overwinter include grouse and rock and willow ptarmigan.³²⁷

Protected areas near Holy Cross include the Yukon Delta and Innoko National Wildlife Refuges (NWR). The eastern boundary of the Yukon Delta NWR is located less than 20 miles south of Holy Cross and the Innoko NWR is located just to the north, along the eastern bank of the Yukon River between Grayling and Koyuk. Both areas were established in 1980 with the passage of the Alaska National Interest Lands Conservation Act. The 22-million acre Yukon Delta NWR provides essential habitat for waterfowl and migratory birds, including some of the most productive subarctic goose habitat. In addition, the refuge supports muskox, caribou, brown and black bear, wolves, and moose, salmon, and marine mammals.³²⁸ One of the primary motivations for creation of the Innoko NWR was its importance as a waterfowl area in interior Alaska, noted for its wetlands that provide nesting, resting and staging areas. In addition, this NWR offers excellent raptor and moose habitat. The Innoko NWR is made up of two units, totaling 4.6 million acres.³²⁹ These areas were also established to fulfill treaty obligations and provide the opportunity for continued subsistence uses. NWR lands are open to sport and subsistence hunting and fishing, as well as trapping.³³⁰ In addition to these NWR, Holy Cross is

³²³ See footnote 318.

³²⁴ See footnote 311.

³²⁵ See footnote 309.

³²⁶ See footnote 324.

³²⁷ See footnote 325.

³²⁸ U.S. Fish and Wildlife Service. 2011. *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

³²⁹ U.S. Fish and Wildlife Service. 2010. *Innoko National Wildlife Refuge*. Retrieved October 4, 2011 from <http://innoko.fws.gov/>.

³³⁰ See footnotes 328 and 329.

located approximately 80 miles east of the eastern boundary of the Andreafsky Wilderness Area, which covers slightly more than 5% of the Yukon Delta NWR.³³¹

The Yukon-Kuskokwim delta is rich in mineral deposits. Gold was discovered in the Klondike area of the upper Yukon River in 1896, and prospectors began searching closer to Holy Cross – along the Innoko River – in 1898. Commercial quantities of gold were discovered in the Innoko Valley in 1906.³³² As of 2010, the Iditarod and Innoko mining districts have produced more than 2.3 million ounces of gold.³³³

Natural hazard risks in the Yukon-Koyukuk Census Area include flooding, wildfire, earthquakes, snow and avalanche, severe weather, landslides and erosion. Shallow earthquakes in the region would be considered ‘intraplate’ earthquakes, which can have a magnitude of up to 7.0 on the Richter scale.³³⁴

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Holy Cross as of September 2012.³³⁵

Current Economy³³⁶

According to the 2011 AFSC survey, community leaders indicated that commercial and subsistence fishing are the primary economic activities in Holy Cross. The summer fishing season is the peak of the seasonal economy, along with construction and local capital improvement projects. There are also approximately 50 full-time jobs in the community.³³⁷

Based on household surveys for the 2006-2010 ACS,³³⁸ in 2010, the per capita income in Holy Cross was estimated to be \$12,358 and the median household income was estimated to be \$25,833. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$8,542 and \$21,875, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,³³⁹ 2010 per capita income estimate remains slightly higher than the real 2000 per capita income of \$11,233. In contrast, the 2010 median household income estimate is revealed to be a decrease from the real 2000 median household income of \$28,765. In 2010, Holy Cross ranked 258th of 305 Alaskan communities with per capita income data that year, and 258th in median household income, out of 299 Alaskan communities with household income data.

³³¹ Wilderness.net (n.d.). *Andreafsky Wilderness*. Retrieved December 8, 2011 from <http://www.wilderness.net>.

³³² See footnote 325.

³³³ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

³³⁴ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

³³⁵ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved October 3, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³³⁶ Unless otherwise noted, all monetary data are reported in nominal values.

³³⁷ Holy Cross Tribe. 2009. *History*. Retrieved October 1, 2012 from <http://www.holocrosstribe.org/history.html>.

³³⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³³⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

However, Holy Cross's small population size may have prevented the ACS from accurately portraying economic conditions.³⁴⁰ The slight increase in per capita income suggested by the 2006-2010 ACS is not supported by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Holy Cross in 2010 is \$6,861.^{341,342} This discrepancy suggests that caution is warranted when citing an increase in per capita income in Holy Cross between 2000 and 2010. The relatively low per capita income estimates for Holy Cross in 2010 from both data sources are reflected in the fact that the community was recognized as "distressed" by the Denali Commission,³⁴³ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It is important to note that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of personal use and subsistence within the local economy.

In 2010, a much smaller percentage of Holy Cross residents was estimated to be in the civilian labor force (43.8%) compared to the civilian labor force statewide (68.8%). In the same year, 40.6% of local residents were estimated to be living below the poverty line, more than four times the statewide poverty rate of 9.5%, and the unemployment rate was estimated to be 16.1%, more than twice the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which shows a local unemployment rate of 24.3%, more than twice the state rate estimate of 11.5%.³⁴⁴

Also based on the 2006-2010 ACS, just over half of the employed civilian workforce in Holy Cross was estimated to be employed in the public sector (50.9%), while 43.4% were employed in the private sector, and the remaining 5.7% were estimated to be self-employed. Out of 53 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in educational services, health care and social services (45.3%), construction (15.1%), transportation, warehousing and utilities (13.2%), public administration (9.4%), professional, scientific, management, and administrative and waste management services (5.7%), and agriculture, forestry, and fishing industries (5.7%) (Figure 3). The number of individuals employed in the fishing industry is probably underestimated in Census statistics; fishermen may hold another job and characterize their employment accordingly. Compared to employment statistics in 2000, the most notable shifts in the distribution of employment by industry included a decline in careers categorized as 'other services' and an increase in retail trade, construction, and agriculture, forestry, fishing, hunting, and mining industry employment.

³⁴⁰ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁴¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁴² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁴³ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

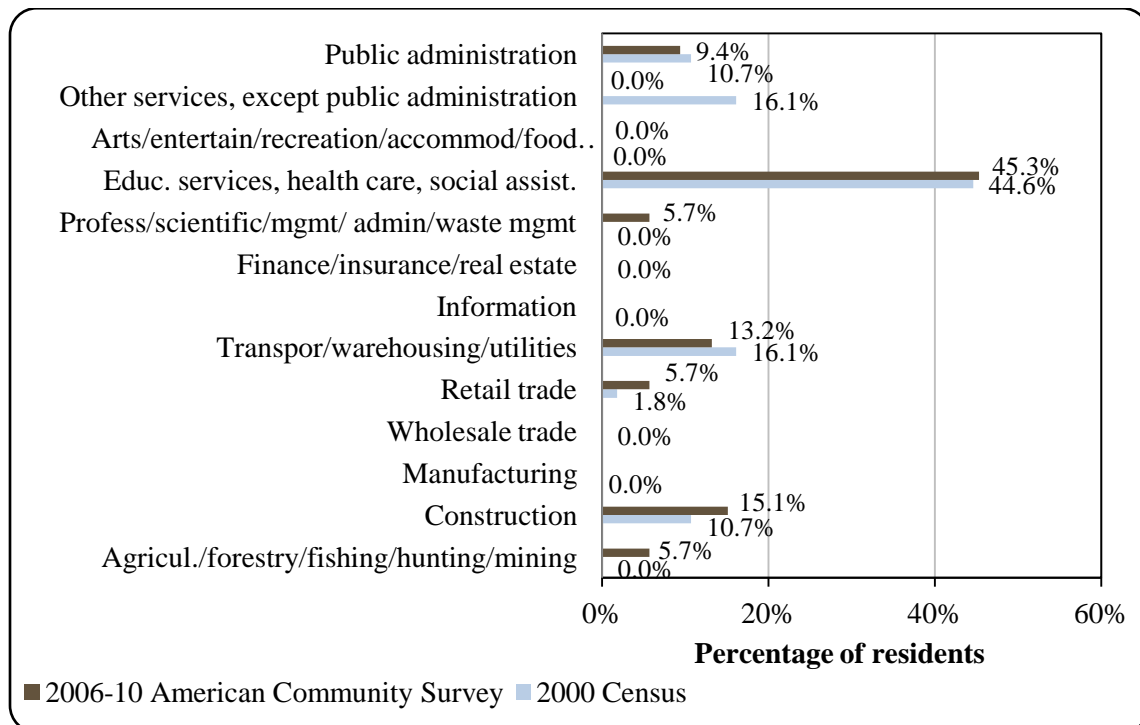
³⁴⁴ See footnote 341.

ALARI industry employment statistics differ from ACS estimates, with the highest percentage of employed residents (59.3%) reported to be working in local government in 2010, along with 24.7% employed in education and health services, 4.9% working in trade, transportation, and utilities, 3.7% in natural resources and mining, 2.5% in construction, 1.2% in financial activities, 1.2% in professional and business services, 1.2% in state government, and 1.2% in other industries.³⁴⁵

Viewing employment from the perspective of occupation, 2006-2010 ACS estimates indicate that the highest percentages of the Holy Cross workforce were employed in sales and office occupations (32.1%) and service occupations (30.2%), along with 22.6% employed in natural resources, construction, and maintenance occupations, 15.1% in management, business, science, and arts occupations, and 0% in production, transportation, and material moving service occupations (Figure 4). Between 2000 and 2010, the percentage of the workforce employed in sales and office occupations increased by approximately 50%, and the percentages employed in service occupations and natural resources, construction, and maintenance occupations also increased notably. There was a 100% decline in the number of individuals estimated to be working in production, transportation, and material moving occupations between 2000 and 2010.

According to the ALARI database, top occupations in Holy Cross in 2010 were laborers and freight, stock, and material movers (16 workers), and community and social service specialists (6 workers).³⁴⁶ Discrepancies between 2006-2010 ACS and ALARI statistics can be explained in part by different category definitions. It is also important to note that, as with income statistics, ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

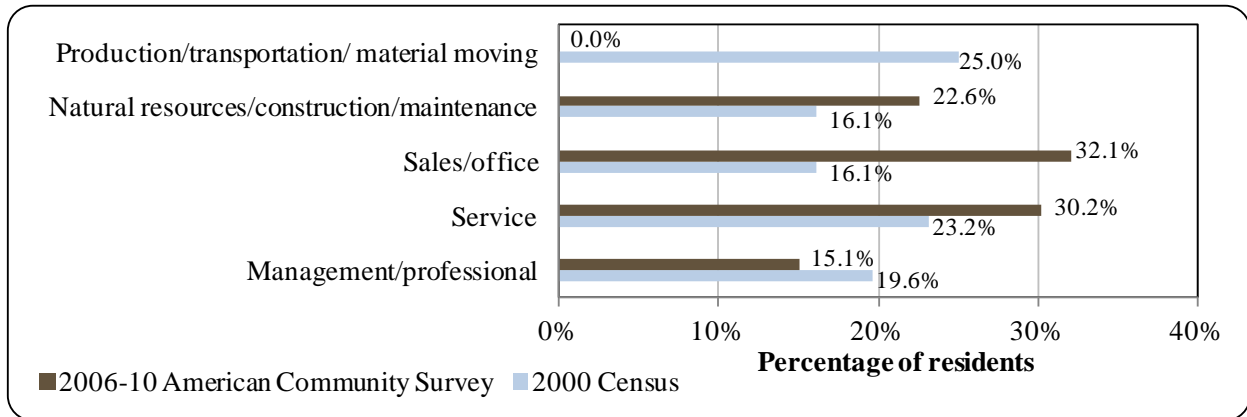
Figure 3. Local Employment by Industry in 2000-2010, Holy Cross (U.S. Census).



³⁴⁵ Ibid.

³⁴⁶ Ibid.

Figure 4. Local Employment by Occupation in 2000-2010, Holy Cross (U.S. Census).



Governance

Holy Cross is a 2nd Class City located in an unorganized borough. The City was incorporated in 1698, and has a manager or “Strong Mayor” form of government, with a seven-person city council including the Mayor, a seven-person school board, and several municipal employees. No sales or property taxes are administered by the City.³⁴⁷ Locally-generated revenue sources during the 2000-2010 period included state-contracted services, building and equipment rentals, water, sewer, and washeteria service fees, land leases, concessions, and bingo and pull tab receipts. The City also received shared revenues from the state and federal government. State shared funds included contributions from the State Revenue Sharing program from 2000 to 2003 and from the Community Revenue Sharing program in 2009 and 2010, as well as Municipal Energy Assistance, Telephone / Electric Co-op tax refunds, and the SAFE Communities program (funding for public safety, fire, utilities, infrastructure, etc.). Federal revenue sharing dollars came from the Payment In Lieu of Taxes program. Holy Cross also received capital/special project grants in some years during the 2000-2010 period. Between 2000 and 2010, no fisheries-related grants were received by the City of Holy Cross. This information about selected revenue streams is presented in Table 2.

Holy Cross was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is Holy Cross Village. The Native village corporation is Deloycheet, Incorporated, which manages 138,727 acres of land. The regional Native corporation to which Holy Cross belongs is Doyon, Limited.³⁴⁸

Holy Cross is also a member village of the Tanana Chiefs Conference, a tribal 501(c)(3) non-profit organization headquartered in Fairbanks. It is a consortium of 42 villages of Interior Alaska that works to meet “the health and social service challenges for more than 10,000 Alaska Natives spread across a region of 235,000 square miles in Interior Alaska.” The non-profit provides health and tribal development services, as well as educational and employment services

³⁴⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁴⁸ Ibid.

to individuals of member tribes.³⁴⁹ The Tanana Chiefs Conference is one of the 12 regional Alaska Native nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.³⁵⁰

The closest offices of the Alaska Department of Fish and Game (ADF&G) are located in Emmonak and Bethel, although the Emmonak office is only open during the summer season. The closest office of the Alaska Department of Commerce, Community and Economic Development is also in Bethel. However, the Anchorage and Fairbanks offices of these agencies may be more accessible to people living in Holy Cross than the coastal villages. Anchorage has the nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Natural Resources, and U.S. Bureau of Citizenship and Immigration Services.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Holy Cross from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$207,339	n/a	\$29,823	n/a
2001	\$197,252	n/a	\$28,789	n/a
2002	\$272,173	n/a	\$26,014	n/a
2003	\$160,431	n/a	\$28,000	n/a
2004	\$137,123	n/a	n/a	n/a
2005	\$114,055	n/a	n/a	n/a
2006	\$189,204	n/a	n/a	n/a
2007	\$189,303	n/a	n/a	n/a
2008	\$228,948	n/a	n/a	n/a
2009	\$366,540	n/a	\$106,307	n/a
2010	\$391,070	n/a	\$105,897	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

³⁴⁹ Tanana Chiefs Conference website.2007. *History*. Retrieved January 9, 2012 from <http://www.tananachiefs.org/>.

³⁵⁰ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

Infrastructure

Connectivity and Transportation

Holy Cross can be accessed by air and water. The State owns and operates a 4,000 feet long by 100 feet wide gravel airstrip.³⁵¹ As of early June, 2012, roundtrip airfare between Holy Cross and Anchorage was \$584.³⁵² Residents use private boats for fishing, subsistence, and recreation.³⁵³ According to a survey conducted by the AFSC in 2011, community leaders reported that all vessels used in Holy Cross are under 35 feet in length. Holy Cross is serviced by barge during the summer months.³⁵⁴ Plans are currently being developed for relocation of the barge landing site due to sediment fill slowly making the existing landing site inaccessible.³⁵⁵ In addition to air and water access, local residents have access to 7.5 miles of local roads. Motor bikes, 3-wheelers, snowmobiles, and dog teams are common modes of overland transportation.³⁵⁶

Facilities

The City of Holy Cross operates a piped water and sewer system which serves 71 housing units and the local school. Water is sourced from a deep well and chlorinated before it is distributed. Residents of housing units not connected to the piped system haul water from the washeteria. The City operates a sewage lagoon for piped sewage, and some households use individual septic tanks or outhouses, or haul honeybuckets. The City operates a landfill, but does not provide refuse collection services. Individuals are responsible for hauling their own garbage. Electricity in Holy Cross is provided by an Alaska Village Electric Cooperative diesel powerhouse, operated by the REA Coop.³⁵⁷ Police services in Holy Cross are provided by state troopers stationed 40 miles upriver in Aniak. The City operates a jail. Fire and rescue services are provided by the City Volunteer Fire Department. Additional community facilities include the Holy Cross Community Hall, a school gymnasium, and a school/community library. Community services include an elder nutrition program. Local and long-distance telephone service is available in Holy Cross. Internet service is available at the school only. No cable providers offer service locally.³⁵⁸

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that no dock space is available in Holy Cross. However, smaller vessels (up to 24 feet in length) are in use in Holy Cross, and fuel barges can also be accommodated at the barge landing site. Community leaders reported that no fisheries-related businesses and services are

³⁵¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵² Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

³⁵³ See footnote 351.

³⁵⁴ Ibid.

³⁵⁵ U.S. Army Engineer District. 2011. *Trip Report to the Denali Commission*. Retrieved October 2, 2012 from https://www.denali.gov/dcpdb/index.cfm?fuseAction=Project.ProjectAtAGlance&project_id=6739.

³⁵⁶ See footnote 351.

³⁵⁷ Today, the Rural Electric Administration has transformed into the Rural Utilities Service, and is part of the U.S. Department of Agriculture. (Source: National Rural Electric Cooperative Association. 2012. *History of Electric Co-ops*. Retrieved October 2, 2012 from <http://www.nreca.coop/members/history/pages/default.aspx>.)

³⁵⁸ See footnote 351.

available in Holy Cross, with the exception of fishing gear repair and storage, which local residents do themselves.

Medical Services

Basic medical services are provided in Holy Cross at the Theresa Demientieff Health Clinic. The clinic is owned by the Village Council and operated by the Yukon Kuskokwim Health Corporation. It is part of the Community Health Aid Program. Emergency services have river and air access in Holy Cross. Emergency services are provided by the health aide.³⁵⁹ The nearest hospital is located in Bethel.

Educational Opportunities

There is one school in Holy Cross which offers a preschool through 12th grade education. As of 2011, the Holy Cross School had 41 students and 4 teachers.³⁶⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence salmon fishing has long provided a basis for life in Deg Hit'an communities of the Lower Yukon River. Chinook salmon were the most important food fish, while chum and coho salmon were processed into dried fish, and chum salmon was an important food for sled dogs. The Deg Hit'an primarily used large basket traps for salmon harvest. They also used dipnets, which they would hold in the water as they drifted down river with the current in canoes. Villagers from Koserefsky and Anilukhtakpuk (formerly located near Holy Cross) most often had fish camps on the eastern bank of the Yukon River.³⁶¹

The first recorded commercial harvest of salmon on the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure on the Yukon River between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s.³⁶²

Poor returns of Chinook salmon in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.³⁶³ Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but restricted commercial harvest in 2008 and complete

³⁵⁹ Ibid.

³⁶⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³⁶¹ VanStone, James. 1979. "Ingalik Contact Ecology: An Ethnohistory of the Lower-Middle Yukon, 1790-1935." *Fieldiana. Anthropology*. 71, pp. i, iii, v-vii, ix-xii, 1-273. (Retrieved October 3, 2012 from <http://www.jstor.org>.)

³⁶² Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

³⁶³ Ibid.

closure of Chinook harvest in 2009 led to declaration of a fishery disaster that year.³⁶⁴ A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of Fisheries, and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundant species, including gear and other management restrictions.³⁶⁵

Like Yukon Chinook salmon runs, chum salmon runs have seen poor returns since 1998. A relatively strong run in 2007 led to some effort to redevelop the Yukon chum fishery, but this process is challenged by the need to reduce incidental harvest of co-migrating Chinook salmon. Further, beginning in 2008, the fall chum salmon run has not been large enough to provide for commercial opportunity. From 2008 to 2010, management actions have been taken to delay commercial fishing to provide for escapement and subsistence use.³⁶⁶

In years when commercial salmon fishing is open, fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 subdistricts, and 28 statistical areas. Fishing takes place with set and drift gillnets, and fish wheels are also allowed in Upper Yukon districts (Districts 4, 5, and 6). Subsistence fishermen also most often utilize these gear types. Many subsistence fishermen are also commercial fishermen.³⁶⁷

Some commercial fishing also takes place in the area for “freshwater fish”, which may target species such as Arctic char, northern pike, rainbow trout, Dolly Varden char, and sheefish.³⁶⁸

Holy Cross is located in District 3 of the Lower Yukon River salmon fishery. It is also important to note that the ocean area into which the Yukon River flows is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Holy Cross is not eligible to participate in the Community Quota Entity program or the Community Development Quota program.

In the 2011 AFSC survey, community leaders reported that Holy Cross actively participates in fisheries management processes in Alaska through sending a representative to sit on a regional fisheries advisory and/or working group run by ADF&G. When asked to report challenges faced by the fishing economy, community leaders indicated that Holy Cross has been negatively impacted by reduced fishing hours, outlawing fish wheels, the reduction of legal mesh size in the salmon gillnet fishery, and the lack of a processing facility in District 3 of the Lower Yukon River salmon fishery. Without a processing facility, local fishermen have difficulty making money in the commercial salmon fishery. Community leaders also indicated that Holy Cross has been negatively impacted by salmon by-catch in the high seas pollock fishery, and expressed the opinion that the high seas harvest should be shut down for several years as an experiment to find out whether Chinook salmon begin to come back in higher numbers.

³⁶⁴ Upton, H.F. 2010. *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

³⁶⁵ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=hottopics.federalChinookdisaster>.

³⁶⁶ Wolfe, R.J. and C. Scott. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

³⁶⁷ See footnote 362.

³⁶⁸ Alaska Dept. of Fish and Game. 2006. *Our Wealth Maintained: A Strategy for Conserving Alaska's Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=species.wapview>.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Holy Cross does not have a registered processing plant. In the 2011 AFSC survey, community leaders indicated that there hasn't been a processing plant in District 3 of the Lower Yukon River salmon fishery for many years, and expressed the desire for a processing facility to be developed in District 3 to provide greater economic opportunity in the region.

According to the 2010 Intent to Operate list, the nearest processing facilities were located in Anvik (approximately 40 miles upriver in District 4) and Saint Mary's (approximately 180 miles downriver in District 2). In Anvik, Bonasila, Inc. operates a salmon roe processing facility, and Boreal Seafoods, Inc. is a registered processing plant in Saint Mary's that purchases salmon from local fishermen, with processing focused on Chinook, chum, and coho.³⁶⁹

Fisheries-Related Revenue

Between 2000 and 2010, there was little known fisheries-related revenue generated in Holy Cross. The only known source was the Shared Fisheries Business Tax, which generated a total of \$329 between 2000 and 2010. No other known fisheries-related revenue was reported during this period (Table 3).³⁷⁰

Commercial Fishing

Holy Cross is a river fishing community, located approximately 275 miles up the Yukon River. The primary fisheries resource available to Holy Cross fishermen is salmon. Between 2000 and 2010, Holy Cross residents participated in commercial salmon fishery as permit holders, crew license holders, and vessel owners. The number of vessels homeported in Holy Cross each year was typically slightly higher than the number of vessels reported to be primarily owned by Holy Cross residents. According to a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing boats using Holy Cross as a base of fishing operations were all under 35 feet in length and were mostly gillnetters. No fish buyers or processing facilities were located in the community, and no landings were delivered locally. Information about the commercial fishing sector in Holy Cross is presented in Table 5.

During the 2000-2010 period, all but one Commercial Fisheries Entry Commission (CFEC) permit held in Holy Cross were for Yukon River salmon gillnet fisheries. In 2008, one permit was also held for freshwater fish ('other finfish'), but was not actively fished that year. In all years during the decade, a majority of salmon permits were held in the Lower Yukon River gillnet fishery, with a smaller number held in the Upper Yukon River gillnet fishery. The only salmon permits that were actively fished between 2000 and 2010 were for the Lower Yukon River. The total number of salmon permit holders and number of permits held remained stable through the decade. However, the number of permits that were actively fished showed a declining trend. No permits were actively fished in 2001-2002 and 2008-2010. The lack of permit activity in these years is explained by complete closures of the commercial Chinook

³⁶⁹ Boreal Fisheries. 2009. *Homepage*. Retrieved May 31, 2012 from <http://www.borealfish.com/>.

³⁷⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

fishery in 2001 and 2009, and restricted commercial fishing effort in other years (see *History and Evolutions of Fisheries* section). This information about CFEC permits is presented in Table 4.

Between 2000 and 2010, no residents of Holy Cross held Federal Fisheries Permits (FFP), License Limitation Program permits (LLP), or participated in federal halibut, sablefish, or crab catch share fisheries. Information about federal permits held by Holy Cross residents is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

Given the lack of fish buyers and shore-side processing facilities in Holy Cross between 2000 and 2010, no landings or revenue information is reported in the community (Table 9). Information about landings and ex-vessel revenue earned by Holy Cross vessel owners between 2000 and 2010 is considered confidential due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Holy Cross: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	\$45	n/a	\$72	n/a	n/a	n/a	\$47	\$49	\$58	\$61
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>\$45</i>	<i>n/a</i>	<i>\$72</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$47</i>	<i>\$49</i>	<i>\$58</i>	<i>\$61</i>
<i>Total municipal revenue</i> ⁵	<i>\$207,339</i>	<i>\$197,252</i>	<i>\$272,173</i>	<i>\$160,431</i>	<i>\$137,123</i>	<i>\$114,055</i>	<i>\$189,204</i>	<i>\$189,303</i>	<i>\$228,948</i>	<i>\$366,540</i>	<i>\$391,070</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Holy Cross: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4. Cont. Permits and Permit Holders by Species, Holy Cross: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	0%	-	-
	Total permit holders	0	0	0	0	0	0	0	0	1	0	0
Salmon (CFEC) ²	Total permits	9	10	10	11	11	11	10	11	10	10	10
	Fished permits	5	0	0	4	2	4	3	1	0	0	0
	% of permits fished	56%	0%	0%	36%	18%	36%	30%	9%	0%	0%	0%
	Total permit holders	9	10	10	11	11	12	11	11	10	10	10
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>9</i>	<i>10</i>	<i>10</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>10</i>	<i>11</i>	<i>11</i>	<i>10</i>	<i>10</i>
	<i>Fished permits</i>	<i>5</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>2</i>	<i>4</i>	<i>3</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>56%</i>	<i>0%</i>	<i>0%</i>	<i>36%</i>	<i>18%</i>	<i>36%</i>	<i>30%</i>	<i>9%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>9</i>	<i>10</i>	<i>10</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>10</i>	<i>10</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Holy Cross: 2000-2010.

Year	Crew licenses holders ¹	Count of all fish buyers ²	Count of shore-side processing facilities ³	Vessels primarily owned by residents ⁴	Vessels homeported ⁴	Vessels landing catch in Holy Cross ²	Total net pounds landed in Holy Cross ^{2,5}	Total ex-vessel value of landings in Holy Cross ^{2,5}
2000	6	0	0	13	15	0	0	\$0
2001	0	0	0	17	19	0	0	\$0
2002	2	0	0	17	18	0	0	\$0
2003	7	0	0	19	21	0	0	\$0
2004	6	0	0	23	24	0	0	\$0
2005	9	0	0	1	2	0	0	\$0
2006	4	0	0	18	19	0	0	\$0
2007	5	0	0	18	19	0	0	\$0
2008	0	0	0	18	19	0	0	\$0
2009	1	0	0	19	20	0	0	\$0
2010	0	0	0	17	18	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Holy Cross: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Holy Cross: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Holy Cross: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Holy Cross: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Holy Cross Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses were registered in Holy Cross. However, several licensed sport fish guides were present in the community each year. The number of licensed guides varied between four and one per year, with a declining trend over the period. The number of sportfishing licenses purchased by Holy Cross residents (irrespective of point of sale) ranged from 48 to 71 per year. The number of licenses purchased by residents each year was slightly higher than the total number of licenses sold in Holy Cross, with the exception of 2009 and 2010 (Table 11).

In a survey conducted by the AFSC in 2011, community leaders reported that sport fishermen in Holy Cross primarily target chum, Chinook, and coho salmon. The Alaska Statewide Harvest Survey,³⁷¹ conducted by ADF&G between 2000 and 2010, also noted sport harvest of sockeye salmon in Holy Cross, as well as harvest of razor clams by Holy Cross recreational fishers. No kept/release log book data were reported for sportfishing charters out of Holy Cross between 2000 and 2010.³⁷²

Holy Cross is located within Alaska Sport Fishing Survey Area Y – Yukon River Drainage. Information is available about both saltwater and freshwater sportfishing activity at this regional scale (Table 11). Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 81 non-resident angler days fished per year, and between 0 and 89 Alaska resident angler days fished per year. The low numbers reported for saltwater sportfishing make sense given that a majority of residents in Yukon drainage communities live a great distance from the ocean, and fishing activities take place primarily in fresh water. Between 2000 and 2010, Alaska resident anglers in the Yukon River drainage consistently fished more days in freshwater (4,783 – 10,400 angler days per year) than non-resident anglers (2,573 – 5,761 angler days per year).

Table 11. Sport Fishing Trends, Holy Cross: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Holy Cross ²
2000	0	4	60	16
2001	0	4	48	0
2002	0	4	66	38
2003	0	3	57	47
2004	0	3	57	49
2005	0	2	69	30
2006	0	2	63	38
2007	0	1	57	48
2008	0	2	68	67
2009	0	2	71	84
2010	0	2	60	61

³⁷¹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁷² Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 Cont. Sport Fishing Trends, Holy Cross: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Historically, subsistence harvest has been foundational to the economy and culture of the Deg Hit’an Athabascan people. Salmon were of primary importance, as well as a secondary dependence on large and small game animals.³⁷³ Today, subsistence and fishing-related activities remain important to the economy and way of life of Holy Cross residents.³⁷⁴ Fish are the most reliable subsistence resource in the lower-middle Yukon River region. In addition to salmon, non-salmon fish are a vital component of the subsistence fish harvest, partly due to their year-round availability. Non-salmon fish species harvested by residents of Holy Cross include whitefish, sheefish, northern pike, Arctic grayling, longnose sucker, burbot, Alaska blackfish, and Arctic lamprey.³⁷⁵

³⁷³ VanStone, J.. 1976. “The Yukon River Ingalik: Subsistence and the Fur Trade, and a Changing Resource Base.” *Ethnohistory*. 23(3), pp. 199-212.

³⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷⁵ Brown, C, Burr, J., Elkin, K., and Walker, R. 2005. *Contemporary Subsistence Use and Population Distribution of Non-Salmon Fish in Grayling, Anvik, Shageluk, and Holy Cross*. Alaska Dept. of Fish and Game, Tech. Paper No. 289. Retrieved October 4, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp289.pdf>.

According to data reported in ADF&G’s Community Subsistence Information System, in 2002, 21% of Holy Cross households were estimated to participate in harvest or use of non-salmon fish, while estimates were not reported regarding the percentage of households participating in salmon, halibut, marine mammal, or marine invertebrate subsistence, or the per capita subsistence harvest in Holy Cross between 2000 and 2010 (Table 12). In 2002, total estimated non-salmon fish harvest was reported to be 5,310 pounds (Table 13).

ADF&G also reported information regarding subsistence salmon permits issued to Holy Cross households between 2000 and 2008. During this period, the number of permits issued was relatively stable from year to year, varying between 48 and 65 per year, while the number of permits returned varied from 21 to 36 per year. Chinook were by far the most heavily harvested salmon species during this time period, averaging 2,395 Chinook taken per year. Chum and coho were the next most heavily harvested species, averaging 803 and 135 fish harvested per year, respectively. A small number of pink and sockeye salmon were also reported as harvested in some years during the period (Table 13).

No information was reported by management agencies regarding subsistence harvest of halibut (Table 14) or marine mammal species (Table 15) by residents of Holy Cross between 2000 and 2010.

Table 12. Subsistence Participation by Household and Species, Holy Cross: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	21%	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Holy Cross: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	62	26	1,249	1,092	70	20	n/a	n/a	n/a
2001	63	28	2,711	1,084	n/a	n/a	60	n/a	n/a
2002	60	23	1,813	155	n/a	n/a	n/a	n/a	5,310
2003	55	21	2,395	223	498	n/a	n/a	n/a	n/a
2004	48	29	1,993	352	27	n/a	n/a	n/a	n/a
2005	51	31	2,817	1,342	84	n/a	n/a	n/a	n/a
2006	65	32	3,165	1,049	16	17	n/a	n/a	n/a
2007	60	36	2,902	568	213	n/a	n/a	n/a	n/a
2008	55	34	2,509	1,361	38	20	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Holy Cross: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Holy Cross: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nenana (nuh-NAN-uh)



People and Place

*Location*³⁷⁶

Nenana is located in Interior Alaska, 55 road miles southwest of Fairbanks on the George Parks Highway. Nenana is located at mile 412 of the Alaska Railroad, on the south bank of the Tanana River, just east of the mouth of the Nenana River. It lies 304 road miles northeast of Anchorage. The City encompasses 6.0 square miles of land and 0.1 square miles of water. Nenana is in the Yukon-Koyukuk Census Area and the Nenana Recording District.

*Demographic Profile*³⁷⁷

In 2010, there were 378 inhabitants in Nenana, making it the 141st largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population of Nenana decreased by 3.8%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 12.2%, with an average annual growth rate of -0.74%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that approximately 24 individuals were present in Nenana as seasonal or transient workers between March and October. They indicated that the yearly population peak in Nenana occurs between June and August each year, and that population fluctuations are slightly driven by employment in fishing sectors.

In 2010, a majority of Nenana residents identified themselves as White (56.1%), while 37.6% identified themselves as American Indian or Alaska Native, 0.3% as Asian, 0.3% as Black or African Americans, and 5.6% of residents identified with two or more races. In addition, 0.5% of Nenana residents identified themselves as Hispanic in 2010. Compared to 2000, residents identifying as American Indians and Alaska Natives made up 3.4% less of the population in 2010, while those identifying as White made up 5.4% more of the population. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Nenana was 2.21. Overall, this represents a slight decrease from the 1990 average of 2.8 persons per household, but an increase from 1.99 persons per household in 2000. The number of households in Nenana has increased over time, from 140 households in 1990 and 159 in 2000, to 171 occupied housing units in 2010. Of the 215 total housing units surveyed for the 2010 U.S. Decennial Census, 53% were owner-occupied, 26.5% were rented, and 20.5% were vacant or used only seasonally. From 1990 to 2010, no residents of Nenana lived in group quarters.

³⁷⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

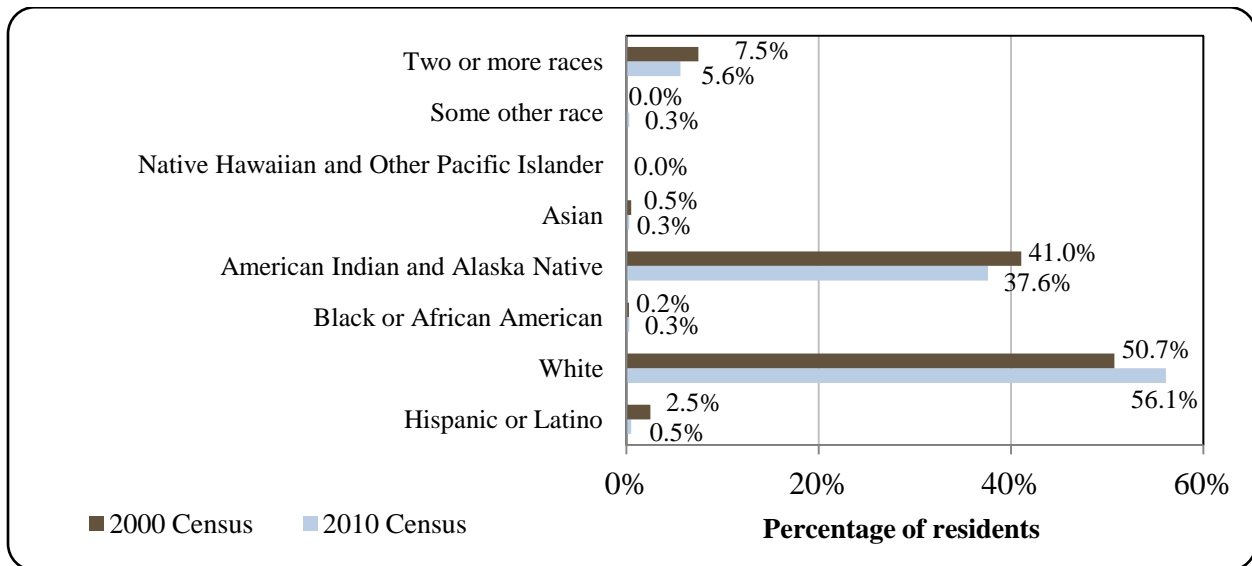
Table 1. Population in Nenana from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	393	-
2000	402	-
2001	-	392
2002	-	401
2003	-	371
2004	-	370
2005	-	353
2006	-	355
2007	-	366
2008	-	354
2009	-	353
2010	378	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

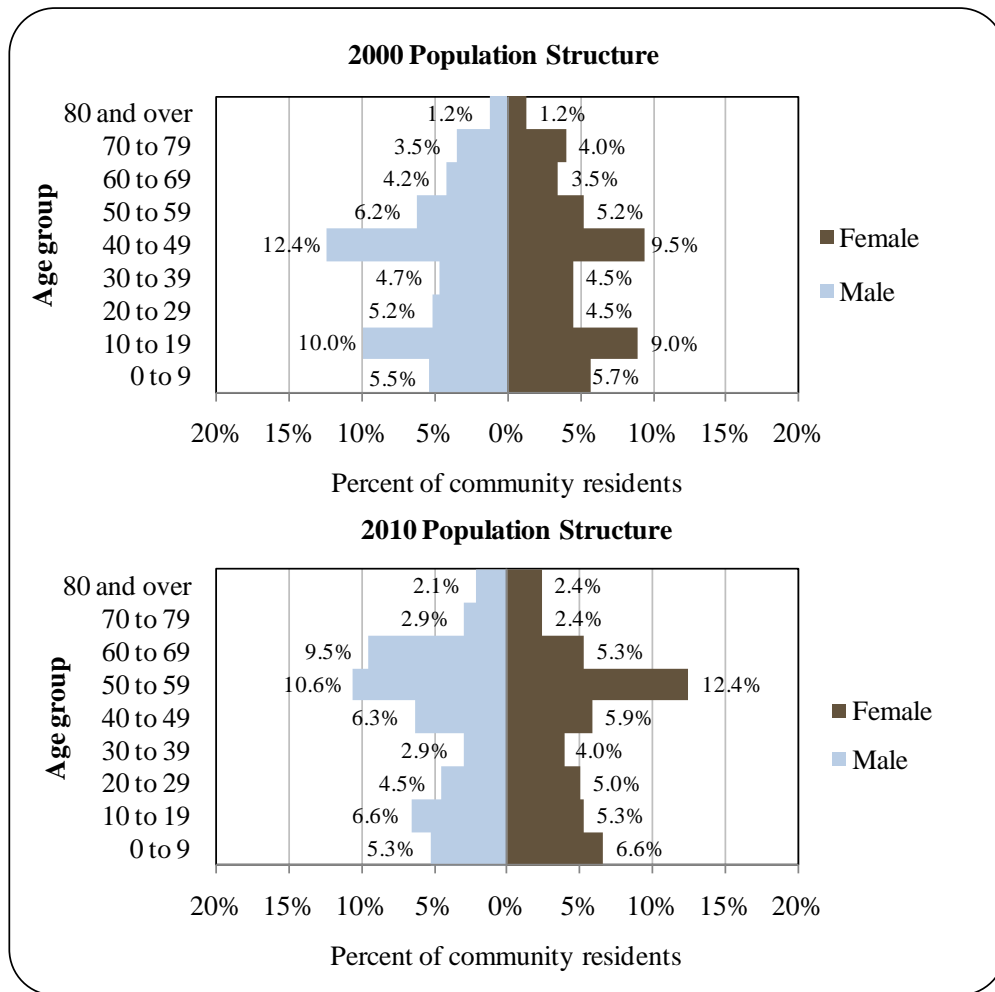
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nenana: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Nenana’s population (50.8% male and 49.2% female) was more gender balanced than the population of the State as a whole, which was 52% male and 48% female. That year, the median age of Nenana residents was 48 years, much older than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 24.7% of Nenana’s population was age 60 or older. The overall population structure of Nenana in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Nenana Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),³⁷⁸ 85.3% of Nenana residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 4.7% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 10% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 31.3% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 6.9% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 8.8% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 3.8% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

³⁷⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*³⁷⁹

Nenana is in the western-most portion of Tanana Athabascan territory. It was first known as Tortella, an interpretation of the word “Toghotthele,” which means “mountain that parallels the river.” The Nenana Valley of Central Alaska is the site of one of the earliest archaeological sites in North America, dating between about 11,000 and 12,000 years old.³⁸⁰ The site of the City of Nenana was historically used by Athabascan Indians for summer subsistence and mid-winter ceremonial activities.³⁸¹ Interpretations of the name Nenana in the Athabascan language include, “easy place to camp,” or “camp between the rivers.”³⁸² By the late 1800s, the Native people had established a small village with permanent dwellings there.³⁸³

Contact between Europeans and residents of the Tanana Valley began around 1850, following the establishment of a fort at Fort Yukon in 1847 by Russian fur traders. Another fort was established at “Nuklukayet,” at the confluence of the Yukon and Tanana Rivers, in 1860.³⁸⁴ The first non-Native explorers to enter the Tanana Valley were Allen, Harper, and Bates in 1875 and 1885. The discovery of gold in Fairbanks in 1902 brought intense activity to the region.³⁸⁵ The juncture of river and railroad transportation made Nenana a center for commerce in the region during the gold rush and railroad construction period.³⁸⁶

Because of available transportation, Nenana became the headquarters for St. Mark’s Episcopal Mission,³⁸⁷ which was built upriver in 1905, followed by a mission school in 1907.³⁸⁸ Native children from other communities, such as Minto, attended school in Nenana. A post office opened in 1908. By 1909, there were about 12,000 residents in the Fairbanks area, most drawn by gold mining activities.³⁸⁹ Settlement of a non-Native population in Nenana occurred with the construction of the Alaska Railroad between 1916 and 1923,³⁹⁰ doubling the town’s population.³⁹¹ The community incorporated as a City in 1921. The railroad depot was completed in 1923, when President Warren Harding drove the golden spike at the north end of the 700-foot steel bridge over the Tanana River, which created a transportation link to Fairbanks and Seward.³⁹²

During the 1925 diphtheria epidemic in Nome, serum from Anchorage was transported to Nenana by train before being sent by dogsled to Nome. According to local records, 5,000

³⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁸⁰ Ibid.

³⁸¹ Shinkwin, A. and M. Case (1984). Modern Foragers: Wild Resource Use in Nenana Village, Alaska. Technical Paper 91, *Alaska Department of Fish and Game, Division of Subsistence*. Retrieved January 9, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp091.pdf>.

³⁸² Lutes and Amundson Community Planners and Alaska State Housing Authority (1968). *Nenana – Comprehensive Planning Study*. Retrieved January 6, 2012 from <http://www.commerce.state.ak.us/dca/plans/Nenana-CP-1968.pdf>.

³⁸³ See footnote 381.

³⁸⁴ Ibid.

³⁸⁵ See footnote 379.

³⁸⁶ See footnote 382.

³⁸⁷ Ibid.

³⁸⁸ See footnote 381.

³⁸⁹ See footnote 379.

³⁹⁰ See footnote 381.

³⁹¹ See footnote 379.

³⁹² Ibid.

residents lived in Nenana during this time.³⁹³ A dramatic decline in population followed the completion of the railroad, primarily due to the departure of non-Natives, and also due to an influenza epidemic in 1920 in which one fourth of the Indian population perished.³⁹⁴ Completion of the railroad was also followed by an economic slump. The population in 1930 was recorded at 291.³⁹⁵

Today, the City attracts independent travelers in search of fuel and supplies, the Alaska Railroad Museum, the Golden Railroad Spike Historic Park and Interpretive Center, the historical St. Mark's Episcopal Church, Iditarod dog kennels, and the Alfred Starr Museum & Cultural Center. The Nenana Ice Classic, a contest established in 1917 to guess when the ice will break in the Nenana River each year, is a statewide event.³⁹⁶

Natural Resources and Environment

Nenana has a cold, continental climate with an extreme temperature range. The average daily maximum during summer months is 65 to 70 °F; the daily minimum during winter is well below 0 °F. The highest temperature ever recorded was 98 °F, and the lowest was -69 °F. Average annual precipitation is 11.4 inches, with 48.9 inches of snowfall. Nenana is located on the Tanana River, which is ice-free from mid-May to mid-October.³⁹⁷ The Tanana River, meaning “river trail” in Athabascan, is an important tributary of the Yukon River.³⁹⁸ Runs of Chinook, chum, and coho salmon return to the Yukon and Tanana Rivers each year, spawning as far inland as the headwaters of the Yukon River in Canada.³⁹⁹

Nenana is located one mile west of the border of a western segment of Tanana Valley State Forest, and four miles south of the border of the Minto Flats State Game Refuge. The Game Refuge is nestled among scattered segments of the State Forest, which totals 1.78 million acres and stretches along the Tanana River from near the Canadian border to Manley Hot Springs. Almost 90% of the State Forest is covered by hardwood and hardwood-spruce type forests, with high representation of paper birch, quaking aspen, balsam poplar, black and white spruce, and tamarac. Almost 7% of the forest is shrub land, covered primarily in willow.⁴⁰⁰

The Minto Flats State Game Refuge encompasses 500,000 acres. It was established in 1988 for the protection and enhancement of fish and wildlife, and to guarantee hunting, fishing, and trapping opportunities. The landscape is a mosaic of ponds, oxbows, stream channels, and wetland and upland vegetation, providing habitat for waterfowl, big game, and furbearers, as well as anadromous and resident freshwater fish species. The area has traditionally been and

³⁹³ Ibid.

³⁹⁴ See footnote 381.

³⁹⁵ See footnote 379.

³⁹⁶ Ibid.

³⁹⁷ Ibid.

³⁹⁸ Encyclopedia Britannica Online (2012). Tanana River. *Encyclopedia Britannica*. Retrieved January 12, 2012 from <http://www.britannica.com/>.

³⁹⁹ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁴⁰⁰ Alaska Dept. of Natural Resources, Division of Forestry (2001). *Introduction*. In: *Tanana Valley State Forest Management Plan: 2001 Update*. Retrieved January 12, 2012 from http://forestry.alaska.gov/management/tvsf_final_plan.htm.

remains an important area for harvesting fish, wildlife, and other resources for Athabascan Indians and others living in the Nenana area.⁴⁰¹

Natural hazard risks in the Nenana area include flooding, wildfire, earthquakes, snow and avalanche, severe weather, landslides and erosion. Shallow earthquakes in the area of Nenana would be considered ‘intraplate’ earthquakes, which can have a magnitude of up to 7 on the Richter scale. There have been three magnitude 7 earthquakes in the Fairbanks area in the past 90 years.⁴⁰² In late July, 2008, the Tanana River flooded, damaging residential septic, water systems and basements, washing out culverts, and temporarily shutting down Alaska Railroad train service.⁴⁰³

Interior Alaska is dotted with mineral deposits. No mining projects are located directly in Nenana, but the greater Tanana-Fairbanks region has deposits of gold, copper, silver, tin, tungsten, and antimony.⁴⁰⁴ To the south of Nenana, Usibelli Coal Mine, Inc. has been producing coal since the 1940s.⁴⁰⁵

According to the Alaska Department of Environmental Conservation (DEC), one active environmental cleanup site was located in Nenana as of May 2012. In 1991, petroleum contamination was identified in the soil and groundwater near an underground storage tank (UST) system at A-Frame Services in Nenana. In 1993, the UST system was removed and soils were excavated and treated. Ongoing groundwater monitoring indicates that the contaminated plume is stable and decreasing in concentration. To date, contaminants have not been detected above Maximum Contaminant Levels in a drinking water well located at the facility.⁴⁰⁶

Current Economy⁴⁰⁷

Over 40% of year-round jobs in Nenana are government-funded, including employment with the City, Tribe, Nenana School District, Yukon-Koyukuk School District, and Department of Transportation highway maintenance. As the center of rail-to-river barge transportation for Interior Alaska, Nenana has a strong seasonal private-sector economy. Crowley Marine is the major private employer in Nenana, providing supplies and fuel to over 40 villages along the Tanana and Yukon Rivers each summer. Subsistence foods, such as salmon, moose, caribou (by permit), bear, waterfowl, and berries play an important role. A number of Nenana residents are also involved in commercial salmon fisheries.^{408,409} Between 2000 and 2010, the percentage of

⁴⁰¹ Alaska Dept. of Fish and Game (2012). Minto Flats State Game Refuge. *Protected Areas website*. Retrieved January 12, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=mintoflats.main>.

⁴⁰² State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁴⁰³ State Emergency Coordinating Center (2008). *Situation Report – 2008 Tanana Basin Flooding*. Retrieved February 10, 2012 from http://fc.ak-prepared.com/dailysitrep/I00F90219/_OpenNdx.

⁴⁰⁴ Szumigala, D.J., L.A. Harbo, and J.N. Adleman (2011). *Alaska’s Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

⁴⁰⁵ Usibelli Coal Mine, Inc. (n.d.). *UCM History*. Retrieved January 10, 2012 from http://www.usibelli.com/History_KD.asp.

⁴⁰⁶ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁴⁰⁷ Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁰⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Nenana residents holding state Commercial Fisheries Entry Commission (CFEC) permits was equivalent to between 6% and 7% of the population per year, although a smaller percentage were actively fished each year (see *Commercial Fishing* section).

Based on household surveys conducted for the 2006-2010 ACS,⁴¹⁰ in 2010, the per capita income in Nenana was estimated to be \$25,479 and the median household income was estimated to be \$56,250. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$17,334 and \$33,333, respectively). Income levels in 2010 remain slightly higher than 2000 levels even when inflation is taken into account by converting the 2000 values to 2010 dollars,⁴¹¹ revealing a real 2000 per capita income of \$22,794 and real 2000 median household income of \$43,832. In 2010, Nenana ranked 101st of 307 Alaskan communities with per capita income data that year, and 96th in median household income, out of 305 Alaskan communities with household income data.

Nenana's small population size may have prevented the ACS from accurately portraying economic conditions.⁴¹² An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nenana in 2010 is \$17,455,⁴¹³ similar to the per capita income reported for the year 2000. This suggests that caution is warranted when citing an increase in per capita income in Nenana between 2000 and 2010, but provides additional evidence for income stability in the community during this period. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

This evidence of income stability is reflected in the fact that Nenana did not meet the Denali Commission's primary criteria for a "distressed community" in 2010. However, Nenana did make a list of additional communities that meet the distressed classification when a plus/minus 3% formula is used.⁴¹⁴

Based on the 2006-2010 ACS, in 2010, a slightly lower percentage of Nenana residents were estimated to be in the civilian labor force (64.4%) than in the civilian labor force statewide (68.8%). In the same year, 20.9% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 15.2%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the

⁴⁰⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴¹⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴¹¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴¹² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴¹³ See footnotes 409 and 410.

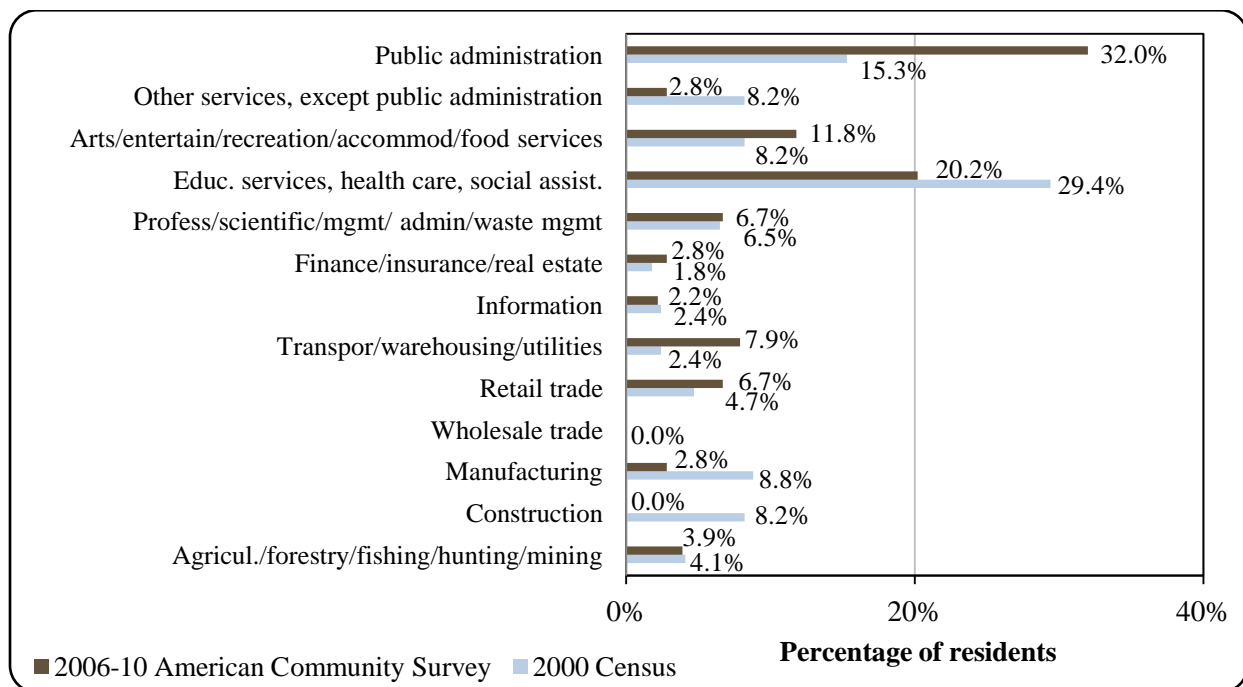
⁴¹⁴ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

unemployment rate in 2010 was 19.9%, compared to a statewide unemployment rate estimate of 11.5%.⁴¹⁵

Also based on the 2006-2010 ACS, the greatest number of workers was estimated to be employed in the private and public sectors (47.8% and 46.6%, respectively). Of the remaining 5.6%, 1.7% were estimated to be self-employed and 3.9% to be unpaid family workers. Of the 178 people aged 16 and over that were employed in the civilian labor force, the majority was estimated to be working in the public administration (32%) and educational services, health care, and social assistance (20.2%). Only 3.9% of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining in 2010. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 224 employed residents in 2010, of which 25.4% were employed in local government, 21% in leisure and hospitality, 15.6% in trade, transportation, and utilities industries, 12.9% in educational and health services, 8.9% in construction, 4.5% in professional and businesses services, 4.5% in natural resources and mining, 4.5% in financial activities, 1.3% in state government, 0.4% in information, and 0.9% in other industries.⁴¹⁶ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

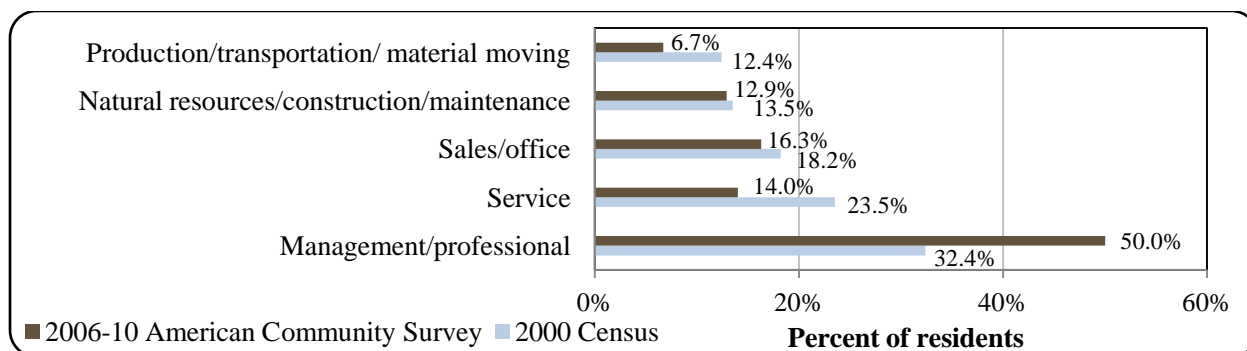
Figure 3. Local Employment by Industry in 2000-2010, Nenana.



⁴¹⁵ See footnote 409.

⁴¹⁶ Ibid.

Figure 4. Local Employment by Occupation in 2000-2010, Nenana.



Governance

Nenana is a Home Rule City which was incorporated in 1921. It is not included in an organized borough. The City has a Strong Mayor form of government, with a seven-person city council including the mayor, a seven-person advisory school board, and four municipal employees. The City administers a 4% sales tax and a 12.0 mills property tax.⁴¹⁷ Annual municipal revenue totals generally increased over the 2000-2010 period. In addition to sales and property tax revenues, locally-generated revenue sources in Nenana include building rentals and leases, traffic fines, and charges for local services and events. Outside revenue sources include a variety of revenue sharing programs and grants. Nenana received contributions from the State Revenue Sharing program each year from 2000 to 2004, ranging from \$27,540 to \$40,000 per year, and Community Revenue Sharing contributions of approximately \$120,000 per year in 2009 and 2010. Revenues were also received from the federal Payment in Lieu of Taxes program. It is also important to note that Nenana received an \$850,000 grant from the Denali Commission in 2007 for upgrades to the Nenana Tug and Barge Port.⁴¹⁸ Information about selected aspects of Nenana’s municipal revenue is presented in Table 2.

Nenana was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Nenana Native Association. The Native village corporation is Toghothtele Corporation, which manages 138,240 acres of land. The regional Native corporation to which Nenana belongs is Doyon, Limited.⁴¹⁹

Nenana is also a member of the Tanana Chiefs Conference, a tribal 501(c)(3) non-profit organization headquartered in Fairbanks. It is a consortium of 42 villages of Interior Alaska that works to meet “the health and social service challenges for more than 10,000 Alaska Natives spread across a region of 235,000 square miles in Interior Alaska.” The non-profit provides health and tribal development services, as well as educational and employment services to individuals of member tribes.⁴²⁰ The Tanana Chiefs Conference is one of the 12 regional Alaska

⁴¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴¹⁸ Denali Commission Project Database System (2008). *Nenana Tug and Barge Port Construction Project Detail*. Retrieved January 6, 2012 from <https://www.denali.gov/dcpdb/>.

⁴¹⁹ See footnote 417.

⁴²⁰ Tanana Chiefs Conference (2007). *History*. Retrieved January 9, 2012 from <http://www.tananachiefs.org/>.

Native nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁴²¹

The closest offices of the Alaska Department of Natural Resources, Alaska Department of Fish and Game (ADF&G), Alaska Department of Commerce, Community, and Economic Development, and U.S. Bureau of Citizenship and Immigration Services are located in Fairbanks, 55 miles northeast of Nenana by road. Anchorage hosts the nearest office of the National Marine Fisheries Service (NMFS).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nenana from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$493,165	\$104,312	\$27,540	n/a
2001	\$494,727	\$86,691	\$28,900	n/a
2002	\$709,024	\$126,684	\$28,000	n/a
2003	\$657,588	\$130,674	\$28,000	n/a
2004	\$716,589	\$141,277	\$40,000	n/a
2005	\$883,076	\$145,361	n/a	n/a
2006	\$794,367	\$129,687	n/a	n/a
2007	\$800,647	\$127,376	n/a	\$850,000
2008	\$926,309	\$190,889	n/a	n/a
2009	\$1,171,265	\$149,010	\$124,499	n/a
2010	\$1,017,707	\$149,078	\$120,436	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁴²¹ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

Infrastructure

Connectivity and Transportation

Nenana is accessible by road, railroad, river, and air. The community is located on the George Parks Highway, the road connecting Wasilla and Fairbanks. The railroad provides daily freight service. The Nenana Municipal Airport offers a 4,600 feet long by 100 feet wide lighted asphalt runway and a gravel runway that doubles as a ski strip in the winter, which measures 2,520 feet by 60 feet. There is also a float pond with parking basins for float planes.⁴²² The airport receives air taxis and is open to transient and local general aviation. No scheduled commercial flights serve Nenana.⁴²³ Fairbanks is located 55 miles away by road, and the price of a roundtrip ticket by plane from Fairbanks to Anchorage in early June of 2012 was \$247.⁴²⁴ Daily buses to Fairbanks and Anchorage are available year-round.⁴²⁵

The Nenana Port Authority operates the dry cargo loading and unloading facilities, dock, bulkhead, and warehouse. The Tanana River is shallow, with a maximum draft for loaded river barges of 4.5 feet. There is a public boat launch with a recreational area to provide access to the Nenana and Tanana rivers.⁴²⁶

Facilities

The City of Nenana operates a piped water and sewer system. Water is derived from a deep well, treated, and then distributed throughout the community via circulating loops. A piped gravity system collects sewage, which is treated at a secondary treatment plant. Most of the City is connected to the piped water and sewer system, which serves a total of 215 homes as well as the school. The remaining homes have individual wells and septic systems, and some use outhouses. Refuse is collected by a private firm and hauled to the Denali Borough regional landfill, located approximately 30 miles south along the George Parks Highway. A diesel powerhouse, operated by Golden Valley Electric Association, provides electricity to the City. Telephone and internet service is available in Nenana, but no cable company provides service locally.⁴²⁷

Public safety services are provided by state troopers stationed in Nenana, and fire/rescue services are provided by the Nenana Volunteer Fire Department and Emergency Medical Services (EMS). Nenana is home to the Nenana District Court system. Other community facilities include a youth/recreation center, a community center, senior housing, a small exercise room, a museum (the Alfred Starr Nenana Cultural Center) and both a public and a school library.⁴²⁸ According to a survey conducted by the AFSC in 2011, community leaders reported additional public services available in Nenana, including a food bank and publicly subsidized housing.

⁴²² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴²³ Airport information retrieved January 9, 2012 from <http://www.airnav.com>.

⁴²⁴ This price was calculated on November 21, 2011 using kayak.com.

⁴²⁵ See footnote 422.

⁴²⁶ Ibid.

⁴²⁷ Ibid.

⁴²⁸ Ibid.

With regard to fishing-related infrastructure, community leaders reported in the 2011 AFSC survey that 1,400 feet of dock space is available for permanent vessel moorage, and 800 feet of dock space is available for transient vessel moorage, with dock facilities served by both road access and water. They said the harbor is dredged and a jetty is in place, and that vessels up to 120 feet in length can use moorage at Nenana. Community leaders also indicated that haulout and dry dock services are available for vessels less than 60 tons, and that boat fuel, bait, and tackle are for sale in Nenana. According to the survey, Fairbanks is the primary destination for access to fisheries-related businesses and services not provided in Nenana.

Medical Services

Local health care is provided by the Nenana Clinic, which is owned by the Village Council non-profit and operated by the Tanana Chiefs Conference. The Nenana Clinic is a Community Health Aide Program (CHAP) site. Nenana also has a mental health clinic. Emergency Services have highway, river and airport access. Emergency service is provided by 911 Telephone Service volunteers and a health aide. Auxiliary health care is provided by the Nenana Volunteer Fire/EMS Department.⁴²⁹ A number of hospitals are located 55 miles away in Fairbanks.

Educational Opportunities

The Nenana City School District operates one local school and a correspondence program. The Nenana City School and the CyberLynx Correspondence Program both serve preschool through 12th grade. As of 2011, the Nenana City School had 200 students and 18 teachers.⁴³⁰ The CyberLynx Correspondence Program had 951 students and seven teachers that same year.⁴³¹ The Nenana Student Living Center, one of three statewide boarding facilities for high school students, provides housing to up to 88 students from around Alaska.⁴³²

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Indigenous people living along the Yukon and Tanana Rivers have long harvested salmon for subsistence purposes. Salmon was used for personal subsistence as well as food for sled dogs. The first recorded commercial harvest of salmon in the Alaskan portion of the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s along the Yukon. Poor returns in the late 1990s and early 2000s

⁴²⁹ Ibid.

⁴³⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴³¹ See footnote 422.

⁴³² Nenana School District (2010). *Nenana Student Living Center*. Retrieved January 9, 2012 from <http://nenanalynx.org/nslc/>.

resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.⁴³³ Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but low returns required restricted commercial harvest in 2008 and complete closure of Chinook harvest in 2009. A fishery disaster was declared that year.⁴³⁴ A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of Fisheries, and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundance species, including gear and other management restrictions.⁴³⁵

Like Yukon Chinook salmon runs, chum salmon runs have seen poor returns since 1998. A relatively strong run in 2007 led to some effort to redevelop the Yukon chum fishery, but this process is challenged by the need to reduce incidental harvest of co-migrating Chinook salmon. Further, beginning in 2008, the fall chum salmon run has not been large enough to provide for commercial opportunity. From 2008 to 2010, management actions have been taken to delay commercial fishing to provide for escapement and subsistence use.⁴³⁶

In years when commercial salmon fishing is open, fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 sub-districts and 28 statistical areas. Nenana is located in the Upper Yukon Area of the Yukon salmon fishery, in Subdistrict 6B. Chinook, chum, and coho are the three species of salmon that have significant runs far into Interior Alaska and Canada. Fishing on the Upper Yukon takes place using drift gillnets and fish weirs.⁴³⁷

According to a survey conducted by the AFSC in 2011, community leaders indicated that Nenana residents are involved in the fisheries management process in Alaska by sending a representative to participate in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process. Nenana is not eligible to participate in the Community Development Quota or the Community Quota Entity programs.

Processing Plants

ADF&G's 2010 Intent to Operate list did not list a registered processing plant in Nenana. One nearby processing facility was listed in Fairbanks.

⁴³³ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁴³⁴ Upton, Harold F. 2010. *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

⁴³⁵ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalChinookdisaster>.

⁴³⁶ Wolfe, R.J. and C. Scott. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

⁴³⁷ See footnote 433.

Fisheries-Related Revenue

According to information provided in Nenana's annual municipal budget between 2000 and 2010, a majority of fisheries-related revenue came from harbor usage fees, along with \$100 from a raw fish tax in both 2001 and 2002. Refer to Table 3 for details on selected aspects of fisheries-related revenue during this period.⁴³⁸

Commercial Fishing

Between 2000 and 2010, Nenana residents participated in commercial fisheries as crew members, vessel owners, and state permit holders. In 2010, there were 23 Nenana residents holding a total of 26 Commercial Fisheries Entry Commission (CFEC) permits, all for salmon fisheries. Of these, only six were actively fished in 2010. A majority of these permits, including all six active permits, were for the upper Yukon River fish wheel fishery, with the remainder issued for the upper Yukon drift gillnet fishery. Until 2002, one Nenana resident also held a permit in the lower Yukon drift gillnet fishery. Salmon CFEC permit numbers were relatively stable between 2000 and 2010, declining from 29 total permits in 2000 to 25 in 2010. No permits were fished in 2000 or 2001, reflecting the closure of the Chinook fishery in 2001 (see *History and Evolution of Fisheries* section above.) The highest number of permits was fished in 2006, with nine active permits that year. Between 2000 and 2010, no Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were held by Nenana residents, and no quota share accounts were held in federal catch share fisheries for halibut, sablefish, or crab. Information about permits held by Nenana residents is presented in Table 4, and information about federal quota is presented in Tables 6 through 8.

In 2010, one Nenana resident held a commercial crew license and no residents were the primary owner of a fishing vessel (Table 5). Between 2000 and 2010, the number of crew license holders fluctuated between zero in 2001-2002 and five in 2006. The number of Nenana residents that were primary owners of a fishing vessel fluctuated between zero and two during the 2000-2010 period. According to a survey conducted by the AFSC in 2011, community leaders indicated that the only vessels using Nenana as a base of operations during the fishing season were gillnet boats under 35 feet in length. In 2010, no fish buyers or processors were present in Nenana (Table 5) and no landings or ex-vessel revenue were recorded in the community (Table 9). Information about landings and ex-vessel revenue generated by vessels owned by Nenana residents is considered confidential between 2000 and 2009 due to the small number of participants. No vessels were primarily owned by Nenana residents in 2010 (Table 10).

⁴³⁸ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nenana: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	\$100	\$100	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	3	49	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$271,250	\$215,750	\$219,940	\$219,040	\$260,250	\$255,750	\$250,974	\$248,474	\$263,500	\$274,692	\$249,750
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$271,253	\$215,899	\$220,040	\$219,040	\$260,250	\$255,750	\$250,974	\$248,474	\$263,500	\$274,692	\$249,750
Total municipal revenue⁵	\$493,165	\$494,727	\$709,024	\$657,588	\$716,589	\$883,076	\$794,367	\$800,647	\$926,309	\$1.17M	\$1.02M

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Nenana: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Nenana: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	29	27	27	28	26	26	28	27	26	26	25
	Fished permits	0	0	4	6	7	5	9	9	6	2	6
	% of permits fished	0%	0%	15%	21%	27%	19%	32%	33%	23%	8%	24%
	Total permit holders	28	25	25	27	25	24	26	25	25	24	23
<i>Total CFEC Permits²</i>	<i>Permits</i>	29	27	27	28	26	26	28	27	26	26	25
	<i>Fished permits</i>	0	0	4	6	7	5	9	9	6	2	6
	<i>% of permits fished</i>	0%	0%	15%	21%	27%	19%	32%	33%	23%	8%	24%
	<i>Permit holders</i>	28	25	25	27	25	24	26	25	25	24	23

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nenana: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Nenana ²	Total Net Pounds Landed In Nenana ^{2,5}	Total Ex-Vessel Value Of Landings In Nenana ^{2,5}
2000	4	0	0	1	4	0	0	\$0
2001	0	0	0	2	4	0	0	\$0
2002	0	0	0	2	3	0	0	\$0
2003	1	0	0	2	3	0	0	\$0
2004	4	0	0	1	2	0	0	\$0
2005	2	0	0	1	0	0	0	\$0
2006	5	0	0	1	0	0	0	\$0
2007	4	0	0	2	1	0	0	\$0
2008	2	0	0	1	1	0	0	\$0
2009	2	0	0	1	1	0	0	\$0
2010	1	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Nenana: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nenana: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nenana: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nenana: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nenana Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	0
Finfish	-	-	-	-	-	-	-	-	-	-	0
Halibut	-	-	-	-	-	-	-	-	-	-	0
Herring	-	-	-	-	-	-	-	-	-	-	0
Other Groundfish	-	-	-	-	-	-	-	-	-	-	0
Other Shellfish	-	-	-	-	-	-	-	-	-	-	0
Pacific Cod	-	-	-	-	-	-	-	-	-	-	0
Pollock	-	-	-	-	-	-	-	-	-	-	0
Sablefish	-	-	-	-	-	-	-	-	-	-	0
Salmon	-	-	-	-	-	-	-	-	-	-	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	\$0
Finfish	-	-	-	-	-	-	-	-	-	-	\$0
Halibut	-	-	-	-	-	-	-	-	-	-	\$0
Herring	-	-	-	-	-	-	-	-	-	-	\$0
Other Groundfish	-	-	-	-	-	-	-	-	-	-	\$0
Other Shellfish	-	-	-	-	-	-	-	-	-	-	\$0
Pacific Cod	-	-	-	-	-	-	-	-	-	-	\$0
Pollock	-	-	-	-	-	-	-	-	-	-	\$0
Sablefish	-	-	-	-	-	-	-	-	-	-	\$0
Salmon	-	-	-	-	-	-	-	-	-	-	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to a survey conducted by the AFSC in 2011, community leaders indicated that sportfishing activity occurs near Nenana using private boats owned by both Alaska residents and non-Alaska residents, as well as charter boats. According to ADF&G, no active sport fish guide businesses were present in Nenana between 2000 and 2010. However, between one and eight licensed sport fish guides per year resided in Nenana from 2000 to 2006. Very few sport fish licenses were sold in Nenana (between 0 and 17 per year over the period), although Nenana residents purchased over 250 licenses each year, irrespective of point of sale. According to the 2011 AFSC survey, community leaders noted that bait and fishing tackle is available for purchase in Nenana. However, the fact that a majority of Nenana residents purchase sportfishing licenses elsewhere indicates that Nenana may not be the primary launching point for sportfishing in the area. Sport fishermen may purchase licenses and gear in nearby Fairbanks or other surrounding communities.

In the 2011 AFSC survey, community leaders indicated that the primary target of sportfishing activity in Nenana is salmon. The Alaska Statewide Harvest Survey,⁴³⁹ conducted by ADF&G between 2000 and 2010, confirmed this and noted the following species as targeted by private anglers in Nenana: coho, sockeye, and Chinook salmon, rainbow trout, Dolly Varden char, whitefish, burbot, and Arctic grayling in fresh water, and coho and pink salmon, Pacific halibut, and rockfish in salt water. The Harvest Survey also noted harvest of razor and hardshell clams by residents of Nenana. No kept/release log book data were reported for fishing charter businesses out of Nenana between 2000 and 2010.⁴⁴⁰

Nenana is located within Alaska Sport Fishing Survey Area U – Tanana River Drainage. This Survey Area does not include saltwater areas, reflected in the lack of saltwater angler days reported in Table 11. Freshwater fishing activity was very high in the region between 2000 and 2010. Alaska resident anglers fished significantly more angler days in the Tanana River drainage (71,461 - 110,256 angler days per year) than non-Alaska resident anglers (7,415 – 11,853 per year). This information about fishing trends in Nenana is presented in Table 11.

⁴³⁹ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴⁴⁰ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Nenana: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nenana ²
2000	0	3	263	0
2001	0	8	268	0
2002	0	7	264	1
2003	0	7	267	0
2004	0	3	275	6
2005	0	1	275	12
2006	0	1	244	10
2007	0	0	258	16
2008	0	0	251	17
2009	0	0	256	8
2010	0	0	285	11

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	0	0	11,517	110,246
2001	0	0	10,744	80,391
2002	0	0	9,733	98,884
2003	0	0	7,502	92,432
2004	0	0	11,853	104,633
2005	0	0	11,335	82,063
2006	0	0	8,216	71,461
2007	0	0	9,327	91,629
2008	0	0	7,613	64,722
2009	0	0	7,415	85,082
2010	0	0	9,025	87,834

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest of salmon, along with moose, caribou, bear, waterfowl, and berries, play an important role in the culture and lifestyle of Nenana.⁴⁴¹ The Minto Flats State Game Preserve, located north of Nenana, is an important area for harvesting fish, wildlife, and other resources.⁴⁴² In a survey conducted by the AFSC in 2011, Nenana community leaders said that all five salmon species are important subsistence resources utilized by local residents.

Results of a 2004 subsistence survey conducted by ADF&G did not report information about the number of households participating in subsistence for salmon, halibut, marine mammals, or marine invertebrates in Nenana. The survey did find that 17% of Nenana households participated in non-salmon fish subsistence (not including halibut) in 2004 (Table 12). That year, a total of 4,732 pounds of non-salmon fish was harvested by Nenana residents, and no information was reported regarding total harvest of marine invertebrates (Table 13). Species of non-salmon fish harvested in by Nenana residents included Bering and least cisco, broad, humpback, and round whitefish, lake and rainbow trout, Dolly Varden char, blackfish, sheefish, burbot, Arctic grayling, herring, northern pike, and sucker. Of these species, grayling, pike, and broad whitefish were the most heavily utilized for subsistence purposes in 2004.⁴⁴³

Information was also available between 2000 and 2010 regarding subsistence harvest of salmon. The number of Nenana households that were issued subsistence salmon permits varied from 45 to 66 per year between 2000 and 2008, and the number of permits returned each year varied from 32 and 59. On average, 8,560 chum and 5,858 coho salmon were harvested per year, along with 816 Chinook and 702 sockeye per year. No pink salmon were reported as harvested by Nenana residents between 2000 and 2008. This information about subsistence salmon harvest is presented in Table 13.

No information was reported by management agencies regarding participation by Nenana residents in the Subsistence Halibut Registration Certificate (SHARC) program (Table 14) or subsistence harvest of marine mammals between 2000 and 2010 (Table 15).

Additional Information

According to elders interviewed in Nenana in the 1980s, Nenana is a place where people and animals could talk to one another a long time ago. The site was used as a mid-winter ceremonial gathering place, in addition to a summer fish camp.⁴⁴⁴

⁴⁴¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁴² Alaska Dept. of Fish and Game (2012). Minto Flats State Game Refuge. *Protected Areas website*. Retrieved January 12, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=mintoflats.main>.

⁴⁴³ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁴⁴⁴ Shinkwin, A. and M. Case (1984). Modern Foragers: Wild Resource Use in Nenana Village, Alaska. Technical Paper 91, *Alaska Department of Fish and Game, Division of Subsistence*. Retrieved January 9, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp091.pdf>.

Table 12. Subsistence Participation by Household and Species, Nenana: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	17%	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nenana: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	52	50	597	823	1,828	n/a	210	n/a	n/a
2001	66	59	1,610	1,173	5,143	n/a	602	n/a	n/a
2002	59	53	707	2,169	4,499	n/a	671	n/a	n/a
2003	63	54	1,315	10,370	5,619	n/a	685	n/a	n/a
2004	49	32	608	8,280	8,906	n/a	648	n/a	4,732
2005	45	41	541	12,365	12,395	n/a	1,005	n/a	n/a
2006	53	49	720	10,918	7,065	n/a	986	n/a	n/a
2007	60	57	911	23,292	4,495	n/a	1,028	n/a	n/a
2008	56	53	331	7,646	2,775	n/a	482	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nenana: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nenana: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

North Pole



People and Place

*Location*⁴⁴⁵

North Pole is located on the banks of the Tanana River, 14 miles southeast of Fairbanks on the Richardson Highway. It lies 386 miles north of Anchorage and 2,347 miles northwest of Seattle. North Pole is located in the Fairbanks Recording District and the Fairbanks North Star Borough Census Area. The City encompasses 4.2 square miles of land and 0.1 square miles of water.

*Demographic Profile*⁴⁴⁶

In 2010, there were 2,117 inhabitants in North Pole, making it the 44th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population of North Pole increased by 45.4%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 40.1%, with an average annual growth rate of 2.79% (Table 1).

In 2010, a majority of North Pole residents identified themselves as White (79.6%), while 5.4% identified themselves as Black or African American, 4% as Asian, 3.4% as American Indian or Alaska Native, 0.1% as Native Hawaiian and Other Pacific Islander, 1% as ‘some other race’, and 6.4% identified with two or more races. In addition, 6.1% of North Pole residents identified themselves as Hispanic in 2010. The percentages of residents identifying as White and as American Indian or Alaska Native stayed relatively stable from 2000 to 2010. The percentage residents identifying as Asian in 2010 was 1.4% higher than in 2000, and the percentage of residents identifying as Hispanic was 2.3% higher (Figure 1).

Between 1990 and 2010, the average household size in North Pole remained stable with 2.58 persons per household in 1990, 2.5 in 2000, and 2.54 in 2010. The number of households in North Pole increased over time, from 564 households in 1990 and 605 in 2000, to 828 occupied housing units in 2010. Of the 916 total housing units surveyed for the 2010 U.S. Decennial Census, 50% were owner-occupied, 40.4% were rented, and 9.6% were vacant or used only seasonally. In 1990, no residents were reported to be living in group quarters in North Pole. However, by 2000, 9 residents lived in group quarters, and 10 were reported to be living in group quarters in 2010.

In 2010, the gender makeup of North Pole’s population (50.6% male and 49.4% female) was more gender balanced than in the population of the State as a whole, which was 52% male and 48% female. The median age of North Pole residents was 30 years in 2010, slightly younger

⁴⁴⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁴⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

than the national average of 36.8 years and the median age for Alaska, 33.8 years. That same year, 9.2% of North Pole’s population was age 60 or older. The overall population structure of North Pole in 2000 and 2010 is shown in Figure 2.

Table 1. Population in North Pole from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	1,456	-
2000	1,570	-
2001	-	1,469
2002	-	1,601
2003	-	1,602
2004	-	1,530
2005	-	1,601
2006	-	1,648
2007	-	1,977
2008	-	2,207
2009	-	2,200
2010	2,117	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, North Pole: 2000-2010 (U.S. Census).

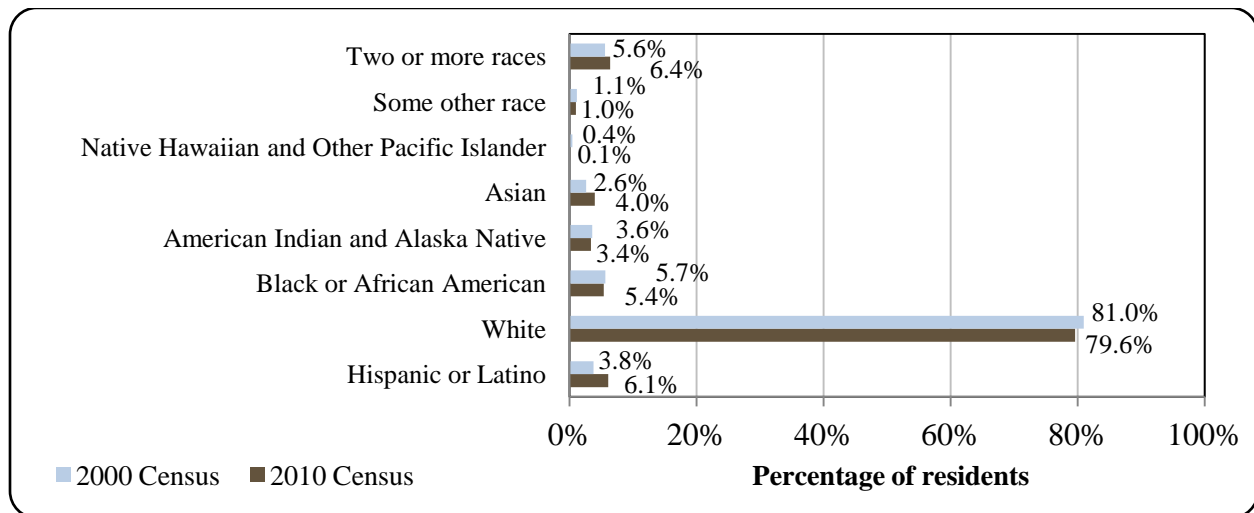
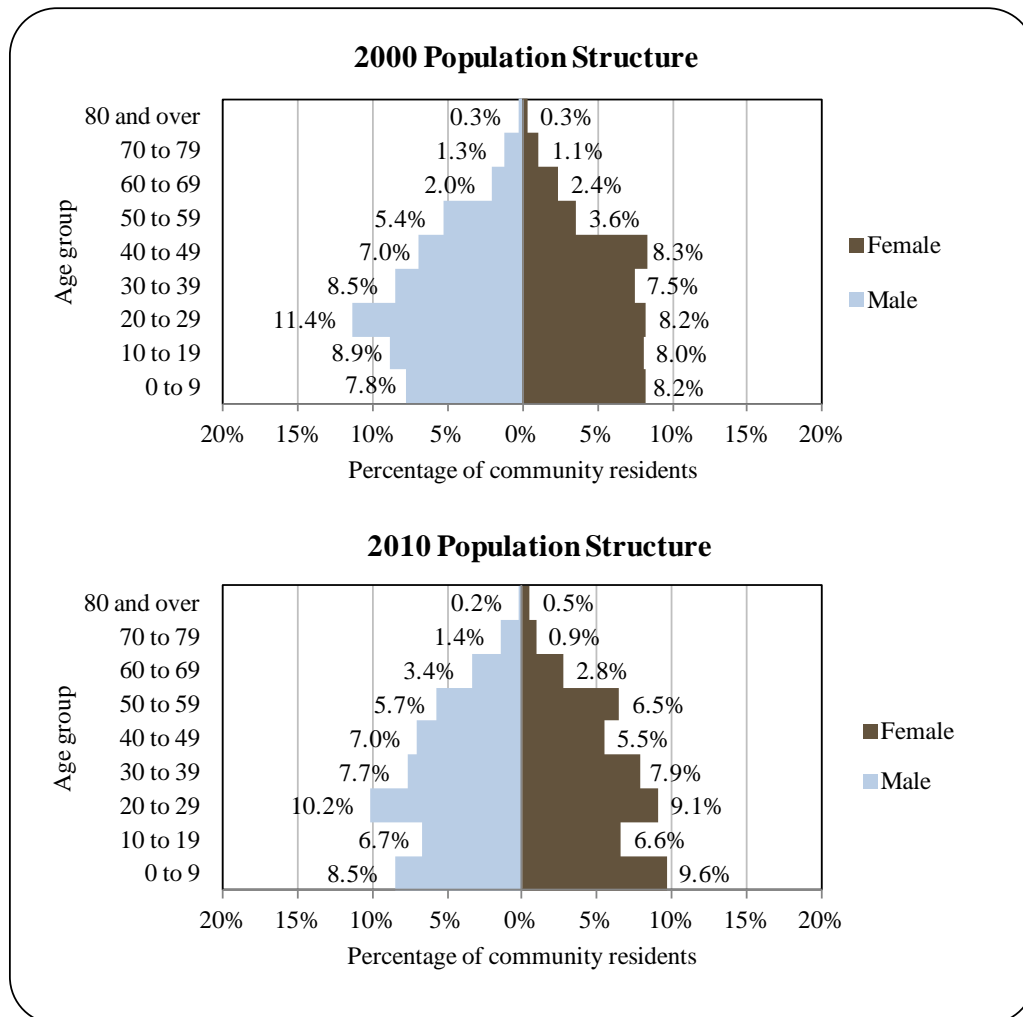


Figure 2. Population Age Structure in North Pole Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁴⁴⁷ 90.8% of North Pole residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 2.5% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 6.7% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 34.8% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 9.8% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 8% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and

⁴⁴⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

6.4% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

In 1944, Bon Davis homesteaded this area. Dahl and Gaske Development Company later bought the Davis homestead, subdivided it, and named it North Pole, hoping to attract a toy manufacturer that would advertise products as being made in North Pole.⁴⁴⁸ Although no toy manufacturers came to the City, the spirit of Christmas is alive in North Pole through street names, decorations, and community events. In addition, in the 1950s, Con Miller named his trading post the Santa Claus House, and developed a reputation for playing Santa Claus to Native children in Alaskan villages during his bush trading trips.⁴⁴⁹ The City was incorporated in 1953. Growth from Fairbanks and the nearby Eielson Air Force Base has increased development in North Pole over the years. Today, North Pole is renowned as the “home of Santa Claus.” Letters from children all over the world are mailed to North Pole at Christmas each year. The Santa Claus House is a year-round attraction.⁴⁵⁰

Natural Resources and Environment

North Pole has a sub-arctic interior climate, characterized by extreme seasonal temperatures. Average January temperatures range from -19 to -2 °F, and average July temperatures range from 49 to 71 °F. Located at 64.75° N. latitude, North Pole also experiences extreme variation in daylight hours between summer and winter. North Pole receives moderate rainfall, and the air is dry. Annual precipitation averages 11.5 inches, with 68 inches of snowfall.⁴⁵¹

North Pole is located less than 20 miles west of the Chena River State Recreation Area. The Area contains 397 square miles of forests, rivers, and alpine tundra, and offers opportunities for camping, backpacking, boating, swimming, and sportfishing. In winter months, ice fishing is a popular activity in the Recreation Area, along with ski touring and snow machining. Several dogsled races pass through the area. Wildlife in the Recreation Area includes moose, black and grizzly bears, and beavers. The Alaska Department of Fish and Game (ADF&G) stocks Chena Lake annually with rainbow trout, coho salmon, and Arctic char. The Chena River is home to Arctic grayling, northern pike, whitefish, burbot, and an annual run of Chinook salmon.^{452,453}

Segments of the Tanana Valley State Forest are located both southeast and west of the Fairbanks-North Pole area. In combination, these segments of the forest total 1.78 million acres and stretch along the Tanana River from near the Canadian border to Manley Hot Springs, approximately 100 miles west of North Pole. Almost 90% of the forest is covered by hardwood and hardwood-spruce type forests, with high representation of paper birch, quaking aspen,

⁴⁴⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁴⁹ North Pole Chamber of Commerce. (n.d.). *North Pole History & Economy*. Retrieved February 28, 2012 from <http://www.northpolechamber.us/NP-history.html>.

⁴⁵⁰ See footnote 448.

⁴⁵¹ Ibid.

⁴⁵² Alaska Dept. of Natural Resources, Division of Parks and Outdoor Recreation. 2011. *Chena River State Recreation Area*. Retrieved February 28, 2012 from <http://dnr.alaska.gov/parks/units/chena/>.

⁴⁵³ Chena Lake Recreation Area. 2008. *Homepage*. Retrieved February 28, 2012 from <http://www.chenalake.com/>.

balsam poplar, black and white spruce, and tamarac. Almost 7% of the forest is shrub land, covered primarily in willow.⁴⁵⁴

Natural hazards in the vicinity of North Pole include flooding, wildfire, earthquakes and volcanic activity, severe weather, and erosion. Shallow earthquakes in the Fairbanks area would be considered ‘intraplate’ earthquakes, which can have a magnitude of up to 7.0 on the Richter scale. There have been three magnitude 7.0 earthquakes in the Fairbanks area in the past 90 years.⁴⁵⁵

Interior Alaska is dotted with mineral deposits. The Fairbanks area historically had world-class gold deposits. Today, the greater Tanana-Fairbanks region has deposits of gold, copper, silver, tin, tungsten and antimony. As of 2010, the Fairbanks North Star Borough reported an average of between 400 and 500 mining and support activity jobs. The Usibelli Coal Mine, Inc. was the third-largest private employer in the Borough that year.⁴⁵⁶ Usibelli Coal Mine has been producing coal since the 1940s.⁴⁵⁷

According to the Alaska Department of Environmental Conservation, one active environmental cleanup site was located in the vicinity of North Pole as of May 2012. Between 1954 and 1973, the Haines-Fairbanks pipeline was used to transport petroleum products from a deep-water port in Haines to various military facilities, including Eielson Air Force Base, which is located approximately 10 miles southeast of North Pole. Between 2001 and 2005, investigations were carried out into possible ground contamination from petroleum products, as well as possible dioxin residues from pesticide application along the pipeline. Results of dioxin sampling found no evidence of contamination in soils, and the Army Corps of Engineers (COE) does not currently plan to conduct further testing. As of 2005, a petroleum sampling plan was being developed, and the COE intended to identify areas of contamination and work with landowners to resolve issues of concern.⁴⁵⁸

Current Economy⁴⁵⁹

Given North Pole’s close proximity to Fairbanks, residents have access to employment in the greater Fairbanks area. Employment is diverse.⁴⁶⁰ In 2010, top employers of local residents included the Fairbanks North Star School District, the State of Alaska, the University of Alaska, health services, retail businesses, Borough government, and an investment company.⁴⁶¹ In addition, some residents are employed by the military or the oil industry. Flint Hills Resources

⁴⁵⁴ Alaska Dept. of Natural Resources, Division of Forestry. 2001. “Introduction.” *Tanana Valley State Forest Management Plan: 2001 Update*. Retrieved January 12, 2012 from http://forestry.alaska.gov/management/tvsf_final_plan.htm.

⁴⁵⁵ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁴⁵⁶ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska’s Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

⁴⁵⁷ Usibelli Coal Mine, Inc. website. (n.d.). *UCM History*. Retrieved January 10, 2012 from http://www.usibelli.com/History_KD.asp.

⁴⁵⁸ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁴⁵⁹ Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁶⁰ See footnote 448.

⁴⁶¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

oil refinery, located in North Pole, produces jet fuel, heating oil, gasoline and diesel from North Slope crude oil. Another company, Petro Star, also operates a small distillery. Several North Pole residents also participate in commercial fishing activities. It is also important to note that every Christmas season Santa’s helpers are hired to respond to the thousands of letters mailed to North Pole.⁴⁶²

Based on household surveys conducted for the 2006-2010 ACS,⁴⁶³ in 2010, the per capita income in North Pole was estimated to be \$26,596 and the median household income was estimated to be \$61,225. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$21,426 and \$44,583, respectively). When inflation is taken into account by converting the 2000 values to 2010 dollars,⁴⁶⁴ a real increase is still observed in median household income, from real median household income of \$58,626 in 2000. However, a real decrease is revealed in per capita income, from a real per capita income of \$28,175 in 2000. In 2010, North Pole ranked 90th of 307 Alaskan communities with per capita income data that year, and 73rd in median household income, out of 305 Alaskan communities with household income data.

North Pole’s small population size may have prevented the ACS from accurately portraying economic conditions.⁴⁶⁵ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for North Pole in 2010 is \$12,796.⁴⁶⁶ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, This supporting the decreasing per capita income trend suggested by the 2010 ACS estimate. Despite decreases in per capita income, North Pole was not recognized as a “distressed” community by the Denali Commission in 2011.⁴⁶⁷ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a similar percentage of North Pole residents were estimated to be in the civilian labor force (68.2%) compared to population in the civilian labor force statewide (68.8%). In the same year, 9.2% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 6.7%, slightly higher than the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the

⁴⁶² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁶³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁶⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁶⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

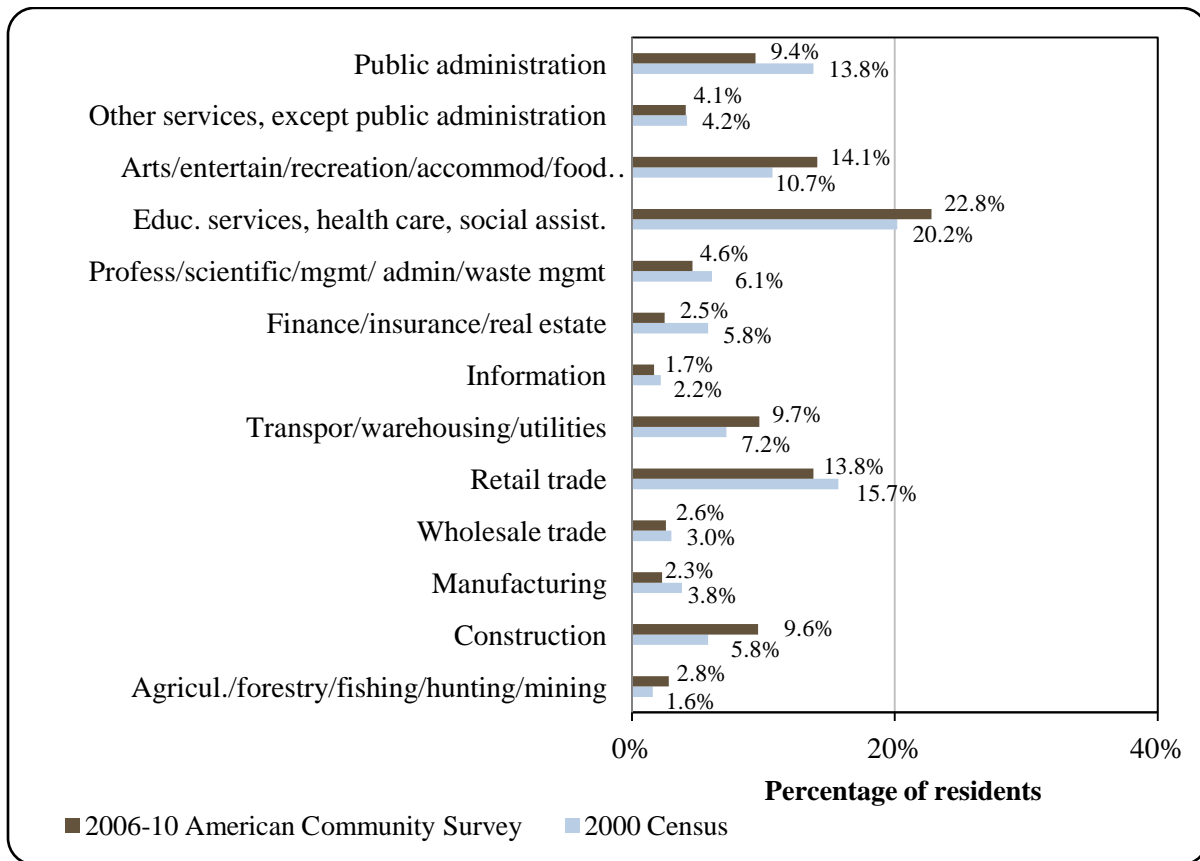
⁴⁶⁶ See footnotes 461 and 463.

⁴⁶⁷ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

unemployment rate in 2010 was 9.3%, compared to a statewide unemployment rate estimate of 11.5%.⁴⁶⁸

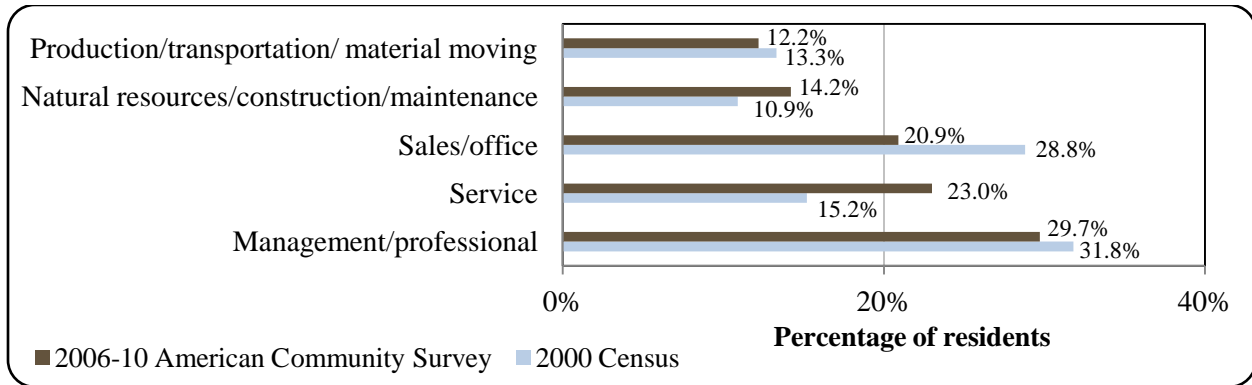
Also based on the 2006-2010 ACS, the greatest number of workers was estimated to be employed in the private sector (68.1%), along with 27.4% in the public sector, and 4.5% estimated to be self-employed. Of the 1,089 people aged 16 and over that were estimated to be employed in the civilian labor force, the majority was estimated to be working in educational services, health care, and social assistance (20.2%), retail trade (15.7%), public administration (13.8%), and arts, entertainment, accommodation, and food services (10.7%). Only 1.6% of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining in 2010. However, the number of individuals employed in farming, fishing, and forestry industries is potentially underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, North Pole (U.S. Census).



⁴⁶⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 4. Local Employment by Occupation in 2000-2010, North Pole (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 797 employed residents in North Pole in 2010, of which 25% were employed in trade, transportation, and utilities, 12.2% in leisure and hospitality, 11.5% in education and health services, 10.9% in local government, 8.3% in professional and business services, 8.3% in state government, 7.7% in construction, 5.3% in financial activities, 3.5% in natural resources and mining, 2.5% in manufacturing, 0.8% in information, 0.4% in unknown industries, and 3.8% in other industries.⁴⁶⁹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

North Pole is a Home Rule City which was incorporated in 1953. It is located in the Fairbanks North Star Borough. The City has a Strong Mayor form of government, with a seven-person city council including the Mayor, a seven-person advisory school board, and five municipal employees. The City administers a 4% sales tax, 8% bed tax, 5% alcohol tax, and 8% tobacco tax. Together, the City and Borough administer a 15.445 mills property tax.⁴⁷⁰

In addition to tax revenues, other locally-generated revenue sources in North Pole between 2000 and 2010 included permit and business license fees, charges for services such as ambulance, and investment income. Outside revenue sources included various shared revenue programs as well as state and federal grant funding. North Pole received contributions from the State Revenue Sharing program from 2000 to 2003 of between \$14,000 and \$34,000 per year and Community Revenue Sharing program contributions of approximately \$200,000 per year in 2009 and 2010. Other sources of shared revenue included state telephone and electric co-op tax refunds and fish tax refunds in some years (see the *Fisheries-Related Revenue* section). No information was reported regarding fisheries-related grants received by North Pole between 2000 and 2010. Information about selected aspects of North Pole’s municipal revenue is presented in Table 2.

⁴⁶⁹ Ibid.

⁴⁷⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of North Pole from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$2,801,117	\$1,219,624	\$14,000	n/a
2001	\$5,115,286	\$1,388,770	\$23,612	n/a
2002	\$3,468,594	\$1,344,710	\$23,612	n/a
2003	\$5,195,843	\$1,563,306	\$23,715	n/a
2004	\$3,999,341	\$1,589,859	n/a	n/a
2005	\$5,111,667	\$2,182,822	n/a	n/a
2006	\$4,333,161	\$2,666,932	n/a	n/a
2007	\$5,157,034	\$2,351,143	n/a	n/a
2008	\$5,227,035	\$2,432,917	n/a	n/a
2009	\$5,067,738	\$2,398,544*	\$196,287	n/a
2010	\$5,367,772	\$2,793,448*	\$203,079	n/a

* Note: Sales tax revenue was not reported separate from alcohol and bed taxes this year. This number includes total revenue from alcohol and bed taxes in addition to local sales tax.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

North Pole was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village. The closest offices of the ADF&G, the Alaska Department of Natural Resources (DNR), Alaska Department of Commerce, Community, and Economic Development, and Bureau of Citizenship and Immigration Services are located in Fairbanks, 14 miles from North Pole by road. Anchorage has the nearest office of the National Marine Fisheries Service (NMFS).

Infrastructure

Connectivity and Transportation

North Pole is connected to nearby communities via the Alaska Railroad, which runs through the city center, and via the interior Alaska highway system. Fairbanks International airport is located approximately 19 miles away by road, on the far side of the City of Fairbanks. The price of a roundtrip ticket by plane from Fairbanks to Anchorage in early June of 2012 was

\$247.⁴⁷¹ In addition, one public and six private airstrips are present in North Pole, although these facilities are not served by scheduled commercial flights.⁴⁷²

⁴⁷¹ This price was calculated on November 21, 2011 using kayak.com.

⁴⁷² Airport information retrieved February 27, 2012 from www.airnav.com.

Facilities

Water in North Pole is derived from community and private wells. Water is filtered and chlorinated before entering the City-operated piped water system. The City also operates a piped sewer system, and collected sewage is treated in an aerated lagoon. Some homes use private septic tanks. The City does not operate its own landfill. Refuse collection services are provided by a private company, Drake's Refuse. The Golden Valley Electric Association provides electricity in North Pole using natural gas. Police services are provided by the North Pole City Police Department.⁴⁷³ The nearest state trooper post is located in Fairbanks.⁴⁷⁴ Fire and rescue services are provided by the North Pole Fire Department and ambulance, as well as the North Star and Moose Creek Volunteer Fire Departments and ambulance services. Additional community facilities include a Boys and Girls Club, a City Hall Annex, senior housing, one public and three school libraries, and a swimming pool. An RV park and campground is available for North Pole visitors. Several taxis are based in the City, and car rentals are available in Fairbanks. Telephone, internet, and cable services are available in North Pole.⁴⁷⁵

Medical Services

Health care is provided for North Pole residents at the Fairbanks Hospital, 15 miles away by road, as well as several local health clinics. Emergency Services include highway, airport, and floatplane access, and are provided by 911 telephone service volunteers and paid emergency medical services. Alternate health care is provided by the North Pole Fire Department ambulance and North Star Volunteer Fire Department.⁴⁷⁶

Educational Opportunities

Six schools are located in North Pole, including three elementary schools (preschool through 6th grade), one middle school (grades 6 through 8), one high school (grades 9 through 12) and one additional secondary school (grades 7 through 12). As of 2011, Badger Road Elementary School had 592 students and 32 teachers, North Pole Elementary School had 484 students and 26 teachers, and Ticasuk Brown Elementary School had 548 students and 31 teachers. That year, North Pole Middle School had 582 students and 40 teachers, North Pole High School (grades 9 through 12) had 783 students and 45 teachers, and Star of the North Secondary School (grades 7 through 12) had 192 students and 12 teachers.⁴⁷⁷

⁴⁷³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁷⁴ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁴⁷⁵ See footnote 473.

⁴⁷⁶ Ibid.

⁴⁷⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

North Pole is located along a portion of the Tanana River included in District 6 of the Yukon Commercial Salmon Fishery. Several North Pole residents held permits in the Upper Yukon gillnet and fish wheel fisheries between 2002 and 2010, although a majority of salmon permits were held in fisheries executed elsewhere in the state (see *Commercial Fishing* section).

Historically, salmon was harvested for subsistence purposes by indigenous people living along the Yukon and Tanana Rivers, as well as for food for sled dogs. The first recorded commercial harvest of salmon in the Yukon River fishery took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s along the Yukon River. Poor returns in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.⁴⁷⁸ Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but low returns required restricted commercial harvest in 2008 and complete closure of Chinook harvest in 2009. A fishery disaster was declared that year.⁴⁷⁹ A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of Fisheries, and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundance species, including gear and other management restrictions.⁴⁸⁰

Like Yukon Chinook salmon runs, chum salmon runs have seen poor returns since 1998. A relatively strong run in 2007 led to some effort to redevelop the Yukon chum fishery, but this process is challenged by the need to reduce incidental harvest of co-migrating Chinook salmon. Further, beginning in 2008, the fall chum salmon run was not large enough to provide for commercial opportunity. From 2008 to 2010, management actions were taken to delay commercial fishing to provide for escapement and subsistence use.⁴⁸¹

In years when commercial salmon fishing is open, fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 subdistricts, and 28 statistical areas. Chinook, chum, and coho are the three species of salmon that have significant runs far into Interior Alaska and Canada. Fishing in the Upper Yukon Area takes place using drift gillnets and fish weirs.⁴⁸²

⁴⁷⁸ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁴⁷⁹ Upton, Harold F. 2010. *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

⁴⁸⁰ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalChinookdisaster>.

⁴⁸¹ Wolfe, R.J. and C. Scott. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

⁴⁸² See footnote 478.

North Pole is not eligible to participate in the Community Development Quota (CDQ) or the Community Quota Entity (CQE) programs.

Processing Plants

The 2010 Alaska Department of Fish and Game’s Intent to Operate list does not list a registered processing plant in North Pole. However, Fairbanks-based Interior Alaska Fish Processors, also known as “Santa’s Smokehouse” has an additional processing facility in North Pole. The Fairbanks plant processes commercially-caught halibut and all five species of salmon. In addition, Interior Alaska Fish Processors provides custom processing services on sport-caught fish and meats.⁴⁸³

Fisheries-Related Revenue

According to information provided in North Pole’s annual municipal budget between 2000 and 2010, fisheries-related revenue was not an important source of income for the City. Between \$48 and \$319 were reported in earnings from the Shared Fisheries Business Tax in 5 years during the 2000-2010 period. Refer to Table 3 for details on selected aspects of fisheries-related revenue during this period.⁴⁸⁴

Commercial Fishing

Between 2000 and 2010, North Pole residents participated in commercial fisheries as crew members, vessel owners, permit holders, and quota share account holders. In 2010, 20 North Pole residents held a total of 25 Commercial Fisheries Entry Commission (CFEC) salmon permits (Table 4). Of these, 10 were actively fished in 2010. A majority of these permits, including 9 of the 10 active permits, were held in a variety of salmon fisheries around the state. Salmon fisheries in which North Pole residents held permits in 2010 included: Kodiak purse seine (two held, zero active in 2010); Bristol Bay drift gillnet (three held, three active); Bristol Bay set gillnet (seven held, six active); Upper Yukon gillnet (two held, zero active); Kotzebue gillnet (one held, zero active); statewide hand troll (two held, zero active); and Upper Yukon fish wheel (three held, zero active). The number of salmon CFEC permits held in North Pole increased between 2000 and 2010, although the percentage of salmon permits fished declined slightly.

Also in 2010, three CFEC permits were held in ‘other shellfish’ fisheries and two were held in herring fisheries (Table 4). All three ‘other shellfish’ permits were held in Prince William Sound shrimp fisheries, including two for use of pot gear on vessels under 60 feet (one permit active in 2010), and one for pot gear on vessels over 60 feet (not active in 2010). 2010 was the first year between 2000 and 2010 that ‘other shellfish’ CFEC permits were held by residents of North Pole. Regarding herring CFEC permits, in 2010, one was held in the Goodnews Bay roe herring, spawn on kelp fishery, and the other in the Bristol Bay spawn on kelp, hand-picking fishery. Neither of these herring permits was actively fished in 2010. During the 2000-2010 period, North Pole residents held herring permits from 2005 to 2010, and the percentage of

⁴⁸³ Santa’s Smokehouse. (n.d.). *Homepage*. Retrieved June 20, 2012 from <http://santassmokehouse.com/>.

⁴⁸⁴ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

permits actively fished declined over time. Although no other CFEC permits were held in North Pole in 2010, it is important to mention that CFEC permits were held by earlier in the decade in fisheries for crab, halibut, sablefish, and groundfish. In addition, one Federal Fisheries Permit (FFP) was held in North Pole between 2000 and 2002, but was not actively fished.

Between 2000 and 2010, the number of quota share accounts held by North Pole residents in the federal halibut catch share fishery decreased from four in 2000-2003 to one in 2008-2010. The number of quota shares held increased from 17,573 to 18,151, before declining to 99 shares held in 2008-2010. The annual halibut individual fishing quota (IFQ) allotment increased slightly between 2000 and 2006, when the pounds allotted per quota share was 4% higher than 2000 levels. Between 2008 and 2010, however, IFQ allotment had fallen to 11% below 2000 levels. Also between 2000 and 2010, no quota share accounts or quota shares were held by North Pole residents in federal catch share fisheries for sablefish or crab. Information about federal catch share participation is presented in Tables 6 through 8.

In 2010, 15 North Pole residents held commercial crew licenses, 6 residents were the primary owner of a fishing vessel, and one fishing vessel was recorded as homeported in North Pole. Crew license numbers stayed stable between 2000 and 2010, although the number of vessels owned by residents and the number of vessels homeported declined substantially over the period. Additionally, since no fish buyers or shore-side processing facilities were located in North Pole between 2000 and 2010, no landings or ex-vessel revenue were generated in the community. This information about the commercial fishing sector is presented in Table 5.

Although no landings or ex-vessel revenue were reported in North Pole between 2000 and 2010 (Table 9), some information is available regarding landings and ex-vessel revenue generated by North Pole fishermen, irrespective of the location of their deliveries (Tables 9 and 10). Most of this information is considered confidential between 2000 and 2010 due to the small number of participants, although salmon landings and ex-vessel revenue could be reported between 2004 and 2007. In 2007, the last year for which data are reported regarding salmon landings, North Pole vessel owners landed 88,663 net pounds of salmon, valued at \$67,697, a decrease in both landings and ex-vessel revenue from the previous 3 years.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of North Pole: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$48	\$319	n/a	n/a	n/a	\$82	n/a	n/a	n/a	\$266	\$96
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$48</i>	<i>\$319</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$82</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$266</i>	<i>\$96</i>
<i>Total municipal revenue⁵</i>	<i>\$2,801,117</i>	<i>\$5,115,286</i>	<i>\$3,468,594</i>	<i>\$5,195,843</i>	<i>\$3,999,341</i>	<i>\$5,111,667</i>	<i>\$4,333,161</i>	<i>\$5,157,034</i>	<i>\$5,227,035</i>	<i>\$5,067,738</i>	<i>\$5,367,772</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, North Pole: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	-	-	-	-	-	-	-	-
	Total permit holders	1	1	1	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	2	0	0	0	0	0	0	0
	Fished permits	0	0	0	1	0	0	0	0	0	0	0
	% of permits fished	-	-	-	50%	-	-	-	-	-	-	-
	Total permit holders	0	0	0	2	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	3
	Fished permits	0	0	0	0	0	0	0	0	0	0	1
	% of permits fished	-	-	-	-	-	-	-	-	-	-	33%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	2
Halibut (CFEC) ²	Total permits	3	2	2	2	2	3	3	2	1	0	0
	Fished permits	1	1	1	1	2	2	2	2	1	0	0
	% of permits fished	33%	50%	50%	50%	100%	67%	67%	100%	100%	-	-
	Total permit holders	3	2	2	2	2	3	3	2	1	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	2	2	2	2	1	3	2
	Fished permits	0	0	0	0	2	1	1	0	0	1	0
	% of permits fished	-	-	-	-	100%	50%	50%	0%	0%	33%	0%
	Total permit holders	0	0	0	0	1	1	1	1	1	2	1

Table 4 cont'd. Permits and Permit Holders by Species, North Pole: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	1	2	1	1	0	0	0	0
	Fished permits	0	0	0	1	2	1	1	0	0	0	0
	% of permits fished	-	-	-	100%	100%	100%	100%	-	-	-	-
	Total permit holders	0	0	0	1	2	1	1	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	0	0	1	1	1	0	1	1	0	0
	Fished permits	0	0	0	1	1	0	0	0	0	0	0
	% of permits fished	0%	-	-	100%	100%	0%	-	0%	0%	-	-
	Total permit holders	1	0	0	1	1	1	0	1	1	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	11	11	13	14	17	19	22	23	18	14	20
	Fished permits	7	8	5	6	10	10	11	11	6	2	9
	% of permits fished	64%	73%	38%	43%	59%	53%	50%	48%	33%	14%	45%
	Total permit holders	11	11	13	13	17	19	23	22	17	13	17
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>15</i>	<i>13</i>	<i>15</i>	<i>20</i>	<i>24</i>	<i>26</i>	<i>28</i>	<i>28</i>	<i>21</i>	<i>17</i>	<i>25</i>
	<i>Fished permits</i>	<i>8</i>	<i>9</i>	<i>6</i>	<i>10</i>	<i>17</i>	<i>14</i>	<i>15</i>	<i>13</i>	<i>7</i>	<i>3</i>	<i>10</i>
	<i>% of permits fished</i>	<i>53%</i>	<i>69%</i>	<i>40%</i>	<i>50%</i>	<i>71%</i>	<i>54%</i>	<i>54%</i>	<i>46%</i>	<i>33%</i>	<i>18%</i>	<i>40%</i>
	<i>Permit holders</i>	<i>12</i>	<i>11</i>	<i>13</i>	<i>17</i>	<i>19</i>	<i>21</i>	<i>25</i>	<i>24</i>	<i>19</i>	<i>15</i>	<i>20</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in North Pole: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in North Pole ²	Total Net Pounds Landed in North Pole ^{2,5}	Total Ex-Vessel Value of Landings in North Pole ^{2,5}
2000	13	0	0	24	10	0	0	\$0
2001	12	0	0	19	9	0	0	\$0
2002	9	0	0	23	11	0	0	\$0
2003	9	0	0	21	9	0	0	\$0
2004	9	0	0	21	7	0	0	\$0
2005	11	0	0	7	2	0	0	\$0
2006	10	0	0	6	1	0	0	\$0
2007	12	0	0	6	1	0	0	\$0
2008	11	0	0	4	1	0	0	\$0
2009	6	0	0	2	1	0	0	\$0
2010	15	0	0	6	1	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of North Pole: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	4	17,573	1,947
2001	4	17,573	2,222
2002	4	17,573	2,250
2003	4	17,573	2,249
2004	3	17,255	2,539
2005	3	17,255	2,602
2006	4	18,151	2,682
2007	4	18,151	2,577
2008	1	99	12
2009	1	99	11
2010	1	99	10

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of North Pole: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of North Pole: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in North Pole: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by North Pole Residents:
2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	121,864	183,645	202,752	88,663	-	-	-
<i>Total²</i>	0	0	0	0	121,864	183,645	202,752	88,663	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	\$72,348	\$126,284	\$133,772	\$67,697	-	-	-
<i>Total²</i>	\$0	\$0	\$0	\$0	\$72,348	\$126,284	\$133,772	\$67,697	\$0	\$0	\$0

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, the number of active sport fish guide businesses present in North Pole varied between 8 and 5, with a slight decreasing trend over time. The number of licensed sport fish guides residing in North Pole also decreased over the period, from 27 in 2000 to 9 in 2010. An increasing number of sportfishing licenses were sold in North Pole each year, from 2,427 in 2000 to 3,449 in 2010. North Pole residents purchased between two and three times as many sportfishing licenses as were sold locally, totaling between 5,047 and 6,508 per year between 2000 and 2010.

The Alaska Statewide Harvest Survey,⁴⁸⁵ conducted by ADF&G between 2000 and 2010, noted the following species as targeted by private anglers in North Pole. In freshwater, anglers

⁴⁸⁵ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

targeted Arctic grayling, burbot, all five Pacific salmon species, Dolly Varden, rainbow trout, northern pike, and whitefish. The survey specifically noted that North Pole anglers targeted stocks of landlocked salmon. In saltwater, anglers targeted all five salmon species, Dolly Varden, lingcod, Pacific cod, Pacific halibut, rockfish, shark, and smelt. The survey also noted harvest of hardshell clams and shrimp by residents of North Pole. No kept/release log book data were reported for fishing charters out of North Pole between 2000 and 2010.⁴⁸⁶

North Pole is located within Alaska Sport Fishing Survey Area U – Tanana River Drainage. This Survey Area does not include saltwater areas, reflected in the lack of saltwater angler days reported in Table 11. Freshwater fishing activity was very high in the region between 2000 and 2010. Alaska resident anglers fished significantly more angler days in the Tanana River drainage (71,461 - 110,256 angler days per year) than non-Alaska resident anglers (7,415 – 11,853 per year). This information about fishing trends in North Pole is presented in Table 11.

Subsistence Fishing

Residents of North Pole were active in subsistence fisheries for salmon and halibut between 2000 and 2008. The number of subsistence salmon permits issued to North Pole households varied between 655 and 837 per year over the period. Sockeye salmon were the most heavily harvested species in all years, averaging 12,287 fish per year between 2000 and 2008. Chinook and coho were the next most important salmon species, averaging 447 and 388 fish harvested per year, respectively. Information about subsistence harvest of chum and pink salmon was also reported in some years during the period. A relatively high number of chum salmon were reported harvested in one year during the period (932 fish in 2004). Information about subsistence salmon harvest is presented in Table 13.

Table 11. Sport Fishing Trends, North Pole: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in North Pole ²
2000	8	27	5,047	2,427
2001	8	26	5,089	2,662
2002	8	30	5,104	2,765
2003	7	30	5,413	3,349
2004	6	33	5,466	3,333
2005	6	17	5,666	3,369
2006	5	14	5,514	3,337
2007	7	20	6,046	3,300
2008	6	15	5,764	3,124
2009	5	9	6,048	3,284
2010	6	9	6,508	3,449

⁴⁸⁶ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Cont'd. Sport Fishing Trends, North Pole: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	0	0	11,517	110,246
2001	0	0	10,744	80,391
2002	0	0	9,733	98,884
2003	0	0	7,502	92,432
2004	0	0	11,853	104,633
2005	0	0	11,335	82,063
2006	0	0	8,216	71,461
2007	0	0	9,327	91,629
2008	0	0	7,613	64,722
2009	0	0	7,415	85,082
2010	0	0	9,025	87,834

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Between 2003 and 2010, for years in which information was reported, the number of Subsistence Halibut Registration Certificates (SHARC) issued to North Pole residents varied between three and four. No additional information was reported regarding the number of SHARC cards fished or the poundage of halibut harvested for subsistence purposes in those years. This information is presented in Table 14.

No information is reported by ADF&G regarding the percentage of households in North Pole participating in subsistence harvest or use of various resources or per capita subsistence harvest in the community between 2000 and 2010 (Table 12). Neither is information reported regarding subsistence use of marine invertebrates and non-salmon fish (not including halibut) (Table 13). Likewise, no information is available from management agencies regarding marine mammal subsistence harvest by residents of North Pole between 2000 and 2010 (Table 15).

Additional Information

The Santa Claus House in North Pole offers a ‘Letters from Santa’ service. “These personalized letters are filled with more than good wishes from Saint Nick: they’re filled with the promise of Christmas, and all its secrets and magic. And, a Santa letter can set many a worried mind at ease, as each reader learns that he or she is, indeed, on Santa’s ‘good list’!”⁴⁸⁷

⁴⁸⁷ Santaclausehouse.com. 2010. *The Original Letter from Santa*. Retrieved February 28, 2012 from <http://www.santaclausehouse.com/santaletters.asp>.

Table 12. Subsistence Participation by Household and Species, North Pole: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, North Pole: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	693	651	496	n/a	204	5	9,682	n/a	n/a
2001	773	688	455	26	183	n/a	12,835	n/a	n/a
2002	655	562	453	40	202	n/a	9,201	n/a	n/a
2003	689	596	486	20	569	n/a	9,429	n/a	n/a
2004	781	636	717	932	1,655	n/a	12,884	n/a	n/a
2005	828	675	323	1	143	5	16,027	n/a	n/a
2006	837	635	352	2	192	1	14,727	n/a	n/a
2007	837	712	421	n/a	109	n/a	16,182	n/a	n/a
2008	757	630	320	n/a	236	n/a	9,614	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, North Pole: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	4	n/a	n/a
2005	4	n/a	n/a
2006	3	n/a	n/a
2007	3	n/a	n/a
2008	4	n/a	n/a
2009	4	n/a	n/a
2010	4	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, North Pole: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Shageluk (SHAG-uh-look)



People and Place

*Location*⁴⁸⁸

Shageluk is located on the east bank of the Innoko River, approximately 20 miles east of Anvik and 34 miles northeast of Holy Cross. The Innoko is a tributary of the Yukon River. Shageluk is located in the Mt. McKinley Recording District, the Yukon-Koyukuk Census Area, and is not located within an organized borough. The city boundaries encompass 10.6 square miles of land and 1.4 square miles of water.

*Demographic Profile*⁴⁸⁹

In 2010, there were 83 residents in Shageluk, making it the 265th largest of 352 total Alaskan communities with recorded populations that year. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents fell by 24.81%. The average annual growth rate during this period was -2.42%, indicating a steady population decline. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, almost all of Shageluk residents identified themselves as American Indian or Alaska Native (90.4%), with small percentages of the population identifying themselves as White (3.6%) and two or more races (6%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian or Alaska Native decreased by 6.5%, with corresponding increases in the percentages of the population identifying themselves as White and as two or more races. Changes in racial and ethnic composition between 2000 and 2010 are shown in Figure 1.

In 2010, the average household size in Shageluk was 2.31, a decrease from 3.3 persons per household in 1990 and 3.58 in 2000. The total number of households in Shageluk decreased from 42 in 1990 to 36 in both 2000 and 2010. Of the 53 total housing units surveyed for the 2010 Decennial Census, 20 were owner-occupied, 16 were renter-occupied, and 17 units were vacant. Throughout this period no residents of Shageluk were reported to be living in group quarters.

In 2010, the gender makeup of Shageluk was fairly even, at 50.6% male and 49.4% female, less skewed than the state as a whole (52% male, 48% female). However, the population is skewed towards males in the 0 to 9, 10 to 19 and 50 to 59 age groups. The median age was estimated to be 37.8 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010 the largest percentage of residents fell within the age group 40 to 59 years old, with the next largest percentage of residents in the age group 0 to 19 years old. The overall population structure of Shageluk in 2000 and 2010 is shown in Figure 2.

⁴⁸⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁸⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Shageluk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	139	-
2000	129	-
2001	-	144
2002	-	141
2003	-	141
2004	-	131
2005	-	129
2006	-	124
2007	-	118
2008	-	102
2009	-	97
2010	83	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Shageluk: 2000-2010 (U.S. Census).

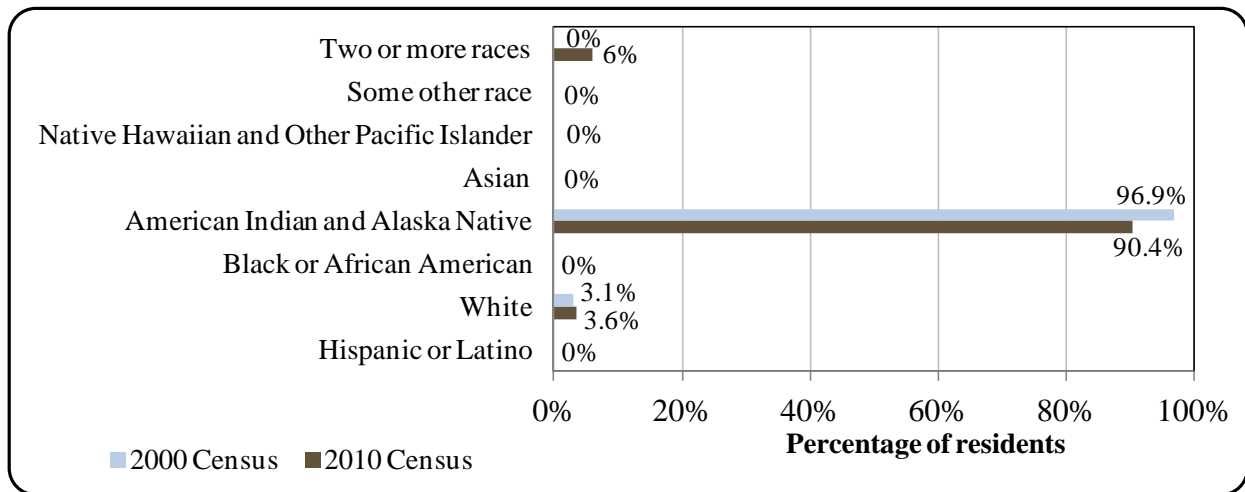
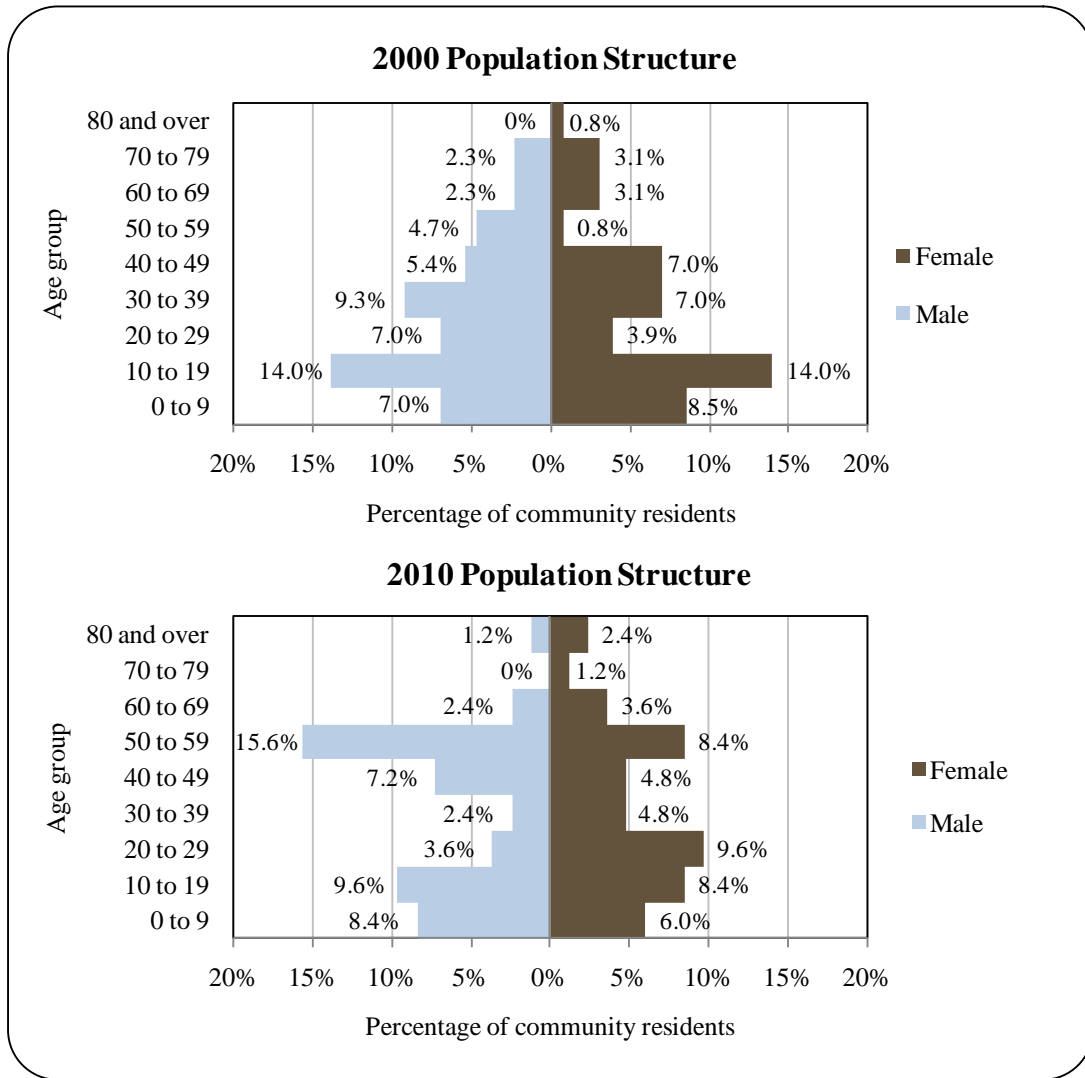


Figure 2. Population Age Structure in Shageluk Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁴⁹⁰ 73.1% of Shageluk residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 11.5% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 15.4% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 55.8% were estimated to hold a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 11.5% were estimated to have some college but no degree, compared to 28.3%

⁴⁹⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

of Alaskan residents overall; and 5.8% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall. There were no residents of Shageluk estimated to hold an Associate's degree or a graduate or professional degree in 2010.

History, Traditional Knowledge, and Culture

Shageluk is a Deg Hit'an Athabascan village, within the Ingalik language group.⁴⁹¹ Early ethnographic studies of Ingalik speakers identified several subdivisions, including a group of people known as the Anvik-Shageluk group, centered around the village of Anvik on the Yukon and settlements along the Innoko River including Shageluk. The culture of the Lower Yukon Deg Hit'an people was heavily influenced by the neighboring Kwikpagmiut Eskimos, whose territory began just downriver from Holy Cross. The mouth of the Innoko River is thought to have been one of the primary locations of trade exchanges between the Yukon Eskimos and the Deg Hit'an.⁴⁹² With regard to material culture, the Deg Hit'an Athabascan people's reliance of salmon fishing more closely resembled Eskimo tradition than that of Athabascan people living further inland.⁴⁹³

The Russian explorer Andrey Glazunov provided the first population estimate of the Anvik-Shageluk area following his 1833-34 explorations in region, when approximately 1,000 people resided in villages he visited or was told about. A later explorer, Lt. Alekseevich Zagoskin of the Russian Navy, counted 699 people in the Anvik-Shageluk area, and reported that the population had been reduced following smallpox epidemics in 1838 and 1839.⁴⁹⁴ In 1850, Lt. Zagoskin recorded the name of the village at Shageluk as "Tie'goschitno," while the group of villages on the Innoko River were collectively referred to as the "Chageluk settlements" by the Russian Navy in 1861.⁴⁹⁵

Of the various settlements along the Innoko River, Shageluk became one of the permanent communities in the area. The U.S. government established a post office in the community 1924. In 1966, the community was forced to relocate to a less flood-prone location two miles southeast of the original village site. Following the Indian Reorganization Act, the Bureau of Indian Affairs (BIA) constructed 20 homes and a school at the new site, and the City of Shageluk was incorporated in 1970. Today, Shageluk remains a Deg Hit'an Athabascan community. Subsistence harvest of wild resources is of primary importance in the local culture and economy. The sale of alcohol is banned in the village.⁴⁹⁶

⁴⁹¹ Alaska Native Knowledge Network. (2006). *Appendix A: Brief Description of Alaskan Athabascan Culture*. Retrieved March 22, 2013 from http://www.ankn.uaf.edu/curriculum/athabascan/athabascans/appendix_a.html.

⁴⁹² VanStone, James. 1979. "Ingalik Contact Ecology: An Ethnohistory of the Lower-Middle Yukon, 1790-1935." *Fieldiana. Anthropology*. 71, pp. i, iii, v-vii, ix-xii, 1-273. (Retrieved October 3, 2012 from <http://www.jstor.org>.)

⁴⁹³ VanStone, James. 1976. "The Yukon River Ingalik: Subsistence and the Fur Trade, and a Changing Resource Base." *Ethnohistory*. 23(3), pp. 199-212.

⁴⁹⁴ See footnote 492.

⁴⁹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁹⁶ *Ibid*.

Natural Resources and Environment

Shageluk has a cold, continental climate. Summer temperatures average from 42 to 80 °F (5.6 to 26.7 °C), and winters can range from -62 to 0 °F (-52.2 to -17.8 °C). Annual precipitation averages 67 inches, with average snowfall of 110 inches. The Innoko River is generally ice-free from June through October.⁴⁹⁷ Lowlands along the Yukon and Innoko river are made up of vast marshy flatland, with some forest cover of balsam poplar, willow, and alder within active floodplains. Well drained, south-facing upland slopes host forests of white spruce, paper birch, and quaking aspen, while permafrost, stunted black spruce, and tundra is typical of the poorly drained cold soils of north-facing slopes.⁴⁹⁸

Shageluk is located several miles south of the southern boundary of the Innoko National Wildlife Refuge (NWR). One of the primary motivations for creation of the NWR was its importance as a waterfowl area in interior Alaska, noted for its wetlands that provide nesting, resting and staging areas. In addition, the NWR offers excellent raptor and moose habitat. The Innoko Refuge is made up of two units, totaling 4.6 million acres. The area was also established to fulfill treaty obligations and provide the opportunity for continued subsistence uses. NWR lands are open to sport and subsistence hunting and fishing, as well as trapping.⁴⁹⁹

Local terrestrial wildlife includes moose, bear, wolves, lynx, wolverine, river otter, beaver, porcupine, caribou, snowshoe hare, red fox, red squirrel, marten, muskrat, weasel, mink, shrews, voles, and mice.⁵⁰⁰ Anadromous fish species found in the Shageluk area include all five salmon species, Arctic lamprey, smelt, Arctic cisco, and additional freshwater species include northern pike, blackfish, stickleback, burbot and five species of whitefish.⁵⁰¹ Edible and useful plants include cranberries, blueberries, salmon or cloud berries, rose hips, Indian potatoes, wild celery, wild onion, wild rhubarb, and sour dock.⁵⁰²

The Yukon-Kuskokwim delta is rich in mineral deposits. Gold was discovered in the Klondike area of the upper Yukon River in 1896, and prospectors began searching closer to Grayling – along the Innoko River – in 1898. Commercial quantities of gold were discovered in the Innoko Valley in 1906.⁵⁰³ As of 2010, the Iditarod and Innoko mining districts have produced more than 2.3 million ounces of gold.⁵⁰⁴ Currently, a large-scale gold operation is being developed by Donlin Gold north of Crooked Creek, to the southeast of Grayling. The mine is projected to operate for 25 years, with over 33 million ounces of gold speculated to be in the area.⁵⁰⁵ Additional mineral deposits in the region include Wolf Creek Mountain

⁴⁹⁷ Ibid.

⁴⁹⁸ Interior Rivers Resource Conservation and Development Council. (1997). *Area Plan*. Retrieved October 24, 2012 from <http://www.commerce.state.ak.us/oed/>.

⁴⁹⁹ U.S. Fish and Wildlife Service. (2010). *Innoko National Wildlife Refuge*. Retrieved October 4, 2011 from <http://innoko.fws.gov/>.

⁵⁰⁰ Ibid.

⁵⁰¹ See footnote 498.

⁵⁰² City of Anvik. (2004). *Anvik Comprehensive Community Plan*. Retrieved December 23, 2011 from: <http://www.commerce.state.ak.us/dca/plans/Anvik-CP-2004.pdf>.

⁵⁰³ VanStone, James. (1979). "Ingalik Contact Ecology: An Ethnohistory of the Lower-Middle Yukon, 1790-1935." *Fieldiana. Anthropology*. 71, pp. i, iii, v-vii, ix-xii, 1-273. (Retrieved October 3, 2012 from <http://www.jstor.org>.)

⁵⁰⁴ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. (2010). *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

⁵⁰⁵ Donlin Gold. (n.d.) *Homepage*. Retrieved December 27, 2011 from: <http://www.donlingold.com/>

mercury/antimony deposit and Stuyahok and Arnold Kako gold deposits to the southwest, and McLeod copper/molybdenum deposits to the northeast.⁵⁰⁶

Natural hazard risks in the Yukon-Koyukuk Census Area include flooding, wildfire, earthquakes, snow and avalanche, severe weather, landslides and erosion. Shallow earthquakes in the region would be considered ‘intraplate’ earthquakes, which can have a magnitude of up to 7.0 on the Richter scale.⁵⁰⁷

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in the Shageluk area as of March 2013.⁵⁰⁸

Current Economy⁵⁰⁹

Wage employment in Shageluk is generally limited to the City and the school. In addition, summer construction projects often provide seasonal employment. Residents rely upon subsistence activities, as well as trapping and gardening. Salmon, moose, bear, small game, and waterfowl are important food sources. In 2010, one resident held a commercial fishing permit. There is also a village store.⁵¹⁰

According to the 2006-2010 ACS,⁵¹¹ the per capita income in Shageluk in 2010 was estimated to be \$10,703 and the median household income was estimated to be \$28,281, compared to \$7,587 and \$26,667 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,⁵¹² the real per capita income in 2000 was \$9,977 and the real median 2000 household income was \$35,067. This shows that per capita income increased between 2000 and 2010, while household income decreased. However, Shageluk’s small population size may have prevented the ACS from accurately portraying economic conditions.⁵¹³ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for

⁵⁰⁶ Alaska Dept. of Comm. (n.d.). *Mineral Resources of Alaska*. Retrieved December 21, 2011 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>

⁵⁰⁷ State of Alaska. (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁵⁰⁸ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 5, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁵⁰⁹ Unless otherwise noted, all monetary data are reported in nominal values.

⁵¹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵¹¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵¹² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵¹³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Shageluk in 2010 is \$8,665.^{514,515} This alternative 2010 per capita estimate is lower than the 2000 Census per capita income estimate, suggesting that caution is warranted when citing an increase in per capita income in Shageluk between 2000 and 2010.

Both the U.S. Census and alternative ALARI per capita estimates are relatively low, reflected in the fact that the community was recognized as “distressed” by the Denali Commission. This designation indicates that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁵¹⁶ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

In 2010, Shageluk ranked 262nd out of 305 Alaskan communities with per capita income that year, and 254th out of 299 Alaskan communities with household income data. In that same year, 64.6% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 16.7%, compared to the statewide unemployment rate of 5.9%. Approximately 22.1% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Shageluk are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Shageluk. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 22.9%.⁵¹⁷

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the public sector (77.1%), along with 22.9% in the private sector. Out of 35 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage was estimated to work in educational services, health care, and social assistance (37.1%), along with 25.7% working in transportation, warehousing, and utilities, 22.9% in public administration, and 14.3% in retail trade. Compared to 2000, the percentage of the workforce employed in retail trade and in transportation, warehousing and utilities both increased by more than 50%, while there were declines in the percentage employed in public administration and in educational services, health care, and social assistance industries. Information about employment by industry is presented in Figure 3.

When viewing employment in terms of occupation, in 2010, the greatest percentages of the labor force were employed in management/professional (48.6%) and (28.6%) service occupations. Compared to 2000, shifts included an 82% increase in the percentage of the workforce employed in management/professional occupations, and a 100% decrease in employment in natural resource, construction, and maintenance occupations. Employment information is broken down by occupation in Figure 4.

No individuals characterized themselves as working in fishing-related occupations or industries in Shageluk in either 2000 or 2010. However, it is important to note that employment in the fishing industry may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

⁵¹⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵¹⁵ See footnote 511.

⁵¹⁶ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁵¹⁷ See footnote 514.

Figure 3. Local Employment by Industry in 2000-2010, Shageluk (U.S. Census).

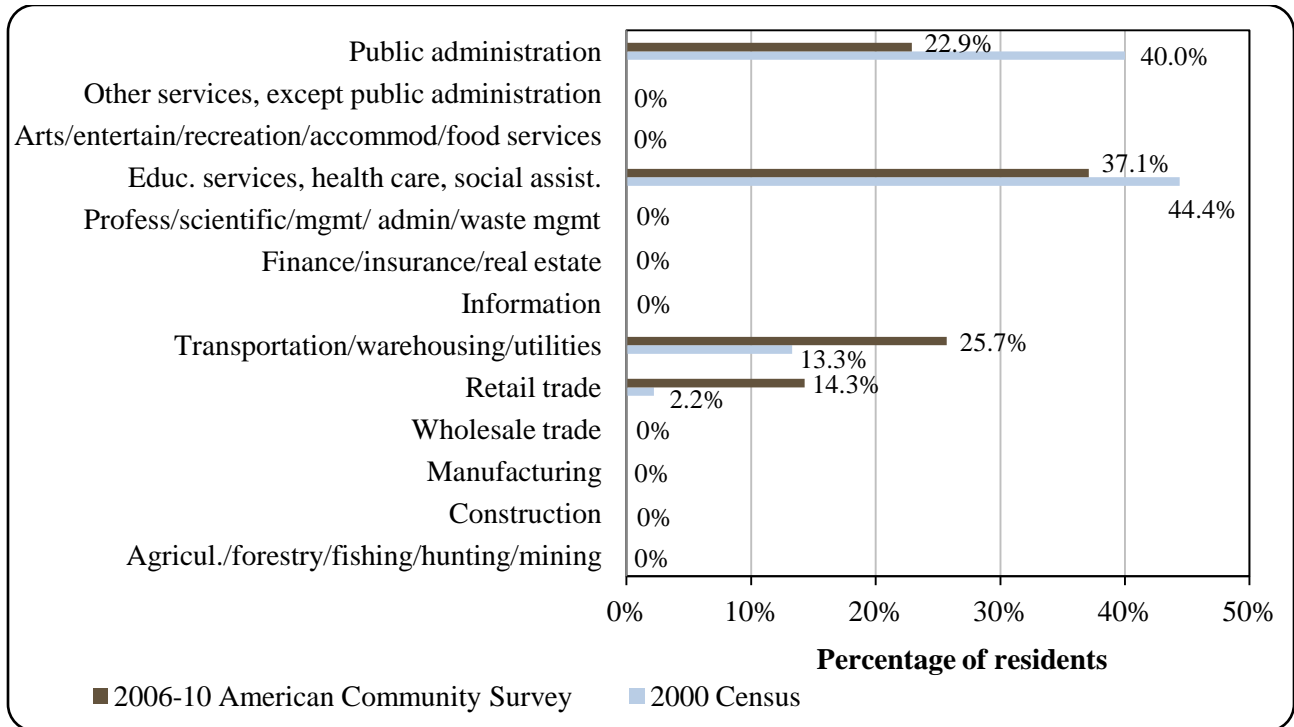
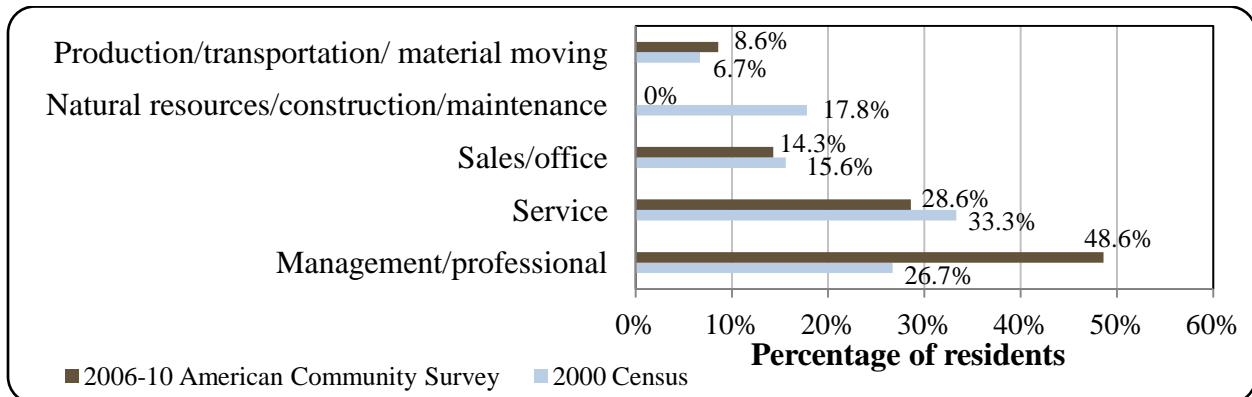


Figure 4. Local Employment by Occupation in 2000-2010, Shageluk (U.S. Census).



Governance⁵¹⁸

Shageluk is a 2nd Class City that is not located within an organized borough. Annual municipal revenue received by the City of Shageluk varied between \$100,000 and just over \$300,000 per year during the 2000-2010 period. No sales tax was collected in any year during the decade. Locally-generated income sources in Shageluk between 2000 and 2010 included contracted services, enterprise revenues, building and equipment rentals, and a land lease to Bush

⁵¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Tell, Inc., a telephone company. Contracts included operation of the electric utility, health clinic, and U.S. post office. Enterprise revenues were received from washeteria/sauna, garbage collection, and internet café use fees. Outside revenue sources included revenue sharing and grants. Sources of shared funds from the State of Alaska included the State Revenue Sharing program from 2000 to 2003 (over \$25,000 per year), the Community Revenue Sharing program in 2009 and 2010 (approximately \$100,000 each year), the SAFE Communities program (public safety, utilities, infrastructure, etc.), and telephone / electric co-op refunds. Some federal revenue sharing was also received from the Payment In Lieu of Taxes program. State of Alaska capital project grants were received in some years for projects such as landfill fencing, bridge repair, design of water and sewer improvements, heavy equipment purchase and repair, and a recreation center. A State Municipal Energy Assistance Program grant was also received. No fisheries-related grants were reported during the 2000-2010 period. Information on selected municipal, state, or federal revenue streams for Shageluk from 2000 to 2010 is shown in Table 2.

Shageluk was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native Village. The authorized traditional entity, recognized by the BIA, is the Shageluk Native Village. The Native village corporation is the Zho-Tse, Incorporated, which manages 92,160 acres of land. The regional Native corporation to which Shageluk belongs is the Doyon, Limited.⁵¹⁹

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Shageluk from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$266,840	n/a	\$27,661	n/a
2001	\$128,538	n/a	\$26,393	n/a
2002	\$233,501	n/a	\$26,502	n/a
2003	\$245,099	n/a	\$26,503	n/a
2004	\$146,653	n/a	n/a	n/a
2005	\$108,897	n/a	n/a	n/a
2006	\$183,334	n/a	n/a	n/a
2007	\$198,134	n/a	n/a	n/a
2008	\$253,879	n/a	n/a	n/a
2009	\$259,782	n/a	\$102,081	n/a
2010	\$322,288	n/a	\$101,203	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁵¹⁹ Ibid.

Shageluk is also a member village of the Tanana Chiefs Conference, a tribal 501(c)(3) non-profit organization headquartered in Fairbanks. It is a consortium of 42 villages of Interior Alaska that works to meet “the health and social service challenges for more than 10,000 Alaska Natives spread across a region of 235,000 square miles in Interior Alaska.” The non-profit provides health and tribal development services, as well as educational and employment services to individuals of member tribes.⁵²⁰ The Tanana Chiefs Conference is one of the 12 regional Alaska Native nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁵²¹

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and the Department of Commerce, Community, and Economic Development are located in Bethel. The nearest office of the Alaska Department of Natural Resources is located in McGrath, and the nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Access to Shageluk is by air or water only. A state-owned 3,400 ft long by 75 ft wide gravel airstrip and a seaplane base are available. Locals use all-terrain vehicles, snowmobiles, and dog sleds for local transportation. Every other year, Shageluk is a checkpoint for the Iditarod dogsled race.⁵²² In June of 2012, round-trip airfare to Anchorage was \$646.⁵²³

*Facilities*⁵²⁴

Residents haul treated well-water and dispose of honeybuckets⁵²⁵ in pit privies or bunkers. Residents are dependent upon the washeteria⁵²⁶ for bathing, laundry, and water, since no homes are fully plumbed. The City provides water to the school and the washeteria. Law enforcement services are provided by state troopers in Aniak, and fire and rescue services are provided by a city volunteer fire department. Shageluk has a youth center and a community hall, as well as a school/community library.

⁵²⁰ Tanana Chiefs Conference website.2007. *History*. Retrieved January 9, 2012 from <http://www.tananachiefs.org/>.

⁵²¹ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁵²² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵²³ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

⁵²⁴ See footnote 522.

⁵²⁵ A “honeybucket” is an indoor bucket used as a toilet in houses without plumbing.

⁵²⁶ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

*Medical Services*⁵²⁷

Medical services are provided by the Shageluk Clinic, which is owned by the City and operated by the Yukon Kuskokwim Health Corporation. The clinic is a Community Health Aid Program site. Emergency services have river, floatplane, and air access and are provided by a health aide. The nearest clinic with a qualified Emergency Care Center is located in Unalakleet.

*Educational Opportunities*⁵²⁸

The Innoko River School provides instruction to students from pre-school through 12th grade. In 2011, the school had 20 students and 2 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence salmon fishing has long provided a basis for life in Deg Hit'an communities of the Lower Yukon River. Chinook salmon were the most important food fish, while chum and coho salmon were processed into dried fish, and chum salmon was an important food for sled dogs. The Deg Hit'an primarily used large basket traps for salmon harvest. They also used dipnets, which they would hold in the water as they drifted down river with the current in canoes. Villagers from Koserefsky and Anilukhtakpuk (formerly located near Holy Cross) most often had fish camps on the eastern bank of the Yukon River.⁵²⁹

The first recorded commercial harvest of salmon on the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure on the Yukon River between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s.⁵³⁰

Poor returns of Chinook salmon in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.⁵³¹ Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but restricted commercial harvest in 2008 and complete closure of Chinook harvest in 2009 led to declaration of a fishery disaster that year.⁵³² A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of

⁵²⁷ See footnote 522.

⁵²⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁵²⁹ VanStone, James. 1979. "Ingalik Contact Ecology: An Ethnohistory of the Lower-Middle Yukon, 1790-1935." *Fieldiana. Anthropology*. 71, pp. i, iii, v-vii, ix-xii, 1-273. (Retrieved October 3, 2012 from <http://www.jstor.org>.)

⁵³⁰ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁵³¹ Ibid.

⁵³² Upton, H.F. 2010. *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

Fisheries, and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundant species, including gear and other management restrictions.⁵³³

Like Yukon Chinook salmon runs, chum salmon runs have seen poor returns since 1998. A relatively strong run in 2007 led to some effort to redevelop the Yukon chum fishery, but this process is challenged by the need to reduce incidental harvest of co-migrating Chinook salmon. Further, beginning in 2008, the fall chum salmon run has not been large enough to provide for commercial opportunity. From 2008 to 2010, management actions have been taken to delay commercial fishing to provide for escapement and subsistence use.⁵³⁴

In years when commercial salmon fishing is open, fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 subdistricts, and 28 statistical areas. Fishing takes place with set and drift gillnets, and fish wheels are also allowed in Upper Yukon districts (Districts 4, 5, and 6). Subsistence fishermen also most often utilize these gear types. Many subsistence fishermen are also commercial fishermen.⁵³⁵

In addition to salmon, one permit was held by a Shageluk resident in a ‘freshwater fish’ fishery in some years during the 2000-2010 period. Commercial freshwater fish fisheries may target species such as Arctic char, pike, rainbow trout, Dolly Varden, and sheefish.⁵³⁶

Shageluk is located on the Innoko River, which joins the Yukon River within District 3 of the Lower Yukon River salmon fishery. It is also important to note that the ocean area into which the Yukon River flows is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Because Shageluk is located more than 50 miles from the coast, the community is not eligible for the Community Development Quota. In addition, Shageluk is not eligible to participate in the Community Quota Entity program.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Shageluk does not have a registered processing plant. The nearest processing plant is located in Bethel.

Fisheries-Related Revenue

Shageluk received a very small amount of fisheries related revenue from 2007 to 2010, from the Shared Fisheries Business Tax. In each of those years, the revenue received from fisheries-related sources was minimal compared to the total municipal revenue received by the

⁵³³ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=hottopics.federalChinookdisaster>.

⁵³⁴ Wolfe, R.J. and C. Scott. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

⁵³⁵ See footnote 530.

⁵³⁶ Alaska Dept. of Fish and Game. 2006. *Our Wealth Maintained: A Strategy for Conserving Alaska’s Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=species.wapview>.

City.⁵³⁷ Information on known fisheries-related revenue received by Shageluk is presented in Table 3.

Commercial Fishing

From 2000 to 2010, was one permit holder in Shageluk held one Commercial Fisheries Entry Commission (CFEC) salmon permit in the Lower Yukon gillnet fishery. However, the permit was only reported as actively fished in 2000 and 2003. In 2004 and 2006, there was one permit holder with a CFEC permit for other finfish, and that permit was reported as fished in 2006. Information regarding permits and permit holders by species in Shageluk between 2000 and 2010 is presented in Table 4.

There was one crew license holder in Shageluk in 2010, and prior to that one crew license holder in 2002, 2003, and 2004. However for the other years between 2000 and 2010, there were no crew license holders in Shageluk. Between 2000 and 2010 there were no fish buyers or shore-side processing facilities in Shageluk, nor were there any vessels homeported or landing catch in Shageluk. Between 2000 and 2002 there were between one and two vessels owned primarily by Shageluk residents, however there were no vessels owned primarily by Shageluk residents between 2002 and 2010. Information on characteristics of the commercial fishing sector in Shageluk between 2000 and 2010 is presented in Table 5.

There were no quota share account holders in Shageluk between 2000 and 2010 for federal halibut (Table 6) or sablefish (Table 7) fisheries, and there were no quota share account holders for federal crab fisheries in Shageluk between 2005 and 2010 (Table 8). Given the lack of processing capacity, there were no commercial landings or associated ex-vessel revenue reported in Shageluk between 2000 and 2010 (Table 9) and no commercial landings or associated ex-vessel revenue reported by Shageluk residents between 2000 and 2010 (Table 10).

⁵³⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Shageluk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$43	\$44	\$52	\$54
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$43</i>	<i>\$44</i>	<i>\$52</i>	<i>\$54</i>
<i>Total municipal revenue⁵</i>	<i>\$266,840</i>	<i>\$128,538</i>	<i>\$233,501</i>	<i>\$245,099</i>	<i>\$146,653</i>	<i>\$108,897</i>	<i>\$183,334</i>	<i>\$198,134</i>	<i>\$253,879</i>	<i>\$259,782</i>	<i>\$322,288</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Shageluk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 Cont. Permits and Permit Holders by Species, Shageluk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	1	0	1	0	0	0	0
	Fished permits	0	0	0	0	0	0	1	0	0	0	0
	% of permits fished	-	-	-	-	-	-	100%	-	-	-	-
	Total permit holders	0	0	0	0	1	0	1	0	0	0	0
Salmon (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	1	0	0	1	0	0	0	0	0	0	0
	% of permits fished	100%	-	-	100%	-	-	-	-	-	-	-
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>Fished permits</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>100%</i>	<i>-</i>	<i>-</i>	<i>100%</i>	<i>-</i>	<i>-</i>	<i>50%</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Shageluk: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Shageluk ²	Total Net Pounds Landed In Shageluk ^{2,5}	Total Ex-Vessel Value Of Landings In Shageluk ^{2,5}
2000	0	0	0	2	0	0	0	\$0
2001	0	0	0	2	0	0	0	\$0
2002	1	0	0	1	0	0	0	\$0
2003	1	0	0	0	0	0	0	\$0
2004	1	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	1	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Shageluk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Shageluk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Shageluk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Shageluk: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Shageluk Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Very little recreational fishing takes place in Shageluk or by Shageluk residents. There were no active sport fish guide businesses or individuals holding sport fish guide licenses in Shageluk between 2000 and 2010. In 2010, two sportfishing licenses were sold to Shageluk residents (irrespective of the location of the point of sale), which represents an overall decrease in the number of sportfishing licenses sold to residents between 2000 and 2010. There were not any sportfishing licenses sold within Shageluk between 2000 and 2010, indicating that community residents likely pursue sportfishing in other communities (Table 11).

Shageluk is located within the Yukon River Drainage Alaska Sport Fishing Survey Area. No saltwater angler days were reported in this survey area between 2005 and 2010. Earlier in the decade, between 2000 and 2004, the number of saltwater angler days fished by non-Alaska residents decreased from 81 in 2000 to 17 in 2004, though no angler days were reported for non-Alaska residents in either 2002 or 2003. In contrast, the number of saltwater angler days fished by Alaska residents was highly variable between 2000 and 2003, and no saltwater angler days were reported for Alaska residents between 2004 and 2010. During this period, freshwater angler

days fished varied considerably for both Alaska residents and non-Alaska residents. Alaska residents fished consistently more angler days in freshwater in this region between 2000 and 2010, averaging 7,355 angler days fished per year compared to an average of 3,861 angler days fished by non-Alaska residents. Information about the sportfishing sector in and near Shageluk is presented in Table 11.

Table 11. Sport Fishing Trends, Shageluk: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Shageluk ²
2000	0	0	17	0
2001	0	0	16	0
2002	0	0	9	0
2003	0	0	10	0
2004	0	0	20	0
2005	0	0	16	0
2006	0	0	1	0
2007	0	0	17	0
2008	0	0	20	0
2009	0	0	20	0
2010	0	0	2	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ ADF&G (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² ADF&G (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ ADF&G (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Historically, subsistence harvest has been foundational to the economy and culture of the Deg Hit'an Athabascan people. Salmon were of primary importance, as well as a secondary dependence on large and small game animals.⁵³⁸ Because no Chinook or coho salmon return to the Innoko River, people living in Shageluk have historically traveled to summer fish camps along the Yukon River to participate in salmon harvest.⁵³⁹ Today, subsistence and fishing-related activities remain important to the economy and way of life of Shageluk residents.⁵⁴⁰ Fish are the most reliable subsistence resource in the lower-middle Yukon River region. In addition to salmon, non-salmon fish are a vital component of the subsistence fish harvest, partly due to their year-round availability. Non-salmon fish species harvested by residents of Shageluk include whitefish, sheefish, northern pike, grayling, longnose sucker, burbot, Alaska blackfish, and Arctic lamprey.⁵⁴¹

Information was not available regarding the percentage of Shageluk households participating in subsistence by species between 2000 and 2010, with the exception of data showing that approximately 83% of households participated in non-salmon fish subsistence (not including halibut) in 2002 (Table 12). However, data are available regarding the number of subsistence salmon permits issued to Shageluk households between 2000 and 2010. The total number of permits initially declined from 40 in 2000 to 29 in 2005, and then rebounded to 38 by 2008 (the last year for which data were available). The number of subsistence salmon permits reported as actively fished remained relatively stable between 2000 and 2008. The number of Chinook salmon harvested per year showed a decreasing trend over this period, while chum salmon harvest was highly variable from year to year. Small numbers of coho and pink salmon were reported as harvested in some years during the 2000-2008 period as well. Table 13 displays information about salmon subsistence. Table 13 also notes a substantial harvest of non-salmon fish in 2002, the year ADF&G Division of Subsistence conducted a subsistence survey. No information was reported by ADF&G regarding marine invertebrate harvest that year. ADF&G reported that the following species of non-salmon fish were used for subsistence in Shageluk in 2002: Arctic char, Arctic grayling, northern pike, sheefish, trout, and whitefish.⁵⁴²

No information was reported by management agencies regarding subsistence halibut fishing participation between 2003 and 2010 (Table 14) or subsistence harvest of marine mammal resources between 2000 and 2010 (Table 15).

⁵³⁸ VanStone, James. 1976. "The Yukon River Ingalik: Subsistence and the Fur Trade, and a Changing Resource Base." *Ethnohistory*. 23(3), pp. 199-212.

⁵³⁹ VanStone, James. (1979). "Ingalik Contact Ecology: An Ethnohistory of the Lower-Middle Yukon, 1790-1935." *Fieldiana. Anthropology*. 71, pp. i, iii, v-vii, ix-xii, 1-273. (Retrieved October 3, 2012 from <http://www.jstor.org>.)

⁵⁴⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴¹ Brown, C, Burr, J., Elkin, K., and Walker, R. 2005. *Contemporary Subsistence Use and Population Distribution of Non-Salmon Fish in Grayling, Anvik, Shageluk, and Holy Cross*. Alaska Dept. of Fish and Game, Tech. Paper No. 289. Retrieved October 4, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp289.pdf>.

⁵⁴² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Shageluk: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	83%	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Shageluk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	40	26	805	1,838	n/a	n/a	n/a	n/a	n/a
2001	37	28	222	684	n/a	n/a	n/a	n/a	n/a
2002	33	24	439	1,956	n/a	n/a	n/a	n/a	19,756
2003	32	26	550	5,587	35	130	n/a	n/a	n/a
2004	29	19	418	1,848	106	n/a	n/a	n/a	n/a
2005	29	22	420	4,136	n/a	n/a	n/a	n/a	n/a
2006	32	26	358	1,386	48	n/a	n/a	n/a	n/a
2007	41	18	448	1,124	267	n/a	n/a	n/a	n/a
2008	38	25	397	453	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Shageluk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Shageluk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

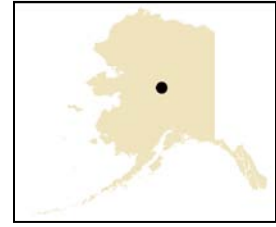
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Tanana (TAN-uh-naw)



People and Place

*Location*⁵⁴³

Tanana is located in Interior Alaska about two miles west of the junction of the Tanana and Yukon Rivers; 130 mi west of Fairbanks. The community encompasses 11.6 square miles of land and 4.0 square miles of water. Tanana is incorporated as a First-class city, is located in the Yukon-Koyukuk Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁵⁴⁴

In 2010, there were 246 inhabitants in Tanana, ranking it the 179th largest of 352 total Alaskan communities with recorded populations that year. Overall, the population declined by 29.0% between 1990 and 2010. Tanana's population decreased by 18.51% between 2000 and 2009, with an average annual growth rate of -1.31%, indicating a slow rate of decline. The change in population from 1990 to 2010 is provided in Table 1.

Tanana is a traditional Athabascan community. In 2010, 86.6% of residents identified themselves as American Indian or Alaska Native, compared to 79.9% in 2000. Also in that year, 9.8% of residents identified themselves as White, compared to 17.9% in 2000; 0.4% identified themselves as Asian, compared to 0% in 2000; 2.8% identified themselves as two or more races, compared to 2.3% in 2000; and 0.4% identified themselves as some "other" race, compared to 0% in 2000. In addition, 0.4% of residents identified themselves as Hispanic or Latino, compared to 0.6% in 2000 (Figure 1).

The average household size in 2010 was 2.41, compared to 2.55 in 2000 and 2.70 in 1990. In that year, there were a total of 136 housing units, compared to 166 in 2000 and 169 in 1990. Of the households surveyed in 2010, 50% were owner-occupied, compared to 42% in 2000; 24% were renter-occupied, compared to 31% in 2000; 15% were vacant, compared to 2% in 2000; and 11% were occupied seasonally, compared to 25% in 2000. In addition, five residents lived in group quarters in 2010, compared to 0 in 2000.

The gender distribution in 2010 was skewed at 53.3% male, and 46.7% female. This was slightly less even than the statewide distribution (52.0% male, 48.0%), and more even than the distribution in 2000 (56.8% male, 43.2% female). The median age that year was 42.3, which was significantly older than both the statewide median of 33.8 years, and 2000 median of 34.2 years.

⁵⁴³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

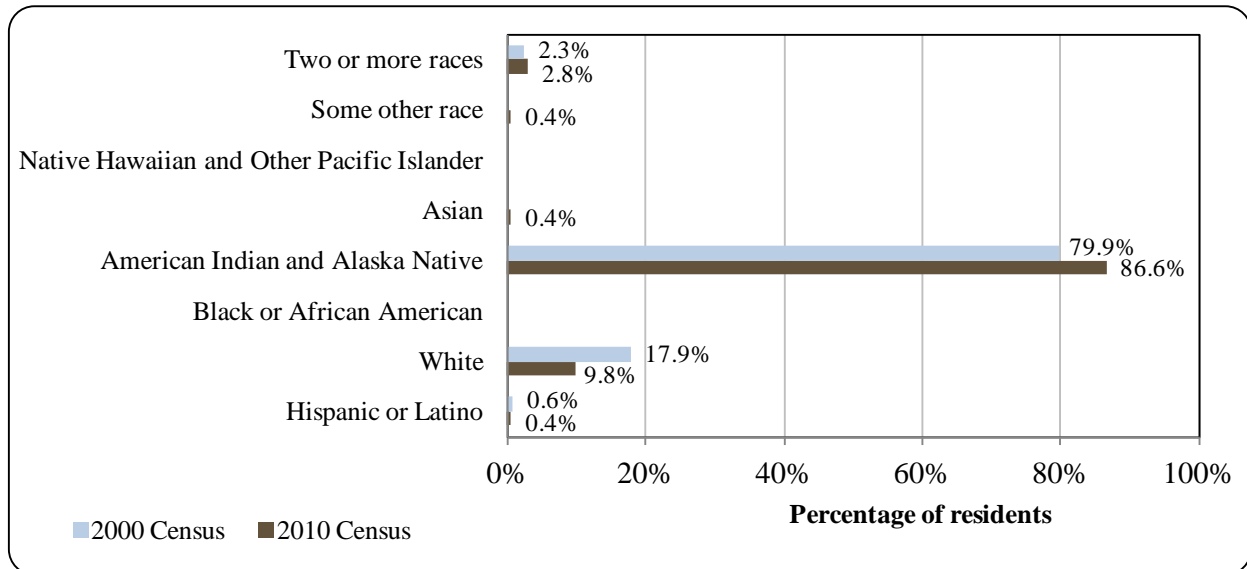
Table 1. Population in Tanana from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	345	-
2000	308	-
2001	-	302
2002	-	272
2003	-	282
2004	-	303
2005	-	282
2006	-	260
2007	-	257
2008	-	251
2009	-	251
2010	246	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Tanana: 2000-2010 (U.S. Census).

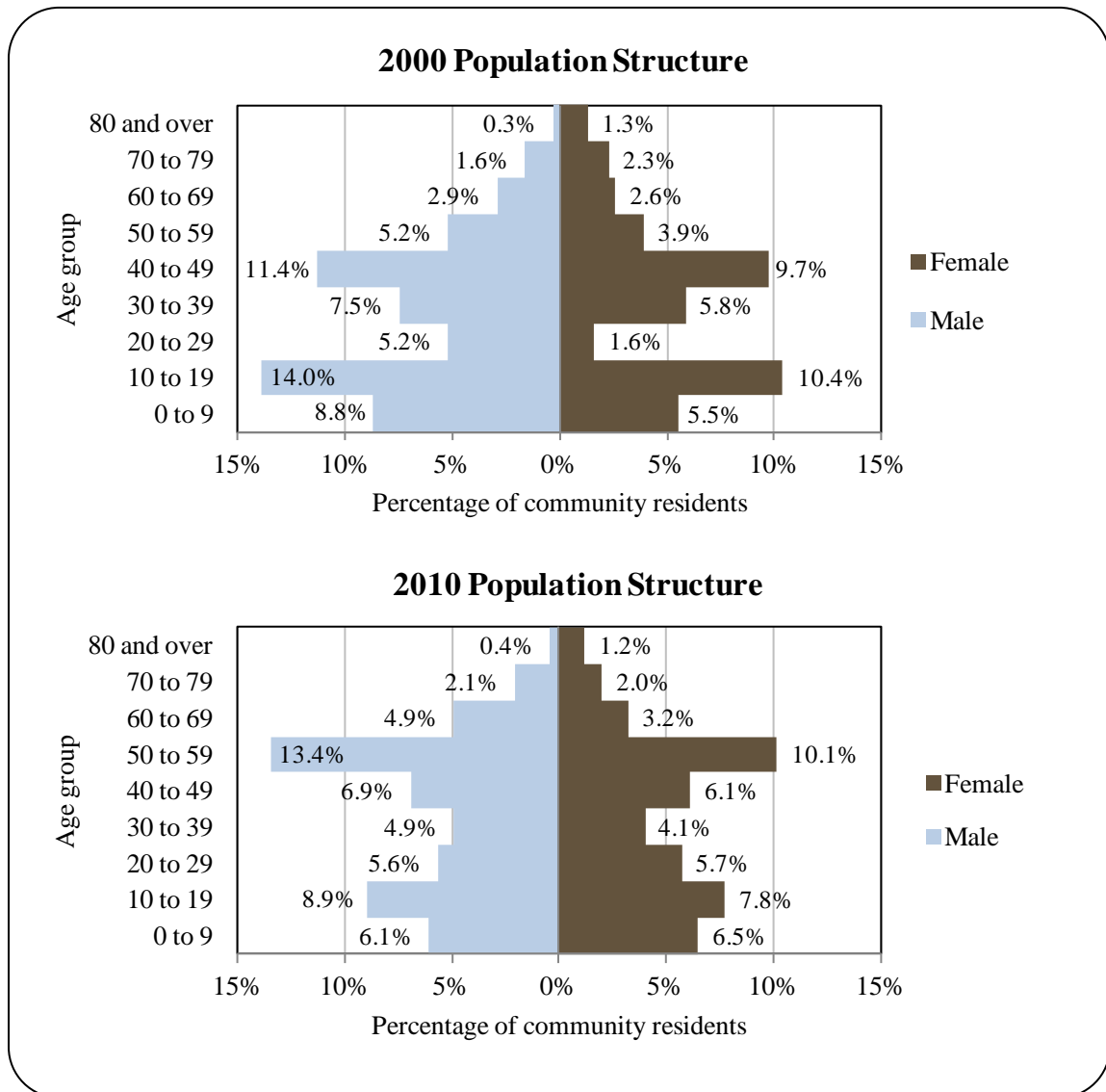


Compared with 2000, the population structure was less expansive in 2010, with marked proportional increases in older age ranges; possibly indicating struggles in youth retention. In that year, 29.3% of residents were under the age of 20, compared to 38.7% in 2000; 13.8% were over the age of 59, compared to 11.0% in 2000; 45.5% were between the ages of 30 and 59,

compared to 43.5% in 2000; and 11.3% were between the ages of 20 and 29, compared to 6.8% in 2000.

Overall, gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 50 to 59 range (13.4% male, 10.1% female), followed by the 60 to 69 (4.9% male, 3.2% female) and 10 to 19 (8.9% male, 7.8% female) ranges. The greatest relative gender difference occurred in the 60 to 69 range. Information regarding trends in Tanana’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Tanana Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey (ACS),⁵⁴⁵ in terms of educational attainment, 86.3% of Tanana residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 8.1% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 5.6% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 37.6% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 44.7% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 2.5% were estimated to hold a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 1.5% were estimated to hold a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*⁵⁴⁶

Due to its location at the confluence of the Tanana and Yukon Rivers, Tanana was a traditional trading settlement for Koyukon and Tanana Athabascans long before European contact. In 1880, Harper's Station, an Alaska Commercial Company trading post, was established 13 miles downriver from the present site. In 1881, Church of England missionaries from Canada built a mission eight miles downriver. Between 1887 and 1900, an elaborate school and hospital complex, the St. James Mission, was constructed. It became an important source of services and social change along both rivers. In 1898, Fort Gibbon was founded at Tanana to maintain the telegraph line between Fairbanks and Nome. A post office was also established, and several other trading posts developed around the turn of the century. Gold seekers left the Yukon after 1906. Ft. Gibbon was abandoned in 1923. The St. James Hospital was transferred to Bureau of Indian Affairs (BIA) administration in the 1920s. During World War II, an air base was established near Tanana as a refueling stop for the lend-lease aircraft program. New hospital facilities were built in 1949. During the 1950s, hospital administration was transferred to the U.S. Public Health Service.

The City of Tanana was incorporated in 1961. The hospital complex was a major employer during this period, employing 54 persons with a payroll of \$1.6 million, but it closed in 1982. That same year, Tanana incorporated as a First-class city in order to assume control of the local school system. The hospital facilities were remodeled for use as a health clinic, counseling center, tribal office, and regional elders' residence.

Traditional Athabascan ways of life persist in Tanana; subsistence, potlatches, dances, and foot races are part of the culture. The sale of alcohol is limited to the city-owned package store.

⁵⁴⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁴⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment⁵⁴⁷

Tanana experiences a cold, continental climate with temperature extremes. Daily maximum temperatures during July range from 64 to 70 °F (18 to 21 °C); daily minimum temperatures during January are -14 to -48 °F (-26 to -44 °C). Extremes have been measured from -71 to 94 °F (-57 to 34 °C). Average annual precipitation is 13 inches, with 50 inches of snowfall. The river is ice-free from mid-May through mid-October.

Tanana is located just north of Denali National Park. The following information about Denali National Park and Preserve (National Park) is from the U.S. National Park Service.⁵⁴⁸

Denali, the "High One," is the name Athabascan native people gave the massive peak that crowns the 600-mi-long Alaska Range. Denali is also the name of an immense national park and preserve created from the former Mount McKinley National Park. In 1917, Mount McKinley National Park was established as a game refuge. The park, including North America's highest peak, were named for former senator - later President - William McKinley. In 1980, the Alaska National Interest Lands Conservation Act (ANILCA) enlarged the boundary of the park by 4 million acres and redesignated it as Denali National Park and Preserve. The National Park exemplifies interior Alaska's character as one of the world's last great frontiers; its wilderness is largely unspoiled.

More than 650 species of flowering plants as well as many species of mosses, lichens, fungi, algae, and others grace the slopes and valleys of the National Park. Only plants adapted to long, cold winters and short growing seasons can survive in this subarctic wilderness. Permafrost ground underlies many areas of the park, where only a thin layer of topsoil is available to support life. After the continental glaciers retreated from most of the park 10,000 to 14,000 years ago, hundreds of years were required to begin building new soils and revegetation. The dynamic glaciated landscape provides large rivers, countless lakes and ponds, and unique landforms which form the foundation of the ecosystems that thrive in the National Park.

The National Park is well-known for its diversity of wildlife. There are 39 species of mammals, 169 species of birds, 14 species of fish, and one species of amphibian known to occur in the area. There are no reptiles recorded in the National Park. Animal life and activity is dictated by the seasons. Winter is the longest season and the animals that are year-round residents are well-adapted to life in the subarctic. The brief spring season brings the return of 80% of the National Park's bird life, the waking of hibernating bears, and an increase in activity levels of wildlife. Summer is a time for raising young and preparing for migration, hibernation, or survival during the winter. Summer also brings hordes of insects, including mosquitoes. In late summer, king and chum salmon run in the multitude of streams and rivers. In autumn, migrating birds fill the skies and bull moose gather their harems of cows for the mating season.

There are no active mineral projects within the immediate vicinity of Tanana, although the Money Knob/Livengood gold development is approximately 100 mi northeast. As of 2009, the site was believed to contain over 4 million ounces of recoverable gold.⁵⁴⁹

Environmental hazards which can potentially impact Tanana include floods, wildland fires, earthquakes, severe weather, and erosion. While historic flood events are uncommon,

⁵⁴⁷ Ibid.

⁵⁴⁸ U.S. National Park Service (2012). *Denali National Park and Preserve: Nature and Science*. Retrieved from <http://www.nps.gov/dena/naturescience/index.htm> on March 29, 2012.

⁵⁴⁹ Myers, R. 2009. *The Money Knob Gold Deposit*. International Tower Hill Mines, LTD. Retrieved March 13, 2013 from: http://www.arcticminers.org/presentations/Russell_Myers.pdf.

Tanana did experience a major flood event resulting in damages ranging in the millions of dollars. Tanana experiences a yearly ice breakup and snowmelt which can result in ice-jams and localized flooding. The 2009 flood resulted in expensive damage to property and required the evacuation of 75 residents from their homes. Wildland fire risk is also high due to the large expanses of grasses and black spruce throughout the area. Spruce bark beetle infestation of local tree stands also increases the risk of fire. Effects of wildland fires include risks to property and decreased air quality. The City of Tanana has experienced many historic wildland fire events in the past, many of which resulted in loss or damage to property. Tanana is located near the Denali Fault, which in 2002 produced a magnitude 7.9 earthquake; the largest inland earthquake in 150 years. There is an approximate 20-25% chance of a magnitude 6.0 or above earthquake occurring within 50 years. For Tanana, severe weather manifests itself as heavy snow, ice buildup, extreme cold, thunderstorms, and high winds. The community has experienced many severe weather events, although they are not well documented. Based on historical data, damaging weather events occur every 3 years with an annual probability of 33%. Erosion mainly occurs along the banks of the Yukon River, and can result from flooding and stormwater runoff. Tanana is currently experiencing erosion along Front Street and 1st Avenue, along the Yukon River bank. Other high risk areas include areas near Airport Road and a small plane parking and gravel site along White Alice Site Road.⁵⁵⁰

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Tanana in 2010.⁵⁵¹

Current Economy⁵⁵²

Local government provides the most permanent employment in Tanana. The majority of workers are employed with the City, Native Village, and school district. Seasonal jobs include Bureau of Land Management (BLM) firefighting, trapping, wood cutting, and construction. Post-flood rehabilitation efforts have led to the city employing 19 seasonal construction employees. The City also employs individuals to gather and cut wood for biomass energy systems, wood boiler installers and operators, foresters, and engineering biomass systems. Tozitna, Limited, the village corporation for Tanana, runs a gas station and fuel delivery service. Limited wage employment is supplemented by subsistence activities including hunting, fishing, and harvesting wild berries.⁵⁵³ Top employers in 2010 included Tanana Native School, City of Tanana, Tanana City School District, American Mechanical Inc., Tanana Chiefs Conference, Tanana Commercial Co. LLC, Too'gha Inc., Doyon Drilling Inc., The IBEX Group Inc., and VSW Tanana Project.⁵⁵⁴

According to the 2006-10 ACS,⁵⁵⁵ in 2010, the per capita income in Tanana was estimated to be \$17,675 and the median household income was estimated to be \$46,250,

⁵⁵⁰ City of Tanana and Tanana Tribal Council (2011). *Tanana Local Hazard Mitigation Plan*. Retrieved March 13, 2013 from: <http://www.commerce.alaska.gov/dca/plans/Tanana%20-%20Sep%202011.pdf>.

⁵⁵¹ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved March 13, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm#Fairbanks>.

⁵⁵² Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁵³ See footnote 550.

⁵⁵⁴ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵⁵⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not

compared to \$12,077 and \$29,750 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,⁵⁵⁶ the real per capita income in 2000 was \$15,881 and the real household income was \$39,121. This shows that both per capita and household income increased between 2000 and 2010. In 2010, Tanana ranked 172nd of 305 Alaskan communities with estimated per capita income that year, and 159th of 299 Alaskan communities with estimated household income data.

Tanana's small population size may have prevented the American Community Survey from accurately portraying economic conditions.⁵⁵⁷ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Tanana in 2010 was \$13,520, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁵⁵⁸

Based on household surveys conducted for the 2006-2010 ACS, an estimated 60.5% of the population age 16 and over was estimated to be in the civilian labor force, compared to the estimated statewide rate of 68.8%. The local unemployment rate was estimated at 11.8%, compared to the estimated statewide unemployment rate of 5.9%. Approximately 9.9% of local residents were living below the poverty line, compared to an estimated 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Tanana are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Tanana. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 28.8%.

The greatest number of workers were estimated to be employed in the private sector (50.7%), while an estimated 43.7% were employed in the public sector and an estimated 5.6% were self-employed. Out of an estimated 142 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in transportation, warehousing, and utilities (30.1%), public administration (17.6%), educational services, health care, and social assistance (16.3%), and construction (15.7%). Smaller percentages of the workforce were employed in other services, except public administration (2%), professional, scientific, management, administration, and waste management (8.5%), retail trade (7.2%), and agriculture, forestry, fishing, hunting, and mining (2.6%). However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the agriculture, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. According to 2010 ALARI estimates, most (63.1%) employed residents work in local government sectors; followed by construction (8.7%); trade, transportation, and utilities (8.1%); and education and health service sectors (5.4%). Information regarding industry employment trends can be found in Figure 3.

By occupation, most (21.6%) employed residents were estimated to hold management or professional positions; followed by production, transportation, and material moving (20.9%);

collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁵⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵⁵⁷ See footnote 555.

⁵⁵⁸ See footnote 554.

sales or office (20.3%); and service positions (17.6%). No employed residents were estimated to hold natural resources, construction, or maintenance positions, which conflicts with both ALARI estimates and local accounts of employment. There were significant proportional declines in the number of residents employed in service and natural resources, construction, and maintenance positions between 2000 and 2010. Conversely, there were significant proportional gains in the number of residents employed in production, transportation, and material moving positions. Information regarding occupational employment trends can be found in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Tanana (U.S. Census).

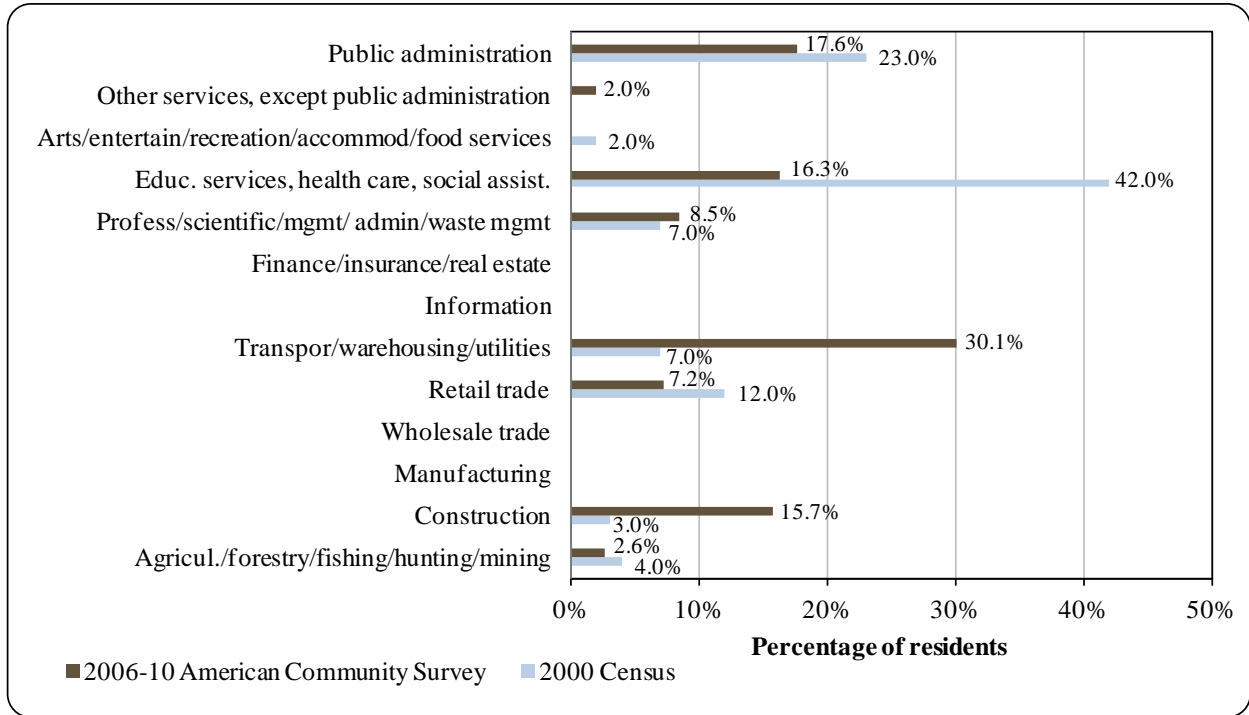
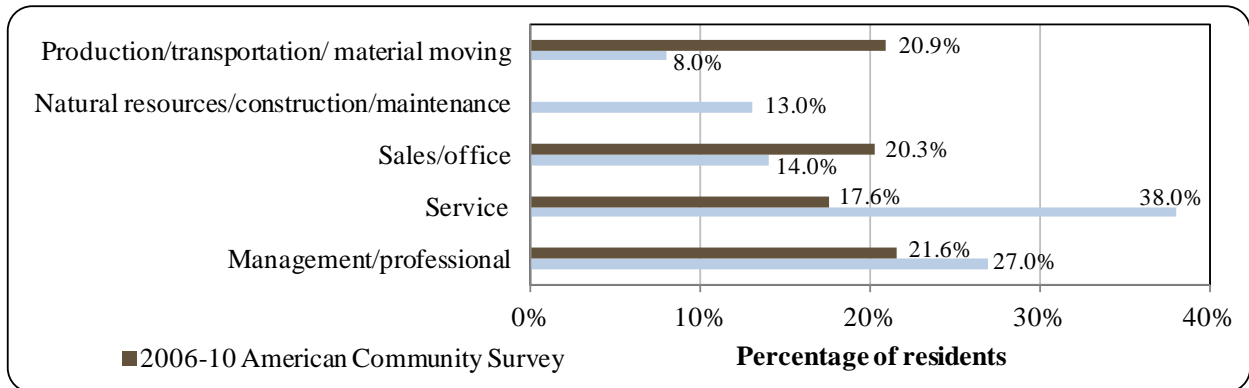


Figure 4. Local Employment by Occupation in 2000-2010, Tanana (U.S. Census).



Governance

Tanana is a First-class city that is not located within an organized Borough. Tanana administers a municipal budget, including revenues from a 2% sales tax. When adjusted for inflation,⁵⁵⁹ total municipal revenues increased by 142.0% between 2000 and 2010 from \$521,913, to \$1.63 million. The significant increase in municipal revenues that followed a declining trend from 2000 to 2005 can be attributed to both a sharp increase in general fund revenues, as well as grants attributed to both FEMA flood relief and other outside revenues. In 2010, locally generated revenues accounted for 29.5% of the total municipal budget, compared to 27.5% in 2000. Total general fund revenues accounted for 48.8% of total municipal revenues (including special revenues) in 2010, compared to 34.5% in 2000. In 2005, when municipal revenues were at their lowest, general fund revenues accounted for 100% of total municipal revenues.⁵⁶⁰

In 2010, most (86.1%) locally generated revenues were collected from service charges; followed by “other” revenues (8.5%) and sales tax revenues (5.4%). Most (34.5%) outside revenues came from state allocated Community Revenue Sharing; followed by USDA dust control grants (18.0%) and payments in lieu of taxes (17.5%). Tanana did not receive any fisheries-related grants between 2000 and 2010. Information about selected aspects of Tanana’s community revenue is presented in Table 2.

Tanana was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is Tozitna, Limited. The regional Native corporation to which Tanana belongs is Doyon, Limited. Doyon, Limited, the Native regional corporation for Interior Alaska, is a for-profit corporation with more than 18,500 shareholders. Established under ANCSA, Doyon is the largest private landowner in Alaska, with more than 12.5 million acres allocated to the corporation under ANCSA. Doyon’s mission is to continually enhance their position as a financially strong Native corporation in order to promote the economic and social well-being of their shareholders and future shareholders, to strengthen their Native way of life, and to protect and enhance their land and resources. As one of the top 10 Alaska-owned businesses, Doyon operates a diverse Family of Companies, including more than a dozen for-profit businesses across the nation in the areas of oil field services, utility management, security, engineering management, land and natural resource development, facility management, construction and tourism.⁵⁶¹

⁵⁵⁹ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

⁵⁶⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

⁵⁶¹ Doyon, Limited (n.d.). *Company Overview*. Retrieved on May 11, 2012 from http://www.doyon.com/corporate_profiles/companyoverview.aspx.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Tanana from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$521,913	\$21,110	\$38,735	n/a
2001	\$457,973	\$28,325	\$30,496	n/a
2002	\$483,923	\$25,370	\$30,496	n/a
2003	\$405,408	\$21,049	\$30,496	n/a
2004	\$428,696	\$20,505	-	n/a
2005	\$228,541	\$21,608	-	n/a
2006	\$236,430	\$21,461	-	n/a
2007	\$587,740	\$17,145	-	n/a
2008	\$751,964	\$23,953	-	n/a
2009	\$1,075,786	\$20,693	\$109,296	n/a
2010	\$1,633,465	\$25,865	\$108,856	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

The closest regional offices of the Alaska Department of Natural Resources (DNR), Alaska Department of Fish and Game (ADF&G), and the Department of Commerce, Community, and Economic Development are located in Fairbanks. The nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Tanana is accessible only by air and river transportation. The city maintains 32 miles of local roads. The city operates a dock on the river and barged goods can be offloaded at a staging and storage area. The state owns and operates the Ralph M. Calhoun Memorial Airport, which has a 4,400-foot long by 150-foot wide lighted gravel runway. Float planes land on the Yukon River. Cars, trucks, snowmobiles, ATVs, and riverboats are used for local transportation.⁵⁶² Round-trip airfare between Tanana and Anchorage in June 2012 was \$494.⁵⁶³

⁵⁶² Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁶³ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

*Facilities*⁵⁶⁴

Water and sewer utilities are operated by Too'gha, Inc., a non-profit utility board. Water is derived from three wells near the Yukon River, and four watering points are available. Nearly all residents now haul their own water from the “washeteria” and use privies and “honeybuckets”. A piped water and sewer system serves the Tanana Hospital, clinic, regional elders' residence, and the tribal council building. Water is treated locally. The landfill uses an incinerator and provides recycling services.

Law enforcement services are provided by the city police department, a Village Public Safety Officer, and state troopers in Fairbanks. Fire and rescue services are provided by the Tanana Tribal Emergency Medical Services. A community hall is operated by the Tanana Tribal Council, as is the Elders Residential Facility. There is both a public and a school library in Tanana.

*Medical Services*⁵⁶⁵

Health care is provided by the Tanana Health Center, which is owned by the Village Council and operated by the Tanana Tribal Council. The health center is a Community Health Aid Program (CHAP) site. Alternate health care is provided by Tanana Emergency Medical Services. The clinic is a qualified Emergency Care Center, and x-ray and pharmacy services are available. Emergency services have limited highway, river, and airport access and are provided by 911 telephone service volunteers and a health aide. The nearest hospital is located in Fairbanks.

*Educational Opportunities*⁵⁶⁶

The Maudrey J. Sommer School in Tanana provides instruction for students in Kindergarten through 12th grade. In 2011 the school had 35 students enrolled and 5 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries^{567,568}

Commercial salmon fishing is permitted along the entire 1,200 mi stretch of the main stem Yukon River in Alaska, as well as the lower 225 mi of the Tanana River. The first recorded commercial salmon harvest in the Yukon River drainage occurred in 1918, although much of the harvest occurred at the river mouth, far from Tanana. Relatively large harvests of Chinook, chum, and coho salmon occurred from 1919 to 1921. The commercial fishery was closed from

⁵⁶⁴ See footnote 562.

⁵⁶⁵ Ibid.

⁵⁶⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁵⁶⁷ Clark, J. H. et al. (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fishery Research Bulletin*, 12(1). Retrieved July 10, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁵⁶⁸ Wolfe, R. J.; Scott, C. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

1925 to 1931 because of concerns over the upriver subsistence fishery. In 1932, commercial fishing was allowed to continue, but at a reduced level. Commercial fishing of chum and coho salmon resumed in 1952. During the 1970s and 1980s, commercial fishing became integrated with subsistence fishing within village economies. Local residents who held commercial fishing permits also operated small-scale nets or fish wheels within family production groups. Among the middle and upper Yukon River, participation rates by local commercial fishermen have been much lower and more variable than in the lower Yukon due to 90% of the commercial Chinook quota amounts being allocated to the lower river districts by the Board of Fisheries in the early 1970s. Peak Chinook salmon harvests occurred in the 1980s when almost 130,000 fish were commercial harvested per year. Commercial harvests averaged about 97,000 fish per year in the 1990s and reduced to 27,000 fish after 2000. Harvests continued to decline, and no commercial harvests occurred during the 2009 through 2012 seasons. Significant reductions in subsistence fishing occurred throughout the entire Yukon system during that time as well.

Annual chum salmon harvests in the area typically totaled over 150,000 fish before 1989. By 2000, the annual catch fell to 19,300 due to run failures. Although chum runs have recovered, annual catches have yet to return to historic levels. Total coho salmon catches increased from around 5,000 to 10,000 fish in the 1960s, to 30,000 to 40,000 by the 1980s. Coho catch declined during the 1990s to levels barely supporting local subsistence needs. In recent decades, Chinook salmon has increased as a part of the subsistence diet in middle Yukon villages, from about three fish per person in 1981, to six fish in 2006. Chum salmon harvests peaked prior to the 1980s, when village residents harvested them for dog food. Chum harvests declined sharply following the sharp reduction of that practice. According to a 2006 ADF&G survey of Tanana households, 50% reported that fewer salmon had impacted their livelihoods.

Tanana is located in Interior Alaska about two mi west of the junction of the Tanana and Yukon Rivers. Due to the inland location of the community, Tanana is not located in a Federal Statistical and Reporting Area, a Pacific Halibut Fishery Regulatory Area, or a Sablefish regulatory area. The community is not eligible for either the Community Development Quota or Community Quota Entity program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Tanana does not have a registered processing plant. The nearest processing plant is located in Fairbanks.

Fisheries-Related Revenue

Tanana received fisheries-related revenue in 2010 from the Shared Fisheries Business Tax; however, the amount received was minimal. This was the only fisheries-related revenue reported between 2000 and 2010. Information on known fisheries-related revenue received by Tanana is presented in Table 3.⁵⁶⁹

⁵⁶⁹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, there were 16 commercial salmon permits issued by the Commercial Fisheries Entry Commission (CFEC) to 16 permit holders in Tanana. The number of salmon CFEC permits and permit holders in Tanana decreased slightly between 2000 and 2010, though those permits were only reported as fished between 2002 and 2008. During this period, between 19% and 28% of salmon CFEC permits were reported as fished in any given year. Of the salmon CFEC permits issued in 2010, the majority were for a fishwheel fishery in the upper Yukon, with the remainder issued for the Upper Yukon gillnet fishery. There were no other CFEC permits, License Limitation Program (LLP) permits, or Federal Fisheries Permits (FFP) in Tanana between 2000 and 2010. Information on permits and permit holders by species between 2000 and 2010 is presented in Table 4. No residents held quota share for halibut, sablefish, or crab fisheries between 2010 and when the programs began (Tables 6 to 8).

In 2010, there were no crew license holders in Tanana, and between 2000 and 2010 there were very few crew license holders in any given year. Between 2000 and 2010, there were no fish buyers or shore-side processing facilities located in Tanana. In 2010, Tanana residents held majority ownership of one vessel (a decrease from two in 2000) and there was one vessel homeported in that year (a decrease from three in 2000). Information on characteristics of the commercial fishing sector in Tanana between 2000 and 2010 is presented in Table 5.

No vessels reported landings in Tanana between 2000 and 2010 (Table 9). In addition, no residents reported landings in 2000, 2001, 2009, and 2010. Landings reported by residents in other years are considered confidential (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Tanana: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$180
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$180</i>
<i>Total municipal revenue⁵</i>	<i>\$521,913</i>	<i>\$457,973</i>	<i>\$483,923</i>	<i>\$405,408</i>	<i>\$428,696</i>	<i>\$228,541</i>	<i>\$236,430</i>	<i>\$587,740</i>	<i>\$751,964</i>	<i>\$1.08 M</i>	<i>\$1.63 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Tanana: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Tanana: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	19	20	20	20	18	18	18	18	16	16	16
	Fished permits	0	0	4	4	4	4	5	4	3	0	0
	% of permits fished	0%	0%	20%	20%	22%	22%	28%	22%	19%	0%	0%
	Total permit holders	20	20	21	20	18	18	18	18	16	16	16
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>19</i>	<i>20</i>	<i>20</i>	<i>20</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>16</i>	<i>16</i>	<i>16</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>5</i>	<i>4</i>	<i>3</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>0%</i>	<i>0%</i>	<i>20%</i>	<i>20%</i>	<i>22%</i>	<i>22%</i>	<i>28%</i>	<i>22%</i>	<i>19%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>20</i>	<i>20</i>	<i>21</i>	<i>20</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>16</i>	<i>16</i>	<i>16</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Tanana: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Tanana ²	Total Net Pounds Landed In Tanana ^{2,5}	Total Ex-Vessel Value Of Landings In Tanana ^{2,5}
2000	2	0	0	2	3	0	0	\$0
2001	1	0	0	2	3	0	0	\$0
2002	0	0	0	2	3	0	0	\$0
2003	0	0	0	1	2	0	0	\$0
2004	0	0	0	1	2	0	0	\$0
2005	0	0	0	1	2	0	0	\$0
2006	1	0	0	1	2	0	0	\$0
2007	2	0	0	1	2	0	0	\$0
2008	1	0	0	1	1	0	0	\$0
2009	0	0	0	1	1	0	0	\$0
2010	0	0	0	1	1	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Tanana: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Tanana: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Tanana: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Tanana: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Tanana Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

While there were sport fish guide businesses registered in Tanana between 2000 and 2003, none were reported as active during that time. Residents held several sport fish guide licenses during that time as well. No sport fish guide businesses were registered in the community, nor did any residents hold sport fish guide licenses between 2004 and 2010. There were 58 sportfishing licenses sold to Tanana residents in 2010 (irrespective of the location of the point of sale), a number which varied between 2000 and 2010. There were no sportfishing licenses sold within the community until 2007, and the number of licenses sold in Tanana has increased slightly since that time to a total of 45 in 2010. The number of sportfishing licenses sold in Tanana was lower than the number of licenses sold to Tanana residents during this period, indicating that some community residents may purchase their licenses and pursue sportfishing in other communities.

Tanana is located within the Yukon River Drainage Alaska Sport Fishing Survey Area. There were no saltwater angler days fished reported in this survey area between 2005 and 2010. Between 2000 and 2004, the number of saltwater angler days fished by non-Alaska residents decreased from 81 in 2000 to 17 in 2004, though there were no angler days fished by non-Alaska residents in 2002 and 2003. The number of saltwater angler days fished by Alaska residents was highly variable between 2000 and 2003, and there were no saltwater angler days fished by Alaska residents between 2004 and 2010. During this period, freshwater angler days fished varied considerably for both Alaska residents and non-Alaska residents. Alaska residents fished consistently more angler days in freshwater in this region between 2000 and 2010, averaging 7,355 angler days fished per year compared to an average of 3,861 angler days fished by non-Alaska residents. Information about the sportfishing sector in and near Tanana is presented in Table 11.

The Alaska Statewide Harvest Survey,⁵⁷⁰ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Tanana: coho salmon, sockeye salmon, whitefish, burbot, Arctic grayling, northern pike, Pacific halibut, rockfish, and other fish. No kept/released log book data were reported for fishing charters out of Tanana between 2000 and 2010.⁵⁷¹

⁵⁷⁰ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁵⁷¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Tanana: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Tanana ²
2000	0	4	55	0
2001	0	2	52	0
2002	0	3	48	0
2003	0	1	56	0
2004	0	0	48	0
2005	0	0	64	0
2006	0	0	69	0
2007	0	0	50	31
2008	0	0	50	35
2009	0	0	57	39
2010	0	0	58	45

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence foods for residents of Tanana include salmon, whitefish, moose, bear, ptarmigan, waterfowl, and berries.⁵⁷² With the exception of the percentage of households using non-salmon fish in 2006 (17%), data were not available for subsistence participation by household between 2000 and 2010. In 2006, the per capita harvest of non-salmon fish (except halibut) was 28,763 pounds (Table 13). According to the ADF&G Division of Subsistence, non-salmon fish species harvested for subsistence use in Tanana in 2006 included burbot, Dolly Varden, grayling, pike, sheefish, sucker, and whitefish.⁵⁷³

For years which data were reported between 2000 and 2010, an average of 102 subsistence salmon permits were issued to Tanana residents, with an average of 43 of those permits reported as fished each year (Table 13). Chum salmon were the primary species harvested under subsistence permits (an average of 19,580 chum salmon per year), along with an average of over 3,000 Chinook salmon and coho salmon each year. Subsistence participants typically harvest Chinook and chum salmon during July and early August, and chum and coho salmon from mid-August through September.⁵⁷⁴

Between 2000 and 2010, data were not reported for subsistence halibut fishing participation (Table 14) or subsistence harvest of marine mammal resources (Table 15).

Table 12. Subsistence Participation by Household and Species, Tanana: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	17%	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵⁷² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁷³ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵⁷⁴ Alaska Department of Fish and Game (n.d.). *Tanana River Personal Use Salmon Fishery*. Retrieved March 21, 2013 from: <http://www.adfg.alaska.gov/index.cfm?adfg=PersonalUsebyAreaInteriorTanana.main>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Tanana: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Pounds of Marine Inverts ²	Pounds of Non-Salmon Fish ²
2000	122	45	2,896	12,266	6,285	n/a	29	n/a	n/a
2001	113	37	4,112	11,186	6,675	n/a	n/a	n/a	n/a
2002	102	35	2,379	9,576	2,032	n/a	n/a	n/a	n/a
2003	97	34	5,332	17,383	3,480	n/a	n/a	n/a	n/a
2004	90	45	2,689	24,608	1,049	n/a	n/a	n/a	n/a
2005	98	51	3,729	25,377	1,616	n/a	n/a	n/a	n/a
2006	104	47	3,794	28,641	3,619	n/a	n/a	n/a	28,763
2007	99	48	5,498	26,825	2,369	n/a	n/a	n/a	n/a
2008	97	48	3,981	20,355	1,511	80	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Tanana: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Tanana: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Two Rivers



People and Place

*Location*⁵⁷⁵

Two Rivers is dispersed from mi 13 to mi 25 of Chena Hot Springs Road. It lies between the Chena and the Little Chena Rivers. The community covers 28.5 sq mi of land. Two Rivers is unincorporated and under the jurisdiction of the Fairbanks North Star Borough.

*Demographic Profile*⁵⁷⁶

In 2010, there were 719 inhabitants in Two Rivers, making it the 86th largest of 352 total Alaskan communities with recorded populations that year. Overall, the population of Two Rivers grew by 58.7% between 1990 and 2010. The population grew by 37.6% between 2000 and 2009 with an average annual growth rate of 2.12%, which was significantly higher than the statewide average of 0.75% and indicative of robust growth. Information regarding population trends from 1990 to 2010 is shown in Table 1.

Two Rivers is predominately a White community. In 2010, 85.7% of residents identified themselves as White, compared to 88.6% in 2000. Also in that year, 3.6% of residents identified themselves as American Indian or Alaska Native, compared to 2.7% in 2000; 1.0% identified themselves as Asian, compared to 2.5% in 2000; 0.1% identified themselves as Black or African American, compared to 0.2% in 2000; 0.1% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.0% in 2000; 8.2% identified themselves as two or more races, compared to 5.2% in 2000; and 1.3% identified themselves as some other race, compared to 0.8% in 2000. In addition, 5.0% of residents identified themselves as Hispanic or Latino, compared to 1.2% in 2000.

The average household size in Two Rivers in 2010 was 2.43, a decrease from 2.9 persons per household in 1990 and 2.72 in 2000. In that year, there were a total of 348 housing units, compared to 209 in 1990 and 192 in 2000. Of the households surveyed in 2010, 73% were owner-occupied, compared to 80% in 2000; 12% were renter-occupied, compared to 12% in 2000; 7% were vacant, compared to 4% in 2000; and 8% were occupied seasonally, compared to 4% in 2000. No residents lived in group quarters between 1990 and 2010.

The gender distribution in 2010 was slightly skewed at 51.7% male and 38.3% female. This was similar to the statewide distribution that year (52.0% male, 48.0% female), and more even than the distribution in 2000 (54.6% male, 45.4% female). The median age in 2010 was 42, which was significantly older than both the statewide median of 34, and 2000 median of 35.

⁵⁷⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

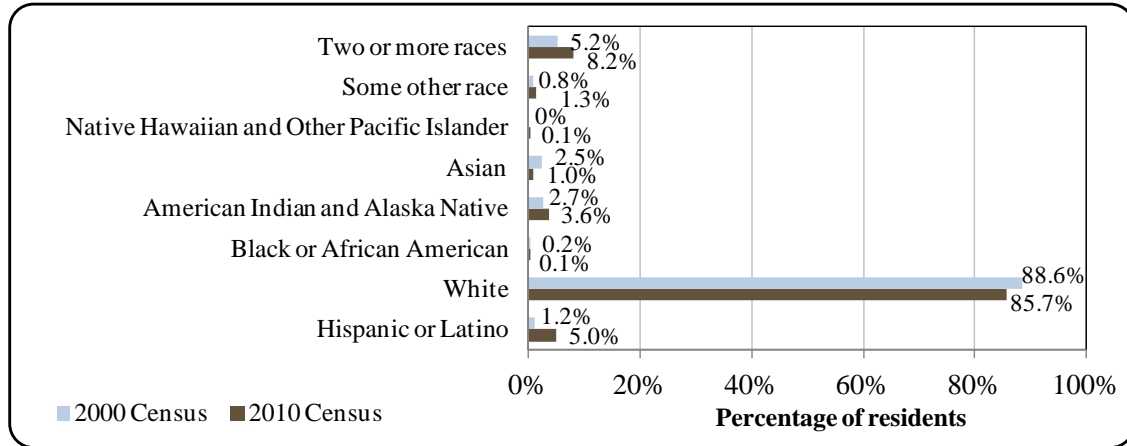
⁵⁷⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Two Rivers from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	453	-
2000	482	-
2001	-	536
2002	-	540
2003	-	602
2004	-	600
2005	-	629
2006	-	627
2007	-	624
2008	-	656
2009	-	663
2010	719	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

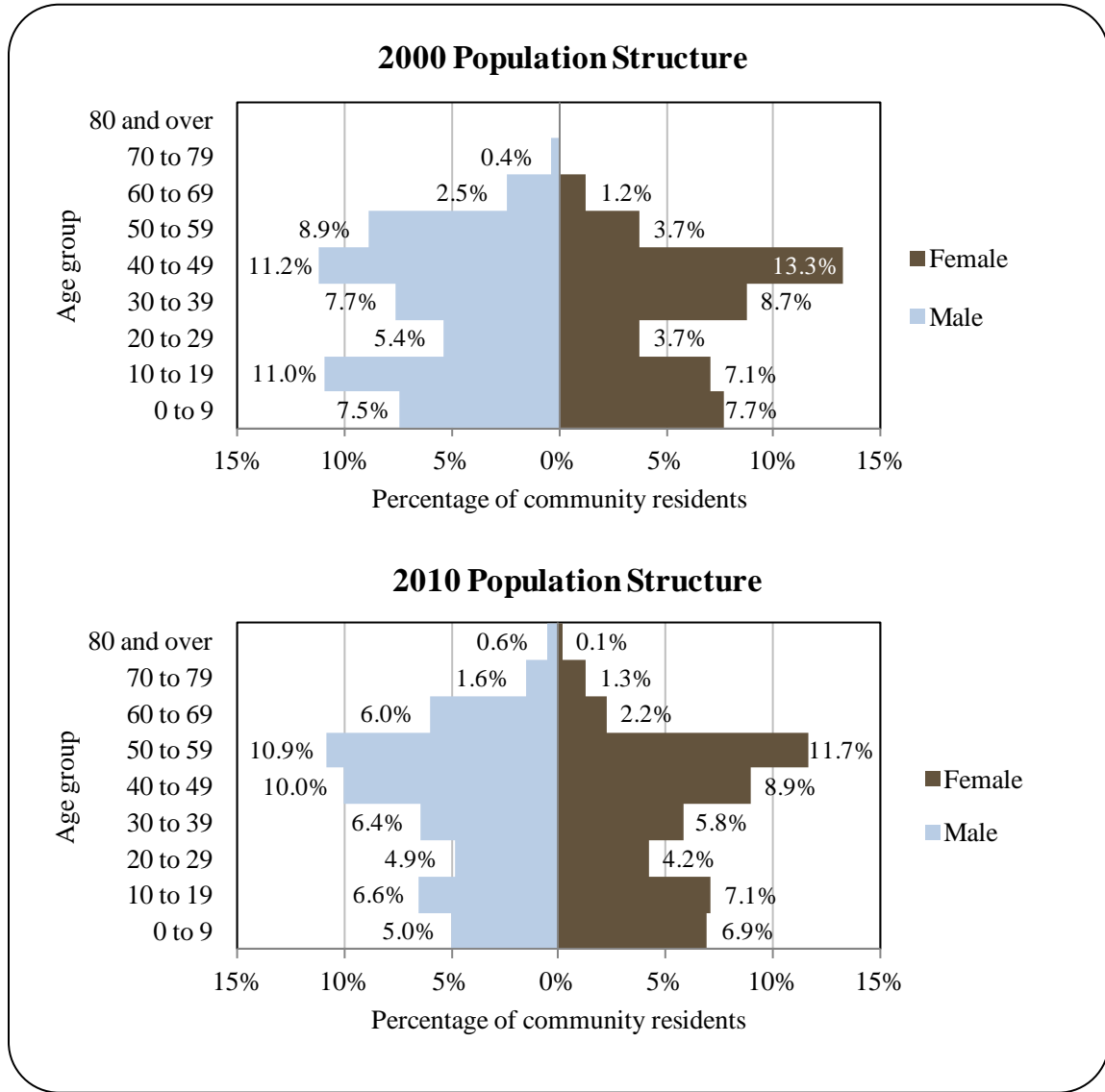
Figure 1. Racial and Ethnic Composition, Two Rivers: 2000-2010 (U.S. Census).



Overall, the gender distribution was less expansive in 2010 than in 2000, which is reflected in the rise in median age. In that year, 25.6% of residents were under the age of 20, compared to 33.3% in 2000; 11.8% were over the age of 59, compared to 4.1% in 2000; 53.7% were between the ages of 30 and 59, compared to 53.5%, and 9.1% were between the ages of 20 and 29, compared to 9.1% in 2000.

Gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 60 to 69 range (6.0% male, 2.2% female), followed by the 0 to 9 (6.9% female, 5.0% male) and 40 to 49 (10.0% male, 8.9% female) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range. Information regarding trends in Two Rivers’ population structure can be found in Figure 2.

Figure 2. Population Age Structure in Two Rivers Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey,⁵⁷⁷ in terms of educational attainment, 100% of Two Rivers residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 6.9% of residents aged 25 and older were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; 49.6% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 27.4% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 9.3% were estimated to have a

⁵⁷⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Bachelor's degree, compared to 17.4% of Alaska residents overall; and 6.9% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*⁵⁷⁸

The Fairbanks region, specifically the Tanana Valley, had been inhabited by Tanana Athabascans for thousands of years prior to European contact. Tanana Athabascans were strictly territorial and used hunting and gathering practices in their semi-nomadic way of life and dispersed habitation patterns. The boundaries of such systems of life were, presumably, fairly fluid and it may explain some references to the presence in the area of Koyukon Athabascans, the northwest neighbors. Fairbanks, like much of central Alaska, was at the center of the race between British, Russian, and American control of the Yukon River from Norton Sound and Saint Michael to Fort Yukon and the current Canadian border.

Two Rivers lies on the banks of the upper Chena River, near the Little Chena River. It was the site of a territorial school. Expansion of the greater Fairbanks area since the 1970s has enabled the community to expand and develop. Dog mushing is a prevalent activity in Two Rivers. There are several community organizations, including churches, the Parent-Teacher Association, the Ski Club, 4-H, and scouts. A recreational complex is available at Pleasant Valley, approximately five mi from Two Rivers, which supports baseball, basketball, tennis, ice skating, and hockey.

Natural Resources and Environment⁵⁷⁹

Interior Alaska experiences seasonal temperature extremes. Average January temperatures range from -19 to -2 °F (-28.3 to -18.9 °C); average July temperatures range from 49 to 71 °F (9.4 to 21.7 °C). Annual precipitation averages 11.5 inches, with 68 inches of snowfall.

Two Rivers is adjacent to the Chena River State Recreation Area (SRA), an area that is administered by the Alaska Department of Natural Resources (DNR) Division of Parks and Outdoor Recreation. The following information was obtained from the Alaska DNR.⁵⁸⁰ Thomas and Robert Swan came across Chena Hot Springs in 1905. When local Fairbanks residents learned of this resource, they requested access, and the U.S. War Department built a trail to the hot springs in 1913. Today, part of the Yukon Quest, an annual 1,000-mi sled dog race, is run on the old trail. The area around the springs attracted attention from gold prospectors and loggers as well. The Chena River became a central mode of transportation, carrying people to the hot springs and timber to the rapidly growing city of Fairbanks. With the start of World War II, large numbers of servicemen settled in the Fairbanks area and developed the wild lands.

In 1967, Alaska legislators designated 15,360 acres as the Chena River SRA. One year later, oil was discovered in Prudhoe Bay and lands were rapidly parceled out and developed. Alaskans fought to preserve the remaining wild lands and their natural resources, and in 1975, 240,000 acs were added to the recreation area.

⁵⁷⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁷⁹ Ibid.

⁵⁸⁰ Alaska Department of Natural Resources (n.d.). *Chena River State Recreation Area Brochure*. Retrieved on April 19, 2012 from <http://dnr.alaska.gov/parks/units/chena/brochure/chenabrochure.pdf>.

Today, the Chena River SRA encompasses 397 sq mi of forests, rivers, and alpine tundra. Visitors may hike, bike, dogsled, ski, horseback ride, ski or, snowmobile, 4-wheel, or snowshoe on over 100 mi of maintained trails. The meandering, class I-II Chena River flows through the park, and is an ideal place for kayaking, canoeing, fishing, swimming, or sunbathing. Chena River SRA abounds with wildlife including moose, bears, lynx, and a multitude of birds. The Chena River, flanked by alpine ridges and towering landforms, cuts through this recreation area. The valley is anchored by Chena Dome (4,421 ft) to the north and the granite tors to the south. The granite tors' weathered, craggy spires of intrusive granite rise above their surroundings. The two-toned Angel Rocks on the east side are the exposed tips of a large granite mass underlying the Chena River area. Fishing in the Chena River is catch and release only, and small game animals bring trappers and hunters to the park during the winter. Sport hunting within the park includes moose, bear, rabbit, grouse, ptarmigan, and fur bearing animals. Fishery resources include Arctic char, broad whitefish, burbot, Chinook salmon, coho salmon, chum salmon, Dolly Varden, Arctic grayling, humpback whitefish, lake trout, least cisco, longnose sucker, northern pike, rainbow trout, round whitefish, and sheefish.

Mineral resources include Fort Knox Gold Mine, which produces about 363,000 ounces of gold per year. Pogo Gold development is located 115 miles east of Fairbanks. Placer mines exist in the area, although on a small scale. Fourteen known or prospective mineral deposits exist east of Fairbanks. The Tanana Valley State Forest contains approximately 1.8 million acres of forestland. In 2003, 1.77 million acres of lands were designated as harvestable.⁵⁸¹

Flooding and wildfire are the most prevalent environmental hazards in the area, although permafrost melt and land subsidence hazards have been increasing. Fires are common, and are mostly caused by summer lightning strikes along the foothills. Frequent flooding occurs across active floodplains.⁵⁸²

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation projects active in Two Rivers in 2010.⁵⁸³

Current Economy⁵⁸⁴

There are numerous local businesses in Two Rivers, and many residents are employed in the Fairbanks area. Three general stores, four restaurants, a post office, a laundromat, the University of California at Los Angeles' High Power Auroral Stimulation observatory, agricultural enterprises, a recreational vehicle park, and other small businesses exist in Two Rivers. Several residents are involved in dog mushing or raising horses, due to the excellent trails in the area. Top employers in 2010⁵⁸⁵ included Fairbanks North Star School District, University of Alaska, Banner Health System, State of Alaska, Fairbanks Gold Mining Inc., Fairbanks North Star Borough, Tanana Chiefs Conference, Midnight Sun Subway LLC, Fountainhead Development Inc., and Wal-Mart Associates Inc.

⁵⁸¹ Fairbanks Northstar Borough (2003). *Comprehensive Economic Development Strategy*. Retrieved July 18, 2012 from: <http://www.commerce.state.ak.us/dca/plans/FairbanksNorthStarBorough-EDP-2003.pdf>.

⁵⁸² Ibid.

⁵⁸³ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved March 25, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm#Interior>.

⁵⁸⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁸⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

In 2010,⁵⁸⁶ per capita income in Two Rivers was estimated to be \$44,736 and the median household income was estimated to be \$161,705, compared to \$24,351 and \$58,571 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,⁵⁸⁷ the real per capita income in 2000 is shown to have been \$32,021 and the real 2000 median household income was \$77,020. This shows that both per capita income and median household income increased in Two Rivers between 2000 and 2010. In 2010, Two Rivers ranked ninth out of 305 Alaska communities from which per capita income was estimated, and first out of 299 Alaska communities from which median household income was estimated. However, Two Rivers' small population size may have prevented the American Community Survey from accurately portraying economic conditions.⁵⁸⁸ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Two Rivers in 2010 was \$19,560, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁵⁸⁹

Based on the 2006-10 American Community Survey, 79.3% of the population age 16 and older was estimated to be part of the civilian labor force, compared to an estimated statewide rate of 68.8%. The local unemployment rate was estimated to be zero, compared to an estimated statewide rate of 5.9%. An estimated 9.5% of local residents were living below the poverty line, compared to an estimated 9.6% of Alaskans overall. There is a possibility that unemployment and poverty statistics are inaccurate given the small population of Two Rivers. A more accurate estimate based on 2010 ALARI estimates indicates that the unemployment rate in was 9% (based on unemployment insurance claimants). It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Two Rivers are not reflective of the value of subsistence to the local economy. In addition, 2010 ALARI estimates are based on private and state employment figures and do not take into account self-employed or federally-employed workers.

Based on household surveys conducted for the 2006-2010 American Community Survey, the greatest percentage of workers was employed in the private sector (82.7%), while 4.2% of workers were employed in the public sector, 6.5% were self-employed, and 6.5% were unpaid family workers. Out of 260 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (71.5%). Smaller percentages of the population were employed in public administration (4.4%), arts, entertainment, recreation, accommodations, and food services (6.6%), finance, insurance, and real estate (6.1%), retail trade (6.1%), and construction (5.3%). Between 2000 and 2010, there was significant variation in employment by industry sector. The greatest proportional changes occurred in education services, health care, and social assistance sectors, followed by construction and transportation, warehousing, and utilities sectors (Figure 3). No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing*

⁵⁸⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵⁸⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵⁸⁸ See footnote 577.

⁵⁸⁹ See footnote 585.

section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

By occupation type, most (58.3%) employed residents were estimated to hold management or professional positions; followed by natural resources, construction, or maintenance (17.5%); service (6.6%); and sales or office positions (6.1%). Again, there was significant proportional variation in employment by occupation type between 2000 and 2010. Between those years, the greatest change occurred in management and professional occupations; followed by natural resources, construction, and maintenance; and production, transportation, and material moving positions (Figure 4).

Figure 3. Local Employment by Industry in 2000-2010, Two Rivers (U.S. Census).

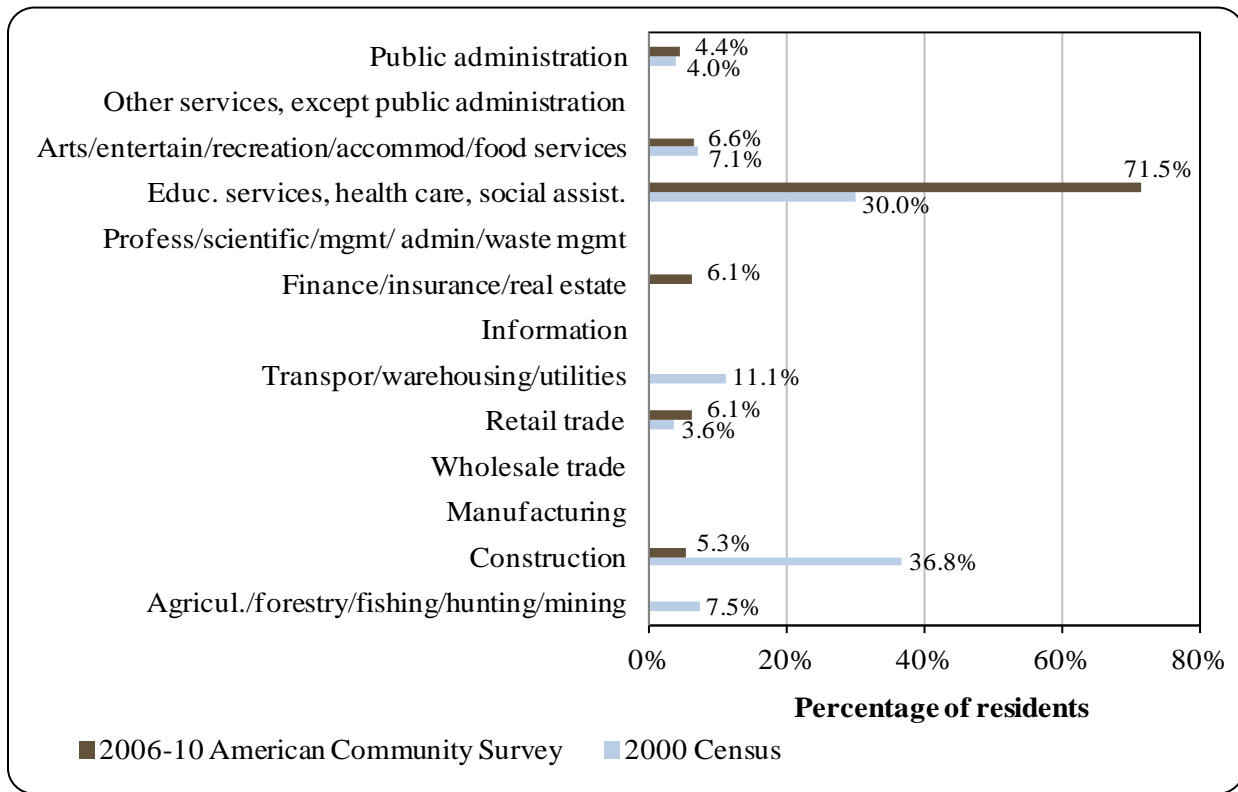
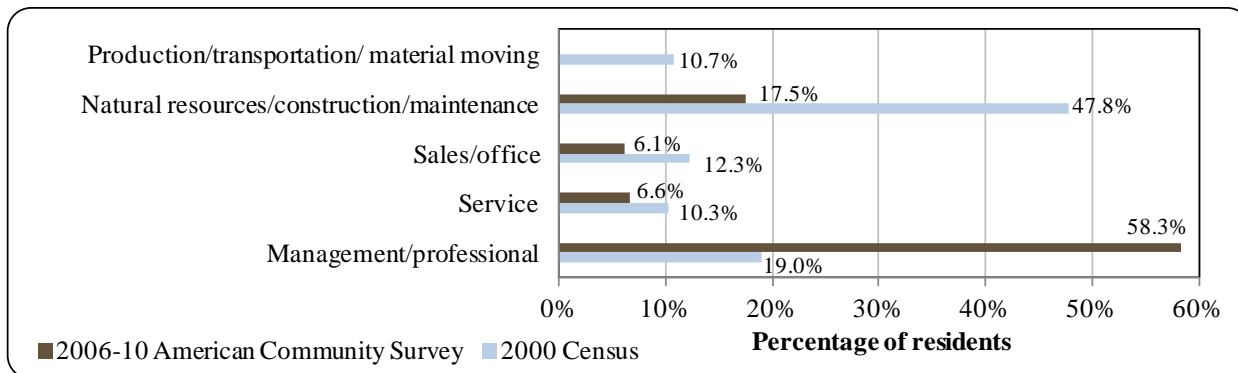


Figure 4. Local Employment by Occupation in 2000-2010, Two Rivers (U.S. Census).



Governance

Two Rivers is an unincorporated town located in the Fairbanks North Star Borough. Because of the unincorporated status of Two Rivers, no municipal taxes were administered between 2000 and 2010. In addition, Two Rivers did not receive any State/Community Revenue Sharing contributions or any fisheries-related grants between 2000 and 2010 (Table 2).

Two Rivers was not included in the Alaska Native Claims Settlement Act (ANCSA) and is not federally recognized as a Native village. However, the community is represented by Doyon, Ltd., a regional ANCSA chartered for-profit Alaska Native corporation.⁵⁹⁰

The nearest offices of the Alaska Department of Natural Resources, Department of Commerce, Community, and Economic Development, and Alaska Department of Fish and Game (ADF&G) are located in Fairbanks. The nearest offices of the National Marine Fisheries Service (NMFS), U.S. Immigration and Customs Enforcement, and Bureau of Citizenship and Immigration Services are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Two Rivers from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁵⁹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Infrastructure

Connectivity and Transportation

Local roads connect to the Alaska road system. Airport, railway, and highway connections are available in nearby Fairbanks (approximately 25 mi).⁵⁹¹ In June 2012, roundtrip airfare between Fairbanks and Anchorage was \$256.⁵⁹²

*Facilities*⁵⁹³

Homes in Two Rivers have individual wells or have water delivered, use septic tanks, and are fully plumbed. Nearly one-fourth of homes in this area are used only seasonally. Refuse is collected from dumpsters and transported to the borough landfill. Law enforcement services are provided by state troopers in Fairbanks, and fire and rescue services are provided by Two Rivers Rescue. Two Rivers has a Boys and Girls Club and a community hall.

*Medical Services*⁵⁹⁴

Medical care is provided by the Fairbanks hospitals. Alternate health care is provided by Two Rivers Rescue and Fairbanks hospitals. Emergency services have highway and helicopter access and are provided by a 911 telephone service and volunteers.

*Educational Opportunities*⁵⁹⁵

The Two Rivers School provides instruction to students in pre-school through 9th grade. In 2011, the school had 91 students enrolled and 8 teachers employed. Beyond 9th grade, students attend school in nearby Fairbanks.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Evidence of historic use of the Tanana River was documented by early Euro-American explorers. The subsistence fishery was essentially unrestricted until a regulatory system was put into place in 1964. In the beginning, permits were issued on an individual bases with no harvest limits or eligibility criteria. In 1971, the first harvest limits for salmon were imposed. These

⁵⁹¹ Ibid.

⁵⁹² Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

⁵⁹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁹⁴ Ibid.

⁵⁹⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

limits were 25 Chinook and 200 “other salmon” per person. Since then, restrictions on numbers of fish and fishing periods have been increased.⁵⁹⁶

Many Fairbanks area residents participate in personal use fisheries on the Tanana River. In a 1980 ADF&G survey of Tanana River fishermen, 76.9% of respondents indicated that they lived in the greater Fairbanks area. Of those surveyed that year, 58.5% reported that subsistence harvest activities account for “half” or “some” of their annual meat consumption. Only 7.8% reported that subsistence activities account for “all” of their annual meat consumption.⁵⁹⁷

Two Rivers lies on the banks of the upper Chena River, near the Little Chena River. Due to its inland location, Two Rivers is not located within any Federal Statistical and Reporting Area, Pacific Halibut Fishery Regulatory Area, or Sablefish Regulatory Area. Two Rivers is not eligible for the Community Development Quota or Community Quota Entity programs.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Two Rivers does not have a registered processing plant. The nearest processing plant is located in Fairbanks.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Two Rivers (Table 3).

Commercial Fishing

In 2010, there were two residents of Two Rivers holding commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for the statewide salmon hand troll fishery. The number of salmon CFEC permits issued in Two Rivers increased from one to two between 2000 and 2010, but none of the permits issued was reported as fished during this period. No Two Rivers residents held Federal Fisheries Permits or License Limitation Program (LLP) permits between 2000 and 2010 (Table 4).

Between 2000 and 2010, the number of crew license holders in Two Rivers varied between zero and three, with one crew license holder in the community in 2010. There were no fish buyers or shore-side processing facilities in Two Rivers between 2000 and 2010. Between 2000 and 2004, there were between two and three vessels owned primarily by Two Rivers residents and there was one vessel homeported in Two Rivers between 2001 and 2004. Between 2005 and 2010, there were no vessels owned primarily by Two Rivers residents and no vessels homeported in Two Rivers. There were no vessels landing catch in Two Rivers between 2000 and 2010, and therefore there are no landings or associated ex-vessel revenue to report during this period. Information on characteristics of the commercial fishing sector in Two Rivers is provided in Table 5.

There were no quota share account holders in Two Rivers for halibut or sablefish between 2000 and 2010 (Tables 6 and 7) or for crab between 2005 and 2010 (Table 8). As

⁵⁹⁶ Caulfield, R. A. (1981). *Final Report of the Survey of Permitholders in the Tanana River Subsistence Salmon Permit Fishery*. Retrieved July 12, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp014.pdf>.

⁵⁹⁷ Caulfield, R. A. (1980). *Interim Report on the Survey of Permitholders in the Tanana Subsistence Permit Fishery*. Retrieved July 12, 2012 from: <http://www.arlis.org/docs/vol1/10883183.pdf>.

previously stated, there were no landings or ex-vessel revenue recorded in Two Rivers between 2000 and 2010 (Table 9). Landings by Two Rivers residents between 2000 and 2004 were considered confidential due to a small number of participants, and no landings were recorded by Two Rivers residents between 2005 and 2010 (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Two Rivers: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Two Rivers: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Two Rivers: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	1	1	1	1	2	2	2	2	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	2	2	2	2	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Two Rivers: 2000-2010.

Year	Crew Licenses Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Two Rivers ²	Total Net Pounds Landed In Two Rivers ^{2,5}	Total Ex-Vessel Value Of Landings In Two Rivers ^{2,5}
2000	1	0	0	2	0	0	0	\$0
2001	0	0	0	2	1	0	0	\$0
2002	0	0	0	3	1	0	0	\$0
2003	0	0	0	3	1	0	0	\$0
2004	0	0	0	3	1	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	1	0	0	0	0	0	0	\$0
2008	3	0	0	0	0	0	0	\$0
2009	2	0	0	0	0	0	0	\$0
2010	1	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Two Rivers: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Two Rivers: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Two Rivers: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Two Rivers: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Two Rivers Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	0	0	0	0	0	0
Finfish	--	--	--	--	--	0	0	0	0	0	0
Halibut	--	--	--	--	--	0	0	0	0	0	0
Herring	--	--	--	--	--	0	0	0	0	0	0
Other Groundfish	--	--	--	--	--	0	0	0	0	0	0
Other Shellfish	--	--	--	--	--	0	0	0	0	0	0
Pacific Cod	--	--	--	--	--	0	0	0	0	0	0
Pollock	--	--	--	--	--	0	0	0	0	0	0
Sablefish	--	--	--	--	--	0	0	0	0	0	0
Salmon	--	--	--	--	--	0	0	0	0	0	0
<i>Total²</i>	--	--	--	--	--	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Herring	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Despite there being several sport fish guide businesses registered in the community, none were active between 2000 and 2010. This means that no kept/released logbook data were reported for fishing charters out of Two Rivers during those years.⁵⁹⁸ The number of individuals holding sport fish guide licenses varied between zero and four during this period, with three sport fish guide license being held in 2010.

The number of sportfishing licenses sold to Two Rivers residents (irrespective of the location of the point of sale) remained relatively stable between 2000 and 2009 at an average of 148 per year, and then increased to 170 in 2010. Few sportfishing licenses were sold in the community until 2005, at which time between 185 and 255 licenses were sold annually. The number of licenses sold in the community was greater than the number of licenses sold to community residents between 2005 and 2010, indicating the potential that visitors to Two Rivers were pursuing sportfishing activities during this period.

Two Rivers is located within the Tanana River Drainage Alaska Sport Fishing Survey Area. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, the number of angler days fished by non-Alaska residents decreased between 2000 and 2004, with no angler days fished by non-Alaska residents between 2005 and 2010. The number of angler days fished by Alaska residents in this region also declined between 2000 and 2003, with no saltwater angler days fished by Alaska residents between 2004 and 2010. In freshwater, Alaska residents fished considerably more angler days per year (an average of 88,125) than non-Alaska residents (an average of 9,480). This information about the sportfishing sector in and near Two Rivers is displayed in Table 11.

Table 11. Sport Fishing Trends, Two Rivers: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Two Rivers ²
2000	0	1	142	0
2001	0	4	153	9
2002	0	4	133	3
2003	0	3	152	0
2004	0	3	152	47
2005	0	4	157	250
2006	0	2	142	185
2007	0	2	151	224
2008	0	4	145	248
2009	0	3	157	192
2010	0	3	170	255

⁵⁹⁸ Alaska Department of Fish and Game (2011). *Alaska sportfishing charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not public available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Two Rivers: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	11,517	110,246
2001	29	14	10,744	80,391
2002	0	89	9,733	98,884
2003	0	17	7,502	92,432
2004	17	0	11,853	104,633
2005	0	0	11,335	82,063
2006	0	0	8,216	71,461
2007	0	0	9,327	91,629
2008	0	0	7,613	64,722
2009	0	0	7,415	85,082
2010	0	0	9,025	87,834

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

The Alaska Statewide Harvest Survey,⁵⁹⁹ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Two Rivers: Chinook salmon, coho salmon, sockeye salmon, rainbow trout, Arctic grayling, and northern pike.

Subsistence Fishing

Two Rivers is not designated as “rural” by the Federal Subsistence Board, meaning that rural subsistence preference is not granted on federal lands. However, Alaska Native preference is still afforded to some residents, and state subsistence rights for personal use fisheries are available to others. Data on subsistence participation by household and species and per capita subsistence harvest were not reported for Two Rivers between 2000 and 2010 (Table 12). In years for which data were reported for salmon harvests between 2000 and 2010, an average of 22 subsistence salmon permits was issued to Two Rivers residents, with an average of 20 permits returned during this period. Sockeye salmon were the primary species harvested under subsistence permits (an average of 358 sockeye per year), along with several Chinook salmon and coho salmon each year (Table 13).

⁵⁹⁹ Alaska Department of Fish and Game (2011). *Alaska Sportfishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Data regarding subsistence harvest of marine invertebrates, non-salmon fish (Table 13), halibut (Table 14) and marine mammals (Table 15) were not reported between 2000 and 2010.

Additional Information

The Two Rivers Dog Musher’s Association represents dog mushers and dog-powered sports fans working together to promote the sport of dog mushing and to organize races, social events, and fund raising in the Two Rivers area, to maintain the winter trail system along Chena Hot Springs Road, to address trail issues relating to the interests of the dog mushers in the Two Rivers Area, and to mentor youth and mushers in the ethical treatment of sled dogs.⁶⁰⁰

Table 12. Subsistence Participation by Household and Species, Two Rivers: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁶⁰⁰ Two Rivers Dog Musher’s Association (n.d.). *Our Purposes*. Retrieved April 19, 2012 from http://www.trdma.org/about_trdma.htm.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Two Rivers: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	18	18	3	n/a	22	n/a	224	n/a	n/a
2001	26	26	8	n/a	9	n/a	507	n/a	n/a
2002	21	20	7	n/a	11	n/a	309	n/a	n/a
2003	27	25	5	n/a	n/a	n/a	334	n/a	n/a
2004	21	19	9	n/a	4	n/a	326	n/a	n/a
2005	20	18	7	n/a	n/a	n/a	421	n/a	n/a
2006	23	20	7	n/a	n/a	n/a	457	n/a	n/a
2007	26	20	8	n/a	5	n/a	387	n/a	n/a
2008	18	15	5	n/a	1	n/a	258	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Two Rivers: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Two Rivers: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Wiseman



People and Place

*Location*⁶⁰¹

Wiseman is located on the middle fork of the Koyukuk River, at the junction of Wiseman Creek in the Brooks Range. It is about 260 mi northwest of Fairbanks off the Dalton Highway, 13 mi north of Coldfoot, and 75 mi north of the Arctic Circle. Wiseman is located in a valley, at 1,180 ft elevation. The area encompasses 78.1 sq ft of land. Wiseman is located in the Yukon-Koyukuk Census Area and is not incorporated into a municipality or under the jurisdiction of a borough.

*Demographic Profile*⁶⁰²

In 2010, there were 14 residents living in Wiseman, ranking it 335th of 352 Alaskan communities in terms of population size. Between 1990 and 2010 the population fell by 57.6%. Between 2000 and 2009 the population fell by 23.8% with an average annual growth rate of -1.85%, which was significantly less than the statewide average of 0.75% and indicative of a steadily declining population. Further information regarding population trends can be found in Table 1.

Wiseman's racial and ethnic composition was predominately White in 2010. In that year, 92.9% of residents identified themselves as White, compared to 81.0% in 2000; and 7.1% identified themselves as two or more races, compared to 0.0% in 2000. Information regarding racial and ethnic trends in Wiseman can be found in Figure 1.

The average household size in 2010 was 2.8, compared to 3.0 in both 1990 and 2000. In that year there were a total of 25 housing units, compared to 37 in 1990 and 30 in 2000. Of the households surveyed in 2010, 20% were owner-occupied, compared to 17% in 2000; 0% was renter-occupied, compared to 7% in 2000; 4% were vacant, compared to 3% in 2000; and 76% were occupied seasonally, compared to 73% in 2000. Between 1990 and 2010 no residents were reported to be living in group quarters.

Gender distribution in 2010 exactly even at 50.0% male and 50.0% female, which was more even than the distribution statewide (52.0% male, 48.0% female) and significantly more even than the distribution in 2000 (57.1% male, 42.9% female). The average age that year was 28.5 years, compared to 33.8 years statewide and 33.5 years in 2000.

Because of its small population size, Wiseman's population structure was irregular in both 2000 and 2010 making it difficult to discern a trend. In 2010, 50.2% of residents were under the age of 20, compared to 47.7% in 2000; 7.2% were over the age of 59, compared to 4.8% in

⁶⁰¹ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁰² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

2000; 43.0% were between the ages of 30 and 59, compared to 47.7% in 2000; and 0.0% were between the ages of 20 and 29, compared to 0.0% in 2000.

Gender distribution by age cohort was somewhat less even in 2010 than it was in 2000, with female biases occurring within the 70 to 79 and 30 to 39 ranges, and male biases occurring in the 50 to 59 and 0 to 9 ranges (Figure 2).

The U.S. Census’ 2006-2010 American Community Survey (ACS) did not capture educational attainment estimates for the Wiseman.

Table 1. Population in Wiseman from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	33	-
2000	21	-
2001	-	25
2002	-	25
2003	-	27
2004	-	26
2005	-	17
2006	-	22
2007	-	17
2008	-	16
2009	-	16
2010	14	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Wiseman: 2000-2010 (U.S. Census).

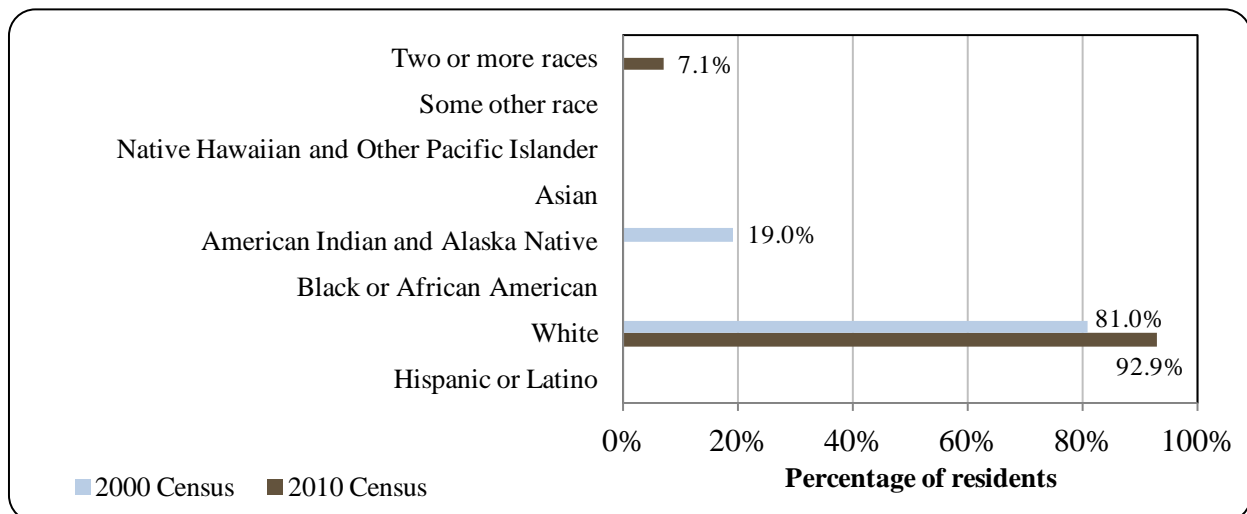
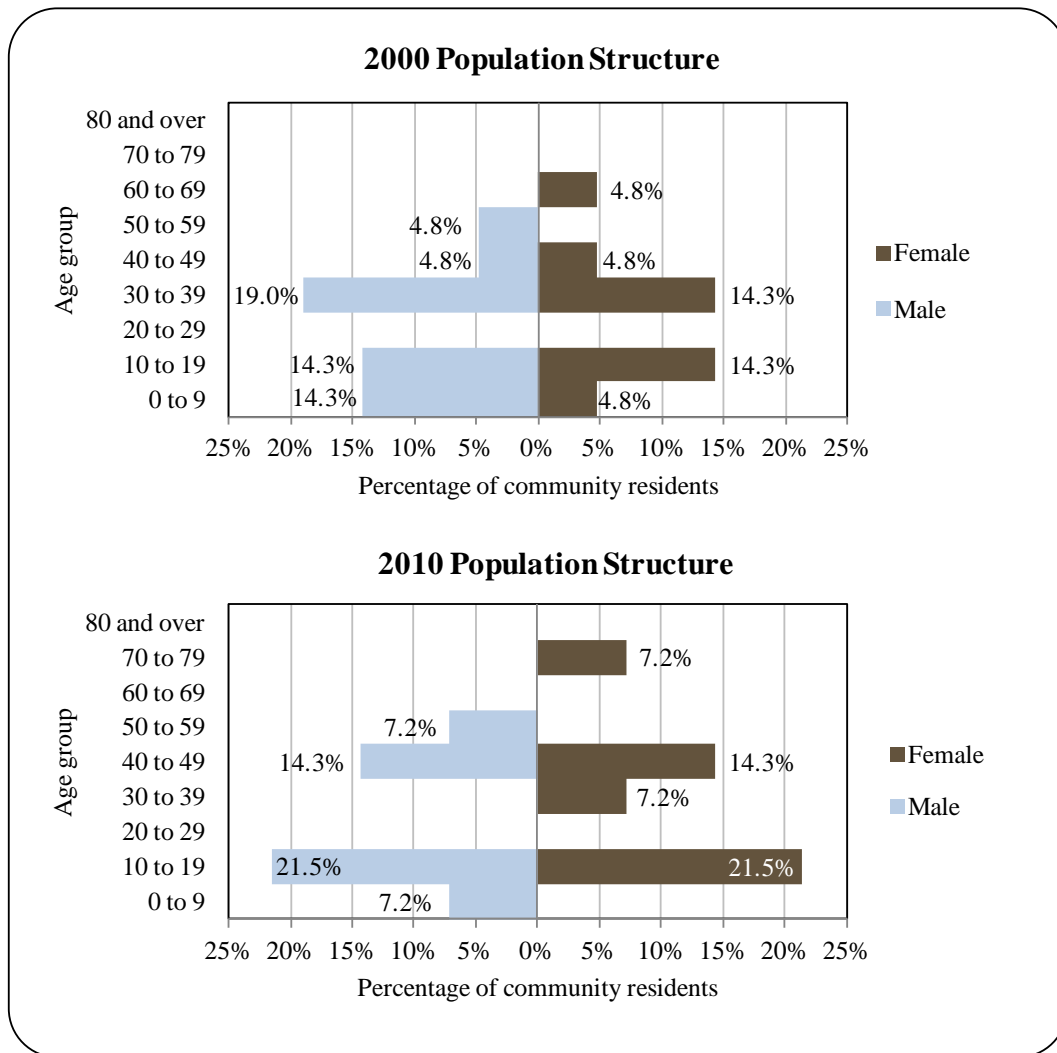


Figure 2. Population Age Structure in Wiseman Based on the 2000 and 2010 U.S. Decennial Census.



History, Traditional Knowledge, and Culture

Occupation of the Brooks Range and northern Alaska can be traced back at least 10,000 years. During the last glacial maximum, successive waves of immigrants arrived in the Arctic, either through an ice free corridor connecting North America and Siberia, coastal routes along the Bering Land Bridge, or both.

The earliest evidence of human occupation is dated to approximately 8,500 to 11,000 years ago; however, there is some disagreement over ages within archaeological record. Evidence related to an early American Paleo-Arctic tradition have been found in the vicinity of Itkillik Lake, the upper Kobuk River, and near Anaktuvuk Pass.⁶⁰³

⁶⁰³ National Park Service (1988). *Final Environmental Impact Statement: Wilderness Recommendation: Gates of the Arctic National Park and Preserve, Alaska*. Retrieved May 22, 2012 from: <http://babel.hathitrust.org/>.

The northern Archaic people arrived in northern Alaska from southern forested regions about 6,500 years ago. By about 1,000 years ago, the Western Thule culture appeared in the archaeological record. The Thule spread throughout the Arctic, eventually reaching as far east as Greenland and Labrador. The Nunamiut culture, which occupied much of the Brooks Range and surrounding tundra descended from the Thule. The south slope of the Brooks Range was traditionally occupied by central Athabaskan groups. In historic times, there were many interactions between northern Eskimo groups and central Athabaskan groups throughout the Brooks Range area.⁶⁰⁴

In 1850, the central Brooks Range was still largely isolated from the influences of European and American culture. The mountains were occupied by semi-nomadic bands of Nunamiut hunters. Kobuk Eskimos and Koyukon and Kutchin Athabaskans made seasonal journeys into the area as well. Principal activities included hunting, fishing, and trading among coastal and interior groups. In the mid-1880s, American explorers began moving into the central Brooks Range. Around this time, waves of miners and trappers began occupying the area.⁶⁰⁵

In response to increased mining on the Nolan Creek and the Hammond River in the early 1900s, locals began to abandon Coldfoot, 13 mi to the south. Supplies were brought up the Koyukuk River to Wiseman Creek by horse-drawn barge, where a new town developed in 1907. It was first called Wrights, then Nolan, and finally Wiseman in 1923. A log post office operated from about 1909 to 1956, with mail and supplies freighted or flown in. A territorial school operated from 1934 to 1941. By 1974, the 414-mi pipeline "haul road" was constructed, which passes near Wiseman. Travel was restricted for the general public until December 1994. The road is now known as the Dalton Highway, named for James William Dalton, an arctic engineer. In 1979, Florence Jonas (or Kalhabuk), the last full Eskimo resident, passed away in Wiseman at the age of 82. A nearby mountain and chapel were named in her honor. The school, operated in the community center, was closed in November 2002, because it was unable to meet the state's minimum enrollment. Since then, children have been home schooled.⁶⁰⁶

Natural Resources and Environment⁶⁰⁷

The climate of the area is strongly continental. Winter temperatures can be extremely cold: -50 to -70 °F (-46 to -57 °C) in January and February. There is a total loss of sunlight between December 5 and January 9. High temperatures occasionally reach 90 °F (32 °C). Annual precipitation averages 12-15 inches, and snowfall averages 36 inches. The Aurora Borealis is especially vivid over this portion of the Brooks Range and is visible from September through March.

Wiseman is located in a valley within the southern portion of the Brooks Range and right outside the Gates of the Arctic National Park and Preserve (GANPP). The area is remote and rugged with ridges that reach elevations of 4,000 to 8,000 ft or more. The ridges are actually the northernmost expanse of the Rocky Mountain system. The topography of the region is shaped by tectonic uplift, deformation, folding, fracturing, and overlapping. Uplift, erosion, and heavy glaciations account for the landscape profile and U-shaped valleys. Subsurface geology consists

⁶⁰⁴ Ibid.

⁶⁰⁵ Ibid.

⁶⁰⁶ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁰⁷ Ibid.

of metamorphic quartz mica and chloritic schists which form belts along the south flanks of the Brooks Range.

Soils vary by location and are dependent on topography, aspect, fire history, drainage, permafrost, and parent material. Most mountainous areas are characterized by thin, sandy soils. Hilly moraines and south-facing colluvial slopes consists of gravelly loams. There are also areas of thin peaty mat and occasional pockets of permafrost. Lower elevations are covered by a gray to brown silty loam overlain by a peaty organic layer. Soils often overlay continuous permafrost zones.

Regional vegetation is consistent with taiga (boreal forest), tundra, and shrub thicket types. Alpine tundra occurs in mountainous areas and may be populated with willows, dryas, heather, lichens, grasses, sedges, and herbs. Moist tundra is found in moderately drained foothills and along valleys. Cottongrass dominates landscapes. Other plants include grasses, dwarf birch, willows, and Labrador tea. Taiga reaches its northern limit at around the southern border of the Brooks Range. As such, spruce stands are scattered and mixed with hardwoods, such as birch or aspen. Other vegetation includes willows, blueberry, cranberry, bearberry, crowberry, lichens, mosses, Labrador tea, and poplar.

Mammals within the GANPP include brown/grizzly bears, moose, lemmings, voles, ground squirrel, marmot, beaver, mink, otter, wolverine, fox, wolf, lynx, marten, snowshoe hare, moose, caribou, and Dall sheep. Freshwater fish include Arctic grayling, lake trout, northern pike, Arctic char, whitefish, sheefish, salmon, long-nosed sucker, burbot, nine-spined stickleback, and slimy sculpin.

Minerals found in the region include copper, gold, lead, and zinc. There are several polymetallic deposits located at Wiseman, Nolan Creek, and Michigan Creek.⁶⁰⁸ Placer mines have operated historically around the Nolan-Hammond River areas outside of Wiseman.

Environmental hazards primarily come in the form of extreme cold events, permafrost melt, wildfire, and erosion. Solifluction, or soil creep, is common on moderate slopes and can be associated with permafrost thaw. Smoke and haze associated with forest and tundra fires can degrade local air quality.

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active in Wiseman as of 2010.⁶⁰⁹

Current Economy⁶¹⁰

Very little information regarding Wiseman's economy is available. Roadside services and transportation of materials for the North Slope Borough provide a few positions in Wiseman. Several residents sell handcrafted items and furs. Self-employment, seasonal visitor service jobs, seasonal highway maintenance jobs, and the National Park Service provide income.⁶¹¹

Economic data for 2010 was not captured by the 2006-2010 ACS; however, economic conditions for that year were estimated by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development

⁶⁰⁸ Alaska Department of Commerce (n.d.). *Mineral Resources of Alaska*. Retrieved May 22, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁶⁰⁹ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved March 28, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

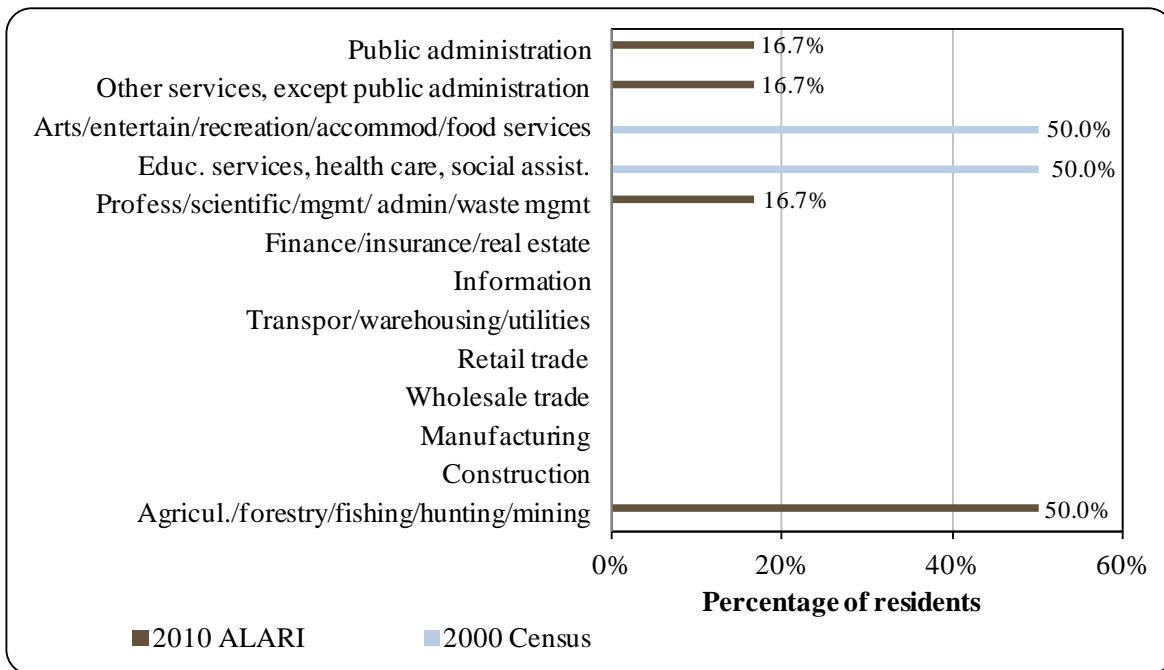
⁶¹⁰ Unless otherwise noted, all monetary data are reported in nominal values.

⁶¹¹ See footnote 609.

(DOLWD).⁶¹² In that year, wages reported for residents totaled \$137,413.⁶¹³ When compared with the total number of residents reported by the 2010 Census, per capita income was estimated at \$9,815. In 2000, per capita income was \$8,211; however, after adjusting for inflation by converting 2000 values to 2010 dollars,⁶¹⁴ the real per capita income (\$10,797) indicates a slight decrease in individual earnings. In addition, Wiseman was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁶¹⁵

According to ALARI records, six residents were employed in private or state government sectors in 2010. Of those six, an estimated 50% worked in natural resources and mining sectors, an estimated 16.7% worked in professional or business service sectors, an estimated 16.7% worked in state government sectors, and an estimated 16.7% worked in other, “non-specified” sectors. In contrast, in 2000, the U.S. Census Bureau reported that 50.0% of employed residents worked in arts, entertainment, recreation, accommodation, and food service sectors; and 50.0% worked in education services, healthcare, and social assistance sectors. Further information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Wiseman (U.S. Census).



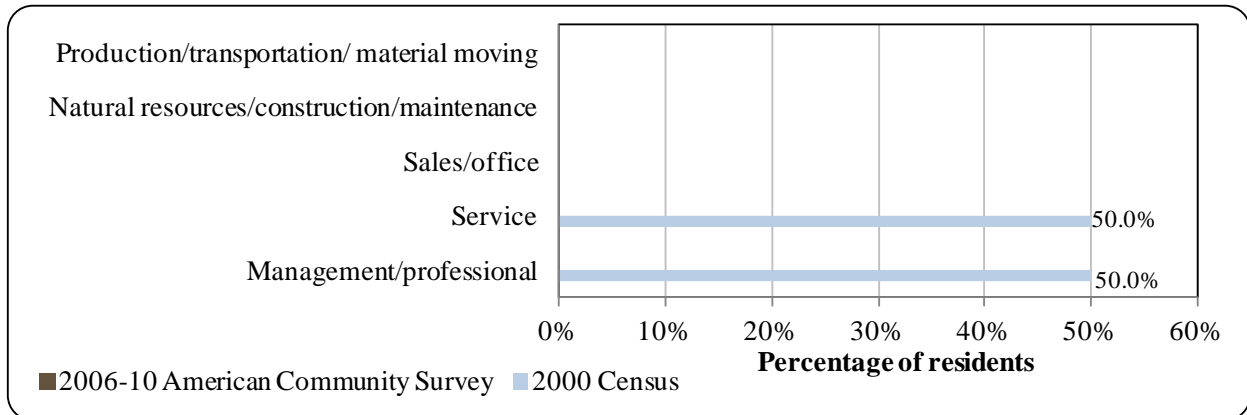
⁶¹² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶¹³ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁶¹⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶¹⁵ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

Figure 4. Local Employment by Occupation in 2000-2010, Wiseman (U.S. Census).



Governance

Wiseman is a Census Designated Place located in the Yukon-Koyukuk Census Area. Since the community is unincorporated, it is unable to collect taxes or fees (Table 2). In addition, Wiseman was not included in the Alaska Native Claims Settlement Act (ANCSA) and does not have a federally recognized Tribal government. The Wiseman Community Association acts as a governing body for the community.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Wiseman from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

The closest Alaska Department of Fish and Game (ADF&G) and U.S. Bureau of Citizenship and Immigration Services offices are located in Fairbanks, 190 mi southeast. The closest National Marine Fisheries Service (NMFS) office is located in Anchorage, 430 mi south.

Infrastructure

*Connectivity and Transportation*⁶¹⁶

The partially-paved Dalton Highway connects Wiseman to Alaska's road system. A state-owned 2,000-ft long by 30-ft wide gravel airstrip is available but is not consistently maintained.

*Facilities*⁶¹⁷

Several homes have individual wells and septic tanks; others haul water and use outhouses. Individual generators are used for power; some residents use propane lights. Seventy percent (70%) of the cabins in Wiseman are used only seasonally. Visitor accommodations include the Arctic Getaway. Public safety services are provided by state troopers based in Fairbanks. Additional public facilities include the Wiseman Community Center. Communications services include local and long distance telephone.

*Medical Services*⁶¹⁸

The Wiseman Health Clinic provides itinerant healthcare and is a Community Health Aid Program (CHAP) site. A State Public Health Nurse visits once a year in October. Emergency services are limited. The closest hospital is located in Fairbanks.

*Educational Opportunities*⁶¹⁹

There are no schools located in Wiseman. All students are homeschooled.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Very little information is available regarding Wiseman's historic participation in North Pacific Fisheries. Many residents have held recreational fishing licenses, and several residents held commercial fishing permits between 2000 and 2010.

⁶¹⁶ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶¹⁷ Ibid.

⁶¹⁸ Ibid.

⁶¹⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Wiseman does not have a registered processing plant. The closest seafood processor is located in Fairbanks.

Fisheries-Related Revenue

Between 2000 and 2010, Wiseman did not collect any fisheries-related taxes or fees (Table 3).

Commercial Fishing

Overall, residents of Wiseman do not participate heavily in commercial fishing. In 2010, one resident, or 7.1% of the population, held one commercial fishing permit issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 4 residents held 3 CFEC permits. In both years salmon accounted for 100% of permits held by residents. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFPs) or License Limitation Program (LLP) permits. In addition, no residents held halibut, sablefish, or crab quota between 2010 and when the programs began.

No residents held commercial crew licenses between 2001 and 2010, and only one resident held a commercial crew license in 2000. In addition, one resident held majority ownership of one vessel between 2000 and 2010. No permits were actively fished in 2010, compared to 67% of permits in 2000. Between those years, permits were actively fished only during 2000, 2006, and 2007.

No landings were reported in Wiseman between 2000 and 2010. Landings made at other locations by residents of Wiseman are considered confidential for those years. Further information regarding commercial fishing trends can be found in Tables 4 through 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Wiseman: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Wiseman: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Wiseman: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	3	3	3	1	1	1	2	1	1	1	1
	Fished permits	2	0	0	0	0	0	2	1	0	0	0
	% of permits fished	67%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%
	Total permit holders	4	3	3	1	1	1	1	1	1	1	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>Fished permits</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>100%</i>	<i>100%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Wiseman: 2000-2010.

Year	Crew Licenses Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Wiseman ²	Total Net Pounds Landed in Wiseman ^{2,5}	Total Ex-Vessel Value of Landings in Wiseman ^{2,5}
2000	1	0	0	1	1	0	0	\$0
2001	0	0	0	1	1	0	0	\$0
2002	0	0	0	1	1	0	0	\$0
2003	1	0	0	1	1	0	0	\$0
2004	0	0	0	1	1	0	0	\$0
2005	0	0	0	1	1	0	0	\$0
2006	0	0	0	1	1	0	0	\$0
2007	0	0	0	1	1	0	0	\$0
2008	0	0	0	1	1	0	0	\$0
2009	0	0	0	1	1	0	0	\$0
2010	0	0	0	1	1	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Wiseman: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Wiseman: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Wiseman: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Wiseman: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Wiseman Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is practiced by most residents of Wiseman. In 2010, 12 sportfishing licenses were held by residents (irrespective of point of sale), compared to 13 in 2000. In addition, 35 sportfishing licenses were sold in the community that year, compared to 46 in 2000. There were no registered sport fish guides or charter businesses operating in the community between 2000 and 2010.

Wiseman is located in the Yukon River Drainage ADF&G Harvest Survey Area which includes all Yukon River drainages from the south side of the Brooks Range to the Bering Sea, and from the Canadian border to the Bering Sea; and all drainages of the Koyukuk River and Alatna River. In 2010 there was a total of 9,134 freshwater angler days fished, compared to 11,223 in 2000. Of those, non-Alaskan residents accounted for 43.6%, compared to 29.8% in 2000. Further information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Subsistence data are somewhat limited for Wiseman. ADF&G data for household subsistence participation are not available. Of the species listed by ADF&G in Table 13, sockeye salmon are harvested exclusively according to reports. In 2008, residents reported harvesting 22 sockeye, compared to 39 in 2005. No data are available for subsistence halibut, marine invertebrate, non-salmon fish, or marine mammal harvests. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 11. Sport Fishing Trends, Wiseman: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Wiseman ²	Freshwater Angler Days Fished – Non-residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	0	0	13	46	3,345	7,878
2001	0	0	12	52	4,063	6,454
2002	0	0	9	35	5,761	9,194
2003	0	0	14	51	3,344	5,756
2004	0	0	11	48	5,479	7,613
2005	0	0	10	59	4,182	4,783
2006	0	0	13	53	3,607	7,816
2007	0	0	13	42	3,168	8,226
2008	0	0	14	48	2,573	10,400
2009	0	0	15	28	2,969	7,639
2010	0	0	12	35	3,983	5,151

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Wiseman: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Wiseman: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	1	n/a	n/a	n/a	39	n/a	n/a
2006	3	3	n/a	n/a	n/a	n/a	31	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	22	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Wiseman: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Wiseman: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Bristol Bay and the Alaska Peninsula

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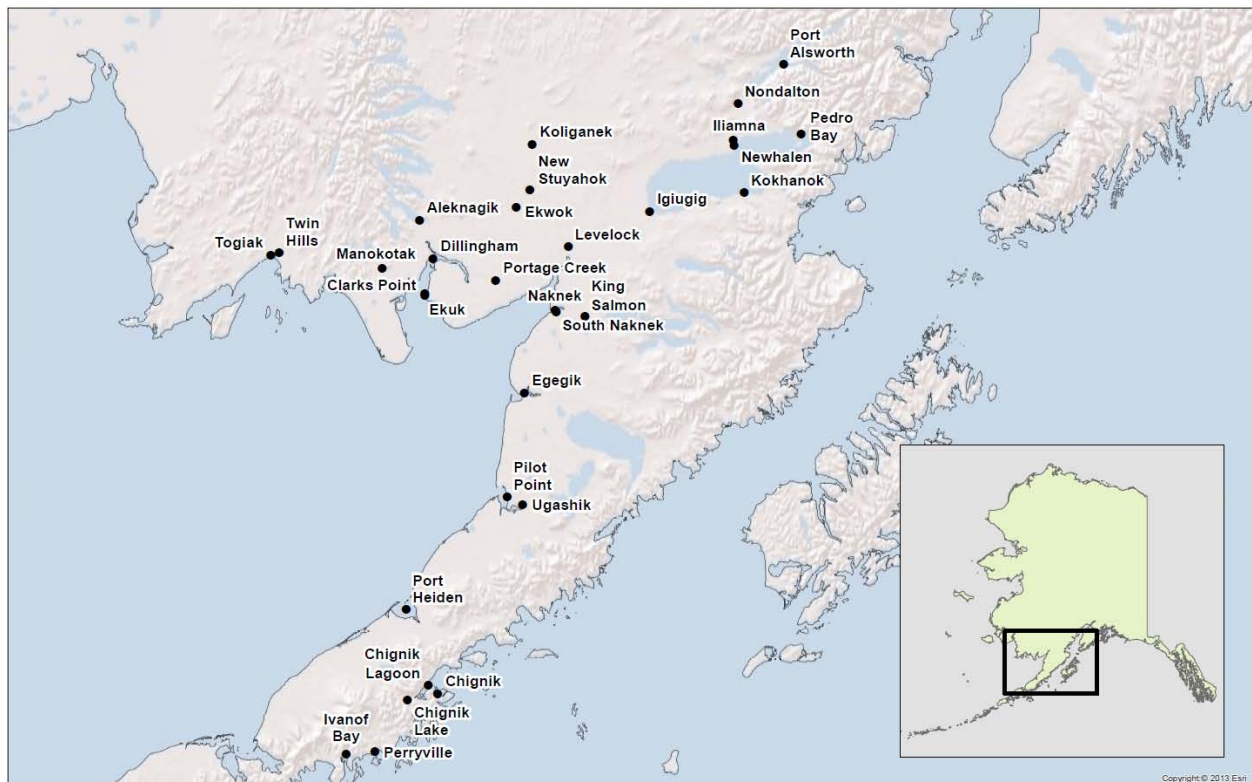
Regional Introduction: Bristol Bay and the Alaska Peninsula

Communities

Aleknagik
Chignik
Chignik Lagoon
Chignik Lake
Clark's Point
Dillingham
Egegik
Ekuk
Ekwok
Igiugig
Iliamna

Ivanof Bay
King Salmon
Kokhanok
Koliganek
Levelock
Manokotak
Naknek
New Stuyahok
Newhalen
Nondalton
Pedro Bay

Perryville
Pilot Point
Port Alsworth
Port Heiden
Portage Creek
South Naknek
Togiak
Twin Hills
Ugashik



People and Place

Location

The Alaska Peninsula extends roughly 500 miles southwest of mainland Alaska, separating the Gulf of Alaska from Bristol Bay. Bristol Bay is approximately 250 miles long by 180 miles wide at its mouth. Historically part of the Bering Sea Land Bridge, Bristol Bay is relatively shallow. The region includes two boroughs (Lake and Peninsula Borough and Bristol Bay Borough) and one census area (Dillingham Census Area). Communities included range from Ivanof Bay to the west (approximately 56 degrees North Latitude, by -159 degrees West Longitude), to Pedro Bay to the east (approximately 60 degrees North Latitude, by -154 degrees West Longitude); a distance of about 335 miles.

Demographic Profile and History

Previous to Russian and European contact, the Bristol Bay region—specifically the Nushagak River region—was occupied by the Nushagagmiut culture of Yup'ik Eskimos. The region was an area of considerable cultural interaction, leading to extensive trade and in some cases, conflict with other groups including interior Athabascans and northern Yup'ik cultures from the Yukon-Kuskokwim Delta.¹ The Alaska Peninsula was populated by Aleutiiq cultures, believed to have moved into the area approximately 9,000 years ago.²

Today, the region is dependent mainly on commercial and subsistence fisheries tied to Bristol Bay, which is most productive sockeye salmon fishery on earth. Most of the region consists of small villages located along productive river drainages. Of the 31 communities profiled, only 4 had populations exceeding 500 residents as of 2010. In that year, the total regional population was 7,267; 32% of which lived in Dillingham, Bristol Bay's largest community. The region has a proportionally high Native Alaskan population, with 68.7% of residents identifying themselves as at least part American Indian or Alaska Native in 2010. At 30.7%, Dillingham had the highest proportion of residents who identified themselves as White that year.³

The Bristol Bay/Alaska Peninsula regional economy is highly dependent upon subsistence and seasonal employment. Permanent wage employment in smaller villages is scarce and often limited to jobs within local school districts or various tribal-related entities including tribal councils, non-profits, and Alaska Native Claims Settlement Act (ANCSA) chartered village corporations. Commercial fishing and construction contribute the largest number of seasonal jobs within the region, and in 2009 it was estimated to that the Bristol Bay commercial

¹ Tryck, Nyman, and Hayes. (1985). *City of Dillingham Comprehensive Plan*. Retrieved March 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-1985.pdf>.

² LaRoche + Associates. (March 2011). *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

³ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

salmon fishery generated approximately \$300 million in economic activity and provided 11,500 full- and part-time jobs during peak season.⁴

In 2010, the overall regional per capita income was estimated at \$18,879, while the estimated median household income was \$50,855.⁵ As the region's economic center, Dillingham was somewhat an outlier at an estimated per capita income of \$34,156 and estimated median household income of \$74,828.⁶ Although income figures are only estimates, this illustrates the contrast between Dillingham and surrounding communities in terms of wage employment availability. It is for this reason that many residents of smaller communities seasonally migrate to population centers in search of employment.

Natural Resources and Environment

The Alaska Peninsula/Bristol Bay region is in Alaska's maritime climate zone. Communities located along the coastline have mild winters with temperatures ranging from 10 to 35° F and cool summers with temperatures from 45 to 65° F. Precipitation averages 20-25 inches annually. Communities located inland on the Alaska Peninsula lie within the transitional climate zone but still exhibit a strong maritime influence. Two weather features are predictable features of life on the Alaska Peninsula and in the Bristol Bay area: wind and fog. In particular, communities which face the Bering Sea experience average winds of 15 knots year-round, with severe winter storms bringing winds in excess of 100 miles per hour. The warm Japanese Current keeps Bering Sea ports ice-free during all seasons, which also contributes to one of the richest marine ecosystems on Earth.

The Bristol Bay and Alaska Peninsula region exhibits a diverse range of topography and environments, from the rocky, mountainous Aleutian Range, to the wet tundra lowlands of the Nushagak and Kvichak river basins. Lowland areas surrounding Bristol Bay are characterized by a mix of wet tundra, gentle hills, and moraine deposits. Steep, sloped coastal peat bluffs line much of the shoreline.⁷ Alaska Peninsula topography is steep, rugged, and marked by a number of active volcanoes. Previously glaciated valleys have left behind an abundance of lakes and drainages known for their salmon productivity.

Wildlife resources within the region are immense, supporting 35 species of fish, more than 190 species of birds, and 40 species of terrestrial mammals.⁸ Important salmon producing drainages include the Nushagak, Kvichak, Naknek, Egegik, and Ugashik rivers; which contribute to the largest sockeye salmon fishery in the world. Bristol Bay supports approximately 46% of

⁴ U.S. Environmental Protection Agency. (2012). *An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska*. Retrieved November 20, 2012 from: http://www.epa.gov/ncea/pdfs/bristolbay/bristol_bay_assessment_erd_2012_vol1.pdf.

⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷ City of Dillingham. (2006). *City of Dillingham Comprehensive Plan*. Retrieved March 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-2006.pdf>.

⁸ Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

the global abundance of sockeye salmon, with an average annual inshore run of 23.4 million fish.⁹

Beyond fisheries, there are relatively few environmental resources being exploited in the Bristol Bay/Alaska Peninsula area. There are thought to be oil and gas deposits within the Bristol Bay lowlands; however, it is uncertain whether they are economically viable. Mineral prospects in the immediate area are slim; however, there are mineral claims outside the lowland areas. These include gold, copper, lead, zinc, arsenic, and molybdenum deposits at Shotgun Hills; tin, tungsten, silver, copper, zinc, arsenic, and bismuth deposits at Sleitat; iron, titanium, platinum, and palladium deposits at Kemuk Mountain; and mercury and antimony deposits at Cinnabar Creek and Kagati Lake.¹⁰

The proposed Pebble Mine site is located at the divide between the Koktuli River and Upper Talarik Creek, north of Iliamna Lake.¹¹ Northern Dynasty Minerals Limited estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion pounds of copper, 66.9 million ounces of gold, and 3.3 billion pounds of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion pounds of copper, 40.4 million ounces gold, and 2.3 billion pounds of molybdenum.¹² Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.¹³

Governance

The Alaska Peninsula and Aleutian Islands region is comprised of two boroughs and one census area. Some communities profiled in this section are unincorporated and therefore rely on their respective boroughs for government services. Dillingham is the administrative center for the Bristol Bay and Alaska Peninsula Region, and is home to the Bristol Bay Native Association (BBNA), the regional ANCSA chartered non-profit. In addition, the city is home to several other village council offices and corporation on behalf of their respective communities. Both the Lake and Peninsula Borough and Bristol Bay Borough seats are located in King Salmon. In 2010, the Lake and Peninsula Borough administered a 2% raw fish tax, 6% accommodations tax, \$3 per person/day guide tax, and \$1 per person in lodge/day guide tax. Also in that year, the Bristol Bay Borough administered a 13.0 mills property tax, 10% accommodations tax, and 4% raw fish tax.

The Bristol Bay Economic Development Corporation is the regional Community Development Quota (CDQ) group that operates in the region. CDQ groups distribute a portion of commercial fishing proceeds to their various communities and sponsor economic and infrastructural development. In addition, there are a number of regional native corporations and Native village corporations with recognized status under the ANCSA.

⁹ Salomone, P., Morstad, S., Sands, T., Jones, M., Baker, T., Buck, G., West, F., and Kreig, T. (2012). *2010 Bristol Bay Area Annual Management Report*. Alaska Department of Fish and Game. Fishery Management Report No. 11-23. Retrieved December 6, 2012 from:

<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareabristolbay.salmon#/management>.

¹⁰ See footnote 7.

¹¹ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky. (2008). Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's Large Mine Permitting Process. *Alaska Law Review* 25:1.

¹² Northern Dynasty Minerals Limited (2012). *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

¹³ See footnote 8.

Involvement in North Pacific Fisheries

Fishing is the backbone of the regional economy in the Bristol Bay/Alaska Peninsula region. Commercial fleets operate out of most of the communities profiled in this section. Shoreside seafood processors are located within Chignik, Dillingham, Egegik, Ekuik, Naknek, Togiak, and Ugashik,¹⁴ and commercial vessels landed 250.7 million pounds of seafood in those communities collectively. Within the region, Naknek received approximately 24.7% of total pounds landed, while Togiak received approximately 23.3%.¹⁵ Much of the seafood processing labor force comes from outside the region, although individual communities vary as to what portion of labor comes from local sources.

Bristol Bay sockeye salmon is by far the most profitable fishery within the region. In 2010, reported salmon landings within the Bristol Bay/Alaska Peninsula region totaled \$178.0 million ex-vessel.^{16,17} Collectively, residents of profiled communities within the region held 1,275 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) in 2010. Most (330) were held in Togiak, where around 40% of residents held CFEC permits that year.¹⁸ In addition, residents held a total of 2.05 million shares of halibut quota, 3.18 million shares of sablefish quota, and 23.43 million shares of crab quota in 2010.¹⁹

Sportfishing is not as extensive in this region as it is in south-central and southeastern Alaska. Most recreational fishing takes places on the Nushagak and Naknek rivers. Fly-out remote destination fishing is popular in the region, and many guide operators maintain lodges along major drainages and tributaries. Major sport species include all five species of Pacific salmon, as well as trout, grayling, char, and northern pike. In 2010, 4,887 sportfishing licenses were sold within the region, most of which were sold in Dillingham and King Salmon.²⁰

Subsistence fishing and hunting form a major part of residents' livelihoods on the Alaska Peninsula and Bristol Bay. In all communities, a substantial majority of residents use subsistence resources. In 2008, residents reported harvesting 133,671 salmon, of which approximately 76% were sockeye. Chinook salmon also made up a significant portion of salmon harvested at 11% of

¹⁴ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁵ Alaska Department of Fish and Game and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁶ Ibid.

¹⁷ Figure reported for landings of all five species of Pacific salmon.

¹⁸ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁹ National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁰ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

fish reported.²¹ In addition to salmon, clams, seals, beluga whales, halibut, herring, cod, crab, and other freshwater fish are harvested throughout the region.²²

Regional Challenges

The region's high dependence on commercial fishing is both an asset and a liability. In recent years, foreign competition has driven down the market price of salmon in the United States, causing financial trouble for many Alaskan communities. While stocks are relatively healthy, salmon prices within the Bristol Bay region have been depressed since their peak in the 1980s.²³ In addition, a lack of year-round wage employment has intensified economic pressures on smaller communities, encouraging many to seek opportunities in larger, urban centers like Anchorage.²⁴ Cost of living presents another challenge to the region. While cargo barges service most communities, prices of goods and fuel is considerable.

The Bristol Bay/Alaska Peninsula is a region of social and political complexity, especially concerning resource development and use. A diverse range of stakeholders are often at odds over resource related interests that are seen as incompatible with each other. The proposed Pebble Mine has proven to be both a contentious and volatile issue with many area residents, and salmon by-catch continues to concern many communities whose subsistence livelihoods rest on strong salmon returns.²⁵

²¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

²² Lowe, M. (2007). *Socioeconomic Review of Alaska's Bristol Bay Region*. Retrieved March 15, 2012 from: <http://www.iser.uaa.alaska.edu/Publications/bb-socio-review.pdf>.

²³ Knapp, G. (2004). *Projections of Future Bristol Bay Salmon Prices*. Retrieved December 6, 2012 from: http://www.cfec.state.ak.us/pita/Knapp_BB_Price_Projections_Oct04_Exec_Summary.pdf.

²⁴ Huskey, L. (2005). *Migration as Economic Adjustment: the Experience of Rural Alaska*. Retrieved December 6, 2012 from: http://migration.iser.uaa.alaska.edu/presentations/migration_economic_adjustment.pdf.

²⁵ Caldwell, J. (n.d.). *Pebble Mine, Alaska: Stories & Perspectives*. Retrieved December 6, 2012 from: <http://www.infomine.com/library/publications/docs/PebbleMine.pdf>.



Aleknagik (uh-LECK-nuh-gik)

People and Place

*Location*²⁶

Aleknagik is located at the head of Wood River on the southeast end of Lake Aleknagik, 16 mi northwest of Dillingham and 329 mi southwest of Anchorage. The area encompasses 43.8 sq mi of land and 7.2 sq mi of water. Aleknagik was incorporated as a Second-class city. The community lies within the Dillingham Census Area and is not under the jurisdiction of a borough.

*Demographic Profile*²⁷

In 2010, there were 219 residents, ranking Aleknagik 186th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 18.4%. Between 2000 and 2009, the population grew by 3.62% with an average annual growth rate of 0.35%; which was slightly less than the statewide average of 0.75% and representative of a variable population trend. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Aleknagik had an estimated 235 permanent and 250 seasonal residents in 2010. On average, seasonal workers live in the community from April through September and population peaks are mostly driven by seasonal employment. Information regarding population trends can be found in Table 1.

The population of Aleknagik was predominately Yup'ik Eskimo in 2010. In that year, 75.8% of residents identified themselves as American Indian or Alaska Native, compared to 81.9% in 2000; 15.1% identified themselves as White, compared to 13.6% in 2000; and 9.1% identified themselves as two or more races, compared to 3.2% in 2000. Information regarding racial and ethnic trends in Aleknagik can be found in Figure 1.

The average household size in 2010 was 3.08, compared to 3.2 in 1990 and 3.62 in 2000. In that year, there were 132 total housing units, compared to 84 in 1990 and 107 in 2000. Of the households surveyed in 2010, 39% were owner-occupied, compared to 54% in 2000; 15% were renter-occupied, compared to 11% in 2000; 8% were vacant, compared to 15% in 2000; and 38% were occupied seasonally, compared to 20% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

The gender distribution in 2010 was skewed at 58.4% male and 41.6% female. This was less even than both the distribution statewide (52.0% male, 48.0% female) and distribution in 2000 (54.8% male, 45.2% female). The median age that year was 29.5 years, which was less than the statewide median of 33.8 years and slightly older than the 2000 median of 28.3 years.

²⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁷ U.S. Census, 1990, 2000 and 2010 decennial census and the 2006-10 American Community Survey.

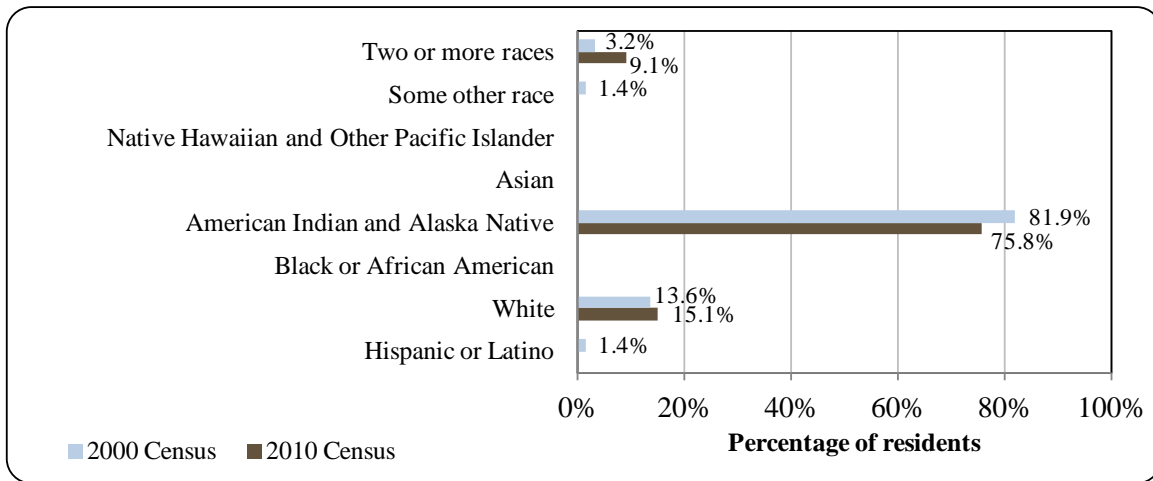
Table 1. Population in Aleknagik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	185	-
2000	221	-
2001	-	221
2002	-	220
2003	-	239
2004	-	233
2005	-	238
2006	-	241
2007	-	232
2008	-	250
2009	-	229
2010	219	-

¹U.S. Census, 1990, 2000 and 2010 Decennial Census.

²Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Aleknagik: 2000-2010 (U.S. Census).

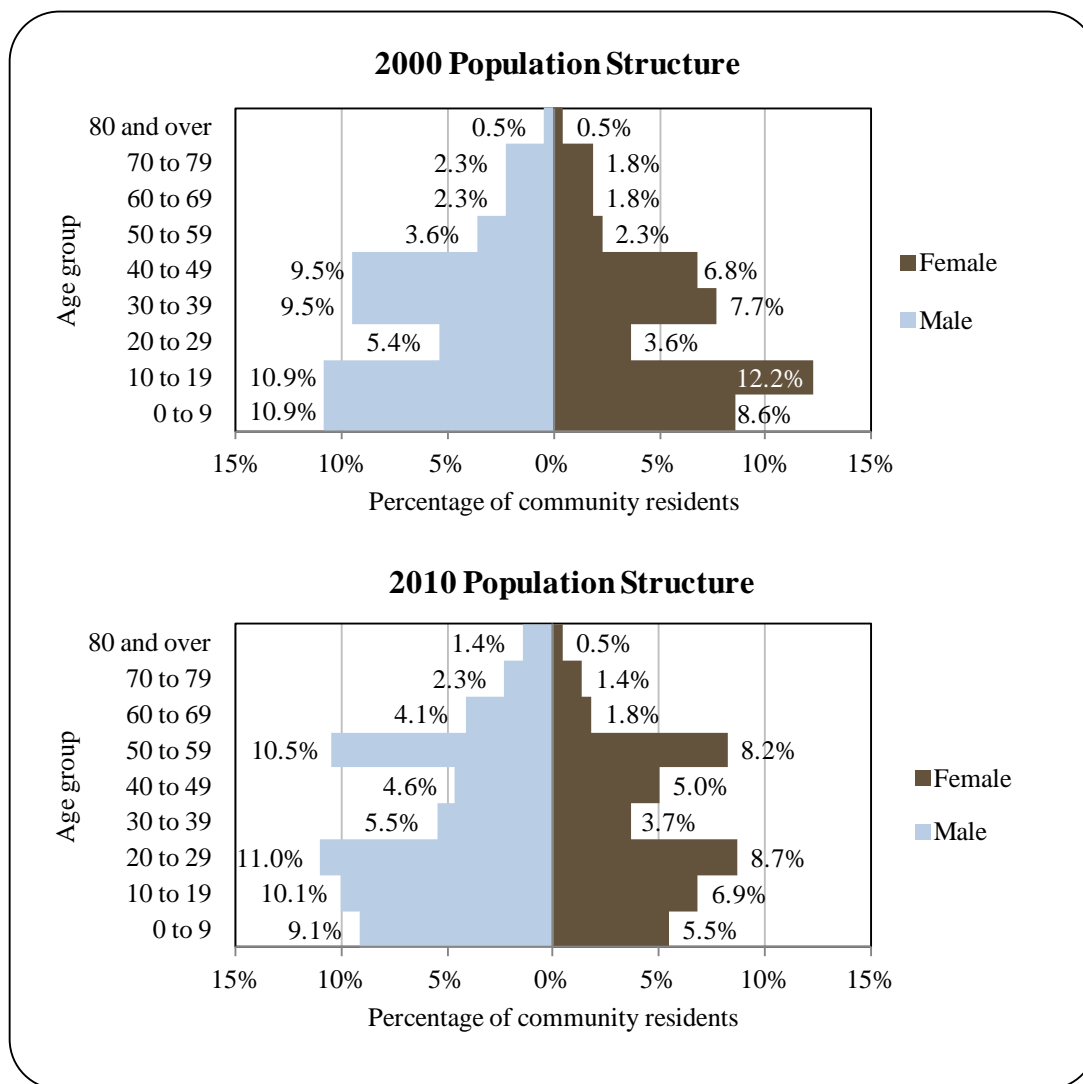


The population structure in 2010 was similar to 2000 in that it can be characterized as expansive. In addition, age transitions were, for the most part, consistent with a stable population; meaning that most cohorts maintained their overall structure as they aged. However, there was some attrition in the 30 to 39 range. In 2010, 31.6% of residents were under the age of 20, compared to 42.6% in 2000; 11.5% were over the age of 59, compared to 9.2% in 2000; 37.5% were between the ages of 30 and 59, compared to 39.4% in 2000; and 19.7% were between the ages of 20 and 29, compared to 9.0% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000 with male biases among most age ranges. In that year, the greatest absolute gender difference occurred in the 0 to 9 range (9.1% male, 5.5% female), followed by the 10 to 19 (10.1% male, 6.9% female) and 20

to 29 (11.0% male, 8.7% female) ranges. Of those three, the greatest relative difference occurred in the 0 to 9 range. Information regarding trends in population structure can be found in Figure 2.

Figure 2. Population Age Structure in Aleknagik Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²⁸ estimated that 82.8% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 9.4% of residents had less than a ninth grade education, compared to an

²⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

estimated 3.5% of Alaska residents overall; an estimated 7.8% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 25.8% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 10.2% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 3.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall. No residents were estimated to hold an Associate's degree in 2010.

History, Traditional Knowledge, and Culture^{29,30}

Aleknagik means "Wrong Way Home." The community was given its name because Native Yup'iks returning to their homes along the Nushagak River would sometimes become lost in the fog and would be swept up the Wood River with the tide, inadvertently arriving at Aleknagik Lake. During the latter part of the nineteenth century there were approximately 200 people living in Aleknagik. However, an influenza outbreak in 1918 decimated much of the population. By 1929, the U.S. Census found 55 people living in the "Wood River Village" area to the south. In 1930, there were five families living on the shores of the lake year-round: the Waskeys, Polleys, Hansons, Yakos, and Smiths.

A log cabin territorial school was built on the south shore of the lake in 1933, and Josie Waskey was the first teacher. Attracted by the school, other facilities, and plentiful fish, game, and timber, a number of families from Goodnews Bay, Togiak, and Kulukak relocated to Aleknagik. A post office was established in 1937. A two-story framed school with a teacher apartment was constructed in 1938. By 1939, Aleknagik had 78 residents, over 30 buildings, and a small sawmill. In the late 1940s, a Seventh-Day Adventist mission and school was established on the north shore. During the 1950s, a Moravian church and a Russian Orthodox Church were built in Aleknagik and over 35 families lived along the lake. In 1959, the state constructed a 25-mi road connecting the south shore to Dillingham. The road was passable only during the summer months, until the late 1980s, when it was upgraded and maintained year-round. The city was incorporated in 1973. Over 24 additional square miles were annexed to the city in April 2000.

Natural Resources and Environment

Aleknagik is in a transitional climate zone. The primary influence is maritime, although a continental climate does affect the weather. Average summer temperatures range from 30 to 66 °F (-1 to 19 °C). Average winter temperatures range from 4 to 30 °F (-16 to -1 °C). The average annual precipitation is 20 to 35 inches and average annual snowfall is 93 inches. Fog and low clouds are common during July and August and may prevent air access to the community. The lake and river are ice-free from June through mid-November.³¹

²⁹ City of Aleknagik and Agnew::Beck Consulting (2005). *Aleknagik Comprehensive Plan*. Retrieved December 21, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Aleknagik-CP-2005.pdf>.

³⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹ Ibid.

Aleknagik is located on the edge of Wood-Tilchik State Park, the largest state park in the nation at 1.6 million acres.³² The topography surrounding the community is characterized by a system of lakes and rivers bordered by tundra lowlands, wooded areas, and mountainous regions. The lowland tundra and marshlands are marked by herbaceous sedges, forbs, shrubs, and dwarf birches and trees.³³ Coniferous spruce forest, mixed birch-spruce forest, muskeg, and willow-alder thickets occupy low and mesic zones. Areas above 900 ft are characterized by bare rock, heath tundra, and alpine meadows.³⁴ Aquatic wildlife in the area include all five species of Pacific salmon, rainbow trout, Dolly Varden, arctic char, lake trout, grayling, and northern pike. Terrestrial wildlife includes moose, caribou, brown bear, black bear, muskrat, otter, fox, beaver, wolverine, mink, porcupine, ground squirrels, and marmot. Birds include a variety of waterfowl, eagles, arctic tern, grouse, ptarmigan, sandpipers, and loons.³⁵

Mineral resources in the area include an iron/titanium/platinum deposit at Kamuk Mountain approximately 36 mi northeast of Aleknagik.³⁶ Significant mineral resources are present in the region, including the Pebble copper-gold-molybdenum deposit. The Pebble site is located approximately 19 mi northwest of Iliamna, at the divide between the Koktuli River and Upper Talarik Creek.³⁷ Northern Dynasty Minerals Limited calls the Pebble deposit, “one of the greatest stores of mineral wealth ever discovered,” and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion lbs of copper, 66.9 million ounces of gold and 3.3 billion lbs of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion lbs of copper, 40.4 million ounces of gold and 2.3 billion lbs of molybdenum.³⁸ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon.³⁹

While Aleknagik is relatively protected, natural hazards that have the potential to impact the community include river bank erosion and destabilization, winter storm events, wildfires, and flooding. While the community itself does not have a Hazard Mitigation Plan, the city of Dillingham 16 mi southeast has analyzed these hazards and has found their likelihood of occurrence to be moderate to high.⁴⁰

As of 2010, there were three open contaminant cleanup projects in the area reported by the Alaska Department of Environmental Conservation. These include a mercury and petroleum contaminated site originating from a 1950s mercury ore processing plant along the Wood River,

³² Alaska Department of Natural Resources. (n.d.). *Wood-Tilchik State Park*. Retrieved December 14, 2011 from: <http://dnr.alaska.gov/parks/units/woodtik.htm>.

³³ United States Forest Service. (1992). *The Alaska Vegetation Classification*. Retrieved December 14, 2011 from: http://www.fs.fed.us/pnw/publications/pnw_gtr286/pnw_gtr286a.pdf.

³⁴ See footnote 32.

³⁵ Ibid.

³⁶ Alaska Department of Natural Resources. (n.d.). *Mineral Resources*. Retrieved December 15, 2011 from: http://dnr.alaska.gov/mlw/planning/areaplans/bristol/pdf/bbap_ch2_mineral.pdf.

³⁷ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky. 2008. “Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process.” *Alaska Law Review* 25:1.

³⁸ Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

³⁹ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky. 2008. “Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process.” *Alaska Law Review* 25:1.

⁴⁰ City of Dillingham and URS. (2008). *The City of Dillingham Multi-Hazard Mitigation Plan*. Retrieved June 8, 2012 from: http://www.agnewbeck.com/pdf/bristolbay/Dillingham_Comp_Plan/Final_Dillingham_HMP_030608.pdf.

groundwater heating oil contaminants which impacted a community well (the well has since been abandoned), and a fuel spill originating from a downed aircraft.⁴¹

Current Economy⁴²

The economy in Aleknagik is largely dependent on educational and social services, health care, and commercial, subsistence and recreational fishing. Some residents commute to Dillingham for employment. Tourism is increasing in the vicinity of the community, with multiple guided hunting and fishing business and lodge operations located in and around Aleknagik.⁴³ Many residents participate in commercial and subsistence activities on the Bristol Bay coast during the summer. Trapping is also an important means of income. Most families depend to some extent on subsistence activities to supplement their livelihoods.⁴⁴

In a survey conducted by the AFSC in 2011, community leaders reported that most residents are employed in the commercial fishing sector between June and August, when most residents make the bulk of their income. Incomes are supplemented by subsistence harvesting from August through September, at which time Permanent Fund Dividends (PFDs) arrive prompting many residents to move to Anchorage or Dillingham to look for employment. Top employers in 2010⁴⁵ included the City of Aleknagik, Bristol Bay Housing Authority, Bristol Bay Area Health Corporation, Aleknagik Traditional Council, Southwest Region Schools, Bristol Bay Native Association, University of Alaska, Bristol Bay Economic Development Corporation (BBEDC), Dillingham City School District, and Dillingham Liquor Store.

In 2010,⁴⁶ the estimated per capita income was \$14,920 and the estimated median household income was \$47,188, compared to \$10,973 and \$22,750 in 2000, respectively.⁴⁷ After accounting for inflation by converting 2000 values into 2010 dollars,⁴⁸ the real per capita income (\$14,429) and real median household income (\$29,916) indicate that individual earnings remained almost unchanged, while household earnings grew. In 2010, Aleknagik ranked 205th of 305 communities from which per capita income was estimated, and 148th of 299 communities from which median household income was estimated.

It should be noted that Aleknagik's small population size may have prevented the American Community Survey from accurately portraying economic conditions.⁴⁹ A potentially more accurate understanding of per capita income is obtained through economic data compiled

⁴¹ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved December 14, 2011 from: http://dec.alaska.gov/spar/csp/db_search.htm.

⁴² Unless otherwise noted, all monetary data are reported in nominal values.

⁴³ City of Aleknagik and Agnew::Beck Consulting. (2005). *Aleknagik Comprehensive Plan*. Retrieved June 8, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Aleknagik-CP-2005.pdf>.

⁴⁴ The Stadium Group. (2003). *City of Aleknagik 20-Year Comprehensive Strategic Development Plan*. Retrieved June 8, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Aleknagik-CP-2003.pdf>.

⁴⁵ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴⁶ U.S. Census. American Community Survey 2006-2010 estimates.

⁴⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁹ See footnote 47.

by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$2.25 million in total wages in 2010.⁵⁰ When matched with the 2010 population, the per capita income equals \$10,272. This estimate is lower than the 2000 per capita income reported by the U.S. Census, suggesting that caution is warranted when citing per capita income as unchanged between 2000 and 2010.⁵¹ However, Aleknagik was not recognized as “distressed” by the Denali Commission indicating that over 30% of residents aged 16 and older earned more than \$16,120 in 2010.⁵²

According to the 2006-2010 ACS,⁵³ an estimated 61.3% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 25.8% and 40% residents were estimated to be living below the poverty line. Of those employed in the civilian labor force, an estimated 18.8% worked in the private sector, an estimated 72.5% worked in the public sector, and an estimated 8.7% were self-employed. It should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy. This may account for elevated poverty and unemployment statistics.

By industry, most (58%) of those employed were estimated to work in education service, health care, or social assistance sectors; followed by public administration sectors (18.8%) and agriculture, forestry, fishing, hunting, and mining sectors (17.4%). By occupation type, most (46.4%) were estimated to hold management or professional positions; followed by sales or office positions (27.5%); natural resources, construction, or maintenance positions (14.5%); and service positions (11.6%). Overall, the 2006-2010 ACS purported strong proportional gains to education service, health care, social assistance, agriculture, forestry, fishing, mining, and public administration sectors between 2000 and 2010. However, there were significant declines in most other sectors indicating an overall loss in economic diversity. Significant variation was also seen in occupation types during those years. It should be noted that ACS sampling techniques may not have captured the true scope of industry representation. This may account for the apparent reduction in economic diversity in those years. Information regarding employment trends can be found in Figures 3 and 4. According to 2010 ALARI estimates, most (41.3%) of employed residents worked in local government sectors; followed by financial sectors (17.4%); and education and health service sectors (15.2%).

⁵⁰ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁵¹ See footnote 45.

⁵² Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

⁵³ See footnote 47.

Figure 3. Local Employment by Industry in 2000-2010, Aleknagik (U.S. Census).

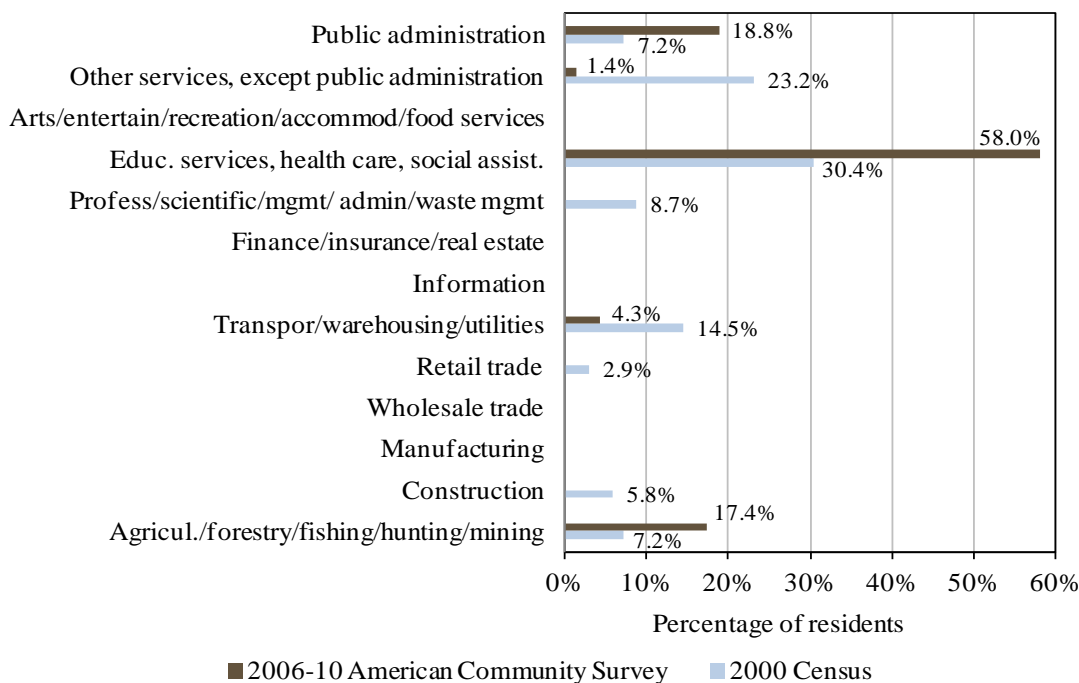
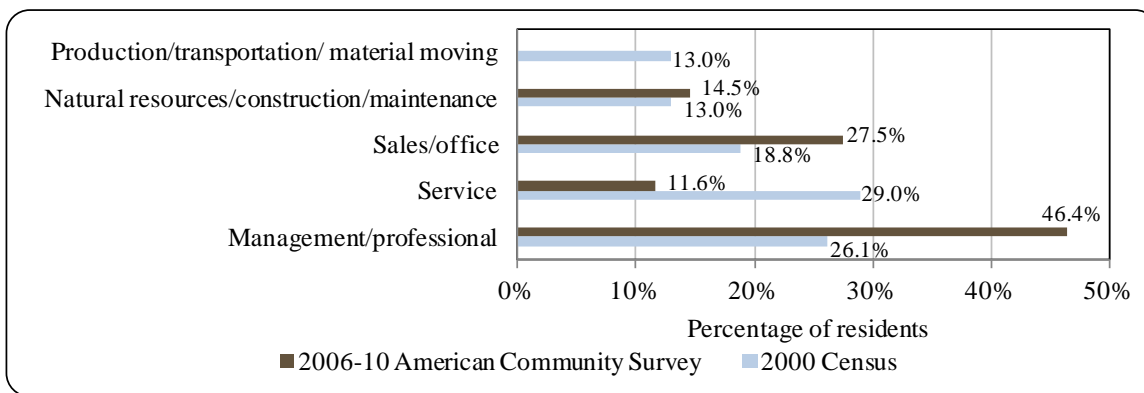


Figure 4. Local Employment by Occupation in 2000-2010, Aleknagik (U.S. Census).



Governance

Aleknagik is a Second-class city with a mayoral form of government. There is a U.S. Bureau of Indian Affairs (BIA) recognized Native village government (Native Village of Aleknagik), and an Alaska Native Claims Settlement Act (ANCSA) chartered Village Corporation (Aleknagik Natives, Ltd). The Bristol Bay Native Corporation represents Aleknagik as its regional ANCSA Corporation. The closest Alaska Department of Fish and Game (ADF&G) office is located in Dillingham, 16 mi southeast. The closest National Marine Fisheries Service (NMFS) office is located in Bethel, 147 mi northwest. The closest Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage, 329 mi northeast.

In 2010, total municipal operating revenue was \$496,040, compared to \$221,694 in 2000; an increase of 73.0% after adjusting for inflation.⁵⁴ Municipal revenues increased steadily between 2000 and 2008—peaking at \$1.09 million in 2008—before declining again sharply in 2009. Aleknagik administered a 5% sales tax and 5% accommodations tax in 2010, collecting \$56,000 in sales tax revenue that year, compared to \$30,309 in 2000. Sales tax revenues peaked in 2007 and 2008 at \$130,873 in each of those years (Table 2).

In 2010, sales tax accounted for 11.3% of total municipal revenues, compared to 13.7% in 2000. Also in that year, \$107,484 in state administered Community Revenue Sharing was allocated to Aleknagik, compared to \$25,605 from State Revenue Sharing in 2000. In addition, Aleknagik community entities received a number of fisheries-related state or federal grants between 2000 and 2010. These included \$36,844 in fisheries disaster relief funds, \$52,500 for an emergency response boat, \$120,000 for a boat yard feasibility study, \$2.12 million for a boat storage yard, \$145,288 for a float plane dock feasibility study, \$1.34 million for a float plane road project, \$193,000 for dock transfer and maintenance funds, and \$25,000 for projects related to the Pebble Mine. This information about selected revenue streams in Aleknagik is presented in Table 2.

Table 2. Selected Municipal, State or Federal Revenue Streams for the Community of Aleknagik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$221,694	\$30,309	\$25,605	n/a
2001	\$245,748	\$37,042	\$24,618	\$36,844
2002	\$372,413	\$97,743	\$24,622	\$52,500
2003	\$336,800	\$106,606	\$24,814	\$30,000
2004	\$294,864	\$93,429	-	n/a
2005	\$335,361	\$93,429	-	n/a
2006	\$516,373	\$80,358	-	n/a
2007	\$983,746	\$130,873	-	\$720,252
2008	\$1,086,507	\$130,873	-	\$832,561
2009	\$505,358	\$55,698	\$108,345	\$1,225,028
2010	\$496,040	\$56,000	\$107,484	\$1,200,100

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁵⁴ Inflation calculated using 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

Infrastructure

Connectivity and Transportation

Aleknagik is the only regional village with a road link to Dillingham, a 25-mi road that connects to the south shore. The north shore of the lake is not currently accessible by road, and residents use skiffs to travel to town from the south shore.⁵⁵ As of 2013, the Alaska Department of Transportation and Public Facilities was in the process of developing a bridge over the Wood River that would connect the northern portion of the community to the south shore by road.⁵⁶ Aleknagik is also accessible by air. A state-owned 2,040-ft long by 80-ft wide gravel airstrip is located on the north shore of the Lake, and regular flights are scheduled to Aleknagik from Dillingham.⁵⁷ Roundtrip airfare between Dillingham and Anchorage in June 2012 was \$452, and roundtrip airfare between Dillingham and Aleknagik was \$170.⁵⁸ In addition to the state-owned runway, two private runways are located in the community. One is a 1,200-ft by 25-ft gravel dirt runway located two mi southeast of Aleknagik, and the other is a 1,150-ft by 35-ft gravel runway. In addition, Moody's Aleknagik Seaplane Base, also on the north shore, provides fueling services for floatplanes. Vehicles, skiffs, ATVs, and snowmobiles are the most frequent means of local transportation.⁵⁹

With regard to fisheries-related infrastructure, the state owns a 100-ft dock on the north shore of Aleknagik Lake. A breakwater, barge landing, boat launch ramp, and haulout facility are located there. The south shore has a boat launch located at the Lake Aleknagik State Recreational Site.⁶⁰

Facilities

The majority of residents have household plumbing, and most use individual wells. Twelve homes do not have water or sewer service. Some haul water from the community center, and a few are served by a spring water catchment system. Septic tanks, leech fields, and public sewage lagoons are used for sewage disposal. The North Shore uses eleven shared residential effluent pumps (REP units), which discharge into a piped system. There are two landfill sites. The North Shore landfill is permitted, and the South Shore landfill is not permitted. Nushagak Electric in Dillingham provides electricity to Aleknagik. Public safety services include a Village Public Safety Office (VPSO) first responders and Aleknagik Volunteer Fire Department. Public facilities include a community center and library. Communications services include local and long distance telephone, internet, local television, and local radio.⁶¹

⁵⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁶ Alaska Department of Transportation and Public Facilities. (n.d.) Aleknagik: Wood River Bridge. Retrieved October 23, 2013 from <http://brooks-alaska.com/aleknagik/index.htm>.

⁵⁷ See footnote 55.

⁵⁸ Airfare was estimated from <http://www.travelocity.com> and <http://www.flygrant.com/> (retrieved November, 2011).

⁵⁹ See footnote 55.

⁶⁰ City of Aleknagik and Agnew::Beck Consulting. (2005). *Aleknagik Comprehensive Plan*. Retrieved June 8, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Aleknagik-CP-2005.pdf>.

⁶¹ See footnote 59.

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed or still in progress as of 2010 include broadband internet access, floatplane harbor access, and bridge access spanning the Wood River. Social services provided in the community include public subsidized housing and tribal office services. Harbor infrastructure includes 130 ft of public dock space capable of mooring vessels up to 100 ft in length and able to handle regulated vessels including rescue vessels, fuel barges, and 32-ft commercial vessels. Planned fisheries-related infrastructure includes additional dock space and haulout facilities. Fisheries related businesses and services located in Aleknagik include fishing gear sales, electrical services, welding services, mechanical services, machine shop, hydraulic services, small vessel (<60 tons) haulout facilities, commercial vessel moorage, recreational vessel moorage, dry dock storage, fish lodges, fishing related book keeping, fishing gear repair, and air taxi. Most fisheries-related businesses and services are informal, and residents often go to Dillingham, King Salmon, Lake Clark, or Iliamna for services not found within the community. There is no permanent moorage in the community due to winter ice conditions.

*Medical Services*⁶²

Basic health care is provided by Aleknagik North and South Shore Clinics, considered Primary Health Care facilities and Community Health Aid Program (CHAP) sites. Acute and long-term care is available at the hospital in Dillingham.

*Educational Opportunities*⁶³

Aleknagik has one school providing preschool through 12th grade instruction. As of 2011, there were 31 students enrolled and four teachers employed.

Involvement in North Pacific Fisheries

*History and Evolution of Fisheries*⁶⁴

The Bristol Bay region is historically defined by traditional subsistence harvesting practiced by Yup'ik, Aleuts, and Athabascans of the region for millennia. Subsistence activities historically and continue to define livelihood, exchange, social networks, and social organization in the region. Subsistence supplements wage employment, and is considered culturally necessary for much of the population. In 1819, Russian fur traders established a trading post at Nushagak Point. Salmon were mostly harvested for local consumption although small amounts of salted salmon were exported. In 1864, canning techniques were being developed in California and by 1878; Alaska's first salmon cannery was built in Klawock.

In 1883, the exploratory vessel *Neptune* anchored in Nushagak Bay to assess potential commercial salmon prospects. Plentiful runs prompted a cannery to be built at the village of Kanulik. By the late 1880s, canneries were built at Scandinavian Creek, Kanakanak, and Clark's Point. Gillnetters flocked to the region and by 1890, canneries were producing more product than

⁶² See footnote 59.

⁶³ Ibid.

⁶⁴ The Bristol Bay Economic Development Corporation. (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved March 14, 2012 from: <http://www.bbsalmon.com/FinalReport.pdf>.

there were buyers. This posed a problem for packers, who reacted by forming the Alaska Packers Association in order to control production. By 1895, landings in Bristol Bay reached five million sockeye and new canneries were built on the Ugashik, Egegik, Naknek, and Kvichak Rivers.

The Spanish American War and Klondike Gold Rush bolstered the demand for canned salmon in the late nineteenth and early twentieth centuries. By 1901, there were 18 canneries throughout Bristol Bay, and landings reached 10 million sockeye. Mechanization and industry expansion increased production substantially, causing it to peak in 1912 at 20 million salmon landed by over 1,000 gillnetters. For the next seven years, production would range between 20 and 25 million. Fueled by demand for canned salmon during WWI, canneries operated 24 hours a day, seven days a week, and recorded record profits. This caused a major crash in sockeye runs throughout Bristol Bay in 1919.

Following the salmon crash, the White Act of 1924 assigned the federal government with managing the Alaska salmon fishery and mandated a 50% escapement rate. This prompted fishery closures and gear restrictions including the abolishment of powerboats, purse seines, and fish traps. However, new regulations being put in place were rarely enforced during the early years following the passage of the White Act.

Commercial salmon fishing prospered in the 1920s and early 1930s and accounted for 80% of tax revenues collected by the territorial government. However, variable runs, foreign encroachment, and the Great Depression stressed the industry and in 1935, only three million salmon were caught almost prompting a total shut-down of the Bristol Bay salmon fishery.

World War II brought significant changes to the Bristol Bay commercial fishing industry. Worker shortages prompted canneries to hire local labor and local fishermen and communities began to organize. In Dillingham, fishermen and cannery workers formed co-ops in 1944 to counter what was seen as an overly influential industry. Following World War II, salmon runs were once again in decline, although the Pacific Decadal Oscillation coupled with lower ocean productivity was to blame this time. However, further threats faced the industry from overfishing in the Bering Sea. By 1955, deep-sea catches by Japanese vessels reached 50 million salmon. Inshore catches on the other hand, averaged at 6.7 million sockeye annually during the 1950s. At this point, many seafood producers switched to more lucrative tuna, which became the iconic fish of the baby boom years.

Following statehood in 1959, salmon management responsibility shifted to state managers. In Bristol Bay, this meant more aggressive forms of in-season management and escapement monitoring. Seasons were regulated according to in-season run strength indicators instead of pre-season forecasts. Despite rigorous management, salmon recovery was slow. Bristol Bay salmon fell to historic lows in 1973 when fewer than one million sockeye salmon were harvested. The state's response was both a scathing indictment of Japanese fishing effort and limits to fishery entry. Following an amendment to Alaska's constitution in 1972, the state issued transferable limited entry permits based on experience and economic dependence to the fishery. In 1976, the U.S. asserted jurisdiction over much of the outer continental shelf surrounding its coastlines. The 200-mi exclusive economic zone, along with revised Bering Sea fishing boarders and favorable environmental conditions, set the stage for salmon recovery.

Salmon returned to the Bristol Bay region in 1978, when after a weak sockeye season, a surge in pink salmon into the Nushagak River overwhelmed processing capacity for the region. Sockeye returned in force the following year, and strong demands elevated prices over \$1.00 per lb. In 1980, over 64 million sockeye returned to Bristol Bay and subsequent seasons remained strong. By 1988, sockeye prices rose to \$2.40 per lb. Average gross earnings by drift boat

exceeded \$100,000 and the value of Bristol Bay drift permits surged to almost \$250,000. As permit value rose, entry into the fishery became increasingly contested and litigated, resulting in additional permits being issued. However, during this time Chile began exporting farmed salmon to Japan. While insignificant at first, salmon farming would soon subvert the Alaska salmon industry and cause a significant drop in prices. A year after salmon prices peaked, they dropped to \$1.09 per lb. By 1991, seafood processors were offering \$0.50 per lb which resulted in fishermen striking. Once again, the Japanese were the focus of ire, with many fishermen making accusations of price-fixing from Japanese-owned seafood processors. During that time, Bristol Bay still maintained record salmon harvests, with 45 million fish taken in 1995. Revenues remained high despite low prices due to large harvests. However, once again the fishery would falter, and once again the Pacific Decadal Oscillation was to blame.

In previous lean years, production shortages would drive prices up. However, the abundance of farmed fish within the market changed this. By 1997, the overall value of Bristol Bay salmon was cut in half from the previous year to \$63 million. Runs in years following were characterized by modest rebounds followed by more declines. In that time, Bristol Bay was declared both a state and federal disaster area and many permit holders opted to not participate in the 2001 season. In 2002, additional fishermen as well as several canneries and cold storage facilities opted out as well. In that year, the Bristol Bay drift permit once valued at \$250,000 was valued at less than \$20,000. In addition, total ex-vessel value of the fishery was down 90% from its peak in 1992.

Many residents of Aleknagik are involved in commercial and subsistence activities during the summer months off the Bristol Bay coast. The Wood River is located in the Nushagak District of Bristol Bay. All five species of Pacific salmon are harvested in commercial, subsistence, and recreational fisheries. Between 1990 and 2009, an average of 25.8 million sockeye, 64,000 Chinook, 1.3 million chum, 88,000 coho, and 182,000 pink salmon were commercially harvested in Bristol Bay annually. The Togiak herring fishery is the largest herring fishery in Alaska. From 1990 to 2009, sac roe harvests averaged approximately 21,000 tons annually. Commercial spawn-on-kelp fisheries exist, but seldom occur. No spawn-on-kelp fishery existed in 2010, and only one existed between 2000 and 2010.⁶⁵

In a survey conducted by the AFSC in 2011, community leaders reported that compared with 2005, the community has seen an increase in charter vessels, private vessels, commercial vessels, and vessels shorter than 35 ft. The community participates in the fisheries management process through a representative who sits on regional fisheries advisory groups run by ADF&G. Aleknagik is located Federal Reporting Area 514, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. In addition, Aleknagik is eligible to participate in the Community Development Quota (CDQ) program and is represented by the BBEDC. In the Bering Sea – Aleutian Islands (BSAI) region, percentages of the Total Allowable Catch for groundfish species, halibut, and crab are allocated to six CDQ non-profit organizations representing 65 communities in Western Alaska in an effort to spur economic development and reduce poverty in western Alaska.⁶⁶ BBEDC receives allocations for pollock, Pacific cod, Atka mackerel, Pacific perch, yellowfin sole, rock sole, flathead sole,

⁶⁵ Salomone, P., Slim, M., Tim, S., Matt, J., Tim, B., Greg, B., Fred, W., and Ted, Kreig. 2011. 2010 Bristol Bay Area Annual Management Report. Alaska Department of Fish and Game. Fishery Management Report No. 11-23. Retrieved December 26, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidpdfs/FMR11-23.pdf>.

⁶⁶ NOAA Fisheries (n.d.). *Community Development Quota Program*. Retrieved January 1, 2013 from: <http://alaskafisheries.noaa.gov/cdq/default.htm>.

sablefish, Pacific halibut, snow crab, Tanner crab, red king crab, golden king crab, and blue king crab. In 2010, pollock, crab, and Pacific cod were among the top performing fisheries for BBEDC harvesters, while halibut and sablefish fisheries also performed well.⁶⁷

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Aleknagik does not have a registered processing plant. The closest seafood processor is located in Dillingham.

Fisheries-Related Revenue

Overall in 2010, the community received \$19,479 from fisheries-related taxes and fees, which represented an increase from \$8,724 in 2000. These revenue sources included a Shared Fisheries Tax, Fisheries Resource Landing Tax, and money raised by boat hauls. In a survey conducted by the AFSC in 2011, community leaders reported that revenue raised by these taxes go to fund medical services, roads, and public safety. In addition, the community received \$150,000 in funding or grants from their representative CDQ entity (BBEDC). Information regarding fisheries-related revenue can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that the commercial salmon season typically runs from June through September. Gear types used by residents include gillnet and troll. Vessels under 35 ft homeport in Aleknagik seasonally, but are not permanent due to winter ice. In 2010, 26 residents, or 11.9% of the population, held a total of 32 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 35 residents held a total of 50 CFEC permits. Of the CFEC permits issued in 2010, 72% were salmon, compared to 58% in 2000; and 28% were herring, compared to 40% in 2000. In addition, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) groundfish or crab permits between 2000 and 2010. Finally, no residents held halibut, sablefish, or crab quota between 2010 and when the programs began. A total of 66% of the CFEC permits were actively fished in 2010, compared to 74% in 2000. Overall, the number of CFEC permits held within the community declined at a relatively steady rate between 2000 and 2010, while the percentage of permits actively fished averaged at 63.5% annually. Participation in herring fisheries declined significantly in that time, as did the number of herring permits held locally. Participation in salmon fisheries remained relatively high between 2000 and 2010, an average of 89.9% of CFEC salmon permits actively fished annually. Fisheries prosecuted by Aleknagik residents in 2010 included Bristol Bay drift and set gillnet salmon.

Residents held 31 commercial crew licenses in 2010, compared to 48 in 2000. In addition, residents held majority ownership of 14 vessels that year, compared to 59 in 2000. In

⁶⁷ Bristol Bay Economic Development Corporation (2012). *BBEDC Decennial Review Report 2006-2010*. Retrieved January 2, 2013 from: http://www.commerce.state.ak.us/bsc/pub/DR_2010_BBEDC.pdf.

addition, the number of vessels homeported in Aleknagik declined significantly from a peak of 115 in 2000, to a low of 14 in 2010. The sharpest decline in that decade occurred in 2005, when the number of homeported vessels dropped from 111 to 21 in one year.

No landings were reported in Aleknagik between 2000 and 2010. However, landings were reported by Aleknagik residents during that time. In 2010, residents landed 847,395 lbs of salmon valued at \$763,956 ex-vessel, compared to 803,096 lbs valued at \$515,045 ex-vessel in 2000; an increase of \$0.07 per lb after adjusting for inflation,⁶⁸ and without considering the species composition of landings. Salmon landings by residents peaked in 2004 at 1.04 million lbs landed valued at \$492,588 ex-vessel. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁶⁸ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Aleknagik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$3,500	\$5,471	\$4,609	\$3,682	\$3,297	\$4,019	\$4,850	\$6,131	\$6,131	\$6,100	n/a
Shared Fisheries Business Tax ¹	\$3,164	\$5,471	\$7,609	\$9,153	\$3,297	\$4,019	\$4,825	\$6,061	\$5,810	\$7,241	\$7,004
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$25	\$69	\$267	\$445	\$475
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	\$5,603	\$8,261	\$11,158	\$14,500	\$14,500	\$4,900	\$4,263	\$11,633	\$11,925	\$12,000
Harbor usage ²	\$2,060	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$8,724</i>	<i>\$16,545</i>	<i>\$20,479</i>	<i>\$23,993</i>	<i>\$21,094</i>	<i>\$22,538</i>	<i>\$14,600</i>	<i>\$16,525</i>	<i>\$23,841</i>	<i>\$25,711</i>	<i>\$19,479</i>
<i>Total municipal revenue⁵</i>	<i>\$221,694</i>	<i>\$245,748</i>	<i>\$372,413</i>	<i>\$336,800</i>	<i>\$294,864</i>	<i>\$335,361</i>	<i>\$516,373</i>	<i>\$983,746</i>	<i>\$1.07 M</i>	<i>\$505,358</i>	<i>\$496,040</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city brings in each year from all sources, including fisheries-related revenue streams. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Aleknagik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	1	1	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	20	19	13	14	13	11	11	10	10	9	9
	Fished permits	9	4	2	0	0	0	0	0	0	0	0
	% of permits fished	45%	21%	15%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	14	16	12	13	12	11	11	10	10	9	9

Table 4 cont'd. Permits and Permit Holders by Species, Aleknagik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	29	28	28	30	25	28	24	23	23	24	23
	Fished permits	28	27	22	27	23	24	21	21	20	22	21
	% of permits fished	97%	96%	79%	90%	92%	86%	88%	91%	87%	92%	91%
	Total permit holders	31	28	30	32	25	29	25	24	23	29	23
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>50</i>	<i>48</i>	<i>42</i>	<i>44</i>	<i>38</i>	<i>39</i>	<i>35</i>	<i>33</i>	<i>33</i>	<i>33</i>	<i>32</i>
	<i>Fished permits</i>	<i>37</i>	<i>31</i>	<i>24</i>	<i>27</i>	<i>23</i>	<i>24</i>	<i>21</i>	<i>21</i>	<i>20</i>	<i>22</i>	<i>21</i>
	<i>% of permits fished</i>	<i>74%</i>	<i>65%</i>	<i>57%</i>	<i>61%</i>	<i>61%</i>	<i>62%</i>	<i>60%</i>	<i>64%</i>	<i>61%</i>	<i>67%</i>	<i>66%</i>
	<i>Permit holders</i>	<i>35</i>	<i>32</i>	<i>32</i>	<i>34</i>	<i>28</i>	<i>32</i>	<i>28</i>	<i>27</i>	<i>26</i>	<i>31</i>	<i>26</i>

Note: n/a indicates that no data were reported for that year.

¹(NMFS) National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²(CFEC) Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Aleknagik: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Aleknagik ²	Total Net Lbs Landed In Aleknagik ^{2,5}	Total Ex-Vessel Value Of Landings In Aleknagik ^{2,5}
2000	48	0	0	59	115	0	0	\$0
2001	28	0	0	57	96	0	0	\$0
2002	20	0	0	55	101	0	0	\$0
2003	31	0	0	58	103	0	0	\$0
2004	27	0	0	51	111	0	0	\$0
2005	30	0	0	15	21	0	0	\$0
2006	25	0	0	15	19	0	0	\$0
2007	34	0	0	15	15	0	0	\$0
2008	38	0	0	16	15	0	0	\$0
2009	37	0	0	17	16	0	0	\$0
2010	31	0	0	14	14	0	0	\$0

¹ (ADF&G) Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² (ADF&G) Alaska Department of Fish and Game, and (CFEC) Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ (NMFS) National Marine Fisheries Service. 2011. Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ (CFEC) Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Individual Fishing Quota, Halibut, Aleknagik: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Individual Fishing Quota, Sablefish, Aleknagik: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Individual Fishing Quota, Crab, Aleknagik: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Aleknagik: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Aleknagik Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	124,660	171,050	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	803,096	517,138	245,476	927,430	1,037,633	880,145	973,238	1,027,564	983,706	1,021,253	847,395
<i>Total²</i>	<i>927,756</i>	<i>688,188</i>	<i>245,476</i>	<i>927,430</i>	<i>1,037,633</i>	<i>880,145</i>	<i>973,238</i>	<i>1,027,564</i>	<i>983,706</i>	<i>1,021,253</i>	<i>847,395</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$13,347	\$13,342	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$515,045	\$193,716	\$100,482	\$426,824	\$492,588	\$488,780	\$581,051	\$629,884	\$682,079	\$761,068	\$761,946
<i>Total²</i>	<i>\$530,392</i>	<i>\$209,058</i>	<i>\$102,484</i>	<i>\$428,827</i>	<i>\$494,592</i>	<i>\$490,785</i>	<i>\$583,057</i>	<i>\$631,891</i>	<i>\$684,087</i>	<i>\$763,077</i>	<i>\$763,956</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is very popular in Aleknagik, most likely due to its proximity to Aleknagik Lake and Wood Tilchik State Park. In a survey conducted by the AFSC in 2011, community leaders reported that species targeted by local private anglers include all five species of Pacific salmon, as well as halibut. In addition, local private anglers target Dolly Varden char, rainbow trout, and northern pike.⁶⁹ In 2010, there were 324 sportfishing licenses sold in the community, compared to 581 in 2000. Sportfishing license sales peaked in 2006 at 601 licenses sold. In addition, residents held 45 sportfishing permits in 2010, compared to 21 in 2000. Although there are sport fish guide business registered in Aleknagik, none were active between 2000 and 2010.

Aleknagik is located within the Nushagak, Wood River, and Togiak ADF&G Harvest Survey Area which included all lakes and tributaries of the Nushagak River drainage, including the Mulchatna River drainage, the Wood River, Tilchik Lake systems, and water westward of Cape Newenham. In 2010, there were a total of 23,385 freshwater angler days fished, compared to 43,083 in 2000. In that year, non-Alaska residents accounted for 67% of angler days fished, compared to 73% in 2000. Total angler days fished peaked in 2005 at 48,751. No charter log data is available for Aleknagik between 2000 and 2010. Information regarding recreational fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Aleknagik: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses to Residents ²	Sport Fishing Licenses Sold in Aleknagik ²	Freshwater Angler Days Fished – Non-Residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	0	1	21	581	31,290	11,793
2001	0	1	31	536	31,489	10,779
2002	0	2	33	575	20,011	11,911
2003	0	3	40	463	26,783	13,419
2004	0	2	42	599	25,203	19,980
2005	0	14	40	596	33,089	15,662
2006	0	11	47	601	28,840	14,858
2007	0	9	43	486	28,541	13,762
2008	0	12	50	335	27,066	7,356
2009	0	8	49	381	22,444	7,805
2010	0	7	45	324	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information

⁶⁹ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>
(Accessed September 2011).

Subsistence Fishing

Subsistence is an important part of the local culture and economy of Aleknagik. According to a survey conducted by the AFSC in 2011, community leaders reported that incomes are heavily supplemented by subsistence resources after the commercial fishing season closes. The most important subsistence species harvested by residents include sockeye salmon, berries, moose, and caribou. Popular subsistence areas include Aleknagik Lake, Bear Creek to the north, and Pike Bay on the east side of Aleknagik Lake.⁷⁰ According to data taken from the ADF&G Community Subsistence Information System, residents of Aleknagik have used or harvested butter clams, cockles, hair crab, mussels, razor clams, shrimp, bearded seal, harbor seal, ringed seal, Steller sea lion, blackfish, burbot, capelin, cisco, Dolly Varden, flounder, Arctic grayling, herring (roe and food), lake trout, Pacific cod, Pacific tom cod, Northern pike, rainbow smelt, rainbow trout, sculpin, sucker, and whitefish.⁷¹

Data pertaining to subsistence activity is limited, and information on household participation in subsistence activities is unavailable. Of the species reported by ADF&G in Table 13, residents reported harvesting sockeye salmon the most often, followed by Chinook, coho, chum, and pink salmon. In 2008, residents reported harvesting 3,309 salmon, compared to 1,111 in 2000. Reported salmon harvests peaked in 2008. Overall, the number of reported Chinook and sockeye salmon harvests increased significantly between 2000 and 2008, while the number of chum and coho harvest remained relatively stable. In 2010, residents held 3 Subsistence Halibut Registration Certificates (SHARC), compared to 1 in 2003. No halibut was reported harvested between 2003 and 2008. Between 2000 and 2008, an estimated 11 beluga whales, 7 harbor seals, and 63 spotted seals were harvested. Information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that opening the Wood River Special Harvest Area to commercial fishing has negatively impacted the community by preventing residents from accessing their set net operations and fish camps. In addition, the community is in favor of allowing foreign processors to operate in Bristol Bay in order to increase processing capacity. Finally, proposals to increase length restrictions of vessels may negatively affect residents, who are largely “low capital” by impacting their competitiveness. Management impacts perceived to be beneficial to the community include the CDQ program and shortened openings on ebb tides.

⁷⁰ City of Aleknagik and Agnew::Beck Consulting. (2005). *Aleknagik Comprehensive Plan*. Retrieved June 8, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Aleknagik-CP-2005.pdf>.

⁷¹ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Aleknagik 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Aleknagik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	19	17	187	55	134	n/a	735	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	26	19	885	68	187	14	1,051	n/a	n/a
2005	22	19	470	82	105	6	1,131	n/a	n/a
2006	26	20	482	95	155	10	1,305	n/a	n/a
2007	21	15	284	8	94	n/a	1,021	n/a	n/a
2008	42	40	1,198	125	142	n/a	1,844	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Aleknagik: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	3	n/a	n/a
2005	4	n/a	n/a
2006	4	n/a	n/a
2007	3	n/a	n/a
2008	3	n/a	n/a
2009	3	n/a	n/a
2010	3	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Aleknagik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	1	n/a	n/a	n/a	n/a	n/a	n/a
2001	2	n/a	n/a	n/a	n/a	n/a	4
2002	2	n/a	n/a	n/a	n/a	n/a	5
2003	n/a	n/a	n/a	n/a	n/a	2	6
2004	2	n/a	n/a	n/a	n/a	n/a	7
2005	3	n/a	n/a	n/a	n/a	5	7
2006	1	n/a	n/a	n/a	n/a	n/a	10
2007	n/a	n/a	n/a	n/a	n/a	n/a	10
2008	n/a	n/a	n/a	n/a	n/a	n/a	14
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Chignik (CHIG-nick)



People and Place

*Location*⁷²

The City of Chignik is located on Anchorage Bay on the south shore of the Alaska Peninsula. It lies 450 mi southwest of Anchorage and 260 mi southwest of Kodiak. The area encompasses 11.7 sq mi of land and 4.2 sq mi of water. Chignik was incorporated as a Second-class city in 1983 and is located in the Lake and Peninsula Borough.

*Demographic Profile*⁷³

In 2010, there were 91 residents, ranking Chignik 254th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 52%. Between 2000 and 2009, the population declined by 21.5% with an average annual growth rate of -0.89%, which was lower than the statewide average of 0.75%. However, there was a 15.2% increase in population between 2000 and 2010, and a 46.8% increase between the 2009 Alaska Department of Labor (DOL) estimate and 2010 U.S. Census figures, indicating a net growth in that decade. Information regarding population trends can be found in Table 1.

Chignik's racial composition is a mixture of Alutiiq and non-Natives. In 2010, 57.1% of the population identified themselves as American Indian or Alaska Native, compared to 60.8% in 2000; 34.1% identified themselves as White, compared to 31.6% in 2000; 3.3% identified themselves as Asian, compared to 2.5% in 2000; 4.4% identified themselves as two or more races, compared to 1.3% in 2000; and 1.1% identified themselves as some other race, compared to 1.3% in 2000. In addition, 1.1% of residents identified themselves as Hispanic or Latino, compared to 1.3% in 2000. Information regarding trends in Chignik's racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 2.22, compared to 3.4 in 1990 and 2.72 in 2000. Also in that year, there were 105 total household units, compared to 104 in 1990 and 80 in 2000. Of the households surveyed in 2010, 24.8% were owner-occupied, compared to 21.3% in 2000; 14.3% were renter-occupied, compared to 15% in 2000; 25.7% were vacant, compared to 11.3% in 2000; and 35.2% were occupied seasonally, compared to 52.5% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

⁷² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

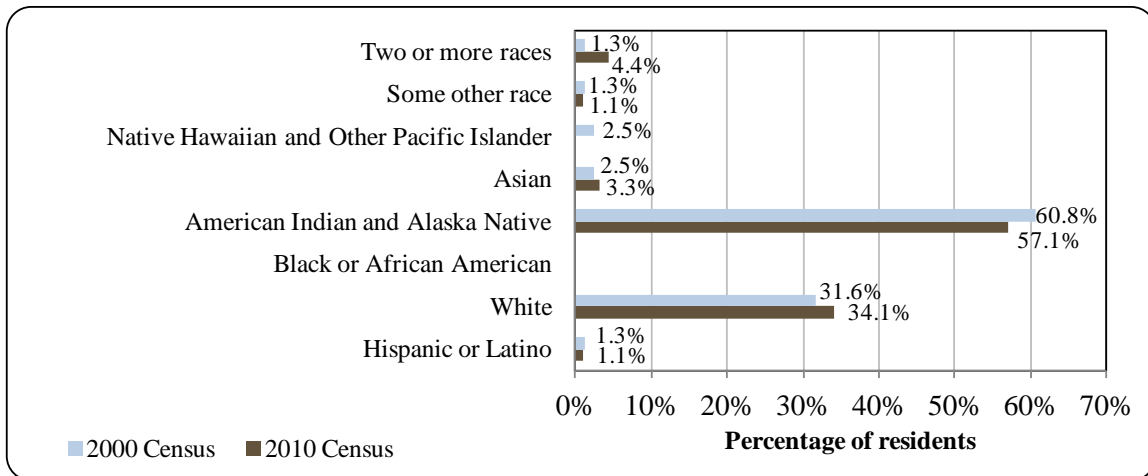
Table 1. Population in Chignik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	188	-
2000	79	-
2001	-	76
2002	-	77
2003	-	91
2004	-	92
2005	-	95
2006	-	83
2007	-	80
2008	-	59
2009	-	62
2010	91	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Chignik: 2000-2010 (U.S. Census).



Gender distribution was somewhat skewed in 2010 at 56.1% male and 43.9% female. This was more skewed than both the statewide distribution (52.1% male, 47.9% female) and 2000 distribution (53.2% male, 46.8% female). The median age that year was 45.3 years, which was markedly older than the statewide median of 32.7 years and 2000 median of 36.3 years; and indicative of an aging population.

The population structure was constrictive and highly irregular in both 2000 and 2010. High variability and attrition is likely attributed to the fact that many residents hold dual residency in either Kodiak or Anchorage, migrating to the larger cities in the winter when employment becomes scarce.⁷⁴ In addition, Chignik is largely integrated with the surrounding communities of Chignik Lake and Chignik Lagoon, which may further confound both population structures.

In 2010, 24.2% of residents were under the age of 20, compared to 31.8% in 2000; 12.1% were over the age of 59, compared to 6.3% in 2000; 52.8% were between the ages of 30 and 59, compared to 50.6% in 2000; and 11.0% were between the ages of 20 and 29, compared to 11.4% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000, most male biases among most age ranges. In that year, the greatest absolute gender difference occurred within the 50 to 59 range (15.4% male, 9.9% female), followed by the 70 to 79 (2.2% male, 0.0% female) and 20 to 29 (6.6% male, 4.4% female) ranges. Of those three, the greatest relative gender difference occurred in the 70 to 79 range. Information regarding trends in Chignik's population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁷⁵ estimated that 54.1% of residents aged 25 and older held a highschool diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, and estimated 39.2% of residents had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 6.8% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 21.6% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 8.1% had an Associate's degree, compared to an estimated 8% of Alaskan residents overall; an estimated 6.8% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 4.1% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*⁷⁶

The Alaska Peninsula has been occupied for over 8,000 years, although there is limited evidence of occupation in the Chignik vicinity. The village of *Kalwak* is reported to have existed prior to Russian contact, although it was destroyed during the fur trade boom in the late eighteenth century. During the Russian occupation, many communities along the Gulf of Alaska became fragmented and by 1871, the Alaska Peninsula appeared to be almost abandoned. A 1976 study of the Chignik region found a large site affiliated with 4,000 year-old traditions in the area. Two surveys conducted in 1984 and 1996 also revealed a cluster of Native homes on the southwest side of Anchorage Bay.

⁷⁴ Chignik Bay Tribal Council. (2006). *Chignik Bay Community Plan*. Retrieved January 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChignikBay-CP-2006.pdf>.

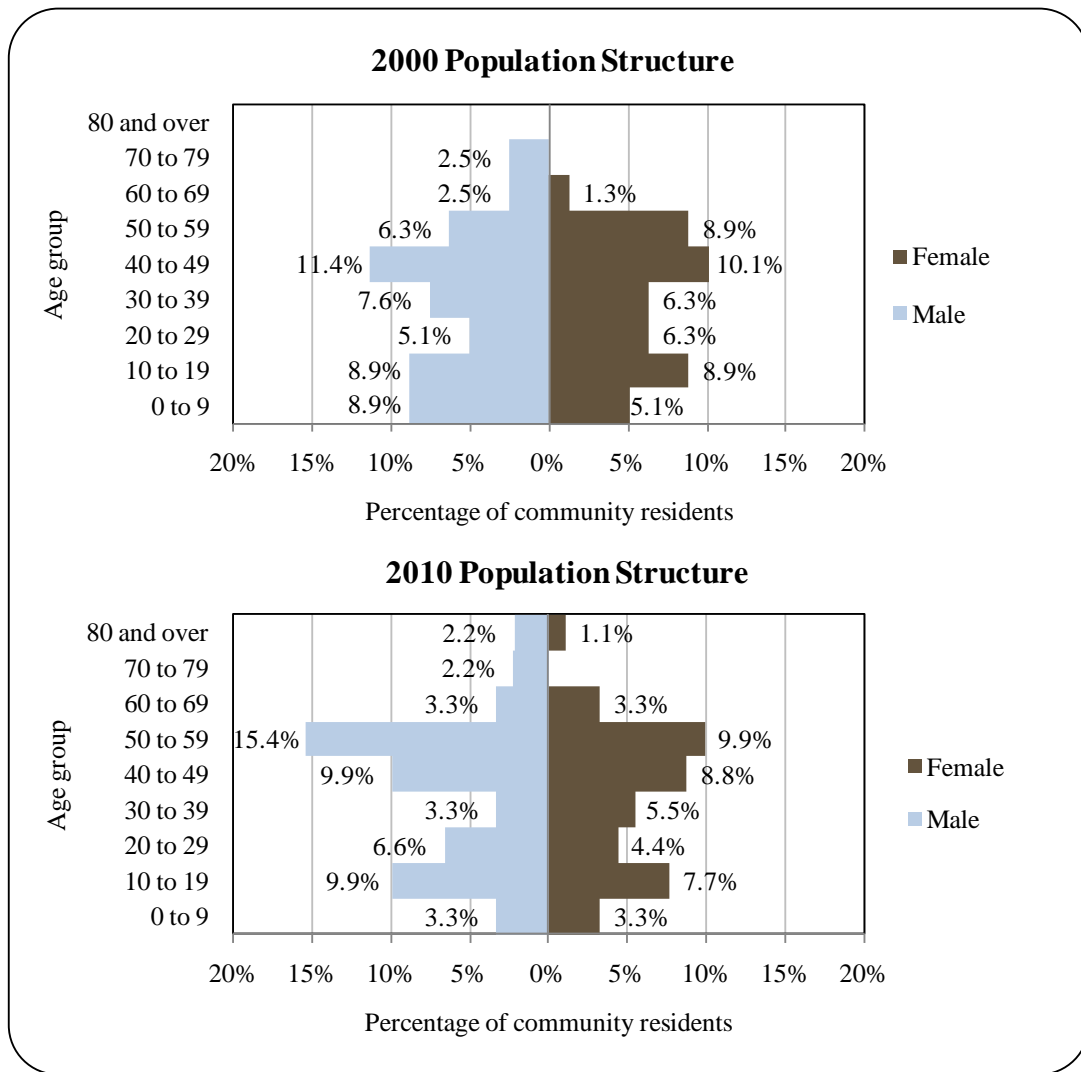
⁷⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Chignik, meaning “big wind,” was established in the late nineteenth century as a fishing village. During this time, supplies and workers were shipped in from San Francisco and in 1896 the Hume Company built a cannery on the eastern side of Anchorage Bay. A cannery on the town side was built in 1910 by Columbia River Packers, which later burned in 1976. Trident Seafoods currently owns the cannery, although NorQuest Seafoods (which sold the cannery to Trident) still operates it. A 1979 building inventory of the cannery indicated 56 facilities of possible historic significance. The original 1910 structure remains the oldest continuously operating seafood processing facility in Alaska.

Today, Chignik Bay continues to remain a community dependent on commercial and subsistence fisheries and seafood processing. It is part of a regional community network connected to Chignik Lake and Chignik Lagoon; with a combined population of 242 according to the 2010 Census.

Figure 2. Population Age Structure in Chignik Based on the 2000 and 2010 U.S. Decennial Census.



Natural Resources and Environment

The maritime climate of Chignik is characterized by cool summers and relatively warm, rainy winters. Summer temperatures range from 39 to 60 °F (4 to 16 °C). Winter temperatures range from 21 to 50 °F (-6 to 10 °C). Extreme temperatures, ranging from a low of -12 (-24 °C) to a high of 76 °F (24 °C), have been recorded. Precipitation averages 127 inches annually, with an average annual snowfall of 58 inches.⁷⁷

Chignik is located in the Alaska Peninsula National Wildlife Refuge (APNWR). The geology and topography of the area is characterized by high relief mountainous slopes mantled with deposits of volcanic ash and cinders. Many depressions in the slopes contain muskeg. Brown and tan sandstone conglomerates dominate the landscape. Soils are relatively shallow and unproductive on the slopes, and primarily consist of well-drained ashy loams overlying sandy and cindery ash. Level areas consist of deeper, poorly drained organics with a thin layer of ash. Land within the community consists mostly of marshy wetlands, pebble rock, and sand. Vegetation is typical of western/Aleutian Alaska. Due to soil and climatic conditions, natural growing trees are rare and most vegetation consists of low shrubs, grasses, and dwarf alders and willow. Brackish marsh vegetation populates the low lying areas and wetlands. Wildflowers including dandelion, fireweed, iris, rose, lupine, and horsetail are also found throughout the area, as well as an abundance of wild berries.⁷⁸

The APNWR provides habitat for many migratory and marine birds including mallards, shovel nose, canvas backs, pintails, common merganser, bufflehead, and gulls. Terrestrial wildlife includes brown bear, moose, caribou, wolf, wolverine, fox, river otter, and beaver. Fish present include all five species of Pacific salmon, Arctic grayling, Dolly Varden char, rainbow and lake trout, northern pike, and burbot. Marine mammals present include Steller sea lions, harbor seals, sea otters, and migratory whales.⁷⁹ Mineral resources in the area include a copper and molybdenum deposit located at Bee Creek to the north, as well as coal deposits scattered throughout the region.⁸⁰

Natural hazards in the area are similar to those on a regional level and include coastal flooding and erosion, storm surges, earthquakes, volcano eruptions, and tsunamis. There have been several historic earthquake and flooding events, and the community itself lies 40 mi west of the active volcano, Mt. Veniaminof.⁸¹ An active stratovolcano, eruption events were observed six times between 2002 and 2008.⁸²

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in the community in 2010.⁸³

⁷⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁸ Chignik Bay Tribal Council. (2006). *Chignik Bay Community Plan*. Retrieved January 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChignikBay-CP-2006.pdf>.

⁷⁹ U.S. Fish and Wildlife Service. (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved January 24, 2012 from: <http://alaskapeninsula.fws.gov/wildlife.htm>.

⁸⁰ Alaska Department of Economic Development. (n.d.). *Mineral Resources in Alaska*. Retrieved January 24, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁸¹ See footnote 78.

⁸² Alaska Volcano Observatory (n.d.). *Veniaminof Reported Activity*. Retrieved January 9, 2013 from: <http://www.avo.alaska.edu/volcanoes/volact.php?volname=Veniaminof>.

⁸³ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 22, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy⁸⁴

Commercial fishing and subsistence activities are central parts of Chignik's economy. The commercial fishing and seafood processing sectors are major contributors to the local cash economy, although many of these jobs are seasonal and attract mostly temporary workers. Like most rural communities in Alaska, education, health care, and public administration are major sources of year round employment. Top employers⁸⁵ for 2010 included Lake and Peninsula School District, Chignik Lake Village Council, and Bristol Bay Housing Authority, Health Corporation, and Native Association.

In 2010,⁸⁶ the estimated per capita income in Chignik was \$16,377 and the estimated median household income was \$37,206, compared to \$16,166 and \$34,250 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁸⁷ the real per capita income (\$21,258) and median household income (\$45,038) indicate an overall decline in both individual and household earnings.⁸⁸ In 2010, Chignik ranked 180th of 305 Alaskan communities from which per capita income was estimated, and 206th of 299 communities from which median household income was estimated.

Chignik's small population size may have prevented the ACS from accurately portraying economic conditions.⁸⁹ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$1.03 million in total wages in 2010.⁹⁰ When matched with the population in 2010, the per capita income equals \$11,332 which suggests that caution should be used when comparing 2006-2010 ACS estimates with the 2000 Census.⁹¹

According to 2006-2010 ACS estimates,⁹² 46.7% of residents aged 16 years and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 2.8%, compared to 5.9% statewide; and 4.9% of residents were estimated to be living below the poverty level, compared to 9.5% statewide. Of those employed, an estimated 23.4% worked in the private sector and an estimated 76.6% worked in the public sector.

⁸⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁸⁵ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸⁹ Ibid.

⁹⁰ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁹¹ See footnote 85.

⁹² See footnote 86.

By industry, most (55.3%) employed residents were estimated to work in the public administration sector in 2010; followed by education, health care, and social assistance sectors (12.8%) manufacturing sectors (12.8%); construction sectors (12.8%); and transportation, warehousing, and utility sectors (6.4%). By occupation type, most (42.6%) employed residents were estimated to hold sales or office positions that year; followed by management or professional positions (23.4%); production, transportation, or material moving positions (17.0%); natural resources, construction, or maintenance positions (14.9%); and service positions (2.1%).

Between 2000 and 2010, there were several major proportional shifts in employment by industry sector, most notably within the public administration and education, health care and social assistance sectors; In addition, the proportion of sales and office occupations saw a dramatic increase from 17.1% in 2000 to 42.6% 2010, while service occupations declined steeply from 28.6% to 2.1%. It should be noted that large variations in employment data may be attributed either to shifts in economic conditions resulting from a transient population, or ACS sampling errors. Information regarding employment trends can be found in Figure 3 and 4.

No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

An alternative estimate of employment is provided by the ALARI database. According to 2010 ALARI estimates,⁹³ most (52.6%) of employed residents worked in local government sectors; followed by education and health service sectors (10.5%); and other unspecified sectors (10.5%).

Figure 3. Local Employment by Industry in 2000-2010, Chignik (U.S. Census).

⁹³ See footnote 85.

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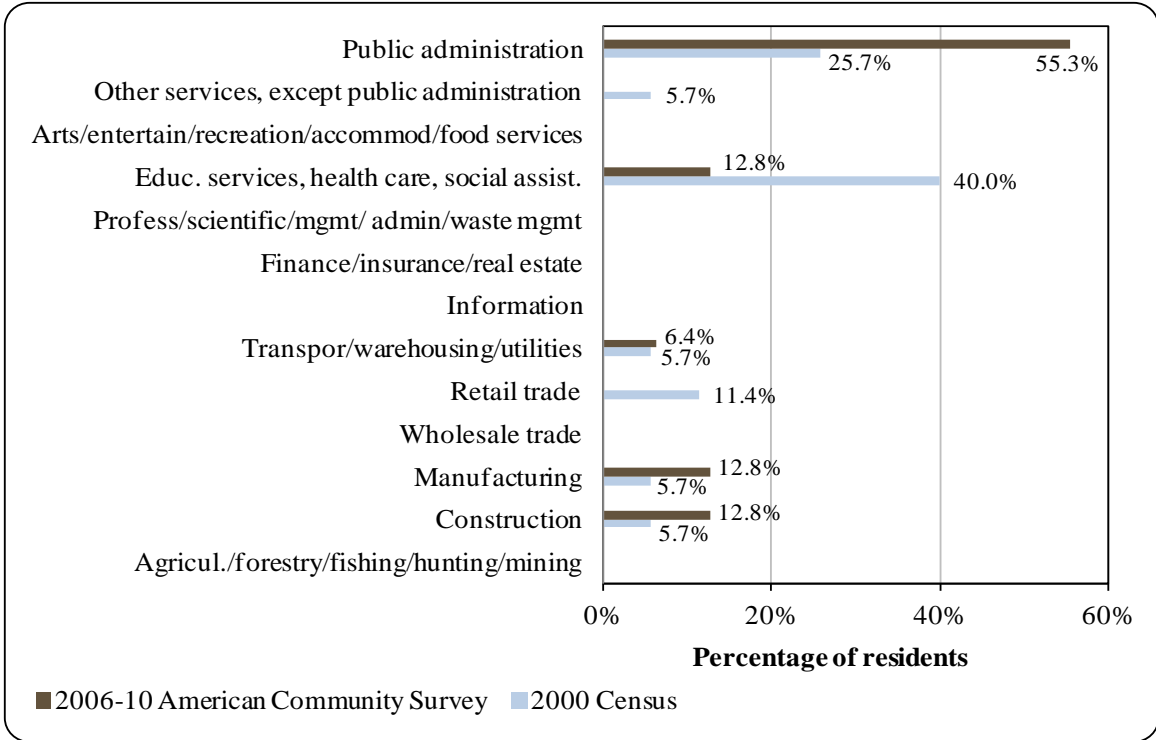
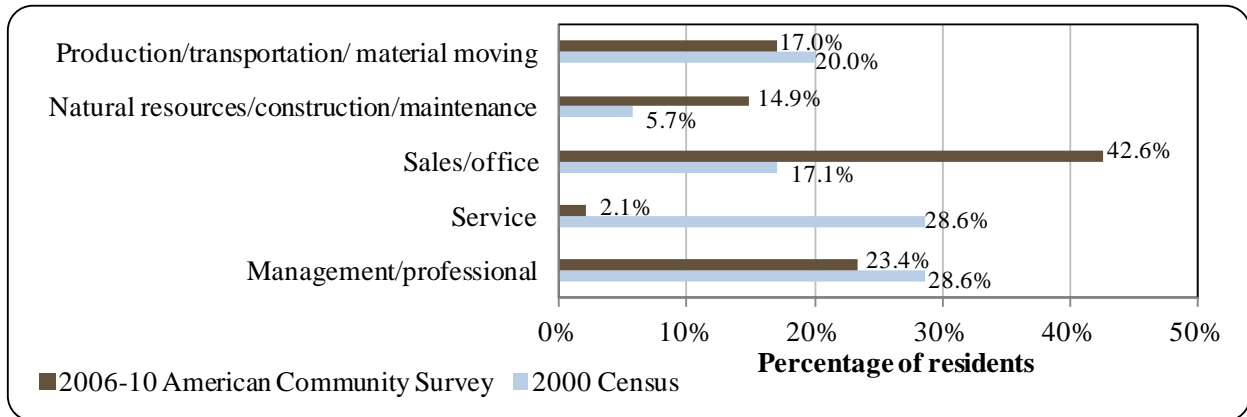


Figure 4. Local Employment by Occupation in 2000-2010, Chignik (U.S. Census).



Governance

Chignik is a Second-class city with a mayoral form of government. It has a seven-member city council, five-member school board, and four municipal employees. In addition, there is a U.S. Bureau of Indian Affairs recognized Tribal government (Chignik Bay Tribal Council) and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Far West, Incorporated). The regional ANCSA chartered corporation representing Chignik is the Bristol Bay Native Corporation. The community has a local Alaska Department of Fish and Game (ADF&G) office open during the summer. The closest permanent ADF&G office is located in Sand Point, 105 mi to the southwest. The closest National Marine Fisheries Services (NMFS) office is located in Kodiak, 260 mi to the northeast; and the closest U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage, 450 mi northeast.

In 2010, the municipality administered a 3% fish tax; however, the Lake and Peninsula Borough administers an additional 2% Raw Fish tax, 6% accommodations tax, \$3.00 Guide tax, and \$1.00 Lodge Guide tax. In 2010, there was \$1.15 million in total municipal revenues, compared to \$1.21 million in 2000. Revenues peaked in 2009 at \$1.42 million, and were at their lowest in 2005 at \$961,753. Chignik received \$99,109 in state allocated Community Revenue Sharing in 2010, accounted for approximately 8.6% of municipal revenues. In 2000, the community received \$26,242 in State Revenue Sharing, which accounted for approximately 2.2% of total revenues. Between 2000 and 2010, Chignik received over \$12.2 million in fisheries related grants. Projects funded by these grants included harbor dredging, seafood processing projects, dock improvements, construction of a breakwater and small harbor, and port facilities improvements. Information regarding municipal revenue trends can be found in Table 2.

Infrastructure

*Connectivity and Transportation*⁹⁴

Chignik is accessible by air and sea. There is a state-owned 2,600-ft long by 60-ft wide gravel runway and a seaplane base. Regular flights run from King Salmon and Port Heiden. Barge services arrive weekly from late spring through early fall and monthly during the remainder of the year. The state ferry operates bi-monthly from Kodiak between May and October. A 600-ft privately-owned dock and boat haul-out are available. A breakwater, 110-slip small boat harbor, and public dock are under development. ATVs and skiffs are the primary means of local transportation. There is a strong regional interest in constructing roads between Chignik, Chignik Lagoon, Chignik Lake, and the city landfill. The price of roundtrip airfare between Chignik and Anchorage in June 2012 was \$960.⁹⁵

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Chignik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,213,519	n/a	\$26,242	\$25,000
2001	\$1,321,777	n/a	\$25,264	\$3,325,000
2002	\$1,251,393	n/a	\$25,263	\$175,075
2003	\$1,069,864	n/a	\$25,428	\$7,500,000
2004	\$1,168,627	n/a	-	\$213,370
2005	\$961,753	n/a	-	n/a
2006	\$966,626	n/a	-	n/a
2007	\$965,673	n/a	-	n/a
2008	\$1,073,390	n/a	-	n/a
2009	\$1,420,955	n/a	\$99,010	\$1,000,000
2010	\$1,152,553	n/a	\$99,109	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁹⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁵ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

Facilities^{96,97}

The municipality provides basic utilities including diesel power, water and sewer, and waste disposal. Water is supplied by Indian Creek, which has a dam and a reservoir. Water is treated and piped into all 60 homes and the school. A well is available for back-up water supply. Piped sewage is collected in community septic tanks, and wastewater is discharged via ocean outfall lines; approximately 45 homes are served. The remainder use individual septic tanks. All homes are completely plumbed. The municipal landfill currently serves both private residences and the local cannery and needs to be updated in order to extend its lifespan. Long distance telephone services are provided by ACS, AT&T, and GCI. Internet service is provided by GCI. The city fuel tank farm has four 32,000 gallon storage tanks and one 6,000 gallon dispensing tank

The city offers cable television services via a satellite system. Current infrastructure is strung along telephone poles, and service is often interrupted by storms. Public safety and emergency response is handled by the local volunteer fire department and Village Public Safety Officer. The community hall offers space for recreation, community gatherings, and cultural events. Additional public facilities include a post office, church, and subsistence building.

Beginning in 2006, the community was in the development and proposal phase of several extensive port improvement projects aimed at developing Chignik as a regional marine transportation and cargo hub. A small boat harbor and breakwater was approved for funding in 2001 and construction and dredging was completed in 2005. As of 2010, the two docks located in Chignik were privately owned by Trident Seafoods and NorQuest Seafoods. The city is interested in constructing a seven acre public dock on public waterfront land for commercial and industrial uses. Proposed facilities and services for placement around the dock would include container shipping and short-term storage, inbound cargo storage, outside storage for seine skiffs and fishing gear, a vehicle staging area, fuel delivery and vessel fueling, travel lift and vessel haulout, a vessel repair facility, a machine shop, a marine-related rental shop, and other marine-oriented businesses.

Medical Services

Chignik Bay Sub Regional Health Clinic is a qualified Emergency Care Center and Community Health Aid Program (CHAP) site.⁹⁸ Services currently offered include primary medical care, emergency and trauma, behavioral health, dental, diagnostic imaging, and pharmacy.⁹⁹

⁹⁶ See footnote 94.

⁹⁷ Chignik Bay Tribal Council. (2006). *Chignik Bay Community Plan*. Retrieved January 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChignikBay-CP-2006.pdf>.

⁹⁸ See footnote 94.

⁹⁹ Ibid.

*Educational Opportunities*¹⁰⁰

Chignik Bay School offers preschool through 12th grade instruction. As of 2011 there were 20 students enrolled and 2 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historical involvement in north pacific fisheries dates back over 8,000 years of human occupation in the area; however, commercial fishing didn't take root in the area until the end of the nineteenth century when the first seafood processor began salting, packing, and shipping salmon.¹⁰¹

The Chignik Management Area (CMA) is located on south side of the Alaska Peninsula and is the site of one of the earliest salmon fisheries in Alaska. By 1878, two canneries were processing the region's abundant sockeye salmon resource from Chignik Lagoon, one more began operation in Anchorage Bay by Chignik in 1896, and by 1910 the Columbia River Packers Association had built a cannery at Indian River (on Anchorage Bay). Canneries continued to proliferate throughout the region between 1890 and 1910, with additional canneries being established near Ivanof Bay, and in Anchorage Bay. By 1911, the Columbia River Packing Company (later renamed Columbia Ward Fisheries) began operations on the north side of Chignik Lagoon, and operated there until 1990. By 1992, Aleutian Dragon Fisheries, and Chignik Pride Fisheries operated the only two remaining processing plants in the area, and both were located in Chignik Bay. Seafood processed mostly included all five species of Pacific salmon, Pacific cod; while smaller quantities of octopus, sablefish, red snapper, pollock, and herring were also processed. Chignik canneries began processing shrimp in the 1970s, king crab in the early 1980s, and Tanner crab by 1987.¹⁰²

All five species of Pacific salmon are harvested commercially within the CMA, of which sockeye salmon are primarily targeted. In 2010, Chinook harvests within CMA totaled 10,380 fish, sockeye harvests totaled 1.38 million fish, coho harvests totaled 159,198 fish, pink harvests totaled 489,781 fish, and chum harvests totaled 581,329 fish. Total ex-vessel value of the CMA salmon harvest in 2010 was approximately \$14.34 million.¹⁰³ Ex-vessel value for Chignik salmon peaked in 1987 and 1988 at more than \$25 million, and decreased steadily to a low of approximately \$5 million between 2002 and 2006.¹⁰⁴

¹⁰⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰¹ Chignik Bay Tribal Council. Retrieved January 25, 2012 from: <http://www.chignikbay.com/economicstrends.asp>

¹⁰² Hutchinson-Scarborough, L., and J. A. Fall. (1996). *An Overview of Subsistence Salmon and Other Subsistence Fisheries of the Chignik Management Area, Alaska Peninsula, Southwest Alaska*. Alaska Dep. of Fish and Game. Tech. Paper No. 230. Retrieved January 10, 2013 from: <http://www.subsistence.adfg.state.ak.us/download/TPS/tp230.pdf>.

¹⁰³ Anderson, T. J., and N. W. Nichols. (2010). *Chignik Management Area Salmon and Herring Annual Management Report, 2010*. Alaska Dep. of Fish and Game. Fishery Management Report No. 10-48. Retrieved January 10, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR10-48.pdf>.

¹⁰⁴ Knapp, G. (2007). *The Chignik Salmon Cooperative: A Case Study of Allocation to a Voluntary Self-Governance Organization*. University of Alaska, Anchorage. Retrieved January 9, 2013 from: http://www.iser.uaa.alaska.edu/people/knapp/personal/pubs/Knapp_Chignik_Salmon_Coop--Case_Study_of_Allocation_to_a_Voluntary_Self_Governance_Organization.pdf.

Managed by emergency order, herring harvests typically occur from April 15 through June 30 for the sac roe season, and from August 15 through February 28 for the food and bait season. However, no commercial herring harvest occurred in 2010 due to low industry interest. The last commercial herring harvest occurred in 1996.¹⁰⁵

Groundfish species targeted for both state and federal fisheries include Pacific cod, sablefish, lingcod, black rockfish, dark rockfish, and walleye pollock. In 2010, Pacific cod and walleye pollock comprised the largest volume of groundfish harvested in state fisheries within the Chignik area. Pacific cod are managed as a single Gulf of Alaska (GOA) stock, with the state managing parallel fisheries within state waters. In 2010, the total Acceptable Biological Catch for GOA pacific cod was 174.38 million lbs. In that year, 59.16 million lbs of Pacific cod was taken from the western GOA, of which 56% was harvested from state waters. In the Chignik Area, pot gear vessels were allocated 8.51 million lbs, while jig gear vessels were allocated 946,040 lbs. The total Pacific cod harvest that year was 9.15 million lbs taken by 16 vessels, valued at \$2.19 million ex-vessel. In 2010, Black rockfish harvests in the Chignik Area was capped at 100,000 lbs. Only one vessel participated in the fishery that year. Skates are typically harvested incidentally while fishing for other targeted species, and fall under the assemblage of “other species” which include sharks, sculpins, squid, and octopi. Growing Asian markets for skates has increased interest in skates, which at times can be more valuable than other targeted species. Because of overfishing concerns, NMFS placed skates in bycatch status in 2006, while ADF&G discontinued directed harvests in state waters. State directed sablefish fisheries existed within Kodiak and Chignik areas in 2002, but have since been restricted to bycatch harvests. In 2010, sablefish bycatch harvests in state waters around Kodiak, Chignik, and the South Peninsula Eastern Districted totaled 17,924 lbs. Lingcod harvests are also strictly managed within the Kodiak and Chignik areas. Again, most lingcod is harvested as bycatch, and retention typically remains below 100,000 lbs annually within the western GOA. During 2008, lingcod harvests spiked to 521,257 lbs due to increased retention by trawl vessels. Lingcod harvests declined to 97,281 lbs in 2009 and 67,429 lbs in 2010. Walleye pollock harvests totaled 101.6 million lbs in the central GOA, and 57.1 million lbs in the western GOA. In the western GOA, 58% of the total pollock harvest occurred within state waters.¹⁰⁶

Historically, commercial red king crab, Tanner crab, grooved Tanner crab, Dungeness crab, Pandalid shrimp, red sea cucumber, and giant Pacific octopus harvests have occurred along the Alaska Peninsula. Most shellfish stocks are depressed, and commercial fisheries for red king crab and shrimp have not occurred since 1982. The Chignik Tanner crab fishery began in 1968, when 21,100 lbs were harvested and peaked in 1975 when 11 million lbs were harvested. Commercial fishing was closed in 1990 to allow depressed stocks to recover, and reopened during the 2004 and 2005 seasons. No Tanner crab fisheries occurred within the Chignik District between 2006 and 2010. Dungeness crab is harvested within the Chignik District, although participation in the fishery is low with less than three vessels reporting landings in 2010. Shrimp fishing within the Chignik District began in 1968, and harvests peaked in 1976 at 27 million lbs. Stocks crashed shortly after, and by 1981 only 71,000 lbs were harvested. Since then, all inshore waters within the Chignik District have remained closed. While commercial fishing is permitted

¹⁰⁵ See footnote 103.

¹⁰⁶ Stichert, M. A., K. Phillips, and P. Converse. (2011). *Annual Management Report fo Groundfish Fisheries in the Kodiak, Chignik, and South Alaska Peninsula Management Areas, 2010*. Alaska Dep. of Fish and Game. Fishery Management Report No. 11-44. Retrieved January 10, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-44.pdf>.

in some areas within the Chignik area, there was no fishing effort for shrimp within the Chignik District in 2010. Commercial sea cucumber harvests began in the Kodiak and Chignik districts in 1991 following an increase in market demand. Limits for eviscerated product was set at 25,000 lbs for the Chignik District in 2010 and fishing effort was limited. Demand for octopus increased during the 1990s, and are harvested alongside targeted species. In 2010, incidental harvests totaled 270,067 lbs from both state and federal waters.¹⁰⁷

In 2002, the Alaska Board of Fisheries implemented an experimental program that allocated a percentage of the Chignik sockeye salmon harvest to a harvesting cooperative, while creating a separate, “independent” fishery for non-cooperative vessels. The Chignik Salmon Cooperative originally grew from anger over ex-vessel prices offered by processing plants. In 1991, this anger led to local seiners striking. Following the strike, the Chignik Seiners Association continued discussions over the formation of a cooperative as a way to increase the overall profitability and lower overhead costs within the Chignik sockeye salmon fishery.¹⁰⁸ Fishing cooperatives had been formed previously in other fisheries as a method of voluntary self-management which would complement existing limited entry systems. It was believed that cooperatives would increase local access to markets, operating efficiency, and overall profitability.¹⁰⁹ In the case of the Chignik cooperative, members would be selected as harvesters, tenders, or inactive members. Profits would then be split equally among members. Between 2002 and 2005, over three-quarters of salmon permit holders living in Chignik became members of the Chignik Salmon Cooperative. Following the formation of the Cooperative, relations with local seafood processors became strained. With control over almost 70% of the salmon harvest, the Cooperative gained greater influence within the market than independent fishermen had previously held. Two salmon processing plants owned by Trident Seafoods and Norquest Seafoods operated in nearby Chignik Bay. Trident Seafoods and the Cooperative were unable to come to a purchasing agreement, and Trident decided close its plant in 2004. Despite being regarded as largely successful by most permit holders, the Chignik Salmon Cooperative ended in 2006 after the Alaska Supreme Court determined that the cooperative broke Alaska Limited Entry law.¹¹⁰

Today, the Chignik region as a whole participates heavily in commercial sockeye salmon, halibut, and groundfish fisheries; with Chignik Bay acting as a central hub for seafood processing. In addition, subsistence fishing provides an important economic and cultural foundation for residents. The community is eligible for participation in the Community Quota Entity (CQE) program, although they have yet to form a non-profit corporation. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and

¹⁰⁷ Sagalkin, N. and K. Spalinger. (2011). *Annual Management Report for Shellfish Fisheries in the Kodiak, Chignik, and Alaska Peninsula Areas, 2010*. Alaska Dep. of Fish and Game. Fishery Management Report No. 11-43. Retrieved January 10, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-43.pdf>.

¹⁰⁸ Knapp, G. (2007). *The Chignik Salmon Cooperative: A Case Study of Allocation to a Voluntary Self-Governance Organization*. University of Alaska, Anchorage. Retrieved January 9, 2013 from: http://www.iser.uaa.alaska.edu/people/knapp/personal/pubs/Knapp_Chignik_Salmon_Coop--Case_Study_of_Allocation_to_a_Voluntary_Self_Governance_Organization.pdf.

¹⁰⁹ Deacon, R. T., D. P. Parker, and C. Costello. (2008). *The Efficiency Gains from Coordinating Effort in a Fishery: Evidence from the Chignik Salmon Cooperative*. University of California, Santa Barbara. Retrieved January 9, 2013 from: http://econ.ucsd.edu/CEE/papers/Chignik%20II%2012_4.pdf

¹¹⁰ See footnote 108.

apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, an unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.¹¹¹

Chignik is located in Federal Reporting Area 620, International Pacific Halibut Commission (IPHC) Regulatory Area 3B, and the Central GOA Sablefish Regulatory District.

Processing Plants

Trident Seafoods Corporation's Chignik Plant is located in Chignik. Trident Seafoods was founded in 1973, and by the year 2000 was employing 4,000 people annually throughout Alaska and the Pacific Northwest. Throughout Alaska, Trident processes cod, pollock and crab in the winter and herring and salmon in the summer. The Chignik facility provides room and board at a nominal cost, as well as free air transportation to Chignik from Seattle and back to its seafood processing employees.¹¹²

Fisheries-Related Revenue

Between 2000 and 2010, Chignik received revenue from raw-fish taxes, Shared Fisheries Business taxes, Fisheries Resource Landing taxes, and harbor usage fees. In addition, the Lake and Peninsula Borough received revenue from raw-fish taxes. In 2010, fisheries-related revenue totaled \$178,557, compared to \$410,446 in 2000. Fisheries-related revenues peaked in 2001 at \$715,582. Information regarding fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 14 residents, or 15% of the population, held a total of 24 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 19 residents held 36 CFEC permits. Of the CFEC permits issued in 2010, 54% were for salmon, compared to 33% in 2000; 25% were for groundfish, compared to 33% in 2000; 13% were for halibut, compared to 14% in 2000; and 8% were for crab and "other" shellfish, compared to 6% in 2000. In addition, 5 residents held 6 groundfish License Limitation Program (LLP) permits; and 1

¹¹¹ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

¹¹² Trident Seafoods (n.d.) *Trident Seafoods*. Retrieved from: <http://tridentseafoods.com/>.

resident held 1 Federal Fisheries Permit (FFP) in 2010; although none of those permits were actively fished. Finally, residents held 128,220 shares of halibut quota on 1 account in 2010, compared to 218,539 shares held on 4 accounts in 2000. No residents held crab or sablefish quota between 2010 and when the programs began.

Residents held 24 commercial crew licenses in 2010, compared to 36 in 2000. In addition, residents held majority ownership of 22 vessels that year, compared to 31 in 2000. Of the CFEC permits held in 2010, 50% were actively fished, compared to 56% in 2000. This varied by fishery with 69% of salmon permits being fished, and 0% of crab and other shellfish permits being fished. Fisheries prosecuted by Chignik residents in 2010 included: statewide longline halibut, GOA pot gear miscellaneous saltwater finfish, and Alaska Peninsula drift gillnet salmon.¹¹³

Landings made in Chignik in 2010 are considered confidential. A total of 15.60 million lbs were landed in Chignik in 2009, representing an ex-vessel total value of \$9.91 million; however, information on individual species landed between 2000 and 2010 is mostly confidential. In 2004, 4.79 million lbs of salmon was landed in the community with an ex-vessel value of \$4.37 million, compared to 8.23 million lbs valued at \$5.39 million in 2002; representing a \$0.21 increase in ex-vessel price per pound after adjusting for inflation.¹¹⁴ In 2010, Chignik ranked 20th of 67 Alaskan communities in terms of pounds landed, and 21st in terms of ex-vessel revenue.

In 2010, residents landed 1.71 million lbs of salmon valued at \$1.13 million ex-vessel, compared 1.48 million lbs valued at \$1.17 million ex-vessel in 2000; a decline of \$0.44 per pound after accounting for inflation.¹¹⁵ However, residents landing Pacific cod in 2008 saw an increase of \$0.18 per pound ex-vessel from 2000 after accounting for inflation.¹¹⁶ Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹¹³ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹¹⁴ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

¹¹⁵ Ibid.

¹¹⁶ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Chignik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$92,046	\$235,538	\$126,568	\$82,644	\$61,500	\$76,649	\$42,355	\$44,623	\$55,867	\$58,779	\$58,000
Shared Fisheries Business Tax ¹	\$96,248	\$239,487	\$130,059	\$85,201	\$54,345	\$79,611	\$43,471	\$46,101	\$57,716	\$62,488	\$68,777
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	\$17	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$222,152	\$240,557	\$215,000	n/a	n/a	\$123,000	\$3,720	\$69,420	\$54,750	\$58,125	\$51,780
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$410,446</i>	<i>\$715,582</i>	<i>\$471,627</i>	<i>\$167,862</i>	<i>\$115,845</i>	<i>\$279,260</i>	<i>\$89,545</i>	<i>\$160,144</i>	<i>\$168,333</i>	<i>\$179,392</i>	<i>\$178,557</i>
<i>Total municipal revenue⁵</i>	<i>\$1.21 M</i>	<i>\$1.32 M</i>	<i>\$1.25 M</i>	<i>\$1.07 M</i>	<i>\$1.17 M</i>	<i>\$961,753</i>	<i>\$966,626</i>	<i>\$965,673</i>	<i>\$1.07 M</i>	<i>\$1.42 M</i>	<i>\$1.15 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Chignik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	6	5	6	6	6	6	6	6	6	6	6
	Active permits	3	2	0	2	2	2	2	2	2	1	0
	% of permits fished	50%	40%	0%	33%	33%	33%	33%	33%	33%	16%	0%
	Total permit holders	5	4	5	5	5	5	5	5	5	5	5
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	2	2	2	3	3	3	1	1	1	1	1
	Fished permits	0	0	0	3	2	2	1	1	1	0	0
	% of permits fished	0%	0%	0%	100%	67%	67%	100%	100%	100%	0%	0%
	Total permit holders	2	2	2	3	3	3	1	1	1	1	1
Crab (CFEC) ²	Total permits	1	2	0	0	0	10	8	2	2	1	1
	Fished permits	0	0	0	0	0	3	2	1	1	0	0
	% of permits fished	0%	0%	n/a	n/a	n/a	30%	25%	50%	50%	0%	0%
	Total permit holders	1	1	0	0	0	6	5	2	2	1	1
Other shellfish (CFEC) ²	Total permits	1	1	1	3	3	3	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	2	2	3	1	1	1	1	1
Halibut (CFEC) ²	Total permits	5	5	5	4	4	4	4	4	4	4	3
	Fished permits	4	4	5	4	3	4	4	4	4	3	1
	% of permits fished	80%	80%	100%	100%	75%	100%	100%	100%	100%	75%	33%
	Total permit holders	5	5	5	4	4	4	4	4	4	4	3
Herring (CFEC) ²	Total permits	5	9	3	3	2	2	0	0	0	0	0
	Fished permits	1	1	0	0	0	0	0	0	0	0	0
	% of permits fished	20%	11%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	4	4	2	2	1	1	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Chignik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	12	11	12	14	11	11	8	6	6	5	6
	Fished permits	3	5	2	7	5	7	3	4	4	1	2
	% of permits fished	25%	45%	17%	50%	45%	64%	38%	67%	67%	20%	33%
	Total permit holders	10	9	9	10	7	8	7	6	6	5	6
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	12	13	11	12	12	11	10	10	10	11	13
	Fished permits	12	12	4	5	5	11	3	5	7	7	9
	% of permits fished	100%	92%	36%	42%	42%	100%	30%	50%	70%	64%	69%
	Total permit holders	13	13	11	13	12	11	10	10	11	12	13
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>36</i>	<i>41</i>	<i>32</i>	<i>36</i>	<i>32</i>	<i>41</i>	<i>31</i>	<i>23</i>	<i>23</i>	<i>22</i>	<i>24</i>
	<i>Fished permits</i>	<i>20</i>	<i>22</i>	<i>11</i>	<i>16</i>	<i>13</i>	<i>25</i>	<i>12</i>	<i>14</i>	<i>16</i>	<i>11</i>	<i>12</i>
	<i>% of permits fished</i>	<i>56%</i>	<i>54%</i>	<i>34%</i>	<i>44%</i>	<i>41%</i>	<i>61%</i>	<i>39%</i>	<i>61%</i>	<i>70%</i>	<i>50%</i>	<i>50%</i>
	<i>Permit holders</i>	<i>19</i>	<i>16</i>	<i>14</i>	<i>18</i>	<i>14</i>	<i>15</i>	<i>14</i>	<i>14</i>	<i>15</i>	<i>15</i>	<i>14</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics Of The Commercial Fishing Sector In Chignik: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Chignik ²	Total Net Lbs Landed In Chignik ^{2,5}	Total Ex-Vessel Value Of Landings In Chignik ^{2,5}
2000	36	2	2	31	83	101	--	--
2001	52	3	2	31	77	98	--	--
2002	9	5	2	30	69	46	8,505,387	\$5,919,782
2003	25	2	2	29	65	71	--	--
2004	8	4	2	22	61	93	5,293,332	\$5,629,393
2005	17	3	2	18	54	53	--	--
2006	32	1	2	21	56	56	--	--
2007	19	1	1	17	53	58	--	--
2008	23	2	1	18	53	56	--	--
2009	22	4	1	18	55	60	15,595,633	\$9,971,058
2010	24	3	1	22	62	65	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Chignik: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	4	218,539	60,615
2001	2	74,536	22,525
2002	3	76,165	23,541
2003	2	128,220	40,522
2004	2	128,220	36,902
2005	2	128,220	31,073
2006	2	128,220	25,661
2007	2	128,220	21,810
2008	2	128,220	25,784
2009	1	128,220	25,784
2010	1	128,220	23,418

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Chignik: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Chignik: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Chignik: 2000-2010.

	<i>Total Net Pounds¹</i>											
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	
Crab	0	0	0	0	0	0	0	0	0	0	0	
Finfish	--	--	--	--	--	--	--	--	--	--	--	
Halibut	--	--	--	--	--	--	--	--	--	--	--	
Herring	--	--	--	--	--	--	--	--	--	--	--	
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--	
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--	
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--	
Pollock	--	--	--	--	--	--	--	--	--	--	--	
Sablefish	--	--	--	--	--	--	--	--	--	--	--	
Salmon	--	--	8,233,008	--	4,785,219	--	--	--	--	--	--	
<i>Total²</i>	--	--	8,233,008	--	4,785,219	--	--	--	--	--	--	
	<i>Ex-vessel Value (nominal U.S. dollars)</i>											
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Finfish	--	--	--	--	--	--	--	--	--	--	--	
Halibut	--	--	--	--	--	--	--	--	--	--	--	
Herring	--	--	--	--	--	--	--	--	--	--	--	
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--	
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--	
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--	
Pollock	--	--	--	--	--	--	--	--	--	--	--	
Sablefish	--	--	--	--	--	--	--	--	--	--	--	
Salmon	--	--	\$5,393,924	--	\$4,373,478	--	--	--	--	--	--	
<i>Total²</i>	--	--	\$5,393,924	--	\$4,373,478	--	--	--	--	--	--	

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Chignik Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	246,690	421,704	--	483,972	826,684	1,322,554	1,080,807	696,587	296,092	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	1,475,563	1,771,713	--	1,596,836	606,863	886,931	1,579,434	--	1,875,820	1,749,124	1,713,624
<i>Total²</i>	<i>1,722,253</i>	<i>2,193,417</i>	--	<i>2,080,808</i>	<i>1,433,547</i>	<i>2,209,485</i>	<i>2,660,241</i>	<i>696,587</i>	<i>2,171,912</i>	<i>1,749,124</i>	<i>1,713,624</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$76,474	\$116,851	--	\$130,895	\$198,250	\$342,008	\$395,575	\$322,580	\$169,120	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$1,165,987	\$903,829	--	\$823,197	\$568,538	\$727,155	\$658,765	--	\$1,041,463	\$1,076,938	\$1,128,337
<i>Total²</i>	<i>\$1,242,461</i>	<i>\$1,020,679</i>	--	<i>\$954,091</i>	<i>\$766,788</i>	<i>\$1,069,162</i>	<i>\$1,054,340</i>	<i>\$322,580</i>	<i>\$1,210,583</i>	<i>\$1,076,938</i>	<i>\$1,128,337</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Only a few residents hold sportfishing licenses in the community, and non-Alaska resident sportfishing is somewhat limited due to Chignik's remote location. Sportfishing licenses were not sold in the community between 2000 and 2007, and a total of 9 were sold in 2010. In addition, 7 sportfishing licenses were sold to residents in 2010, compared to 18 in 2000. There were no active sport fish guide businesses registered in 2010, although 1 was registered in 2009 and in 2005. One resident held a sport fish guide license in 2010.

Chignik is located within the Alaska Peninsula and Aleutian Islands ADF&G Harvest Survey Area which includes all Alaskan waters, including drainages, between Cape Douglas and the community of Naknek. In 2010, angler days fished totaled 5,297 for saltwater fisheries and 33,635 for freshwater fisheries, compared to 10,534 and 44,976 in 2000, respectively. In that year, non-Alaskan resident anglers accounted for 38.4% of saltwater and 58.4% of freshwater angler days fished, compared to 15.8% and 39.5% in 2000, respectively. According to ADF&G Harvest Survey data, private anglers in Chignik target king salmon. In 2007, ADF&G reported 4 charter operators in the harvest survey area. In that year, charter vessels kept 10 coho salmon, 154 halibut, 5 lingcod, and 68 pelagic rockfish. Information regarding sportfishing trends can be found in Table 11.

Subsistence Fishing

Subsistence is an important part of life in Chignik, as many year-round residents rely on subsistence and personal use fisheries to supplement their incomes when employment is scarce. In addition, as with many rural communities in Alaska, subsistence activities are a source of social and cultural cohesion, reinforcing lifestyles and traditions important to village life. In a 2003 ADF&G survey of subsistence participation by household and species, 82% of households were found to participate in salmon subsistence, 95% in halibut subsistence, 7% in marine mammal subsistence, 66% in marine invertebrate subsistence, and 34% other non-salmon fish subsistence. Subsistence harvesting in pounds per capita that year was 281.5. According to the ADF&G *Community Subsistence Information System*,¹¹⁷ residents of Chignik have used and/or harvested chitons, butter clams, Dungeness crab, limpets, octopus, littleneck clams, pinkneck clams, sea urchin, Tanner crab, cockles, harbor seal, Steller sea lion, black rockfish, Dolly Varden, lingcod, Pacific cod, rainbow trout, red rockfish, sablefish, steelhead and walleye pollock.

Of the species reported by ADF&G in Table 13, sockeye salmon were harvested the most, followed by coho salmon. In 2008, residents reported harvesting 929 salmon, compared to 1,558 in 2000. Reported salmon harvests peaked in 2007 at 2,389 fish. In 2010, 10 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 21 in 2000. In that year, an estimated 560 lbs of halibut was harvested on 2 SHARC, compared to an estimated 12,878 lbs harvested with 19 SHARC in 2000. Halibut harvests peaked in 2000. Data on marine mammal subsistence harvests is limited. Between 2000 and 2008, an estimated 14 harbor seals were harvested. Information regarding subsistence trends can be found in Tables 12 through 15.

¹¹⁷ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 11. Sport Fishing Trends, Chignik: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to residents ²	Sport Fishing Licenses Sold in Chignik ²
2000	0	0	18	0
2001	0	0	22	0
2002	0	1	11	0
2003	0	0	22	0
2004	0	0	6	0
2005	0	0	18	0
2006	0	0	7	0
2007	0	0	10	13
2008	0	1	17	15
2009	0	0	8	11
2010	0	1	7	9

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Chignik: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	82%	95%	7%	66%	34%	281.5
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Chignik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	13	16	n/a	125	173	87	1,173	n/a	n/a
2001	12	11	4	22	12	32	758	n/a	n/a
2002	17	15	9	n/a	170	n/a	1,306	n/a	n/a
2003	22	21	88	6	136	12	1,796	1,626	2,829
2004	16	10	19	n/a	163	n/a	306	n/a	n/a
2005	22	21	25	24	158	61	1,266	n/a	n/a
2006	8	4	6	n/a	8	n/a	534	n/a	n/a
2007	15	9	35	n/a	542	n/a	1,792	n/a	n/a
2008	11	7	2	2	36	55	834	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Chignik: 2003-2010.

Year	SHARC Issued	SHARC Fished	SHARC Halibut Lbs Harvested
2003	21	19	12,878
2004	30	18	4,434
2005	31	19	4,641
2006	31	22	4,051
2007	27	12	2,684
2008	16	9	5,130
2009	13	3	283
2010	10	2	560

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Chignik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	1	n/a
2003	n/a	n/a	n/a	n/a	n/a	3	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	4	n/a
2007	n/a	n/a	n/a	n/a	n/a	4	n/a
2008	n/a	n/a	n/a	n/a	n/a	2	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Chignik Lagoon (CHIG-nick)



People and Place

*Location*¹¹⁸

Chignik Lagoon is located on the south shore of the Alaska Peninsula, 450 mi southwest of Anchorage. It lies 180 mi south of King Salmon, 8.5 mi west of Chignik, and 16 mi east of Chignik Lake. Chignik Lagoon is unincorporated and is located in the Lake and Peninsula Borough.

*Demographic Profile*¹¹⁹

In 2010, there were 78 residents, ranking Chignik Lagoon 268th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 47.2%. However, between 2000 and 2009 the population declined by 29.1% with an average annual growth rate of -2.0%; much lower than the statewide average of 0.75% and reflective of a steady decline in population since its peak in 2001. Information regarding population trends can be found in Table 1.

Chignik Lagoon is predominately a Koniag community.¹²⁰ In 2010, 62.8% of residents identified themselves as American Indian or Alaska Native, compared to 81.6% in 2000; 20.5% identified themselves as White, compared to 11.7%; 1.3% identified themselves as Asian, compared to 0.0% in 2000; 11.5% identified themselves as two or more races, compared to 5.8% in 2000; and 3.8% identified themselves as some other race, compared to 0.0% in 2000. In addition, 3.8% of residents identified themselves as Hispanic or Latino, compared to 0.0% in 2000. Further information regarding racial and ethnic trends in Chignik Lagoon can be found in Figure 1.

In 2010, the average household size was 2.69, compared to 3.1 in 1990 and 3.12 in 2000. In that same year, the total number of housing units was 66, compared to 83 in 1990 and 68 in 2000. Of the households surveyed in 2010, 32% were owner-occupied, compared to 38% in 2000; 12% were renter-occupied, compared to 10% in 2000; 15% were vacant, compared to 13% in 2000; and 41% were occupied seasonally, compared to 38% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

Gender distribution in 2010 was relatively even at 51.3% male and 48.7% female. This was similar to the statewide distribution (52.1% male, 47.9% female) and more even than the distribution in 2000 (57.3% male, 42.7% female). The median age that year was 36.0 years, which was somewhat higher than the statewide median of 32.7 years and markedly higher than the 2000 median of 26.3 years.

¹¹⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²⁰ See footnote 118.

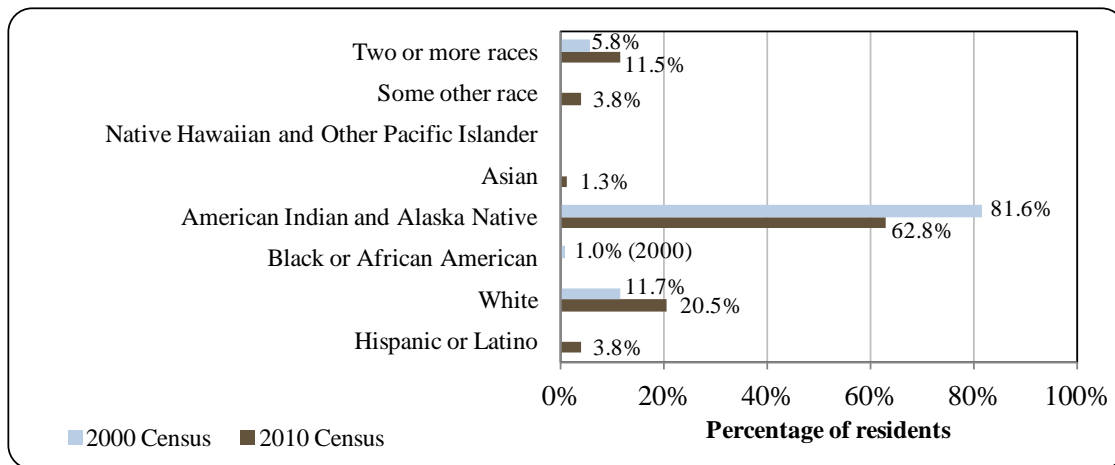
Table 1. Population in Chignik Lagoon from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	53	-
2000	103	-
2001	-	104
2002	-	88
2003	-	92
2004	-	82
2005	-	86
2006	-	71
2007	-	67
2008	-	71
2009	-	73
2010	78	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Chignik Lagoon: 2000-2010 (U.S. Census).

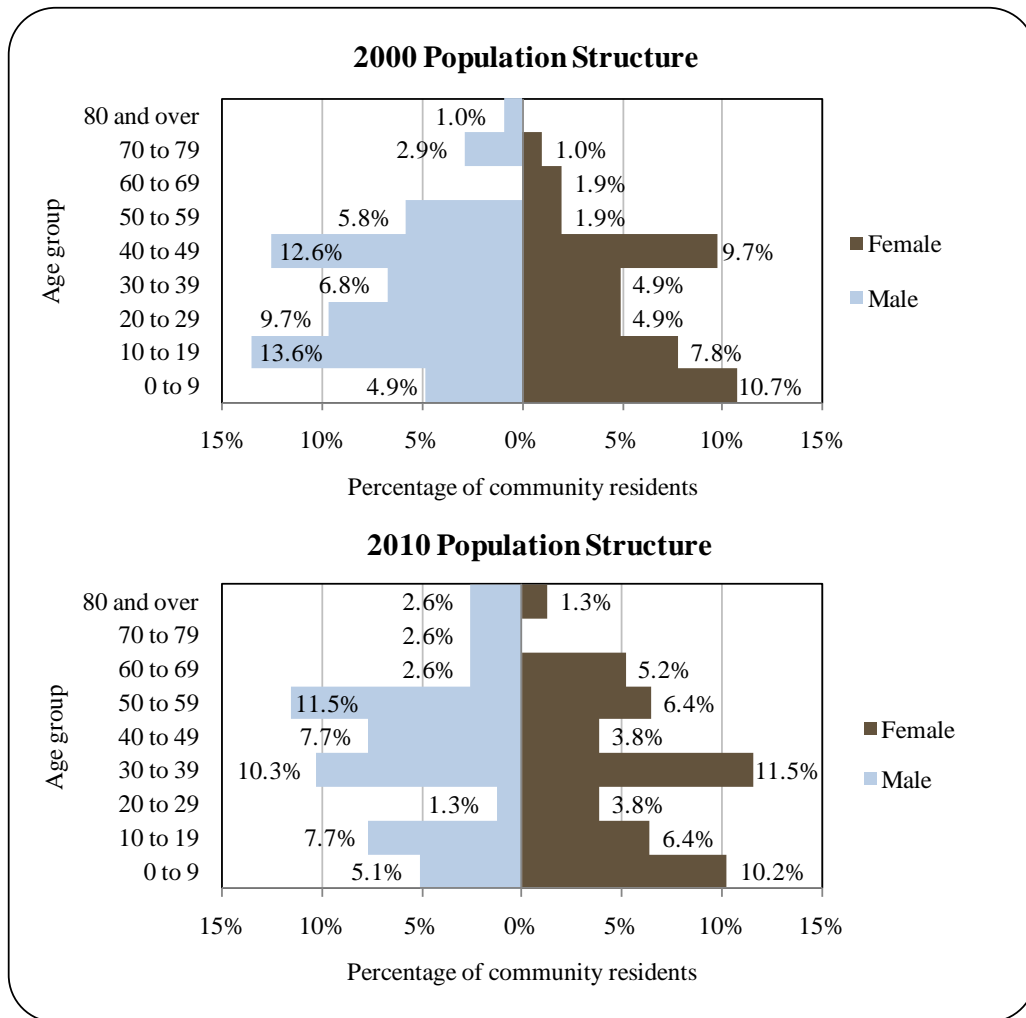


The population structure was irregular in both 2000 and 2010 making it difficult to discern a trend. In 2010, 29.4% of residents were under the age of 20, compared to 37% in 2000; 14.3% over the age of 59, compared to 6.8% in 2000; 51.2% were between the age 30 and 59, compared to 41.7% in 2000; and 5.1% were between the ages of 20 and 29, compared to 14.6% in 2000. Gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within 50 to 59 range (11.5% male, 6.4% female), followed by the 0 to 9 (10.2% female, 5.1% male) and 40 to 49 (7.7% male, 3.8% female)

ranges. Of those three, the greatest relative gender difference occurred within the 40 to 49 range. Information regarding trends in Chignik Lagoon’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-10 American Community Survey (ACS)¹²¹ estimated that 82.0% of residents aged 25 years and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 18.0% had between a ninth and twelfth grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 22.0% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 14.0% had a Bachelor’s degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 6.0% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Chignik Lagoon Based on the 2000 and 2010 U.S. Decennial Census.



¹²¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Archaeological evidence suggests that Aleut (Unanga and Alutiiq) peoples have occupied the Alaska Peninsula for approximately 9,000 years.^{122,123} In the past, the Chignik region was at the contact boundary between Aleut and Yup'ik language groups. Archaeological investigations around Chignik Lake, Chignik River, and Chignik Lagoon suggest occupation dating back approximately 2,000 years. During the late 1700s and early 1800s, Russian traders began exploring the Aleutian Islands and Alaska Peninsula. The decline of the fur trade was followed by the growth of salmon processing within the region, and by 1889 three canneries had been established in Chignik Lagoon.¹²⁴ These were the Chignik Bay Company cannery, the Shumagin Packing Company, and the Chignik Bay Packing Company.¹²⁵

Chignik Lagoon took its name from its location and proximity to Chignik, which means “big wind” in Aleut. The area was originally occupied by Kanaigmuit Eskimos, who primarily subsisted on otter, sea lion, porpoise, and whale. During the fur boom between 1767 and 1783, the sea otter population was decimated. This, in addition to disease and conflict, reduced the Native population to less than half its original size. After Alaska was purchased from Russia, Chignik salmon grew in popularity, and many migrants moved into the region. Today, Chignik Lagoon exists as a village dependant on fishing Pacific cod, halibut, and salmon. Although a cannery no longer exists in the community, residents are heavily involved in both commercial and subsistence fishing.¹²⁶

Natural Resources and Environment

The community experiences a maritime climate, characterized by cool summers and warm, wet winters. Thick cloud cover and heavy winds are prevalent during winter months. Summer temperatures range from 39 to 60 °F (4 to 16 °C). Winter temperatures range from 21 to 36 °F (-6 to 2 °C). Precipitation averages 127 inches annually, with an average annual snowfall of 58 inches.¹²⁷

Chignik Lagoon is located in the Alaska Peninsula National Wildlife Refuge (APNWR). The refuge was created in 1980 as a product of the Alaska National Interest Lands Conservation

¹²² LaRoche and Associates (2011). *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from: http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹²³ WHPacific (2010). *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from: <http://www.aleutianseast.org/>.

¹²⁴ Mobley, C. M. (2004). *Chignik's Norquest Cannery: A Cultural Resource Inventory and Evaluation, Chignik, Alaska Peninsula, Alaska*. Retrieved January 10, 2013 from: http://polarconsult.net/ChignikBay/env/mobley_combined.pdf.

¹²⁵ Hutchinson-Scarborough, L., and J. A. Fall. (1996). *An Overview of Subsistence Salmon and Other Subsistence Fisheries of the Chignik Management Area, Alaska Peninsula, Southwest Alaska*. Alaska Dep. of Fish and Game. Tech. Paper No. 230. Retrieved January 10, 2013 from: <http://www.subsistence.adfg.state.ak.us/download/TPS/tp230.pdf>.

¹²⁶ Native Village of Chignik Lagoon (n.d.). *Chignik Lagoon*. Retrieved January 26, 2012 from: <http://chigniklagoon.net/index.html>.

¹²⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Act, and occupies 3.7 million acres of the Alaska Peninsula.¹²⁸ The geology and topography of the area is characterized by high relief mountainous slopes mantled with deposits of volcanic ash and cinders. Brown and tan sandstone conglomerates dominate the landscape. Soils are relatively shallow and unproductive on the slopes, and primarily consist of well-drained ashy loams overlying sandy and cindery ash. Level areas consist of deeper, poorly drained organics with a thin layer of ash. Poorly drained depressions within mountainous slopes can contain muskeg environments. Land within the community consists mostly of marshy wetlands, pebble rock, and sand. Vegetation is typical of western/Aleutian Alaska. Due to soil and climatic conditions, natural growing trees are rare and most vegetation consists of low shrubs, grasses, and dwarf alders and willow. Brackish marsh vegetation populates the low lying areas and wetlands. Wildflowers including dandelion, fireweed, iris, rose, lupine. Horsetail are also found throughout the area, as well as an abundance of wild berries.¹²⁹

The APNWR provides habitat for many migratory and marine birds including mallards, shovel nose, canvas backs, pintails, common merganser, bufflehead, and gulls. Terrestrial wildlife includes brown bear, moose, caribou, wolf, wolverine, fox, river otter, and beaver. Fish found in the area include all five species of Pacific salmon, Arctic grayling, Dolly Varden, rainbow and lake trout, northern pike, and burbot. Marine mammals include Steller sea lions, harbor seals, sea otters, and migratory whales.¹³⁰ Natural resources in the area include a copper and molybdenum deposit located at Bee Creek to the northeast, as well as coal deposits scattered throughout the region.¹³¹

Natural hazards in the area are similar to those on a regional level and include coastal flooding and erosion, storm surges, earthquakes, volcano eruptions, and tsunamis. There have been several historic earthquake and flooding events, and the community itself lies west of the active volcano, Mt. Veniaminof.¹³² An active stratovolcano, eruption events were observed six times between 2002 and 2008.¹³³

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation sites active in the community in 2010.¹³⁴

Current Economy¹³⁵

Fishing is an economic mainstay in Chignik Lagoon, and the area serves as a regional fishing center. The economy is dependent on the success of the salmon fleet. The primary year-round employers are the village council, electric plant, and school. Subsistence activities contribute to food sources, and harvests include salmon, other fish, crab, clams, caribou, moose,

¹²⁸ U.S. Fish and Wildlife Service. (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved January 24, 2012 from: <http://alaskapeninsula.fws.gov/wildlife.htm>.

¹²⁹ Chignik Bay Tribal Council (2006). *Chignik Bay Community Plan*. Retrieved January 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChignikBay-CP-2006.pdf>.

¹³⁰ See footnote 128.

¹³¹ Alaska Department of Economic Development. (n.d.). *Mineral Resources in Alaska*. Retrieved January 24, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

¹³² See footnote 129.

¹³³ Alaska Volcano Observatory (n.d.). *Veniaminof Reported Activity*. Retrieved January 9, 2013 from: <http://www.avo.alaska.edu/volcanoes/volcact.php?volcname=Veniaminof>.

¹³⁴ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 22, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

¹³⁵ Unless otherwise noted, all monetary data are reported in nominal values.

ducks, and berries.¹³⁶ Top employers¹³⁷ in 2010 included the Lake and Peninsula School District, Chignik Lagoon Village Council, Twin Peaks Construction, Native Village of Chignik Lagoon, Bristol Bay Native Association, and Bristol Bay Area Health Corporation.

In 2010,¹³⁸ the estimated per capita income in Chignik Lagoon was \$37,231 and the estimated median household income was \$130,250, compared to \$28,941 and \$92,297 in 2000, respectively. After accounting for inflation by converting 2000 values to 2010 dollars,¹³⁹ the real per capita income (\$38,057) and real median household income (\$121,369) indicate that while individual earnings have stayed the same, household earnings increased. In 2010, Chignik Lagoon ranked 20th of 305 Alaskan communities from which per capita income was estimated, and 3rd of 299 Alaskan communities from which median household income was estimated; making Chignik Lagoon one of the wealthiest communities in Alaska in terms of household earnings.

Chignik Lagoon's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁴⁰ Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$657,455 in total wages in 2010.¹⁴¹ When matched with the population in 2010, the per capita income equals \$8,429; which is significantly lower than ACS estimates. This suggests that caution should be used when comparing 2010 ACS estimates with the 2000 Census.¹⁴² However, it should be noted that the ACS estimated that 17.5% of employed residents were self-employed. If this is accurate, then ALARI estimates may be inaccurate based on the fact that self-employed residents were not considered.

According to 2006-10 ACS estimates,¹⁴³ 62.5% of the population aged 16 years and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 0.0%, compared to an estimated 5.9% statewide; and no residents were estimated to be living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Again, these estimates may be inaccurate depending on sample error. ALARI estimated a 2010 unemployment rate of 3.4% based on unemployment claimants.

Of those employed in 2010, an estimated 67.5% worked in the public sector, an estimated 17.5% were self-employed, and an estimated 15.0% worked in the private sector. By industry,

¹³⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁷ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹³⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹³⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁴⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁴¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁴² See footnote 140.

¹⁴³ See footnote 138.

most (32.5%) employed residents were estimated to have worked in the education, health care, and social assistance sectors in 2010; followed by agriculture, forestry, fishing, hunting, and mining sectors (22.5%); public administration sectors (22.5%); transportation, warehousing, and utilities sectors (12.5%); and construction sectors (10.0%) (Figure 3). By occupation type, most (50.0%) employed residents were estimated to hold management or professional positions; followed by natural resources, construction, or maintenance positions (42.5%); service positions (5.0%); and production, transportation, or material moving positions (2.5%) (Figure 4).

Local employment by industry and by occupation shifted dramatically between 2000 and 2010, most likely because of Chignik Lagoon’s variable population or because of ACS sampling error. Notable changes were seen in both the public administration and construction sectors, including notable increases in both management and professional occupations.

Figure 3. Local Employment by Industry in 2000-2010, Chignik Lagoon (U.S. Census).

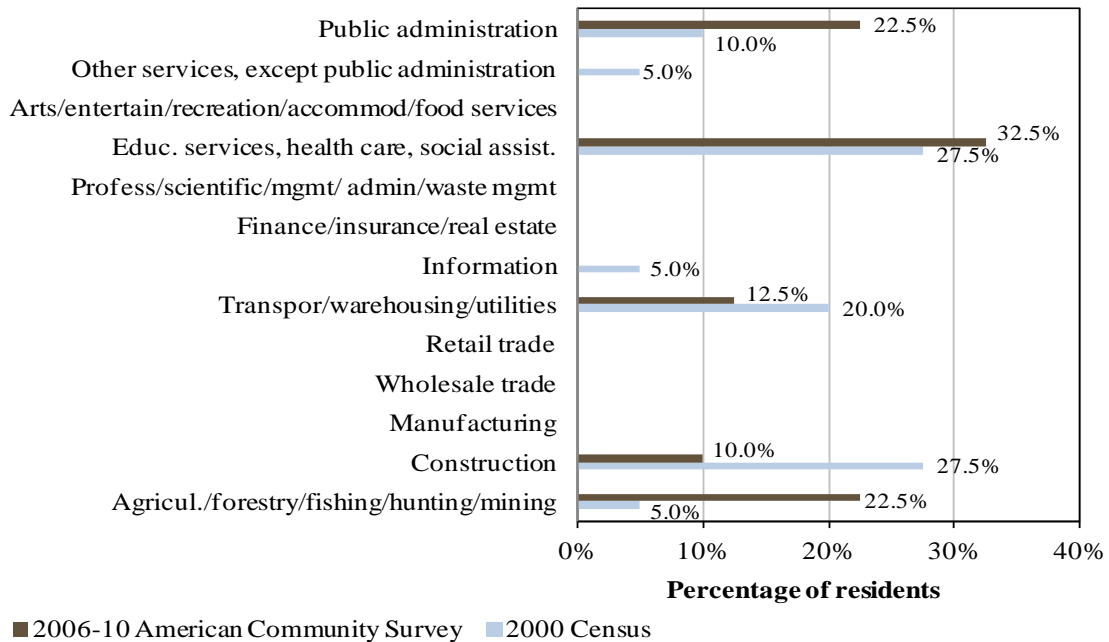
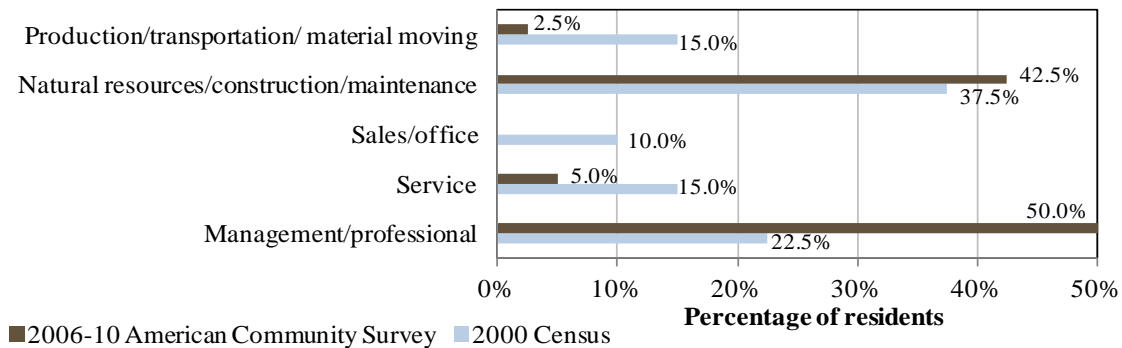


Figure 4. Local Employment by Occupation in 2000-2010, Chignik Lagoon (U.S. Census).



Governance

Chignik Lagoon is unincorporated and unable to administer taxes. However, it is under the jurisdiction of the Lake and Peninsula borough, which administers a 2% Raw Fish tax, 6% accommodations tax, \$3.00 Guide tax, and \$1.00 Lodge Guide tax. There is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal government (Native Village of Chignik Lagoon) and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Chignik Lagoon Native Corporation). The regional ANCSA Native corporation representing Chignik Lagoon is the Bristol Bay Native Corporation. The closest Alaska Department of Fish and Game (ADF&G) office is located in Chignik, although that office is only open seasonally. The closest permanent ADF&G office is located in Sand Point, 100 mi to the southwest. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services (BCIS) offices are located in Kodiak, 257 mi to the northeast. Information regarding community finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Chignik Lagoon from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*¹⁴⁴

Chignik Lagoon is primarily accessible by air and sea. There are no roads connecting it to other villages. There is a strong regional interest in constructing roads between Chignik, Chignik Lagoon, Chignik Lake, and the landfill. A state-maintained 1,810-ft by 60-ft wide gravel airstrip, public domain small boat harbor, and seaplane base are all located in the community. Regular and charter flights are available from King Salmon. A cargo ship brings supplies annually, and goods are lightered to shore. Boat haulouts are available. ATVs and skiffs are the primary means of local transportation. Price for roundtrip airfare between Chignik and Anchorage in June 2012 was \$960.¹⁴⁵

*Facilities*¹⁴⁶

Chignik Lagoon draws its water from surface sources. The piped water system serves most homes; a few households have individual wells. Nearly all residences have complete plumbing, using individual septic tanks. An incinerator is available at the landfill. As of 2012 there was a hydroelectric project underway at Packer's Creek outside of town. Public safety services are provided by state troopers based in King Salmon. Fire and rescue services are provided by the Chignik Lagoon First Responder Group. Additional public facilities include a youth center and subsistence building, community center, school gym, and school library. Communications services include local and long distance telephone, local television, internet, and local radio.¹⁴⁷

*Medical Services*¹⁴⁸

The Chignik Lagoon Clinic, which provides basic health care, is a Community Health Aid Program site. Emergency care, trauma care, behavioral health care, dental care, diagnostic images, and pharmacy services are provided in Chignik.

*Educational Opportunities*¹⁴⁹

Chignik Lagoon School offers preschool through twelfth grade instruction. As of 2011 there were 18 students enrolled and 3 teachers employed.

¹⁴⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁵ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

¹⁴⁶ See footnote 144.

¹⁴⁷ Native Village of Chignik Lagoon (n.d.). *Chignik Lagoon*. Retrieved January 26, 2012 from: <http://chigniklagoon.net/index.html>.

¹⁴⁸ See footnote 144.

¹⁴⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Chignik Management Area (CMA) is located on south side of the Alaska Peninsula and is the site of one of the earliest salmon fisheries in Alaska. By 1878, two canneries were processing the region's abundant sockeye salmon resource from Chignik Lagoon, one more began operation in Anchorage Bay by Chignik in 1896, and by 1910 the Columbia River Packers Association had built a cannery at Indian River (on Anchorage Bay). Canneries continued to proliferate throughout the region between 1890 and 1910, with additional canneries established near Ivanof Bay, and in Anchorage Bay. By 1911, the Columbia River Packing Company (later renamed Columbia Ward Fisheries) began operations on the north side of Chignik Lagoon, and operated there until 1990. By 1992, Aleutian Dragon Fisheries, and Chignik Pride Fisheries operated the only two remaining processing plants in the area, and both were located in Chignik Bay. Canneries primarily focused on all five species of Pacific salmon and Pacific cod; while also processing smaller quantities of octopus, sablefish, red snapper, pollock, and herring. Chignik canneries began processing shrimp in the 1970s, king crab in the early 1980s. and Tanner crab by 1987.¹⁵⁰

All five species of Pacific salmon are harvested commercially within the CMA, of which sockeye salmon are primarily targeted. In 2010, Chinook harvests within CMA totaled 10,380 fish, sockeye harvests totaled 1.38 million fish, coho harvests totaled 159,198 fish, pink harvests totaled 489,781 fish, and chum harvests totaled 581,329 fish. Total ex-vessel value of the CMA salmon harvest in 2010 was approximately \$14.34 million.¹⁵¹ Ex-vessel value for Chignik salmon peaked in 1987 and 1988 at more than \$25 million, and decreased steadily to a low of approximately \$5 million between 2002 and 2006.¹⁵²

Managed by emergency order, herring harvests typically occur from April 15 through June 30 for the sac roe season, and from August 15 through February 28 for the food and bait season. However, no commercial herring harvest occurred in 2010 due to low industry interest. The last commercial herring harvest occurred in 1996.¹⁵³

Groundfish species targeted for both state and federal fisheries include Pacific cod, sablefish, lingcod, black rockfish, dark rockfish, and walleye pollock. In 2010, Pacific cod and walleye pollock comprised the largest volume of groundfish harvested in state fisheries within the Chignik area. Pacific cod are managed as a single Gulf of Alaska (GOA) stock, with the state managing parallel fisheries within state waters. In 2010, the total Acceptable Biological Catch for GOA pacific cod was 174.38 million lbs. In that year, 59.16 million lbs of Pacific cod was

¹⁵⁰ Hutchinson-Scarborough, L., and J. A. Fall. (1996). *An Overview of Subsistence Salmon and Other Subsistence Fisheries of the Chignik Management Area, Alaska Peninsula, Southwest Alaska*. Alaska Dep. of Fish and Game. Tech. Paper No. 230. Retrieved January 10, 2013 from:

<http://www.subsistence.adfg.state.ak.us/download/TPS/tp230.pdf>.

¹⁵¹ Anderson, T. J., and N. W. Nichols. (2010). *Chignik Management Area Salmon and Herring Annual Management Report, 2010*. Alaska Dep. of Fish and Game. Fishery Management Report No. 10-48. Retrieved January 10, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR10-48.pdf>.

¹⁵² Knapp, G. (2007). *The Chignik Salmon Cooperative: A Case Study of Allocation to a Voluntary Self-Governance Organization*. University of Alaska, Anchorage. Retrieved January 9, 2013 from: http://www.iser.uaa.alaska.edu/people/knapp/personal/pubs/Knapp_Chignik_Salmon_Coop--Case_Study_of_Allocation_to_a_Voluntary_Self_Governance_Organization.pdf.

¹⁵³ See footnote 151.

taken from the western GOA, of which 56% was harvested from state waters. In the Chignik Area, pot gear vessels were allocated 8.51 million lbs, while jig gear vessels were allocated 946,040 lbs. The total Pacific cod harvest that year was 9.15 million lbs taken by 16 vessels, valued at \$2.19 million ex-vessel. In 2010, Black rockfish harvests in the Chignik Area were capped at 100,000 lbs. Only one vessel participated in the fishery that year. Skates are typically harvested incidentally while fishing for other targeted species, and fall under the assemblage of “other species” which include sharks, sculpins, squid, and octopi. Growing Asian markets for skates have increased interest in the species, which at times can be more valuable than other targeted species. Because of overfishing concerns, NMFS placed skates in bycatch status in 2006, while ADF&G discontinued directed harvests in state waters. State directed sablefish fisheries existed within Kodiak and Chignik areas in 2002, but have since been restricted to bycatch harvests. In 2010, sablefish bycatch harvests in state waters around Kodiak, Chignik, and the South Peninsula Eastern Districted totaled 17,924 lbs. Lingcod harvests are also strictly managed within the Kodiak and Chignik areas. Again, most lingcod is harvested as bycatch, and retention typically remains below 100,000 lbs annually within the western GOA. During 2008, lingcod harvests spiked to 521,257 lbs due to increased retention by trawl vessels. Lingcod harvests declined to 97,281 lbs in 2009 and 67,429 lbs in 2010. Walleye pollock harvests totaled 101.6 million lbs in the central GOA, and 57.1 million lbs in the western GOA. In the western GOA, 58% of the total pollock harvest occurred within state waters.¹⁵⁴

Historically, commercial red king crab, Tanner crab, grooved Tanner crab, Dungeness crab, Pandalid shrimp, red sea cucumber, and giant Pacific octopus harvests have occurred along the Alaska Peninsula. Most shellfish stocks are depressed, and commercial fisheries for red king crab and shrimp have not occurred since 1982. The Chignik Tanner crab fishery began in 1968, when 21,100 lbs were harvested and peaked in 1975 when 11 million lbs were harvested. Commercial fishing was closed in 1990 to allow depressed stocks to recover, and reopened during the 2004 and 2005 seasons. No Tanner crab fisheries occurred within the Chignik District between 2006 and 2010. Dungeness crab is harvested within the Chignik District although participation in the fishery is low with less than three vessels reporting landings in 2010. Shrimp fishing within the Chignik District began in 1968, and harvests peaked in 1976 at 27 million lbs. Stocks crashed shortly after, and by 1981 only 71,000 lbs were harvested. Since then, all inshore waters within the Chignik District have remained closed. While commercial fishing is permitted in some areas within the Chignik area, there was no fishing effort for shrimp within the Chignik District in 2010. Commercial sea cucumber harvests began in the Kodiak and Chignik districts in 1991 following an increase in market demand. Limits for eviscerated product was set at 25,000 lbs for the Chignik District in 2010 and fishing effort was limited. Demand for octopus increased during the 1990s, and are harvested alongside targeted species. In 2010, incidental harvests totaled 270,067 lbs from both state and federal waters.¹⁵⁵

Chignik Lagoon has a history of being a fishing community, with many commercial fishermen using it as a seasonal base of operations. Even after the closure of the local seafood processor, the community remained a commercial fishing hub for the region, largely because of

¹⁵⁴ Stichert, M. A., K. Phillips, and P. Converse. (2011). *Annual Management Report fo Groundfish Fisheries in the Kodiak, Chignik, and South Alaska Peninsula Management Areas, 2010*. Alaska Dep. of Fish and Game. Fishery Management Report No. 11-44. Retrieved January 10, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-44.pdf>.

¹⁵⁵ Sagalkin, N. and K. Spalinger. (2011). *Annual Management Report for Shellfish Fisheries in the Kodiak, Chignik, and Alaska Peninsula Areas, 2010*. Alaska Dep. of Fish and Game. Fishery Management Report No. 11-43. Retrieved January 10, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-43.pdf>.

the acclaimed Chignik salmon fishery. In 2002, the Alaska Board of Fisheries implemented an experimental program that allocated a percentage of the Chignik sockeye salmon harvest to a harvesting cooperative, while creating a separate, “independent” fishery for non-cooperative vessels. The Chignik Salmon Cooperative originally grew from anger over ex-vessel prices offered by processing plants. In 1991, this anger led to local seiners striking. Following the strike, the Chignik Seiners Association continued discussions over the formation of a cooperative as a way to increase overall profitability and lower overhead costs within the Chignik sockeye salmon fishery.¹⁵⁶ Fishing cooperatives had been formed previously in other fisheries as a method of voluntary self-management to complement existing limited entry systems. It was believed that cooperatives would increase local access to markets, operating efficiency, and overall profitability.¹⁵⁷ In the case of the Chignik cooperative, members would be selected as harvesters, tenders, or inactive members. Profits would then be split equally between members. Between 2002 and 2005, over three-quarters of salmon permit holders living in Chignik became members of the Chignik Salmon Cooperative. Following the formation of the Cooperative, relations with local seafood processors became strained. With control over almost 70% of the salmon harvest, the Cooperative gained greater influence within the market than independent fishermen had previously held. Two salmon processing plants owned by Trident Seafoods and Norquest Seafoods operated in nearby Chignik Bay. Trident Seafoods and the Cooperative were unable to come to a purchasing agreement, and Trident decided close its plant in 2004. Despite being regarded as largely successful by most permit holders, the Chignik Salmon Cooperative ended in 2006 after the Alaska Supreme Court determined it broke Alaska Limited Entry law.¹⁵⁸

Chignik Lagoon is eligible to participate in the Community Quota Entity (CQE) program, and established a CQE non-profit called the Chignik Lagoon Fishing Coalition at the recommendation of the Chignik Lagoon Village Council. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated a portion of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their

¹⁵⁶ Knapp, G. (2007). *The Chignik Salmon Cooperative: A Case Study of Allocation to a Voluntary Self-Governance Organization*. University of Alaska, Anchorage. Retrieved January 9, 2013 from: http://www.iser.uaa.alaska.edu/people/knapp/personal/pubs/Knapp_Chignik_Salmon_Coop--Case_Study_of_Allocation_to_a_Voluntary_Self_Governance_Organization.pdf.

¹⁵⁷ Deacon, R. T., D. P. Parker, and C. Costello. (2008). *The Efficiency Gains from Coordinating Effort in a Fishery: Evidence from the Chignik Salmon Cooperative*. University of California, Santa Barbara. Retrieved January 9, 2013 from: http://econ.ucsd.edu/CEE/papers/Chignik%20II%2012_4.pdf

¹⁵⁸ See footnote 156.

behalf.¹⁵⁹ As of Fall 2013, the Chignik Lagoon Fishing Coalition had not yet purchased commercial halibut IFQ or halibut charter permits. However, the non-profit had acquired four non-trawl groundfish License Limitation Program permits for lease to eligible community members.¹⁶⁰

Chignik Lagoon is located in Federal Reporting Area 620, International Pacific Halibut Commission Regulatory Area 3B, and the GOA Sablefish Regulatory District.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Chignik Lagoon does not have a registered processing plant. The closest seafood processor is located in Chignik.

Fisheries-Related Revenue

No fisheries-related revenue was reported on a community level between 2000 and 2010. Taxes and fees are collected on a borough level. Information regarding fisheries-related revenue can be found in Table 3.

Commercial Fishing

In 2010, 24 residents, or 30.8% of the population, held a total of 44 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 29 residents held 71 CFEC permits. Of those issued in 2010, 48% were for salmon, compared to 46% in 2000; 25% were for groundfish, compared to 42% in 2000; 9% were for herring, compared to 14% in 2000; 9% were for halibut, compared to 7% in 2000; and 9% were for crab, compared to 1% in 2000. Six residents held License Limitation Program (LLP) groundfish permits and two residents held Federal Fisheries Permits (FFP) (Table 4). Residents held 387,433 shares of halibut quota on 5 accounts in 2010, compared to 428,943 shares on 6 accounts in 2000. No residents held sablefish or crab quota between 2010 and when the programs began (Tables 6 to 8).

Residents held 41 commercial crew licenses in 2010, compared to 53 in 2000 (Table 5). In addition, residents held majority ownership of 41 vessels that year, compared to 49 in 2000. Of the CFEC permits held in 2010, 57% were actively fished, compared to 52% in 2000. This varied by fishery from 81% of salmon permits, to 75% of halibut, 36% of groundfish, 25% of crab, and 0% of herring permits. Herring permits were actively fished until 2006. Also in 2010, 66% of LLP groundfish permits were fished, as were 50% of FFPs (Table 4). Fisheries prosecuted in 2010 by Chignik Lagoon residents included: Chignik pot Dungeness crab and purse seine salmon; statewide longline halibut; statewide pot miscellaneous saltwater finfish; and GOA pot miscellaneous saltwater finfish.

No landings were reported in the community between 2000 and 2010; however, landings were reported by residents in those years (Tables 9 and 10). In 2010, 4.65 million lbs of salmon valued at \$3.76 million ex-vessel was landed, compared to 3.71 million lbs valued at \$3.03

¹⁵⁹ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

¹⁶⁰ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

million ex-vessel in 2000; a decrease of \$0.31 per pound ex-vessel after accounting for inflation¹⁶¹ and without considering the species composition of landings. Pacific cod landings that year totaled 4.63 million lbs valued at \$1.19 million ex-vessel, compared to 1.10 million lbs valued at \$340,136 ex-vessel; representing a decrease of \$0.17 per pound after accounting for inflation.¹⁶² Other landings made in 2010 are considered confidential. Halibut landings in 2007 totaled 94,153 lbs valued at \$401,341 ex-vessel, compared to 117,741 lbs valued at \$303,414 in 2000; representing an increase of \$1.11 per pound ex-vessel after accounting for inflation.¹⁶³

¹⁶¹ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

¹⁶² Ibid.

¹⁶³ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Chignik Lagoon: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Chignik Lagoon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	5	6	6	6	5	5	5	5	6	6	6
	Active permits	3	4	3	4	4	4	4	4	5	5	4
	% of permits fished	60%	66%	50%	66%	80%	80%	80%	80%	83%	83%	66%
	Total permit holders	5	6	6	6	5	5	5	5	6	6	6
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	1	2	2	1	1	2	2	2
	Fished permits	0	0	0	1	1	2	1	1	2	2	1
	% of permits fished	0%	0%	0%	100%	50%	100%	100%	100%	100%	100%	50%
	Total permit holders	1	1	1	1	2	2	1	1	2	2	2
Crab (CFEC) ²	Total permits	1	2	4	1	1	12	11	4	4	3	4
	Fished permits	1	2	2	1	1	7	3	1	1	0	1
	% of permits fished	100%	100%	50%	100%	100%	58%	27%	25%	25%	0%	25%
	Total permit holders	1	1	1	1	1	10	9	3	3	3	3
Other shellfish (CFEC) ²	Total permits	2	2	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	2	1	1	1	1	0	0	0	0	0
Halibut (CFEC) ²	Total permits	5	5	6	5	6	6	6	6	6	6	4
	Fished permits	5	4	5	5	6	6	5	6	5	4	3
	% of permits fished	100%	80%	83%	100%	100%	100%	83%	100%	83%	67%	75%
	Total permit holders	5	5	6	5	6	6	6	6	6	6	4
Herring (CFEC) ²	Total permits	10	6	5	4	8	7	5	5	3	3	4
	Fished permits	1	1	0	0	1	1	1	0	0	0	0
	% of permits fished	10%	17%	0%	0%	13%	14%	20%	0%	0%	0%	0%
	Total permit holders	7	5	4	3	3	3	2	2	1	1	2

Table 4 cont'd.. Permits and Permit Holders by Species, Chignik Lagoon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	30	28	22	23	32	29	18	17	15	15	11
	Fished permits	8	18	6	12	14	9	7	7	8	9	4
	% of permits fished	27%	64%	27%	52%	44%	31%	39%	41%	53%	60%	36%
	Total permit holders	19	19	17	16	22	19	15	14	13	14	10
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	23	25	24	24	24	26	23	22	23	24	21
	Fished permits	22	24	16	15	13	22	16	17	18	19	17
	% of permits fished	96%	96%	67%	63%	54%	85%	70%	77%	78%	79%	81%
	Total permit holders	22	25	25	22	24	24	21	20	23	25	23
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>71</i>	<i>68</i>	<i>62</i>	<i>58</i>	<i>72</i>	<i>81</i>	<i>63</i>	<i>54</i>	<i>51</i>	<i>51</i>	<i>44</i>
	<i>Fished permits</i>	<i>37</i>	<i>49</i>	<i>29</i>	<i>33</i>	<i>35</i>	<i>45</i>	<i>32</i>	<i>31</i>	<i>32</i>	<i>32</i>	<i>25</i>
	<i>% of permits fished</i>	<i>52%</i>	<i>72%</i>	<i>47%</i>	<i>57%</i>	<i>49%</i>	<i>56%</i>	<i>51%</i>	<i>57%</i>	<i>63%</i>	<i>63%</i>	<i>57%</i>
	<i>Permit holders</i>	<i>29</i>	<i>31</i>	<i>30</i>	<i>26</i>	<i>33</i>	<i>33</i>	<i>27</i>	<i>24</i>	<i>24</i>	<i>27</i>	<i>24</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Chignik Lagoon: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Chignik Lagoon ²	Total Net Lbs Landed In Chignik Lagoon ^{2,5}	Total Ex-Vessel Value Of Landings In Chignik Lagoon ^{2,5}
2000	53	0	0	49	42	0	0	\$0
2001	66	0	0	54	41	0	0	\$0
2002	52	0	0	51	38	0	0	\$0
2003	53	0	0	51	35	0	0	\$0
2004	29	0	0	54	38	0	0	\$0
2005	38	0	0	42	34	0	0	\$0
2006	35	0	0	40	34	0	0	\$0
2007	40	0	0	40	32	0	0	\$0
2008	39	0	0	43	35	0	0	\$0
2009	25	0	0	44	32	0	0	\$0
2010	41	0	0	41	33	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Chignik Lagoon: 2000-2010.

Year	Number of Halibut Quota Share account holders	Halibut Quota Shares held	Halibut IFQ allotment (lbs)
2000	6	428,943	118,561
2001	6	428,943	130,449
2002	6	428,943	135,181
2003	6	428,943	134,450
2004	6	392,851	112,189
2005	6	392,851	94,604
2006	6	392,851	78,258
2007	6	392,851	66,660
2008	6	392,851	78,597
2009	6	392,851	78,519
2010	5	387,433	70,738

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation in Chignik Lagoon: 2000-2010.

Year	Number Of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation in Chignik Lagoon: 2000-2010.

Year	Number Of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Lbs)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-Vessel Revenue, by Species, in Chignik Lagoon: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-Vessel Revenue, By Species, by Chignik Lagoon Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	155,804	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	117,741	125,784	--	143,088	132,099	108,299	92,959	94,153	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	11,279	2,630	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	1,098,592	1,644,330	3,314,695	2,501,486	3,341,116	2,871,138	2,391,714	3,758,015	3,927,712	3,491,723	4,633,248
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	3,710,293	4,435,588	2,301,163	2,661,475	1,574,900	2,536,652	2,636,534	5,930,246	6,307,771	6,537,079	4,649,445
<i>Total²</i>	<i>4,926,626</i>	<i>6,205,702</i>	<i>5,615,858</i>	<i>5,317,328</i>	<i>5,050,745</i>	<i>5,671,893</i>	<i>5,121,207</i>	<i>9,782,414</i>	<i>10,235,483</i>	<i>10,028,802</i>	<i>9,282,693</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	\$244,977	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$303,414	\$242,512	--	\$396,534	\$380,693	\$310,905	\$342,496	\$401,341	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	\$4,755	\$583	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$340,136	\$415,390	\$703,288	\$672,325	\$795,125	\$741,575	\$875,374	\$1,740,608	\$2,244,109	\$886,419	\$1,187,620
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$3,034,196	\$2,465,420	\$1,493,648	\$1,630,399	\$1,469,211	\$2,144,728	\$1,752,060	\$2,321,916	\$3,339,523	\$4,126,809	\$3,763,243
<i>Total²</i>	<i>\$3,677,745</i>	<i>\$3,123,322</i>	<i>\$2,196,936</i>	<i>\$2,704,013</i>	<i>\$2,645,612</i>	<i>\$3,442,185</i>	<i>\$2,969,930</i>	<i>\$4,463,866</i>	<i>\$5,583,632</i>	<i>\$5,013,228</i>	<i>\$4,950,863</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is limited due to Chignik Lagoon’s remote location. However, in 2010 there was one sportfishing guide business registered in the community and three residents held sport fish guide licenses. In total, 44 sportfishing licenses were sold in the community in 2010, compared to 10 in 2000. In addition, 18 sportfishing licenses were sold to residents, compared to none in 2000.

Chignik Lagoon is located within the Alaska Peninsula and Aleutian Islands ADF&G Harvest Survey Area which includes all Alaskan waters, including drainages, between Cape Douglas and the community of Naknek. In 2010, angler days fished totaled 5,297 for saltwater fisheries and 33,635 for freshwater fisheries. In that year, non-Alaskan residents accounted for 38.4% of saltwater and 58.4% of freshwater angler days fished, compared to 15.8% and 39.5% in 2000, respectively. According to ADF&G Harvest Survey data, private anglers in Chignik Lagoon target king and sockeye salmon, halibut, rockfish, Pacific cod, Dungeness and Tanner crab, hardshell clams, and other shellfish. There is no kept/released charter information available for Chignik Lagoon. Information regarding sportfishing trends can be found in Table 11.

Table 11. Sport Fishing trends, Chignik Lagoon: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Chignik Lagoon²
2000	1	1	10	0
2001	1	1	33	0
2002	1	1	25	0
2003	2	3	33	7
2004	2	3	36	7
2005	1	1	36	21
2006	2	1	18	30
2007	2	1	20	29
2008	1	0	14	9
2009	1	0	17	41
2010	1	3	18	44

Table 11 cont'd. Sport Fishing trends, Chignik Lagoon: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence is an important part of life in Chignik Lagoon as many year-round residents rely on subsistence and personal use fisheries to supplement their incomes when employment is scarce. In addition, as with many rural communities in Alaska, subsistence activities are a source of social and cultural cohesion, reinforcing lifestyles and traditions important to village life. During the 1980s and 1990s, residents harvested salmon primarily using purse seines, beach seine, and gill nets. Fish were also set aside from commercial harvests for home use and some salmon were harvested using rod and reel under sportfishing regulations.¹⁶⁴

In a 2003 ADF&G survey,¹⁶⁵ 90% of surveyed households were to participating in subsistence salmon fisheries, 94% were participating in subsistence halibut fisheries, 71% were participating in subsistence marine invertebrate fisheries, and 25% were participating in

¹⁶⁴ Hutchinson-Scarborough, L., and J. A. Fall. (1996). *An Overview of Subsistence Salmon and Other Subsistence Fisheries of the Chignik Management Area, Alaska Peninsula, Southwest Alaska*. Alaska Dep. of Fish and Game. Tech. Paper No. 230. Retrieved January 10, 2013 from: <http://www.subsistence.adfg.state.ak.us/download/TPS/tp230.pdf>.

¹⁶⁵ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

subsistence non-salmon fish fisheries. In 2003, it was estimated that 304.5 lbs of marine resources were harvested per person for subsistence. According to the ADF&G *Community Subsistence Information System*,¹⁶⁶ Chignik Lagoon residents have used or harvested chitons, butter clams, Dungeness crab, octopus, littleneck clams, razor clams, sea urchin, Tanner crab, harbor seal, king crab, Steller sea lion, black rockfish, Dolly Varden char, eulachon, herring, longcod, Pacific cod, rainbow trout, red rockfish, skates, steelhead, and sole.

Salmon, halibut and marine mammals have been harvested by residents recently (Tables 12-15). Of the salmon species harvested by residents, sockeye salmon were harvested most, followed by coho and Chinook salmon. In 2008, residents reported harvesting 2,466 salmon, compared to 2,659 in 2000. The number of sockeye salmon reported harvested peaked in 2004 at 3,577 fish, which was the same year total reported salmon harvests peaked. In 2010, 13 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 34 in 2003. In that year, an estimated 770 lbs of halibut was harvested on 9 SHARC, compared to an estimated 2,921 lbs on 28 SHARC in 2003. Estimated halibut harvests peaked in 2006 at 6,694 lbs harvested on 28 SHARC. Marine mammal harvest information is limited; however, an estimated 14 sea otters were harvested between 2000 and 2010. In addition, an estimated 3 Steller sea lions were harvested between 2000 and 2008.

Table 12. Subsistence Participation by Household and Species, Chignik Lagoon: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	90%	94%	n/a	71%	25%	304.52
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁶⁶ Ibid.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Chignik Lagoon: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	26	22	88	n/a	8	n/a	2,563	n/a	n/a
2001	38	37	87	n/a	240	33	2,843	n/a	n/a
2002	31	22	32	n/a	68	n/a	2,396	n/a	n/a
2003	35	28	126	n/a	35	17	3,459	2,051	856
2004	31	16	16	23	78	50	3,577	n/a	n/a
2005	26	24	157	14	114	27	1,896	n/a	n/a
2006	30	22	130	7	74	13	2,850	n/a	n/a
2007	30	11	16	3	95	n/a	3,327	n/a	n/a
2008	19	16	n/a	n/a	65	n/a	2,401	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Chignik Lagoon: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	34	28	2,921
2004	45	34	4,434
2005	42	30	4,686
2006	42	28	6,694
2007	39	22	4,269
2008	18	12	1,859
2009	13	9	2,233
2010	13	3	770

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Chignik Lagoon: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	1	n/a
2001	n/a	n/a	n/a	n/a	n/a	1	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	1	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Chignik Lake (CHIG-nick)

People and Place

*Location*¹⁶⁷

Chignik Lake is located on the south side of the Alaska Peninsula next to the body of water of the same name. It lies 13 mi from Chignik, 265 mi southwest of Kodiak, and 474 mi southwest of Anchorage. The community is unincorporated and under the jurisdiction of the Lake and Peninsula Borough.

*Demographic Profile*¹⁶⁸

In 2010, there were 73 residents, ranking Chignik Lake 277th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 45.1%. Between 2000 and 2009, the population declined by 27.6% with an average annual growth rate of -0.89%. This was lower than the state average of 0.75% and indicative of steady rate of decline since the population peaked in 2000 (Table 1).

Chignik Lake is an Alutiiq community with 94.5% of residents identifying themselves as American Indian or Alaska Native in 2010, compared to 86.9% in 2000. In addition, 2.7% of residents identified themselves as White, compared to 11.7% in 2000 and 2.7% identified themselves as two or more races, compared to 0.7% in 2000 (Figure 1).

In 2010, the average household size was 2.70, compared to 3.90 in 1990 and 3.63 in 2000. In that year, there were 50 total housing units, compared to 57 in 1990 and 50 in 2000. Of those households surveyed in 2010, 52% were owner occupied, compared to 68% in 2000; 12% were renter occupied, compared to 12% in 2000; 20% were vacant, compared to 18% in 2000; and 26% were occupied seasonally, compared to 2% in 2000. There were no residents living in group quarters between 1990 and 2010.

In 2010, the gender distribution of Chignik Lake was slightly skewed at 56.2% male and 43.8% female. This was slightly more skewed than the statewide distribution (52.1% male, 47.9% female) and significantly more male biased than 2000 (48.3% male, 51.7% female). The median age was 32.5 years, very similar to the statewide median of 32.7 years and markedly higher than the 2000 median of 20.8 years.

¹⁶⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

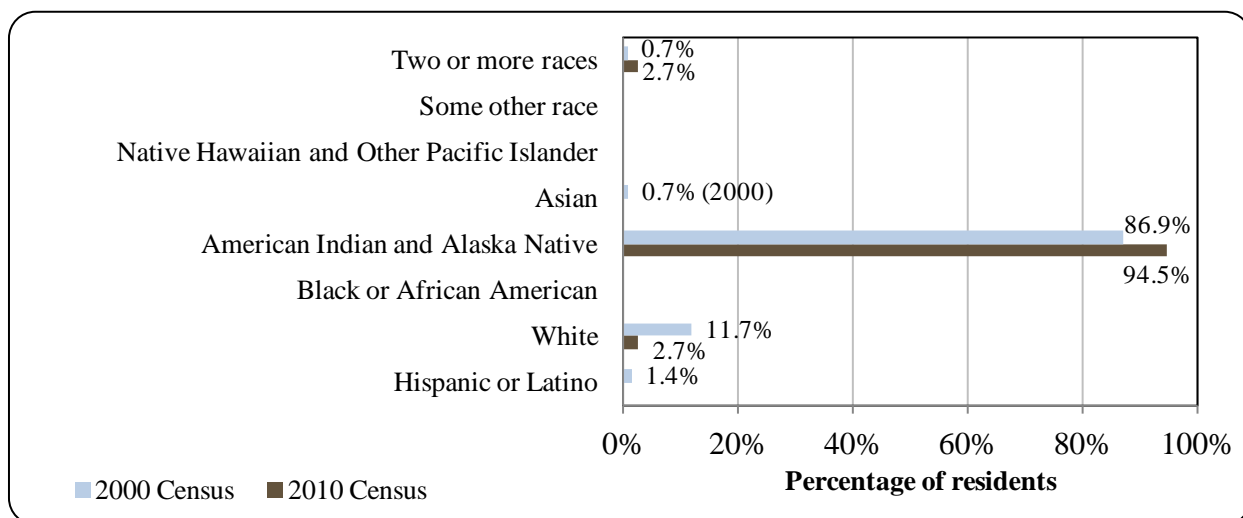
Table 1. Population in Chignik Lake from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	133	-
2000	145	-
2001	-	140
2002	-	115
2003	-	113
2004	-	113
2005	-	117
2006	-	122
2007	-	125
2008	-	104
2009	-	105
2010	73	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

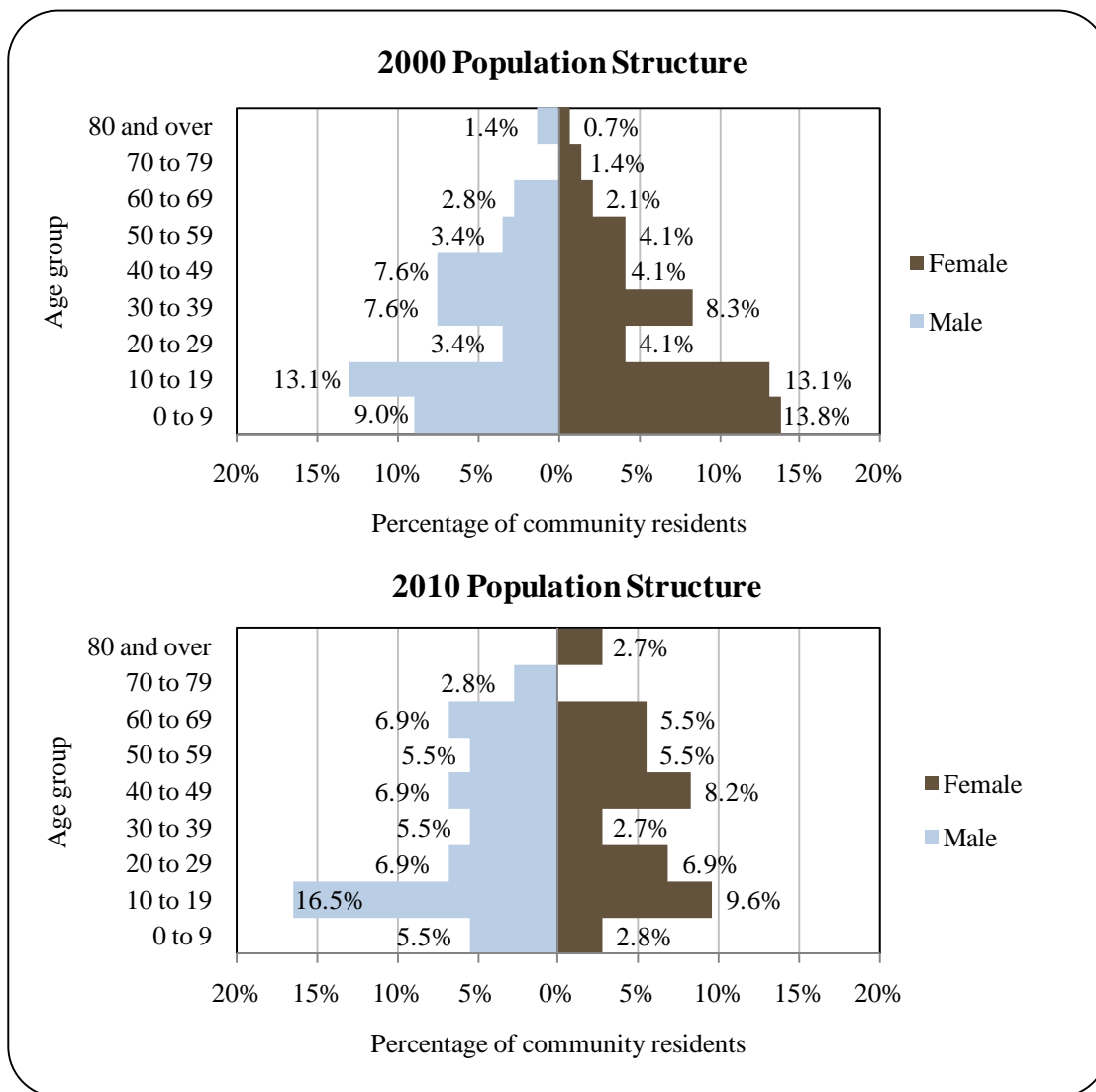
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Chignik Lake: 2000-2010 (U.S. Census).



The population structure was irregular in both 2000 and 2010, although more constricted in 2010 with 34.4% of residents under the age of 20, as opposed to 49% in 2000. Also in that year, 17.9% of residents were over the age of 59, compared to 8.4% in 2000; 34.3% were between the ages of 30 and 59, compared to 35.1% in 2000; and 13.8% were between the ages of 20 and 29, compared to 7.5% in 2000.

Figure 2. Population Age Structure in Chignik Lake Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution by age cohort was more uneven in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 30 to 39 ranges (5.5% male, 2.7% female); followed by the 70 to 79 (2.7% female, 0.0% male) and 0 to 9 (5.5% male, 2.8% female) ranges. Of those three, the greatest relative gender difference occurred in the 70 to 79 range. Information regarding trends in Chignik Lake’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-10 American Community Survey (ACS)¹⁶⁹ estimated that 57.1% of residents aged 25 years and older held a high school

¹⁶⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 26.5% had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 16.3% had 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; and an estimated 53.1% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall. No residents were estimated to hold a post-secondary degree.

History, Traditional Knowledge, and Culture

Archaeological evidence suggests that Aleut (Unanga and Alutiiq) peoples have occupied the Alaska Peninsula for approximately 9,000 years.^{170,171} In the past, the Chignik region was at the contact boundary between Aleut and Yup'ik language groups. Archaeological investigations around Chignik Lake, Chignik River, and Chignik Lagoon suggest occupation dating back approximately 2,000 years. During the late 1700s and early 1800s, Russian traders began exploring the Aleutian Islands and Alaska Peninsula. The decline of the fur trade was followed by the growth of salmon processing within the region, and by 1889 three canneries had been established in Chignik Lagoon.¹⁷² These were the Chignik Bay Company cannery, the Shumagin Packing Company, and the Chignik Bay Packing Company.¹⁷³

The present population traces its roots from Aleuts who lived on the west side of the Alaska Peninsula near Ilnik and the old village of Kanatag near Becharof Lake. In 1903, the village was the winter residence of a single family who fished near Chignik Lagoon. Other families moved from surrounding villages in the early 1950s when a school was built. The residents of Chignik Lake retain close ties with its Alutiiq heritage and practice a subsistence lifestyle. Commercial fishing is the mainstay of Chignik Lake's economy. Some residents leave the village during the summer months to fish commercially, crew or work at the fish processors in Chignik.¹⁷⁴

Natural Resources and Environment

The maritime climate of Chignik Lake is characterized by cool summers and relatively warm, rainy winters. Summer temperatures range from 39 to 60 °F (4 to 16 °C). Winter temperatures range from 21 to 50 °F (-6 to 10 °C). Extreme temperatures, ranging from a low of

¹⁷⁰ LaRoche and Associates (2011). *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from: http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹⁷¹ WHPacific (2010). *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from: <http://www.aleutianseast.org/>.

¹⁷² Mobley, C. M. (2004). *Chignik's Norquest Cannery: A Cultural Resource Inventory and Evaluation, Chignik, Alaska Peninsula, Alaska*. Retrieved January 10, 2013 from: http://polarconsult.net/ChignikBay/env/mobley_combined.pdf.

¹⁷³ Hutchinson-Scarborough, L., and J. A. Fall. (1996). *An Overview of Subsistence Salmon and Other Subsistence Fisheries of the Chignik Management Area, Alaska Peninsula, Southwest Alaska*. Alaska Dep. of Fish and Game. Tech. Paper No. 230. Retrieved January 10, 2013 from: <http://www.subsistence.adfg.state.ak.us/download/TPS/tp230.pdf>.

¹⁷⁴ Lake and Peninsula Borough. (n.d.). *Chignik Lake*. Retrieved January 30, 2012 from: http://www.lakeandpen.com/index.asp?Type=B_BASIC&SEC=%7BBF9236C9-F5CB-4227-9F86-681435D21410%7D.

-12 (-24 °C) to a high of 76 °F (24 °C), have been recorded. Precipitation averages 127 inches annually, with an average annual snowfall of 58 inches.¹⁷⁵

Chignik Lake is located in the Alaska Peninsula National Wildlife Refuge (APNWR). The refuge was created in 1980 as a product of the Alaska National Interest Lands Conservation Act, and occupies 3.7 million acres of the Alaska Peninsula.¹⁷⁶ The geology and topography of the area is characterized by high relief mountainous slopes mantled with deposits of volcanic ash and cinders. Brown and tan sandstone conglomerates dominate the landscape. Soils are relatively shallow and unproductive on the slopes, and primarily consist of well-drained ashy loams overlying sandy and cindery ash. Poorly drained depressions within mountainous slopes can contain muskeg environments. Level areas consist of deeper, poorly drained organics with a thin layer of ash. Land within the community consists mostly of marshy wetlands, pebble rock, and sand. Vegetation is typical of western/Aleutian Alaska. Due to soil and climatic conditions, natural growing trees are rare and most vegetation consists of low shrubs, grasses, and dwarf alders and willow. Brackish marsh vegetation populates the low lying areas and wetlands. Wildflowers including dandelion, fireweed, iris, rose, lupine, and horsetail are also found throughout the area, as well as an abundance of wild berries.¹⁷⁷

The APNWR provides habitat for many migratory and marine birds including mallards, shovel nose, canvas backs, pintails, common merganser, bufflehead, and gulls. Terrestrial wildlife includes brown bear, moose, caribou, wolf, wolverine, fox, river otter, and beaver. Fish includes all five species of Pacific salmon, Arctic grayling, Dolly Varden char, rainbow and lake trout, northern pike, and burbot. Marine mammals include Steller sea lions, harbor seals, sea otters, and migratory whales.¹⁷⁸ Natural resources in the area include a copper and molybdenum deposit located at Bee Creek to the northeast, as well as coal deposits scattered throughout the region.¹⁷⁹

Natural hazards in the area are similar to those on a regional level and include coastal flooding and erosion, storm surges, earthquakes, volcano eruptions, and tsunamis. There have been several historic earthquake and flooding events, and the community itself lies west of the active volcano, Mt. Veniaminof.¹⁸⁰ An active stratovolcano, eruption events were observed six times between 2002 and 2008.¹⁸¹

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in the community in 2010.¹⁸²

¹⁷⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁶ U.S. Fish and Wildlife Service. (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved January 24, 2012 from: <http://alaskapeninsula.fws.gov/wildlife.htm>.

¹⁷⁷ Chignik Bay Tribal Council (2006). *Chignik Bay Community Plan*. Retrieved January 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ChignikBay-CP-2006.pdf>.

¹⁷⁸ U.S. Fish and Wildlife Service (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved January 24, 2012 from: <http://alaskapeninsula.fws.gov/wildlife.htm>.

¹⁷⁹ Alaska Department of Econ. Dev. (n.d.). *Mineral Resources in Alaska*. Retrieved January 24, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

¹⁸⁰ See footnote 178.

¹⁸¹ Alaska Volcano Observatory (n.d.). *Veniaminof Reported Activity*. Retrieved January 9, 2013 from: <http://www.avo.alaska.edu/volcanoes/volcact.php?volcane=Veniaminof>.

¹⁸² Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved June 22, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹⁸³

Fishing is the mainstay of Chignik Lake's economy. Some residents leave the community during summer months to commercially fish, crew, or work at the fish processing plants at Chignik. The people depend on subsistence hunting and fishing and utilize salmon, other fish, caribou, moose, and seal. Top employers in 2010¹⁸⁴ included: Lake and Peninsula School District, Chignik Lake Village Council, Bristol Bay Housing Authority, Bristol Bay Area Health Corp., and Bristol Bay Native Association.

In 2010,¹⁸⁵ the estimated per capita income was \$16,347 and the estimated median household income was \$64,063, compared to \$13,842 and \$41,458 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,¹⁸⁶ the real per capita income (\$18,202) and real median household income (\$54,517) indicate that while individual earnings declined, household earnings increased. In 2010, Chignik Lake ranked 181st of 305 Alaskan communities from which per capita income was estimated, and 66th of 299 Alaskan communities from which median household income was estimated.

Chignik Lake's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁸⁷ Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$745,553 in total wages in 2010.¹⁸⁸ When matched with the population in 2010, the per capita income equals \$10,213 which was significantly lower than 2010 ACS estimates and suggests that caution should be used when comparing 2010 ACS estimates with the 2000 Census.¹⁸⁹ It should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,¹⁹⁰ 61.7% of residents aged 16 years and older were part of the civilian labor force. Unemployment that year was estimated at 8.3%, compared to an estimated 5.9% statewide, and an 14.0% of the population was estimated to be living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Of those employed in 2010, an estimated 50% worked in the public sector and an estimated 50% worked in the private sector.

¹⁸³ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁸⁴ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁸⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁸⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁸⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

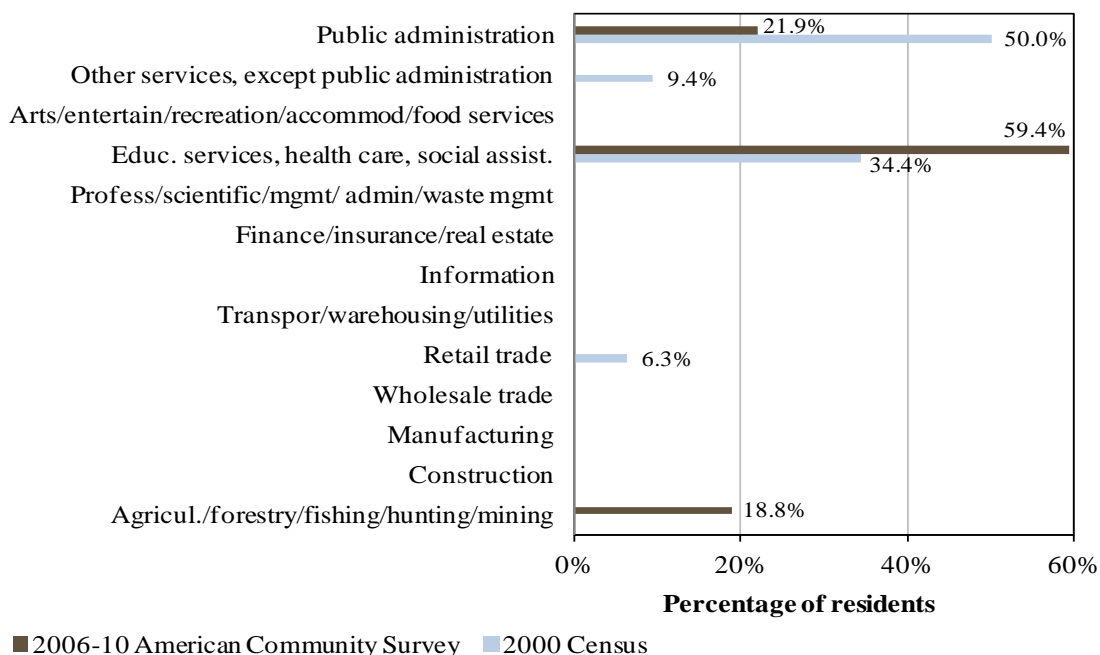
¹⁸⁸ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁸⁹ See footnote 184.

¹⁹⁰ See footnote 185.

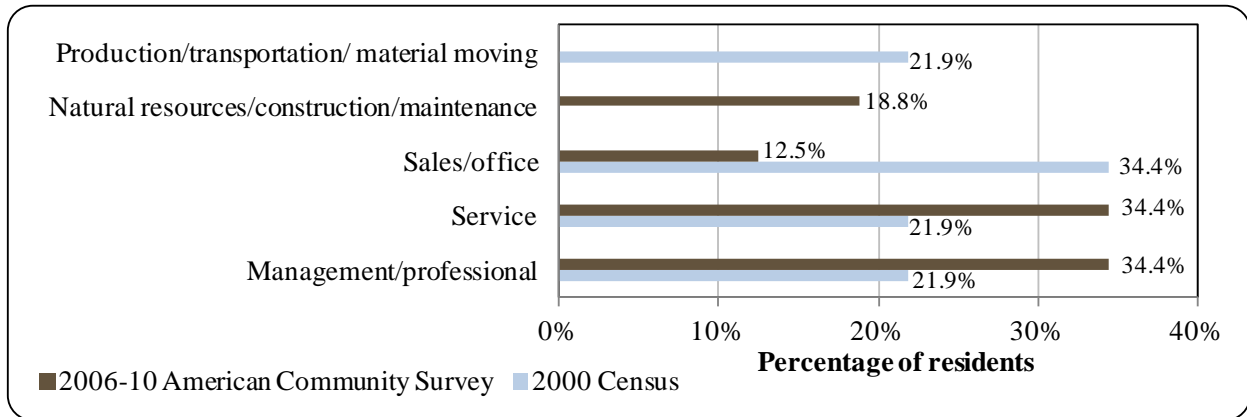
By industry, most (59.4%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by public administration sectors (21.9%) and agriculture, forestry, fishing, hunting, and mining sectors (18.8%). By occupation type, most (34.4%) employed residents were estimated to hold management or professional positions; followed by service positions (34.4%); natural resources, construction, or maintenance positions (18.8%); and sales or office positions (12.5%). There was immense variation in employment by industry sector and occupation type between 2000 and 2010. This could be attributed to the highly variable population or ACS sampling error. According to 2010 ALARI estimates, most (68.0%) of employed residents worked in local government sectors; followed by financial service sectors (12.0%) and other unspecified sectors (6.0%).¹⁹¹ Further information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Chignik Lake (U.S. Census).



¹⁹¹ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 4. Local Employment by Occupation in 2000-2010, Chignik Lake (U.S. Census).



Governance

Chignik Lake is unincorporated and therefore unable to administer taxes (Table 2). However, it is under the jurisdiction of the Lake and Peninsula borough which administers a 2% Raw Fish tax, 6% Bed tax, \$3.00 Guide tax, and \$1.00 Lodge Guide tax. There is a U.S. Bureau of Indian Affairs recognized Tribal government (Chignik Lake Village) and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Chignik River Limited). The regional ANCSA chartered Native corporation representing Chignik Lake is the Bristol Bay Native Corporation. The closest seasonal Alaska Department of Fish and Game (ADF&G) office is located in Chignik; however, the closest permanent ADF&G office is located in Sand Point, 100 mi to the southwest. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services (BCIS) offices are located in Kodiak, 265 mi to the northeast.

Infrastructure

*Connectivity and Transportation*¹⁹²

Chignik Lake is primarily accessible by air. There is a state-owned 2,800-ft. long by 60-ft. wide gravel airstrip; seaplanes may land at Chignik Lagoon. Regularly-scheduled and charter flights are provided. Goods are lightered weekly during the summer and monthly during winter, to the lake via Chignik Lagoon and are then transported over land. The state ferry provides service to Chignik Lagoon four times per year. There is no harbor, dock, barge access, or boat haul-outs. Skiffs and ATVs are the primary means of local transportation. There is a strong regional interest in constructing roads between Chignik, Chignik Lagoon, Chignik Lake, and the city landfill. The price of roundtrip airfare between Anchorage and Chignik Lake in June of 2012 was \$960.¹⁹³

¹⁹² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁹³ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Chignik Lake from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Facilities¹⁹⁴

Treated well water is stored in a wood stave tank and is piped to all 32 households. The school has its own well. Approximately 70% of the homes are plumbed. Fifteen HUD (Housing and Urban Development) homes are connected to a central sewer system with a waste pump and lagoon; the remainder of the houses in the community use individual septic systems. Chignik Lake Electric Utility generates power only during the summer months; in winter, electricity is purchased from the school district. There is one hotel available for visitor accommodations. Public safety services are provided by state troopers based in King Salmon. Fire and rescue services are provided by the Chignik Lake Rescue Squad. Additional public facilities include a community center and school library.

Medical Services¹⁹⁵

Chignik Lake Clinic is a Community Health Aid Program site. Basic health care is provided; however, emergency and trauma care, behavioral health care, dental care, diagnostic images, and pharmacy services are located in Chignik.

¹⁹⁴ See footnote 192.

¹⁹⁵ Ibid.

*Educational Opportunities*¹⁹⁶

Chignik Lake School provides preschool through 12th grade instruction. As of 2011, there were 22 students enrolled and 2 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Chignik lake system has historically been the most productive sockeye salmon system in southwestern Alaska. Commercial fisheries began in the Chignik region in the late nineteenth century. In 1888, a fish-prospecting party lead by the Fishermen's Packing Company of Astoria, Oregon, returned from Chignik with 2,160 barrels of salted salmon. During the following year, 12 new canneries in central Alaska lead to a boom in seafood processing. Around 1896, the Hume Brothers and Pacific Steam Whaling Company both constructed canneries in Chignik, which mostly purchased fish from the Chignik Lagoon area. Northwestern Fisheries Company purchased both canneries in 1905 and closed the Hume facility, while operating the other until 1931. In 1910, the Columbia River Packers Association (CRPA) built a cannery at the mouth of Indian Creek, along the shore of Anchorage Bay. The Chignik area began to flourish around the CRPA and Northwestern Fisheries canneries. Key to the canneries success was the extensive use of fish traps station in Chignik Bay and Lagoon. Both the CRPA and Northwestern facilities on Anchorage Bay were the main Chignik canneries until the 1932 season, when neither operated due to poor economic conditions. Both plants didn't operate the following year, allowing a independent operator to establish a cannery at Chignik Lagoon. The 1930s were poor years for the Chignik fishing industry. All 20 canneries owned by Northwestern Fisheries were leased to Pacific American Fisheries (PAF) in 1933, but the PAF primarily only operated fish traps while selling catch to other canneries. In the 1950s, both the CRPA and American Packers Association plants combined operations. A fire in 1976 decimated the APA cannery. The cannery was quickly rebuilt and put back into operation by 1977.¹⁹⁷

Annual catches in the Chignik fishery generally ranged between 0.5 to 1.5 million fish between the fisheries inception and 1950. However, the 1950s and 1960s produced periods of low annual catches averaging fewer than 500,000 until they rebounded during the 1970s and 1980s.¹⁹⁸ In 2002, the Board of Fisheries passed regulations leading to a harvesting cooperative in the Chignik fishery. Each year, the cooperative would receive a percentage of the Chignik sockeye harvest, based on the number of permit holders who join. Between 2002 and 2005, more than three quarters of Chignik permit holders joined the cooperative. Although controversial, the program reduced vessel participation and provided cost savings, while still providing income for its members. After lengthy litigation regarding its legality, the program was ended in 2006.¹⁹⁹

¹⁹⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁹⁷ Mobley, C. M. (2004). *Chignik's Norquest Cannery—A Cultural Resource Inventory & Evaluation, Chignik, Alaska Peninsula, Alaska*. Retrieved June 25, 2012 from: http://polarconsult.net/ChignikBay/env/mobley_combined.pdf.

¹⁹⁸ Rogers, D.E. (1995). *Recent Variation in the Catches of Chignik Sockeye Salmon*. Retrieved June 25, 2012 from: <https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/4219/9509.pdf?sequence=1>.

¹⁹⁹ Knapp, G. (2007). *The Chignik Salmon Cooperative: A Case Study of Allocation to a Voluntary Self-Governance Organization*. Retrieved June 25, 2012 from:

Historically, commercial red king crab, Tanner crab, grooved Tanner crab, Dungeness crab, Pandalid shrimp, red sea cucumber, and giant Pacific octopus have occurred along the Alaska Peninsula. Most shellfish stocks are depressed, and commercial fisheries for red king crab and shrimp have not occurred since 1982. The Chignik Tanner crab fishery began in 1968, when 21,100 lbs were harvested and peaked in 1975 when 11 million lbs were harvested. Commercial fishing was closed in 1990 to allow depressed stocks to recover, and reopened during the 2004 and 2005 seasons. No Tanner crab fisheries occurred within the Chignik District between 2006 and 2010. Dungeness crab is harvested within the Chignik District although participation in the fishery is low with less than three vessels reporting landings in 2010. Shrimp fishing within the Chignik District began in 1968, and harvests peaked in 1976 at 27 million lbs. Stocks crashed shortly after, and by 1981 only 71,000 lbs were harvested. Since then, all inshore waters within the Chignik District have remained closed. While commercial fishing is permitted in some areas within the Chignik area, there was no fishing effort for shrimp within the Chignik District in 2010. Commercial sea cucumber harvests began in the Kodiak and Chignik districts in 1991 following an increase in market demand. Limits for eviscerated product was set at 25,000 lbs for the Chignik District in 2010 and fishing effort was limited. Demand for octopus increased during the 1990s, and are harvested alongside targeted species. In 2010, incidental harvests totaled 270,067 lbs from both state and federal waters.²⁰⁰

Groundfish species targeted for both state and federal fisheries include Pacific cod, sablefish, lingcod, black rockfish, dark rockfish, and walleye pollock. In 2010, Pacific cod and walleye pollock comprised the largest volume of groundfish harvested in state fisheries within the Chignik area. Pacific cod are managed as a single Gulf of Alaska (GOA) stock, with the state managing parallel fisheries within state waters. In 2010, the total Acceptable Biological Catch for GOA Pacific cod was 174.38 million lbs. In that year, 59.16 million lbs of Pacific cod was taken from the western GOA, of which 56% was harvested from state waters. In the Chignik Area, pot gear vessels were allocated 8.51 million lbs, while jig gear vessels were allocated 946,040 lbs. The total Pacific cod harvest that year was 9.15 million lbs taken by 16 vessels, valued at \$2.19 million ex-vessel. In 2010, Black rockfish harvests in the Chignik Area were capped at 100,000 lbs. Only one vessel participated in the fishery that year. Skates are typically harvested incidentally while fishing for other targeted species, and fall under the assemblage of “other species” which include sharks, sculpins, squid, and octopi. Growing Asian markets for skates have increased interest, which at times can be more valuable than other targeted species. Because of overfishing concerns, NMFS placed skates on bycatch status in 2006, while ADF&G discontinued directed harvests in state waters. State directed sablefish fisheries existed within Kodiak and Chignik areas in 2002, but have since been restricted to bycatch harvests. In 2010, sablefish bycatch harvests in state waters around Kodiak, Chignik, and the South Peninsula Eastern Districted totaled 17,924 lbs. Lingcod harvests are also strictly managed within the Kodiak and Chignik areas. Again, most lingcod is harvested as bycatch, and retention typically remains below 100,000 lbs annually within the western GOA. During 2008, lingcod harvests spiked to 521,257 lbs due to increased retention by trawl vessels. Lingcod harvests declined to 97,281 lbs in 2009 and 67,429 lbs in 2010. Walleye pollock harvests totaled 101.6 million lbs in

http://www.iser.uaa.alaska.edu/people/knapp/personal/pubs/Knapp_Chignik_Salmon_Coop--Case_Study_of_Allocation_to_a_Voluntary_Self_Governance_Organization.pdf.

²⁰⁰ Sagalkin, N. and K. Spalinger. (2011). *Annual Management Report for Shellfish Fisheries in the Kodiak, Chignik, and Alaska Peninsula Areas, 2010*. Alaska Dep. of Fish and Game. Fishery Management Report No. 11-43. Retrieved January 10, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-43.pdf>.

the central GOA, and 57.1 million lbs in the western GOA. In the western GOA, 58% of the total pollock harvest occurred within state waters.²⁰¹

Chignik Lake's participation in North Pacific Fisheries is tied to the Chignik Salmon Fishery, as well as the Chignik region as a whole. Like the other communities in the Chignik region, the community is eligible to participate in the Community Quota Entity program, although a non-profit has not been formed. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf. Chignik Lake is located in Federal Reporting Area 620, International Pacific Halibut Commission Regulatory Area 3B, and the Central GOA Sablefish Regulatory District.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Chignik Lake does not have a registered processing plant. The closest seafood processor is located in Chignik.

Fisheries-Related Revenue

No fisheries-related revenue was reported on a community level between 2000 and 2010 (Table 3). Taxes and fees are collected on a borough level.

Commercial Fishing

In 2010, 8 residents, or 11.0% of the population, held 8 permits issued by the Commercial Fisheries Entry Commission (CFEC), which has held relatively stable since 2000 when 8 residents held 10 CFEC permits. All of the CFEC permits issued in 2010 were for salmon, and 63% were actively fished. No residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits, and 1,866 shares of halibut quota were held on 1 account between 2000 and 2010. No residents have held sablefish or crab quota shares since those programs began. The only fishery prosecuted by residents in 2010 was the Chignik purse

²⁰¹ Stichert, M. A., K. Phillips, and P. Converse. (2011). *Annual Management Report fo Groundfish Fisheries in the Kodiak, Chignik, and South Alaska Peninsula Management Areas, 2010*. Alaska Dep. of Fish and Game. Fishery Management Report No. 11-44. Retrieved January 10, 2013 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-44.pdf>.

seine salmon fishery.²⁰² In 2010, 27 residents held commercial crew licenses, compared to 38 in 2000. Also in that year, residents held majority ownership of 7 vessels, compared to 10 in 2000. No landings were made in the community between 2000 and 2010 given a lack of processing capacity; however, landings were still reported by residents. Landings made by residents in 2010 are considered confidential. However, in 2006 residents landed 311,656 lbs of salmon with an ex-vessel value of \$228,033, compared to 451,442 landed in 2000 with an ex-vessel value of \$395,859. This represents a decrease of approximately \$0.32 per pound ex-vessel during this time period after accounting for inflation²⁰³ and without considering the species composition of landings. Further, information regarding commercial fishing trend scan be found in Tables 4 through 10.

²⁰² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁰³ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Chignik Lake: 2000-2010.

Revenue Source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Chignik Lake: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	2	0	0	0	0	0	0	0	0	0
	Fished permits	0	1	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	50%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	1	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0

Table 4 Cont. Permits and Permit Holders by Species, Chignik Lake: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	1	1	0	0	0	0	0	0	0	0
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	1	1	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	8	9	8	7	10	8	8	6	5	7	8
	Fished permits	7	7	3	3	6	7	7	4	3	4	5
	% of permits fished	88%	78%	38%	43%	60%	88%	88%	67%	60%	57%	63%
	Total permit holders	8	9	9	8	10	8	8	6	5	7	8
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>10</i>	<i>12</i>	<i>9</i>	<i>7</i>	<i>10</i>	<i>8</i>	<i>8</i>	<i>6</i>	<i>5</i>	<i>7</i>	<i>8</i>
	<i>Fished permits</i>	<i>9</i>	<i>8</i>	<i>3</i>	<i>3</i>	<i>6</i>	<i>7</i>	<i>7</i>	<i>4</i>	<i>3</i>	<i>4</i>	<i>5</i>
	<i>% of permits fished</i>	<i>90%</i>	<i>67%</i>	<i>33%</i>	<i>43%</i>	<i>60%</i>	<i>88%</i>	<i>88%</i>	<i>67%</i>	<i>60%</i>	<i>57%</i>	<i>63%</i>
	<i>Permit holders</i>	<i>8</i>	<i>10</i>	<i>9</i>	<i>8</i>	<i>10</i>	<i>8</i>	<i>8</i>	<i>6</i>	<i>5</i>	<i>7</i>	<i>8</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Chignik Lake: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Chignik Lake ²	Total Net Lbs Landed In Chignik Lake ^{2,5}	Total Ex-Vessel Value Of Landings In Chignik Lake ^{2,5}
2000	38	0	0	10	5	0	0	\$0
2001	37	0	0	11	6	0	0	\$0
2002	25	0	0	10	5	0	0	\$0
2003	20	0	0	10	4	0	0	\$0
2004	3	0	0	10	3	0	0	\$0
2005	32	0	0	11	4	0	0	\$0
2006	18	0	0	12	4	0	0	\$0
2007	13	0	0	10	4	0	0	\$0
2008	28	0	0	6	4	0	0	\$0
2009	26	0	0	7	3	0	0	\$0
2010	27	0	0	7	3	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Chignik Lake: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	1,866	520
2001	1	1,866	572
2002	1	1,866	592
2003	1	1,866	589
2004	1	1,866	537
2005	1	1,866	452
2006	1	1,866	373
2007	1	1,866	317
2008	1	1,866	375
2009	1	1,866	375
2010	1	1,866	340

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation in Chignik Lake: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island crab Catch Share Program Participation in Chignik Lake: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-Vessel Revenue, by Species, in Chignik Lake: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-Vessel Revenue, by Species, by Chignik Lake Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	451,442	396,120	--	--	558,310	733,563	311,656	--	--	--	--
<i>Total²</i>	<i>451,442</i>	<i>396,120</i>	--	--	<i>558,310</i>	<i>733,563</i>	<i>311,656</i>	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$395,859	\$262,959	--	--	\$488,908	\$631,483	\$228,033	--	--	--	--
<i>Total²</i>	<i>\$395,859</i>	<i>\$262,959</i>	--	--	<i>\$488,908</i>	<i>\$631,483</i>	<i>\$228,033</i>	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is not a substantial part Chignik Lake's participation in North Pacific Fisheries, partly because of its remote location and high cost for travel to the community. Visitors to the community acquire sportfishing licenses elsewhere. No licenses were sold in the community between 2000 and 2010. In 2010, 10 residents held sportfishing licenses, compared to 7 in 2000. There were no registered sport fish guide businesses active in 2010 nor did any residents hold sport fish guide licenses. However, the Chignik area is popular with private anglers willing to make the trip, and Chignik Lake offers visitor accommodations.

Chignik Lake is located within the Alaska Peninsula and Aleutian Islands ADF&G Harvest Survey Area which includes all Alaskan waters, including drainages, between Cape Douglas and the community of Naknek. In 2010, angler days fished totaled 5,297 for saltwater fisheries and 33,635 for freshwater fisheries. In that year, non-Alaska resident anglers accounted for 38.4% of saltwater and 58.4% of freshwater angler days fished, compared to 15.8% and 39.5% in 2000, respectively. According to ADF&G Harvest Survey data, private anglers in Chignik Lake target king, coho, chum, and sockeye salmon, Dolly Varden char, halibut, rockfish, lingcod, Pacific cod, and other finfish. There is no kept/release charter information available for Chignik Lake. Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Subsistence is an important part of life in Chignik Lake as many year round residents rely on subsistence and personal use fisheries to supplement their incomes when employment is scarce. As with many rural communities in Alaska, subsistence activities are a source of social and cultural cohesion, reinforcing lifestyles and traditions important to village life. In a 2003 ADF&G survey, 83% of household surveyed were found to be participating salmon subsistence activities, 90% were participating in halibut subsistence activities, 38% were participating in marine mammal subsistence activities, 65% were participating in marine invertebrate subsistence activities, and 18% were participating in non-salmon fish subsistence activities. Total per capita lbs harvested that year was estimated at 183.08. According to the ADG&G *Community Subsistence Information System*,²⁰⁴ residents of Chignik Lake have used or harvested chitons, butter clams, octopus, littleneck clams, razor clams, sea urchin, Tanner crab, cockles, harbor seal, Steller sea lion, Dolly Varden, Pacific cod, rainbow trout, steelhead, and flounder.

Of the species reported by AF&G in Table 13, sockeye salmon were harvested the most, followed by coho, Chinook, pink, and chum. In 2008, residents reported harvesting 2,125 salmon, compared to 2,500 in 2000. Total reported salmon harvests peaked in 2002 with 3,062. In 2010, 4 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 7 in 2003. In that year, an estimated 100 lbs of halibut was harvested using 5 SHARC, compared to an estimated 359 lbs on 6 SHARC in 2003. Halibut harvests peaked in 2007 at an estimated 1,176 lbs harvested on 6 SHARC. Reports on marine mammal subsistence are limited. However, 1 sea otter was reported harvested in 2004. Between 2000 and 2008, an estimated 55 harbor seals were harvested. Harbor seal harvests peaked in 2008 at an estimated 20 seals. Information regarding subsistence trends can be found in Tables 12 through 15.

²⁰⁴ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 11. Sport Fishing Trends, Chignik Lake: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Chignik Lake ²
2000	0	0	7	0
2001	0	0	5	0
2002	0	0	10	0
2003	0	0	11	0
2004	1	3	7	0
2005	0	1	10	0
2006	1	1	18	0
2007	1	3	11	0
2008	1	1	11	0
2009	0	1	10	0
2010	0	0	10	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Chignik Lake: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	83%	90%	38%	65%	18%	183
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Chignik Lake: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	17	16	15	n/a	n/a	5	2,464	n/a	n/a
2001	26	25	41	n/a	n/a	n/a	2,930	n/a	n/a
2002	23	20	8	n/a	75	n/a	2,979	n/a	n/a
2003	24	21	2	1	46	7	2,621	815	439
2004	12	7	19	n/a	185	17	1,094	n/a	n/a
2005	24	15	30	n/a	264	40	2,714	n/a	n/a
2006	26	15	42	n/a	125	n/a	2,574	n/a	n/a
2007	27	21	6	n/a	64	96	2,638	n/a	n/a
2008	16	14	23	23	9	54	2,016	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Chignik Lake: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	7	6	359
2004	6	3	413
2005	8	6	406
2006	7	5	310
2007	8	6	1,176
2008	8	5	423
2009	8	5	197
2010	4	1	100

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Chignik Lake: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	3	n/a
2001	n/a	n/a	n/a	n/a	n/a	1	n/a
2002	n/a	n/a	n/a	n/a	n/a	3	n/a
2003	n/a	n/a	n/a	n/a	n/a	9	n/a
2004	n/a	n/a	n/a	n/a	n/a	7	n/a
2005	n/a	1	n/a	n/a	n/a	4	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	8	n/a
2008	n/a	n/a	n/a	n/a	n/a	20	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Clark’s Point



People and Place

*Location*²⁰⁵

Clark’s Point is located on a spit on the northeastern shore of Nushagak Bay, 15 mi south of Dillingham and 337 mi southwest of Anchorage. The area encompasses 3.1 sq mi of land and 0.9 sq mi of water. The community was incorporated as a Second-class city in 1971, is located in the Dillingham Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*²⁰⁶

In 2010, there were 62 residents, ranking Clark’s Point 286th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 3.3%. Between 2000 and 2009, the population declined by 18.7% with an average annual growth rate of -1.29%, which was less than the statewide average of 0.75% and representative of a relatively steady decline. In a survey conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the permanent population of Clark’s Point was 60, and that seasonal workers typically live in the community from June through August. Clark’s Point population peaks at the end of June and is mostly driven by employment in the fishing sectors. Information regarding population trends can be found in Table 1.

Clark’s Point is predominately a Yup’ik community with 88.7% of the population identifying themselves as American Indian or Alaska Native in 2010, compared to 90.7% in 2000. In addition, 11.3% of the population identified themselves as White, compared to 6.7% in 2000. Overall, racial and ethnic composition in Clark’s Point remained relatively unchanged between 2000 and 2010. Information regarding racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 2.58, compared to 3.3 in 1990 and 3.13 in 2000. In that year, there were a total of 50 housing units, compared to 55 in 1990 and 51 in 2000. Of the households surveyed in 2010, 36% were owner-occupied, compared to 27% in 2000; 12% were renter-occupied, compared to 20% in 2000; 0% were vacant, compared to 10% in 2000; and 52% were occupied seasonally, compared to 43% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

²⁰⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

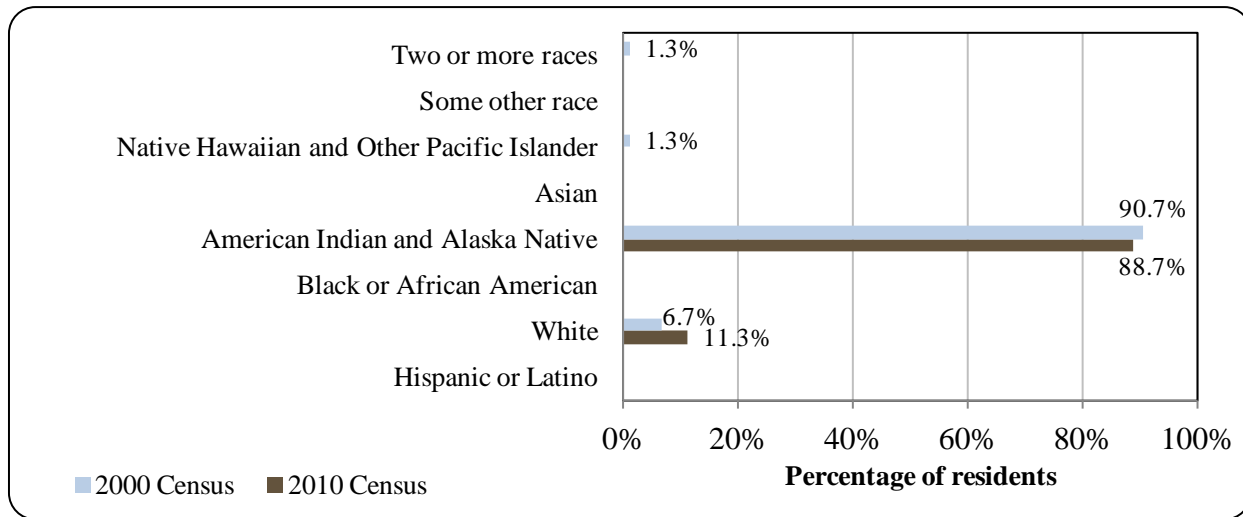
Table 1. Population in Clark’s Point from 1990 to 2010 By Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	60	-
2000	75	-
2001	-	69
2002	-	65
2003	-	66
2004	-	63
2005	-	65
2006	-	69
2007	-	66
2008	-	54
2009	-	61
2010	62	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Clark’s Point: 2000-2010 (U.S. Census).



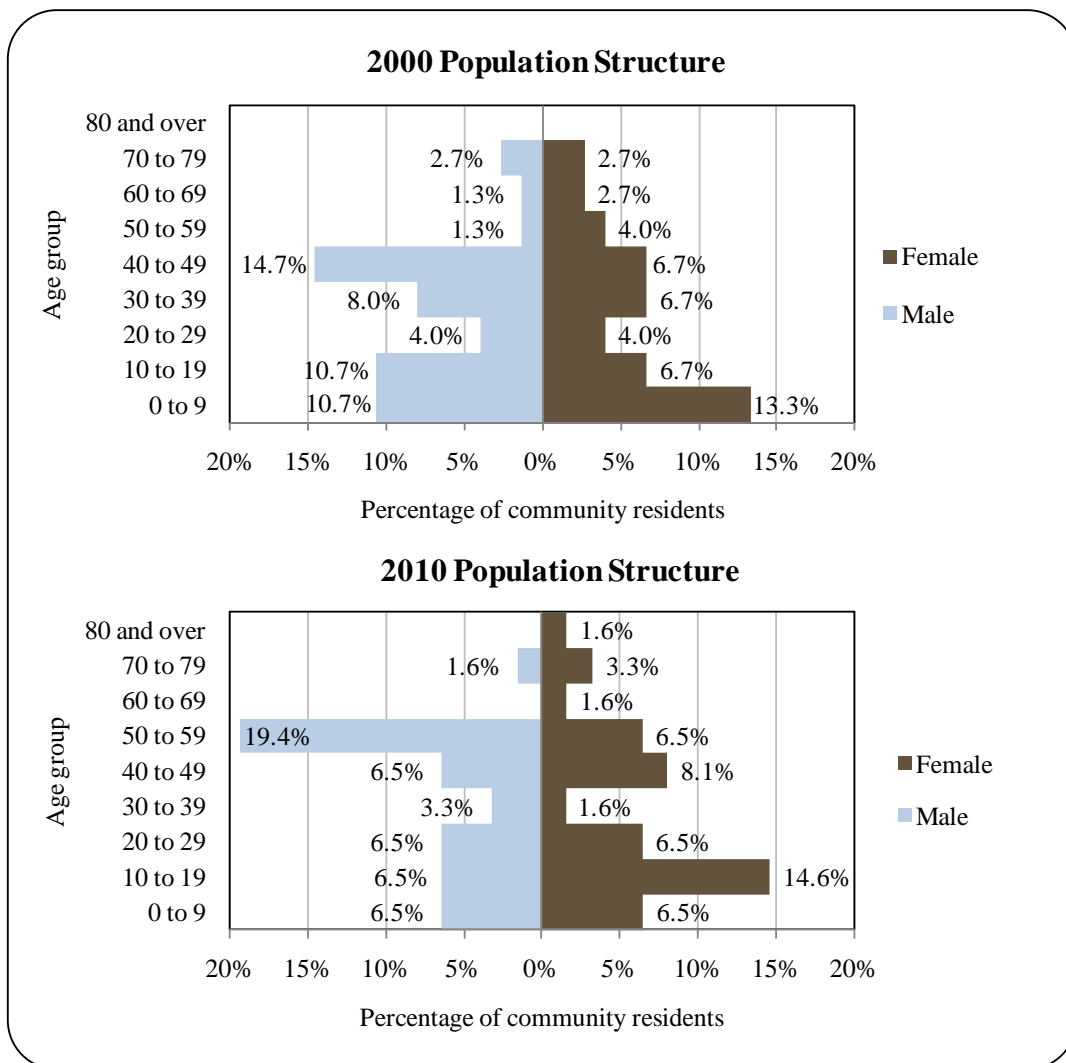
Gender distribution in 2010 was even at 50.0% male and 50.0% female. This was more even than both the distribution statewide (52% male, 48% female) and the distribution in 2000 (53.4% male, 46.6% female). The median age that year was 35.0 years, which was similar to the statewide median of 33.8 years and older than the 2000 median of 30.5 years.

The population structure was irregular in both 2000 and 2010, although somewhat more constricted in 2010. In that year, 34.1% of residents were under the age of 20, compared to

41.4% in 2000; 8.1% were over the age of 59, compared to 9.4% in 2000; 45.4% were between the ages of 30 and 59, compared to 41.4% in 2000; and 13.0% were between the ages of 20 and 29, compared to 8.0% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 50 to 59 range (19.4% male, 6.5% female), followed by the 10 to 19 (14.6% female, 6.5% male), 70 to 79 (3.3% female, 1.6% male), and 30 to 39, (3.3% male, 1.6% female) ranges. Of those four, the greatest relative gender difference occurred in the 50 to 59 range. Information regarding trends in Clark’s Point population structure can be found in Figure 2.

Figure 2. Population Age Structure in Clark’s Point Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS) ²⁰⁷ estimated that 79.4% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 20.6% of residents had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; and an estimated 64.7% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall. No residents were estimated to have less than a 9th grade education or hold a post-secondary degree.

*History, Traditional Knowledge, and Culture*²⁰⁸

Clark's Point originally had a Yup'ik name, "Saguyak," yet there is no evidence of a settlement at the site prior to the Nushagak Packing Company cannery, established in 1888. John Clark, the community's namesake, was the manager of the Alaska Commercial Company store at Nushagak. Clark is said to have operated a saltery prior to the establishment of the cannery. In 1893, the cannery became a member of the Alaska Packers Association. In 1901 a two-line cannery was built. During World War II, the canning operation ceased, and only salting was done at Clark's Point. The plant was closed in 1952, and the Alaska Packers Association used the facility as the headquarters for its fishing fleet. The city was incorporated in 1971. The village has been plagued by severe erosion, resulting in a housing project that was constructed on high and safe ground on the bluff in 1982.

Natural Resources and Environment

Clark's Point is located in a climatic transition zone. The primary influence is maritime, although the arctic climate also affects the region. Average summer temperatures range from 37 to 66 °F (3 to 19 °C). Average winter temperatures range from 4 to 30 °F (-16 to -1 °C). Average annual precipitation is 20 to 26 inches, and annual snowfall averages 82 inches. Fog and low clouds are common during winter months. The Nushagak Bay is ice-free from June through mid-November.²⁰⁹

The topography surrounding Clark's Point was shaped by continental glaciers and consists of wet lowlands, rolling hills, and moraine deposits. Soils in the area are dominated by silty glacial deposits. Lowlands are characterized by streams and small lakes and ponds associated with the wetlands. Upland hills are covered with a thick layer of silty loess.²¹⁰ Vegetation consists of a mix of moist tundra and spruce stands. Tundra consists of mosses, lichens, and grasses. Spruce forests consist of white spruce and paper birch, and typically cover

²⁰⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁰⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁹ Ibid.

²¹⁰ City of Dillingham. (2006). *City of Dillingham Comprehensive Plan*. Retrieved February 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-2006.pdf>.

moraine hills. Other tree species in the greater area include quaking aspen, black spruce, and cottonwood.²¹¹

While the community lacks a hazard mitigation plan, coastal flooding events and erosion have historically impacted the region as a whole. Exposed bluffs in the area are susceptible to erosion from tides and storm surges, often leading to coastal lowland flooding.²¹² According to Dillingham’s *2008 Multi-Hazard Mitigation Plan*,²¹³ there is an approximate 0.05% chance of a 5.0 magnitude or above earthquake occurring in the area before 2017.

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation sites active in the community in 2010.²¹⁴

Current Economy²¹⁵

The primary economic base of Clark’s Point is commercial fishing. Trident Seafoods has an on-shore facility, although it was not registered on the Alaska Department of Fish and Game (ADF&G) intent to operate list in 2010. In addition, no commercial landings were made in the community between 2000 and 2010.²¹⁶ Ekuk, to the south of Clark’s Point, also contributes to regional commercial fishing employment. Everyone depends on subsistence resources to some extent and travels over a great area, if necessary, to harvest them. Salmon, smelt, moose, bear, rabbit, ptarmigan, duck, and geese are harvested. Exchange relationships exist between nearby communities. For example, whitefish is acquired from Ekwok, New Stuyahok, and Bethel; and smelt and lingcod are traded with Manokotak for moose.²¹⁷ Top employers²¹⁸ in 2010 included: Southwest Region Schools, Clark’s Point Village Council, City of Clark’s Point, Bristol Bay Native Association (BBNA), Ekuk Fisheries LLC, and Grant Aviation Inc.

In 2010,²¹⁹ the estimated per capita income in Clark’s Point was \$10,491 and the estimated median household income was \$14,107, compared to \$10,988 and \$28,125 in 2000, respectively. After accounting for inflation by converting 2000 values to 2010 dollars,²²⁰ the real per capita income (\$14,449) and real median household income (\$36,984) indicate declines in both individual and household earnings.

²¹¹ Palcsak, B.B. and Dorava, J. M. (1994). *Overview of Environmental and Hydrogeologic Conditions at Dillingham, Alaska*. Retrieved February 9, 2012 from: <http://www.dggs.alaska.gov/webpubs/usgs/of/text/of94-0482.PDF>.

²¹² See footnote 210.

²¹³ City of Dillingham. (2008). *City of Dillingham Multi-Hazard Mitigation Plan*. Retrieved February 10, 2012 from: http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Dillingham_HMP.pdf.

²¹⁴ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 22, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

²¹⁵ Unless otherwise noted, all monetary data are reported in nominal values.

²¹⁶ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²¹⁷ See footnote 208.

²¹⁸ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²¹⁹ U.S. Census. American Community Survey 2006-10 Estimates.

²²⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

The small population of Clark’s Point may have prevented the ACS from accurately portraying economic conditions.²²¹ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$422,801 in total wages in 2010.²²² When matched with the population in 2010, the per capita income equals \$6,819, which is somewhat less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.²²³ In addition, Clark’s Point was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²²⁴ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates, 50% of the population aged 16 years and older was part of the civilian labor force in 2010. In that year, unemployment was estimated at 19.6%, compared to an estimated 5.9% statewide; and 44.6% of the population was estimated to be living below the poverty line, compared to an estimated 9.5% statewide. Of those employed in 2010, an estimated 50% worked in the private sector and an estimated 50% worked in the public sector.

By industry, most (28.6%) were estimated to work in public administration sectors in 2010; followed by manufacturing sectors (28.6%); construction sectors (21.4%); and private service sectors (21.4%). By occupation type, most (57.1%) employed residents were estimated to hold service positions that year; followed by natural resources, construction, or maintenance positions (21.4%); and sales or office positions (21.4%). Overall, there were significant proportional changes in employment by industry sector and occupation type between 2000 and 2010. There were notable increases in construction and private service sectors, and notable declines in education services, health care, social assistance, transportation, insurance, and utilities sectors. These changes could either be attributed to changes in economic conditions and population structure, or errors in ACS sampling methods resulting from the community’s small population size. According to 2010 ALARI estimates, most (59.4%) employed residents worked in local government sectors; followed by other unspecified sectors (12.5%) and manufacturing sectors (9.4%). Information regarding employment trends can be found in Figures 3 and 4.

No individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

²²¹ See footnote 207.

²²² ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²²³ See footnote 218.

²²⁴ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

Figure 3. Local Employment by Industry in 2000-2010, Clark’s Point(U.S. Census).

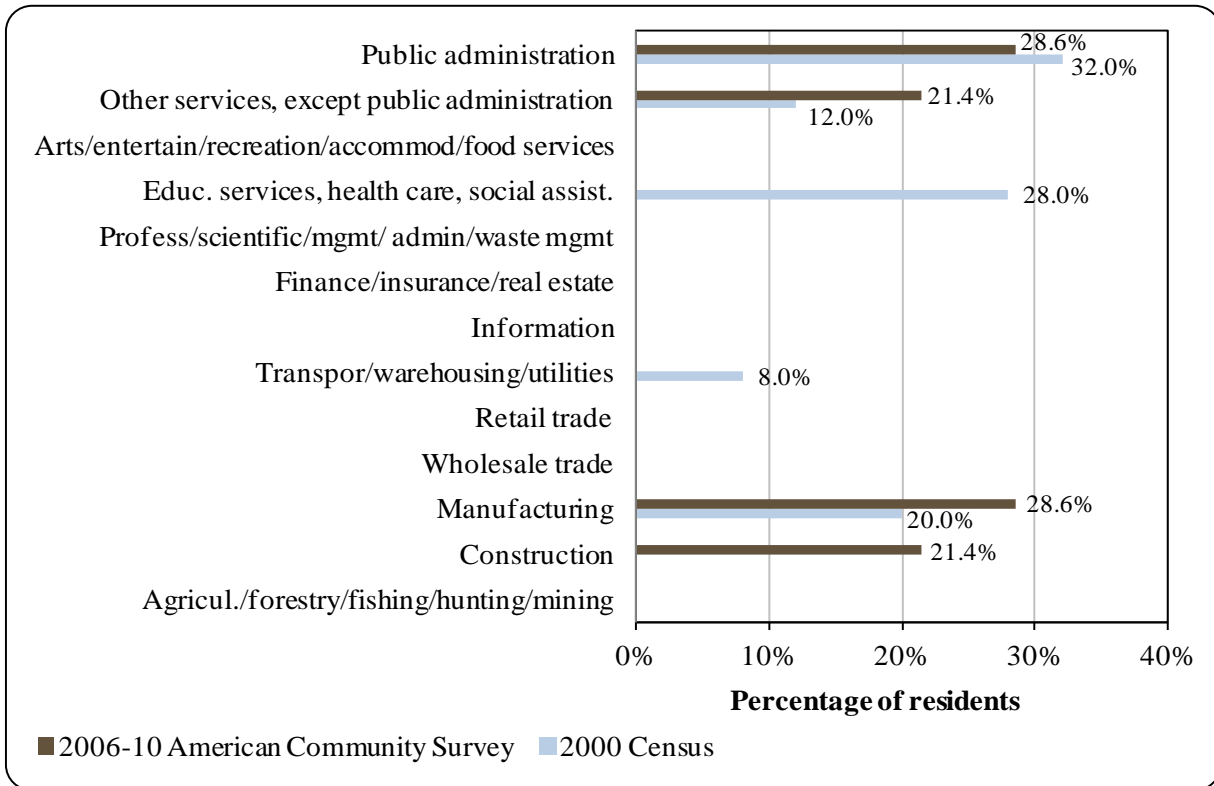
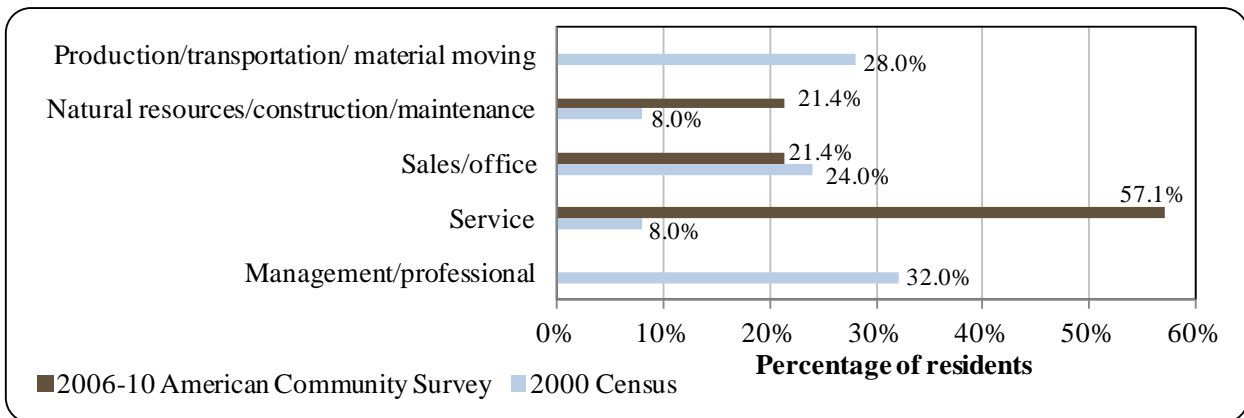


Figure 4. Local Employment by Occupation in 2000-2010, Clark’s Point (U.S. Census).



Governance

Clark’s Point is a Second-class city with a mayoral form of government. There is a federally recognized Tribal government (Clark’s Point Village Council) and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Saguyak Inc.). The Bristol Bay Native Corporation is the regional ANCSA for-profit Native corporation representing Clark’s Point, and the Bristol Bay Native Association is the regional ANCSA non-profit. The closest Alaska Department of Fish and Game

(ADF&G) office is located in Dillingham, 15 mi to the north. The closest National Marine Fisheries Service (NMFS) office is located in Bethel, 171 mi to the northwest. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) is located in Anchorage, 337 mi to the east.

When adjusted for inflation,²²⁵ municipal revenues increased by 95.4% between 2000 and 2010 from \$160,621 to \$405,855. However, it should be noted that a Certified Financial Statement was not available for 2010, and values represented in Table 2 for that year are budgeted estimates. In 2009, almost half of community revenues were allocated in the form of state revenue sharing. Locally generated revenues came predominately from utilities rents and fuel sales. Sales tax revenues declined sharply in 2003 due to Trident Seafoods closing operations in the community. In 2010, Clark’s Point received \$99,059 in state allocated Community Revenue Sharing, which accounted for approximately 24.4% of total revenues for that year. This represented a proportional increase from 2000, when \$25,605 in State Revenue Sharing accounted for approximately 15.9% of total revenues. Between 2000 and 2010 there were no fisheries-related grants reported. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Clark’s Point from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$160,621	\$28,547	\$25,605	n/a
2001	\$218,815	\$30,419	\$24,618	n/a
2002	\$294,491	\$24,866	\$24,622	n/a
2003	\$140,766	\$5,651	\$25,208	n/a
2004	\$270,258	\$466	-	n/a
2005	\$213,776	\$1,111	-	n/a
2006	\$271,209	\$363	-	n/a
2007	\$145,174	\$412	-	n/a
2008	\$228,756	\$636	-	n/a
2009	\$283,344	\$1,206	\$98,755	n/a
2010	\$405,855	n/a	\$99,059	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

²²⁵ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

Connectivity and Transportation

Air transport is the primary method of reaching Clark's Point. Regular and charter flights are available from Dillingham. There is a state-owned 3,200-ft long by 60-ft wide gravel runway, and float planes land on Nushagak River. Freight is brought in by barge to Dillingham and then flown or lightered to the community. The only boat moorage is an undeveloped spit dock owned by the city; boats land on the beach. Trident Seafoods owns a private dock for vessels delivering landings. ATVs and snowmobiles are the primary means of local transportation.²²⁶ The fishing community of Ekuk and City of Dillingham are both within close proximity of Clark’s Point, and residents regularly commute between them. The price of roundtrip airfare between Anchorage and Dillingham in June 2012 was \$452.²²⁷ From Dillingham, flights to Clark’s Point can be chartered from Grant Air at \$160 roundtrip.²²⁸

*Facilities*²²⁹

Spring-fed wells provide water treated with chlorine and fluoride to the community. Nearly 80% of residents are connected to the piped water system; the remainder use individual wells. Approximately 40% of homes and the school -- all located on the bluff -- are served by a piped gravity sewage system. Residents below the bluff rely on septic tanks or pit privies. In all, 21 homes have piped water and sewer. The clinic and city offices use “honeybuckets.” Trident Seafoods supplies its own power, and the school has back-up generators. Public safety services are provided by the local Village Public Safety Office (VPSO) and state troopers based in Dillingham. Fire and rescue services are provided by Clark’s Point volunteer fire department and first responders. Communications services include local and long distance telephone, internet, local television, and local radio.

In a survey conducted by the AFSC in 2011, community leaders reported that as of 2010, the community was in the process of building vessel haulout facilities, a diesel powerhouse, a new landfill, and a new tribal building. In addition, there were plans for improvements to the water and sewer system, broadband internet, road system improvements, and a barge landing area. Vessels up to 32 ft in length can use moorage in Clark’s Point; however, there is no space available for permanent public moorage. The only U.S. Coast Guard regulated vessel type Clark’s Point is capable of handling are fuel barges. Residents rely on Dillingham and Anchorage for businesses and services not available in the community.

*Medical Services*²³⁰

Clark’s Point Clinic provides basic health services and is a Community Health Aid Program (CHAP) site. Emergency services are provided by Clark’s Point First Responders.

²²⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²⁷ Airfare was calculated using lowest fare. Retrieved November 22, 2011, from <http://www.travelocity.com>.

²²⁸ Grant Air. (n.d.). Retrieved January 14, 2013 from: <http://www.flygrant.com/>.

²²⁹ See footnote 226.

²³⁰ Ibid.

Dillingham provides acute, specialized, and long-term health care services. The city also hosts a regional Emergency Medical Service (EMS) center.

Educational Opportunities

Due to declining student enrollment, the Clark’s Point School closed in 2013.^{231,232} Until that year, Clark’s Point School offered Kindergarten through 12th grade instruction. As of 2011, there were 13 students enrolled and one teacher employed.²³³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Bristol Bay region is historically defined by traditional subsistence harvesting practiced by Yup’ik, Aleuts, and Athabascans of the region for millennia. Subsistence activities historically and continue to define livelihood, exchange, social networks, and social organization in the region. Subsistence supplements wage employment, and is considered culturally necessary for much of the population. In 1819, Russian fur traders established a trading post at Nushagak Point. Salmon were mostly harvested for local consumption although small amounts of salted salmon were exported. In 1864, canning techniques were being developed in California and by 1878; Alaska’s first salmon cannery was built in Klawock.²³⁴

In 1883, the exploratory vessel *Neptune* anchored in Nushagak Bay to assess potential commercial salmon prospects. Plentiful runs prompted a cannery to be built at the village of Kanulik. By the late 1880s, canneries were built at Scandinavian Creek, Kanakanak, and Clark’s Point. Gillnetters flocked to the region and by 1890, canneries were producing more product than there were buyers. This posed a problem for packers, who reacted by forming the Alaska Packers Association in order to control production. By 1895, landings in Bristol Bay reached 5 million sockeye and new canneries were built on the Ugashik, Egegik, Naknek, and Kvichak Rivers.²³⁵

The Spanish American War and Klondike Gold Rush bolstered the demand for canned salmon in the late nineteenth and early twentieth century’s. By 1901, there were 18 canneries throughout Bristol Bay, and landings reached 10 million sockeye. Mechanization and industry expansion increased production substantially, causing it to peak in 1912 at 20 million salmon landed by over 1,000 gillnetters. For the next 7 years, production would range between 20 and 25 million. Fueled by demand for canned salmon during World War I, canneries operated 24 hours a day, 7 days a week, and recorded record profits. This caused a major crash in sockeye runs throughout Bristol Bay in 1919.²³⁶

²³¹ DeMarban, A. June 5, 2012. “Dwindling students mean four more rural Alaska schools will close.” *Alaska Dispatch*. Retrieved October 23, 2013 from <http://www.alaskadispatch.com/article/dwindling-students-mean-four-more-rural-alaska-schools-will-close>.

²³² Alaska Department of Education and Early Development (2013). *1999-2013 School Closures*. Retrieved October 23, 2013 from <http://w3.legis.state.ak.us/index.php>.

²³³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²³⁴ The Bristol Bay Economic Development Corporation. (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved March 14, 2012 from: <http://www.bbsalmon.com/FinalReport.pdf>.

²³⁵ Ibid.

²³⁶ Ibid.

Following the salmon crash, the White Act of 1924 assigned the federal government with managing the Alaska salmon fishery and mandated a 50% escapement rate. This prompted fishery closures and gear restrictions including the abolishment of powerboats, purse seines, and fish traps. However, new regulations being put in place were rarely enforced during the early years following the passage of the White Act. Commercial salmon fishing prospered in the 1920s and early 1930s and accounted for 80% of tax revenues collected by the territorial government. However, variable runs, foreign encroachment, and the Great Depression stressed the industry and in 1935, only 3 million salmon were caught almost prompting a total shut-down of the Bristol Bay salmon fishery.²³⁷

World War II brought significant changes to the Bristol Bay commercial fishing industry. Worker shortages prompted canneries to hire local labor and local fishermen and communities began to organize. In Dillingham, fishermen and cannery workers formed co-ops in 1944 to counter what was seen as an overly influential industry. Following World War II, salmon runs were once again in decline, although the Pacific Decadal Oscillation coupled with lower ocean productivity was to blame this time. However, further threats faced the industry from overfishing in the Bering Sea. By 1955, deep-sea catches by Japanese vessels reached 50 million salmon. Inshore catches on the other hand, averaged at 6.7 million sockeye annually during the 1950s. At this point, many seafood producers switched to more lucrative tuna, which became the iconic fish of the baby boom years.²³⁸

Following statehood in 1959, salmon management responsibility shifted to state managers. In Bristol Bay, this meant more aggressive forms of in-season management and escapement monitoring. Seasons were regulated according to in-season run strength indicators instead of pre-season forecasts. Despite rigorous management, salmon recovery was slow. Bristol Bay salmon fell to historic lows in 1973 when fewer than one million sockeye salmon were harvested. The state’s response was both a scathing indictment of Japanese fishing effort and limits to fishery entry. Following an amendment to Alaska’s constitution in 1972, the state issued transferable limited entry permits based on experience and economic dependence to the fishery. In 1976, the United States asserted jurisdiction over much of the outer continental shelf surrounding its coastlines. The 200-mile Exclusive Economic Zone, along with revised Bering Sea fishing borders and favorable environmental conditions, set the stage for salmon recovery.²³⁹

Salmon returned to the Bristol Bay region in 1978, when after a weak sockeye season, a surge in pink salmon into the Nushagak River overwhelmed processing capacity for the region. Sockeye returned in force the following year, and strong demands elevated prices over \$1.00 per pound. In 1980, over 64 million sockeye returned to Bristol Bay and subsequent seasons remained strong. By 1988, sockeye prices rose to \$2.40 per pound. Average gross earnings by drift boat exceeded \$100,000 and the value of Bristol Bay drift permits surged to almost \$250,000. As permit value rose, entry into the fishery became increasingly contested and litigated, resulting in additional permits being issued. However, during this time Chile began exporting farmed salmon to Japan. While insignificant at first, salmon farming would soon subvert the Alaska salmon industry and cause a significant drop in prices. A year after salmon prices peaked, they dropped to \$1.09 per pound. By 1991, seafood processors were offering \$0.50 per pound which resulted in fishermen striking. Once again, the Japanese were the focus of ire, with many fishermen making accusations of price-fixing from Japanese-owned seafood

²³⁷ Ibid.

²³⁸ Ibid.

²³⁹ Ibid.

processors. During that time, Bristol Bay still maintained record salmon harvests, with 45 million fish taken in 1995. Because of large harvests, revenues remained high despite low prices.²⁴⁰

In previous lean years, production shortages would drive prices up. However, the arrival of farmed fish in the market changed this. By 1997, the overall value of Bristol Bay salmon was cut in half from the previous year to \$63 million. Runs in years following were characterized by modest rebounds followed by more declines. In that time, Bristol Bay was declared both a state and federal disaster area and many permit holders opted to not participate in the 2001 season. In 2002, additional fishermen as well as several canneries and cold storage facilities opted out as well. In that year, the Bristol Bay drift permit once valued at \$250,000 was valued at less than \$20,000. In addition, total ex-vessel value of the fishery was down 90% from its peak in 1992.²⁴¹

The history of fisheries participation in Clark’s Point is tied to the cannery that was opened by the Alaska Packer’s Association in the late nineteenth century.²⁴² Since then, it has continued to develop as a commercial and subsistence fishing community. Clark’s Point is part of a regional network of fishing communities, which include Ekuik and the regional hub of Dillingham. In a survey conducted by the AFSC in 2011, community leaders reported that salmon seasons typically run from June to August, and herring and halibut from April to May. The community participates in the fisheries management process in Alaska through a representative that sits on regional fisheries advisory and/or working groups run by ADF&G. In addition, Clark’s Point is eligible for participation in the Community Development Quota (CDQ) program and is represented by the Bristol Bay Economic Development Corporation (BBEDC). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.²⁴³ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. The community is located in Federal Reporting Area 514, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Clark’s Point does not have an active processing plant. Trident Seafoods still maintains a shoreside plant although no landings were recorded between 2000 and 2010 and it has remained unregistered since 2002.²⁴⁴ In addition, Icicle Seafoods Inc. anchors a processor barge at Clark’s Point from mid-June through July for the salmon and herring seasons. Processor crew ranges from 80 to 115.²⁴⁵

²⁴⁰ Ibid.

²⁴¹ Ibid.

²⁴² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁴³ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

²⁴⁴ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁴⁵ Icicle Seafoods Inc. (n.d.). *Icicle Seafoods' Western Alaska operations*. Retrieved February 10, 2012 from: <http://www.icicleseafoods.com/locations/vsl/about.aspx>.

Fisheries-Related Revenue

Between 2000 and 2010, Clark’s Point received fisheries-related revenue mostly from Shared Fisheries Business taxes. In 2010, the community received \$105,950 in total fisheries related tax revenue, representing a substantial increase from 2000 when \$2,208 was collected. Fisheries-related revenue peaked in 2009 when \$443,117 was collected.

In a survey conducted by the AFSC in 2011, community leaders reported that the community received \$150,000 from its regional CDQ entity (BBEDC) in 2010. However, the community itself does not have any fisheries-related fees programs which support public services and infrastructure. Information regarding fisheries-related revenue trends can be found in Table 3.²⁴⁶

Commercial Fishing

In 2010, most residents who held permits issued by the Commercial Fisheries Entry Commission (CFEC) held Bristol Bay set and drift gillnet salmon permits, followed by statewide longline halibut permits, and Bristol Bay gillnet herring roe permits.²⁴⁷ A total of 17 CFEC permits were held by 16 residents in 2010, compared to 34 CFEC permits held by 18 residents in 2000. In total, 25.8% of residents living in Clark’s Point held CFEC permits in 2010. Of the CFEC permits held that year, 88% were for salmon, compared to 50% in 2000; 6% were for herring, compared to 32% in 2000; and 6% were for halibut, compared to 18% in 2000. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. No residents held halibut, crab, or sablefish quota between 2010 and when the programs began.

A total of 13 residents held commercial crew licenses in 2010, compared to 30 in 2000. In addition, residents held majority ownership of 11 commercial vessels in that year, compared to 12 in 2000. Of the CFEC permits held in 2010, 71% were actively fished, compared to 68% in 2000. This varied by fishery from 80% of salmon permits, to 0% of herring and halibut permits.

Between 2000 and 2010, no landings were reported in Clark’s Point, although landings were reported by residents. In 2010, residents landed 297,203 lbs of salmon valued at \$260,659 ex-vessel, compared to 528,907 lbs valued at \$323,297 ex-vessel in 2000, representing an increase of \$0.04 per pound after adjusting for inflation²⁴⁸ and without the species composition of landings. Salmon landings by residents peaked in 2000. Herring was actively fished by residents from 2000 through 2004, and in 2006. In 2000, residents landed 60,874 lbs of herring valued at \$6,482 ex-vessel. Other years when herring landings were made are considered confidential. No halibut landings were reported by residents between 2000 and 2010. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁴⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

²⁴⁷ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁴⁸ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Clark’s Point: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$3,700	\$4,400	n/a	n/a
Shared Fisheries Business Tax ¹	\$2,208	\$64,838	\$136,927	\$43,264	\$2,470	\$2,900	\$3,575	\$33,539	\$139,023	\$118,364	\$105,613
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	\$72	n/a	\$19	\$49	\$191	\$2,589	\$327
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$2,208</i>	<i>\$64,838</i>	<i>\$136,927</i>	<i>\$43,264</i>	<i>\$2,542</i>	<i>\$2,900</i>	<i>\$3,594</i>	<i>\$37,288</i>	<i>\$143,613</i>	<i>\$120,953</i>	<i>\$105,940</i>
<i>Total municipal revenue⁵</i>	<i>\$160,621</i>	<i>\$218,815</i>	<i>\$294,491</i>	<i>\$140,766</i>	<i>\$270,258</i>	<i>\$213,776</i>	<i>\$271,209</i>	<i>\$145,174</i>	<i>\$228,756</i>	<i>\$283,344</i>	<i>\$405,855</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Clark’s Point: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	6	4	3	2	0	0	0	0	0	0	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	0%
	Total permit holders	6	4	3	2	0	0	0	0	0	0	1
Herring (CFEC) ²	Total permits	11	10	6	2	1	0	1	0	0	0	1
	Fished permits	7	4	2	1	1	0	1	0	0	0	0
	% of permits fished	64%	40%	33%	50%	100%	n/a	100%	n/a	n/a	n/a	0%
	Total permit holders	6	5	3	1	1	0	1	0	0	0	1

Table 4 cont’d. Permits and Permit Holders by Species, Clark’s Point: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	17	16	18	14	16	15	12	13	13	13	15
	Fished permits	16	14	10	9	12	13	10	11	12	10	12
	% of permits fished	94%	88%	56%	64%	75%	87%	83%	85%	92%	77%	80%
	Total permit holders	17	16	18	15	18	17	13	12	12	13	15
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>34</i>	<i>30</i>	<i>27</i>	<i>18</i>	<i>17</i>	<i>15</i>	<i>13</i>	<i>13</i>	<i>13</i>	<i>13</i>	<i>17</i>
	<i>Fished permits</i>	<i>23</i>	<i>18</i>	<i>12</i>	<i>10</i>	<i>13</i>	<i>13</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>10</i>	<i>12</i>
	<i>% of permits fished</i>	<i>68%</i>	<i>60%</i>	<i>44%</i>	<i>56%</i>	<i>76%</i>	<i>87%</i>	<i>85%</i>	<i>85%</i>	<i>92%</i>	<i>77%</i>	<i>71%</i>
	<i>Permit holders</i>	<i>18</i>	<i>17</i>	<i>18</i>	<i>15</i>	<i>18</i>	<i>17</i>	<i>13</i>	<i>12</i>	<i>12</i>	<i>13</i>	<i>16</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Clark’s Point: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Clark’s Point ²	Total Net Lbs Landed In Clark’s Point ^{2,5}	Total Ex-Vessel Value Of Landings In Clark’s Point ^{2,5}
2000	30	0	1	12	43	0	0	\$0
2001	31	0	1	12	39	0	0	\$0
2002	22	0	1	7	31	0	0	\$0
2003	18	0	0	9	28	0	0	\$0
2004	14	0	0	8	31	0	0	\$0
2005	19	0	0	9	32	0	0	\$0
2006	14	0	0	8	30	0	0	\$0
2007	18	0	0	9	28	0	0	\$0
2008	16	0	0	12	29	0	0	\$0
2009	17	0	0	10	26	0	0	\$0
2010	13	0	0	11	28	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Clark’s Point: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation in Clark’s Point: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation in Clark’s Point: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Clark’s Point: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Clark’s Point Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	60,874	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	528,907	394,037	140,517	351,460	484,031	462,498	452,007	263,295	369,879	283,776	297,203
<i>Total²</i>	<i>589,781</i>	<i>394,037</i>	<i>140,517</i>	<i>351,460</i>	<i>484,031</i>	<i>462,498</i>	<i>452,007</i>	<i>263,295</i>	<i>369,879</i>	<i>283,776</i>	<i>297,203</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$6,482	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$323,297	\$151,106	\$64,322	\$160,199	\$220,397	\$259,687	\$274,973	\$159,202	\$251,540	\$210,243	\$260,659
<i>Total²</i>	<i>\$329,778</i>	<i>\$151,106</i>	<i>\$64,322</i>	<i>\$160,199</i>	<i>\$220,397</i>	<i>\$259,687</i>	<i>\$274,973</i>	<i>\$159,202</i>	<i>\$251,540</i>	<i>\$210,243</i>	<i>\$260,659</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Participation in recreational fisheries is limited in Clark’s Point due to its remote location, lack of sport fish guide businesses, and the fact that most residents participate in subsistence harvesting rather than sportfishing. In 2010, 11 residents held sportfishing licenses, compared to 17 in 2000. However, no sportfishing licenses were sold within the community between 2000 and 2010. According to a survey conducted by the AFSC in 2011, community leaders reported that recreational fishing that is done within the community is done by private, locally owned vessels. Recreational fishermen target all five species of Pacific salmon and halibut.

Clark’s Point is located within the Nushagak, Wood River and Togiak ADF&G Harvest Survey Area, which includes the Nushagak River, Mulchatna River, Wood River, and Tilchik Lake drainages, as well as water westward to Cape Newenham.²⁴⁹ Overall, there was a steady decline in angler days fished in the survey area between 2000 and 2010. In 2010, freshwater angler days fished totaled 23,385, compared to 43,083 in 2000. In that year, non-Alaska residents accounted for 89% of angler days fished, compared to 73% in 2000. There is no kept/released charter information available for Clark’s Point. Information regarding recreational fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Clark’s Point: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Clark’s Point²
2000	0	0	17	0
2001	0	0	13	0
2002	0	0	7	0
2003	0	0	13	0
2004	0	0	6	0
2005	0	0	7	0
2006	0	0	4	0
2007	0	0	9	0
2008	0	0	15	0
2009	0	0	6	0
2010	0	0	11	0

²⁴⁹ Alaska Department of Fish and Game. (n.d.). *Alaska Sport Fishing Survey*. Retrieved February 13, 2012 from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/index.cfm?ADFG=area.home>.

Table 11 cont’d. Sport Fishing Trends, Clark’s Point: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	n/a	44	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Historically, Nushagak Bay was a region of intense subsistence activity. At least 18 historic village sites have been documented along its shores; and the villages of Ekuik, Kakanak, Nushagak, and Kanulik held the bulk of the region’s population by the time of European contact. Traps, spearing, and dip netting were common methods used in catching salmon at the mouth of the Nushagak River and when commercial fishing began in Nushagak Bay in the 1870s, many indigenous commercial fishermen would save a portion of their harvest for subsistence purposes.²⁵⁰

According to a survey conducted by the AFSC in 2011, community leaders reported important subsistence resources which include fish, marine mammals, moose, caribou, berries, and herbs.

Subsistence activities change according to season. In the spring, residents hunt seal, ducks, and geese, fish for herring, collect herring roe on kelp, and gather bird eggs. In the summer, residents collect salmon berries, and fish for salmon and pike. In the fall, residents fish

²⁵⁰ Seitz, J. (1990). *Subsistence Salmon Fishing in Nushagak Bay, Southwest Alaska*. Alaska Dep. of Fish and Game. Technical Paper No. 195. Retrieved January 14, 2013 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp195.pdf>.

for salmon, white fish, halibut, and pike, hunt moose, and collect blueberries, cranberries, and blackberries. In the winter, residents hunt moose, caribou, and ptarmigan and fish for smelt and tomcod. Beluga whales are harvested throughout the year.²⁵¹ According to the ADF&G *Community Subsistence Information System*,²⁵² residents of Clark’s Point have harvested and/or used butter clams, razor clams, shrimp, bearded seal, harbor seal, ringed seal, Steller sea lion, blackfish, burbot, cisco, Dolly Varden, flounder, Arctic grayling, herring (roe and food), lake trout, Pacific cod, tom cod, northern pike, rainbow smelt, rainbow trout, sucker, and whitefish.

Data on subsistence activity is limited, and estimates of subsistence participation by household are not available. In addition, it should be noted that ADF&G subsistence data for Clark’s Point is combined with the subsistence camp of Ekuk. Of the species reported by ADF&G in Table 13, sockeye salmon were harvest most often, followed by coho, Chinook, pink, and chum salmon. In 2008, residents reported harvesting 2,016 salmon total, compared to 1,147 in 2000. Reported salmon harvests peaked in 2008. In 2010, 1 resident held a Subsistence Halibut Registration Permit (SHARC), compared to 2 in 2003. No residents reported halibut harvests between 2010 and when NMFS began issuing the SHARC. Marine mammals were an important subsistence resource between 2000 and 2008. Between 2000 and 2010, an estimated 11 beluga whales were harvested although there is no information for 2003 through 2010. Finally, an estimated 219 spotted seals and three harbor seals were harvested between 2000 and 2008. Spotted seal harvests peaked in 2008 at an estimated 81 seals. Information regarding subsistence trends can be found in Table 12 through 15.

Additional Information

According to a survey conducted by the AFSC in 2011, community leaders reported that current challenges facing the fishery based economy in Clark’s Point include a lack of infrastructure, including the absence of cold storage facilities or a dock. In addition, there has been a great amount of erosion to the beach and bluffs located near the river system which is affecting shore based fishing and threatening general infrastructure. The number of commercial permits in the community has been in decline, making it more difficult to support infrastructure. There is a need for small fishery support businesses in the community, including small vessel repair, vessel storage, maintenance and net building services, and a parts shop. Finally, there is concern in the community regarding the loss of drift permits within the community. There is a desire to see programs which assist in making permits more affordable to local residents, and incentivize young residents to remain within the community.

²⁵¹ East, P.; Egbert, J.T.; Hurley, D.; Wassily, B.; Wassily, H.; Wassily, J.; Wassily, K.; Wassily, M.; and Wassily, S. (2003). *Clark’s Point, Alaska*. Retrieved February 13, 2012 from: https://segue.middlebury.edu/repository/viewfile/polyphony-repository___repository_id/edu.middlebury.segue.sites_repository/polyphony-repository___asset_id/6782661/polyphony-repository___record_id/6782662/polyphony-repository___file_name/clarkspoint.pdf.

²⁵² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Clark’s Point: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Clark’s Point: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	16	13	336	33	142	97	539	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	14	14	193	52	365	186	283	n/a	n/a
2005	10	9	264	94	277	46	436	n/a	n/a
2006	13	13	231	31	51	58	313	n/a	n/a
2007	10	10	120	74	79	10	264	n/a	n/a
2008	13	12	172	99	535	421	789	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Clark’s Point: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	2	n/a	n/a
2004	4	n/a	n/a
2005	4	n/a	n/a
2006	4	n/a	n/a
2007	4	n/a	n/a
2008	3	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Clark’s Point: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	3	n/a	n/a	n/a	n/a	n/a	2
2001	4	n/a	n/a	n/a	n/a	3	6
2002	4	n/a	n/a	n/a	n/a	n/a	14
2003	n/a	n/a	n/a	n/a	n/a	n/a	15
2004	n/a	n/a	n/a	n/a	n/a	n/a	22
2005	n/a	n/a	n/a	n/a	n/a	n/a	24
2006	n/a	n/a	n/a	n/a	n/a	n/a	27
2007	n/a	n/a	n/a	n/a	n/a	n/a	28
2008	n/a	n/a	n/a	n/a	n/a	n/a	81
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Dillingham (DILL-eeng-ham)

People and Place

*Location*²⁵³

Dillingham is located at the extreme northern end of Nushagak Bay in northern Bristol Bay, at the confluence of the Wood and Nushagak Rivers. It lies 327 mi southwest of Anchorage and is a 6 hour flight from Seattle. The area encompasses 33.6 sq mi of land and 2.1 sq mi of water. Dillingham was incorporated as a First-class city in 1963, is located in the Dillingham Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*²⁵⁴

In 2010, there were 2,329 residents, ranking Dillingham 40th of 352 communities in terms of population size. Between 1990 and 2010, the population grew by 15.5%. Between 2000 and 2009, the population fell by 8.2% with an average annual growth rate of -0.53, which was less than the statewide average of 0.75% and indicative of a slowly shrinking population during that time. However, 2010 Census data indicate that the population has recovered somewhat since 2009 Alaska Department of Labor and Workforce Development (DOLWD) estimates. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there was an estimated 2,500 seasonal or transient workers living in Dillingham in 2010, in addition to year round residents. On average, there are seasonal workers living in Dillingham from May through September. The population typically peaks in June and July, and is mostly driven by employment in the fishing sectors. Information regarding population trends can be found in Table 1.

Dillingham's racial composition is predominately Yup'ik Eskimo and White. In 2010, 55.9% of residents identified themselves as American Indian or Alaska Native, compared to 52.6% in 2000. Also in that year, 30.7% of residents identified themselves as White, compared to 35.6% in 2000; 1.3% identified themselves as Asian, compared to 1.2% in 2000; and 11.2% identified themselves as two or more races, compared to 9.4% in 2000. Residents identifying themselves as Black or African American, Native Hawaiian or Other Pacific Islander, or some other race each made up less than one percent of the population. Hispanics and Latinos made up 2.9% of the population in 2010, compared to 3.5% in 2000. Information regarding race and ethnicity can be found in Figure 1.

²⁵³ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

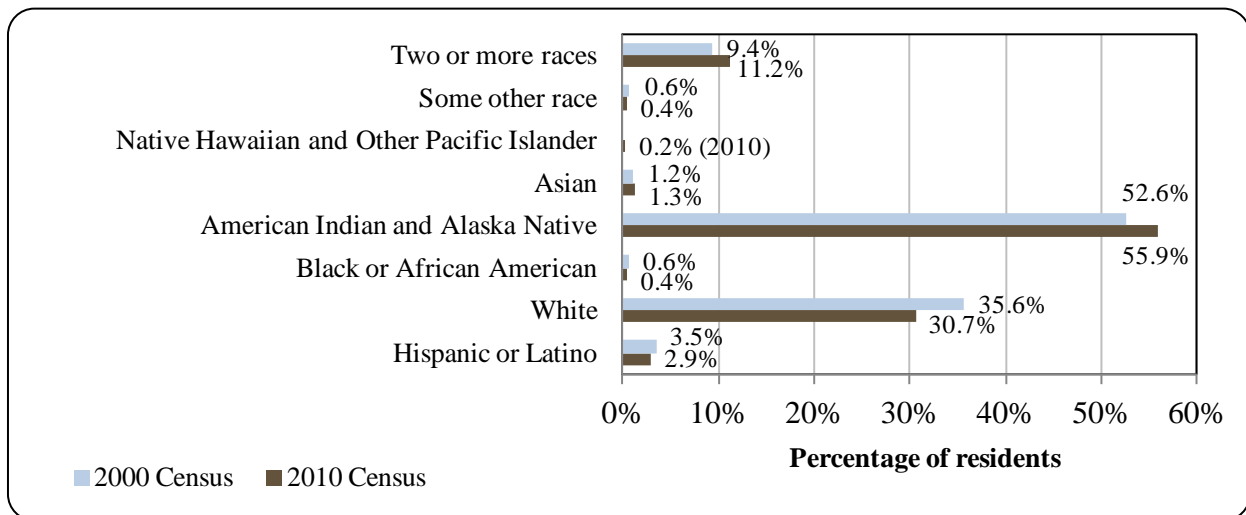
Table 1. Population in Dillingham from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	2,017	-
2000	2,466	-
2001	-	2,461
2002	-	2,468
2003	-	2,385
2004	-	2,407
2005	-	2,371
2006	-	2,405
2007	-	2,404
2008	-	2,335
2009	-	2,264
2010	2,329	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Dillingham: 2000-2010 (U.S. Census).



In 2010, the average household size in Dillingham was 2.66, a decline from 2.90 in 1990 and 2.75 in 2000. In that year, there were a total of 1,047 housing units, compared to 851 in 1990 and 1,000 in 2000. Of those households surveyed in 2010, 42% were owner-occupied, compared to 43% in 2000; 40% were renter-occupied, compared to 45% in 2000; 13% were vacant,

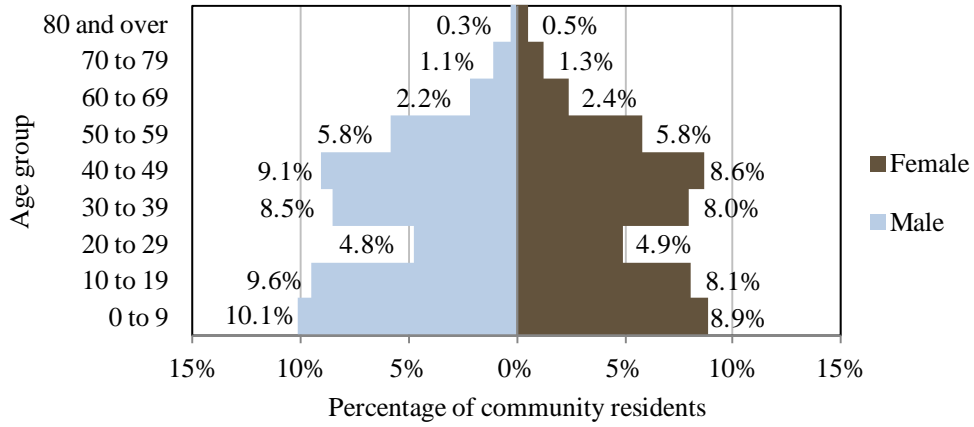
compared to 8% in 2000; and 6% were occupied seasonally, compared to 4% in 2000. There were 52 residents living in group quarters that year, compared to 33 in 2000.

The gender distribution in 2010 was relatively even at 51.6% male and 48.4% female. This was similar to the gender distribution statewide (52% male, 48% female) and identical to the distribution in 2000. The median age that year was 32.8, which was similar to the statewide median of 33.8 and identical to the median age in 2000.

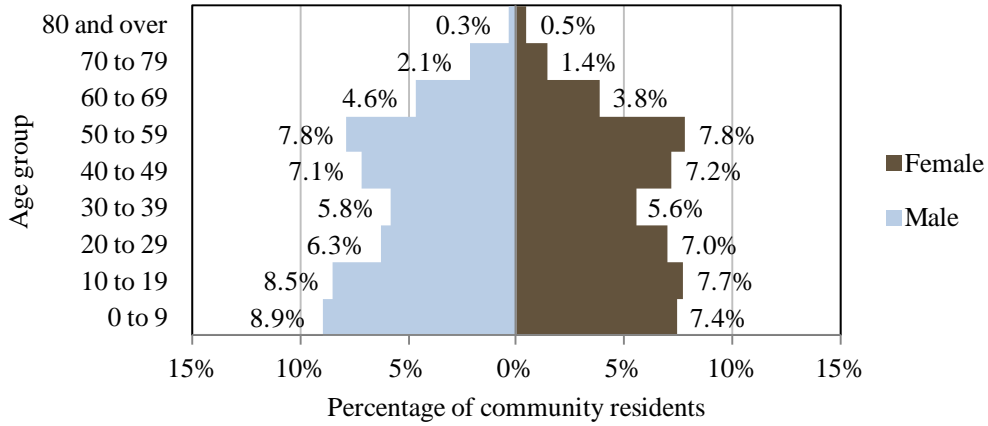
Compared with 2000, the population structure in 2010 was slightly more stationary. In addition, age transitions were consistent with a stable population, meaning that the population aged while still mostly retaining its structural character. In 2010, 32.5% of residents were under the age of 20, compared to 36.7% in 2000. Also in that year, 12.7% of residents were over the age of 59, compared to 7.8% in 2000; and 41.3% were between the ages of 30 and 59, compared to 45.8% in 2000. The proportion of residents between the ages of 20 and 29 grew from 9.7% in 2000 to 13.3% in 2010, perhaps indicating greater youth retention in the community.

Figure 2. Population Age Structure in Dillingham Based on the 2000 and 2010 U.S. Decennial Census.

2000 Population Structure



2010 Population Structure



Gender distribution by age cohort was relatively even in both 2000 and 2010. In 2010, the greatest absolute gender difference occurred in the 0 to 9 range (8.9% male, 7.4% female), followed by the 10 to 19 range (8.5% male, 7.7% female) and 70 to 79 range (2.1% male, 1.4% female). Of those three, the greatest difference relative to cohort size occurred in the 70 to 79 range. In 2000, the greatest absolute gender difference occurred in the 10 to 19 range (9.6% male, 8.1% female), followed by the 0 to 9 range (10.1% male, 8.9% female) and 30 to 39 range (8.5% male, 8% female). Of those three, the greatest difference relative to cohort size occurred in the 10 to 19 range. Information regarding population structure trends can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²⁵⁵ estimated that 94.3% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 3.5% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 2.3% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 29.8% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 5% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 18.4% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 15% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Previous to Russian and European contact, the Nushagak River region was occupied by the Nushagamiut culture of Yup'ik Eskimos. The area's proximity to highly productive salmon grounds and location between the Alaska Peninsula and Yukon-Kuskokwim Delta lent to considerable cultural mixing, trade, and in some instances, conflict. Cultural groups in the greater area included the Aglemiut group, who occupied the mouth of the Nushagak river and Bristol Bay coast; and Athabascans, who occupied the Mulchatna river to the north of Dillingham.

Bristol Bay was visited by Captain James Cook in 1778 while searching for a northwest passage. The bay was named after the Admiral Earl of Bristol. Although this was the first well recorded visit to Bristol Bay by Europeans, Cook gave evidence of a prior Russian presence in the area.

In 1818, Alexander Baranov, first governor of the Russian American colonies, sent an expedition to establish a permanent station on the Nushagak River. A fort was completed that year and was named Alexandrovsk, possibly after Alexander Baranov. A census conducted shortly after showed three Russian men and two Russian women at the post. Under Kolmaof, the Russians were reported to have made peace with the various cultural groups in the area by 1822, including the Aglemiut, who were said to be "warrior people". At that time, fur trade could be conducted without difficulty. A Russian Orthodox mission was established at Nushagak as early as 1837.

²⁵⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

The Bristol Bay population grew as the fur trade proliferated. The first official Census in Alaska in 1880 reported populations of 178 at Nushagak, and 142 at nearby Kanulik. In 1884, the Arctic Packing Company established the first salmon cannery in the Bristol Bay region at Nushagak. The next year, another cannery was constructed on the west bank of the Bay, close to the junction of the Wood and Nushagak Rivers. In 1886, yet another cannery was built at a site which would eventually become the city of Dillingham. In that year, a Moravian Church was established near Kanulik. Aside from missionary activities, the church operated as a hospital and school. In the 1890 census, the mission had a population of 189. A post office was established in Nushagak in 1899. In 1904, the Moravians ceased operations, in part because of the entrenched Russian Orthodoxy in the area.

By 1900, most of the population and economic activity shifted to the west side of Nushagak Bay and the Moravian Mission and village of Kanulik were largely deserted. In 1901, a new cannery was constructed at Wood River Village, north of present day Dillingham, while continued emigration occurred in Nushagak. Between 1908 and 1910, there were about 10 canneries in Nushagak Bay. During that time, there was a small hospital in the area operated at the village of Kanakanak. The post office of Dillingham was established on Snag Point in 1904. At that time, the town of Dillingham was located 3 mi southwest at what is now known as “Olsonville”.

The 1918-19 influenza epidemic hit the region hard and by 1920, the population of Nushagak Bay had been reduced to around 500. Most of the residents of Kanakanak died of influenza and an orphanage was constructed to care for children orphaned by the epidemic. The 1920 census recorded 36 people in Kanakanak, compared to 250 in 1918. Villages along the Wood River were virtually wiped out by influenza. People did not begin to move back into the area until the late 1920s.

The present location of Dillingham is the former location of a village known as Ahleknuguk (also known as Chogiung). Dillingham was named in 1904 for the U.S. Senator William Paul Dillingham. Around 1944, the post office was closed at Kanakanak and the name “Dillingham” was transferred to Snag Point where the post office had been assigned since 1904. By 1950, the population of Dillingham reached 577 and by 1962, a boat harbor and high school had been completed. A sewer system and disposal plant was completed in 1964. By 1970, the population grew to 914.²⁵⁶

Traditionally a Yup'ik Eskimo area with Russian influences, Dillingham is now a highly mixed population of both Alaska Native and non-Alaska Native residents. The outstanding commercial fishing opportunities in the Bristol Bay area are the focus of the local culture.²⁵⁷

Natural Resources and Environment

The primary climatic influence is marine; however, the arctic climate of the Interior also affects the Bristol Bay coast. Average summer temperatures range from 37 to 66 °F (3 to 19 °C). Average winter temperatures range from 4 to 30 °F (-16 to -1 °C). Annual precipitation averages 26 inches, and annual snowfall averages 65 inches. Heavy fog is common in July and August.

²⁵⁶ Tryck, Nyman & Hayes. (1985). *City of Dillingham Comprehensive Plan*. Retrieved March 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-1985.pdf>.

²⁵⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Winds of up to 60-70 mph may occur between December and March. The Nushagak River is ice-free from June through November.²⁵⁸

Located just outside the Togiak National Wildlife Refuge (TNWR), Dillingham rests in an area characterized by a mixture of wet lowlands, gentle hills, and moraine deposits. Steep sloped areas are rare aside from coastal peat bluffs that extend from the city to the end of Wood River Road. Soils around Dillingham are familiar to those found in previously glaciated areas. The city itself lies on rolling moraine hills covered by silty loess. Lowlands are dominated by wetlands and muskeg.²⁵⁹ Vegetation consists of a mix of moist tundra and spruce stands. Tundra consists of mosses, lichens, and grasses. Spruce forests consist of white spruce and paper birch, and typically cover moraine hills. Other tree species in the greater area include quaking aspen, black spruce, and cottonwood.²⁶⁰

Terrestrial wildlife around the TNWR includes moose, caribou, brown and black bears, wolves coyotes, red and arctic fox, wolverines, lynx, otters, mink and weasels, marten, marmot, beavers, muskrat, ground and red squirrels, hares, porcupine, shrews, voles, mice, and lemmings. Marine mammals include spotted seals, harbor seals, ribbons seals, ringed seals, bearded seals, Pacific walrus, Steller sea lions, fur seals, and a wide variety of whales. There are many species of fish within the TNWR which have both economic and subsistence importance. These include all five species of Pacific salmon, lake trout, arctic char, Dolly Varden char, arctic grayling, rainbow trout, northern pike, blackfish, burbot, cisco, whitefish, herring, smelt, sculpin, stickleback, and flounder.²⁶¹

Beyond fishing, there are few environmental resources being exploited in the Dillingham area. There are thought to be oil and gas deposits within the Bristol Bay lowlands, however it is uncertain whether they are economically viable. Mineral prospects in the immediate area are slim; however, there are mineral claims outside the lowland areas. These include gold, copper, lead, zinc, arsenic, and molybdenum deposits and Shotgun Hills; tin, tungsten, silver, copper, zinc, arsenic, and bismuth deposits at Sleitat (80 mi west); iron, titanium, platinum, and palladium deposits at Kemuk Mountain (40 mi northwest); and mercury and antimony deposits at Cinnabar Creek and Kagati Lake.²⁶²

Local natural hazards come primarily in the form of flooding and erosion. Most flooding in the area is a result of storm surges. These storm surges often cause seasonal flooding in lowlands west of Dillingham, as well as along most shorelines. Erosion is most prevalent along the Nushagak Bay coastline and around the entrance to the Dillingham boat harbor. Steep bluffs are undercut by waves during high tide and southerly currents erode low-lying silt shorelines which complicates shoreline development.²⁶³

The Alaska Department of Environmental Conservation (DEC) reports that no significant environmental remediation projects were being undertaken as of 2010. However, they reported

²⁵⁸ Ibid.

²⁵⁹ City of Dillingham. (2006). *City of Dillingham Comprehensive Plan*. Retrieved March 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-2006.pdf>.

²⁶⁰ Palcsak, B.B. and Dorava, J. M. (1994). *Overview of Environmental and Hydrogeologic Conditions at Dillingham, Alaska*. Retrieved February 9, 2012 from: <http://www.dggs.alaska.gov/webpubs/usgs/of/text/of94-0482.PDF>.

²⁶¹ U.S. Fish and Wildlife Service. (n.d.). Retrieved March 13, 2012 from: <http://togiak.fws.gov>.

²⁶² See footnote 259.

²⁶³ Ibid.

several smaller cleanup projects in Dillingham, most of which involved limited petroleum contamination of soils and groundwater.²⁶⁴

Current Economy²⁶⁵

In a survey conducted by the AFSC in 2011, community leaders reported that Dillingham's economy is reliant on commercial fishing. Most of the city's economy is centered on its involvement in Bristol Bay fisheries and its place as an economic, transportation, and public service center for the region. Commercial fishing, fish processing, cold storage, and fishing support services are all mainstays for residents. Dillingham's role as a regional center helps stabilize the economy, and provides year-round employment. Many residents also supplement wage earnings with subsistence activities. Trapping beaver, otter, mink, lynx, and fox provide cash income. Salmon, grayling, pike, moose, bear, caribou, and berries are also harvested for food.²⁶⁶ Top employers²⁶⁷ in 2010 included Bristol Bay Area Health Corp. (BBAHC); Bristol Bay Native Association; Dillingham City School Dist.; Bristol Bay Housing Authority; State of Alaska; City of Dillingham; Nushagak Electric & Tele Coop Inc.; University of Alaska; Omni Enterprises Inc.; and S.A.F.E Inc.

In 2010,²⁶⁸ the per capita income in Dillingham was estimated at \$34,156 and the median household income was estimated at \$74,828, compared to \$21,537 and \$51,458 in 2000, respectively. After accounting for inflation by converting 2000 values to 2010 dollars,²⁶⁹ the real per capita income (\$28,321) and real median household income (\$67,667) indicate a rise in both individual and household earnings. In that year, Dillingham ranked 36th of 305 communities from which per capita income was estimated, and 35th of 299 communities from which median household income was estimated.

Dillingham's small population size may have prevented the American Community Survey from accurately portraying economic conditions.²⁷⁰ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the DOLWD. According to the ALARI database, residents earned \$43.97 million in total wages in 2010.²⁷¹ When matched with the population in 2010, the per capita income equals \$18,879, which was significantly lower than the 2010 ACS

²⁶⁴ Alaska Department of Environmental Conservation. (n.d.). *List of contaminated site summaries by region*. Retrieved March 13, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

²⁶⁵ Unless otherwise noted, all monetary data are reported in nominal values.

²⁶⁶ See footnote 259.

²⁶⁷ Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²⁶⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁶⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁷⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁷¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

estimates and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.²⁷²

According to 2006-10 ACS estimates,²⁷³ 83.7% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 5.8%, compared to an estimated 5.9% statewide; and 13.2% of residents were estimated to be living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed, an estimated 58% worked in the private sector, an estimated 37% worked in the public sector, and an estimated 5% were self-employed. By industry, Dillingham's economy was relatively diverse in 2010. In that year, most residents were estimated to be working in education services, health care, and social assistance sectors (40.1%), followed by public administration sectors (11.7%) and transportation, warehousing, and utilities sectors (8.4%). An estimated 3.9% of employed residents worked in agriculture, forestry, fishing, hunting, and mining sectors. However, the number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. By occupation type, most (49.5%) employed residents were estimated to hold management or professional positions in 2010, followed by sales or office positions (21.7%); natural resources, construction, or maintenance positions (12.9%); service positions (10.9%); and production, transportation, or material moving positions (5%). There was little significant change in employment by industry between 2000 and 2010. There was a small decline in the agriculture, forestry, fishing, hunting, and mining sectors in that time from 5.1% in 2000, to an estimated 3.9% in 2010. There were only modest changes in occupation types in that time, although there was significant growth in management or professional positions. Information regarding employment trends can be found in Figures 3 and 4. According to 2010 ALARI estimates compiled by DOLWD,²⁷⁴ most (23.4%) employed residents were estimated to work in education and health service sectors; followed by local government (17.4%) and trade, transportation, and utilities sectors (14.9%).

²⁷² See footnote 267.

²⁷³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁷⁴ See footnote 267.

Figure 3. Local Employment by Industry in 2000-2010, Dillingham (U.S. Census).

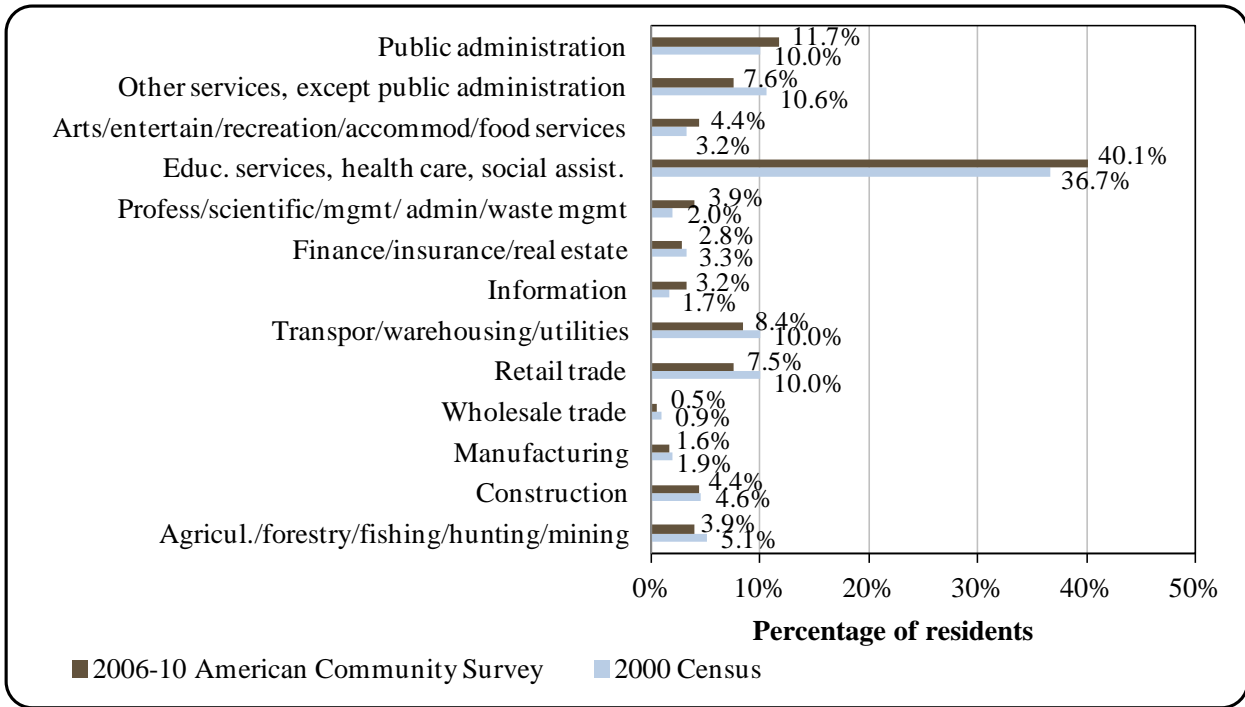
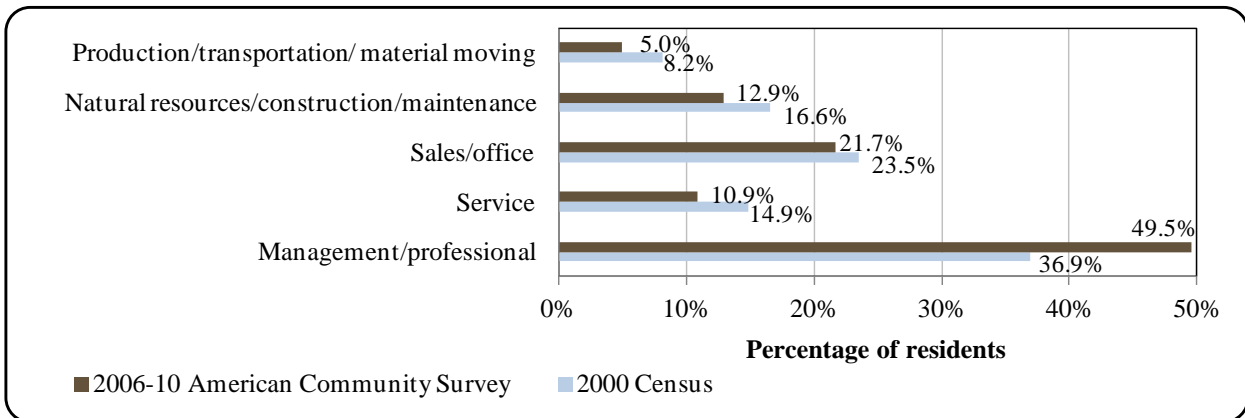


Figure 4. Local Employment by Occupation in 2000-2010, Dillingham (U.S. Census).



Governance

Dillingham is a First-class city with a mayoral form of government. There is a federally recognized Native village council (Curyung Tribal Council) and an ANCSA chartered Native village corporation (Choggiung Limited). Bristol Bay Native Corporation is the regional ANCSA for-profit corporation. Other organizations and Tribal councils in Dillingham include the Knagnuk Tribal Council, the Native Village of Ekuk, Olsonville Inc., Bristol Bay Area Health Corporation, Bristol Bay Housing Authority, Alaska Department of Transportation, U.S. Fish and Wildlife Service, Alaska Department of Fish and Game (ADF&G), and Bristol Bay Native Association. The closest National Marine Fisheries Service (NMFS) field office is located in

Bethel, 160 mi northwest. The closest U.S. Bureau of Citizenship and Immigration Services is located in Anchorage, 327 mi northeast.

In 2010, Dillingham administered a 6% sales tax, 13 mills property tax, and a 10% accommodations tax. In that year, most general fund revenues were collected from sales taxes, followed by property taxes, jail contract revenues, and payments in lieu of taxes. The 2010 municipal budget was \$10.1 million, compared to \$9.9 million in 2000 representing a 20.5% decrease after accounting for inflation (Table 2).²⁷⁵ Total sales tax revenue in 2010 was \$2.4 million, which accounted for 24% of total municipal revenues that year. This was a proportional increase from 2000 when \$1.6 million accounted for 16.6% of total revenues. Dillingham received \$209,543 in state allocated Community Revenue Sharing in 2010, which accounted for 2.6% of total revenues that year. This was also an increase from 2000 when \$54,468 in State Revenue Sharing accounted for less than one-percent of total revenues. Fisheries-related state and federal grants awarded to Dillingham between 2000 and 2010 include: \$4.1 million for dock projects; \$1.9 million for harbor projects, \$57,000 for a cold storage project, \$195,000 for a small boat harbor project, \$1 million for bulkhead extension, \$350,000 for small boat harbor ramps construction, \$5.2 million for construction of an all-tide dock, \$1.4 million for ice and fish quality maintenance and market expansion, and \$1 million for harbor dredging. In addition, the Bristol Bay Economic Development Corporation (BBEDC) contributed \$600,000 for portable ice machines. Further information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Dillingham from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$9,856,680	\$1,633,393	\$54,468	\$1,229,345
2001	\$8,735,387	\$1,717,094	\$46,724	\$1,452,550
2002	\$7,867,575	\$1,892,967	\$49,467	\$532,777
2003	\$7,555,483	\$1,838,724	\$48,306	\$3,514,992
2004	\$7,239,929	\$2,014,814	-	\$3,955,913
2005	\$7,361,692	\$2,110,190	-	\$439,212
2006	\$7,578,172	\$2,206,634	-	\$492,935
2007	\$8,092,899	\$2,295,601	-	\$547,226
2008	\$8,931,832	\$2,407,193	-	\$622,400
2009	\$9,994,760	\$2,132,402	\$215,730	\$1,892,075
2010	\$10,130,963	\$2,427,974	\$209,543	\$780,635

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

²⁷⁵ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

Connectivity and Transportation

Dillingham can be reached by air and sea. The state-owned airport provides a 6,400-ft long by 150-ft wide paved runway and regular jet flights are available from Anchorage. Airline services include Alaska Airlines, Grant Aviation, and Peninsula Airways. The price of round-trip airfare between Anchorage and Dillingham in June 2012 was \$452.²⁷⁶ A seaplane base owned by the U.S. Bureau of Land Management is available 3 mi west at Shannon's Pond. A heliport is available at Kakanak Hospital. There is a city-operated small boat harbor with 320 berths, a dock, barge landing, boat launch, and boat haul-out facilities, however it is a tidal harbor and only available for seasonal use. Two barge lines make scheduled trips from Seattle. There is a 23-mi Alaska Department of Transportation maintained gravel road to Aleknagik that was constructed in 1960.²⁷⁷

Airfreight accounts for almost a quarter of total freight moved through Dillingham. Airfreight is limited to smaller or time sensitive goods, and heavier freight is moved by sea. Air transportation is the principle means of moving people throughout the region, and improving winter services has been a consistent challenge. A lack of long-distance road systems within the Dillingham Census Area has kept communities isolated from the rest of the state. While approximately three quarters of freight in the area is moved by barge, limited facilities and large tidal ranges often produce challenges. Dillingham lacks deepwater port facilities and at times, barges are grounded during low tide while freight is offloaded.²⁷⁸ In a survey conducted by the AFSC in 2011, community leaders reported that while there was no public dock space available for permanent moorage, 600-700 ft was available for transient moorage. Vessels up to 85 ft in length can use moorage in Dillingham.

Facilities

Around 90% of homes are fully plumbed. Dillingham's water is derived from three deep wells. Water is treated, stored in tanks (capacity is 1.25 million gallons), and distributed. Approximately 40% of homes are served by the city's piped water system; 60% use individual wells. The core townsite is served by a piped sewage system; waste is treated in a sewage lagoon. However, the majority of residents (75%) have septic systems. Dillingham Refuse, Inc., a private firm, collects refuse three times a week. The senior center collects aluminum for recycling, and National Auto Parts Association (NAPA) recycles used batteries. The Chamber of Commerce coordinates recycling of several materials, including fishing web. Nushagak Electric owns and operates a diesel plant in Dillingham that also supplies power to Aleknagik. Visitor accommodations include the Bristol Inn, Beaver Creek Bed & Breakfast, Bristol Bay Lodge, Coho Bed & Breakfast, and Aleknagik Schoolhouse Inn. Public safety services are provided by City Department of Public Safety and a local state troopers post. Fire and rescue services are provided by Dillingham Volunteer Fire and Rescue Squad, and local medevac. Youth services

²⁷⁶ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

²⁷⁷ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁷⁸ City of Dillingham (2006). *City of Dillingham Comprehensive Plan*. Retrieved March 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-2006.pdf>.

include a local youth center and Boys and Girls Club. Senior services include a senior center and housing. There is one museum and three libraries located in town. Communications services include cable television and internet, radio, local television, and local and long distance telephone.²⁷⁹

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed or in progress as of 2010 included: construction of new dock space, dock improvements, dockside water utilities, dock access, harbor dredging, public water and sewer pipeline improvements, sewage treatment improvements, water treatment improvements, and improvements to education facilities. There are also plans for a fish cleaning station, dockside electrical facilities, a new breakwater, new haul-out facilities, broadband internet service, alternative energy projects, a new landfill/solid waste site, new community center/library, improvements to public safety, improvements to communications services, bikes for the harbor, road improvements, and additional pedestrian facilities. Fisheries-related businesses and services available in Dillingham include: seafood processing plants, fishing gear sales, boat repair (i.e., electrical, welding, mechanical services, machine shop, hydraulics), small vessel haul-out facilities, commercial and recreational fishing vessel moorage, marine refrigeration, fish lodges, fishing related bookkeeping, boat fuel sales, fishing gear repair, fishing gear storage, ice sales, seaplane services, and air taxi. Residents typically go to Seattle, Anchorage, or Naknek for services not available locally. Additional public services available in Dillingham include medical services, a food bank, job placement services, publically subsidized housing, assisted living, alcoholism treatment, an abuse shelter, and a senior center.

*Medical Services*²⁸⁰

Kanakanak Hospital is a qualified Acute Care Facility providing generalized, long term, and specialized care. Public Health Services provides generalized health care and additional health assistance. Jake's Place and BBAHC's "Our House" provide crisis counseling and respite services. Mental health services are available through BBAHC community mental health center. Regional Emergency Medical Services is available.

Educational Opportunities

Dillingham Elementary School offers preschool through 5th grade instruction. As of 2011, there were 226 students in attendance and 19 teachers employed. Dillingham Middle/High School offers 6th through 12th grade instruction. As of 2011 there were 253 students in attendance and 19 teachers employed.²⁸¹ The University of Alaska Fairbanks operates a satellite campus in Dillingham. The Bristol Bay campus offers a variety of certificate, Associate's, Bachelor's, and Master's degree programs mostly focusing on business and rural development.²⁸²

²⁷⁹ See footnote 277.

²⁸⁰ Ibid.

²⁸¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁸² University of Alaska Fairbanks (n.d.). *Bristol Bay Campus Homepage*. Retrieved March 14, 2012 from: <http://www.uaf.edu/bbc/>.

Involvement in North Pacific Fisheries

*History and Evolution of Fisheries*²⁸³

The Bristol Bay region is historically defined by traditional subsistence harvesting practiced by Yup'ik, Aleuts, and Athabascans of the region for millennia. Subsistence activities historically and continue to define livelihood, exchange, social networks, and social organization in the region. Subsistence supplements wage employment, and is considered culturally necessary for much of the population. In 1819, Russian fur traders established a trading post at Nushagak Point. Salmon was mostly harvested for local consumption although small amounts of salted salmon were exported. In 1864, canning techniques were being developed in California and by 1878 Alaska's first salmon cannery was built in Klawock.

In 1883, the exploratory vessel *Neptune* anchored in Nushagak Bay to assess potential commercial salmon prospects. Plentiful runs prompted a cannery to be built at the village of Kanulik. By the late 1880s, canneries were built at Scandinavian Creek, Kanakanak, and Clark's Point. Gillnetters flocked to the region and by 1890, canneries were producing more product than there were buyers. This posed a problem for packers, who reacted by forming the Alaska Packers Association in order to control production. By 1895, landings in Bristol Bay reached five million sockeye and new canneries were built on the Ugashik, Egegik, Naknek, and Kvichak Rivers.

The Spanish-American War and Klondike Gold Rush bolstered the demand for canned salmon in the late nineteenth and early twentieth centuries. By 1901, there were 18 canneries throughout Bristol Bay, and landings reached 10 million sockeye. Mechanization and industry expansion increased production substantially, causing it to peak in 1912 at 20 million salmon landed by over 1,000 gillnetters. For the next 7 years, production would range between 20 and 25 million. Fueled by demand for canned salmon during WWI, canneries operated 24 hours a day, seven days a week, and recorded record profits. This caused a major crash in sockeye runs throughout Bristol Bay in 1919.

Following the salmon crash, the White Act of 1924 assigned the federal government with managing the Alaska salmon fishery and mandated a 50% escapement rate. This prompted fishery closures and gear restrictions including the abolishment of powerboats, purse seines, and fish traps. However, new regulations being put in place were rarely enforced during the early years following the passage of the White Act.

Commercial salmon fishing prospered in the 1920s and early 1930s and accounted for 80% of tax revenues collected by the territorial government. However, variable runs, foreign encroachment, and the Great Depression stressed the industry and in 1935, only three million salmon were caught almost prompting a total shut-down of the Bristol Bay salmon fishery.

World War II brought significant changes to the Bristol Bay commercial fishing industry. Worker shortages prompted canneries to hire local labor and fishermen, and communities began to organize. In Dillingham, fishermen and cannery workers formed co-ops in 1944 to counter what was seen as an overly influential processing industry. Following World War II, salmon runs were once again in decline, although the Pacific Decadal Oscillation coupled with lower ocean productivity was to blame this time. However, further threats faced the industry from overfishing in the Bering Sea. By 1955, deep-sea catches by Japanese vessels reached 50 million salmon. Inshore catches on the other hand, averaged at 6.7 million sockeye annually during the 1950s. At

²⁸³ The Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved March 14, 2012 from: <http://www.bbsalmon.com/FinalReport.pdf>.

this point, many seafood producers switched to more lucrative tuna, which became the iconic fish of the baby boom years.

Following statehood in 1959, salmon management responsibility shifted to state managers. In Bristol Bay, this meant more aggressive forms of in-season management and escapement monitoring. Seasons were regulated according to in-season run strength indicators instead of pre-season forecasts. Despite rigorous management, salmon recovery was slow. Bristol Bay salmon fell to historic lows in 1973 when fewer than one million sockeye salmon were harvested. The state's response was both a scathing indictment of Japanese fishing effort and limits to fishery entry. Following an amendment to Alaska's constitution in 1972, the state issued transferable limited entry permits based on experience and economic dependence to the fishery. In 1976, the U.S. asserted jurisdiction over much of the outer continental shelf surrounding its coastlines. The 200-mi exclusive economic zone, along with revised Bering Sea fishing boarders and favorable environmental conditions, set the stage for salmon recovery.

Salmon returned to the Bristol Bay region in 1978, when after a weak sockeye season, a surge in pink salmon into the Nushagak River overwhelmed processing capacity. Sockeye returned in force the following year, and strong demands elevated prices over \$1.00 per pound. In 1980, over 64 million sockeye returned to Bristol Bay and subsequent seasons remained strong. By 1988, sockeye prices rose to \$2.40 per pound. Average gross earnings by drift boats exceeded \$100,000 and the value of Bristol Bay drift permits surged to almost \$250,000. As permit value rose, entry into the fishery became increasingly contested and litigated, resulting in additional permits being issued. However, during this time Chile began exporting farmed salmon to Japan. While insignificant at first, salmon farming would soon subvert the Alaska salmon industry and cause a significant drop in prices. A year after salmon prices peaked, they dropped to \$1.09 per pound. By 1991, seafood processors were offering \$0.50 per pound which resulted in fishermen striking. Once again, the Japanese were the focus of ire, with many fishermen making accusations of price-fixing from Japanese-owned seafood processors. During that time, Bristol Bay still maintained record salmon harvests, with 45 million fish taken in 1995. Revenues remained high despite low prices due to large harvests. However, once again the fishery would falter, and once again the Pacific Decadal Oscillation was to blame.

In previous lean years, production shortages would drive prices up. However, the abundance of farmed fish within the market changed this. By 1997, the overall value of Bristol Bay salmon was cut in half from the previous year to \$63 million. Runs in years following were characterized by modest rebounds followed by more declines. In that time, Bristol Bay was declared both a state and federal disaster area and many permit holders opted to not participate in the 2001 season. In 2002, additional fishermen as well as several canneries and cold storage facilities opted out as well. In that year, the Bristol Bay drift permit once valued at \$250,000 was valued at less than \$20,000. In addition, total ex-vessel value of the fishery was down 90% from its peak in 1992.

Today, Bristol Bay salmon prices are slowly recovering thanks to increased demand for "Wild" Alaskan salmon, and a willingness by consumers to pay a premium for them. In a survey conducted by the AFSC in 2011, community leaders reported that Dillingham does not participate directly in the fisheries management process in Alaska; although one City Council member is a state salmon fishery manager. Instead, it relies on regional organizations such as the BBEDC and Bristol Bay Regional Seafood Development Association (RSDA) to provide information on fisheries management issues. Dillingham is eligible to participate in the Community Development Quota (CDQ) program and is represented by the BBEDC. The CDQ

program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.²⁸⁴ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

The city is located in Federal Reporting Area 514, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, three shoreside processing plants were in operation in 2010. This includes plants operated by Peter Pan Seafoods, Snopac Products, and Dancing Salmon Company LLP.

Peter Pan Seafoods is the largest sockeye salmon processing plant in the world. The Dillingham facility, which first began operations in 1901, processes sockeye salmon from early June to early August. The plant is the oldest continually operating cannery in Alaska. The facility employs a maximum of 395 workers each year. The plant relies on public water services, power/electricity, and waste management services.²⁸⁵

Snopac Products purchased the Dillingham facility in 2008 from Dagnet Fisheries. Snopac is an independent, family-owned, Seattle-based company. The plant processes primarily salmon and some halibut and employs a maximum of 340 workers each year. It relies on public docks, water services, power/electricity, and waste management services.²⁸⁶ The Dillingham facility is Snopac's first shore-based Alaska plant, although Snopac has operated a 336-ft floating salmon processor in Bristol Bay since 2005.²⁸⁷

Dancing Salmon Company LLP also operates a seafood processing plant in Dillingham; however, no further information is known about the plant.

Fisheries-Related Revenue

In 2010, Dillingham collected \$584,671 in fisheries-related revenue. Most of this was collected through Shared Fisheries Businesses Taxes; however, raw fish taxes, Fisheries Resource Landings Taxes, gear storage fees, and harbor usage fees were collected as well. In a survey conducted by the AFSC in 2011, community leaders reported that fees collected by harbor use is put towards maintaining harbor facilities, as well as providing a crane, ice machine, and police and fire services. In addition, Dillingham received \$150,000 in funding from its CDQ entity (BBEDC) in 2010. Information regarding fisheries-related revenue can be found in Table 3.

²⁸⁴ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

²⁸⁵ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

²⁸⁶ Ibid.

²⁸⁷ SeafoodSource.com (n.d.). *Snopac Acquires Dillingham, Alaska, Facility*. Retrieved January 18, 2008 from: <http://www.seafoodsource.com/newsarticledetail.aspx?id=1413>.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Popular commercial fisheries in Dillingham include salmon, herring, and halibut. There were 302 residents who held commercial crew licenses in 2010, compared to 481 in 2000. In addition, residents held majority ownership of 123 vessels that year, compared to 276 vessels in 2000. In 2010, 274 residents, 11.8% of the population, held 308 permits issued by the Commercial Fisheries Entry Commission (CFEC), compared to 321 and 477 in 2000, respectively. Of the CFEC permits issued in 2010, 80% were for salmon, compared to 56% in 2000; 16% were for herring, compared to 34% in 2000; and 4% were for halibut, compared to 9% in 2000. In addition, six residents held six Federal Fisheries Permits (FFP) although none were active that year. In 2010, residents held 1.52 million shares of halibut quota on 5 accounts, compared to 970,022 shares held on 10 accounts in 2000. Also in that year, residents held 3.18 million shares of sablefish quota on 2 accounts, compared to 3.18 million shares held on 1 account in 2000; accounting for 2.4% of statewide sablefish quota. Finally, residents held 23.43 million shares of crab quota on 1 account in 2010, compared to 19.97 million shares on 1 account in 2000; accounting for 4.4% of statewide crab quota that year.

Of the CFEC permits issued in 2010, 65% were actually fished. This varied by fishery from 78% of salmon permits, to 16% of herring and 0% of halibut permits. Fisheries prosecuted by residents of Dillingham in 2010 included: Bristol Bay purse seine herring roe, Bristol Bay gillnet herring roe, Alaska Peninsula drift gillnet salmon, and Bristol Bay drift and set gillnet salmon.²⁸⁸

In 2010, a total of 51.3 million pounds of fish were landed in Dillingham, valued at \$44.6 million. This represented a significant increase in ex-vessel value of total landings from 2001, when 50.5 million pounds landed was valued at \$5.7 million. Much of this can be attributed to the herring roe fishery which dominated landings in 2001 and 2002. Landings in Dillingham between 2003 and 2010 were made up almost entirely of salmon, and in 2010 Dillingham ranked 13th of 76 Alaskan communities in terms of total pounds landed within the community and 10th of 67 communities in terms of total ex-vessel value of landings. Although the species composition of landings is not available, it is assumed that landings were composed mostly of sockeye salmon. In 2010, 51.3 million pounds of salmon valued at \$44.6 million were landed, compared to 6.3 million pounds valued at \$2.4 million in 2001; representing an increase of \$0.31 per pound landed after adjusting for inflation.²⁸⁹

Landings by residents of Dillingham, regardless of location made, saw similar increases in the ex-vessel value of salmon landings. In 2010, residents landed 7.7 million lb of salmon valued at \$6.6 million ex-vessel, compared to 5.5 million pounds valued at \$2.1 million; representing an increase of \$0.32 per pound landed after adjusting for inflation.²⁹⁰ In addition,

²⁸⁸ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁸⁹ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

²⁹⁰ Ibid.

residents landed 2.6 million pounds of herring valued at \$195,338 ex-vessel, compared to 2.2 million pounds valued at \$224,600 in 2000; representing a decrease of \$0.06 per pound landed after accounting for inflation.²⁹¹

In 2007, Bristol Bay salmon accounted for almost a third of the total value of all Alaska salmon, and continues to be the single most valuable salmon fishery in the state. However, the ex-vessel value of sockeye salmon in Bristol Bay is typically lower than other regions. To address this, efforts have been made by the RSDA and other organizations to improve marketing and value of Bristol Bay salmon.²⁹² The herring sac roe fishery in Dillingham declined between 2000 and 2010, marked by a decline in herring permits issued to residents and price paid for landings. In response to market declines, some processors eventually opted out of buying herring, which put additional strain on the industry.²⁹³ Local and regional efforts to increase the value of herring are undertaken continuously. While halibut permit activity reduced to 0% in 2010, the BBEDC offers halibut quota to local residents for a small fee.

In a survey conducted by the AFSC in 2011, community leaders reported that on average, herring seasons run from May to June, halibut seasons run from March 12th to November 18th, and salmon seasons run from June to August. Since 2005, there had been a large increase in commercial fishing vessels smaller than 35 ft in length, and somewhat more vessels between 35 and 125 ft in length. This was attributed to the increase of fish and markets in the Nushagak River area. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁹¹ Ibid.

²⁹² City of Dillingham. (2006). *City of Dillingham Comprehensive Plan*. Retrieved March 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-2006.pdf>.

²⁹³ Carlson, S. (2005). *Changes in Roe Herring Markets: A Review of Available Evidence*. CFEC Report Number 05-5N. Retrieved March 15, 2012 from: http://www.cfec.state.ak.us/RESEARCH/05-5N/RoeMarkets_CFEC05-5N.pdf.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Dillingham: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$153,647	\$200,000	\$200,000	\$150,000	\$50,000	\$75,000	\$100,000	\$125,000	\$150,000	\$162,000	\$176,000
Shared fisheries business tax ¹	\$166,932	\$226,238	\$197,233	\$66,228	\$94,742	\$118,059	\$177,092	\$175,259	\$210,233	\$209,720	\$218,655
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$120	\$311	\$1,215	\$2,056	\$2,128
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$93,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$102,958*
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$84,930
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$413,579	\$426,238	\$397,233	\$216,228	\$144,742	\$193,059	\$277,212	\$300,570	\$361,448	\$373,776	\$584,671
Total municipal revenue⁵	\$9.86 M	\$8.74 M	\$7.87 M	\$7.56 M	\$7.24 M	\$7.36 M	\$7.58 M	\$8.09 M	\$8.93 M	\$9.99 M	\$10.13 M

Note: n/a indicates that no data were reported for that year.

*Reported by community leaders in a survey conducted by the AFSC in 2011.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Dillingham: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	1	2	2	2	2	2	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	0%	0%	0%	0%	0%	0%	n/a
	Total permit holders	0	0	0	0	1	1	1	1	1	1	0
Crab (LLP) ¹	Total permits	0	0	0	0	1	2	2	2	2	2	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	0%	0%	0%	0%	0%	0%	n/a
	Total permit holders	0	1	2	3	1	1	1	1	1	1	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	13	6	6
	Fished permits	0	0	0	0	0	0	0	0	1	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8%	0%	0%
	Total permit holders	0	1	2	3	4	5	6	7	12	6	6
Crab (CFEC) ²	Total permits	0	0	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	1	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	44	38	33	31	27	26	26	24	27	16	13
	Fished permits	14	11	16	12	10	10	8	11	12	4	0
	% of permits fished	32%	29%	48%	39%	37%	38%	31%	46%	44%	25%	0%
	Total permit holders	44	38	33	31	27	26	26	24	27	16	13
Herring (CFEC) ²	Total permits	164	139	93	93	75	74	73	61	58	53	50
	Fished permits	49	34	18	20	14	17	13	8	8	8	8
	% of permits fished	30%	24%	19%	22%	19%	23%	18%	13%	14%	15%	16%
	Total permit holders	105	95	70	73	62	64	59	56	54	47	47

Table 4 cont'd. Permits and Permit Holders by Species, Dillingham: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	4	4	2	1	0	0	0	1	2	0	0
	Fished permits	0	0	0	0	0	0	0	1	1	0	0
	% of permits fished	0%	0%	0%	0%	n/a	n/a	n/a	100%	50%	n/a	n/a
	Total permit holders	4	4	2	1	0	0	0	1	2	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	265	268	269	259	261	248	249	250	246	243	245
	Fished permits	243	224	171	192	185	187	194	198	195	182	191
	% of permits fished	92%	84%	64%	74%	71%	75%	78%	79%	79%	75%	78%
	Total permit holders	292	291	285	279	276	271	270	263	260	248	256
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>477</i>	<i>449</i>	<i>398</i>	<i>384</i>	<i>363</i>	<i>348</i>	<i>348</i>	<i>336</i>	<i>333</i>	<i>312</i>	<i>308</i>
	<i>Fished permits</i>	<i>306</i>	<i>269</i>	<i>205</i>	<i>224</i>	<i>209</i>	<i>214</i>	<i>215</i>	<i>218</i>	<i>216</i>	<i>194</i>	<i>199</i>
	<i>% of permits fished</i>	<i>64%</i>	<i>60%</i>	<i>52%</i>	<i>58%</i>	<i>58%</i>	<i>61%</i>	<i>62%</i>	<i>65%</i>	<i>65%</i>	<i>62%</i>	<i>65%</i>
	<i>Permit holders</i>	<i>321</i>	<i>315</i>	<i>308</i>	<i>304</i>	<i>297</i>	<i>291</i>	<i>291</i>	<i>284</i>	<i>280</i>	<i>267</i>	<i>274</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Dillingham: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Dillingham ²	Total Net Lb Landed In Dillingham ^{2,5}	Total Ex-Vessel Value Of Landings In Dillingham ^{2,5}
2000	481	3	2	276	408	396	--	--
2001	399	18	2	220	387	477	50,541,247	\$5,682,688
2002	282	28	3	205	348	571	47,737,422	\$10,459,433
2003	325	20	3	203	348	622	47,731,864	\$22,334,806
2004	321	22	4	201	366	545	43,897,018	\$20,918,381
2005	336	29	4	146	201	708	50,069,177	\$27,996,395
2006	304	23	3	141	209	748	71,789,825	\$43,568,239
2007	315	25	3	138	217	694	54,429,801	\$33,316,897
2008	333	27	3	134	214	549	43,459,968	\$30,380,555
2009	302	26	3	126	203	464	51,575,899	\$38,226,534
2010	302	18	3	123	204	597	51,311,403	\$44,649,994

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Dillingham: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	10	970,022	242,054
2001	9	1,605,875	381,689
2002	10	1,607,745	365,290
2003	8	1,513,783	352,523
2004	8	1,513,783	304,252
2005	8	1,513,783	276,068
2006	9	1,603,788	252,021
2007	9	1,603,788	244,186
2008	7	1,612,806	256,288
2009	5	1,522,529	231,605
2010	5	1,522,529	229,615

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Dillingham: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	3,176,112	286,564
2001	1	3,176,112	283,355
2002	1	3,176,112	295,459
2003	1	3,176,112	361,419
2004	1	3,176,112	391,744
2005	1	3,176,112	362,767
2006	1	3,176,112	356,742
2007	1	3,176,112	345,785
2008	2	3,181,804	304,986
2009	2	3,181,804	277,243
2010	2	3,181,804	263,166

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Dillingham: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	1	19,973,229	626,024
2006	1	21,805,680	596,431
2007	1	21,805,680	962,981
2008	1	21,805,680	902,472
2009	1	23,425,807	772,070
2010	1	23,425,807	823,238

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Dillingham: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	2,765	--
Herring	--	44,279,805	29,347,509	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	6,261,442	18,389,913	47,731,864	43,896,787	50,069,177	71,789,825	54,429,801	43,459,968	51,573,134	51,311,403
<i>Total²</i>	--	<i>50,541,247</i>	<i>47,737,422</i>	<i>47,731,864</i>	<i>43,896,787</i>	<i>50,069,177</i>	<i>71,789,825</i>	<i>54,429,801</i>	<i>43,459,968</i>	<i>51,575,899</i>	<i>51,311,403</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	\$11,790	--
Herring	--	\$3,235,982	\$2,172,037	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	\$2,446,705	\$8,287,397	\$22,334,806	\$20,918,378	\$27,996,395	\$43,568,239	\$33,316,897	\$30,380,555	\$38,214,744	\$44,649,994
<i>Total²</i>	--	<i>\$5,682,688</i>	<i>\$10,459,433</i>	<i>\$22,334,806</i>	<i>\$20,918,378</i>	<i>\$27,996,395</i>	<i>\$43,568,239</i>	<i>\$33,316,897</i>	<i>\$30,380,555</i>	<i>\$38,226,534</i>	<i>\$44,649,994</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Dillingham Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	17,477	48,120	61,091	29,301	27,390	22,736	20,592	28,256	15,236	--	--
Herring	2,171,928	1,955,361	1,508,979	2,906,603	1,679,834	1,730,147	3,065,831	2,302,803	2,385,579	1,813,068	2,605,163
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	9,149,312	5,499,959	2,584,279	6,582,093	8,620,831	8,622,274	9,917,811	8,631,223	7,565,248	7,983,915	7,721,233
<i>Total²</i>	<i>11,338,717</i>	<i>7,503,440</i>	<i>4,154,349</i>	<i>9,517,997</i>	<i>10,328,055</i>	<i>10,375,157</i>	<i>13,004,234</i>	<i>10,962,282</i>	<i>9,966,063</i>	<i>9,796,983</i>	<i>10,326,396</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$43,012	\$80,720	\$130,942	\$52,552	\$62,853	\$41,526	\$39,154	\$54,281	\$50,592	--	--
Herring	\$224,600	\$149,508	\$113,050	\$220,580	\$119,962	\$139,120	\$222,092	\$162,172	\$176,695	\$135,980	\$195,388
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$5,871,078	\$2,051,655	\$1,128,208	\$3,065,251	\$4,106,991	\$4,836,521	\$6,009,522	\$5,270,159	\$5,174,092	\$5,914,562	\$6,580,455
<i>Total²</i>	<i>\$6,138,690</i>	<i>\$2,281,883</i>	<i>\$1,372,201</i>	<i>\$3,338,383</i>	<i>\$4,289,807</i>	<i>\$5,017,167</i>	<i>\$6,270,767</i>	<i>\$5,486,612</i>	<i>\$5,401,379</i>	<i>\$6,050,542</i>	<i>\$6,775,842</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that sportfishing is conducted on private boats owned by local residents, private boats owned by non-residents, and guided boats on the Nushagak River. There has been a significant increase in the number of personal boats and skiffs on the Wood and Nushagak Rivers since 2005. In 2010, there were four sport fish guide businesses registered in Dillingham, of which none were active. Between 2000 and 2010, there were only two years (2002 and 2003) in which there were active sport fish guide businesses. There were 24 sport fish guide licenses held in Dillingham in 2010, compared to 24 in 2000. Also In that year, 1,629 sportfishing licenses were sold in the community, compared to 1,213 in 2000. In addition, residents were sold 696 sportfishing licenses, compared to 684 in 2000. No kept/released charter information is available for Dillingham.

Dillingham is located within the Nushagak, Wood River and Togiak ADF&G Harvest Survey Area, which includes the Nushagak River, Mulchatna River, Wood River, and Tilchik Lake drainages, as well as water westward to Cape Newenham.²⁹⁴ Overall, there was a steady decline in freshwater angler days fished in the survey area between 2000 and 2010. In 2010, freshwater resident and non-Alaska resident angler days fished totaled 23,385 days, compared to 43,083 in 2000. In that year, non-Alaska residents accounted for 89% of angler days fished, compared to 73% in 2000. Between 2000 and 2010, there was significantly less saltwater angler days fished than freshwater. In 2009, there was 147 total saltwater angler days fished, compared to 429 in 2000. According to ADF&G Harvest Survey data,²⁹⁵ local private anglers target all five species of Pacific salmon, rainbow trout, Dolly Varden char, whitefish, arctic grayling, northern pike, Pacific halibut, rockfish, smelt, and other finfish. Information regarding sportfishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Dillingham: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Dillingham ²
2000	0	24	684	1,213
2001	0	21	737	1,702
2002	1	24	700	1,897
2003	1	24	617	2,051
2004	0	19	670	2,229
2005	0	23	640	2,004
2006	0	23	678	2,091
2007	0	27	700	2,058
2008	0	20	680	1,829
2009	0	36	691	1,767
2010	0	24	696	1,629

²⁹⁴ Alaska Department of Fish and Game. (n.d.). Alaska Sport Fishing Survey. Retrieved February 13, 2012 from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/index.cfm?ADFG=area.home>

²⁹⁵ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Dillingham: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	n/a	44	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Many residents in Dillingham participate in subsistence activities. Fish and shellfish harvested in the Bristol Bay region include salmon, herring, halibut, cod, crab, clams, mussels, and freshwater fish. Moose, caribou, black and brown bear, Dall sheep, seal, ducks, geese, and spruce hen are hunted in the region. Beaver, otter, muskrat, hares, porcupine, fox, weasel, mink, and wolverine are all harvested for pelts. Plants and berries harvested include blueberries, cranberries, salmonberries, and crowberries, wild celery, wild spinach, and fiddlehead ferns.²⁹⁶ In a survey conducted by the AFSC in 2011, community leaders reported that important subsistence resources harvested by Dillingham residents include: salmon, halibut, clams, seals, beluga whales, ducks, and geese. According to the ADF&G *Community Subsistence Information System*,²⁹⁷ residents of Dillingham have harvested and/or used butter clams, Dungeness crab, king crab, razor clams, shrimp, Tanner crab, harbor seal, Steller sea lion, blackfish, burbot,

²⁹⁶ Lowe, M. (2007). *Socioeconomic Review of Alaska's Bristol Bay Region*. Retrieved March 15, 2012 from: <http://www.iser.uaa.alaska.edu/Publications/bb-socio-review.pdf>.

²⁹⁷ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

capelingcod, Dolly Varden, Arctic grayling, herring, lake trout, northern pike, rainbow trout, smelt, and whitefish.

According to ADF&G household surveys conducted in 2010, 19% of households harvested or used halibut, 15% harvested or used marine invertebrates, 20% harvested or used marine mammals, 80% harvested or used non-salmon fish, and 80% harvested or used salmon. In that year, estimated harvests in pounds per capita totaled 417.89 (Table 12). Data are also available regarding total harvests of salmon, halibut and marine mammals. In 2008, 327 subsistence salmon permits were issued to households in Dillingham. By, sockeye salmon made up the majority of recorded subsistence salmon harvests in 2008, followed by Chinook, coho, chum, and pink salmon. In that year, reported harvests totaled 25,907 salmon, compared to 26,823 in 2000 (Table 13).

In addition, 46 residents were issued Subsistence Halibut Registration Certificates (SHARC) by NMFS in 2009, although there no reported harvests that year. SHARC halibut harvests peaked in 2005 at an estimated 1,135 lb and declined to half that in 2007 (Table 14). No information was reported regarding subsistence harvests of other fish species or marine invertebrates.

Between 2000 and 2008, an estimated 37 beluga whales were harvested, although no harvests were reported following 2006. In addition, an estimated 20 walrus were harvested during those years. One sea otter was reported harvested in 2008. Finally, an estimated 83 spotted seals and 6 harbor seals were harvested between 2000 and 2008, with spotted seal harvests increasing steadily during those years. Information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that local funding and shoreline erosion are current challenges for the portion of Dillingham's economy that is based on fishing. Small rural communities in the region feel that when federal infrastructure projects are undertaken, local conditions and needs are not adequately considered. Shoreline erosion is of critical concern to the City, and community leaders felt like conditions were not adequately addressed when building harbor and bulkhead infrastructure. Because of this, the City is responsible for maintaining infrastructure that is rapidly deteriorating. Moreover, the current state of Dillingham's shoreline has become such that harbor facilities relied on by the local fishing industry are being threatened along with other critical infrastructure. Finally, cost of living associated with high fuel and ice prices has impacted the commercial fishing fleet's ability to improve product quality.

Overall, community leaders felt that fisheries are managed well. The state has made successful efforts to accommodate subsistence and grants provided through the CDQ program have made positive impacts. Areas which need attention include regulatory enforcement and salmon bycatch. Locals are concerned over trawl vessels coming to close to shore and impacting halibut and salmon resources. In addition, regulations allowing dual permits to be fished on boats has impacted local employment.

When asked about potential future fisheries policy or management concerns, community leaders expressed concern over the proposed Pebble Mine and offshore oil exploration which they worry may jeopardize the local salmon fishery.

Table 12. Subsistence Participation by Household and Species, Dillingham: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	80%	19%	20%	15%	80%	417.89

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Dillingham: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	342	326	4,908	1,279	4,185	1,286	15,165	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	2	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	308	271	8,185	1,668	2,276	1,268	8,911	n/a	n/a
2005	307	280	5,807	1,149	3,385	192	10,409	n/a	n/a
2006	283	248	4,649	1,733	2,071	1,329	11,614	n/a	n/a
2007	315	265	6,988	1,272	1,736	199	14,552	n/a	n/a
2008	327	294	6,626	1,640	3,165	1,275	13,201	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Dillingham: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	35	10	395
2004	48	7	90
2005	62	11	1,135
2006	64	8	914
2007	75	18	654
2008	56	5	n/a
2009	46	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Dillingham: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	5	n/a	3	n/a	n/a	n/a	n/a
2001	8	n/a	2	n/a	n/a	5	1
2002	1	n/a	1	n/a	n/a	n/a	4
2003	8	n/a	3	n/a	n/a	n/a	6
2004	4	n/a	5	n/a	n/a	n/a	8
2005	7	n/a	3	n/a	n/a	n/a	12
2006	4	n/a	n/a	n/a	n/a	n/a	15
2007	n/a	n/a	n/a	n/a	n/a	n/a	15
2008	n/a	1	3	n/a	n/a	1	22
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Egegik (EE-guh-gick)

People and Place

*Location*²⁹⁸

Egegik is located on the south bank of the Egegik River on the Alaska Peninsula, 100 mi southeast of Dillingham and 326 air mi southwest of Anchorage. The area encompasses 32.8 sq mi of land and 101.2 sq mi of water. Egegik was incorporated as a Second-class city in 1995 and is under the jurisdiction of the Lake and Peninsula Borough.

*Demographic Profile*²⁹⁹

In 2010, there were 109 residents ranking Egegik 237th of 352 communities in terms of population size. Between 1990 and 2010, the population declined by 10.7%. Between 2000 and 2009, the population fell by 37.1% with an average annual growth rate of -4.0%; which was much lower than the statewide average of 0.75% and indicative of a steeply declining population during those years. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 50 full time residents according to a village count by Tribal staff. In addition, there were an estimated four to five thousand seasonal workers living in Egegik in 2010. On average, the community has seasonal workers living there between June and August. Seasonal population peaks, which occur between June and July, are thought to be driven entirely by employment in fisheries sectors. The seafood industry's effect on seasonal population levels is a likely source of the disparity between U.S. Census figures, Alaska Department of Labor estimates, and local estimates. Information regarding population trends can be found in Table 1.

Racial and ethnic composition was somewhat evenly split between Alaska Natives and Whites in 2010. In that year, 47.7% of residents identified themselves as White, compared to 19% in 2000; 39.4% identified themselves as American Indian or Alaska Native, compared to 57.8% in 2000; 4.6% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0% in 2000; and 7.3% identified themselves as two or more races, compared to 22.4% in 2000. In addition, 1.8% of residents were Hispanic or Latino, compared to 6.9% in 2000. Again, the variability of racial and ethnic representation in Egegik between 2000 and 2010 can likely be attributed to affects by the seafood industry and generally low population size. Information regarding racial and ethnic composition can be found in Figure 1.

²⁹⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

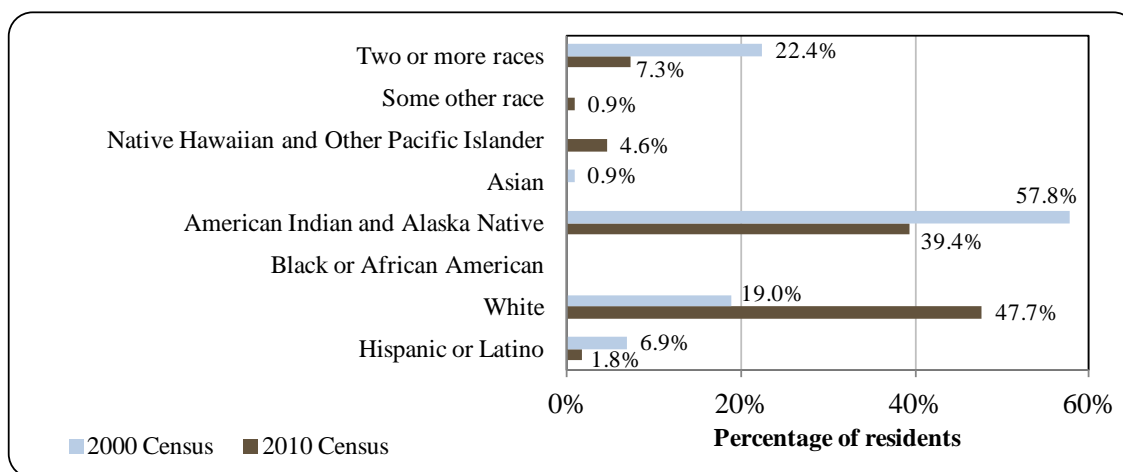
Table 1. Population in Egegik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	122	-
2000	116	-
2001	-	80
2002	-	87
2003	-	82
2004	-	77
2005	-	81
2006	-	76
2007	-	63
2008	-	63
2009	-	73
2010	109	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Egegik: 2000-2010 (U.S. Census).



In 2010, the average household size was 2.48, a decrease from 2.5 in 1990 and 2.64 in 2000. In that year, there was 256 housing units total, compared to 66 in 1990 and 286 in 2000. Of the household surveyed in 2010, 9% were owner-occupied, compared to 13% in 2000; 2% were renter-occupied, compared to 2% in 2000; 3% were vacant, compared to 6% in 2000; and 86% were occupied seasonally, compared to 83% in 2000. In that year, 37 residents lived in group quarters, compared to none in 2000.

The gender distribution in 2010 was significantly uneven at 72.5% male and 27.5% female, and less even than the distribution statewide (52% male, 48% female) and distribution in 2000 (59.5% male, 40.5% female). In that year, the median age was 47.3 years, which was much older than the statewide median of 33.8 years and 2000 median of 35.3 years.

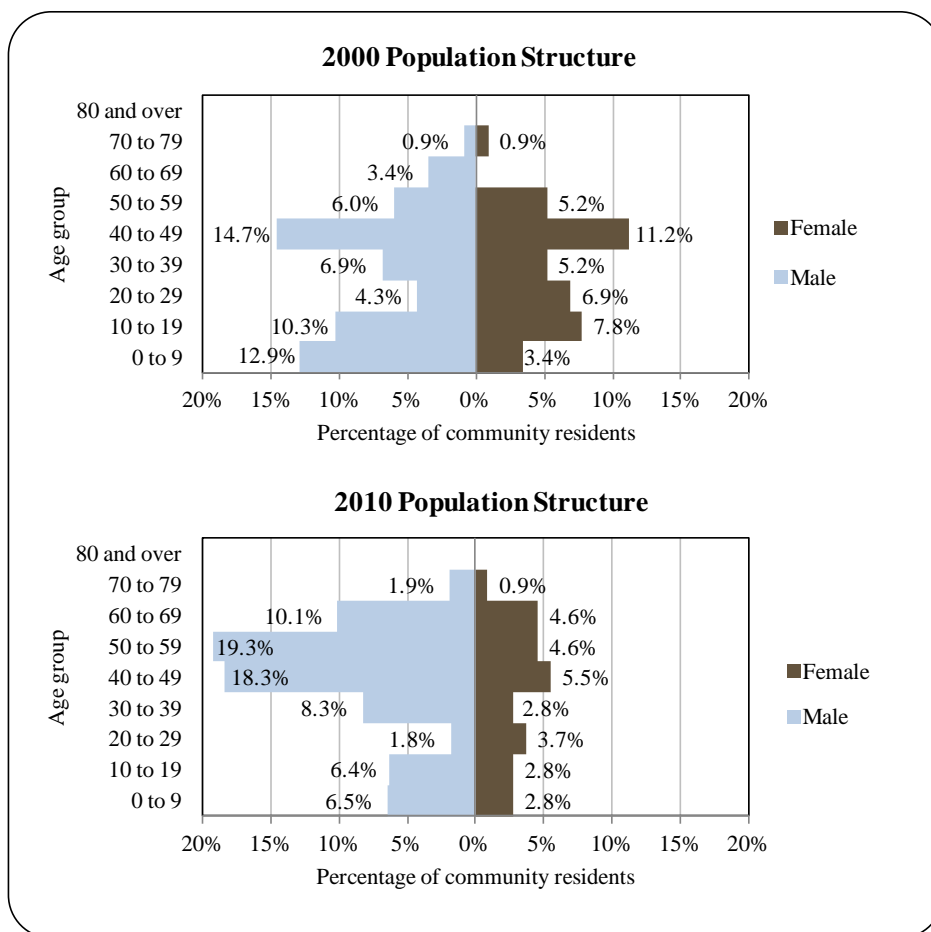
Compared to 2000, the population structure in 2010 was significantly more constricted. In that year, 18.5% of residents were under the age of 20, compared to 34.4% in 2000; 17.5% were over the age of 59, compared to 5.2% in 2000; 58.8% were between the ages of 30 and 59, compared to 49.2% in 2000; and 5.5% were between the ages of 20 and 29, compared to 11.2% in 2000. In addition, there was noticeably few residents aged 10 to 19 in 2000 transitioning into the 20 to 29 range in 2010, perhaps indicating low youth retention.

Gender distribution by age cohort was notably less even in 2010 than in 2000, with male biases prevalent along most age ranges. The greatest absolute gender difference that year occurred within the 50 to 59 range (19.3% male, 4.6% female), followed by the 40 to 49 (18.3% male, 5.5% female) and 60 to 69 (10.1% male, 4.6% female) ranges. Of those three, the greatest relative gender difference occurred in the 50 to 59 range. Overall, population structures in both 2000 and 2010 appear consistent with communities whose populations are heavily impacted by local seafood processors. It should be noted that because of Egegik's small and variable population, trends are difficult to discern. Information regarding Egegik's population structure can be found in Figure 2.

In terms of education attainment, the U.S. Census' American Community Survey (ACS)³⁰⁰ estimated that 63% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 18.5% had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 18.5% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 11.1% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; and an estimated 11.1% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall. No residents were estimated to hold an Associate's, graduate or professional degree.

³⁰⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 2. Population Age Structure in Egegik Based on the 2000 and 2010 U.S. Decennial Census.



History, Traditional Knowledge, and Culture

According to anthropologists, settlement of the Bristol Bay region first occurred over 6,000 years ago. Yup'ik Eskimos and Athabascan Indians jointly occupied the area, although Aleuts arrived in later years. The first recorded contact with Russian fur traders occurred between 1818 and 1867. The village was first reported by Russians as a fish camp called “Igagik” (meaning “throat”) in 1876. Local people would travel each year from Kanatak on the gulf coast through a portage pass to Becharof Lake and then hike or kayak on to the Egegik Bay area for summer fish camp. In 1895, an Alaska Packers Association salmon saltery was established at the mouth of Egegik River and a town was developed around the former fish camp. During the influenza outbreaks beginning in 1918, Natives from other villages moved to Egegik in an attempt to isolate themselves from the disease. During World War II, men from Egegik were enlisted to help build the King Salmon Airport, with many subsequently serving in Dutch Harbor and elsewhere. Egegik later grew into a major salmon production port.³⁰¹

³⁰¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Today, the economy in Egegik is based on commercial fishing and fish processing, providing seasonal employment from May to August. The population swells by 1,000 to 2,000 fisherman and cannery workers during the commercial fishing season. Five on-shore processors are located on the Egegik River and numerous floating processors participate in the Egegik fishery. Local working tours of the Bristol Bay set-net fishery are available.³⁰²

Natural Resources and Environment

Egegik's predominantly maritime climate is characterized by cool, humid, and windy weather. Average summer temperatures range from 41 to 60 °F (5 to 16 °C); winter temperatures range from 20 to 37 °F (-7 to 3 °C). Annual precipitation averages 20 to 26 inches, with 45 inches of snow.³⁰³

Egegik lies approximately 20 mi west of the Becharof National Wildlife Refuge (BNWR), which occupies around 1.16 million acres of the Alaska Peninsula. Local and regional topography is shaped by the Aleutian Range spanning the length of the Alaska Peninsula and Aleutian island chain. The community sits on flat lowland occupied by shallow lakes, wetlands, and tundra; while the rugged crests of the Kejulik Mountains provide a backdrop to the east. The coastal plain Egegik occupies is flat, with lakes and meandering streams, although the remains of glacial moraines provide limited relief. Local geology is volcanic in nature and soils are characterized by a mixture of ash and glacial deposits which result in a clay-like material. Organic soils occur in wet areas and consist of sedge peat and sphagnum.³⁰⁴

Vegetation in the area is characteristic of transitional coastal/tundra plant communities. This includes mostly low shrub and grasses, with low grass tundra. Near the BNWR boundary to the west, there are areas of low shrub and grass tundra. Trees in the area are typically stunted, and low alders and willows dominate deciduous species.³⁰⁵

The 2,740 sq mi Egegik River drainage is home to more than 1,000 salmon-producing streams. Estimated productivity of this drainage exceeds 30 million fish. Resident fish species include all five species of Pacific salmon, rainbow trout, steelhead, lake trout, Dolly Varden, Arctic char, Arctic grayling, whitefish, northern pike, and burbot. Terrestrial wildlife in the BNWR includes weasels, red fox, coyote, snowshoe hare, beaver, wolverine, otter, mink, lynx, wolves, brown bears, caribou, moose, and host of small smaller mammals. Marine mammals include harbor seals, Steller sea lions, sea otters, porpoise, and killer, gray, minke, pilot, and beluga whales. Over 200 species of birds use the BNWR as migratory or permanent habitat.³⁰⁶

Natural resources in the area primarily include local wildlife and the environments that sustain them, included the BNWR and Bristol Bay. Oil and gas exploration is active in both Bristol Bay and the BNWR. Oil and gas seeps have been found to occur in the Becharof Lake area. Twenty-five onshore and one offshore exploratory wells have been drilled around the

³⁰² Lake and Peninsula Borough (n.d.). *Egegik*. Retrieved March 21, 2012 from: <http://www.lakeandpen.com/>.

³⁰³ See footnote 301.

³⁰⁴ U.S. Fish & Wildlife Service (2005). *Revised Comprehensive Conservation Plan and Environmental Impact Statement: Alaska Peninsula and Becharof National Wildlife Refuges*. Retrieved March 21, 2012 from: http://alaska.fws.gov/nwr/planning/pdf/apb/APB%20Revised%20CCP-EIS_090605.pdf.

³⁰⁵ Ibid.

³⁰⁶ Ibid.

refuges as of 2005, and the U.S. Bureau of Land Management (BLM) has cited lowlands along the Bristol Bay coast and Egegik Bay as having potential hydrocarbon accumulations.³⁰⁷

Environmental hazards include coastal and riverine erosion, volcanic eruptions, severe weather, wildfire, and earthquakes. As of 2009, erosion was threatening the seawall near the cannery as well as the city dock. Coastal erosion and undercutting along the banks of the Egegik River are immediate hazards to the community. Severe weather comes in the form of cyclonic windstorms out of the west and southwest. Each winter, windstorms cause considerable damage to the community with sustained winds of 100 mph and gusts up to 140 mi per hour being recorded during the winter of 2000. Active volcanoes within the Katmai National Park threaten the community directly through local ash fallout and indirectly through potential impacts to the salmon fishery. Ash fallout has the potential to disrupt travel, impact water utilities, and affect valuable salmon producing watersheds. While the community is relatively safe from forest fires, residents are concerned over potential tundra fires. Wildland fires have the potential to destroy property, harm livestock and pets, and impact vegetation and waterways. The potential for earthquakes in Egegik is relatively low, and there is no historical precedence of a catastrophic damage resulting from a quake. The chance of an earthquake within Egegik is greater than 10% but less than 20% each calendar year.³⁰⁸

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation sites active within Egegik in 2010.³⁰⁹

Current Economy³¹⁰

The economy is based primarily on commercial fishing and fish processing. During the commercial fishing season, the population swells by 1,000 to 2,000 fishermen and cannery workers. There are a number of shore-based processors located within the Egegik Fishing District. Icicle Seafoods on the south shore of the Egegik River, and Coffee Point Seafoods on the north side of the river are the two largest processors in the area. Numerous tenders operate in the Egegik Fishery, transporting fish to floating processors in Bristol Bay as well as shore-based processors in Naknek and Dillingham. Subsistence hunting and fishing activities are also an important part of the lifestyle and local diet. Seal, beluga, salmon, trout, smelt, grayling, clams, moose, bear, caribou, porcupine, waterfowl, and ptarmigan are utilized. Locals also gather berries and wild greens each season.³¹¹ Top employers³¹² in 2010 included: the City of Egegik, the Village of Egegik, Lake and Peninsula School District, and Bristol Bay Native Association.

³⁰⁷ Ibid.

³⁰⁸ Lake and Peninsula Borough (2009). *Multi-Hazard Mitigation Plan*. Retrieved March 22, 2012 from: http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

³⁰⁹ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved June 29, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

³¹⁰ Unless otherwise noted, all monetary data are reported in nominal values.

³¹¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹² Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

In 2010,³¹³ the estimated per capita income was \$21,571 and the estimated median household income was \$74,167, compared to \$16,352 and \$46,000 in 2000, respectively. However, after accounting for inflation by converting 2000 values into 2010 dollars,³¹⁴ the real per capita income (\$21,503) and real median household income (\$60,489) indicate that while individual earnings remained unchanged, household earnings grew. In that year, Egegik ranked 137th of 305 communities from which per capita income was estimated, and 36th of 299 communities from which median household income was estimated. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Egegik do not reflect the value of subsistence to the local economy.

Egegik's small population size may have prevented the American Community Survey from accurately portraying economic conditions.³¹⁵ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$933,198 in total wages in 2010.³¹⁶ When matched with the population in 2010, the per capita income equals \$8,561, which is significantly less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.³¹⁷

According to 2006-2010 ACS estimates,³¹⁸ 87.1% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 3.2%, compared to an estimated 5.9% statewide; and an estimated 14.3% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. It is possible that the 2010 ACS misrepresented unemployment in Egegik because of the community's small population size. According to 2010 ALARI estimates, local unemployment was 12.3% based on unemployment insurance claimants.

Of those employed in 2010, an estimated 57.7% worked in the private sector and an estimated 42.3% worked in the public sector. By industry, most (34.6%) of those employed were estimated to work in transportation, warehousing, or utilities sectors; followed by professional, scientific, management, administration, or waste management sectors (19.2%) (Figure 3). By occupation type, most (42.3%) of those employed were estimated to hold service positions; followed by sales or office positions (19.2%); production, transportation, or material moving positions (15.4%); natural resources, construction, or maintenance positions (11.5%); and management or professional positions (11.5%) (Figure 4). According to 2010 ALARI employment estimates, most (71.9%) employed residents worked in local government sectors; followed by trade, transportation, and utilities (9.4%) and manufacturing (6.3%) sectors.

³¹³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³¹⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³¹⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³¹⁶ ALARI estimates are based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

³¹⁷ See footnote 312.

³¹⁸ See footnote 315.

Figure 3. Local Employment by Industry in 2000-2010, Egegik (U.S. Census).

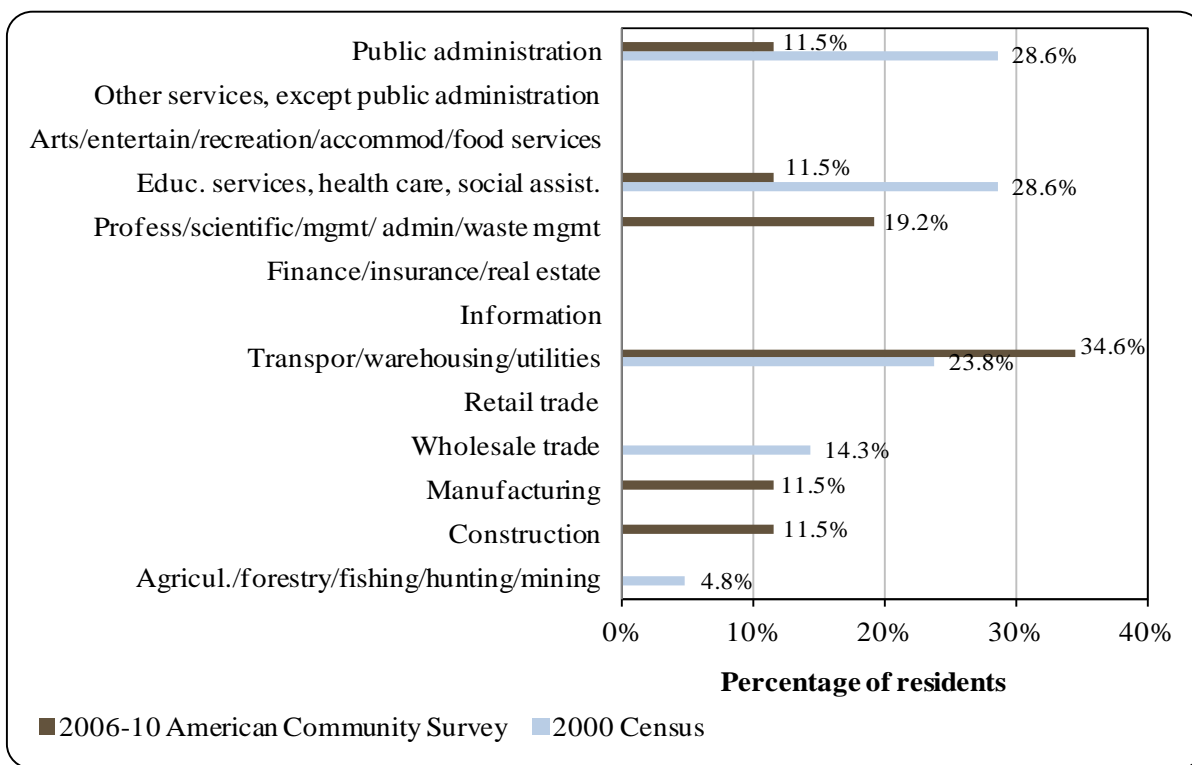
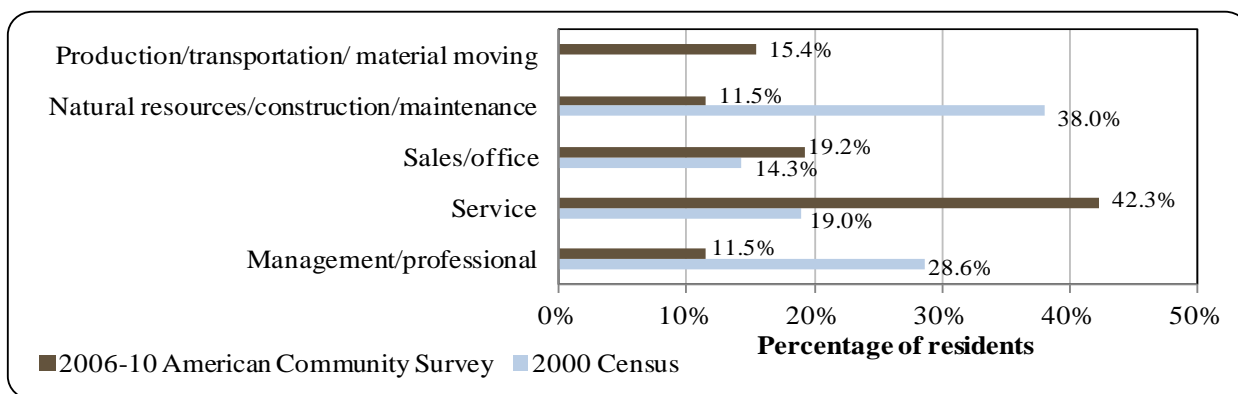


Figure 4. Local Employment by Occupation in 2000-2010, Egegik (U.S. Census).



Between 2000 and 2010 there were strong shifts in employment both by industry sector and by occupation type. Public administration, education service, health care, social assistance, and wholesale trade sectors declined significantly, while there was significant growth in professional, scientific, management, administrative, waste management, manufacturing, and construction sectors. In addition, there was significant growth in service, production, transportation, and material moving positions; and significant declines in natural resources, construction, maintenance, management, and professional positions. It is possible that extreme shifts in industry sector and occupation representation are attributed to high population turnover. However, it should also be noted that many resource based sectors, including commercial

fishing, are seasonal or transient in nature. This makes tracking them by Census and ACS survey methods difficult in some instances, especially given the known importance of commercial fishing to local residents (see *Commercial Fishing* section below).

Governance

Egegik is a Second-class city with a mayoral form of government. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Native village council and an Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Becharof Corporation). The Bristol Bay Native Corporation is the regional ANCSA chartered corporation. The closest Alaska Department of Fish and Game (ADF&G) office is located in King Salmon 40 mi northeast. The closest National Marine Fisheries Service and U.S. Bureau of Citizenship and Immigration Services (BCIS) are located in Kodiak, 188 mi west.

In 2010, Egegik administered a 3% Raw Fish Tax, \$3 per person/day Guide Tax, and a \$1 per person/day lodge Guide Tax. In addition, the borough administered a 2% Raw Fish Tax and 6% Bed Tax. When adjusted for inflation,³¹⁹ total municipal revenues declined by 22.6% between 2000 and 2010, from \$2.34 million to \$2.35 million. However, it should be noted that in major revenue sources differed in both of those years. In 2010, almost half of revenues collected came from taxes, while most revenues were generated from capital projects in 2000. Other major sources of locally generated revenues in 2010 include municipal service charges, investments, and leases and grants. Major outside revenue sources included state and borough revenue sharing. In that year, approximately 4.2% of total municipal revenues were collected from state allocated Community Revenue Sharing, compared to 1.3% from State Revenue Sharing in 2000.

Between 2000 and 2010, Egegik received one fisheries-related state/federal grant. This included \$92,621 in fisheries disaster relief associated with the Bristol Bay sockeye salmon crash in the early 2000s. Information regarding municipal finances can be found in Table 2.

Infrastructure

Connectivity and Transportation

The community is accessible by air and water. A new City-owned 5,600-ft long by 100-ft wide lighted gravel runway with crosswind airstrip is located approximately two mi south of Egegik. Scheduled and charter flights are available. Roundtrip airfare between Anchorage and Egegik in June 2012 was \$712.³²⁰ There is also a private 2,800-ft airstrip across from Coffee Point. A boat haul-out is available and the City has a deep water dock that that services barges from Anchorage and Seattle. Two privately-owned docks and marine storage are also available. Motorized vehicles used by residents include automobiles, trucks, skiffs, ATVs and snowmobiles.³²¹

³¹⁹ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

³²⁰ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

³²¹ Lake and Peninsula Borough. (2009). *Multi-Hazard Mitigation Plan*. Retrieved March 22, 2012 from: http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Egegik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$2,344,162	n/a	\$29,433	\$92,621
2001	\$4,302,728	n/a	\$28,492	n/a
2002	\$3,241,646	n/a	\$28,759	n/a
2003	\$639,495	n/a	\$28,779	n/a
2004	\$484,865	n/a	-	n/a
2005	\$901,421	n/a	-	n/a
2006	\$767,000	n/a	-	n/a
2007	\$628,828	n/a	-	n/a
2008	\$1,292,947	n/a	-	n/a
2009	\$2,755,560	n/a	\$99,163	n/a
2010	\$2,345,501	n/a	\$99,661	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Facilities

The City of Egegik operates a public water/sewer system. Egegik’s water is supplied by a combination of three wells. Two storage tanks are used, comprised of an indoor 8,000 gal tank and an outside 100,000 gal tank. Most households and public facilities are plumbed and connected to the public water and sewer system. The Icicle Seafoods processing facility derives water from School Lake and obtains water for general use from the City. A seven-acre landfill is available, with a batch oxidation incinerator. Visitor accommodations include the Fun & Wash Hotel and Becharof Lodge. Public safety services are provided by the City police department and state troopers based in King Salmon. Fire and rescue services are provided by Egegik First Responders. Additional facilities include a recreational center and community center. Communications services include local television, radio, and internet.³²²

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed or underway between 2000 and 2010 include dock improvements, broadband internet access, road construction, airport improvements, water and sewer pipelines, sewage and water treatment, alternative energy, landfill improvements, community center/library, public safety, and emergency response. Fisheries-related businesses or

³²² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

services available in the community include fish processing plants, fishing gear sales, boat repair (electrical, welding, mechanical services, machine shop, hydraulics), small and large vessel haulout facilities, commercial cold storage, dry dock storage, fish lodges, boat fuel sales, fishing gear repair, fishing gear storage, ice sales, and air taxi. Additional public services include medical and a food bank. Residents travel to Naknek, Dillingham, Anchorage, or Seattle for businesses and services not available in the community.

*Medical Services*³²³

The Egegik Village Clinic is a Community Health Aid Program (CHAP) site, providing general health services. Acute, long-term, and specialized health care is provided in Dillingham.

*Educational Opportunities*³²⁴

Egegik School provides preschool through 12th grade instruction. As of 2011, there were 10 students enrolled and 1 teacher employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The community of Egegik has participated in North Pacific fisheries since Yup'ik and Athabascans first arrived in the area. Traditionally, subsistence harvesting was the sole method of participation before commercial fishing was introduced. The Bristol Bay region is justifiably famous for the salmon, trout, char, and grayling that abound in its lakes, streams, and marine waters. The world's largest sockeye salmon runs pass along the Alaska Peninsula and through Bristol Bay enroute to their spawning grounds in the streams and lakes of the region.³²⁵

The Bristol Bay salmon fishery is one of the most important commercial salmon fisheries in the world. Annual commercial harvests of salmon since statehood have averaged about 17 million sockeye salmon (91.2% of all salmon), about 880,000 chum salmon (4.7%), about 550,000 pink salmon (3.0%), about 120,000 coho salmon (0.6%), and about 100,000 Chinook salmon (0.5%). Commercial sockeye salmon harvests since 1959 have represented about 56% of statewide commercial harvests for that species. Sockeye salmon are the most important commercial fish in the region, and large runs occur in Egegik and Nushagak River drainages. These fish return to Bristol Bay in late June and early July with most adults entering their spawning stream by late July or early August. In addition, research has shown that the largest outmigrating sockeye salmon smelts in the Bristol Bay area are from the Egegik River system.³²⁶

Chinook harvests occur mostly in the Nushagak District outside of Dillingham. Coho salmon are underused because fall runs occur after most vessels have ceased fishing efforts. Because of this, coho harvests are directly tied to market conditions rather than abundance. The

³²³ Ibid.

³²⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³²⁵ LaRoche & Associates. (2011). *Lake & Peninsula Borough Coastal Management Plan*. Retrieved March 22, 2012 from: http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

³²⁶ Ibid.

Togiak River continuously exceeds minimum escapement goals and had relatively few emergency orders issued between 2000 and 2005, compared to other areas within Bristol Bay.³²⁷

The Togiak area of Bristol Bay supports the largest herring fishery in the state. Large purses seine and gillnet fleets harvest the spawning herring in a sac roe fishery, and spawn-on-kelp harvests are also taken by local residents (usually in Togiak Bay). The Togiak sac roe fishery began in 1977, and has supported a fairly stable catch, averaging 40.6 million pounds between 1998 and 2002.³²⁸

Bristol Bay supports a large, stable red king crab fishery which has been increasing in abundance since the late 1990s. Fishing effort has remained high with an average of 261 active permits between 1998 and 2002. However, no Togiak residents held crab permits or quota between 2000 and 2010.³²⁹

In a survey conducted by the AFSC in 2011, community leaders reported that Egegik participates in the fisheries management process in Alaska through a representative who participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process. In addition, Egegik has a representative that attends ADF&G meetings. The community is eligible to participate in the Community Development Quota (CDQ) program and is represented by the Bristol Bay Economic Development Corporation (BBEDC). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.³³⁰ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. The community is located in Federal Reporting Area 508, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there are four shore-based processing plants operating in Egegik. Alaska General Seafoods' Egegik location is commercial fleet staging camp in support of the company's Naknek cannery, providing housing, mess hall, vessel storage, and repair services to independent commercial fishing vessels. This site was originally a saltery in the early 1930s. A cannery was established in the 1940s by a different company and has changed hands over time (San Juan Fish Packing, New England Fish Company, and Ocean Beauty/Diamond E). Ocean Beauty began to operate the facility as a fish camp soon after the late 1970s (and transferred the canning lines to the Diamond E plant in Egegik). The facility was purchased by Nelbro Co. in 1986 and it continued to operate as a commercial fleet staging camp. Nelbro built a new bunkhouse and warehouse. Nelbro Packing Co. merged with Kanaway Seafoods and Alaska General Seafoods to form Alaska General Seafoods in 1999. Alaska General's full summer season in Bristol Bay lasts from mid-June to late July. The facility which

³²⁷ Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

³²⁸ Woodby, D. et al. (2005). *Commercial Fisheries in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³²⁹ Ibid.

³³⁰ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

is supported by the Egegik fish camp processes herring and all five species of salmon. The Egegik fish camp provides boat repair services, housing and a mess hall to its independent fishing fleet. At the peak of the fishing season, Alaska General Seafoods employs more than 700 people throughout all of its shore-side operations, including the Bristol Bay area.³³¹

Big Creek Fisheries operates a fish processing plant in Egegik, although little is known about its operation. Big Creek Fisheries generally processes all five species of Pacific salmon.³³²

Coffee Point Seafoods processes sockeye salmon and salmon roe (sujiko). Their season runs from mid-June to the end of July. After a successful 2002 Bristol Bay salmon season (marketed by Double E Foods), the owners of Clark's Fish company and Joe Kelso came together and moved into a larger facility to accommodate an increase in product volume for the 2003 season at which point they became Coffee Point Seafoods. The following products are processed in or near the Bristol Bay region: sockeye salmon (May-September at Bristol Bay plants), Chinook salmon (year-round at Bristol Bay plant), and salmon roe (May-September at Bristol Bay plant).³³³

The Egegik facility of Icicle Seafoods Inc. is located on the south bank of the Egegik River. The canning and freezing facility processes sockeye salmon. The season runs from mid-June through the beginning of August, employing 200 fish processing workers. As the Bristol Bay season winds down the crew size decreases. The facility was purchased in 2005, but the cannery was established in the 1890s. Icicle provides free laundry service, work-gear, and room and board to its fish processing workers. Air transportation from and to Seattle is also provided, but is dependent on workers fulfilling their contractual obligations.³³⁴

Fisheries-Related Revenue

In 2010, Egegik collected \$1.65 million in fisheries-related revenue, most of which came from a raw fish tax. That year accounted for the highest amount of fisheries-related revenue collected since 2000 when \$394,758 was collected. In addition to raw fish tax revenue, Egegik received revenue from the Shared Fisheries Business Tax, Fisheries Resource Landing Tax, and fees collected from public fishing gear storage (Table 3).³³⁵

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that there has been a significant increase in the number of commercial fishing vessels in Egegik since 2005. In terms of size, there has been an increase of vessels shorter than 35 ft, while vessels longer than 125 ft have declined in number. The sockeye salmon season typically runs from June 1st through

³³¹ Alaska General Seafoods. (n.d.). *Egegik*. Retrieved from: <http://www.akgen.com>.

³³² Alaska Seafood Marketing Institute. 2011. Directory of Alaska Seafood Suppliers. Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

³³³ Google's March 15, 2009 cache of <http://www.eefoods.com/id108.htm>

³³⁴ Icicle Seafoods. (n.d.). Retrieved from: <http://www.icicleseafoods.com/locations/vsl/about.aspx>.

³³⁵ Fisheries-related revenue as a proportion of municipal revenue cannot be accurately reported due to conflicts between reported fisheries-related taxes and fees and municipal budgets provided by Alaska Taxable.

July 31st, while the coho salmon season typically runs from July 26th through August 13th.

In 2010, 26 residents, or 23.9% of the population, held 24 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 55 residents held 86 CFEC permits. Of the CFEC permits issued that year, 100% were for salmon, compared to 56% in 2000. Halibut permits were held in the community until 2009 and herring until 2004. Between 2000 and 2010 no residents held License Limitation Program (LLP) permits for groundfish or crab. Two residents held Federal Fisheries Permits (FFP) from 2000 to 2002. No residents held halibut, sablefish, or crab quota between 2010 and when the programs began.

There were 27 residents who held commercial crew licenses in 2010, compared to 48 in 2000. In addition, residents held majority ownership of 20 vessels that year, compared to 40 in 2000. Of the CFEC salmon permits issued in 2010, 71% were fished, compared to 92% in 2000. Fisheries prosecuted in 2010 by residents of Egegik included Bristol Bay drift and set gillnet salmon.³³⁶

In 2010, 29.4 million pounds of fish were landed in Egegik valued at \$27.7 million ex-vessel, compared to 13.2 million valued at \$5.3 million in 2000. The number of vessels making landings in Egegik peaked in 2010 at 718 although pounds landed was at its lowest since 2003. On the other hand, landings peaked in 2009 when 539 vessels landed 67.9 million pounds. Total value of landings that year was \$54 million. In 2010, Egegik ranked 15th of 67 Alaskan communities in terms of total pounds landed and 16th in terms of ex-vessel value of landings. Between 2000 and 2010, the price of salmon in Egegik increased by \$0.12 per pound landed ex-vessel, after accounting for inflation³³⁷ and without considering the species composition of landings. Residents of Egegik landed 503,567 lb of salmon valued at \$449,942 ex-vessel in 2010, compared to 905,790 lb valued at \$602,045 in 2000; a decrease of \$0.02 per pound landed after accounting for inflation³³⁸ and without considering the species composition of landings. In a survey conducted by the AFSC in 2011, community leaders reported that residents are concerned with fish returns, markets and prices. Information regarding commercial fishing trends can be found in Tables 4 through 10.

³³⁷ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

³³⁸ Ibid

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Egegik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$330,810	\$381,616	\$55,120	\$313,063	\$202,571	\$412,575	\$792,763	\$475,289	\$434,367	\$1.05 M	\$1.57 M
Shared Fisheries Business Tax ¹	\$62,748	\$33,912	\$35,953	\$81,471	\$38,273	\$39,428	\$32,508	\$33,661	\$78,512	\$68,512	\$67,801
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$19	\$51	\$194	\$349	\$333
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$1,200	\$1,200	\$1,200	\$1,000	\$1,930	\$1,000	\$7,000	\$6,000	\$3,500	\$2,000	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$10,000
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$394,758</i>	<i>\$416,728</i>	<i>\$92,273</i>	<i>\$395,534</i>	<i>\$242,774</i>	<i>\$453,003</i>	<i>\$832,290</i>	<i>\$515,001</i>	<i>\$516,573</i>	<i>\$1.12 M</i>	<i>\$1.65 M</i>
<i>Total municipal revenue⁵</i>	<i>\$2.34 M</i>	<i>\$4.30 M</i>	<i>\$3.24 M</i>	<i>\$639,195</i>	<i>\$484,865</i>	<i>\$901,421</i>	<i>\$767,000</i>	<i>\$628,828</i>	<i>\$1.29 M</i>	<i>\$2.76 M</i>	<i>\$2.35 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Egegik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	2	2	2	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	2	2	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	11	6	5	4	4	4	2	3	1	1	0
	Fished permits	3	1	3	2	1	1	0	0	0	0	0
	% of permits fished	27%	17%	60%	50%	25%	25%	0%	0%	0%	0%	n/a
	Total permit holders	11	6	5	4	4	4	2	3	1	1	0
Herring (CFEC) ²	Total permits	23	12	8	1	2	0	0	0	0	0	0
	Fished permits	13	8	2	0	1	0	0	0	0	0	0
	% of permits fished	57%	67%	25%	0%	50%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	13	6	5	1	2	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Egegik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	3	0	0	0	0	0	0	1	0	0	0
	Fished permits	0	0	0	0	0	0	0	1	0	0	0
	% of permits fished	0%	n/a	n/a	n/a	n/a	n/a	n/a	100%	n/a	n/a	n/a
	Total permit holders	3	0	0	0	0	0	0	1	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	48	38	37	34	30	28	29	24	23	24	24
	Fished permits	44	28	26	24	21	24	23	17	17	14	17
	% of permits fished	92%	74%	70%	71%	70%	86%	79%	71%	74%	58%	71%
	Total permit holders	51	41	39	37	30	31	34	25	23	23	26
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>86</i>	<i>56</i>	<i>50</i>	<i>39</i>	<i>36</i>	<i>32</i>	<i>31</i>	<i>28</i>	<i>24</i>	<i>25</i>	<i>24</i>
	<i>Fished permits</i>	<i>60</i>	<i>37</i>	<i>31</i>	<i>26</i>	<i>23</i>	<i>25</i>	<i>23</i>	<i>18</i>	<i>17</i>	<i>14</i>	<i>17</i>
	<i>% of permits fished</i>	<i>70%</i>	<i>66%</i>	<i>62%</i>	<i>67%</i>	<i>64%</i>	<i>78%</i>	<i>74%</i>	<i>64%</i>	<i>71%</i>	<i>56%</i>	<i>71%</i>
	<i>Permit holders</i>	<i>55</i>	<i>42</i>	<i>40</i>	<i>38</i>	<i>31</i>	<i>31</i>	<i>34</i>	<i>26</i>	<i>23</i>	<i>23</i>	<i>26</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Egegik: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Egegik ²	Total Net Lb Landed In Egegik ^{2,5}	Total Ex-Vessel Value Of Landings In Egegik ^{2,5}
2000	48	6	4	40	129	600	13,210,430	\$5,251,922
2001	38	14	4	30	117	574	11,375,007	\$4,672,430
2002	32	20	2	25	102	378	23,218,722	\$11,344,570
2003	34	13	2	26	116	561	14,274,413	\$7,206,033
2004	27	16	3	20	104	693	61,293,040	\$31,325,919
2005	35	16	5	21	102	611	49,578,496	\$30,580,575
2006	33	13	3	21	107	530	43,374,102	\$28,223,187
2007	28	15	4	19	109	575	39,759,242	\$26,094,073
2008	22	19	4	17	105	391	42,094,548	\$31,085,066
2009	21	20	4	16	104	539	67,851,799	\$53,975,342
2010	27	13	4	20	109	718	29,436,776	\$27,667,099

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Egegik: 2000-2010.

Year	Number Of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Egegik: 2000-2010.

Year	Number Of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Egegik: 2000-2010.

Year	Number Of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Egegik: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	7,911,550	11,375,007	23,218,722	14,274,413	61,293,040	49,578,496	43,374,102	39,759,242	42,094,548	67,850,329	29,436,776
<i>Total²</i>	<i>7,911,550</i>	<i>11,375,007</i>	<i>23,218,722</i>	<i>14,274,413</i>	<i>61,293,040</i>	<i>49,578,496</i>	<i>43,374,102</i>	<i>39,759,242</i>	<i>42,094,548</i>	<i>67,850,329</i>	<i>29,436,776</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$4,721,748	\$4,672,430	\$11,344,570	\$7,206,033	\$31,325,919	\$30,580,575	\$28,223,187	\$26,094,073	\$31,085,066	\$53,970,526	\$27,667,099
<i>Total²</i>	<i>\$4,721,748</i>	<i>\$4,672,430</i>	<i>\$11,344,570</i>	<i>\$7,206,033</i>	<i>\$31,325,919</i>	<i>\$30,580,575</i>	<i>\$28,223,187</i>	<i>\$26,094,073</i>	<i>\$31,085,066</i>	<i>\$53,970,526</i>	<i>\$27,667,099</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Egegik Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	309,873	484,388	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	905,790	539,937	559,173	391,287	814,890	818,644	572,727	469,551	462,221	799,926	503,567
<i>Total²</i>	<i>1,215,663</i>	<i>1,024,325</i>	<i>559,173</i>	<i>391,287</i>	<i>814,890</i>	<i>818,644</i>	<i>572,727</i>	<i>469,551</i>	<i>462,221</i>	<i>799,926</i>	<i>503,567</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$32,881	\$38,504	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$602,045	\$223,040	\$270,272	\$194,250	\$417,612	\$500,034	\$366,510	\$310,817	\$343,597	\$634,653	\$449,942
<i>Total²</i>	<i>\$634,926</i>	<i>\$261,544</i>	<i>\$270,272</i>	<i>\$194,250</i>	<i>\$417,612</i>	<i>\$500,034</i>	<i>\$366,510</i>	<i>\$310,817</i>	<i>\$343,597</i>	<i>\$634,653</i>	<i>\$449,942</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that sportfishing and hunting were important aspects of Egegik’s economy. Private anglers typically fish from shore or by private boats owned by both local residents and non-local residents. According to community leaders, species targeted locally include Chinook, coho, and sockeye salmon. In 2010, residents held 8 sportfishing licenses, compared to 15 in 2000. The number of sportfishing licenses held in the community declined steadily between 2000 and 2010. One sport fish guide business was registered in 2006 and another in 2009, although neither were active during those years. Two sport fish guide licenses were issued in 2009. No charter catch record information is available for Egegik.

Egegik is located within the Alaska Peninsula and Aleutian Islands ADF&G Harvest Survey Area which includes all Alaskan waters, including drainages, between Cape Douglas and the community of Naknek. In 2010, overall angler days fished totaled 5,297 days for saltwater fisheries, compared to 10,534 days in 2000; and 33,635 days for freshwater fisheries, compared to 44,976 days in 2000. In that year, non-Alaska resident anglers accounted for 38.4% of saltwater and 58.4% of freshwater angler days fished, compared to 15.8% and 39.5% in 2000, respectively. According to ADF&G Harvest Survey data,³³⁹ private anglers in Egegik target coho salmon. Information regarding sportfishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Egegik: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Egegik²
2000	0	0	15	0
2001	0	0	18	0
2002	0	0	19	0
2003	0	0	14	0
2004	0	0	12	0
2005	0	0	16	0
2006	0	1	14	0
2007	0	1	10	0
2008	0	0	8	0
2009	0	2	9	0
2010	0	0	8	0

³³⁹ Alaska Department of Fish and Game. 2011. Alaska sportfishing Survey results, 2000 – 2010. ADF&G Division of sport fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Egegik: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Residents of Alaska Peninsula communities harvest caribou from the Mulchatna and Alaska Peninsula herds. The subsistence harvest of moose in the Borough region occurs primarily in the Nushagak drainage, Iliamna Lake area, and on the Alaska Peninsula. Subsistence hunters also harvest small game and birds throughout the region with geese, ptarmigan, and ducks receiving the most attention. Residents of coastal communities along the Bristol Bay side of the peninsula gather seaweed, crab, cockles, clams, and marine fish year-round. In late summer and fall, people throughout the region pick blueberries, cranberries, huckleberries, blackberries, and salmon berries. In the spring, villagers gather wild celery, spinach, and bird eggs. During winter, a few residents of each community trap furbearers. The catch varies by area but beaver, land otter, mink, and fox are most commonly taken. Some meat is used for subsistence purposes, but the primary objective is to sell the furs to supplement their cash income.³⁴⁰ In a survey conducted by the AFSC in 2011, community leaders reported that salmon, moose, and berries are the three most important subsistence resources to Egegik residents.

³⁴⁰ LaRoche & Associates. (2011). *Lake & Peninsula Borough Coastal Management Plan*. Retrieved March 22, 2012 from: http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

Information regarding subsistence activity is limited, and data regarding subsistence harvest activity by household is unavailable (Table 12). However, data are available regarding total community reported harvests of salmon, halibut and some marine mammal species. Of the species listed by ADF&G in Table 13, sockeye salmon were harvested most, followed by coho, Chinook, chum, and pink salmon. In 2008, residents reported harvesting 1,022 salmon, compared to 572 in 2000. Reported salmon harvests peaked in 2004 at 2,874 fish. In that year, coho salmon made up the majority of salmon harvested at 1,356 fish (Table 13). In 2010, one resident held a Subsistence Halibut Registration Certificate (SHARC) although no halibut was harvested that year (Table 14). Between 2000 and 2008, and estimated 3 beluga whales, 1 walrus, and 38 harbor seals were harvested (Table 15).

According to ADF&G *Community Subsistence Information System*,³⁴¹ marine invertebrate species harvested or used by residents of Egegik include butter clams, chitons, cockles, Dungeness crab, king crab, mussels, octopus, razor clams, sea urchin, shrimp, and Tanner crab. Non-salmon fish harvested or used include capelingcod, Dolly Varden, flounder, grayling, herring, herring roe, herring roe on kelp, lake trout, rainbow trout, steelhead trout, and whitefish. Information regarding subsistence trends can be found in Tables 11 through 15.

Table 12. Subsistence Participation by Household and Species, Egegik: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

³⁴¹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Egegik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	15	12	11	9	233	n/a	319	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	10	7	101	381	1,356	86	950	n/a	n/a
2005	20	15	35	216	439	n/a	963	n/a	43,027
2006	18	13	36	17	514	n/a	503	n/a	n/a
2007	7	7	118	57	260	25	198	n/a	n/a
2008	11	10	45	25	320	3	629	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Egegik: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Egegik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	4	n/a
2001	2	n/a	1	n/a	n/a	6	n/a
2002	n/a	n/a	n/a	n/a	n/a	2	n/a
2003	1	n/a	n/a	n/a	n/a	4	n/a
2004	n/a	n/a	n/a	n/a	n/a	15	n/a
2005	n/a	n/a	n/a	n/a	n/a	1	n/a
2006	n/a	n/a	n/a	n/a	n/a	3	n/a
2007	n/a	n/a	n/a	n/a	n/a	3	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	4	n/a
2010	n/a	n/a	n/a	n/a	n/a	6	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Ekuk (EE-kuk)



People and Place

*Location*³⁴²

Ekuk is located on the east coast of Nushagak Bay, 17 mi south of Dillingham. It is spread out for about 2 mi along a narrow gravel spit that extends from the Ekuk Bluffs in the shape of a hook. The area encompasses 4.7 sq mi of land. Ekuk is not incorporated into a municipality or under the jurisdiction of a borough. The community is located within the Dillingham Census Area.

Demographic Profile

Historically a Yup'ik Eskimo village, Ekuk is now used only as a summer commercial cannery and subsistence-use site.³⁴³ Although not a Census Designated Place (CDP), the Census Bureau recognizes Ekuk as an Alaska Native Village Statistical Area (ANVSA). There were two permanent residents, a man and woman, living in Ekuk in both 2010 and 2000. It is likely that those residents were employed as caretakers for the local cannery, and had held that position at least since the 2000 Census was completed. The median age in 2010 was 82 years, compared to 75 years in 2000. There were a total of 53 housing units that year, compared to 73 in 2000. Of those, only one was owner-occupied.³⁴⁴

*History, Traditional Knowledge, and Culture*³⁴⁵

The word Ekuk means “the last village down,” reflecting that Ekuk is the farthest village south on Nushagak Bay. The Village is mentioned in Russian accounts of 1824 and 1828 as Village Ekouk and Seleniye Ikuk. It is thought that Ekuk was a major Eskimo village at one time. Russians employed Natives as guides for their boats as they navigated up Nushagak Bay to the trading post at Aleksandrovsk after 1818. Before the North Alaska Salmon Company opened a cannery at Ekuk in 1903, many residents had moved to the Moravian Mission at Carmel. In addition, numerous canneries sprang up during 1888 and 1889 on the east and west sides of the bay, which drew many residents away from the village. Ekuk had a school from 1958 to 1974. Today, the cannery watchman's family are the only year-round residents. In the summer, the village comes alive with cannery crews, commercial fishing, and subsistence activities.

³⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁴³ Ibid.

³⁴⁴ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁴⁵ See footnote 342.

Natural Resources and Environment

Ekuk is in a climatic transition zone. The primary influence is maritime, although the arctic climate also affects the region. Average summer temperatures range from 37 to 66 °F (3 to 19 °C); winter temperatures range from 4 to 30 °F (-16 to -1 °C). Annual precipitation averages 20 to 26 inches. Fog and high winds are common during winter months. The Bay is ice-free from June through mid-November.³⁴⁶

The topography surrounding Ekuk was shaped by continental glaciers and consists of wet lowlands, rolling hills, and moraine deposits. Soils in the area are dominated by silty glacial deposits. Lowlands are characterized by streams, small lakes, and ponds associated with wetlands. Upland hills are covered with a thick layer of silty loess.³⁴⁷ Vegetation consists of a mix of moist tundra and spruce stands. Tundra is covered with mosses, lichens, and grasses. Spruce forests are populated with white spruce and paper birch which typically cover moraine hills. Other tree species in the greater area include quaking aspen, black spruce, and cottonwood.³⁴⁸

While the community lacks a hazard mitigation plan, coastal flooding events and erosion have historically impacted the community, as well as the region as a whole. Exposed bluffs in the area are susceptible to erosion from tides and storm surges, often leading to coastal lowland flooding.³⁴⁹ According to Dillingham's 2008 Multi-Hazard Mitigation Plan,³⁵⁰ there is approximately a 0.05% chance of a 5.0 magnitude or above earthquake occurring in the area before 2017.

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Ekuk as of 2010.³⁵¹

Current Economy³⁵²

The Wards Cove Packing Company closed its Ekuk location in 2002. During the cannery's peak, it employed 200 workers each summer and provided a market for about 80 commercial fishing boats and over 160 beach set net sites.³⁵³ As of 2010, Ekuk's economy remained dependant on commercial and subsistence fisheries. Ekuk Fisheries is a main source of seasonal employment. In 2000, per capita income was \$25,000 and the median household income was \$51,250. Median household and per capita income for 2010 is unavailable.

³⁴⁶ Ibid.

³⁴⁷ City of Dillingham. (2006). *City of Dillingham Comprehensive Plan*. Retrieved February 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-2006.pdf>.

³⁴⁸ Palcsak, B.B. and Dorava, J. M. (1994). *Overview of Environmental and Hydrogeologic Conditions at Dillingham, Alaska*. Retrieved February 9, 2012 from: <http://www.dggs.alaska.gov/webpubs/usgs/of/text/of94-0482.PDF>.

³⁴⁹ See footnote 347.

³⁵⁰ City of Dillingham. (2008). *City of Dillingham Multi-Hazard Mitigation Plan*. Retrieved February 10, 2012 from: http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Dillingham_HMP.pdf.

³⁵¹ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*

³⁵² Unless otherwise noted, all monetary data are reported in nominal values.

³⁵³ Bristol Bay Economic Development Corporation. (n.d.). *Our Communities: Ekuk*. Retrieved October 24, 2013 from <http://www.bbtedc.com/web/communities/ekuk.html>.

Governance

Ekuik is unincorporated and not under the jurisdiction of a borough. However, there is a U.S. Bureau of Indian Affairs recognized Tribal government and Choggiung, Ltd. is the Alaska Native Claims Settlement Act (ANCSA) chartered village corporation. The regional ANCSA chartered corporation is the Bristol Bay Native Corporation. The regional ANCSA non-profit corporation is the Bristol Bay Native Association. The closest Alaska Department of Fish and Game (ADF&G) office is located in Dillingham, 17 mi to the north. The closest National Marine Fisheries Service field office is located in Bethel, 170 mi to the northwest. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Kodiak, 235 mi to the southeast.

Infrastructure

*Connectivity and Transportation*³⁵⁴

Air transport is the most frequent means of getting to Ekuik. The Ekuik Village Council owns a 1,200-ft long by 40-ft wide dirt/gravel airstrip. Scheduled and charter flights are available from Dillingham during the summer months. The village has a small dock on the south side. Other private docks are in use. The cannery has two docks and a boat haul-out. Clark's Point, 2 mi to the north, can be reached by snowmachine during winter. The price of round-trip airfare between Anchorage and Dillingham in June 2012 was \$452.³⁵⁵ Chartered flights are available by appointment from Dillingham.

*Facilities*³⁵⁶

As a seasonally-used area, there are no central facilities in Ekuik. One resident has a well. A central electric system is not available. Ward's Cannery operates its own water and sewer system and electrical generator. Their water is drawn from a lake east of the village. Public safety services are provided by state troopers based in Dillingham. Communications services include local and long-distance telephone, local television, and local radio.

*Medical Services*³⁵⁷

Basic medical services are provided in Clark's Point. Additional acute, long-term and specialized services are provided in Dillingham.

³⁵⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵⁵ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

³⁵⁶ See footnote 354.

³⁵⁷ Ibid.

*Educational Opportunities*³⁵⁸

There are no schools located in Ekuk.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The commercial fishing industry has had a large impact on populations living around Nushagak Bay. In 1883, the schooner, Neptune, sailed into Nushagak Bay and conducted a salmon salting operation. In 1884, the first salmon cannery was built by Arctic Packing Company in the community of Kanulik, about 4 mi north of Nushagak Point. In 1888, the Nushagak Packing Company established a cannery on the Clark's Point spit. John W. Clark operated a salting station at the spit prior to the establishment of the cannery. In 1901, the Columbia River Packers Association, the Alaska-Portland Packers Association, and the Alaska Salmon Company built canneries in Nushagak Bay. In 1903, the North Alaska Salmon Company opened a cannery at Ekuk. These canneries operated continuously until the early 1930s.

The commercial salmon fishery peaked between 1908 and 1910. There were approximately 10 canneries operating along the bay at that time, and population in the Nushagak Bay region was likely around 700 to 800 people; a number that was seasonally augmented by imported labor. Communities were built in association with canneries, and by 1920, the number of canneries in the areas peaked at 25. However, overfishing and commercial fishing restrictions in the 1930s led to their decline and by 1938 only six were still in operation.

The vast majority of commercial fishermen came seasonally from outside the region and state. However, a labor shortage during World War II resulted in more local and indigenous labor being used. By the 1960s, a substantial portion of the Bristol Bay fleet was operated by Nushagak Eskimo fishermen.

Historical sources and oral histories indicate that Nushagak Bay was the site of extensive subsistence activity during the nineteenth century. People living around the bay participated in seasonal activities including caribou hunting trips up the Mulchatna River, ice fishing for ling cod and blackfish, trout fishing on Lake Aleknagik, trapping, seal hunting, dip netting for smelt, and salmon fishing. Nushagak River people would travel to the coast in the late spring to hunt seal, and fish. Fish traps and weirs were used to catch salmon at the mouth of the Nushagak River, and spearing and dip netting were used on the upper Nuyakuk.

Ekuk is located in Federal Reporting Area 514, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. Ekuk is eligible for participation in the Community Development Quota (CDQ) program and is represented by the Bristol Bay Economic Development Corporation. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.³⁵⁹ Managers of CDQ organizations

³⁵⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³⁵⁹ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. The community is located in Federal Reporting Area 508, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District.

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Baltimore-based Friedman Family Fisheries has a small operation in Ekuk. Product is caught, smoked or filleted, processed, and shipped to Maryland for storage. In addition, Ekuk Fisheries processes sockeye, coho, pink, chum, and Chinook salmon.³⁶⁰

Fisheries-Related Revenue

No fisheries-related revenue was collected in Ekuk.

Commercial Fishing

Between 2000 and 2010, no residents held commercial fishing permits. The only two permanent residents during those years were employed as caretakers of the cannery. In 2010, two vessels made landings in Ekuk, compared to 116 in 2000. Eleven vessels were homeported in Ekuk that year, compared to 22 in 2000. Landings made in the community between 2000 and 2010 are considered confidential. Information regarding commercial fishing trends can be found in Tables 1 and 2.

Recreational Fishing

Based on data reported by the ADF&G Division of Sport Fish, there is no evidence of sportfishing taking place in Ekuk. No visitor accommodations or sport fish guide business were recorded as present in the community. No sportfishing licenses were sold in the community or to residents of the community between 2000 and 2010.

Subsistence Fishing

Ekuk is a popular site for subsistence salmon harvesting; however, no data are available regarding subsistence activities. Since the community ceased to be recognized as a Census Designated Place, ADF&G subsistence data for Ekuk are now combined with Clark's Point.³⁶¹

³⁶⁰ Ekuk Fisheries. (n.d.). Retrieved May 31, 2012 from <http://www.ekukfisheries.com/>.

³⁶¹ Fall, J. A.; Krieg, T. M.; and Holen, D. (2009). *An Overview of the Subsistence Fisheries of the Bristol Bay Management Area*. Retrieved July 5, 2012 from: http://www.subsistence.adfg.state.ak.us/specialpubs/SP2_SP2009-007.pdf.

Table 1. Characteristics of the Commercial Fishing Sector in EkuK: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In EkuK ²	Total Net Lb Landed In EkuK ^{2,5}	Total Ex-Vessel Value Of Landings In EkuK ^{2,5}
2000	0	2	2	0	22	116	--	--
2001	0	1	2	0	21	134	--	--
2002	0	0	2	0	18	0	--	--
2003	0	0	1	0	18	0	--	--
2004	0	0	2	0	14	0	--	--
2005	0	1	2	0	14	0	--	--
2006	0	0	2	0	14	0	--	--
2007	0	1	3	0	13	0	--	--
2008	0	3	3	0	12	0	--	--
2009	0	0	3	0	11	0	--	--
2010	0	1	2	0	11	2	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

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Table 2. Landed Pounds and Ex-vessel Revenue, by Species, in Ekuk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	0	0	0	--	0	--	--	0	--
Halibut	--	--	0	0	0	--	0	--	--	0	--
Herring	--	--	0	0	0	--	0	--	--	0	--
Other Groundfish	--	--	0	0	0	--	0	--	--	0	--
Other Shellfish	--	--	0	0	0	--	0	--	--	0	--
Pacific Cod	--	--	0	0	0	--	0	--	--	0	--
Pollock	--	--	0	0	0	--	0	--	--	0	--
Sablefish	--	--	0	0	0	--	0	--	--	0	--
Salmon	--	--	0	0	0	--	0	--	--	0	--
<i>Total²</i>	--	--	0	0	0	--	0	--	--	0	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--
Halibut	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--
Herring	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--
Other Groundfish	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--
Other Shellfish	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--
Pacific Cod	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--
Pollock	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--
Sablefish	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--
Salmon	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--
<i>Total²</i>	--	--	\$0	\$0	\$0	--	\$0	--	--	\$0	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Ekwok (ECK-wock)



People and Place

*Location*³⁶²

Ekwok is located along the Nushagak River, 43 mi northeast of Dillingham and 285 mi southwest of Anchorage. The area encompasses 16.0 sq mi of land and 1.4 sq mi of water. The community was incorporated as a Second-class city in 1974, is located in the Dillingham Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*³⁶³

In 2010, there were 115 residents, ranking Ekwok 231st of 352 communities in terms of population size. Between 1990 and 2010 the population grew by 49.4%. Between 2000 and 2009 the population fell by 16.2% with an average annual growth rate of -2.3%, which was much lower than the statewide average of 0.75% and indicative of an overall decline in population during those years. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 108 permanent residents and 6 non-permanent school teachers living in Ekwok in 2010. The community's population reaches its annual peak in September and is driven by subsistence, recreational, and charter fishing. Information regarding population trends can be found in Table 1.

The racial composition of Ekwok is predominately Yup'ik Eskimo. In 2010, 90.4% of residents identified themselves as American Indian or Alaska Native, compared to 91.5% in 2000. Also in that year, 5.2% of residents identified themselves as White, compared to 6.2% in 2000; and 4.3% identified themselves as two or more races, compared to 2.3% in 2000. Hispanics and Latinos made up 2.6% of the population that year (Figure 1).

In 2010, the average household size was 3.11, compared to 2.50 in 1990 and 3.10 in 2000. In that year, there were 51 total housing units, compared to 39 in 1990 and 56 in 2000. Of the households surveyed in 2010, 55% were owner-occupied, compared to 63% in 2000; 18% were renter-occupied, compared to 13% in 2000; 10% were vacant, compared to 16% in 2000; and 18% were occupied seasonally, compared to 9% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

Gender distribution was slightly skewed in 2010 at 53.0% male and 47.0% female, and similar to both the statewide distribution that year (52.0% male, 48.0% female) and distribution in 2000 (53.1% male, 46.9% female). The median age that year was 27.3 years, which was younger than the statewide median of 33.8 years and 2000 median of 31.5 years.

³⁶² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁶³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

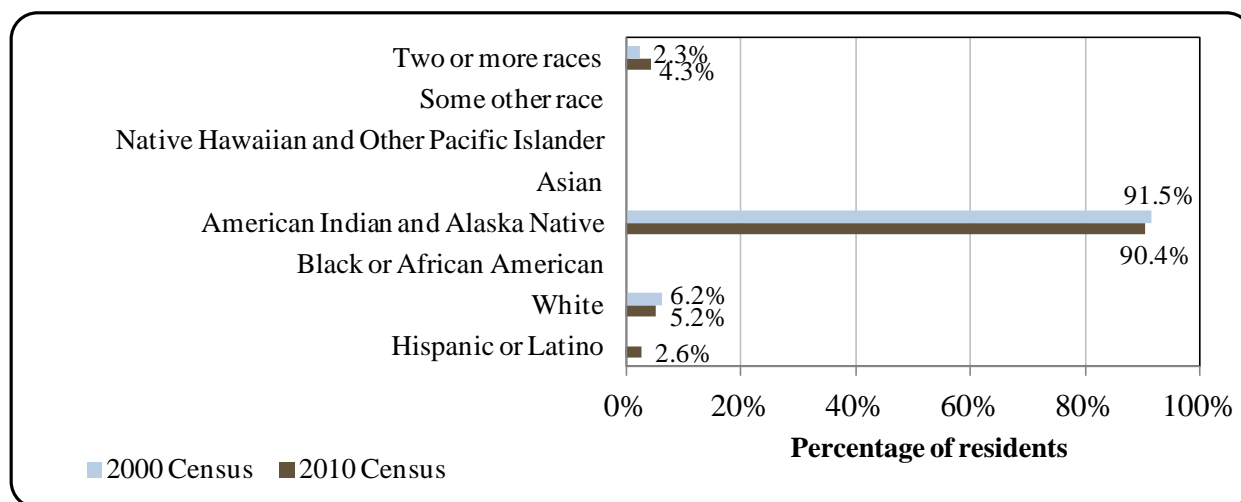
Table 1. Population in Ekwok from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	77	-
2000	130	-
2001	-	119
2002	-	116
2003	-	128
2004	-	127
2005	-	118
2006	-	116
2007	-	108
2008	-	121
2009	-	109
2010	115	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

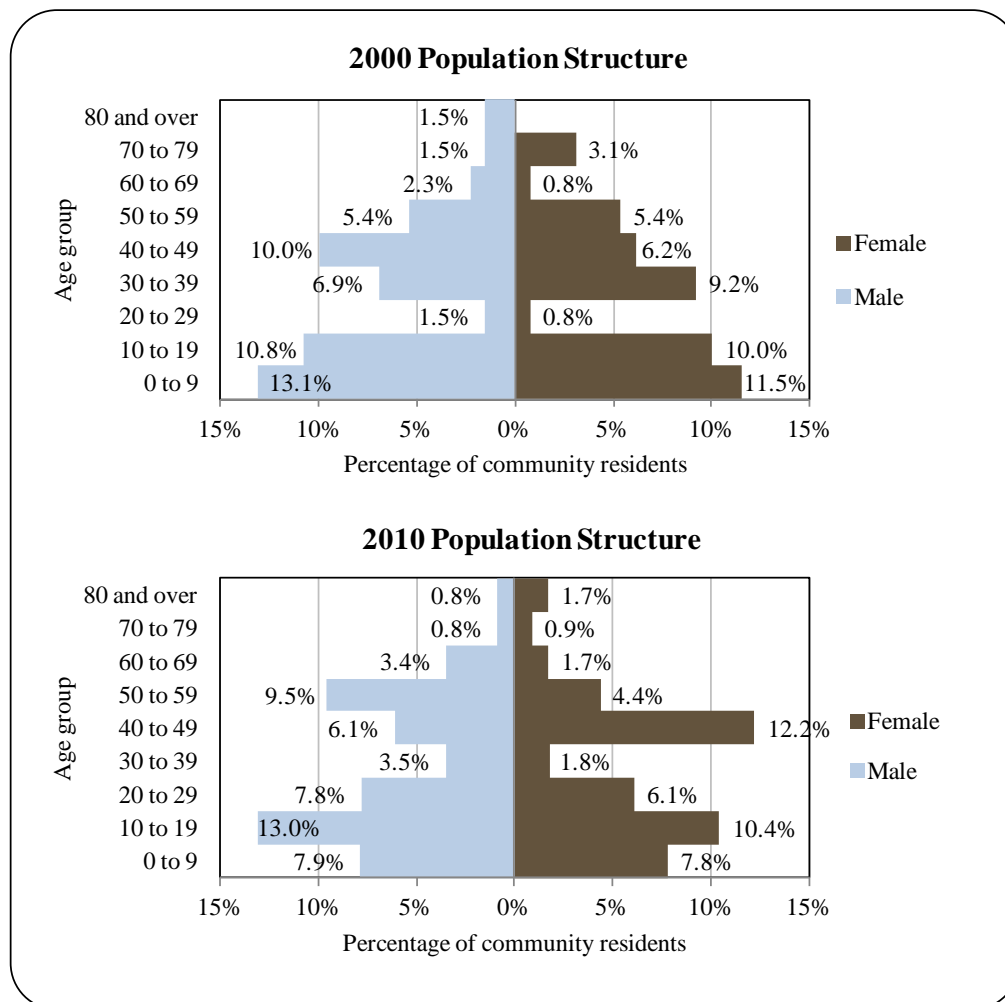
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Ekwok: 2000-2010 (U.S. Census).



Compared with 2000, Ekwok’s population structure was less expansive in 2010. In that year, 39.1% of residents were under the age of 20, compared to 45.4% in 2000; 9.3% of residents were over the age of 59, compared to 9.2% in 2000; 34.5% were between the ages of 30 and 59, compared to 43.1% in 2000; and 13.9% were between the ages of 20 and 29, compared to 2.3% in 2000.

Figure 2. Population Age Structure in Ekwok Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution by age cohort was significantly more skewed in 2010 than it was in 2000. In that year, the greatest absolute gender difference occurred in the 40 to 49 range (12.2% female, 6.1% male), followed by the 50 to 59 (9.5% male, 4.4% female) and 10 to 19 (13% male, 10.4% female) ranges. Of those three, the greatest relative gender difference occurred in the 50 to 59 range. Information regarding Ekwok’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006 to 2010 American Community Survey (ACS)³⁶⁴ estimated that 72.7% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 21.2% of residents had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 6.1% had a ninth to twelfth grade education but

³⁶⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 23.2% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 7.1% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 11.1% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 5.1% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

In 1818, the Russian-America Company established the region's first trading post at the mouth of the Nushagak River.³⁶⁵ Ekwok means "end of the bluff" and is the oldest continuously-occupied Yup'ik Eskimo village on the Ekwok River. During the 1800s, the settlement was used by residents as a fish camp in the spring and summer, and as base for berry picking in the fall. By 1923, it was the largest settlement along the river. In 1930, a U.S. Bureau of Indian Affairs (BIA) school was constructed. Mail was delivered by dog sled from Dillingham until a post office opened in 1941. Many of the earliest homes in Ekwok were located on a low flat area near the riverbank. After a severe flood in the early 1960s, villagers relocated to the current location on higher ground.³⁶⁶

Natural Resources and Environment³⁶⁷

Ekwok is located in a climatic transition zone. The primary influence is maritime, although continental influences impact weather as well. Average summer temperatures range from 30 to 66 °F (-1 to 19 °C) and winter temperatures average from 4 to 30 °F (-16 to -1 °C). Precipitation averages 20 to 35 inches each year. Extremely strong winds are common during winter months. Fog is prevalent during summer months. The Nushagak River is ice-free from June through mid-November and flooding is common in the spring.³⁶⁸

The Nushagak River Lowlands province is largely glaciofluvial with outwash deposits consisting of poorly sorted gravel, sand, and silt. According to local sources, Ekwok has an abundance of gravel. The deposits originated as debris eroded by glacial action and were reworked, partially sorted, and distributed by streams into the Nushagak Valley. In many places, moss or other vegetation cover the terrain. The topography around Ekwok is relatively flat with lowlands on the Nushagak River and rolling terrain to the north.³⁶⁹

Vegetation around Ekwok consists of mixed woodland forest comprised of black spruce, paper birch, and quaking aspen. Typical understory vegetation includes low shrubs such as bog blueberry and dwarf arctic birch. Herbaceous plants include crowberry and lowbush cranberry.³⁷⁰

Avian populations from the North American Pacific Flyway and several Asiatic routes funnel through Bristol Bay semiannually on their way to and from northern nesting grounds.

³⁶⁵ Schichnes, J. and Chythlook, M. (1991). *Contemporary Use of Fish and Wildlife In Ekwok, Koliganek, and New Stuyahok, Alaska*. Retrieved July 2, 2012 from: <http://www.arlis.org/docs/vol1/A/25794521.pdf>.

³⁶⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁶⁷ Ibid.

³⁶⁸ Ekwok Village Council; Ekwok Natives Ltd.; and City of Ekwok. (2005). *Ekwok Community Comprehensive Plan*. Retrieved March 26, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Ekwok-CP-2005.pdf>.

³⁶⁹ Ibid.

³⁷⁰ Ibid.

Ekwok area wetlands support significant populations of these migratory waterfowl, swans, shorebirds, and cranes. Resident bird species include yellow warblers, Wilson’s warblers, common redpolls, fox sparrows, spruce grouse, black-bill magpies, common ravens, tree swallows, and American robins.³⁷¹ Terrestrial wildlife includes moose, caribou, brown and black bears, wolves coyotes, red and arctic fox, wolverines, lynx, otters, mink and weasels, marten, marmot, beavers, muskrat, ground and red squirrels, hares, porcupine, shrews, voles, mice, and lemmings. Fish on the Nushagak River and tributaries include all five species of Pacific salmon, rainbow trout, Dolly Varden, Arctic char, Arctic grayling, and northern pike.³⁷²

Beyond subsistence fisheries, there are no active natural resource exploits in the immediate vicinity of Ekwok. However, the proposed Pebble Mine would impact the community if constructed.³⁷³ On a regional level, it is possible that Pebble Mine could have impacts on subsistence activity, perception of local landscapes, population dynamics, resource availability, and overall community character.³⁷⁴ The probability and magnitude of these impacts were still under review as of April 2012.

Riverine flooding and erosion are the most prevalent environmental hazards facing Ekwok. The Nushagak River experiences seasonal flooding resulting from ice break-up during the spring and flooding can impact drinking water, waste disposal sites, and local infrastructure.³⁷⁵

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation projects active within Ekwok as of 2010.³⁷⁶

Current Economy³⁷⁷

In a survey conducted by the AFSC in 2011, community leaders reported that Ekwok’s economy is reliant on fishing.

The entire population depends on subsistence activities for various food sources. Salmon, pike, moose, caribou, duck, and berries are harvested. A few residents trap, and summer gardens are also popular since families typically do not leave the village to fish for subsistence purposes. Most residents are not interested in participating in a cash economy. The village corporation owns a fishing lodge 2 mi downriver. Gravel is mined near the community.³⁷⁸ Top employers in 2010³⁷⁹ included Ekwok Village Council, Southwest Region Schools, City of Ekwok, Bristol Bay Area Health Corp., Ekwok Natives Ltd., Ekwok Village Council Public Health Facilities, Bristol Bay Native Association, and Peninsula Airways Inc.

³⁷¹ Ibid.

³⁷² U.S. Fish and Wildlife Service. (n.d.). *Togiak National Wildlife Refuge*. Retrieved March 13, 2012 from: <http://togiak.fws.gov>.

³⁷³ Bristol Bay Native Association. (n.d.). *Homepage*. Retrieved March 26, 2012 from: <http://www.bbna.com/landres/>.

³⁷⁴ Langdon, S.; Colt, S.; King, M.; and Sharp, S. (2006). *BBNA Pebble Mine Technical Assistance Project*. Final Report. Retrieved March 26, 2012 from: <http://www.arlis.org/docs/vol1/C/719684256/719684256.pdf>.

³⁷⁵ See footnote 368.

³⁷⁶ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved April 16, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Bristol>.

³⁷⁷ Unless otherwise noted, all monetary data are reported in nominal values.

³⁷⁸ See footnote 366.

³⁷⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

In 2010,³⁸⁰ the estimated per capita income in Ekwok was \$23,636 and the estimated median household income was \$71,875, compared to \$11,512 and \$16,250 in 2000, respectively. After accounting for inflation by converting 2000 values into 2010 dollars,³⁸¹ the real per capital income (\$14,569) and real median household income (\$21,369) indicate that there were substantial increases in both individual and household earnings between 2000 and 2010. In 2010, Ekwok ranked 122nd of 305 communities from which per capita income was estimated and 44th of 299 communities from which median household income was estimated.

Ekwok's small population size may have prevented the ACS from accurately portraying economic conditions.³⁸² Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$877,612 in total wages in 2010.³⁸³ When matched with the population in 2010, the per capita income equals \$7,631, which is significantly lower than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.³⁸⁴ In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.³⁸⁵ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,³⁸⁶ 59.2% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 4.8%, compared to an estimated 5.9% statewide; and an estimated 17.2% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Again, ACS estimates may have misrepresented economic conditions in Ekwok. According to 2010 ALARI estimates, unemployment was 29.3% (based on unemployment insurance claimants).

Of those employed, an estimated 13.2% worked in the private sector, an estimated 75.0% worked in the public sector, and an estimated 11.8% were self-employed. If accurate, the high proportion of self-employed residents estimated by the 2010 ACS may have impacted the accuracy of ALARI estimates, which do not account for self-employed workers.

By industry, most (33.8%) employed residents were estimated to work in public administration sectors; followed by education services, health care and social assistance (26.5%); transportation, warehousing, and utilities (11.8%); arts, entertainment, recreation, accommodations, and food service (11.8%); and agriculture, forestry, fishing, hunting, and

³⁸⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁸¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³⁸² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁸³ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

³⁸⁴ See footnote 379.

³⁸⁵ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

³⁸⁶ See footnote 382.

mining (7.4%) sectors (7.4%). By occupation type, most employed residents were estimated to hold management or professional positions (32.4%); followed by service (27.9%); sales or office (20.6%); production, transportation, or material moving (11.8%); and natural resources, construction, or maintenance (7.4%) positions (Figure 4). Between 2000 and 2010, employment shifted significantly among several sectors. Most notably, there were declines in service (non-public), education services, health care, and social assistance sectors; and growth in agriculture, forestry, fishing, hunting, mining, professional, scientific, management, administrative, and waste management sectors. Most occupation types experienced modest declines during that period although there was an increase in natural resources, construction, and maintenance positions. Again, it should be noted that Ekwok’s relatively small population size may have affected 2006-2010 ACS results for local employment resulting in figures not entirely reflective of local conditions. According to 2010 ALARI estimates, most (63.6%) employed residents worked in local government sectors; followed by education and health service (12.7%); and “other” unclassified (10.9%) sectors.

Figure 3. Local Employment by Industry in 2000-2010, Ekwok (U.S. Census).

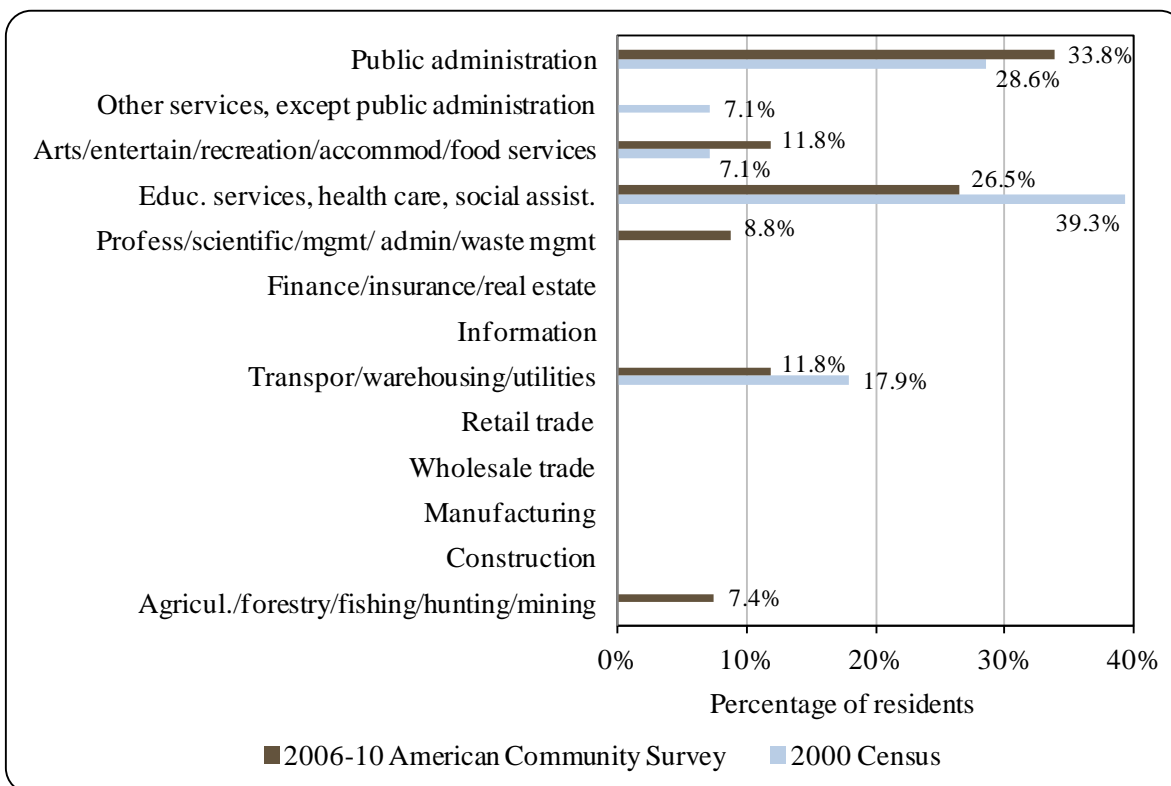
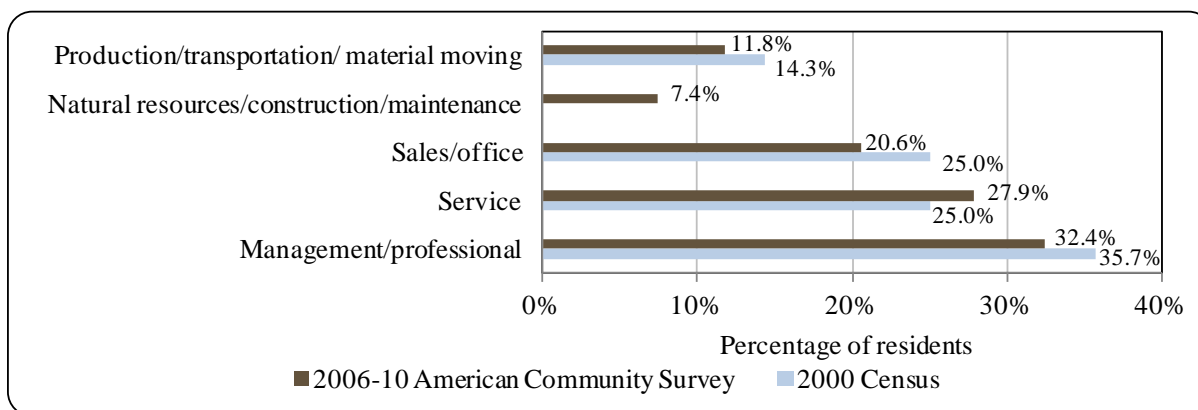


Figure 4. Local Employment by Occupation in 2000-2010, Ekwok (U.S. Census).



Governance

Ekwok is a Second-class city with a mayoral form of government. There is a federally recognized Tribal government and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Ekwok Natives Limited). The regional ANCSA corporation is the Bristol Bay Native Corporation (BBNC). The regional non-profit Native organization is the Bristol Bay Native Association (BBNA). The closest Alaska Department of Fish and Game (ADF&G) office is located in Dillingham, 43 mi southwest. The closest National Marine Fisheries Service (NMFS) office is located in Bethel, 180 mi northwest. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage, 285 mi northeast.

When adjusted for inflation,³⁸⁷ total municipal revenues increased by 7.0% between 2000 and 2010 from \$333,859 to \$462,018. Inflation adjusted revenues peaked in 2006 at \$537,971 (\$592,114 after adjusting for inflation.) In 2010, most locally generated revenues were collected from utility rents and fuel sales. Most outside are collected from Community Revenue Sharing and payments in lieu of taxes. In that year, Ekwok received \$101,467 in state allocated Community Revenue Sharing, which accounted for 22.0% of total municipal revenues that year. This represented an increase from 2000, when \$25,605 of State Revenue Sharing accounted for 7.7% of total revenues. Information regarding community finances can be found in Table 2.

³⁸⁷ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Ekwok from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$333,859	n/a	\$25,605	n/a
2001	\$385,146	n/a	\$24,618	n/a
2002	\$438,743	n/a	\$26,131	n/a
2003	\$429,061	n/a	\$25,909	n/a
2004	\$468,161	n/a	-	n/a
2005	\$517,489	n/a	-	n/a
2006	\$537,971	n/a	-	n/a
2007	\$499,050	n/a	-	n/a
2008	\$478,650	n/a	-	n/a
2009	\$488,410	n/a	\$102,173	n/a
2010	\$462,018	n/a	\$101,467	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*³⁸⁸

Air transport is most frequently used to reach Ekwok. Regular and charter flights are available from Dillingham. The state-owned 3,300-ft long by 75-ft wide gravel runway was rebuilt and lengthened in 2005. Roundtrip airfare between Anchorage and Dillingham in June 2012 was \$452.³⁸⁹ Air charters to Ekwok are available by appointment and float planes land on the Nushagak River. Cargo is brought in during ice-free months from Dillingham by Coastal Marine Transport barge service. There are no docking facilities, but a barge off-loading area exists. Skiffs, All Terrain Vehicles (ATVs), and snowmachines are used for local transportation to other villages.

³⁸⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁸⁹ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

Facilities

Individual wells provide water for the majority of the community. Twenty Housing and Urban Development (HUD) homes have individual wells and a piped septic system. The City operates a piped sewage system with a sewage lift station, which connects to 16 additional residences. The remaining homes use septic systems or a flush/haul system; a sewage pumper is available. Thirty-six of 42 homes have complete plumbing. Refuse collection services are provided. Visitor accommodations include Ekwok Lodge and Maalug's Lodge. Public safety services are provided by a local Village Public Safety Officer (VPSO) and state troopers based in Dillingham. Fire and rescue services are provided by Ekwok Fire and Emergency Medical Services. Additional public facilities include a community center, city hall, Village Council building, school gym, and city jail. Communications services include local and long distance phone, local television and radio, and internet.³⁹⁰

In a survey conducted by the AFSC in 2011, community leaders reported that there is no public dock space available for transient or permanent vessel moorage. Fisheries-related businesses and services located in the community include fish lodges and boat fuel sales. For services not available in Ekwok, residents travel to Dillingham, Anchorage, and Seattle.

*Medical Services*³⁹¹

The Ekwok Clinic is a Community Health Aid Program (CHAP) site which provides basic health care. Acute, long term and specialized care is provided in Dillingham.

*Educational Opportunities*³⁹²

William "Sonny" Nelson School provides kindergarten through 8th grade instruction. In 2011, there were 10 students enrolled and 1 instructor employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Ekwok's involvement in North Pacific Fisheries is closely tied to participation in subsistence harvesting. Semi-nomadic Yup'ik Eskimos (known as *Kiatagmiut*) originally settled around Nushagak and Mulchatna rivers revolving around spring trapping trips to the mountainous interior regions; followed by a transition to fish camps to prepare for salmon fishing. Many families traveled to the coasts in the summer to trade for ivory and seal oil. Once the fur trade was established, these products were exchanged for processed foods and gunpowder. By early September, many returned to winter villages. However, interior hunting and trapping continued until the first snowfall in October. During the winter, whitefish were taken with traps under the ice and grayling with hooks through holes in the ice.

³⁹⁰ See footnote 388.

³⁹¹ Ibid.

³⁹² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

The Bristol Bay salmon fishery is one of the most important commercial salmon fisheries in the world. Annual commercial harvests of salmon since statehood have averaged about 17 million sockeye (91.2% of all salmon), about 880,000 chum (4.7%), about 550,000 pink (3.0%), about 120,000 coho (0.6%), and about 100,000 Chinook salmon (0.5%). Commercial sockeye salmon harvests since 1959 have represented about 56% of statewide commercial harvests for that species. Sockeye salmon are the most important commercial fish in the region, and large runs occur in Egegik and Nushagak River drainages. These fish return to Bristol Bay in late June and early July with most adults entering their spawning stream by late July or early August.³⁹³

Chinook harvests occur mostly in the Nushagak District outside of Dillingham. Coho salmon are underused because fall runs occur after most vessels have ceased fishing efforts. Because of this, coho harvests are directly tied to market conditions rather than abundance. The Togiak River continuously exceeds minimum escapement goals and had relatively few emergency orders issued between 2000 and 2005, compared to other areas within Bristol Bay.³⁹⁴

The Togiak area of Bristol Bay supports the largest herring fishery in the state. Large purses seine and gillnet fleets harvest the spawning herring in a sac roe fishery, and a spawn-on-kelp harvests are also taken by local residents (usually in Togiak Bay). The Togiak sac roe fishery began in 1977, and has supported a fairly stable catch, averaging 40.6 million lb between 1998 and 2002.³⁹⁵

Bristol Bay supports a large, stable red king crab fishery which has been increasing in abundance since the late 1990s. Fishing effort has remained high with an average of 261 active permits between 1998 and 2002. However, no Togiak residents held crab permits or quota between 2000 and 2010.³⁹⁶

The commercial salmon fishery began in the Nushagak region in the 1880s. Local residents of the region were drawn into the seafood processing sector as a source of wage employment. After World War II, all Native cannery crews were common. By the 1960s, Natives has made up a significant portion of local commercial harvesters as well. Earnings from commercial fishing and cannery work became a major annual source of income for many Native families in Bristol Bay.³⁹⁷ In a survey conducted by the AFSC in 2011, community leaders reported that Ekwok does not participate in the fisheries management process in Alaska. However, the community is eligible for the Community Development Quota (CDQ) program and is represented by the Bristol Bay Economic Development Corporation (BBEDC). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.³⁹⁸

³⁹³ LaRoche & Associates. (2011). *Lake & Peninsula Borough Coastal Management Plan*. Retrieved March 22, 2012 from: http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

³⁹⁴ Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

³⁹⁵ Woodby, D. et al. (2005). *Commercial Fisheries in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁹⁶ Ibid.

³⁹⁷ Schichnes, J. and Chythlook, M. (1991). *Contemporary Use of Fish and Wildlife In Ekwok, Koliganek, and New Stuyahok, Alaska*. Retrieved July 2, 2012 from: <http://www.arlis.org/docs/vol1/A/25794521.pdf>.

³⁹⁸ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Ekwok does not have a registered processing plant. The nearest seafood processor is located in Dillingham.

Fisheries-Related Revenue

Between 2000 and 2010, Ekwok received fisheries-related revenue primarily from Shared Fisheries Business Taxes. In 2010, the community received \$5,982, compared to \$4,972 in 2000. Fisheries-related revenues peaked in 2001 at \$8,875. In a survey conducted by the AFSC in 2011, community leaders reported that Ekwok received \$100,000 from the BBEDC in 2010. Information regarding fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that vessels under 35 ft long use Ekwok as a base of operations during fishing seasons. There were five residents who held commercial crew licenses in 2010, compared to thirteen in 2000. In addition, residents held priority ownership of one vessel that year, compared to nineteen in 2000.

In 2010, three residents, or 2.6% of the population, held three permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, six residents, or 4.6% of the population, held seven CFEC permits. All of the permits held by residents in 2010 were for salmon, compared to 2000 when 71% were for salmon and 29% were for herring. Of the CFEC salmon permits issued in 2010, 67% were fished, compared to 80% in 2000. Bristol Bay drift gillnet salmon was the only fishery prosecuted by residents of Ekwok in 2010.³⁹⁹ The herring fishery in Ekwok has been in decline since 1990 when residents held approximately equal numbers of both herring and salmon permits.⁴⁰⁰ By 2003, no herring permits were held by residents. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) groundfish or crab permits. In addition, no residents held halibut, sablefish, or crab quota between 2010 and when the programs began.

No commercial landings were reported in Ekwok between 2000 and 2010. While landings were made in other ports by residents of Ekwok in those years, all information pertaining to poundage and ex-vessel value of landings is considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

³⁹⁹ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁰⁰ See footnote 397.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Ekwok: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$2,486	\$4,437	\$3,835	\$3,800	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$2,486	\$4,437	\$3,835	\$3,136	\$2,744	\$3,310	\$4,073	\$4,836	\$4,563	\$5,681	\$5,602
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$21	\$55	\$209	n/a	\$380
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$4,972	\$8,875	\$7,671	\$6,936	\$2,744	\$3,310	\$4,095	\$4,891	\$4,773	\$5,681	\$5,982
Total municipal revenue⁵	\$333,859	\$385,146	\$438,743	\$429,061	\$468,161	\$517,489	\$537,971	\$499,050	\$478,650	\$488,410	\$462,018

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Ekwok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	2	1	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	1	1	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Ekwok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	5	4	3	3	3	3	3	3	3	3	3
	Fished permits	4	3	2	3	2	3	2	2	2	2	2
	% of permits fished	80%	75%	67%	100%	67%	100%	67%	67%	67%	67%	67%
	Total permit holders	5	4	3	4	3	3	3	3	3	3	3
<i>Total CFEC Permits²</i>	<i>Permits</i>	7	5	4	3	3	3	3	3	3	3	3
	<i>Fished permits</i>	4	3	2	3	2	3	2	2	2	2	2
	<i>% of permits fished</i>	57%	60%	50%	100%	67%	100%	67%	67%	67%	67%	67%
	<i>Permit holders</i>	6	4	3	4	3	3	3	3	3	3	3

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Ekwok: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Ekwok ²	Total Net Lbs Landed In Ekwok ^{2,5}	Total Ex-Vessel Value Of Landings In Ekwok ^{2,5}
2000	13	0	0	19	16	0	0	\$0
2001	6	0	0	19	16	0	0	\$0
2002	1	0	0	17	15	0	0	\$0
2003	2	0	0	14	12	0	0	\$0
2004	6	0	0	15	13	0	0	\$0
2005	3	0	0	2	2	0	0	\$0
2006	7	0	0	2	2	0	0	\$0
2007	4	0	0	3	2	0	0	\$0
2008	2	0	0	3	3	0	0	\$0
2009	1	0	0	1	1	0	0	\$0
2010	5	0	0	1	1	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Ekwok: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Ekwok: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Ekwok: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Ekwok: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Ekwok Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing on the Nushagak River is popular with both Alaska residents and non-Alaska residents and Ekwok’s relatively close proximity to Dillingham makes it a popular destination for private anglers. In a survey conducted by the AFSC in 2011, community leaders reported that there are six recreational fishing lodges within close range of Ekwok. In 2010, there were two sport fish guide businesses, compared to three in 2000. However, no registered sport fish guide businesses were active between 2000 and 2010. Also in 2010, four sport fish guide licenses were issued, compared to five in 2000. The number of sport fish guide licenses issued in the community peaked in 2004 at seven. Finally, 33 sportfishing licenses were issued to residents and 66 sold in the community, compared to 26 and 51 in 2000, respectively. Local sales of sportfishing licenses peaked in 2004 at 102 licenses sold.

Ekwok is located within the Nushagak, Wood River and Togiak ADF&G Harvest Survey Area, which includes the Nushagak River, Mulchatna River, Wood River, and Tilchik Lake drainages, as well as water westward to Cape Newenham.⁴⁰¹ Overall, there was a steady decline in freshwater angler days fished in the survey area between 2000 and 2010. In 2010, total freshwater angler days fished totaled 23,385 days, compared to 43,083 in 2000. In that year, non-Alaska residents accounted for 89% of angler days fished, compared to 73% in 2000. Between 2000 and 2010, there was significantly less saltwater angler days fished than freshwater. In 2009, there was 147 total saltwater angler days fished, compared to 429 in 2000. No kept/released charter data are available for Ekwok.

In a survey conducted by the AFSC in 2011, community leaders reported that sportfishing in the area is conducted by private boats owned by both local residents and non-local residents. Private anglers target all five species of Pacific salmon, rainbow trout, northern pike, and Arctic grayling.⁴⁰² Information regarding sportfishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Ekwok: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Ekwok ²
2000	0	5	26	51
2001	0	4	28	46
2002	0	4	33	41
2003	0	5	33	73
2004	0	7	30	102
2005	0	5	33	100
2006	0	4	37	68
2007	0	5	43	62
2008	0	4	39	72
2009	0	2	39	54
2010	0	4	33	66

⁴⁰¹ Alaska Department of Fish and Game. (n.d.). *Alaska Sport Fishing Survey*. Retrieved February 13, 2012 from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/index.cfm?ADFG=area.home>.

⁴⁰² River King Outfitters. (n.d.). *Homepage*. Retrieved March 27, 2012 from: <http://www.riverkingoutfitters.com/>.

Table 11 cont'd. Sport Fishing Trends, Ekwok: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	n/a	44	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence is of central importance to the community of Ekwok for reasons both cultural and economic. In a survey conducted by the AFSC in 2011, community leaders reported that the subsistence season typically runs from the beginning of May through the end of September. The community of Ekwok is part of a larger network of subsistence communities which rely heavily on the Nushagak River system of drainages and areas north of Lake Iliamna. Subsistence activities are concentrated heavily within the Newhalen and Nondalton areas northeast of Ekwok.⁴⁰³ According to the ADF&G *Community Subsistence Information System*,⁴⁰⁴ marine invertebrates used and/or harvested by Ekwok residents includes butter and razor clams; marine mammals use and/or harvested includes bearded seal, bowhead whale, harbor seal, and Steller

⁴⁰³ Stephen R. Braund & Associates and ADF&G Division of Subsistence. (2012). *Subsistence & Traditional Knowledge Studies*. Retrieved July 2, 2012 from: <http://www.arlis.org/docs/vol2/Pebble/2012%20Agency%20Meetings/29%20Subsistence%20and%20Traditional%20Resources%20-%20Steven%20Braund.pdf>.

⁴⁰⁴ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

sea lion; and non-salmon fish used and/or harvested includes blackfish, burbot, Dolly Varden, flounder, Arctic grayling, herring (roe and food), lake trout, northern pike, rainbow trout, smelt, sucker, and whitefish. Salmon harvesting is conducted primarily by gillnet within the Bristol Bay region. Blackfish and burbot are harvested by use of traps and set hooks. Handline jigging through ice is popular in winter fishing for Arctic grayling, Arctic char, Dolly Varden, lake trout, rainbow smelt, rainbow trout, whitefish, and northern pike. Set gillnets are used for Arctic grayling, Arctic char, Dolly Varden, lake trout, longnose suckers, rainbow trout, northern pike, burbot, and whitefish. Dip nets are used for rainbow smelt.⁴⁰⁵

Contemporary research of subsistence activities in Ekwok is very limited. In 2006, ADF&G attempted to conduct a household subsistence survey in Ekwok; however, the community declined to participate.⁴⁰⁶ Information regarding subsistence participation by household and subsistence participation in halibut, marine invertebrate, non-salmon fish, and marine mammal harvests are unavailable. A 1991 study by ADF&G found that Ekwok residents had some of the highest subsistence harvests in the state of Alaska at 797 lb per capita. In that study, 57% of the overall harvest consisted of salmon, followed by moose and caribou.⁴⁰⁷

Of the species listed by ADF&G in Table 13, Chinook salmon was harvested most by residents, followed by sockeye, coho, chum, and pink salmon. In 2008, residents reported harvesting 1,902 salmon, compared to 3,946 in 2000; which was the year salmon harvests peaked. In 2008, 23 residents, or 19% of the population, held subsistence salmon permits. That year represented the highest proportion of subsistence salmon permits held between 2000 and 2008. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Ekwok: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁴⁰⁵ Fall, J. A. et al. (2008). *Alaska Subsistence Salmon Fisheries 2008 Annual Report*. Retrieved July 2, 2012 from: <http://www.adfg.alaska.gov/techpap/TP359.pdf>.

⁴⁰⁶ Northern Dynasty Mines Inc. (2007). *Draft Environmental Baseline Studies Proposed 2007 Study Plans*. Retrieved July 2, 2012 from: <http://dnr.alaska.gov/mlw/mining/largemine/pebble/plans/2007-plans/2007sp13.pdf>.

⁴⁰⁷ Schichnes, J. and Chythlook, M. (1991). *Contemporary Use of Fish and Wildlife In Ekwok, Koliganek, and New Stuyahok, Alaska*. Retrieved July 2, 2012 from: <http://www.arlis.org/docs/vol1/A/25794521.pdf>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Ekwok: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	19	19	669	780	731	165	1,601	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	19	15	960	77	77	47	730	n/a	n/a
2005	22	20	778	72	111	n/a	428	n/a	n/a
2006	15	13	616	68	249	14	552	n/a	n/a
2007	19	18	647	72	226	n/a	322	n/a	n/a
2008	23	22	781	165	247	48	661	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Ekwok: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Ekwok: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Igiugig (ig-ee-UH-gig)



People and Place

*Location*⁴⁰⁸

Igiugig is located on the Alaska Peninsula on the south shore of the Kvichak River, which flows from Iliamna Lake. It is 50 mi northeast of King Salmon and 48 mi southwest of Iliamna. The community occupies 19.8 sq mi of land and 1.3 sq mi of water. It is unincorporated and under the jurisdiction of the Lake and Peninsula Borough.

*Demographic Profile*⁴⁰⁹

In 2010, there were 50 residents, ranking Igiugig 296th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population increased by 51.5%. Between 2000 and 2009, the population fell by 9.4% with an average annual growth rate of 1.25%, indicating a variable population trend. Information regarding population trends can be found in Table 1.

Historically an Eskimo village, the population is now primarily Alutiiq. In 2010, 40.0% of residents identified themselves as American Indian or Alaska Native, compared to 71.7% in 2000; 28.0% identified themselves as White, compared to 17.0% in 2000; and 32.0% identified themselves as two or more races, compared to 11.3% in 2000. In addition, 12% of residents identified themselves as Hispanic or Latino, compared to 1.9% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 3.13, compared to 2.50 in 1990 and 3.31 in 2000. In that year, there were a total of 19 housing units, compared to 16 in 1990 and 20 in 2000. Of the households surveyed in 2010, 42% were owner-occupied, compared to 65% in 2000; 42% were renter-occupied, compared to 15% in 2000; 5% were vacant, compared to 0% in 2000; and 11% were occupied seasonally, compared to 20% in 2000. No residents lived in group quarters between 1990 and 2010.

The gender distribution was biased towards females in 2010 at 52.0% female and 48.0% male. This was more skewed towards females than the statewide distribution (52.0% male, 48.0% female), although less skewed than the distribution in 2000 (56.6% female, 43.4% male). Also in 2010, the median age was 22.0 years, which was significantly younger than both the statewide median of 33.8 years, and 2000 median of 36.3 years.

The population structure was more expansive in 2010 than in 2000. In that year, 40.0% of residents were under the age of 20, compared to 35.1% in 2000; 8.0% were over the age of 59,

⁴⁰⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁰⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

compared to 7.4% in 2000; 30.0% were between the ages of 30 and 59, compared to 46.9% in 2000; and 22.0% were between the ages of 20 and 29, compared to 0.0% in 2000.

Gender distribution by age cohort was less even in 2010, than in 2000. In that year, the greatest absolute gender difference occurred with both the 0 to 9 (10.0% male, 6.0% female) and 10 to 19 (14.0% female, 10.0% male) ranges, followed by the 50 to 59 (6.0% female, 2.0% male) and 70 to 79 (4.0% male, 2.0% female) ranges. Of those three, the greatest relative gender difference occurred within the 70 to 79 range (Figure 2).

Table 1. Population in Igiugig from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	33	-
2000	53	-
2001	-	55
2002	-	43
2003	-	50
2004	-	55
2005	-	50
2006	-	53
2007	-	32
2008	-	40
2009	-	48
2010	50	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Igiugig: 2000-2010 (U.S. Census).

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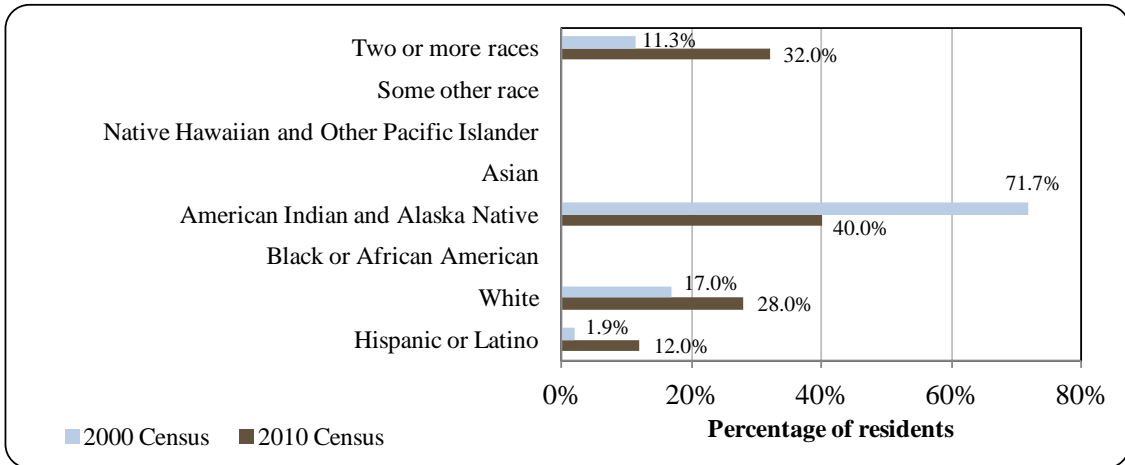
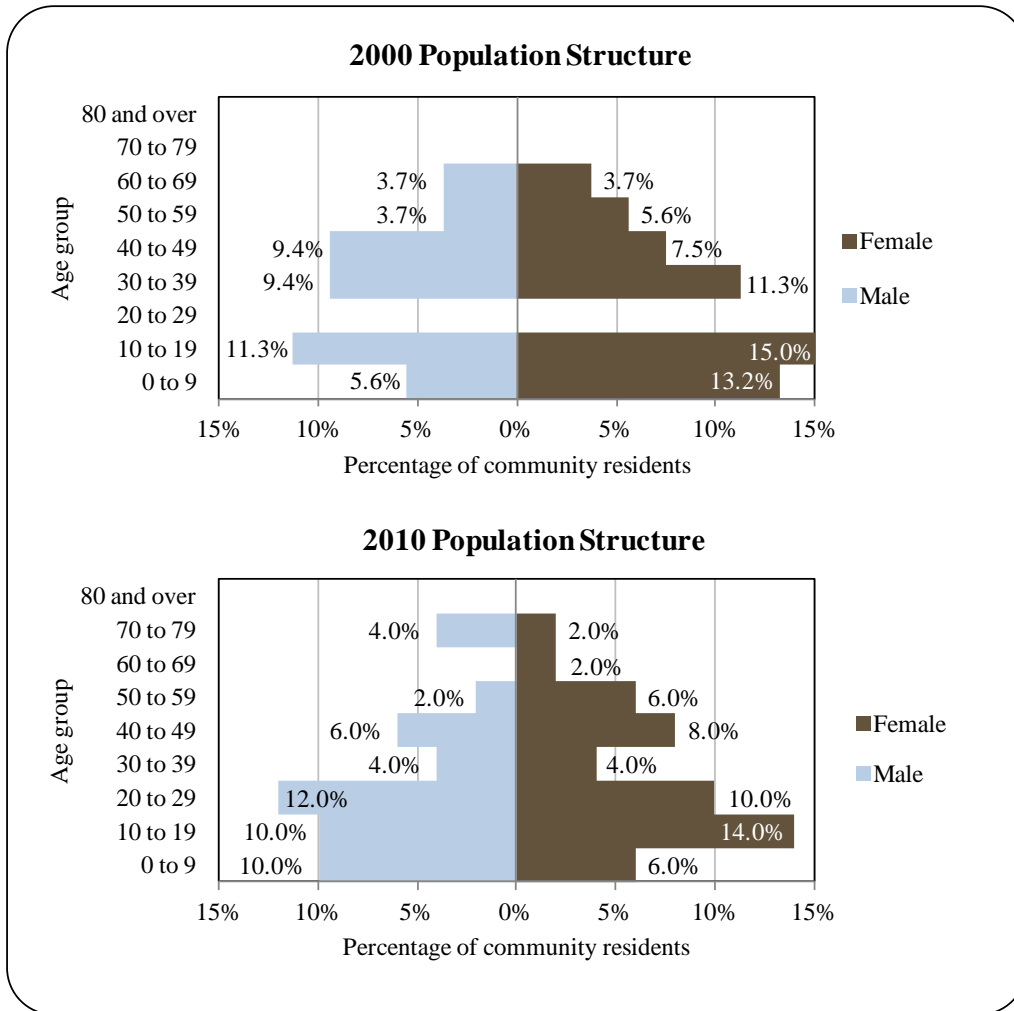


Figure 2. Population Age Structure in Igiugig Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)⁴¹⁰ estimated that 23.5% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 76.5% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; no resident had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; and no resident had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; and no resident held a Bachelor’s degree, compared to an estimated 17.4% of Alaska residents overall.

⁴¹⁰ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*⁴¹¹

In Yup'ik, Igiugig means “like a throat that swallows water,” which describes its location at the mouth of the Kvichak River where it draws water from Lake Iliamna.⁴¹² Kiatagmuit Eskimos originally lived on the north bank of the Kvichak River in the village of Kaskanak and used Igiugig as a summer fish camp. At the turn of the century, these people moved upriver to the present site of Igiugig. People from Branch also moved to Igiugig as it began to develop. Around 1905, Laplander reindeer stations were built near the village. Today, about one-third of residents can trace their roots back to the Branch River village. A post office was established in 1934 but was discontinued in 1954.⁴¹³

Igiugig is a close knit village centered on family and community. Traditional subsistence values and lifestyles continue to sustain their culture and many residents continue to engage in traditional trades like skin sewing, basket making, and ivory carving.⁴¹⁴

Natural Resources and Environment

Igiugig lies within the transitional climatic zone. Average summer temperatures range from 42 to 62 °F; winter temperatures average 6 to 30 °F. The record high is 91 °F, and the record low is -47 °F. Precipitation averages 26 inches annually, with 64 inches of snow.⁴¹⁵

Igiugig lies on the west end of Lake Iliamna at the head of the Kvichak River, north of the Katmai National Park and Preserve. Important Kvichak River drainages include Kaskanak, Yellow, and Bear creeks. The mixed landscape includes mountains, rivers, tundra, marshy lowlands, and ponds. Bedrock consists of middle Tertiary volcanic rock. Lake Iliamna covers more than 1,000 sq mi of the Alaska Peninsula region, and is more than 2,000 ft deep in areas. Uplands consist of tundra and barrens, and elevations above 1,500 ft are sparsely vegetated.⁴¹⁶

All five species of Pacific salmon spawn in the Kvichak and Alagnak river systems. Other freshwater species within the area include Northern pike, blackfish, burbot, whitefish (round/white), rainbow trout, Dolly Varden, lake trout, Arctic grayling, smelt, and least cisco. Mammals include brown bears, moose, caribou, red fox, wolf, lynx, wolverine, river otter, mink, marten, weasel, porcupine, snowshoe hare, red squirrel, beaver, and freshwater seal.⁴¹⁷

Two mineral occurrences exist on opposite sides of Lake Iliamna. The Anelon gold prospect is located near Newhalen on the north side of the lake. The Aukney gold prospect is located on the north side of Big Mountain.⁴¹⁸ The Pebble copper/molybdenum prospect site is located approximately 25 mi north of Newhalen, at the divide between the Kaktuli River and

⁴¹¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴¹² Community of Iliamna. (2001). *Igiugig Village Community Comprehensive Strategic Plan*. Retrieved October 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Igiugig-SAP-2001.pdf>.

⁴¹³ See footnote 411.

⁴¹⁴ See footnote 412.

⁴¹⁵ See footnote 411.

⁴¹⁶ Alaska Department of Natural Resources. (n.d.). *Region 10: Western Iliamna Lake, Kvichak River*. Retrieved October 17, 2012 from: http://dnr.alaska.gov/mlw/planning/areaplans/bristol/pdf/bbap_ch3_reg10.pdf

⁴¹⁷ National Park Service. (n.d.). *Katmai National Park and Preserve: Animals*. Retrieved October 17, 2012 from: <http://www.nps.gov/katm/naturescience/animals.htm>.

⁴¹⁸ See footnote 416.

Upper Talarik Creek.⁴¹⁹ Northern Dynasty Minerals Limited calls the Pebble deposit, “one of the greatest stores of mineral wealth ever discovered,” and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion pounds of copper, 66.9 million ounces of gold and 3.3 billion pounds of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion pounds of copper, 40.4 million ounces of gold and 2.3 billion pounds of molybdenum.⁴²⁰ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, an important salmon-producing watershed in the Bristol Bay area.⁴²¹ The Alaska Peninsula-Bristol Bay region is underlain by gold laced Mesozoic and Tertiary sediments which support potential coal bed methane and oil deposits in shallow areas. Most potential oil and gas reserves lie between Kvichak Bay and Lake Iliamna. Although not suitable for commercial harvest, timber resources are located along the Kvichak and Alagnak River valleys.⁴²²

According to the *Lake and Peninsula Borough Hazard Mitigation Plan*, erosion and wildfire are of chief concern to residents. River bank erosion and wave action from Lake Iliamna constantly alter the local landscape and residents report that the beach, fish camp, and smoke house have all been lost. Residents also believe that the lake level has been rising. The power house and bulk fuel facilities are in immediate danger of erosion, and eventually the entire community will be threatened. Mitigation measures include geotextile fabricated roads, riprap along shorelines and riverbanks, and structure relocation. Wildfire from dry vegetation and high winds create additional risks to the community. Mitigation measures include the acquisition of a fire engine, and the construction of a firebreak around the community.⁴²³

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active in Igiugig in 2010.⁴²⁴

Current Economy⁴²⁵

Igiugig’s economy is dependent on commercial and subsistence fishing and most residents participate in both activities. Seasonal employment, such as tourism and construction, is also available and there are several locally-owned hunting/fishing lodges within the vicinity of Igiugig. Local government and the school provide year-round employment.⁴²⁶ On a regional level, many residents within the Lake Iliamna area travel to Naknek each summer to fish or work in the seafood processing industry.⁴²⁷

⁴¹⁹ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky. 2008. “Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process.” *Alaska Law Review* 25:1.

⁴²⁰ Northern Dynasty Minerals Limited. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

⁴²¹ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁴²² See footnote 418.

⁴²³ Missal, J. and M. Smith. (2009). *Lake and Peninsula Borough Multi-Hazard Mitigation Plan*. Retrieved September 6, 2012 from:

http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

⁴²⁴ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved October 17, 2012 from: http://dec.alaska.gov/spar/csp/sites/big_mountain.htm.

⁴²⁵ Unless otherwise noted, all monetary data are reported in nominal values.

⁴²⁶ See footnote 412.

⁴²⁷ See footnote 416.

In 2010,⁴²⁸ the estimated per capita income was \$7,171 and the estimated median household income was \$23,250, compared to \$13,172 and \$21,750 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,⁴²⁹ the real per capita income (\$17,321) and real median household income (\$28,601) indicate significant declines in both personal and household earnings. In 2010, Igiugig ranked 302nd of 305 communities from which per capita income was estimated, and 266th of 299 communities from which median household income was estimated. This ranked Igiugig among the lowest of Alaskan communities in terms of collective earnings.

However, Igiugig's small population size may have prevented the ACS from accurately portraying economic conditions.⁴³⁰ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$725,383 in total wages in 2010.⁴³¹ When matched with the 2010 Decennial Census population, the per capita income equals \$14,508, which is significantly greater than the 2010 ACS estimate. This suggests that caution should be used when comparing 2000 Decennial Census and 2010 ACS figures.⁴³²

According to 2006-2010 ACS estimates,⁴³³ an estimated 50.0% of residents aged 16 and older were part of the civilian labor force in 2010. Of those employed, an estimated 100% worked in the public sector. Also in that year, unemployment was estimated at 0.0%, compared to 5.9% statewide; and an estimated 23.4% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Again, Igiugig's small population may have prevented the ACS from accurately capturing economic conditions, including the unemployment rate. According to 2010 ALARI estimates,⁴³⁴ the local unemployment rate was 11.9% based on unemployment insurance claimants. It should be noted that employment and worker characteristics data compiled within ALARI estimated that there were 42 residents aged 16 and over in Igiugig in 2010; which also conflicts with 2010 Decennial Census population statistics.

By industry, most (85.7%) employed residents were estimated to work in education services, health care, and social assistance sectors; followed by an estimated 14.3% in public administration sectors. Between 2000 and 2010, there was a strong consolidation of employment in education, health care, and social assistance sectors; while transportation, warehousing, and utilities sectors experienced significant declines (Figure 3). According to 2010 ALARI estimates, most (67.6%) employed residents worked in local government sectors; followed by construction

⁴²⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴²⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴³⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴³¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁴³² Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴³³ See footnote 430.

⁴³⁴ See footnote 432.

(17.6%); education and health service (5.9%), and trade, transportation, and utilities sectors (2.9%). By occupation type, most (71.4%) employed residents held management or professional positions; followed by service positions (28.6%). Between 2000 and 2010, there were significant gains in service, management, and professional occupations; while production, transportation, material moving, sales, and office positions experienced significant declines (Figure 4).

No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

Figure 3. Local Employment by Industry in 2000-2010, Igiugig (U.S. Census).

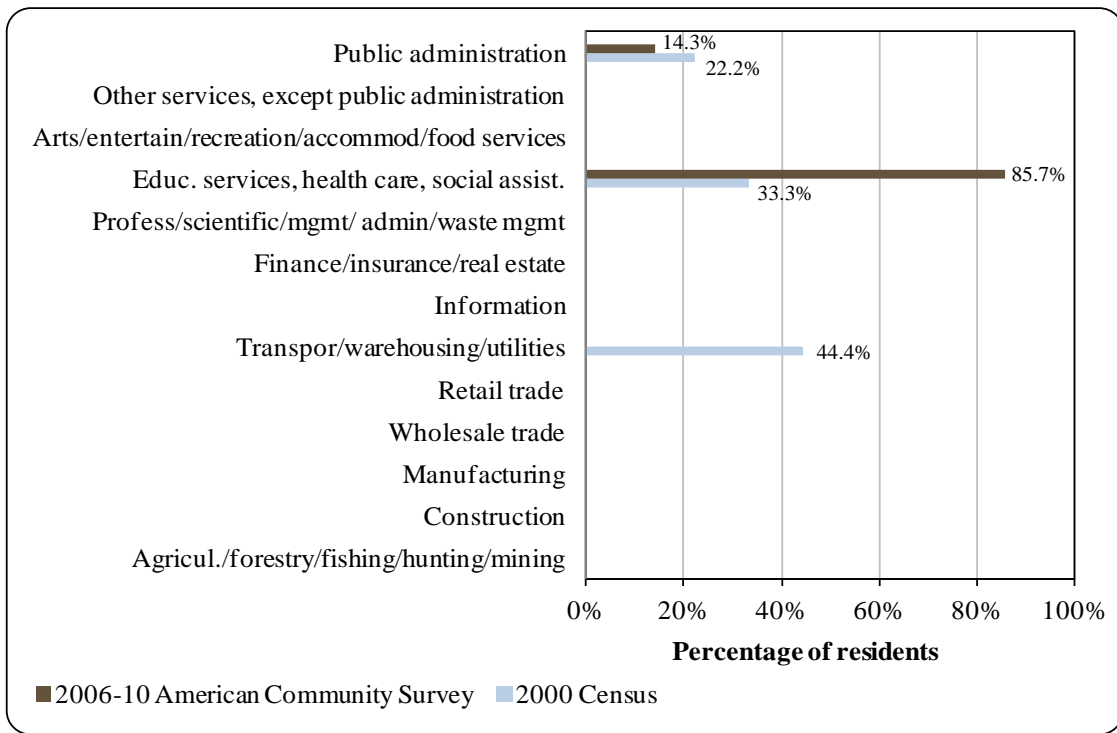
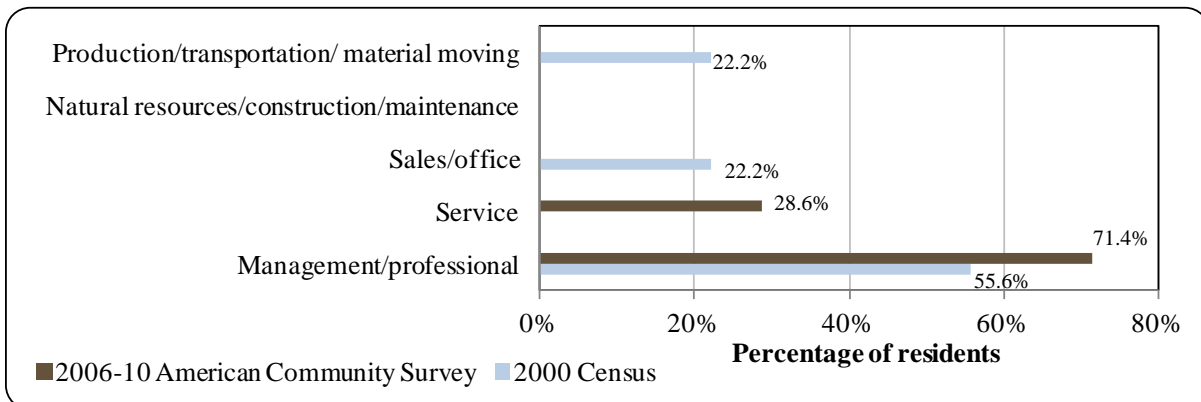


Figure 4. Local Employment by Occupation in 2000-2010, Igiugig (U.S. Census).



Governance

Igiugig is unincorporated although under the jurisdiction of the Lake and Peninsula Borough. There is a U.S. Bureau of Indian Affairs recognized tribal council and Alaska Native Claims Settlement Act (ANCSA) chartered village corporation (Igiugig Native Corporation). The ANCSA-recognized regional corporation is the Bristol Bay Native Corporation and the local ANCSA-chartered non-profit is the Bristol Bay Native Association.

The nearest U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage. The closest Alaska Department of Fish and Game (ADF&G) office is located in King Salmon. The nearest National Marine Fisheries Service (NMFS) enforcement office is located in Homer.

Because it is unincorporated, Igiugig is unable to collect local taxes or fees (Table 2). However, the Lake and Peninsula Borough administers a 2% raw fish tax, 6% accommodations tax, \$3 per person/day guide tax, and a \$1 per person/day lodge and day guide tax.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Igiugig from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Igiugig is accessible by water and air. Charter flights are available from Iliamna and King Salmon. The state owns and maintains a 3,000-ft long by 75-ft wide gravel runway. A small public dock is available. Barges deliver goods from Naknek or Dillingham in the fall. Igiugig Corporation operates a barge system on Lake Iliamna.⁴³⁵ Roundtrip airfare from Anchorage to Dillingham (the nearest airport where charters fly for access to Igiugig) in June 2012 costs \$452.⁴³⁶

Facilities

Water is derived from the Kvichak River. Attempts to drill community wells in the 1970s found inadequate water supplies. There is a recreation center and a public library. The village operates a piped water and sewer system, but not all homes are connected. The Igiugig Electric Company, operated by the village council, provides diesel-generated power to the community. Visitor accommodations include Alaska's Clearwater Lodge at Bristol Bay, Kvichak Cabin, and Igiugig Boarding House. Public safety services are provided by local Village Public Safety Officer. Fire and rescue services are provided by Igiugig Village Response Team. Additional public facilities include a recreation center and public library. Communications services include local and long distance telephone, internet (school only) local television, and local radio.⁴³⁷

Medical Services

The Igiugig Village Health Clinic provides residents with medical services and Emergency Services have lake and air access. The clinic is owned by the village council and operated by the Bristol Bay Area Health Corporation. Emergency service is provided by a health aid. The closest hospital is located in Dillingham.⁴³⁸

Educational Opportunities

Igiugig school is part of the Lake and Peninsula School district and offers preschool through 12th grade instruction. In 2011, there were 18 students enrolled and 3 teachers employed.⁴³⁹

⁴³⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴³⁶ Airfare calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

⁴³⁷ See footnote 435.

⁴³⁸ Ibid.

⁴³⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The region surrounding Iliamna Lake is both a historic and contemporary subsistence use area this is heavily used by villages along the Lake and Nushagak/Mulchatna drainages. Most subsistence activity in the region is concentrated around the Nondalton area, north of Kokhanok.⁴⁴⁰ Iliamna Lake and surrounding drainages and lakes provide popular subsistence areas, and many locals rely on sockeye salmon and freshwater seal. Igiugig is located in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 3A, and the Bering Sea Sablefish Regulatory Area. Igiugig is not eligible for either the Community Quota Entity program or the Community Development Quota program.

Igiugig residents participate exclusively in the Bristol Bay salmon fishery, which began in 1888 (although residents did not participate until later). In 1883, the exploratory vessel *Neptune* anchored in Nushagak Bay to assess potential commercial salmon prospects. Plentiful runs prompted a cannery to be built at the village of Kanulik. By the late 1880s, canneries were built at Scandinavian Creek, Kanakanak, and Clark's Point. Gillnetters flocked to the region and by 1890, canneries were producing more product than there were buyers. This posed a problem for packers, who reacted by forming the Alaska Packers Association in order to control production. By 1895, landings in Bristol Bay reached 5 million sockeye and new canneries were built on the Ugashik, Egegik, Naknek, and Kvichak Rivers.⁴⁴¹

The Spanish American War and Klondike Gold Rush bolstered the demand for canned salmon in the late nineteenth and early twentieth Century's. By 1901, there were 18 canneries throughout Bristol Bay, and landings reached 10 million sockeye salmon. Mechanization and industry expansion increased production substantially, causing it to peak in 1912 at 20 million salmon landed by over 1,000 gillnetters. From 1912 to 1917, production ranged between 20 and 25 million. The demand for canned salmon during World War I caused canneries to operate 24 hours a day, seven days a week, and allowed them to report record profits. However, in 1919, ultimately this caused a major crash in sockeye runs throughout Bristol Bay.⁴⁴²

Following the salmon crash, the White Act of 1924 was passed, which mandated a 50% escapement rate and turned the Alaskan salmon fishery over to the federal government to manage. The federal government in turn instituted fishery closures and gear restrictions including the abolishment of powerboats, purse seines, and fish traps; however, the new regulations were rarely enforced during the years immediately following the passage of the White Act.⁴⁴³

Commercial salmon fishing was strong in the 1920s and early 1930s and accounted for 80% of tax revenues collected by local and state governments. However, in 1935, variable runs, foreign encroachment, and the Great Depression stressed the industry and resulted in only 3

⁴⁴⁰ The Pebble Partnership. (2012). *Subsistence & Traditional Knowledge Studies*. Retrieved September 7, 2012 from: <http://www.arlis.org/docs/vol2/Pebble/2012%20Agency%20Meetings/29%20Subsistence%20and%20Traditional%20Resources%20-%20Steven%20Braund.pdf>.

⁴⁴¹ The Bristol Bay Economic Development Corporation. (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved March 14, 2012 from: <http://www.bbsalmon.com/FinalReport.pdf>.

⁴⁴² Ibid.

⁴⁴³ Ibid.

million salmon caught by commercial fishermen, which came close to a total shut-down of the Bristol Bay salmon fishery.⁴⁴⁴

World War II brought significant changes to the Bristol Bay commercial fishing industry. Worker shortages prompted processing plants to hire local labor and local fishermen. In Dillingham, fishermen and cannery workers formed co-ops in 1944 to counter what was seen as an overly influential industry. Following World War II, salmon runs were once again in decline; however, the Pacific Decadal Oscillation and lower ocean productivity was thought to be the cause. Overfishing in the Bering Sea also contributed to declines. By 1955, deep-sea catches by Japanese vessels reached 50 million salmon. Inshore catches, averaged at 6.7 million sockeye annually during the 1950s.⁴⁴⁵

After Alaska became a state in 1959, salmon management responsibility shifted to state managers. In Bristol Bay, this translated into stricter-season management and escapement monitoring. Seasons were regulated according to in-season run strength indicators instead of pre-season forecasts. However, salmon recovery was slow. Bristol Bay salmon fell to historic lows in 1973 when fewer than one million sockeye salmon were harvested commercially. In response, the state blamed Japanese fishing effort and established limits to fishery entry. Following an amendment to Alaska's constitution in 1972, the state issued transferable limited entry permits based on experience and economic dependence to the fishery. In 1976, the United States asserted jurisdiction over much of the outer continental shelf surrounding its coastlines, encompassing the 200-mi Exclusive Economic Zone. The combination of state revisions to the borders of Bering Sea fishing areas and favorable environmental conditions allowed for the beginning of salmon recovery.⁴⁴⁶

Salmon returned to the Bristol Bay region in 1978, when after a weak sockeye season, a surge in pink salmon into the Nushagak River overwhelmed processing capacity for the region. Sockeye returned in force the following year, and strong demands elevated prices over \$1.00 per pound. In 1980, over 64 million sockeye returned to Bristol Bay and subsequent seasons remained strong. By 1988, sockeye prices rose to \$2.40 per pound and average gross earnings by drift boat exceeded \$100,000 and the value of Bristol Bay drift permits surged to almost \$250,000. As permit value rose, entry into the fishery became increasingly contested and litigated and resulted in the state issuing additional permits.⁴⁴⁷

In addition, during this time Chile began exporting farmed salmon to Japan. While insignificant at first, salmon farming began to threaten the Alaska salmon industry and cause a significant drop in prices. A year after salmon prices peaked, they dropped to \$1.09 per pound. By 1991, seafood processors were offering \$0.50 per pound. This resulted in many fishermen striking. Many Alaskan fishermen made accusations of price-fixing from Japanese-owned seafood processors. However, during that time, Bristol Bay still maintained record salmon harvests, with 45 million salmon taken in 1995. Revenues remained high despite low prices due to large harvests.

In previous lean years, production shortages drove prices up. However, the abundance of farmed fish changed this. By 1997, the overall value of Bristol Bay salmon was cut in half from the previous year to \$63 million. Runs immediately after this had modest rebounds followed by more declines. Bristol Bay was declared both a state and federal disaster area and many permit

⁴⁴⁴ Ibid.

⁴⁴⁵ Ibid.

⁴⁴⁶ Ibid.

⁴⁴⁷ Ibid.

holders opted to not participate in the 2001 season. In 2002, additional fishermen as well as several canneries and cold storage facilities opted out as well. In that year, the Bristol Bay drift permit once valued at \$250,000 was valued at less than \$20,000. In addition, total ex-vessel value of the fishery was down 90% from its peak in 1992.⁴⁴⁸

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Igiugig does not have a registered processing plant. The closest seafood processor is located in Naknek.

Fisheries-Related Revenue

Between 2000 and 2010, there was no known fisheries-related revenue generated for the community of Igiugig (Table 3).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Igiugig: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

⁴⁴⁸ Ibid.

Commercial Fishing

In 2010, five residents, or 10% of the population, held five commercial fishing permits issued by the Commercial Fisheries Entry Commission. Between 2000 and 2010, the number of CFEC permits held in the community decreased from its peak of nine in 2000. During those years, no residents held Federal Fisheries Permits (FFP), License Limitation Program (LLP) permits, or crab, halibut, or sablefish quota share. Of the CFEC permits held in 2010, 100% were for salmon, compared to 67% in 2000. CFEC herring permits were held between 2000 and 2003; however, they were only actively fished in 2000.

Residents held four commercial crew licenses in 2010, compared to eight in 2000; which was also the year in which the number of crew licenses held in the community peaked. Residents held majority ownership of one commercial fishing vessel in 2010, which was a significant decline from 2000, when residents held majority ownership of 14 vessels. In addition, the number of commercial fishing vessels homeported in Igiugig declined significantly from 35 in 2000 to 1 in 2006. No commercial fishing vessels were homeported in the community between 2007 and 2010.

Of the CFEC permits held in 2010, 80% were actively fished, compared to 89% in 2000; which was also the year in which permit activity peaked. The Bristol Bay drift gillnet salmon fishery was the only fishery prosecuted by Igiugig residents in 2010. Between 2000 and 2010, no landings were reported in Igiugig. Landings reported by residents are considered confidential with the exception of salmon landings in 2000 and 2001. In 2001, residents landed 152,055 lb of salmon valued at \$64,008 ex-vessel, compared to 155,553 lb valued at \$100,510 in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

Table 4. Permits and Permit Holders by Species, Igiugig: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	3	1	1	0	0	0	0	0	0	0	0
	Fished permits	2	0	0	0	0	0	0	0	0	0	0
	% of permits fished	67%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	1	1	0	0	0	0	0	0	0	0

Table 4 Cont. Permits and Permit Holders by Species, Igiugig: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	6	6	5	4	6	6	4	4	4	4	5
	Fished permits	6	4	3	2	4	2	2	1	3	2	4
	% of permits fished	100%	67%	60%	50%	67%	33%	50%	25%	75%	50%	80%
	Total permit holders	6	6	5	4	6	7	4	4	5	4	5
<i>Total CFEC Permits²</i>	<i>Permits</i>	9	7	6	4	6	6	4	4	4	4	5
	<i>Fished permits</i>	8	4	3	2	4	2	2	1	3	2	4
	<i>% of permits fished</i>	89%	57%	50%	50%	67%	33%	50%	25%	75%	50%	80%
	<i>Permit holders</i>	7	6	5	4	6	7	4	4	5	4	5

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Igiugig: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Igiugig ²	Total Net Lb Landed In Igiugig ^{2,5}	Total Ex-Vessel Value Of Landings In Igiugig ^{2,5}
2000	8	0	0	14	35	0	0	\$0
2001	3	0	0	14	29	0	0	\$0
2002	2	0	0	12	20	0	0	\$0
2003	1	0	0	10	26	0	0	\$0
2004	0	0	0	9	27	0	0	\$0
2005	3	0	0	1	1	0	0	\$0
2006	2	0	0	2	1	0	0	\$0
2007	2	0	0	1	0	0	0	\$0
2008	2	0	0	1	0	0	0	\$0
2009	2	0	0	1	0	0	0	\$0
2010	4	0	0	1	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Igiugig: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Igiugig: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Igiugig: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Igiugig: 2000-2010.

	<i>Total Net Lb¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Igiugig Residents:
2000-2010.

	<i>Total Net Lb¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	155,553	152,055	--	--	--	--	--	--	--	--	--
<i>Total²</i>	155,553	152,055	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$100,510	\$64,008	--	--	--	--	--	--	--	--	--
<i>Total²</i>	\$100,510	\$64,008	--	--	--	--	--	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Bristol Bay salmon sportfishing season typically begins by the end of May when Chinook salmon begin to enter Bristol Bay drainages. Dolly Varden, Arctic char, and grayling can often be found feeding on out-migrating salmon fry, and northern pike are active as well. Most of the Kvichak River and drainages flowing into Iliamna Lake remain closed to fishing until June 8, when rainbow trout fishing opens in eastern sections of the river. Chinook become more accessible in eastern portions of Bristol Bay drainages, and Arctic char, Dolly Varden, northern pike, and grayling remain active. Sockeye salmon become popular targets for anglers in July, and are plentiful in the Kvichak River early in the month. Chum salmon are found in abundance by mid-July, and some coho may be found by the end of the month. Chinook salmon are closed to sportfishing in most Bristol Bay drainages by the end of July. Coho salmon are most plentiful in August and September, and by October, sportfishing opportunities are primarily limited to resident fish. Throughout the winter months rainbow trout, Dolly Varden, grayling, smelt, Arctic char, and northern pike can be targeted.⁴⁴⁹

While very little sportfishing is conducted from Igiugig, the Kvichak River is one of the most popular sportfishing destinations in Alaska. Many lodges line the river from Igiugig to Naknek, and four residents held sport fish guide licenses in 2010. No sport fish guide businesses were registered in Igiugig between 2006 and 2010, and no locally registered sport fish guide businesses were active between 2000 and 2010. The number of sportfishing licenses sold to residents remained relatively constant, averaging 11 per year between 2000 and 2010, and peaking at 15 in 2010.

Igiugig is located in the Kvichak River Drainage ADF&G Harvest Survey Area, which includes all lakes and tributaries of the Kvichak River drainage. In 2010, there was a total of 25,681 freshwater angler days fished, compared to 31,145 in 2000. In that year, non-Alaska residents accounted for 78.1% of freshwater angler days fished, compared to 66.9% in 2000. Total angler days fished peaked in 2007 at 33,417. In each year, Alaska residents accounted for significantly less freshwater angler days fished than non-Alaska residents. Saltwater sportfishing made up a comparatively insignificant portion of angler days fished within the Survey Area. In 2010, there were 22 saltwater angler days fished, compared to 236 in 2000. In that year, non-Alaska residents accounted for 100% of saltwater angler days fished, compared to 28.8% in 2000. The number of saltwater angler days fished peaked in 2002 at 449. Further information regarding sportfishing trends can be found in Table 11.

⁴⁴⁹ Alaska Department of Fish and Game. (n.d.). *Sport Fish Area Fishing Report – Bristol Bay*. Retrieved September 10, 2012 from: http://www.adfg.alaska.gov/sf/FishingReports/index.cfm?ADFG=R2.summary&Area_key=19&RecordID=40.

Table 11. Sport Fishing Trends, Igiugig: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Igiugig ²
2000	0	2	13	0
2001	0	2	14	0
2002	0	1	12	0
2003	0	0	12	0
2004	0	0	12	0
2005	0	2	10	0
2006	0	2	12	0
2007	0	1	8	0
2008	0	4	7	0
2009	0	4	4	0
2010	0	4	15	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	0	0	17,234	6,514
2010	0	22	20,068	5,613

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Residents of Igiugig follow a seasonal subsistence pattern. In the summer, sockeye salmon is heavily relied upon, while fall and winter involves hunting for caribou and moose. Species commonly harvested for subsistence purposes include all five species of Pacific salmon, rainbow trout, whitefish, Arctic grayling, and blackfish. Most community members use drift or set nets for catching salmon, and once harvested, fish are generally cooked fresh, smoked, or frozen.⁴⁵⁰

There are several fish camps located along the Kvichak River where sockeye, coho, and Chinook salmon are harvested. During the winter, Dolly Varden, Northern pike, Arctic grayling and trout are harvested. In 2005, 91% of households were estimated to participate in subsistence activities involving salmon, 49% were estimated to participate in activities involving marine mammals, and 56% were estimated to participate in subsistence activities involving non-salmon fish. Another account by Krieg et al⁴⁵¹ found that 100% of Igiugig households harvested salmon and non-salmon fish. In addition, beluga whales and freshwater harbor seals were harvested in 2005 (beluga whales were harvested outside of Naknek and freshwater seals were harvested within the Kvichak River). There is no record of residents harvesting marine invertebrates. Halibut was used by 25% of households in 2005, although it was not harvested directly.⁴⁵²

Of the species listed by ADF&G in Table 13, residents reported harvesting sockeye salmon the most, followed by chum, Chinook, coho, and pink salmon. In 2008, residents reported harvesting 1,710 salmon, compared to 2,022 in 2000; which was also the year in which reported salmon harvests peaked. The number of subsistence salmon permits issued to residents remained relatively constant between 2000 and 2008. In 2005, an estimated 2,606 lb of non-salmon fish was harvested. No residents were issued Subsistence Halibut Registration Certificates between 2003 and 2009. In terms of marine mammals, an estimated six beluga whales were harvested between 2000 and 2010. In addition, residents reported harvesting five freshwater seals in 2005.⁴⁵³

According to ADF&G *Community Subsistence Information System* records,⁴⁵⁴ species which residents have historically used include: butter clams, Dungeness crab, freshwater clams, horse clams, octopus, littleneck clams, pinkneck clams, razor clams, shrimp, Tanner crab, bearded seal, harbor seal, ringed seal, Steller sea lion, blackfish, broad whitefish, bullhead sculpin, burbot, char, Dolly Varden, flounder, grayling, herring, humpback whitefish, lake trout, least cisco, lingcod, rainbow trout, rockfish, round whitefish, smelt, steelhead, stickleback, sucker, cod, and pike. Information regarding subsistence trends can be found in Tables 12 through 15.

⁴⁵⁰ Igiugig Village Council. (n.d.). *Subsistence Living*. Retrieved October 18, 2012 from: <http://www.igiugig.com/village-life/life-in-igiugig/subsistence-living>.

⁴⁵¹ Krieg, T. M., Holen, D. L.; and Koster, D. (2009). *Subsistence Harvests and Uses of Wild Resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005*. Alaska Department of Fish and Game. Technical Paper No. 322. Retrieved October 19, 2012 from: <http://www.subsistence.adfg.state.ak.us/techpap/TP322.pdf>

⁴⁵² Ibid.

⁴⁵³ Ibid.

⁴⁵⁴ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Igiugig: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	91%	n/a	49%	n/a	56%	265
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Igiugig: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	8	8	5	14	19	3	1,981	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	7	7	2	n/a	n/a	n/a	1,336	n/a	n/a
2005	6	6	2	n/a	1	14	1,017	n/a	2,606
2006	7	5	n/a	n/a	n/a	n/a	1,252	n/a	n/a
2007	7	6	1	2	n/a	n/a	1,828	n/a	n/a
2008	8	8	8	29	n/a	n/a	1,673	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Igiugig: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Igiugig: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	1	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	3	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Iliamna (ill-ee-AM-nuh)



People and Place

*Location*⁴⁵⁵

Iliamna is located on the northwest side of Iliamna Lake, 225 miles southwest of Anchorage. It is near the Lake Clark Park and Preserve. Iliamna is located in the Lake and Peninsula Borough and the Iliamna Recording District.

*Demographic Profile*⁴⁵⁶

In 2010, there were 109 inhabitants in Iliamna, making it the 238th largest of 352 total Alaskan communities with recorded populations that year. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 10.8% (Table 1). However, population estimates from the U.S. Decennial Census in 2000 and 2010 show a positive growth rate (Table 1), indicating that caution should be used when comparing the decennial and annual estimates. Overall between 1990 and 2010, Decennial Census records show a population increase of 16% in Iliamna.

According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, Iliamna community leaders estimated that approximately 100 seasonal workers or transients are also present in Iliamna each year between May and October to participate in mining/exploration activities. They also noted that Iliamna's yearly population peak occurs in July when these seasonal workers are present. In addition to mining activity, community leaders reported that the peak in population is slightly driven by employment in fishing sectors, including commercial, subsistence and/or recreational industries.

In 2010, just over half of Iliamna residents identified themselves as American Indian and Alaska Native (54.1%), along with 33% who identified themselves as White, and 12.8% who identified as two or more races. In addition, 3.7% identified themselves as Hispanic or Latino in 2010 (Figure 1). Compared to 2000, there was a slight decrease in the percentage of the population that identified as White, and a proportional increase in the percentage identifying as American Indian or Alaska Native or as two or more races. It also appears that the Hispanic and Latino community was not represented in Iliamna in 2000.

⁴⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁵⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

The increasing population in Iliamna between 1990 and 2010 is reflecting in the rising number of occupied households in the community during the period, from 30 in 1990 to 35 in 2000, and 39 in 2010. Over the same period, the average number of persons per household decreased, from 3.1 in 1990 to 2.91 in 2000, and 2.79 in 2010, suggesting that the increase in total occupied housing was also due in part to diminishing household size. Of the 58 housing units surveyed for the 2010 U.S. Census, 48.3% were owner-occupied, 19% were renter-occupied, and 32.8% were vacant, mostly due to seasonal use. Between 1990 and 2010, no Iliamna residents were reported to be living in group quarters.

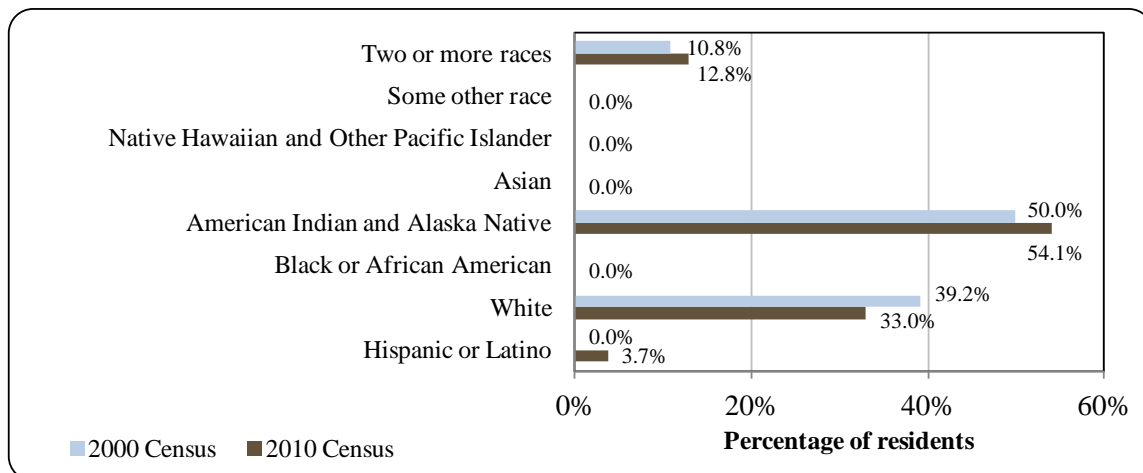
Table 1. Population in Iliamna from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	94	-
2000	102	-
2001	-	95
2002	-	98
2003	-	92
2004	-	90
2005	-	86
2006	-	82
2007	-	87
2008	-	93
2009	-	91
2010	109	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

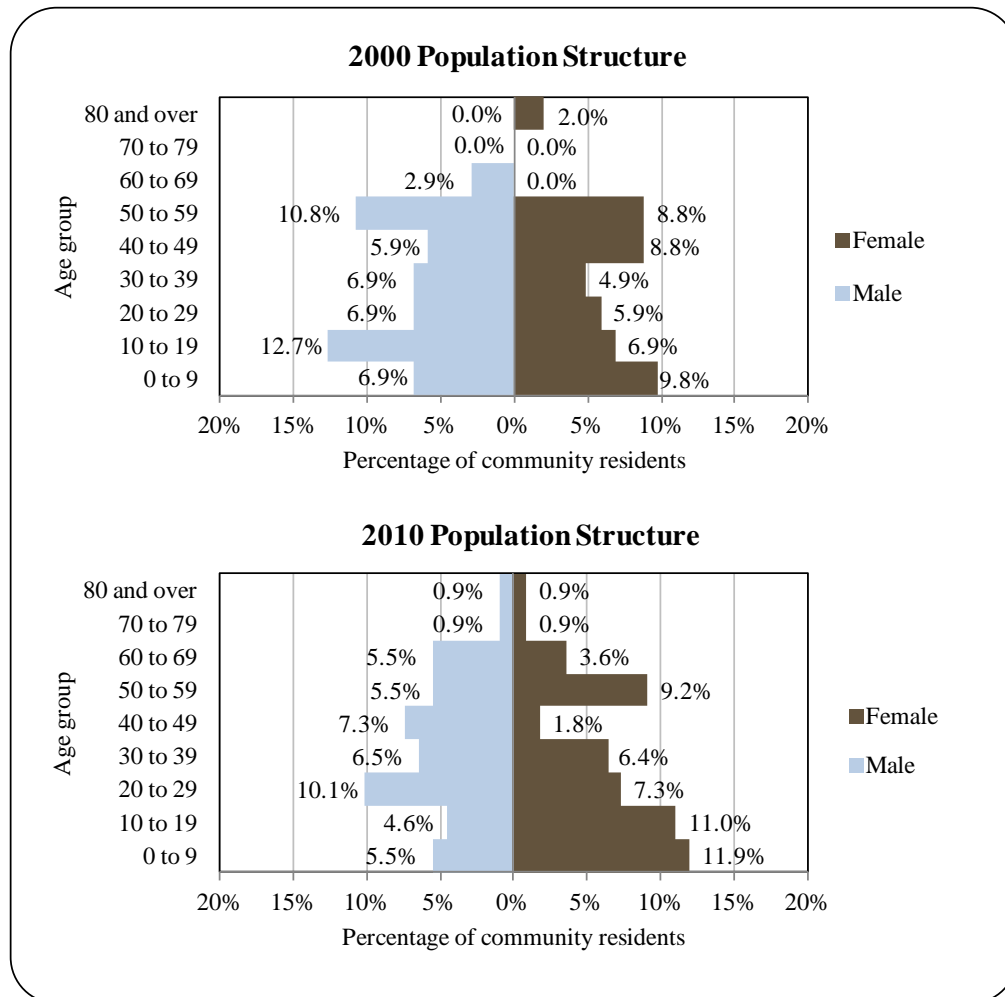
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Iliamna: 2000-2010 (U.S. Census).



In 2010, there were more women than men residing in Iliamna, with a gender balance of 46.7% males and 53.2% female. This is unusual when compared to the state as a whole, which had more males than females overall in 2010 (52% male, 48% female). It is important to note that, in 2000, the gender balance of Iliamna’s population (52.9% male, 47.1% female) was closer to the balance of the state population, which was 51.7% male and 48.3% female. In 2010, the median age in Iliamna was estimated to be 29.9 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 12.7% of the Iliamna population was age 60 or older. The overall population structure of Iliamna in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Iliamna Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁴⁵⁷ estimated that 90% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, no resident had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 10% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 40% had attended some college but not received a degree, compared to an estimated 28.3% of Alaskan residents overall; no Iliamna resident held Associate's or Bachelor's degrees, compared to an estimated 8% and 17.4% of Alaskan residents overall, respectively; and 23.3% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The Iliamna Lake area has been occupied by humans since prehistory. Two distinct indigenous populations historically inhabited the region: the Central Yup'ik Eskimos south and west of the lake, and the Dena'ina Athabascans on the northern and eastern shores. Distinctions between Native populations were blurred during European contact as a result of population decline due to epidemic disease and movement of people to participate in activities surrounding the fur trade and emerging commercial salmon fishery in Bristol Bay.⁴⁵⁸

In the early 1900s, George Seversen operated a roadhouse at the present site of the community of Iliamna. The 'Seversen Roadhouse' served as an important source of goods and services at a crossroads of the Williamsport-Pile Bay Trail,⁴⁵⁹ a primary route by which supplies and vessels have been transported between Cook Inlet and Bristol Bay.⁴⁶⁰ In the early 1900s, a small community of Yup'ik people was also living at the mouth of the Newhalen River, near the present communities of Iliamna and Newhalen.⁴⁶¹ The modern community of Iliamna developed around the Seversen Roadhouse, when villagers relocated there in 1935 from "Old Iliamna," and traditional Athabaskan village located approximately 40 miles away at the eastern end of Iliamna Lake.⁴⁶² The new community of Iliamna continued to grow through the 20th century as fishing and hunting lodges were built in the area. Today, Iliamna has a mixed population of Tanaina

⁴⁵⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁵⁸ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster. 2006. *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

⁴⁵⁹ U.S. Dept. of the Interior, Bureau of Land Management. 2004. *Memorandum: Navigability of Kvichak River and Iliamna Lake in the Bristol Bay Region*. Retrieved October 8, 2012 from http://dnr.alaska.gov/mlw/nav/rdi/kvichakgroup/kvichakgroup_blmnav.pdf.

⁴⁶⁰ Alaska Department of Natural Resources. 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁴⁶¹ See footnote 458.

⁴⁶² McDowell Group, Buell, Jim, and Stephen R. Braund & Associates. 2009. *Pebble Project Environmental Baseline Document. Chapter 21: Socioeconomics, Bristol Bay Drainages*. Retrieved October 8, 2012 from <http://www.arlis.org/docs/vol2/Pebble/2004-2008%20EBD/CH21%20Socioeconomics%20BB.pdf>.

Athabascans, Alutiiq and Yup'ik Eskimos, and non-Native residents.⁴⁶³ Subsistence harvest is also important to the local economy and way of life.^{464,465} The sale of alcohol is prohibited in the community.⁴⁶⁶

Natural Resources and Environment

Iliamna is located in a climatic transition zone, influenced by both maritime and continental weather patterns. Summer temperatures average between 42 and 62 °F, and winter temperatures between 6 and 30 °F. Iliamna receives 26 inches of rain and 64 inches of snow on average per year.⁴⁶⁷ The immediate landscape in Iliamna is rolling tundra.⁴⁶⁸ The Newhalen River valley contains areas of spruce woodlands and shrubs, as well as open spruce forest-shrub-bog mosaic in some places.⁴⁶⁹

The Iliamna Lake and Kvichak River drainage is the single most important source of salmon in the Bristol Bay area, producing approximately 50% of the sockeye salmon caught in the Bristol Bay salmon fishery.⁴⁷⁰ The Newhalen River and its source, Lake Clark, are a major sockeye salmon spawning area, producing 16% of the world's wild sockeye salmon commercial harvest.⁴⁷¹ A large number of sport fishermen travel to the Iliamna Lake area every year to participate in a trophy rainbow trout fishery⁴⁷² along with other sport fisheries (see the *Recreational Fishing* section of this profile). A number of lodges are present along the Newhalen River for sport hunters and fishermen.⁴⁷³

The area across Iliamna Lake to the south is protected as Katmai National Park and Preserve, a 7,383 square mile wilderness area known for its high concentration of brown bears and the Valley of 10,000 Smokes. Katmai National Park tourism does not affect Newhalen directly, as visitors primarily pass through the King Salmon airport to access the park.⁴⁷⁴ Lake Clark National Park and Preserve is located northeast of Iliamna, occupying 4 million acres at the north end of the Alaska Peninsula. This National Park and Preserve was established to protect scenic beauty, wild rivers and waterfalls, populations of fish and wildlife, watersheds essential for sockeye salmon, and the traditional lifestyle of local residents. Subsistence activities are

⁴⁶³ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁶⁴ See footnote 458.

⁴⁶⁵ Lake and Peninsula Borough. 2012. *Iliamna Community Action Plan*. Retrieved October 5, 2012 from http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Iliamna_CommunityPlan_9-17-12a.pdf.

⁴⁶⁶ See footnote 463.

⁴⁶⁷ Ibid.

⁴⁶⁸ LaRoche and Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

⁴⁶⁹ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁴⁷⁰ Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

⁴⁷¹ See footnote 469.

⁴⁷² See footnote 463.

⁴⁷³ See footnotes 469 and 470.

⁴⁷⁴ National Park Service. 2011. *Katmai National Park & Preserve*. Retrieved November 17, 2011 from <http://www.nps.gov/katm/>.

permitted in Lake Clark National Park and Preserve. The National Park Service works closely with state and federal fish and wildlife management agencies to determine seasons, bag limits, and similar harvest controls.⁴⁷⁵ A diversity of fish and wildlife are found in both of these National Parks and Preserves, including bears, caribou, moose, wolves, lynx, sea mammals, salmon, Arctic char, Arctic grayling, Dolly Varden, Northern pike, lake trout, rainbow trout, burbot, and whitefish.⁴⁷⁶

It is also of note that Iliamna Lake is home to a freshwater population of harbor seals.⁴⁷⁷ Seal numbers consistently range between 150 and 220 during molting season, and some portion of the population over-winters in the lake. Local subsistence hunters harvest a small number of these seals each year.⁴⁷⁸

Significant mineral resources are present in the region, including the Pebble copper-gold-molybdenum deposit. The Pebble site is located approximately 19 miles northwest of Iliamna, at the divide between the Koktuli River and Upper Talarik Creek.⁴⁷⁹ Northern Dynasty Minerals Limited calls the Pebble deposit, “one of the greatest stores of mineral wealth ever discovered,” and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion pounds of copper, 66.9 million ounces of gold and 3.3 billion pounds of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion pounds of copper, 40.4 million ounces of gold and 2.3 billion pounds of molybdenum.⁴⁸⁰ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.⁴⁸¹ According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble mine is copper. Dissolved copper is known to be toxic to fish.⁴⁸²

With regard to natural hazards, Iliamna was rated at high risk of severe weather, medium risk of earthquake, volcanic activity, and wildfire, and low risk of tsunami, erosion, and flooding. Avalanche and landslide hazard was not identified in the immediate area. In addition to the direct impact of earthquakes, Iliamna residents are concerned about secondary hazards such as seiche⁴⁸³ and flooding. Flooding is also a threat during ice break-up, when ice jams and ice overflows may funnel water into the community. Severe weather in the form of high winds (70-100 mph) affects the community approximately twice a year. Tundra and brush fires are a serious

⁴⁷⁵ National Park Service. 2011. *Lake Clark National Park & Preserve Management*. Retrieved June 13, 2012 from <http://www.nps.gov/lac/parkmgmt/index.htm>.

⁴⁷⁶ See footnotes 474 and 475.

⁴⁷⁷ See footnote 469.

⁴⁷⁸ Withrow, David and Kymerly Yano, Jennifer Burns, Courtenay Gomez, and Tatiana Askoak. 2011. *Freshwater Harbor Seals of Lake Iliamna, Alaska. Do They Pup and Over-Winter in the Lake?* Poster presented at the 2011 Alaska Marine Science Symposium. Retrieved January 18, 2012 from ftp://ftp.afsc.noaa.gov/posters/pWithrow04_freshwater-seals_2011.pdf.

⁴⁷⁹ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky. 2008. “Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process.” *Alaska Law Review* 25:1.

⁴⁸⁰ Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

⁴⁸¹ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁴⁸² See footnote 479.

⁴⁸³ A seiche is a “wave that oscillate in partially or totally enclosed body of water.” (See footnote 484.)

concern in the community, particularly in areas with standing dead trees that resulted from an outbreak of spruce bark beetles.⁴⁸⁴

According to the Alaska Department of Environmental Conservation, one active environmental cleanup site was located on the south shore of Iliamna Lake as of May 2012. In 1956, the U.S. Air Force constructed a radio relay station on the southern shore of Iliamna Lake as part of a defense communication network and aircraft warning system throughout the State of Alaska. Hazardous materials were stored at the site, including diesel fuel and gasoline, oils, antifreeze, solvents, batteries, asbestos, and electrical transformers containing polychlorinated biphenyls (PCBs). Excavation and thermal treatment of petroleum-contaminated soils was undertaken in 2004 and 2005, removing the source of potential future groundwater contamination. Groundwater wells were also dug to monitor water quality at the site.⁴⁸⁵

Current Economy⁴⁸⁶

Sportfishing and tourism are currently important economic drivers in Iliamna.⁴⁸⁷ Visitors come to the Iliamna area both for sportfishing and other forms of outdoor recreation.⁴⁸⁸ Lodges for sport hunting and fishing are common in the area,⁴⁸⁹ although most lodge employees are not local residents.⁴⁹⁰ Commercial fishing is also a mainstay of the economy, and many workers travel to Bristol Bay each summer to participate in the sockeye salmon fishery.⁴⁹¹ Between 2000 and 2010, the number of salmon permit holders in Iliamna was equivalent to between 17% and 23% of the total local population per year. However, in the 2011 AFSC survey, community leaders indicated that the community derives minimal income from commercial fishing.

Community leaders also noted that mining is an increasingly important industry in Iliamna. Mining-related employment has increased in the Iliamna area as Northern Dynasty Minerals, Ltd. started conducting exploration of the Pebble Mine site, a significant copper-gold-molybdenum deposit located just northwest of Iliamna. If the project moves forward, the mine could provide a range of well-paid jobs for Iliamna residents.⁴⁹² Community leaders reported in the 2011 AFSC survey that mining also brings a large number of seasonal workers to Iliamna during summer months. However, further development of the mine remains controversial due to concerns about environmental impacts.⁴⁹³

⁴⁸⁴ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

⁴⁸⁵ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved October 4, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁴⁸⁶ Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁸⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁸⁸ Lake and Peninsula Borough. 2012. *Iliamna Community Action Plan*. Retrieved October 5, 2012 from http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Iliamna_CommunityPlan_9-17-12a.pdf.

⁴⁸⁹ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster. December 2006. *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

⁴⁹⁰ See footnote 481.

⁴⁹¹ See footnote 487.

⁴⁹² See footnote 488.

⁴⁹³ See footnotes 479 and 488.

Based on household surveys conducted for the 2006-2010 ACS,⁴⁹⁴ in 2010, per capita income in Iliamna was estimated to be \$21,181 and the median household income was estimated to be \$103,750, a significant increase when compared to \$19,741 and \$60,625 reported in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,⁴⁹⁵ the real per capita income in 2000 is shown to have been \$25,959 and the real 2000 median household income was \$79,721, showing a slight increase in per capita income and substantial increase in median household income over the 2000-2010 period. Median household income in 2010 ranked among the highest in the State, at 8th out of 299 Alaskan communities with household income data that year. In contrast, the 2010 per capita income estimate was close to the State average of \$21,618, ranking 139th of 305 Alaskan communities with per capita income that year.

Although Iliamna's small population size may have prevented the ACS from accurately portraying economic conditions,⁴⁹⁶ support for the 2006-2010 ACS per capita income estimate is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Iliamna in 2010 is \$28,184.^{497,498} This estimate is higher than the 2006-2010 ACS estimate, providing additional evidence for a rise in per capita income between 2000 and 2010. In addition, Iliamna did not meet the Denali Commission's criteria for a 'distressed community' in 2011.⁴⁹⁹ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 75% of the Iliamna population age 16 and older was estimated to be in the civilian labor force, higher than the statewide rate of 68.8%. That year, approximately 9.9% of local residents were living below the poverty line, similar to the rate of Alaskans overall (9.6%), and the unemployment rate was estimated to be 0%, compared to a statewide unemployment rate of 5.9%. The lack of unemployment in Iliamna estimated by the 2006-2010 ACS conflicts with data reported in the ALARI database, which indicates that unemployment in Iliamna was 27.7%, more than twice ALARI's statewide unemployment rate estimate of 11.5%.⁵⁰⁰

Also based on the 2006-2010 ACS, over half of the Iliamna workforce was estimated to be employed in the private sector (54.5%), along with 36.4% employed in the public sector

⁴⁹⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁹⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁹⁶ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁹⁷ See footnote 494.

⁴⁹⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴⁹⁹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁵⁰⁰ See footnote 498.

(54.5%), and 9.1% estimated to be self-employed. Out of 33 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in transportation, warehousing, and utilities (36.4%), construction (18.2%), educational services, health care, and social services (15.2%), professional, scientific, management, and administrative and waste management services (15.2%), public administration (6.1%), and other services, except public administration (9.1%). In 2010, none of the workforce was estimated to be working in the agriculture, forestry, and fishing industries. The number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

Compared to employment statistics in 2000, the distribution of employment by industry in 2010 appears to have shifted heavily toward transportation, warehousing, and utilities, construction, and professional, scientific, management, and administration and waste management industries. In addition, employment in various industries appears to have been eliminated. Categories represented in 2000 that were no longer represented in 2010 were arts, entertainment, recreation, accommodation and food services, retail trade, information, and finance and insurance, real estate, and rental and leasing industries. The complete loss of estimated employment in these areas may be due to inaccuracy of ACS estimates in communities with small populations.⁵⁰¹ These shifts in employment by industry are displayed in Figure 3.

Viewing employment from the perspective of occupation, 2006-2010 ACS estimates indicate that the greatest number of Iliamna workers were employed in production, transportation, and material moving occupations (30.3%) and management, business, science, and arts occupations (27.3%), while 18.2% were employed in service occupations, 18.2% in natural resources, construction, and maintenance occupations, and 6.1% in sales and office occupations. The increases in transportation, warehousing, and utilities and construction industries noted above are reflected in a shift toward production, transportation, and material moving and natural resource, construction, and maintenance occupations in Iliamna between 2000 and 2010 (Table 4).

ALARI estimates of employment by industry conflict with 2006-2010 ACS estimates. The ALARI database reports a higher number of employed residents in Iliamna (95) than were estimated by the ACS (33). ALARI data suggest that higher percentages of the 2010 labor force worked in professional and businesses services (40%), and local government (22.1%) compared to ACS estimates. ALARI estimates also showed some employment in industries that were not represented by the 2006-2010 ACS, including 1.1% of the workforce employed in information, 1.1% in financial activities, and 1.1% in leisure and hospitality. In addition, ALARI showed 12.6% of the workforce employed in trade government and trade, transportation, and utilities, 9.5% in education and health services, 8.4% in natural resources and mining, 3.2% in state government, and 1.1% in other industries.⁵⁰² It should be noted that both ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

⁵⁰¹ See footnote 496.

⁵⁰² See footnote 498.

Figure 3. Local Employment by Industry in 2000-2010, Iliamna (U.S. Census).

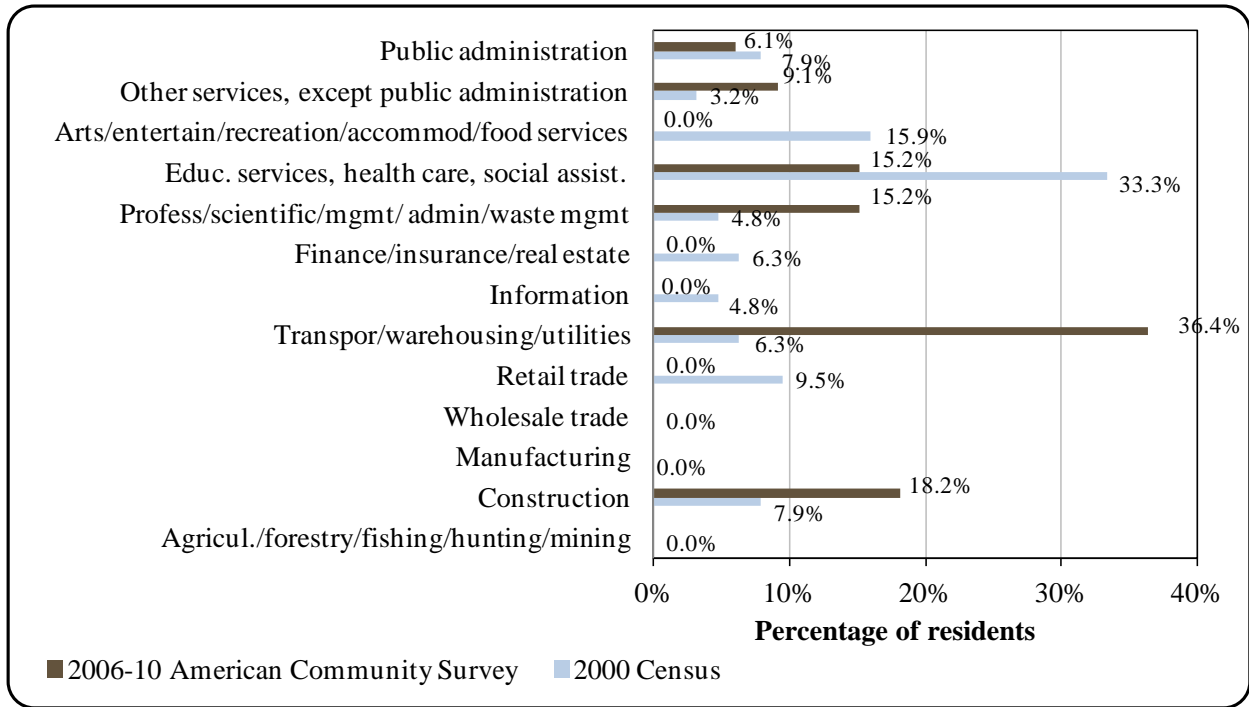
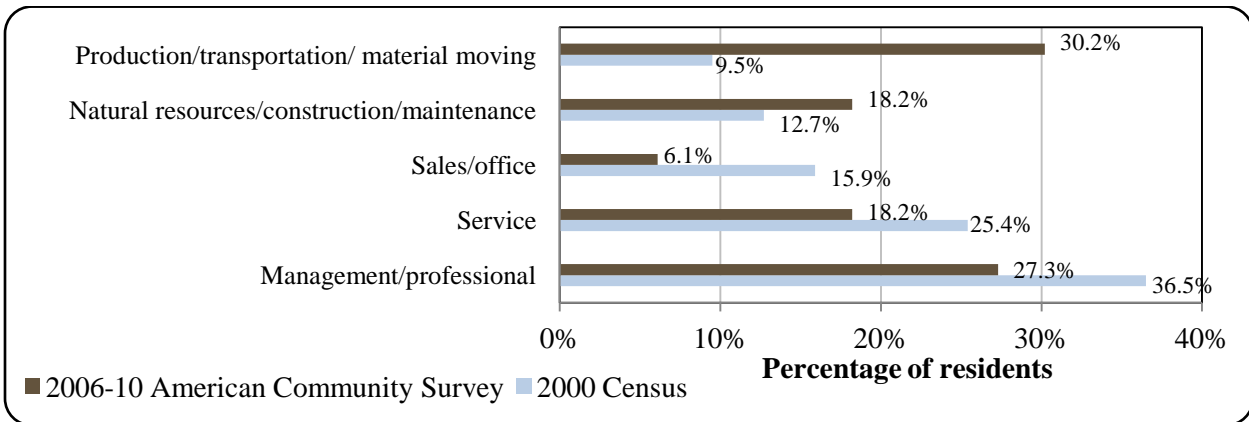


Figure 4. Local Employment by Occupation in 2000-2010, Iliamna (U.S. Census).



Governance

Iliamna is an unincorporated community under the jurisdiction of the Lake and Peninsula Borough. There is no local taxing authority, but the Borough does administer a 2% fish tax, 6% bed tax, \$3 per person/day guide tax, and \$1 person/day lodge guide tax.⁵⁰³ Given that Iliamna has no municipal government, no municipal revenues were reported for the community. In

⁵⁰³ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved January 24, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

addition, no State or Community Revenue Sharing contributions or fisheries-related grants were reported as received by Iliamna between 2000 and 2010 (Table 2).

Iliamna was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Iliamna Village Council. The local village Native corporation is Iliamna Natives, Limited, which manages 73,059 acres of land. The regional Native corporation to which Iliamna belongs is the Bristol Bay Native Corporation (BBNC).⁵⁰⁴ In addition to the local Village Council, Iliamna is one of seven villages in the Iliamna Lake region that joined to form the Nilavena Tribal Consortium.⁵⁰⁵ The Consortium is involved in providing health and cultural services to the Iliamna Lake tribes.^{506,507}

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Iliamna from 2000 to 2010.

Year	Total municipal revenue ¹	Sales tax revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-related grants (state and federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁵⁰⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁰⁵ Nilavena Tribes website. (n.d.). *Home*. Retrieved October 5, 2012 from <http://nilavenatribes.com/>.

⁵⁰⁶ Anchorage Native News. May 2003. "Construction of Iliamna clinic nears completion." The Newsletter of the Southcentral Foundation, Vol. 4, Issue 3. Retrieved October 8, 2012 from <https://www.scf.cc/May%202003.pdf>.

⁵⁰⁷ Agnew::Beck. (n.d.). *Nilvena Community Cultural + Visitors Center*. Retrieved October 8, 2012 from <http://www.agnewback.com/pages-portfolio/bristolbay/nilavena-ccvc.htm>.

Iliamna is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.⁵⁰⁸ The BBNA is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁵⁰⁹

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham and King Salmon, and the Alaska Department of Commerce, Community, and Economic Development also has an office in Dillingham. Kodiak and Homer have the nearest offices of the Alaska Department of Natural Resources and the National Marine Fisheries Service (NMFS), and Kodiak is also the location of the nearest Bureau of Citizenship and Immigration Services office. However, the Anchorage offices of these agencies are perhaps more accessible for the people of the Iliamna Lake region.

Infrastructure

Connectivity and Transportation

Due to a lack of infrastructure in the Iliamna area, travel between communities is usually by small plane, and seasonally by boat, four-wheeler, or snowmobile. Individuals also use personal vehicles, ATVs, and skiffs.⁵¹⁰ Barges deliver bulk goods to the area via the Kvichak River. An improvised barge landing area is currently available at Iliamna. A breakwater, boat harbor, and dock are also available, although the dock is in poor condition.^{511,512}

A state-owned airport with two gravel airstrips is located several miles west of Iliamna. One airstrip measures 5,086 feet long by 100 feet wide, and the other is 4,800 feet by 100 feet. Iliamna Air Taxi, Inc. provides scheduled mail, freight, and passenger air service to several Iliamna Lake communities.⁵¹³ As of June 2012, a roundtrip flight from the Iliamna Airport to Anchorage cost \$460.⁵¹⁴ Birchwood Air Service and Lake and Peninsula Air also offer charter and some scheduled air service between Anchorage and Iliamna.^{515,516} In addition to the state-

⁵⁰⁸ Bristol Bay Native Association. (n.d.). *BBNA homepage*. Retrieved November 16, 2011 from www.bbna.com.

⁵⁰⁹ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁵¹⁰ Bristol Bay Native Association. 2011. *Bristol Bay Comprehensive Economic Development Strategy, 2011-2016*. Funded by the U.S. Department of Commerce, Economic Development Administration. Retrieved January 17, 2012 from http://www.bbna.com/website/BBCEDS_2011-10-31.pdf.

⁵¹¹ Lake and Peninsula Borough. 2012. *Iliamna Community Action Plan*. Retrieved October 5, 2012 from http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Iliamna_CommunityPlan_9-17-12a.pdf.

⁵¹² See footnote 504.

⁵¹³ Ibid.

⁵¹⁴ Personal communication, Iliamna Air Taxi reservation agent, June 13, 2012.

⁵¹⁵ Lake & Pen Air. (n.d.). *Charters & Fares*. Retrieved October 5, 2012 from <http://www.lakeandpenair.com/www.lakeandpenair.com/Booking.html>.

⁵¹⁶ Holliday Air. 2009. *Welcome Packet 2009*. Retrieved October 5, 2012 from <http://www.hollidayair.com/2009/WelcomePacket2009.pdf>.

owned airport, a private airstrip is located at the Iliamna Roadhouse, and Summit Lake provides private float plane access.⁵¹⁷

A paved road connects Iliamna to the Iliamna airport, as well as the community of Newhalen located several miles to the south.⁵¹⁸ During the winter, a road is passable between Iliamna and Nondalton, 15 miles to the north, although the road is only paved half way.⁵¹⁹ Construction of a bridge is proposed at the western end of Six Mile Lake, which would provide year-round access to Nondalton.⁵²⁰ In addition, an unimproved trail, the Williamsport-Pile Bay Trail, runs along the northern shore of Iliamna Lake, connecting Iliamna and Newhalen with the communities of Pedro Bay and Pile Bay Village to the east. Pile Bay Village is also connected to Cook Inlet by road. This corridor is used to transport fishing boats and supplies between Cook Inlet and Bristol Bay, but is considered difficult to use.⁵²¹

Facilities

Water in Iliamna is derived from well sources. A 270-foot deep well provides water to the community building, village office, and Village Council-operated washeteria, and private households retrieve water from individual wells. There is no piped water or sewer system, although 85% of homes are fully plumbed. Some households have septic tanks, while others use honeybuckets or outhouses. The Village Council assists residents with sewage treatment by providing septic pump services. The Village Council also maintains a landfill, but refuse collection services are not provided. Garbage must be hauled to the landfill by residents. Electricity is provided to Iliamna through the Tazimina Hydroelectric Project which also provides electricity to communities of Nondalton and Newhalen.⁵²² The Iliamna – Newhalen - Nondalton Electric Cooperative owns 50 miles of distribution line connecting the three member communities, and also owns a backup diesel powerhouse in Newhalen.⁵²³ According to the 2011 AFSC survey, community leaders indicated that improvements are expected to alternative energy power sources within the next decade. There are plans to expand the existing electrical intertie to include other communities in the region, linking to additional wild and hydroelectric power sources. Iliamna residents also support installation of insulated power lines. Current underground lines experience frequent power outages.⁵²⁴

⁵¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵¹⁸ Ibid.

⁵¹⁹ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster. December 2006. *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

⁵²⁰ See footnote 511.

⁵²¹ Alaska Department of Natural Resources. 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁵²² See footnote 517.

⁵²³ Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew::Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

⁵²⁴ Lake and Peninsula Borough. 2012. *Iliamna Community Action Plan*. Retrieved October 5, 2012 from http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Iliamna_CommunityPlan_9-17-12a.pdf.

Police services are provided in Iliamna the locally-stationed state troopers Village Public Safety Officer. Fire and rescue services are provided by the Iliamna Volunteer Fire Department and the Iliamna/Newhalen Rescue Squad. Telephone and internet service is available in Iliamna, but no cable providers offer local service.⁵²⁵ A fiber optic cable is currently being extended to Iliamna.⁵²⁶ Community facilities include several sport hunting and fishing lodges, a recreation center, and a community hall/village office building.^{527,528} Community leaders indicated in the 2011 AFSC survey that a post office was also built within the last 10 years.

With regard to fisheries-related infrastructure, community leaders reported that 100 feet of dock space is available for permanent vessel moorage, while no moorage is available for transient or public moorage. They reported that construction of new dock space was completed within the last 10 years, as well as new roads serving the dock. They also indicated that dock facilities at Iliamna are not capable of handling regulated vessels such as Coast Guard, ferries, or HAZMAT vessels. Fisheries-related businesses and services noted to be available in Iliamna included sales of boat fuel, bait, and tackle. Community leaders indicated that local residents can access additional fisheries-related businesses and services at area fishing lodges.

Medical Services

The Iliamna Health Clinic, operated by the Bristol Bay Area Health Corporation, provides Iliamna residents with basic medical services. The Clinic is part of the Community Health Aide Program.⁵²⁹ In addition, the Nilavena Subregional Clinic (NSC) is located in Iliamna. The NSC offers primary care, radiology, laboratory, pharmacy, and immunization services to residents of Iliamna and six other communities in the Lake and Peninsula Borough. The NSC is funded by a federal grant, and offers medical services on a sliding fee schedule based on household income and size.⁵³⁰ Local emergency services are provided by the community health aide and volunteers, and additional emergency services have limited highway, lake, and air access to Iliamna. Alternative health care is provided by the Iliamna/Newhalen Rescue Squad Emergency service is provided by volunteers and the health aide.⁵³¹

Educational Opportunities

No schools are located directly in Iliamna. The nearby Newhalen School, located several miles south in the community of Newhalen, serves Iliamna students.⁵³² The Newhalen School offers a pre-school through 12th grade education. As of 2011, there were 8 teachers and 77 students attending the school.⁵³³

⁵²⁵ See footnote 517.

⁵²⁶ See footnote 524.

⁵²⁷ See footnote 517.

⁵²⁸ Lake and Peninsula Borough. 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

⁵²⁹ See footnote 517.

⁵³⁰ Southcentral Foundation website. 2012. *Nilavena Subregional Clinic*. Retrieved October 4, 2012 from <https://www.scf.cc/services/nilavena.ak>.

⁵³¹ See footnote 517.

⁵³² See footnote 528.

⁵³³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest of fisheries resources has been important for residents of the Iliamna Lake region since prehistory. Commercial exploitation of salmon resources began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of the Bristol Bay region, along with several other species harvested in lower volumes.⁵³⁴ Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, southwest of Nushagak River near the village of Togiak.⁵³⁵

Subsistence harvest continues to be an important foundation for the local economy in Iliamna,⁵³⁶ and tourism related to sportfishing activity has grown in importance in the Iliamna Lake region,^{537,538} as outlined below in the *Subsistence Fishing and Recreational Fishing* sections of this profile.

Bristol Bay is the nearest marine area to the community of Iliamna. The Bay is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and Bering Sea Sablefish Regulatory Area. Iliamna is not eligible to participate in the Community Development Quota program or the Community Quota Entity program. According to the 2011 AFSC survey, community leaders reported that Iliamna does not actively participate in fisheries management processes in Alaska.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Iliamna does not have a registered processing plant. However, several processing facilities were listed in nearby communities in Bristol Bay, including Naknek, Egegik, and Dillingham.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Iliamna (Table 3).

⁵³⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁵³⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁵³⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵³⁷ Alaska Department of Natural Resources. 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁵³⁸ Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew::Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

Commercial Fishing

In the 2011 AFSC survey, community leaders reported that the Bristol Bay sockeye salmon fishery is the primary commercial fishery in which Iliamna residents are involved. They indicated that the fishery takes place between June and October, with October harvest focused primarily on subsistence. Iliamna residents have also been involved in the Bristol Bay herring fishery.

Between 2000 and 2010, Iliamna residents were involved in commercial fisheries as state permit holders, crew license holders, and vessel owners. Numbers of permit holders remained stable over the period, varying between 17 and 22 permit holders per year. In 2010, 19 permit holders held a total of 16 state-issued Commercial Fisheries Entry Commission (CFEC) permits. Of these 15 were held in the Bristol Bay salmon fishery, including 9 drift gillnet and 6 set gillnet permits. In addition, one permit was held in the Bristol Bay herring gillnet fishery. The herring permit was held from 2003 to 2010, but was not actively fished in any of these years. In contrast, a high percentage of salmon permits were actively fished each year, varying from a low of 53% of Bristol Bay salmon permit actively fished in 2002 to a high of 100% fished in 2008. Information about CFEC permits is presented in Table 4).

According to data reported by ADF&G and the Alaska Commercial Fisheries Entry Commission (CFEC), declining trends were observed in total crew license holders and vessel ownership in Iliamna over the decade. In 2000, ADF&G reported 45 crew license holders and the CFEC reported 46 vessels primarily owned by Iliamna residents. These numbers fell to 28 crew licenses held and 7 vessels owned in 2010 (Table 5). According to the CFEC, the number of vessels homeported in Iliamna also declined over the period, falling from 58 in 2000 to 4 in 2010. This information about vessels conflicts somewhat with information reported by community leaders in the 2011 AFSC survey, who indicated that the number of fishing vessels present in Iliamna had not changed in recent years.

No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Iliamna residents between 2000 and 2010. This permit information is presented in Table 4. Between 2000 and 2010, no quota share accounts or quota shares were held by Iliamna residents in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8).

No fish buyers or processing plants were present in Iliamna between 2000 and 2010 (Table 5), and no ex-vessel revenue was generated in the community (Table 9). Iliamna vessel owners delivered their catches elsewhere. In 2010, Iliamna vessel owners landed 450,395 net pounds of salmon, earning \$399,945 in ex-vessel revenue. This was higher than average for salmon landings and ex-vessel revenue over the 2000-2010 period. Information about landings and ex-vessel revenue generated by Iliamna fishermen in other fisheries is considered confidential due to the small number of participants. This information is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Iliamna: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Iliamna: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	1	1	1	1	1	1	1	1

Table 4 cont'd. Permits and Permit Holders by Species, Iliamna: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	19	19	17	17	17	16	16	17	18	19	15
	Fished permits	17	17	9	10	13	12	14	14	18	17	13
	% of permits fished	89%	89%	53%	59%	76%	75%	88%	82%	100%	89%	87%
	Total permit holders	19	19	19	17	18	17	19	17	19	22	19
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>19</i>	<i>19</i>	<i>17</i>	<i>18</i>	<i>18</i>	<i>17</i>	<i>17</i>	<i>18</i>	<i>19</i>	<i>20</i>	<i>16</i>
	<i>Fished permits</i>	<i>17</i>	<i>17</i>	<i>9</i>	<i>10</i>	<i>13</i>	<i>12</i>	<i>14</i>	<i>14</i>	<i>18</i>	<i>17</i>	<i>13</i>
	<i>% of permits fished</i>	<i>89%</i>	<i>89%</i>	<i>53%</i>	<i>56%</i>	<i>72%</i>	<i>71%</i>	<i>82%</i>	<i>78%</i>	<i>95%</i>	<i>85%</i>	<i>81%</i>
	<i>Permit holders</i>	<i>19</i>	<i>19</i>	<i>19</i>	<i>17</i>	<i>18</i>	<i>17</i>	<i>19</i>	<i>17</i>	<i>19</i>	<i>22</i>	<i>19</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Iliamna: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Iliamna ²	Total Net Pounds Landed In Iliamna ^{2,5}	Total Ex-Vessel Value Of Landings In Iliamna ^{2,5}
2000	45	0	0	46	58	0	0	\$0
2001	35	0	0	47	59	0	0	\$0
2002	21	0	0	52	62	0	0	\$0
2003	28	0	0	48	66	0	0	\$0
2004	25	0	0	59	77	0	0	\$0
2005	22	0	0	11	9	0	0	\$0
2006	18	0	0	11	7	0	0	\$0
2007	34	0	0	10	5	0	0	\$0
2008	32	0	0	10	5	0	0	\$0
2009	36	0	0	10	3	0	0	\$0
2010	28	0	0	7	4	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Iliamna: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Iliamna: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Iliamna: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Iliamna: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Iliamna Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	273,279	213,085	100,507	176,181	235,985	281,238	325,921	653,261	581,999	389,554	450,395
<i>Total²</i>	<i>273,279</i>	<i>213,085</i>	<i>100,507</i>	<i>176,181</i>	<i>235,985</i>	<i>281,238</i>	<i>325,921</i>	<i>653,261</i>	<i>581,999</i>	<i>389,554</i>	<i>450,395</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$181,187	\$89,462	\$48,112	\$86,566	\$118,786	\$170,436	\$213,657	\$434,104	\$419,469	\$310,807	\$399,945
<i>Total²</i>	<i>\$181,187</i>	<i>\$89,462</i>	<i>\$48,112</i>	<i>\$86,566</i>	<i>\$118,786</i>	<i>\$170,436</i>	<i>\$213,657</i>	<i>\$434,104</i>	<i>\$419,469</i>	<i>\$310,807</i>	<i>\$399,945</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Newhalen River attracts a large number of recreational fishermen each year to participate in the trophy rainbow trout fishery on Iliamna Lake, as well as fisheries for other species such as salmon. Numerous sportfishing and hunting lodges are present in the Iliamna area.^{539,540,541} Although few active sport fish guide businesses were located in Iliamna during the 2000-2010 period, numerous licensed sport fish guides were present in the community throughout the decade. The number of licensed guides varied from 7 to 18 per year. The number of sportfishing licenses sold to Iliamna residents ranged from 54 to 90 per year, while the number of sportfishing licenses sold in the community varied from 364 to 493 per year. The higher number of sportfishing licenses sold in Iliamna than were purchased by local residents provides evidence that sportfishing is one of the primary activities drawing visitors to the Iliamna area.⁵⁴²

In a survey conducted by the AFSC in 2011, community leaders reported that both local residents and visitors use private boats for sportfishing, and non-residents also fish out of lodges. They also indicated that sockeye salmon is the primary salmon species targeted by recreational fishers. The Alaska Statewide Harvest Survey,⁵⁴³ conducted by ADF&G between 2000 and 2010, confirmed this and noted the following species targeted by private anglers in Iliamna-Newhalen: sockeye salmon, rainbow trout, Dolly Varden, and Arctic grayling. No kept/release logbook data were reported for fishing charters out of Iliamna between 2000 and 2010.⁵⁴⁴

Iliamna is located within Alaska Sport Fishing Survey Area S – Kvichak River Drainage. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Non-Alaska resident anglers fished consistently more days than Alaska resident anglers in both freshwater and saltwater between 2000 and 2010, reflective of the large amount of sportfishing-related tourism in the region. Freshwater sportfishing activity was significantly more important than saltwater fishing in the region. The number of freshwater angler days for non-Alaska resident sport fishermen varied between 17,234 and 30,340 between 2000 and 2010, while Alaska resident freshwater angler days varied between 3,077 and 10,297. This information about the sportfishing sector in and near Iliamna is displayed in Table 11.

⁵³⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴⁰ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁵⁴¹ Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew::Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

⁵⁴² Lake and Peninsula Borough. 2012. *Iliamna Community Action Plan*. Retrieved October 5, 2012 from http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Iliamna_CommunityPlan_9-17-12a.pdf.

⁵⁴³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁵⁴⁴ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Iliamna: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Iliamna ²
2000	0	8	68	427
2001	0	10	75	427
2002	0	10	78	364
2003	0	10	90	417
2004	0	7	72	414
2005	0	14	54	466
2006	0	11	58	412
2007	1	15	68	477
2008	1	18	77	493
2009	0	15	88	410
2010	0	10	76	386

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	0	0	17,234	6,514
2010	0	22	20,068	5,613

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest is an important part of the Iliamna economy. Several fish species are of primary importance, along with land animals such as moose, caribou, bear, porcupine, and rabbits.⁵⁴⁵ During fieldwork for a 2004 survey of subsistence resource use in Iliamna and surrounding communities, researchers recorded current resource concerns in the communities of Newhalen and Iliamna. Local residents' concerns centered on caribou, and particularly the Mulchatna Herd. They expressed concern about overharvest of the herd by nonlocal hunters, and were also concerned about lichen being too thin to support the formerly large herd of caribou near the Mulchatna River. They indicated that lichen was thicker around the Nushagak River, and felt that the herd may not return to the Mulchatna River for 10 years.⁵⁴⁶

In addition to caribou, sockeye salmon are one of the most important subsistence resource in Iliamna, as they return in great numbers to the Newhalen River. In a survey conducted by the AFSC in 2011, community leaders reported that sockeye salmon is the most important aquatic subsistence resource for residents of Iliamna. Other salmon species are also used for subsistence purposes, along with trout and Arctic grayling. In addition, harbor seals are utilized for subsistence purposes by Iliamna residents.⁵⁴⁷ Iliamna Lake is home to a freshwater population of harbor seals.⁵⁴⁸ Local subsistence hunters harvest a small number of these seals each year.^{549,550}

In 2004, the only year between 2000 and 2010 that a subsistence focused household survey was conducted by ADF&G in the community of Iliamna, 100% of households were recorded as participating in salmon subsistence, 23% in halibut subsistence, 31% in marine mammal subsistence, 46% in marine invertebrate subsistence, and 56% in non-salmon fish subsistence (other than halibut). The per capita annual subsistence harvest of land- and sea-based resources in Iliamna was 470 pounds in 2004. Information about per capita subsistence harvest and subsistence participation by household and species is presented in Table 12. In 2004, a Iliamna residents harvested a total of 117 pounds of marine invertebrates and 2,388 pounds of non-salmon fish (Table 13).

Specific species of marine invertebrates harvested by Iliamna residents in 2004 included razor and butter clam, while specific species of non-salmon fish included Dolly Varden, rainbow trout, Arctic grayling, lake trout, pike, burbot, humpback whitefish, round whitefish, and sucker. It is of note that a number of species were reported as used by a greater percentage of households

⁵⁴⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴⁶ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster. December 2006. *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

⁵⁴⁷ Ibid.

⁵⁴⁸ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁵⁴⁹ Ibid.

⁵⁵⁰ Withrow, David and Kymberly Yano, Jennifer Burns, Courtenay Gomez, and Tatiana Askoak. 2011. *Freshwater Harbor Seals of Lake Iliamna, Alaska. Do They Pup and Over-Winter in the Lake?* Poster presented at the 2011 Alaska Marine Science Symposium. Retrieved January 18, 2012 from ftp://ftp.afsc.noaa.gov/posters/pWithrow04_freshwater-seals_2011.pdf.

than reported direct involvement in harvest, suggesting that additional households received these fish through sharing networks.⁵⁵¹

Information about subsistence salmon permits is available for 6 years between 2000 and 2008. During this period, the number of subsistence salmon permits issued to Iliamna households varied between 26 and 35. Sockeye salmon was by far the most heavily harvested salmon species in the area. Information about subsistence salmon harvest is presented in Table 13. No information was reported regarding the number of Subsistence Halibut Registration Certificates (SHARC) issued to residents of Iliamna between 2003 and 2010 (Table 14), despite the fact that ADF&G reported a high percentage of households participating in halibut subsistence (Table 12).

Some information about subsistence harvest of marine mammals was reported in several years during the 2000-2010 period. According to data reported by NMFS, beluga whales were harvested in 5 different years, with total harvest ranging from two to five animals. No information was reported by management agencies regarding subsistence harvest of sea otter, walrus, polar bear, Steller sea lion, harbor seal, or spotted seal (Table 15).

Additional Information

Many of Iliamna's earliest residents relocated from the village of "Old Iliamna" in 1935. Old Iliamna was a traditional Athabascan village located approximately 40 miles east of the current site, near the mouth of the Iliamna River at the east end of Iliamna Lake. In 1794, The Russian Lebedev-Lastochkin Company established a fur trading post near Old Iliamna, which was destroyed by Native groups in 1798. The trading post was reestablished by the Russian American Company in the early 1800s. Today, Old Iliamna is a seasonal camp.⁵⁵²

⁵⁵¹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵⁵² McDowell Group, Buell, Jim, and Stephen R. Braund & Associates. 2009. *Pebble Project Environmental Baseline Document. Chapter 21: Socioeconomics, Bristol Bay Drainages*. Retrieved October 8, 2012 from <http://www.arlis.org/docs/vol2/Pebble/2004-2008%20EBD/CH21%20Socioeconomics%20BB.pdf>.

Table 12. Subsistence Participation by Household and Species, Iliamna: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	100%	23%	31%	46%	56%	470
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	81%	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Iliamna: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	32	31	3	n/a	n/a	n/a	3,769	n/a	n/a
2001	2	2	n/a	2	n/a	n/a	4	n/a	n/a
2002	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3,325
2004	28	28	10	n/a	n/a	n/a	6,649	117	2,388
2005	29	26	n/a	n/a	n/a	n/a	5,588	n/a	n/a
2006	26	25	n/a	n/a	n/a	n/a	5,500	n/a	n/a
2007	35	34	1	n/a	n/a	n/a	5,388	n/a	n/a
2008	31	31	n/a	n/a	n/a	n/a	7,128	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Iliamna: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Iliamna: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	2	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	3	n/a	n/a	n/a	n/a	n/a	n/a
2009	3	n/a	n/a	n/a	n/a	n/a	n/a
2010	5	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Ivanof Bay (EYE-van-off)



People and Place

*Location*⁵⁵³

The community of Ivanof Bay is situated on the Pacific side of the Alaska Peninsula, nestled inside Ivanof Bay, the water-body after which it was named. It is 500 miles southwest of Anchorage and 250 miles southeast of Dillingham. The community is located in the Lake and Peninsula Borough and the Aleutian Islands Recording District.

*Demographic Profile*⁵⁵⁴

According to the 2010 Decennial Census, there were 7 inhabitants in Ivanof Bay, making it the 344th largest of 352 total Alaskan communities with populations recorded that year. According to Alaska Department of Labor and Workforce Development (DOLWD) estimates, there were zero residents in Ivanof Bay from 2006 to 2009, down from 22 residents in 2000 (Table 1). The average annual growth rate between 2000 and 2009 was -13.42%, reflecting the 100% decline in population over the period. Ivanof Bay first appeared in U.S. Census records in 1960 with 15 individuals and appears to have reached a population peak of 48 in 1970. In 2000, 4.5% of Ivanof Bay residents identified themselves as White, and the remaining 95.5% identified as American Indian and Alaska Native. By 2010, 100% of residents identified as American Indian and Alaska Native, and no White residents appeared to be present in the community (Figure 1).

The decline in population since 1990 is reflected in housing statistics. In 1990, there were nine occupied housing units in Ivanof Bay, with an average of 3.8 persons per household. In 2000, the number of households remained stable at 9, but the average household size declined to 2.44. By 2010, there were only two occupied housing units in Ivanof Bay, with an average of 3.5 persons per household. Of the 12 total housing units surveyed for the 2010 U.S. Decennial Census, two (16.7%) were owner-occupied, and the remaining 83% were vacant due to seasonal use. From 1990 to 2010, no Ivanof Bay residents were recorded as living in group quarters.

In 2010, the gender makeup of Ivanof Bay's population was 57.1% male and 42.9% female, which was more heavily weighted toward males than the population of the State as a whole (52% male, 48% female). That year, the median age was estimated to be 57.3 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, four of the seven residents recorded in Ivanof Bay were between the ages of 50 and 69, and three were between 0 and 29 years of age. Compared to 2000, a higher percentage of Ivanof Bay residents were over the age of 50 in 2010 (Figure 2).

⁵⁵³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁵⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Ivanof Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	35	-
2000	22	-
2001	-	13
2002	-	3
2003	-	3
2004	-	5
2005	-	2
2006	-	0
2007	-	0
2008	-	0
2009	-	0
2010	7	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Ivanof Bay: 2000-2010 (U.S. Census).

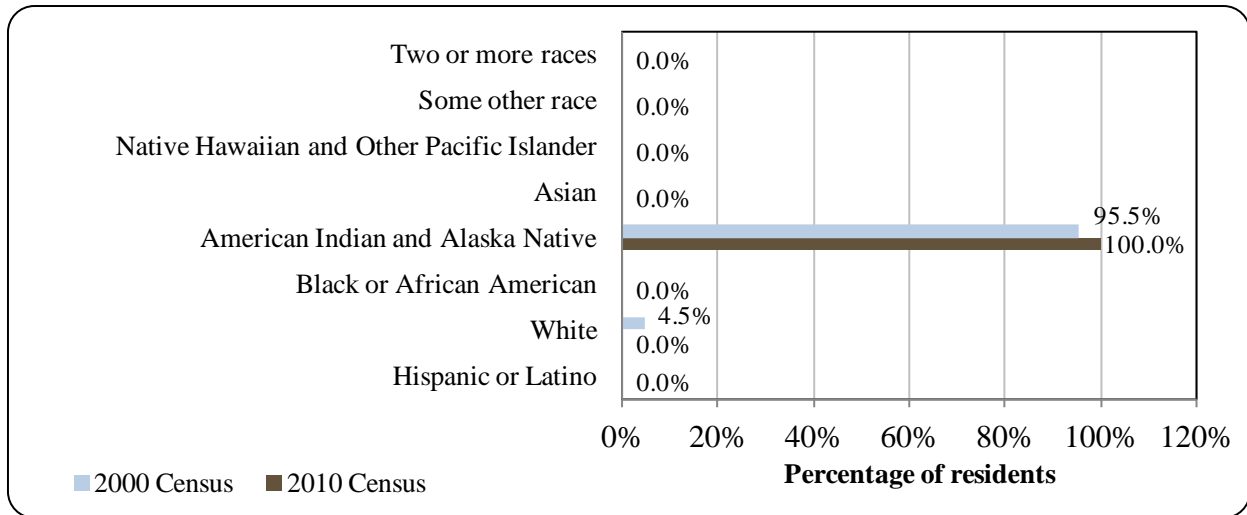
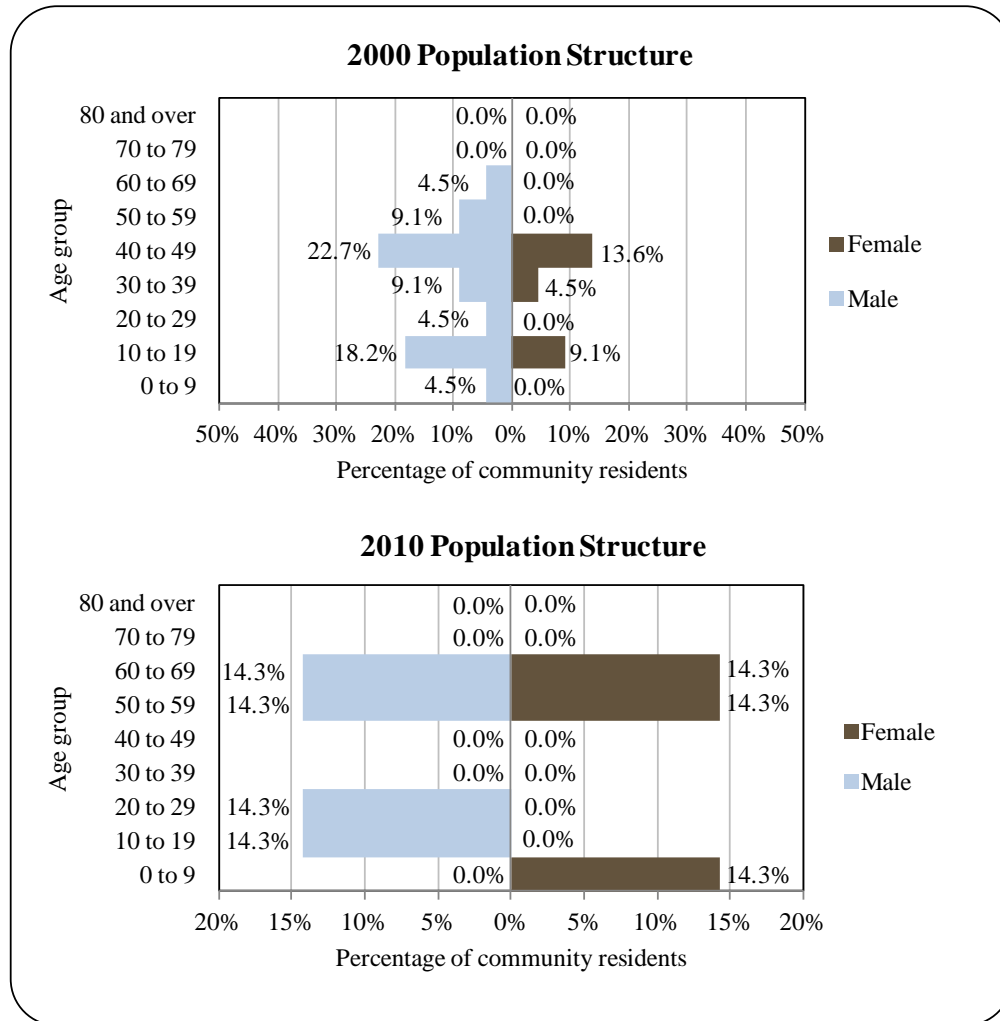


Figure 2. Population Age Structure in Ivanof Bay Based on the 2000 and 2010 U.S. Decennial Census.



The U.S. Census’ 2006-2010 American Community Survey (ACS) did not provide any information regarding educational attainment in Ivanof Bay in 2010. Although the U.S. Decennial Census recorded seven individuals as permanent residents in Ivanof Bay in 2010, the ACS estimated a population of zero.⁵⁵⁵ Given the small population of Ivanof Bay in 2010, it is useful to look back at education statistics in the year 2000 as well, when the population was slightly higher. In 2000, Census sample data for ‘Selected Social Characteristics’ estimated that there were 22 individuals aged 25 or older residing in Ivanof Bay in 2000, 5 of which had less than a 9th grade education, 3 which had between a 9th and 12th grade education, 7 holding high school diplomas, and 7 which held high school diplomas and had attended some college without receiving a degree. It is important to note that, as in the case of 2006-2010 ACS data, the small

⁵⁵⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

population of permanent residents in Ivanof Bay in the 2000 Decennial Census (22 total residents recorded) was not accurately represented by Census sample data (which estimated 30 total residents, including 22 residents aged 25 and older).

History, Traditional Knowledge, and Culture

Archaeological evidence suggests that Aleut (Unanga and Alutiiq) peoples have occupied the Alaska Peninsula for approximately 9,000 years.^{556,557} Subsistence harvest of marine mammals and salmon has historically been of primary importance for the Aleut, and today salmon, Pacific halibut, octopus, shellfish, seal, and sea lion are an important part of the subsistence diet, along with some harvest of land mammals.⁵⁵⁸

Ivanof Bay received its name in 1880, when Lieutenant Dall of the U.S. Coastal and Geodetic Survey mapped the area. Ivanof Bay was briefly a place of refuge for Alutiiq people driven away from their villages by the eruption of Mt. Katmai in 1912. Captain Perry, in command of the ship, “Manning,” transported surviving villagers from Douglas and Katmai to Ivanof Bay. Later, they were moved to a new village site to the east that was named Perryville.⁵⁵⁹

The construction of a cannery at Ivanof Bay in 1930 led to a more permanent population there. The cannery operated until the 1950s. Ivanof Bay first showed up in Census records in 1960 with a population of 15.⁵⁶⁰ The size of the community grew considerably after six households (approximately 40 individuals) relocated to Ivanof Bay from Perryville in 1965.⁵⁶¹ Reasons for the move included a search of better water sources and hunting grounds, as well as the opportunity to pursue a peaceful lifestyle with religious freedom. All of the families that relocated to Ivanof Bay were members of the Slavic Gospel Mission.⁵⁶²

Today, Ivanof Bay remains a traditional Alutiiq community. Residents practice a subsistence lifestyle. Important subsistence resources in Ivanof Bay include salmon, trout, crab, clams, moose, caribou, bear, porcupine, and seals. Many residents leave Ivanof Bay in the summer to live and fish near the community of Chignik to the northeast.⁵⁶³

Natural Resources and Environment

Ivanof Bay’s maritime climate is characterized by cool summers, warm winters, and rainy weather. Average summer temperatures range from 39 to 60 °F; winter temperatures average 21 to 50 °F. Low clouds, rain squalls, fog, and snow showers frequently limit visibility.

⁵⁵⁶ LaRoche + Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

⁵⁵⁷ WHPacific. 2010. *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from: <http://www.aleutianseast.org/>.

⁵⁵⁸ Alaska Native Heritage Center. (n.d) *The Unangax & Alutiiq (Supiaq) People - Who We Are*. Retrieved January 4, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/unangax/.

⁵⁵⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁶⁰ Ibid.

⁵⁶¹ Morris, Judith Marek. 1987. *Fish and Wildlife Uses in Six Alaska Peninsula Communities: Egegik, Chignik, Chignik Lagoon, Chignik Lake, Perryville, and Ivanof Bay*. Alaska Dept. of Fish and Game, Technical Paper No. 151. Retrieved October 18, 2012 from <http://www.arlis.org/docs/vol1/A/20700109.pdf>.

⁵⁶² See footnotes 559 and 561.

⁵⁶³ See footnote 559.

Average annual precipitation is 127 inches, with 58 inches of snow.⁵⁶⁴ Local topography is steep, rugged, and mountainous, with headlands that jut into the ocean. Mt. Veniaminof, a 7,075 feet high active volcano located 20 miles inland from Ivanof Bay, provides an impressive backdrop.⁵⁶⁵

Ivanof Bay is located within the boundaries of the Alaska Peninsula National Wildlife Refuge (NWR), which extends as far west as False Pass and east beyond Chignik Bay, and includes a separate unit south of Ugashik. Between the two units of the Alaska Peninsula NWR lies Aniakchak National Monument and Preserve, and, extending along the southern coast of the Peninsula, the Alaska Maritime NWR, which stretches from the Aleutian Islands to the Southeast Alaska Panhandle. All three protected areas were formed under the Alaska National Interest Land Conservation Act (ANILCA) of 1980.⁵⁶⁶

The 3.7 million acre Alaska Peninsula NWR hosts a dramatic landscape of towering mountain peaks, including a number of active volcanoes, rolling tundra, and rugged coastlines. Salmon return to the rivers of the Alaska Peninsula NWR, supporting brown bear populations. Other land mammals include wolverine, the 7,000-animal Northern Alaska Peninsula caribou herd, wolves, and moose. It is of note that no black bears are found in the Alaska Peninsula NWR. Marine mammals living along the coastline include sea otters, harbor seals, sea lions, and migrating whales. The Alaska Peninsula NWR also provides important habitat for migrating birds.⁵⁶⁷

The Alaska Maritime NWR hosts a similar array of species in the Alaska Peninsula region. However, it contains a greater diversity overall, as it stretches from the tip of the Aleutian Islands to the Southeast Alaska Panhandle, and includes St. Matthew Island in the Bering Sea, Hagemester Island in northern Bristol Bay, and two units bordering the Chukchi Sea. It was created in part to promote a program of scientific research on marine ecosystems. The Alaska Maritime NWR “protects breeding habitat for seabirds, marine mammals, and other wildlife on more than 2,500 islands, spires, rocks, and coastal headlands.”⁵⁶⁸

Aniakchak National Monument and Preserve was established to recognize the unique geological significance of a six-mile wide, 2,500 feet deep caldera formed by a massive eruption that took place 3,500 years ago. The explosion caused the loss of approximately 3,000 feet of the upper mountain. The Aniakchak volcano was last active in 1931, when a small explosion pockmarked the caldera floor.⁵⁶⁹ This National Monument calls attention to the highly active tectonic zone in which Ivanof Bay is located. The Alaska Peninsula and Aleutian Island chain

⁵⁶⁴ Ibid.

⁵⁶⁵ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁵⁶⁶ U.S. Fish and Wildlife Service. (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved March 23, 2012 from <http://www.fws.gov/refuges/profiles/index.cfm?id=74512>.

⁵⁶⁷ Ibid.

⁵⁶⁸ USFWS (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved January 4, 2012 from <http://alaskamaritime.fws.gov/>.

⁵⁶⁹ National Park Service. 2011. *Aniakchak National Monument & Preserve*. Retrieved March 23, 2012 from <http://www.nps.gov/ania/>.

form part of the Pacific “Ring of Fire,” one of the most active earthquake areas in the world.⁵⁷⁰ Some of these earthquakes are associated with explosive volcanic eruptions.⁵⁷¹

The region of the Alaska Peninsula in which Ivanof Bay is located has at least 49 identified occurrences of base and precious metal deposits, as well as the Chignik and Herendeen Bay coalfields. Estimates of coal resources range from 200 million to 3 billion short tons. Reserves of oil and natural gas are thought to be present on the outer continental shelf (OCS) in the Bristol Bay Basin along the northern edge of the Aleutian Islands and Alaska Peninsula.⁵⁷² However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010, Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.⁵⁷³ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, for both exploratory or production purposes, through 2017.⁵⁷⁴ The Proposed OCS Oil & Gas Leasing Program for 2012-2017 does not include any lease sales adjacent to National Monument or NWR boundaries along the Alaska Peninsula. The Alaska Peninsula Unit of the Alaska Maritime NWR has been identified as an area of special concern, in which a large oil spill could have negative impacts on coastal habitats and fauna, and could affect subsistence use, commercial or recreational fisheries, and tourism.⁵⁷⁵

A hazard analysis conducted for communities in the Lake and Peninsula Borough determined that the Ivanof Bay area is at high risk of tsunamis, volcanic activity, and severe weather, and at medium risk of earthquake and wildfire.⁵⁷⁶

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Ivanof Bay as of October, 2012.⁵⁷⁷

Current Economy⁵⁷⁸

Ivanof Bay residents are involved in commercial fisheries, and also depend on subsistence hunting and fishing. Many residents trap during winter months.⁵⁷⁹ Although the U.S.

⁵⁷⁰ Sykes, Lynn R., Jerome B. Kisslinger, Leigh House, John N. Davies and Klaus H. Jacob. 1980. “Rupture Zones and Repeat Times of Great Earthquakes along the Alaska-Aleutian Arc, 1784-1980.” *Science* 19 December 1980, Vol. 210 no. 4476 pp. 1343-1345.

⁵⁷¹ U.S. Geological Survey. 1998. “Can Another Great Volcanic Eruption Happen in Alaska?” Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

⁵⁷² See footnote 565.

⁵⁷³ Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

⁵⁷⁴ The White House, Office of the Press Secretary. March 31, 2010. *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

⁵⁷⁵ Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

⁵⁷⁶ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

⁵⁷⁷ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved October 18, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁵⁷⁸ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Decennial Census reported seven permanent residents in 2010, including five that were age 16 or older; household surveys conducted for the 2006-2010 ACS did not collect any economic data from these residents. The civilian labor force was estimated to be zero and no earnings or employment statistics were reported for Ivanof Bay in 2010.^{580,581} In addition, no information is available from DOLWD's Alaska Local and Regional Information (ALARI) database maintained regarding employment or earnings in Ivanof Bay in 2010.⁵⁸²

Income and employment information was reported for Ivanof Bay in the 2000 Census. In 2000, the per capita income in Ivanof Bay was reported to be \$21,983 and the median household income was \$91,977. Taking inflation into account by converting the 2000 values to 2010 dollars,⁵⁸³ the real per capita income in 2000 is shown to have been \$28,907, and the real median household income in 2000 was \$120,949. Hobart Bay ranked 72nd of 344 Alaskan communities with per capita income data in 2000, and 3rd in median household income, out of 341 Alaskan communities with household income data that year. In 2000, no Ivanof Bay residents were below the poverty level, compared to 9.4% of Alaskan residents overall, and the local unemployment rate was 0%, compared to a statewide rate of 6.1%.

Sample data from the 2000 U.S. Census estimated that there were 16 residents aged 16 and older in Ivanof Bay, all of which were employed in the civilian labor force that year. Of these, 15 were estimated to be employed in public sector, and 1 in the private sector. The industry in which a majority of Ivanof Bay residents were estimated to be employed was public administration (10 residents, 62.5% of the civilian labor force), while 3 residents (18.8%) were employed in educational, health, and social service industries, and 3 (18.8%) were employed in 'other services' (not including public administration) (Figure 3). The top three occupations were service (5 residents employed; 31.3% of the civilian labor force), sales and office work (5 residents; 31.3%), and construction, extraction, and maintenance (5 residents; 31.3%). In addition, one Ivanof Bay resident was estimated to be employed in a management, professional, or other related occupation (Figure 4). As in the case of 2006-2010 ACS estimates,⁵⁸⁴ sample data from the 2000 U.S. Census may not provide an entirely accurate representation of communities with very small populations, as reflected by the conflicting numbers between the total population in Hobart Bay (22) and the number of residents estimated to be age 25 or older in the 2000 Census economic sample data (25).

⁵⁸⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁸¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵⁸² Alaska Dept. of Labor and Workforce Dev. (n.d.). *Alaska Local and Regional Information*. Retrieved May 22, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

⁵⁸³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵⁸⁴ See footnote 580.

Figure 3. Local Employment by Industry in 2000-2010, Ivanof Bay (U.S. Census).

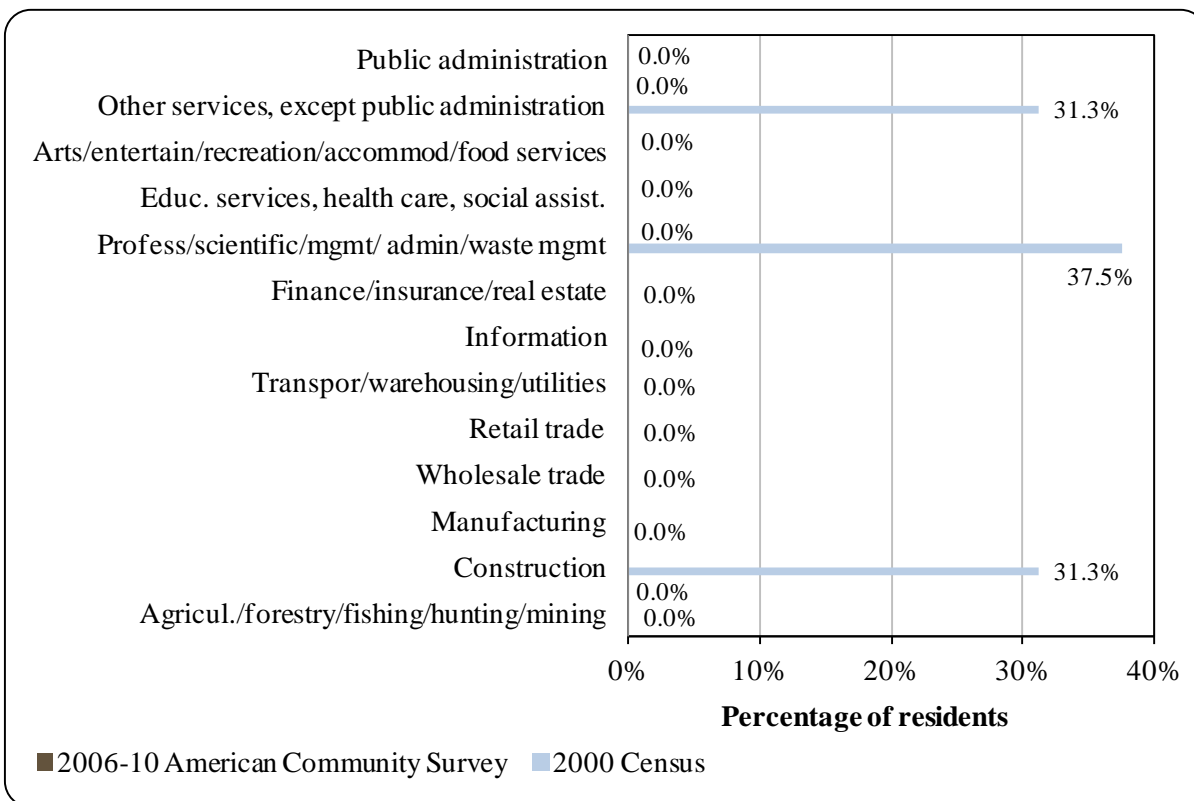
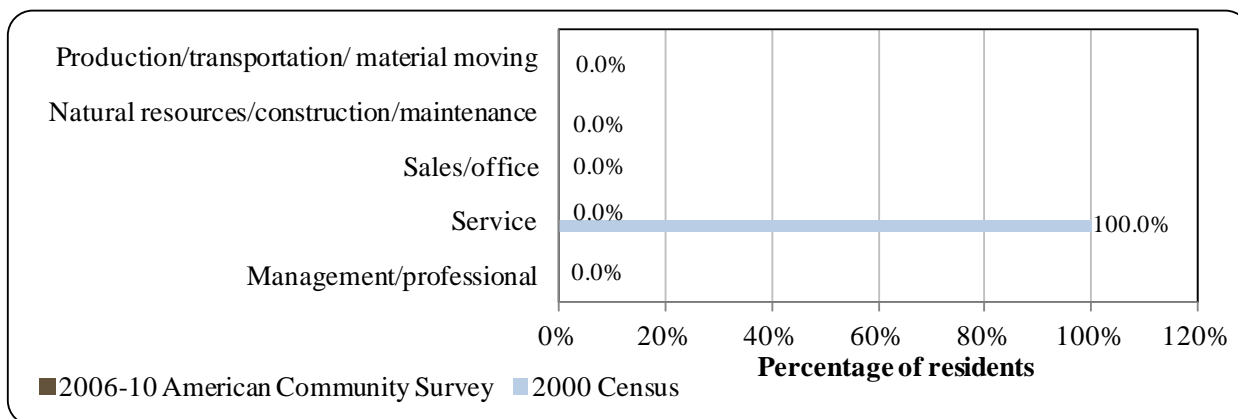


Figure 4. Local Employment by Occupation in 2000-2010, Ivanof Bay (U.S. Census).



Governance

Ivanof Bay is an unincorporated community under the jurisdiction of the Lake and Peninsula Borough. Given that Ivanof Bay does not have a municipal government, no information is reported regarding municipal revenue sources (Table 2). No sales or property tax is collected in Ivanof Bay, but the Borough does administer a 2% fish tax, a 6% Bed Tax, a \$3 per person/day guide tax, and a \$1 per person/day lodge guide tax.⁵⁸⁵

Table 2. Selected Municipal, State or Federal Revenue Streams for the Community of Ivanof Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Ivanof Bay was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity recognized by the Bureau of Indian Affairs (BIA) is the Ivanof Bay Village.⁵⁸⁶ The Village Council is responsible for providing basic services in the community, and is likely to continue to be the local provider of services unless the community incorporates as a city in the future.⁵⁸⁷ The Native village

⁵⁸⁵ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved November 16, 2011 from http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm.

⁵⁸⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁸⁷ LaRoche and Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

corporation is Bay View, Inc., which manages 81,502 acres of land. The regional Native corporation to which Ivanof Bay belongs is the Bristol Bay Native Corporation (BBNC).⁵⁸⁸

Ivanof Bay is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the tribes and the Native people of Bristol Bay.⁵⁸⁹ The BBNA is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁵⁹⁰

The closest regional office of the Alaska Department of Fish and Game (ADF&G) is located in Sand Point. Kodiak has the nearest National Marine Fisheries Service (NMFS) office, including a NOAA Fisheries Sustainable Fisheries Division and Enforcement Office, as well as the nearest office of the Alaska Department of Natural Resources (DNR). The nearest Alaska Department of Commerce, Community, and Economic Development (DCCED) office is in Dillingham, and the closest offices of the U.S. Bureau of Citizenship and Immigration Services are located in Unalaska and Kodiak. However, the Anchorage offices of these agencies may be more accessible to people from the Alaska Peninsula region.

Infrastructure

Connectivity and Transportation

Ivanof Bay is accessible via air or water, and there is no overland connection. A private 1,500 gravel airstrip, owned by Bay View, Inc., is present in the community, and float planes can land on Ivanof Bay.⁵⁹¹ There are no scheduled commercial flights to Ivanof Bay; the community is only accessible by charter flights.⁵⁹² The nearest port with barge service is Chignik Bay. No public dock or harbor is available in Ivanof Bay. Local residents use ATVs and skiffs as primary modes of transportation.⁵⁹³

Ivanof Bay and other communities on the Alaska Peninsula are currently very isolated. The Southwest Alaska Transportation Plan published in November 2002 prioritized development of a transportation corridor along the Alaska Peninsula. The desired corridor would link the communities of Egegik, Pilot Point, Ugashik, and Port Heiden via an overland route to Chignik on the south coast, from which fuel and supplies could be disbursed to these communities. The corridor would also extend west from Chignik to the communities of Perryville and Ivanof Bay, and east to Naknek.⁵⁹⁴

⁵⁸⁸ See footnote 586.

⁵⁸⁹ Bristol Bay Native Association. (n.d.). *Homepage*. Retrieved November 16, 2011 from www.bbna.com.

⁵⁹⁰ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁵⁹¹ See footnote 586.

⁵⁹² Lake and Peninsula Borough. (n.d.). *Borough Communities*. Retrieved October 17, 2012 from http://www.lakeandpen.com/index.asp?Type=B_BASIC&SEC=%7BAFCFD48C-BDE5-47FF-BD61-FB50625F46CE%7D.

⁵⁹³ See footnote 586.

⁵⁹⁴ Parsons Brinkerhoff. 2002. *Southwest Alaska Transportation Plan Final Edition*. Prepared for the Alaska Department of Transportation and Public Facilities. Retrieved April 4, 2012 from <http://www.dot.state.ak.us/stwdplng/areaplans/pub/SWplanfinalnov02.pdf>.

Facilities

Water in Ivanof Bay is sourced from a community well and a nearby stream and is stored in a 20,000-gallon tank. No water treatment system is in place. The school building has its own well. All other facilities and homes are connected to the Village Council-operated piped water system. No piped sewage system is available, and residents use individual septic tanks, outhouses, or “honeybuckets”. Sewage is hauled by individuals to a sludge disposal site. A landfill is operated by the Village Council, but no refuse collection services are provided; individuals haul their own garbage to the landfill. The Ivanof Bay Village Council operates the electric utility. Electricity is generated using a diesel powerhouse. There is no local police service in Ivanof Bay.⁵⁹⁵ The nearest state trooper posts are located in King Salmon and Kodiak.⁵⁹⁶ Local fire and rescue services are provided by the Ivanof Bay Fire House and the Ivanof Bay First Responders. Other community facilities include the Council Building. Telephone service is available in Ivanof Bay, and internet is available at the school building only. No cable service providers offer service locally.⁵⁹⁷

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that no public dock or harbor facilities are present in Ivanof Bay.⁵⁹⁸

Medical Services

Medical services are provided in Ivanof Bay at the Ivanof Bay Clinic. The clinic is owned by the Village Council and operated by the Bristol Bay Area Health Corporation. It is a Community Health Aid Program site. Emergency Services have coastal, floatplane, and air access. Local emergency service is provided by a health aide, and alternative health care is available from the Ivanof Bay First Responders.⁵⁹⁹

Educational Opportunities

There are currently no schools in Ivanof Bay, which is located in the Lake and Peninsula Borough School District.⁶⁰⁰ The Ivanof Bay School last operated during the 1999-2000 school year. It was closed in 2000 due to insufficient student enrollment numbers.⁶⁰¹

⁵⁹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁹⁶ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁵⁹⁷ See footnote 595.

⁵⁹⁸ Ibid.

⁵⁹⁹ Ibid.

⁶⁰⁰ Ibid.

⁶⁰¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Ivanof Bay area for thousands of years. Villages and fish camps were often located at mouths of streams for access to both fresh water and abundant salmon runs.⁶⁰² During Alaska's Russian period, salmon remained a subsistence resource, but soon after the purchase of Alaska by the United States in 1867, commercial exploitation of salmon was initiated.⁶⁰³ Herring was one of the earliest commercial fisheries, along with salmon, during the period when the product was salted for storing and shipment to be used for human consumption. Commercial harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.⁶⁰⁴ Halibut and groundfish fisheries began to develop in the Alaska Peninsula region by the 1920s with the development of diesel engines, which allowed fishing vessels to undertake longer trips.^{605,606}

Salmon harvest at Chignik Lagoon is a mainstay of the Alaska Peninsula economy, and Ivanof Bay fishermen and their families often relocate to Chignik during the salmon season.^{607,608} The Chignik salmon harvesting area extends along the south side of the Alaska Peninsula between Kilokak Rocks and Kupreanof Point. In the early years of this salmon fishery, pile traps were the primary harvest method, and historical harvest activity was focused in Chignik Lagoon and Chignik Bay. Fish traps were the primary harvest method until 1954. Starting in 1955, only purse seine gear has been permitted in the Chignik salmon fishery. Sockeye salmon makes up the greatest percentage of salmon catch in the Chignik area. Between 1980 and 2004, Chignik salmon harvests made up only 1.81% of total commercial salmon harvest in Alaska. However, based on average market value in 2004, as determined from permit sales, the most valuable limited entry permit types in Alaska were purse seine permits in the Chignik area.⁶⁰⁹ As of 2010, there were 91 total limited entry permits in the Chignik salmon fishery, a reduction from 99 in the year 2000.⁶¹⁰

In the early 2000s, a group of permit holders in the Chignik salmon fishery proposed a new fisheries management strategy, and in 2002 the Alaska Board of Fisheries passed

⁶⁰² Alaska Native Heritage Center. (n.d.) *The Unangax & Alutiiq (Supiaq) People - Who We Are*. Retrieved January 4, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/unangax/.

⁶⁰³ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶⁰⁴ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁶⁰⁵ See footnote 603.

⁶⁰⁶ Thompson, W.F. and N.L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁶⁰⁷ See footnote 595.

⁶⁰⁸ LaRoche + Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

⁶⁰⁹ See footnote 603.

⁶¹⁰ Alaska Dept. of Fish and Game (n.d.). *CFEC Public Lookup Database*. Retrieved March 22, 2012 from <http://www.cfec.state.ak.us/plook/>.

regulations allowing for a portion of salmon harvest to be allocated to a cooperative. The Chignik Salmon Cooperative (Co-op) formed that year. Of approximately 100 limited entry permit holders in the Chignik salmon fishery in 2002, more than three-quarters joined the Co-op between 2002 and 2005. Approximately 20 of the Co-op member fishermen were hired to fish the Co-op's allocation annually, and all Co-op members were paid equal shares of the Co-op's profits. The Co-op was opposed by a minority of permit holders. It was eventually ended in 2006, after the Alaska Supreme Court ruled that it violated a state law requiring permit holders to operate their own vessels.⁶¹¹

In addition to salmon, in some years during the 2000-2010 period, Ivanof Bay residents were active in commercial fisheries for miscellaneous saltwater finfish, halibut, and herring. Groundfish fisheries target a variety of species, including pollock, Pacific cod, sablefish, Atka mackerel, lingcod, and various rockfish and flatfish species. Herring are harvested for bait in the vicinity of Unalaska when Togiak-spawning herring are in residence during the summer feeding period. On occasion, a herring sac roe fishery occurs near Port Moller when aerial surveys determine that a sufficient quantity of herring is present, and if processing capacity is available.⁶¹² In addition, commercial herring sac roe harvests occur in Kujulik Bay, Castle Bay, and Chignik Bay (east of Ivanof Bay), and herring sac roe (food/bait) harvest occurs in Stepovak Bay (west of Ivanof Bay).⁶¹³

Ivanof Bay is located in Federal Statistical and Reporting Area 620, Pacific Halibut Fishery Regulatory Area 3B, and the Western Gulf of Alaska Sablefish Regulatory Area. The community is eligible for the Community Quota Entity (CQE) program, but as of October, 2012 had not created a CQE non-profit organization.⁶¹⁴ Ivanof Bay is not eligible to participate in the Community Development Quota program.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Ivanof Bay. However, the 2010 Intent to Operate list shows that active processing facilities are located in nearby communities of Chignik and Sand Point. More information about these processing facilities can be found in the profiles for each of these communities.

Fisheries-Related Revenue

No information was reported regarding fisheries-related revenue sources in Ivanof Bay between 2000 and 2010 (Table 3).

⁶¹¹ Knapp, Gunnar. 2008. "The Chignik Salmon Cooperative." In *Case studies in fisheries self-governance*. Eds. R. Townsend, R. Shotton, and H. Uchida. FAO Fisheries Technical Paper 504.

⁶¹² See footnote 604.

⁶¹³ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁶¹⁴ NOAA Fisheries. 2012. *Name and Contact Information of Community Quota Entities*. Retrieved October 18, 2012 from <http://alaskafisheries.noaa.gov/ram/daily/cqenamescontacts.pdf>.

Commercial Fishing

In some years between 2000 and 2010, Ivanof Bay residents participated in commercial fisheries as permit and quota share account holders, crew members, and vessel owners. In 2000, two Ivanof Bay residents held a total of six Commercial Fisheries Entry Commission (CFEC) permits, while five CFEC permits were held by two permit holds in 2001, and three were held by one permit holder in 2005 (Table 4). Commercial crew licenses were held by several residents from 2000-2002, and a small number of fishing vessels were primarily owned by Ivanof Bay residents in 2000, 2001, and 2005. At least one vessel was listed as homeported in Ivanof Bay in all years during the 2000-2010 period. No fish buyers or shore-side processors were present in the community, and no vessels delivered landings during this period (Table 5).

One halibut CFEC permits was held in 2000, 2001, and 2005. In the first 2 years, the permit was associated with longline gear using vessels 60 feet in length or over, while the 2005 permit was for use on a vessel under 60 feet in length. All salmon permits held in Ivanof Bay during the 2000-2010 period were for the Chignik purse seine fishery, and all miscellaneous finfish permits were associated with mechanical jig gear and were valid for statewide use. The herring permit held in 2000 was for the Bristol Bay roe herring fishery. Between 2000 and 2010, no Ivanof Bay residents held federal License Limitation Permit (LLP) or Federal Fisheries Permits (FFP) Information about LLPs and FFPs held by Perryville residents is also presented in Table 4.

In 2000, one quota share account was held by an Ivanof Bay resident in the federal halibut catch share fishery. That year, a total of 14,638 halibut quota shares were held, and the annual halibut individual fishing quota (IFQ) allotment was 4,081 pounds. No residents held quota share accounts in the federal sablefish or crab catch share fisheries between 2000 and 2010. Further information about federal catch share participation is presented in Tables 6 through 8.

No landings or ex-vessel revenue were recorded in Ivanof Bay (Table 9), given the lack of fish buyers in the community (Table 5). Information about landings and ex-vessel revenue generated by vessels owned by Ivanof Bay residents is considered confidential due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Ivanof Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Ivanof Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	0	0	0	1	0	0	0	0	0
	Fished permits	1	0	0	0	0	1	0	0	0	0	0
	% of permits fished	100%	0%	-	-	-	100%	-	-	-	-	-
	Total permit holders	1	1	0	0	0	1	0	0	0	0	0
Herring (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Ivanof Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished											
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	2	2	0	0	0	1	0	0	0	0	0
	Fished permits	1	1	0	0	0	0	0	0	0	0	0
	% of permits fished	50%	50%	-	-	-	%	-	-	-	-	-
	Total permit holders	2	2	0	0	0	1	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	0	0	0	1	0	0	0	0	0
	Fished permits	2	2	0	0	0	1	0	0	0	0	0
	% of permits fished	100%	100%	-	-	-	100%	-	-	-	-	-
	Total permit holders	2	2	0	0	0	1	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	6	5	0	0	0	3	0	0	0	0	0
	<i>Fished permits</i>	4	3	0	0	0	2	0	0	0	0	0
	<i>% of permits fished</i>	67%	60%	-	-	-	67%	-	-	-	-	-
	<i>Permit holders</i>	2	2	0	0	0	1	0	0	0	0	0

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Ivanof Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Ivanof Bay ²	Total Net Pounds Landed in Ivanof Bay ^{2,5}	Total Ex-Vessel Value of Landings in Ivanof Bay ^{2,5}
2000	9	0	0	4	3	0	0	\$0
2001	3	0	0	4	3	0	0	\$0
2002	2	0	0	0	3	0	0	\$0
2003	0	0	0	0	3	0	0	\$0
2004	0	0	0	0	3	0	0	\$0
2005	0	0	0	2	2	0	0	\$0
2006	0	0	0	0	1	0	0	\$0
2007	0	0	0	0	2	0	0	\$0
2008	0	0	0	0	1	0	0	\$0
2009	0	0	0	0	1	0	0	\$0
2010	0	0	0	0	1	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Ivanof Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	1	14,638	4,081
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Ivanof Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Ivanof Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Ivanof Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Ivanof Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	0	0	0	-	0	0	0	0	0
Finfish	-	-	0	0	0	-	0	0	0	0	0
Halibut	-	-	0	0	0	-	0	0	0	0	0
Herring	-	-	0	0	0	-	0	0	0	0	0
Other Groundfish	-	-	0	0	0	-	0	0	0	0	0
Other Shellfish	-	-	0	0	0	-	0	0	0	0	0
Pacific Cod	-	-	0	0	0	-	0	0	0	0	0
Pollock	-	-	0	0	0	-	0	0	0	0	0
Sablefish	-	-	0	0	0	-	0	0	0	0	0
Salmon	-	-	0	0	0	-	0	0	0	0	0
<i>Total²</i>	-	-	0	0	0	-	0	0	0	0	0
	<i>Ex-vessel Value (Nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
Halibut	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
Herring	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
Other Groundfish	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
Other Shellfish	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
Pacific Cod	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
Pollock	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
Sablefish	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
Salmon	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Very little sportfishing activity took place in Ivanof Bay between 2000 and 2010. No active sportfish guide businesses or licensed sport fish guides were present in the community, and no sportfishing licenses were sold locally. In some years, a small number of Ivanof Bay residents purchased sportfishing licenses in another community. No licenses were issued in 2010 (see Table 11). The Alaska Statewide Harvest Survey,⁶¹⁵ conducted by ADF&G between 2000 and 2010, did not provide information about species targeted by private anglers in Ivanof Bay. However, the survey did not sport harvest of Chinook salmon in freshwater and pink salmon in saltwater in nearby Perryville. Given the lack of sportfishing businesses, no kept/released log book data were reported for fishing charters out of Ivanof Bay between 2000 and 2010.⁶¹⁶

Ivanof Bay is located within Alaska Sport Fishing Survey Areas R – Alaska Peninsula and Aleutian Islands. This area includes all Alaskan waters, plus drainages, between Cape Douglas and the community of Naknek. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Ivanof Bay is also displayed in Table 11.

Table 11. Sport Fishing Trends, Ivanof Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Ivanof Bay²
2000	0	0	3	0
2001	0	0	2	0
2002	0	0	1	0
2003	0	0	0	0
2004	0	0	0	0
2005	0	0	0	0
2006	0	0	0	0
2007	0	0	0	0
2008	0	0	1	0
2009	0	0	0	0
2010	0	0	0	0

⁶¹⁵ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁶¹⁶ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11, cont'd. Sport Fishing Trends, Ivanof Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest remains fundamental to the Ivanof Bay economy and way of life. Residents of Ivanof Bay and other communities on the Pacific side of the Alaska Peninsula rely on subsistence food sources such as salmon, trout, marine fish, crab, clams, waterfowl, seal, moose, caribou, bear, porcupine, and berries.^{617,618}

No information is available from ADF&G regarding per capita subsistence harvest or the percentage of Ivanof Bay households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, a survey of 1989 subsistence activity conducted by ADF&G provides information about harvest of marine invertebrates, non-salmon fish (not including halibut), and marine mammals at the household level. That year, the following species of marine invertebrates were harvested: cockles (100% of households reported harvest), sea urchin (100%), black chitons (86%), Dungeness crab (71%), pinkneck clams (71%), red chitons (71%), butter clams (57%), king crab (43%), razor clams (43%), octopus (29%), mussels (14%),

⁶¹⁷ LaRoche + Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

⁶¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

and Pacific littleneck clams (14%). Species of non-salmon fish (not including halibut) that were reported as harvested by Ivanof Bay households in 1989 included Dolly Varden (harvest reported by 71% of households), Pacific cod (57%), eulachon (hooligan candlefish) (43%), rainbow trout (29%), grayling (14%), herring (14%), and flounder (14%). Also in 1989, 43% of households were estimated to harvest harbor seal and 14% harvested Steller sea lion. In many cases, the number of households that reported using these subsistence resources was higher than the number of households involved in harvest, indicating the importance of sharing within the community.⁶¹⁹

Some data are available regarding subsistence harvest of salmon and marine mammals by Ivanof Bay residents during the 2000-2010 period. In 2000, subsistence salmon permits were issued to 15 Ivanof Bay households. This number declined to five in 2001 and one in 2002, and very little information was reported regarding subsistence permits later in the decade. Coho was the most heavily harvested salmon species in these years, followed by sockeye, pink, and chum salmon. This information about subsistence harvest of salmon is presented in Table 13. With respect to subsistence harvest of marine mammals, Ivanof Bay harvest appears to have focused primarily on harbor seal and Steller sea lion. According to data reported in ADF&G's CSIS, between three and seven harbor seal were harvested each year (for those years in which data were available), and one Steller sea lion was harvested each year in 2001 and 2002. No information was reported by management agencies regarding harvest of beluga whale, sea otter, walrus, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals by Ivanof Bay residents is presented in Table 15.

No information was reported about total harvest of marine invertebrates or non-salmon fish between 2000 and 2010 (Table 13), and no data were available regarding participation in the Subsistence Halibut Registration Certificates program (Table 14).

⁶¹⁹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Ivanof Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Terrestrial Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Ivanof Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	15	12	3	181	583	288	439	n/a	n/a
2001	5	5	2	41	295	35	105	n/a	n/a
2002	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	1	1	n/a	n/a	35	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Ivanof Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Ivanof Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	3	n/a
2001	n/a	n/a	n/a	n/a	1	7	n/a
2002	n/a	n/a	n/a	n/a	1	7	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	3	n/a
2007	n/a	n/a	n/a	n/a	n/a	3	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	3	n/a
2010	n/a	n/a	n/a	n/a	1	7	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

King Salmon

People and Place

Location



King Salmon is a Census Designated Place (CDP) located on the north bank of the Naknek River, about 15 miles upriver from Naknek. It is 284 miles southwest of Anchorage. King Salmon CDP encompasses 168 square miles of land and 1.5 square miles of water. King Salmon is located in the Bristol Bay Borough, the Bristol Bay Borough Census Area, and the Kvichak Recording District.⁶²⁰ King Salmon is also the seat of the Lake and Peninsula Borough, which provides services for communities from as far northeast as the Iliamna Lake region to as far southwest as Perryville and Ivanof Bay on the Alaska Peninsula.⁶²¹

*Demographic Profile*⁶²²

In 2010, there were 374 residents in King Salmon, making it the 143rd largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population decreased by 46.3%. Between 2000 and 2009, there was an average annual growth rate of -0.53%, which was significantly under the statewide average of 0.75%.

In 2010, the majority of King Salmon residents identified themselves as White (61.2%), along with 27.8% identifying as American Indian and Alaska Native, 8.8% identifying with two or more races, 1.3% identified as Asian, and less than 1% identified either as Native Hawaiian and Other Pacific Islander or of 'some other race'. None of King Salmon's population identified as Black or African American that year. In addition, 2.7% of King Salmon residents identified themselves as Hispanic or Latino in 2010. The most substantial shift from 2000 to 2010 appears to have been an increase in the percentage of the population identifying with two or more races, and a commensurate decrease in the percentage identifying as either White or as American Indian and Alaska Native. In addition, the Black or African American population that was present in 2000 appears not to be represented in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The number of households in King Salmon increased from 158 in 1990 to 196 in 2000, and then fell back to 157 occupied housing units by 2010. The average household size decreased from 2.7 persons per household in 1990 to 2.26 in 2000 and 2.28 in 2010. Of the 336 total housing units surveyed in 2010, 61 (18.2%) were owner-occupied households, 96 (28.6%) were renter-occupied, and 179 housing units (53.3%) were vacant or used only seasonally. In 1990,

⁶²⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶²¹ Lake and Peninsula Borough website. (n.d.). *About the Lake & Peninsula Borough*. Retrieved September 19, 2012 from <http://www.lakeandpen.com/>.

⁶²² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

267 King Salmon residents lived in group quarters. This number fell to 0 by 2000, and then rose to 16 in 2010.

In 2010, the gender makeup in King Salmon was 56.1% male and 43.9% female, more heavily weighted toward males than the population of the state as a whole, which was 52.0% male and 48.0% female. The median age in 2010 was estimated to be 39.1 years, slightly higher than both the U.S. national average of 36.8 years and the median age for Alaska of 33.8 years.

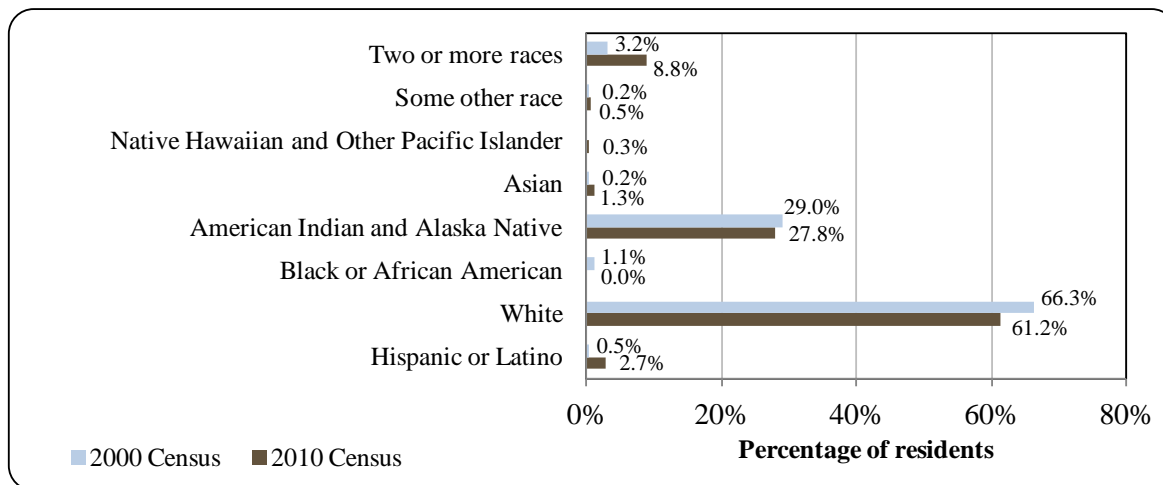
Table 1. Population in King Salmon from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	696	-
2000	442	-
2001	-	388
2002	-	397
2003	-	385
2004	-	396
2005	-	518
2006	-	400
2007	-	424
2008	-	410
2009	-	383
2010	374	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

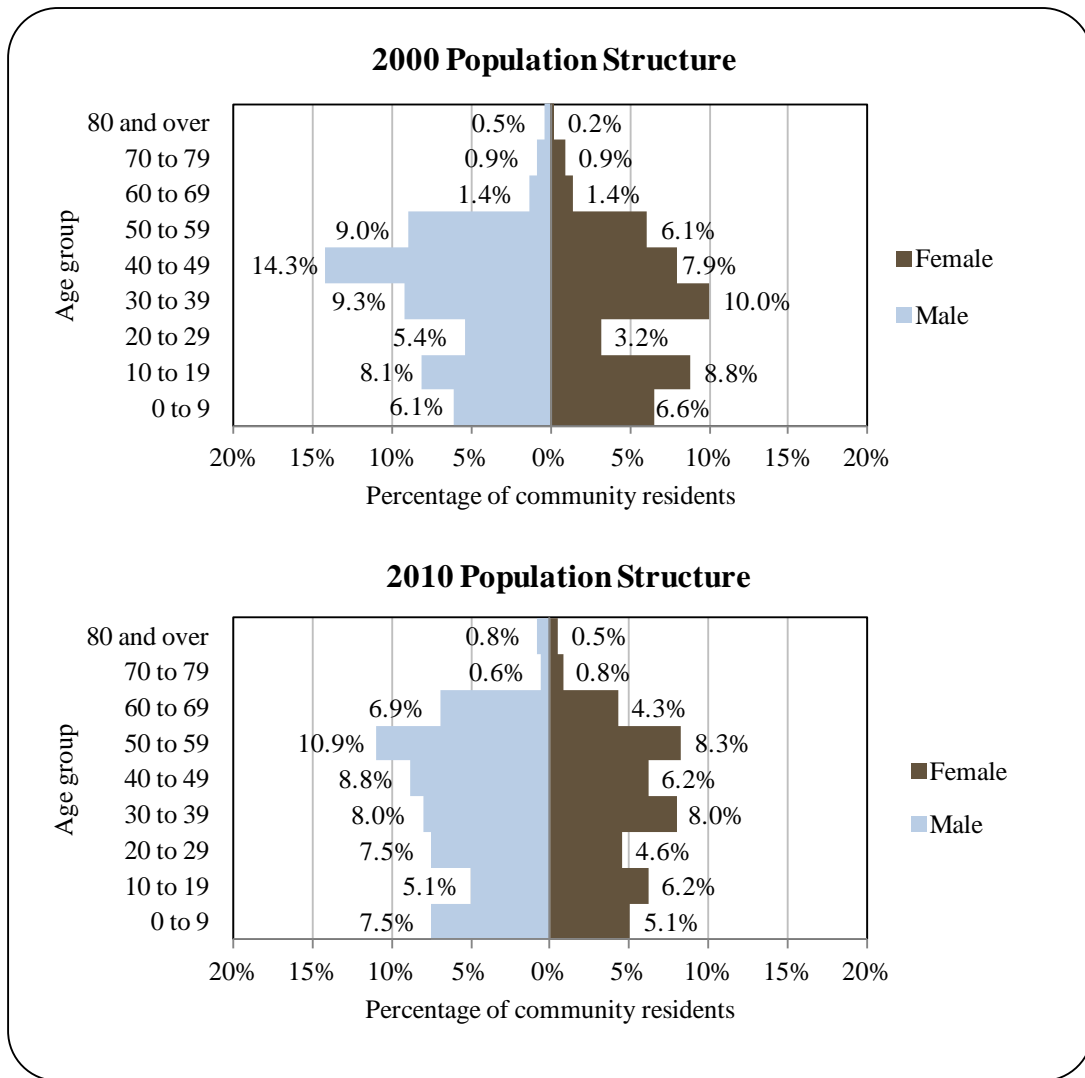
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, King Salmon: 2000-2010 (U.S. Census).



Compared with 2000, the population structure in 2010 was somewhat more constricted in the younger and older age groups and expanding the middle age groups. In that year, 23.9% of residents were under the age of 20, compared to 29.6% in 2000 and 50.2% were between the ages of 30 and 59, compared to 56.6% in 2000. At the same time, 13.9% of the population of King Salmon was over the age of 59, compared to 5.3% in 2000, while 12.1% were between the ages of 20 and 29, compared to 8.6% in 2000. Age distribution by gender cohort was slightly more even in 2010 than in 2000 (Figure 2). In that year, the greatest absolute gender difference occurred within the 20 to 29 age range (7.5% male, 5.1% female), closely followed by the 60 to 69 (6.9% male, 4.3% female) and 0 to 9 (7.5% male, 8.1% female) ranges. Females still continue to make up the smallest segment of the population.

Figure 2. Population Age Structure in King Salmon Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁶²³ estimated that 90.7% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 5.3% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 4.1% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 31.3% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 13.4% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 2.8% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

As early as 8,500 years ago, there is evidence of seasonal camps along the Naknek and Kvichak Rivers by people of the Paleo-Arctic tradition. These people likely arrived following herds of caribou. By 6,000 years ago, ancestors of the Kodiak and Aleutian traditions made seasonal use of the King Salmon area, probably utilizing both caribou and marine resources. By 1,800 B.C., ancestors of historic Yup'ik populations settled in the area. They were fishermen and hunters of caribou and marine mammals. Evidence of permanent settlements and river salmon fishing in the King Salmon area starts around 400 B.C.^{624,625,626} By the time of European contact in the late 1700s, Yup'ik and Aleut residents of area villages used rivers to interact with each other and for transport in pursuit of seasonal subsistence resources.⁶²⁷

Many members of today's King Salmon Tribe are descended from inhabitants of "Old Savonoski", an Aleut village that was located at the eastern end of Naknek Lake, within the modern boundaries of Katmai National Park and Preserve. Old Savonoski was abandoned during the 1912 eruptions of Mt. Katmai and Mt. Novarupta. Villagers relocated to a site at the confluence of King Salmon Creek and the Naknek River, six miles east of today's South Naknek, which they called "New Savonoski". Today, many descendants of Old Savonoski live in the present-day villages of King Salmon and South Naknek.⁶²⁸

Soon after the purchase of Alaska by the United States, a commercial fishing industry began to develop in the region, and many canneries developed in Naknek and South Naknek, two communities located 15 miles down-river from King Salmon.⁶²⁹ Native Alaskan inhabitants of

⁶²³ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶²⁴ Morris, J. 1985. "The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska." *Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

⁶²⁵ Feldman, K.D. Ethnohistory and the IRA Tribal Status Application of King Salmon Natives, Alaska. *Alaska Journal of Anthropology*. 1(1):100-117. Retrieved October 18, 2013 from http://www.uaa.alaska.edu/anthropology/people/upload/King_Salmon.pdf.

⁶²⁶ King Salmon Tribal Council. 2006. *King Salmon Community Plan*. Retrieved September 19, 2012 from www.commerce.state.ak.us/dca/plans/KingSalmon-GCP-2006.pdf.

⁶²⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶²⁸ See footnotes 625 and 626.

⁶²⁹ Ibid.

the area were joined by new residents who arrived to assist in the construction of canneries.⁶³⁰ In the 1930s, an air navigation silo was built at King Salmon, and an Air Force Station was constructed in 1942. In 1949, the U.S. Army Corps of Engineers constructed a road between King Salmon and Naknek, and the King Salmon post office was established.^{631,632} The Air Force Base provided many local jobs through much of the 1900s, serving as the engine for economic expansion. King Salmon also grew as a center for government offices, transportation, and the Bristol Bay salmon and recreational visitor industries. In 1993, the Air Force station went into a caretaker status. The Air Force is still one of the major tenants at the King Salmon airport. Other entities that utilize buildings at the old base include the Bristol Bay Borough, State of Alaska, the Bristol Bay Housing Authority (BBHA), and the Southwest Alaska Vocational and Education Center (SAVEC).^{633,634}

Today, King Salmon is a diverse community, with a majority of White residents, a mix of Aleut, Indian, and Eskimo people, as well as individuals of other racial and ethnic backgrounds. Although King Salmon's Native population was not included as a Native village under the 1971 Alaska Native Claims Settlement Act (ANCSA), the King Salmon Tribe became a federally recognized entity on December 29, 2000.^{635,636}

Natural Resources and Environment

The climate in King Salmon is mainly maritime, characterized by cool, humid, and windy weather. Average summer temperatures range from 42 to 63 °F, and average winter temperatures range from 29 to 44 °F. Extreme temperatures have been recorded from -46 to 88 °F. Total precipitation averages 20 inches annually, with 45 inches of snowfall. Fog is common during summer months.⁶³⁷

King Salmon is located on the Alaska Peninsula, close to the Becharof National Wildlife Refuge (NWR) to the south, Katmai National Park and Preserve to the east, and the Alagnak National Wild and Scenic River to the northeast. The Becharof NWR covers an area of 1,157,000 acres and contains Becharof Lake, the second largest lake in Alaska, and Mt. Peulik, a 4,800 foot volcano. Wildlife present in the NWR includes brown bears, caribou, moose, and over 200 species of migratory and resident birds. It also provides an important nursery for Pacific salmon.⁶³⁸ Katmai National Park and Preserve is a 7,383 square mile wilderness area known for its high concentration of brown bears, the volcanoes Mt. Katmai and Mt. Novarupta, and the Valley of 10,000 Smokes. The National Park and Preserve is also a popular sportfishing destination. A large number of visitors pass through King Salmon on their way to the National

⁶³⁰ See footnote 624.

⁶³¹ Ibid.

⁶³² See footnote 627.

⁶³³ Ibid.

⁶³⁴ Information about entities using buildings at the old base provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

⁶³⁵ Ibid.

⁶³⁶ See footnote 625.

⁶³⁷ Ibid.

⁶³⁸ U.S. Fish and Wildlife Service. 2011. *Becharof National Wildlife Refuge*. Retrieved December 21, 2011 from <http://becharof.fws.gov/>.

Park and Preserve, as it is one of the primary departure points for charter flights.^{639,640} The Alagnak River, also known as the ‘Branch River,’ is a 79-mile long river with headwaters in Katmai National Park and Preserve that joins the Kvichak River at Levelock. Sixty-seven miles of the Alagnak River are designated as wild.⁶⁴¹

The Kvichak River system, including the Alagnak River and Iliamna Lake, is the single most important source of salmon in the Bristol Bay area, providing resources for commercial, subsistence and recreational fisheries. The Alagnak River attracts a large number of anglers each year for salmon, Arctic grayling, Arctic char, and lake trout fisheries. The Alagnak River’s rainbow trout fishery has a world-class reputation.⁶⁴²

Significant mineral resources are present in the Bristol Bay region. Among the many mining claims that have been staked in the area is the Pebble copper-gold-molybdenum deposit. The Pebble Mine site is located northwest of King Salmon near Nondalton, at the divide between the Koktuli River and Upper Talarik Creek, north of Iliamna Lake.⁶⁴³ Northern Dynasty Minerals Limited calls the Pebble deposit, “one of the greatest stores of mineral wealth ever discovered,” and estimates that the deposit includes 80.6 billion pounds of copper, 107.3 ounces of gold, and 5.6 billion pounds of molybdenum, including both indicated (high confidence) and inferred (low confidence) deposits.⁶⁴⁴ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.⁶⁴⁵ According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble Mine is copper. Dissolved copper is known to be toxic to fish.⁶⁴⁶ If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.⁶⁴⁷

The immediate King Salmon area has no known mineral occurrences, but local potential exists for subsurface oil and gas resources. Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin, which runs along the northern edge of the Aleutian Islands and Alaska Peninsula.⁶⁴⁸ The State of Alaska offers oil and gas lease sales on state land and offshore to the 3-mile limit of state waters, although no bids have been received in recent years.⁶⁴⁹ In federal waters, no leases are currently being offered. Given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a

⁶³⁹ National Park Service. 2011. *Katmai National Park & Preserve*. Retrieved November 17, 2011 from <http://www.nps.gov/katm/>.

⁶⁴⁰ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁶⁴¹ Lake Clark-Katmai Studies Center, National Park Service. *Alagnak Wild River: An Illustrated Guide to the Cultural History of the Alagnak Wild River*. Retrieved November 17, 2011 from <http://www.nps.gov/alag/historyculture>.

⁶⁴² See footnote 640.

⁶⁴³ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky. 2008. “Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process.” *Alaska Law Review* 25:1.

⁶⁴⁴ Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

⁶⁴⁵ See footnote 640.

⁶⁴⁶ See footnote 643.

⁶⁴⁷ Pg. 36 in Duffield, John., Christopher Neher, David A. Patterson, and Oliver S. Goldsmith. 2007. *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

⁶⁴⁸ See footnote 640.

⁶⁴⁹ Alaska Department of Natural Resources, Division of Oil and Gas. (2013). *Lease Sale Results*. Retrieved November 8, 2013 from <http://dog.dnr.alaska.gov/Leasing/SaleResults.htm>.

number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.⁶⁵⁰ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.⁶⁵¹

According to the Bristol Bay Coastal Management Plan, the King Salmon area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surges and sea ice. A majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall. Coastal flooding and erosion is affected by wind, site exposure and sea ice conditions. The Management Plan notes the potential for climate change to augment erosion, as coastal areas of Alaska are freezing later in the season, leaving coastal areas more vulnerable to fall storms and storm surges. Changing temperatures also have the potential to shift distribution of fish and wildlife, with possible consequences for commercial and subsistence activities.⁶⁵²

According to the Alaska Department of Environmental Conservation (DEC), one active environmental cleanup site is located in King Salmon. The King Salmon airport was originally constructed by the U.S. Army Air Forces at the beginning of World War II, and was purchased by the State of Alaska for use as a commercial airport in 1959. The U.S. Air Force continues to use the facility as well. Over the years, soil and groundwater surrounding the base became contaminated with petroleum and trichloroethene, some of which leached into the surrounding wetlands and water bodies. Response actions so far have included soil removal and remediation, capping, maintenance, and monitoring. Human health concerns include exposure through vapor inhalation, direct contact with skin, or ingestion of contaminated soil or water. The DEC notes that no private or public drinking water wells have been impacted by soil or groundwater contamination in King Salmon.⁶⁵³ However, during community review of this profile in October 2013, a representative of the Bristol Bay Borough commented that many residents choose not to drink this water.

Current Economy⁶⁵⁴

⁶⁵⁰ Minerals Management Service. 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

⁶⁵¹ The White House, Office of the Press Secretary. March 31, 2010. *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

⁶⁵² Glenn Gray and Associates. 2008. *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf.

⁶⁵³ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved September 19, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁶⁵⁴ Unless otherwise noted, all monetary data are reported in nominal values.

As the seat of the Lake and Peninsula Borough and a transportation hub for eastern Bristol Bay, government and transportation jobs dominate King Salmon's economy. In addition to the Lake and Peninsula Borough offices, government agencies that provide employment in King Salmon include the Alaska Department of Fish and Game (ADF&G), U.S. Fish and Wildlife Service, National Park Service, Federal Aviation Administration, NOAA Weather Service, Alaska State Troopers, the Bristol Bay Borough Police, and the U.S. Postal Service.⁶⁵⁵ Commercial fishing and fishing support services are also important economic drivers. The sockeye salmon harvest brings thousands of fishermen and processing employees through King Salmon each year, and herring and halibut are secondary fish species harvested in the region. King Salmon has also developed a great degree of tourism infrastructure. Sportfishing is popular in and near King Salmon, and there are many fishing lodges in the area, and the community serves as a departure point for access to Katmai National Park and Preserve, which includes attractions such as the McNeil River State Game Sanctuary, Brooks Camp, and the Valley of 10,000 Smokes.^{656,657}

Based on household surveys conducted for the 2006-2010 ACS,⁶⁵⁸ in 2010, per capita income in King Salmon was estimated to be \$36,510 and the median household income was estimated to be \$90,417, compared to \$26,755 and \$54,375 reported in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,⁶⁵⁹ the real per capita income in 2000 is shown to have been \$35,182 and the real 2000 median household income was \$71,502. This shows that per capita income stayed stable over the period, while there was a real increase in median per capita income. In 2010, King Salmon ranked 24th of 305 Alaskan communities with per capita income that year, and 13th out of 299 Alaskan communities with household income data.

However, King Salmon's small population size may have prevented the ACS from accurately portraying economic conditions.⁶⁶⁰ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for King Salmon in 2010 is \$22,676.^{661,662} This estimate is lower than the 2000 per capita income reported

⁶⁵⁵ Information about government employment in King Salmon provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

⁶⁵⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁵⁷ Southwest Alaska Municipal Conference. (n.d.). *Bristol Bay Borough*. Retrieved December 21, 2011 from <http://www.swamc.org/html/southwest-alaska/bristol-bay-borough-raquo.php>.

⁶⁵⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁵⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁶⁰ While ACS estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁶¹ See footnote 658.

⁶⁶² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in King Salmon between 2000 and 2010. King Salmon did not meet the Denali Commission's criteria for a 'distressed community' in 2011.⁶⁶³ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 66.4% of the King Salmon population age 16 and older was estimated to be in the civilian labor force, just under the statewide rate of 68.8%. That year, approximately 1.9% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall, and the unemployment rate was estimated to be 7.2%, slightly higher than the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in King Salmon in 2010 was 16.4%, slightly higher than the ALARI statewide unemployment rate estimate of 11.5%.⁶⁶⁴

Also based on the 2006-2010 ACS, the greatest percentage of the King Salmon workforce was estimated to be employed in the private sector (64.6%), along with 34.8% in the public sector, and 0.6% estimated to be self-employed. Out of 164 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in educational services, health care and social services (28.7%), transportation, warehousing and utilities (20.1%), and public administration industries (19.5%). None of the workforce was estimated to be working in the agriculture, forestry, and fishing industries in 2010. The number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. Compared to employment statistics in 2000, the distribution of employment by industry appears to have remained relatively stable in King Salmon. One notable shift was a 65% increase in the percentage of the King Salmon workforce employed in educational, health care and social assistance services, and greater than 50% reduction in the percentage of the workforce employed in either construction or professional, scientific, administrative, and waste management services. This information about employment by industry is presented in Figure 3.

Viewing employment from the perspective of occupation, 2006-2010 ACS estimates indicate that the greatest percentage of the King Salmon workforce was employed in service occupations (36%) and management, business, science and art occupations (32.3%), as well as 14.6% in service occupations, 14.6% working in natural resources, construction, and maintenance activities, and 2.4% in production, transportation, and material moving occupations. Between 2000 and 2010, the percentage of the workforce employed in sales and office occupations increased substantially, while the percentage employed in production, transportation, and material moving positions decreased. This information about employment by occupation is presented in Figure 4.

The 2010 ALARI estimate of employment by industry mirrors ACS estimates. Economic data compiled in the ALARI database indicate that there were 207 employed residents in King Salmon in 2010, of which 35.7% were employed in trade, transportation, and utilities, 22.7% in local government, 10.6% in professional and business services, 6.8% in state government, 5.3% in education and health services, 5.3% in leisure and hospitality, 4.8% in information, 4.8% in financial activities, 2.4% in construction, 0.5% in natural resources and mining, 0.5% in

⁶⁶³ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁶⁶⁴ See footnote 662.

manufacturing, and 0.5% in unknown industries.⁶⁶⁵ The ACS estimates conflict with economic data compiled in the ALARI database, which shows the greatest number of King Salmon residents employed in transportation and trade occupations, and the next greatest number employed in service occupations, construction, and maintenance activities, and administration. As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, King Salmon (U.S. Census).

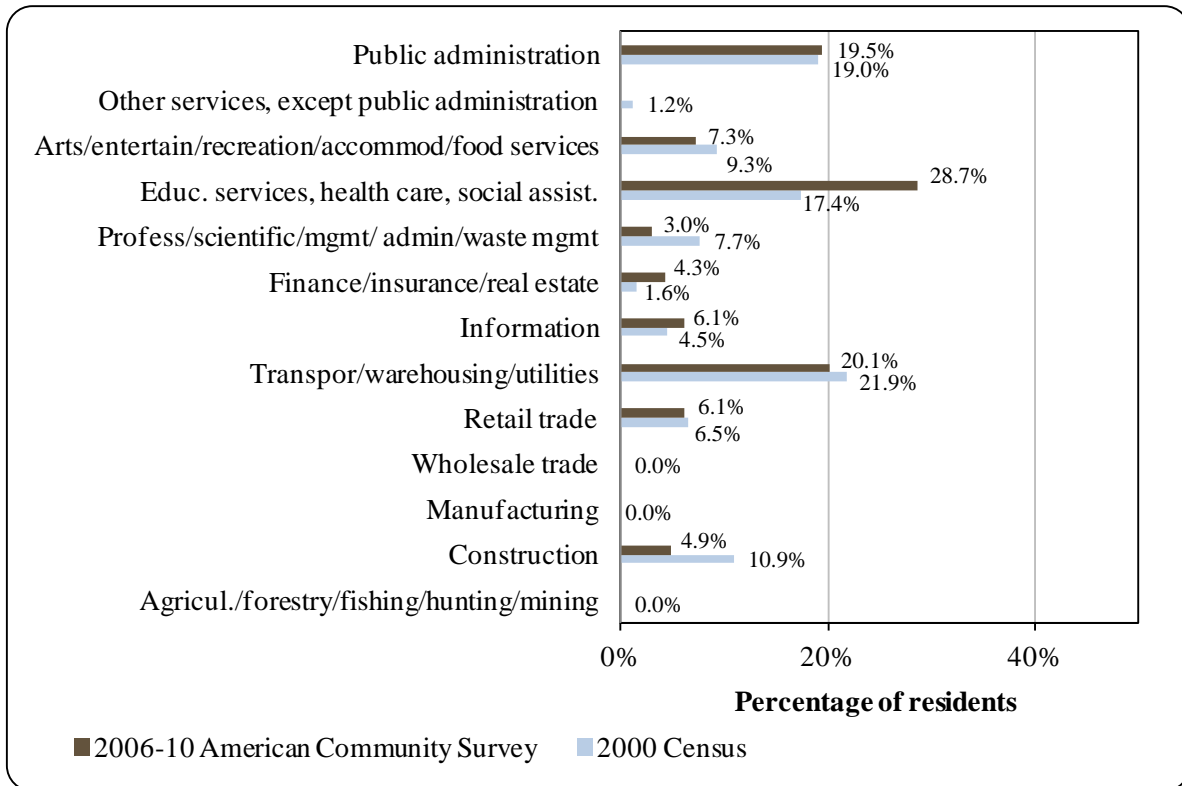
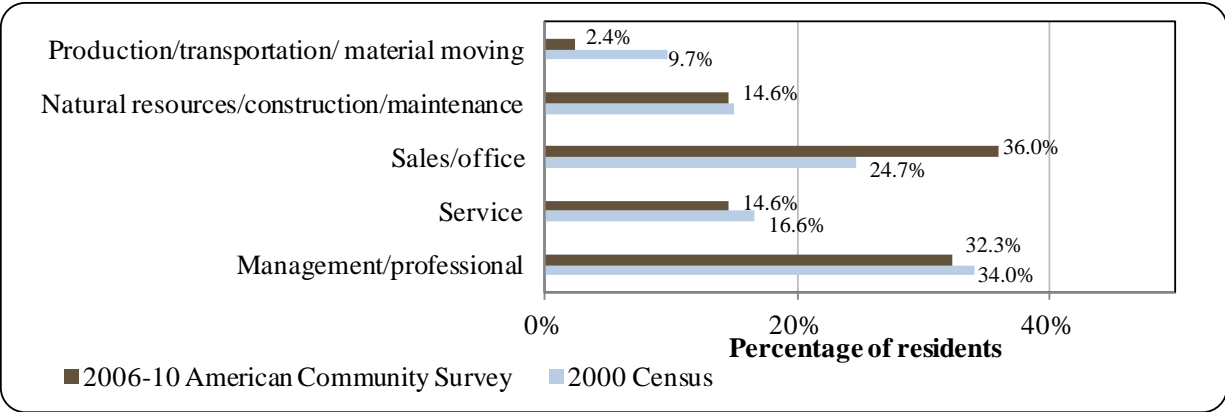


Figure 4. Local Employment by Occupation in 2000-2010, King Salmon (U.S. Census).

⁶⁶⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

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Governance

King Salmon is an unincorporated community. The Bristol Bay Borough serves as the governing body for King Salmon. The Borough was incorporated in 1962, making it the first borough in Alaska. It is also one of the smallest boroughs in the State. It contains three CDPs – King Salmon, Naknek, and South Naknek. The seat of the Bristol Bay Borough is located in Naknek.⁶⁶⁶ It is important to note that, although King Salmon is located in the Bristol Bay Borough, the community is also the seat of the Lake and Peninsula Borough, which provides services for communities from as far northeast as the Iliamna Lake region to as far southwest as Perryville and Ivanof Bay.⁶⁶⁷

As of 2012, the Bristol Bay Borough did not administer a sales tax, but did levy a 12 mills property tax, 3% raw fish tax, and 10% bed tax (transient occupancy tax).^{668,669} In addition to tax revenues, other locally-generated income sources received by the Bristol Bay Borough between 2000 and 2010 included building and equipment rental income, charges for services provided by the Borough such as water and sewer, ambulance fees, and pool fees, land sales, building permit fees, and investment income. Outside revenue sources included state and federal grants and revenue sharing programs, as well as some state contracts including jail and special services contracts. State of Alaska sources of shared revenue during the 2000-2010 period included the State Revenue Sharing program from 2000 to 2003, the Community Revenue Sharing program in 2009 and 2010, municipal energy assistance, and state fish tax refunds (see the *Fisheries-Related Revenue* section of this profile for more information). Federal shared revenue sources included funds from the Payment In Lieu of Taxes program. A variety of special project and capital project grants were also received from the state and federal governments during this period.⁶⁷⁰ Fisheries-related grants included a \$30,000 grant from the Alaska Department of Commerce, Community, and Economic Development's (DCCED's) Division of Community and Regional Affairs (DCRA) in 2003. The \$30,000 grant was received by the ADF&G to replace a retaining wall and dock along the Naknek River near King Salmon. In 2008, the DCRA awarded \$70,671 to the Bristol Bay Borough for purchase of land for and development of a Fisherman's Dock and Industrial Park. Information regarding selected community revenue sources is reported in Table 2.

In addition to the Bristol Bay Borough, the King Salmon Tribe serves as a governing body for its members in the community. The King Salmon Tribe was formally recognized as a Tribal Council by the Bureau of Indian Affairs on December 29, 2000.⁶⁷¹ The Tribe was not

⁶⁶⁶ Southwest Alaska Municipal Conference. (n.d.) *Bristol Bay Borough*. Retrieved October 21, 2013 from <http://www.swamc.org/html/southwest-alaska/bristol-bay-borough-raquo/bristol-bay-borough.php>.

⁶⁶⁷ Lake and Peninsula Borough website. (n.d.). *About the Lake & Peninsula Borough*. Retrieved September 19, 2012 from <http://www.lakeandpen.com/>.

⁶⁶⁸ Alaska Department of Commerce, Community, and Economic Development. 2013. *Alaska Taxable 2012*. Retrieved October 18, 2013 from <http://commerce.alaska.gov/dnn/Portals/4/pub/OSA%20TAXABLE%202012%20-%20FINAL%202013-02-05.pdf>.

⁶⁶⁹ Tax information updated by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

⁶⁷⁰ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

⁶⁷¹ Feldman, K.D. Ethnohistory and the IRA Tribal Status Application of King Salmon Natives, Alaska. *Alaska Journal of Anthropology*. 1(1):100-117. Retrieved October 18, 2013 from http://www.uaa.alaska.edu/anthropology/people/upload/King_Salmon.pdf.

included under the ANCSA of 1971. Despite this, King Salmon is included as a member of the Bristol Bay Native Association (BBNA), one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁶⁷² The BBNA is headquartered in Dillingham, and provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.⁶⁷³

King Salmon hosts an office of the ADF&G, as well as offices of the National Park Service and U.S. Fish and Wildlife Service. The nearest Alaska Department of Natural Resources office is a Division of Parks and Outdoor Recreation office in Homer, and the nearest DCCED office is a DCRA office located in Dillingham. Kodiak and Homer have the nearest National Marine Fisheries Service (NMFS) offices, although Anchorage is also a potentially accessible office for the people of this area. The Alaska Department of Natural Resources and the U.S. Bureau of Citizenship and Immigration Services also have offices in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Bristol Bay Borough, including King Salmon, from 2000 to 2010.

Year	Total Borough Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{1,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$7,175,572	n/a	\$29,923	n/a
2001	\$6,318,332	n/a	\$27,975	n/a
2002	\$4,801,219	n/a	\$27,960	n/a
2003	\$4,163,996	n/a	\$28,013	\$30,000
2004	\$6,098,710	n/a	n/a	n/a
2005	\$4,213,625	n/a	n/a	n/a
2006	\$5,475,184	n/a	n/a	n/a
2007	\$6,248,803	n/a	n/a	n/a
2008	\$8,374,133	n/a	n/a	\$70,671
2009	\$8,489,105	n/a	\$498,484	n/a
2010	\$8,839,652	n/a	\$497,231	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁶⁷² U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁶⁷³ Bristol Bay Native Association. (n.d.). *BBNA homepage*. Retrieved November 16, 2011 from www.bbna.com.

Infrastructure

Connectivity and Transportation

King Salmon is a transportation hub for Bristol Bay. Formerly an Air Force base, the state-owned airport has an 8,901 feet long by 150 feet wide paved, lighted runway, and a 4,018 feet long by 100 feet wide asphalt/gravel crosswind runway. Scheduled Alaska Airlines and Peninsula Air commercial flights serve the King Salmon airport, including summer jet service.^{674,675} As of June 2012, roundtrip airfare from Anchorage to King Salmon costs \$452.⁶⁷⁶

A 4,000-foot stretch of the Naknek River is designated for float plane use. A seaplane base is also located at Brooks Camp on Naknek Lake, east of King Salmon within the Katmai National Park and Preserve. Four docks are available on the Naknek River, owned by the U.S. Park Service, U.S. Fish and Wildlife Service, Alaska State Troopers, and the Bristol Bay Borough. Many fishing lodges also have private docks. Cargo goods are delivered to Naknek by barge and trucked upriver to King Salmon via a 15-mile connecting road. During winter, an ice road provides access to South Naknek. Vehicles are the primary means of local transportation, and during the summer residents use small fishing boats or skiffs for river travel.^{677,678}

Facilities

Water in King Salmon is primarily sourced from individual wells, and 80% of households are fully plumbed. Federal Aviation Administration housing on the east side of the community has its own well and water treatment system. The Bristol Bay Borough operates a piped sewer system that serves 60% of King Salmon residents. The community also utilizes a separate piped sewage system left by the former Air Force base. A sewage lagoon is operated by the Bristol Bay Borough. Some septic tanks are also in use in the community, and the Borough is available to provide septic pumping services. Electricity is provided by a diesel plant owned by Naknek Electric. The Borough also operates a permitted Class 2 landfill, incinerator, and balefill, located at mile 5 between King Salmon and Naknek for use by both communities. Private garbage collection services are available from Peterson Sanitation Company. Most residents haul their own garbage to the landfill.⁶⁷⁹

Public safety services are provided by the Bristol Bay Borough Police Department and the Alaska State Troopers. Fire and rescue services are provided by Bristol Bay Borough Emergency Services. Visitor accommodations are available at the Ponderosa Inn, Rainbow Bend Cabin & Boat Rental, King Ko Inn, Antlers Inn, Alaska Enchanted Lake Lodge, and No See Um Lodge, among others. Local telephone and cable services are offered by Bristol Bay Telephone

⁶⁷⁴ Information about summer jet service updated by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

⁶⁷⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁷⁶ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

⁶⁷⁷ See footnote 675.

⁶⁷⁸ Information updated by a representative of the Bristol Bay Borough during community review of this profile in October, 2013.

⁶⁷⁹ See footnote 675.

Cooperative (BBTC), and internet service is provided by GCI. Cellular service is available via BBTC or GCI.⁶⁸⁰

Medical Services

Local health care is provided at the Camai Community Health Center in Naknek and the King Salmon Clinic. The King Salmon Clinic is located in the King Salmon Village Council Building. It is operated by the Bristol Bay Area Health Corporation (BBAHC), primarily on behalf of tribal members. The King Salmon clinic is staffed by a community health aide with the support of BBAHC doctors.⁶⁸¹ Emergency Services have coastal, river, floatplane, and air access, as well as limited highway access. Ambulance and EMT services are provided by the Bristol Bay Borough Fire Department, which is supported by volunteers as well as paid staff. Emergency service is provided through a 911 Telephone System.⁶⁸² The nearest hospital is located in Dillingham.

Educational Opportunities

King Salmon students travel to school at the Bristol Bay Borough School in Naknek, 15 miles away on the Peninsula Highway.⁶⁸³ The Bristol Bay Borough School has an Elementary School wing and a Middle/High School wing. As of 2011, the Elementary School (grades preschool through 6th) was attended by 93 students and had 7 teachers. That same year, the Middle/High School had 85 students and 8 teachers.⁶⁸⁴ During community review of this profile, a representative of the Bristol Bay Borough noted that enrollment numbers have been steadily decreasing in the Bristol Bay School District system.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

For as far back as 6,000 B.C., there is evidence of Ocean Bay peoples, ancestors of the Kodiak and Aleutian traditions, living in the Bristol Bay region. These people likely made use of marine resources along the coast. By 400 B.C., there is archaeological evidence of fishing activity by people of the Norton tradition in the King Salmon area. Notched pebbles used as sinkers allowed access to fishing sites along the Naknek River where deep, swift water made wading impossible.⁶⁸⁵

The commercial salmon fishery began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of the Bristol Bay region,

⁶⁸⁰ See footnotes 675 and 678.

⁶⁸¹ See footnote 678.

⁶⁸² See footnotes 675 and 678.

⁶⁸³ See footnote 675.

⁶⁸⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶⁸⁵ Morris, J. 1985. "The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska." *Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

although several other species are harvested in lower volumes.⁶⁸⁶ The present community of King Salmon grew alongside the development of the commercial salmon fishing industry in Bristol Bay. An influx of workers arrived from outside Alaska to help in the construction of canneries and to provide a sufficient labor force for fishing and cannery jobs.⁶⁸⁷ The lack of fishermen and cannery labor led to a practice of importing cannery crews and fishermen from outside Alaska. Historically this led to a lack of participation by local Native residents as fishermen in the Bristol Bay salmon fishery, although the start of World War II created a labor shortage in the U.S. and provided an opportunity for local residents to enter the fishery.^{688,689} Today, over 80% of the workforce in a majority of processing facilities in nearby Naknek consists of non-residents,⁶⁹⁰ and includes many foreign workers.⁶⁹¹

Herring and halibut are important secondary commercial species in the Bristol Bay region.⁶⁹² The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, southwest of Nushagak River near the village of Togiak. Commercial herring fisheries were initiated soon after salmon fisheries, with original production oriented toward herring oil and herring meal. Catch of herring for bait began around 1900, and sac roe fisheries developed in the 1970s.⁶⁹³ Commercial exploitation of halibut and groundfish first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁶⁹⁴

King Salmon is located along the Naknek River, which empties into Bristol Bay. The area is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. King Salmon participates in the Community Development Quota program as a member of the Bristol Bay Economic Development Corporation (BBEDC). The community is not eligible for the Community Quota Entity program. A local advisory committee for the Alaska Board of Fisheries (BOF) is located in Naknek/Kvichak. The activities of the advisory committee include developing regulatory proposals; evaluating regulatory proposals and making recommendations to the BOF; providing a local forum for fish and wildlife conservation and use, including matters relating to habitat;

⁶⁸⁶ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶⁸⁷ See footnote 685.

⁶⁸⁸ Ibid.

⁶⁸⁹ Bristol Bay Economic Development Corporation. March 2003. *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

⁶⁹⁰ Alaska Dept. of Labor and Workforce Development. January 2011. *Nonresidents Working in Alaska 2009*. Prepared by J. Hadland, Economist. Retrieved December 21, 2011 from <http://www.cfec.state.ak.us/plook/>.

⁶⁹¹ Public Radio International's The World. August 15, 2011. *Why Foreign Students are Hired for Alaskan Fish Processing*. Retrieved December 21, 2011 from <http://www.theworld.org/>.

⁶⁹² Southwest Alaska Municipal Conference website. (n.d.). *Bristol Bay Borough*. Retrieved December 21, 2011 from <http://www.swamc.org/html/southwest-alaska/bristol-bay-borough-raquo.php>.

⁶⁹³ Woodby, D, D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁶⁹⁴ Thompson, W. F. and N. L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://ww.iphc.int/publications/scirep/Report0005.pdf>.

advising the appropriate regional council on resources; and consulting with individuals, organizations, and agencies.⁶⁹⁵

⁶⁹⁵ Southwest Alaska Municipal Conference. 2010. *Southwest Alaska Comprehensive Economic Development Strategy*. Prepared for the U.S. Department of Commerce Economic Development Association. Retrieved December 21, 2011 from <http://www.swamc.org/>.

Processing Plants

King Salmon is located within 15 to 20 miles of a large number of seafood processing facilities that line the shores of the Naknek River at both Naknek and South Naknek. ADF&G's 2010 Intent to Operate list does not list any processors with location codes in King Salmon, although one company – Wild Alaska Salmon and Seafood – has a business address in King Salmon. Wild Alaska Salmon and Seafood is a wholesaler fisherman/direct marketing company with a King Salmon address.⁶⁹⁶ The company was founded in 2000 and specializes in processing sockeye salmon.⁶⁹⁷

Fisheries-Related Revenue

Between 2000 and 2010, the primary sources of revenue to the Bristol Bay Borough that were directly tied to fisheries included income from both a borough and a state raw fish tax, as well as revenue sharing from the state Fisheries Business Tax. Based on information reported in the Bristol Bay Borough's yearly audits, the local raw fish tax remained a more stable source of revenue than the state raw fish tax through the decade, and the shared Fisheries Business Tax increased in importance over time, rising to \$1.5 million per year in several later years of the period. Information about fisheries-related revenue sources is presented in Table 3.

In addition, it is important to note that the BBEDC uses fisheries revenue from the CDQ program to provide grants for infrastructure, fuel, and electrical assistance to member communities. The BBEDC also offers educational scholarships, vocational training, and fishing permit acquisition and financing assistance to residents of its member communities.⁶⁹⁸

Commercial Fishing

During the 2000-2010 period, King Salmon residents were involved in commercial fisheries as permit and quota share account holders, crew license holders, and vessel owners. Commercial fishing participation statistics declined over the period, with the number of crew license holders falling from 70 in 2000 to 36 in 2010, the number of vessels primarily owned by residents falling from 166 to 28, and the number of vessels homeported in King Salmon decreasing from 114 to 32. No fish buyers were present in King Salmon between 2000 and 2010, and no vessels were reported to deliver landings. These statistics about the commercial fishing sector in King Salmon are presented in Table 5.

In 2010, a total of 41 King Salmon residents held 52 state-issued Commercial Fisheries Entry Commission (CFEC) permits. A majority of these permits (43) were held for Bristol Bay salmon drift and set gillnet fisheries, while 4 were held for herring fisheries, 2 for halibut fisheries, and 1 permit each in fisheries for crab, sablefish, and groundfish. More details regarding these permits is presented below, and CFEC permit numbers are displayed in Table 4.

⁶⁹⁶ Alaska Seafood Marketing Institute. 2011. *Suppliers Directory*. Retrieved October 17, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

⁶⁹⁷ Wild Alaska Salmon and Seafood. 2012. *History and About Us*. Retrieved September 24, 2012 from <http://wildalaskasalmonandseafood.com/>.

⁶⁹⁸ Bristol Bay Economic Development Corporation. *Annual Report 2010*. Retrieved November 16, 2011 from <http://www.bbdc.com>.

The number of salmon CFEC permit holders and total salmon permits remained stable over the 2000-2010 period, with an increase between 2000 and 2006 followed by a decrease to levels close to 2000 numbers by 2010. Of the 43 salmon CFEC permits held in 2010, 24 were held in the Bristol Bay set gillnet fishery, and 19 in the Bristol Bay drift gillnet fishery. Overall, 35 (81%) were actively fished that year. All salmon permits held between 2000 and 2010 were held in Bristol Bay gillnet fisheries, and the percentage of salmon permits that were actively fished did not change substantially over this period.

Four herring CFEC permits were held in 2010 by two individuals, including two permits in the Bristol Bay roe herring fishery and two in the Security Cove roe herring fishery. None of these herring permits were actively fished in 2010. Herring permit numbers showed a substantial decrease over the 2000-2010 period, from 17 total herring permits held by 10 King Salmon residents in 2000. At least one herring permit was actively fished in all years during the 2000-2010 period, with the exception of 2010. The number of halibut CFEC permits and permit holders also declined over the period, from eight permit holders and eight total permits held in 2000 to two in 2010. During the 2000-2010 period, all halibut permits were held in the statewide longline fishery, and with the exception of one permit held for a larger vessel in 2000, all halibut permits were associated with vessels under 60 feet in length.

In addition to salmon, herring, and halibut permits, in 2010, King Salmon residents held one permit in the statewide sablefish longline fishery (not for use in Southeast Alaska or Prince William Sound), one permit in the Cook Inlet Dungeness crab fishery, and one statewide miscellaneous saltwater finfish (groundfish) permit associated with longline gear. The sablefish permit was held in 2004 and 2005 and from 2008 to 2010, and was actively fished in all of these years except 2008. Groundfish permits were held in all years of the 2000-2010 period except 2003 and 2006-2007, and at least one was actively fished in 2004-2005 and 2008-2009. Most of these permits were associated with longline gear, but it is important to note that at least one permit was associated with mechanical jig gear from 2000-2002 and in 2005. The Dungeness crab permit was held from 2004 to 2010, and was not actively fished in any of these years. One King Salmon resident also held a permit in the Dutch Harbor Tanner crab fishery in 2005 and 2008. The Tanner crab permit was actively fished in 2005 only. It is also important to note that, in 2008, one King Salmon resident also held a CFEC permit in the statewide pot gear fishery for octopi/squid. CFEC permit information is presented in Table 4.

In addition to CFEC permits, one King Salmon resident held a Federal Fisheries Permit (FFP) from 2000 to 2005, and again from 2008 to 2010. The FFP was not actively fished in any year during the 2000-2010 period. No federal License Limitation Permits (LLP) were held by King Salmon residents from 2000 to 2010 (Table 4).

King Salmon residents participated in the federal catch share fishery for halibut, with two quota share account holders residing in the community from 2000 to 2008, and one account holder in 2009 and 2010. During the period when two individuals held quota share accounts, the total number of quota shares held declined from 5,446 to 2,638. This number declined to 798 shares in the final 2 years of the 2000-2010 period, when only one quota share account holder remained. This information about halibut catch share participation is presented in Table 6. Between 2000 and 2010, no King Salmon residents participated in federal catch share fisheries for sablefish or crab (Tables 7 and 8).

While no landings or ex-vessel revenue was generated in King Salmon during the 2000-2010 period (Table 9), landings were delivered by vessel owners from King Salmon to many other delivery locations. Landings and revenue information for salmon landed by King Salmon

vessel owners can be reported for all years during the 2000-2010 period. Herring landings may only be reported in 2000 and 2001. Landings and revenue data are considered confidential for other years for herring, and for all years for other species, due to the small number of participants in those fisheries in those years. Over the decade, King Salmon vessel owners landed an average of 1,179,195 net pounds of salmon per year, valued on average at \$769,247 in ex-vessel revenue. The value of salmon (\$ per pound) showed an increasing trend, which could reflect changes in species composition of the catch and/or changes in market prices over the decade. For the two years in which herring landings information can be reported, King Salmon vessel owners landed an average of 423,349 net pounds, for an average ex-vessel revenue of \$38,568. This information about landings and ex-vessel revenue generated by King Salmon residents is presented in Table 10.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Bristol Bay Borough: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Borough raw fish tax ¹	\$1,376,536	\$529,759	\$337,112	\$131,111	\$311,369	\$464,884	\$729,623	\$838,199	\$1,143,108	\$1,587,484	\$1,170,907
State raw fish tax ¹	\$789,759	\$1,439,586	\$918,305	\$504,399	n/a	n/a	n/a	n/a	n/a	n/a	n/a
State Shared Fisheries Business Tax ¹	\$8,232	\$14,275	\$12,108	n/a	\$393,836	\$460,752	\$834,661	\$1,178,357	\$29,353	\$1,581,617	\$1,559,831
State Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue received by the Bristol Bay Borough⁴</i>	<i>\$2,174,527</i>	<i>\$1,983,620</i>	<i>\$1,267,525</i>	<i>\$635,510</i>	<i>\$705,205</i>	<i>\$925,636</i>	<i>\$1,564,284</i>	<i>\$2,016,556</i>	<i>\$1,172,461</i>	<i>\$3,169,101</i>	<i>\$2,730,738</i>
<i>Total municipal revenue reported by the Bristol Bay Borough⁵</i>	<i>\$7,175,572</i>	<i>\$6,318,332</i>	<i>\$4,801,219</i>	<i>\$4,163,996</i>	<i>\$6,098,710</i>	<i>\$4,213,625</i>	<i>\$5,475,184</i>	<i>\$6,248,803</i>	<i>\$8,374,133</i>	<i>\$8,489,105</i>	<i>\$8,839,652</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the Bristol Bay Borough reports each year in its audit. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, King Salmon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	1	1	1	0	0	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	-	-	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	0	0	1	1	1
Crab (CFEC) ²	Total permits	0	0	0	0	1	2	1	1	2	1	1
	Fished permits	0	0	0	0	0	1	0	0	0	0	0
	% of permits fished	-	-	-	-	0%	50%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	1	2	1	1	2	1	1
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	0%	-	-
	Total permit holders	0	0	0	0	0	0	0	0	1	0	0
Halibut (CFEC) ²	Total permits	8	5	4	3	3	3	3	2	1	2	2
	Fished permits	3	0	2	1	0	1	1	0	0	1	1
	% of permits fished	38%	0%	50%	33%	0%	33%	33%	0%	0%	50%	50%
	Total permit holders	8	5	4	3	3	3	3	2	1	2	2
Herring (CFEC) ²	Total permits	17	11	6	6	4	6	4	1	1	4	4
	Fished permits	11	7	2	4	3	5	1	1	1	2	0
	% of permits fished	65%	64%	33%	67%	75%	83%	25%	100%	100%	50%	0%
	Total permit holders	10	6	4	5	3	4	3	1	1	2	2

Table 4 cont'd. Permits and Permit Holders by Species, King Salmon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	1	1	0	0	1	1	1
	Fished permits	0	0	0	0	1	1	0	0	0	1	1
	% of permits fished	-	-	-	-	100%	100%	-	-	0%	100%	100%
	Total permit holders	0	0	0	0	1	1	0	0	1	1	1
Groundfish (CFEC) ²	Total permits	2	2	1	0	1	2	0	0	1	1	1
	Fished permits	0	0	0	0	1	2	0	0	1	1	0
	% of permits fished	0%	0%	0%	-	100%	100%	-	-	100%	100%	0%
	Total permit holders	2	2	1	0	1	1	0	0	1	1	1
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	41	40	45	47	47	44	48	46	44	43	43
	Fished permits	39	32	33	41	41	40	44	38	36	36	35
	% of permits fished	95%	80%	73%	87%	87%	91%	92%	83%	82%	84%	81%
	Total permit holders	41	41	43	45	44	43	47	46	43	42	39
<i>Total CFEC Permits²</i>	<i>Permits</i>	68	58	56	56	57	58	56	50	51	52	52
	<i>Fished permits</i>	53	39	37	46	46	50	46	39	38	41	37
	<i>% of permits fished</i>	78%	67%	66%	82%	81%	86%	82%	78%	75%	79%	71%
	<i>Permit holders</i>	43	42	44	46	46	45	48	47	45	44	41

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in King Salmon: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in King Salmon ²	Total Net Pounds Landed in King Salmon ^{2,5}	Total Ex-Vessel Value of Landings in King Salmon ^{2,5}
2000	70	0	1	166	114	0	0	\$0
2001	52	0	2	163	117	0	0	\$0
2002	51	0	1	164	100	0	0	\$0
2003	49	0	2	116	108	0	0	\$0
2004	49	0	1	128	122	0	0	\$0
2005	56	0	0	26	30	0	0	\$0
2006	45	0	1	31	33	0	0	\$0
2007	40	0	1	29	29	0	0	\$0
2008	35	0	1	30	27	0	0	\$0
2009	28	0	0	27	27	0	0	\$0
2010	36	0	0	28	32	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in King Salmon: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	2	5,446	583
2001	2	5,446	674
2002	2	5,446	693
2003	2	5,446	692
2004	2	4,234	577
2005	2	2,763	352
2006	2	2,763	335
2007	2	2,638	333
2008	2	2,638	324
2009	1	798	80
2010	1	798	73

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation in King Salmon: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation in King Salmon: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in King Salmon: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by King Salmon Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	379,247	467,450	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	1,134,045	817,217	457,332	693,917	1,279,830	1,303,691	1,471,440	1,865,511	1,201,613	1,340,890	1,405,660
<i>Total²</i>	<i>1,513,292</i>	<i>1,284,667</i>	<i>457,332</i>	<i>693,917</i>	<i>1,279,830</i>	<i>1,303,691</i>	<i>1,471,440</i>	<i>1,865,511</i>	<i>1,201,613</i>	<i>1,340,890</i>	<i>1,405,660</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	\$40,256	\$36,879	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$734,347	\$337,164	\$220,354	\$344,633	\$649,648	\$801,553	\$928,027	\$1,219,346	\$876,470	\$1,060,976	\$1,289,196
<i>Total²</i>	<i>\$774,603</i>	<i>\$374,043</i>	<i>\$220,354</i>	<i>\$344,633</i>	<i>\$649,648</i>	<i>\$801,553</i>	<i>\$928,027</i>	<i>\$1,219,346</i>	<i>\$876,470</i>	<i>\$1,060,976</i>	<i>\$1,289,196</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing for salmon and rainbow trout is one of the King Salmon area's top visitor attractions.⁶⁹⁹ The number of licensed sport fish guides present in King Salmon increased between 2000 and 2010, from 33 in 2000 to a high of 68 in 2008. In contrast, few "active" sport fish guide businesses were present in the community.⁷⁰⁰ In general, the number of sportfishing licenses sold in King Salmon vastly outweighed the number of licenses sold to residents (irrespective of point of sale), providing additional evidence that sportfishing attracts a large number of visitors to King Salmon and the surrounding region. Further information is presented in Table 11.

King Salmon is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average).

The Alaska Statewide Harvest Survey,⁷⁰¹ conducted by ADF&G between 2000 and 2010, noted species targeted by private anglers in King Salmon. In fresh water, sport fishermen caught all five species of Pacific salmon, rainbow trout, Dolly Varden char, Arctic grayling, northern pike, and smelt. In saltwater, they targeted Pacific halibut and Pacific cod. The survey also noted sport harvest of razor clams by King Salmon residents. No kept/release log book data were reported for fishing charters out of King Salmon between 2000 and 2010.⁷⁰²

⁶⁹⁹ King Salmon Tribal Council. 2006. *King Salmon Community Plan*. Retrieved September 19, 2012 from www.commerce.state.ak.us/dca/plans/KingSalmon-GCP-2006.pdf.

⁷⁰⁰ A charter business is considered "active" if ADF&G received at least one logbook data page that reported targeted effort. (See Sigurdsson D. and Powers B. (2011). Participation, Fishing Effort, and Harvest in the Sport Fish Business/Guide Licensing and Logbook Programs, 2010. Alaska Department of Fish and Game, Division of Sport and Commercial Fisheries. Retrieved November 8, 2013 from <http://www.adfg.alaska.gov/FedAidpdfs/FDS11-31>).

⁷⁰¹ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁷⁰² Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, King Salmon: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in King Salmon ²
2000	0	33	340	0
2001	0	31	325	100
2002	1	33	328	640
2003	0	29	295	2,101
2004	0	31	303	2,265
2005	0	40	304	2,192
2006	0	47	293	2,176
2007	0	64	266	2,249
2008	1	68	281	2,266
2009	1	56	273	1,992
2010	0	55	258	1,967

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Traditional activities including subsistence harvest and food preparation remain an important part of community identity in King Salmon. Local people utilize marine and land-based resources, including salmon, halibut, waterfowl, moose, and caribou.^{703,704} Statistics presented in this section relate to marine subsistence resource harvest only.

In 2007, the only year that a subsistence survey was conducted by ADF&G in the community of King Salmon between 2000 and 2010, 51% of households were recorded as participating in salmon subsistence activities, 12% in halibut subsistence, 22% in non-salmon fish subsistence (other than halibut), 4% in marine mammal subsistence, and 13% in marine invertebrate subsistence. Per capita, residents of King Salmon harvested 85 pounds of land and sea-based subsistence resources that year (Table 12). These levels of participation in subsistence activities are lower than in nearby Naknek for all categories.

Individual species harvest data is also available from the 2007 ADF&G subsistence survey for non-salmon fish (other than halibut), marine invertebrates, and marine mammals. That year, the non-salmon fish species harvested by the greatest percentage of King Salmon households included rainbow trout, smelt, Dolly Varden char, lake trout, and northern pike; the marine invertebrate species harvested by the greatest percentage of households included softshell and razor clams and red king crab; and a small percentage of King Salmon households also reported involvement in harvest of harbor seals.⁷⁰⁵ It is important to note that in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, suggesting the presence of sharing networks between households in King Salmon households, and also between communities.

Data are available between 2000 and 2010 regarding subsistence salmon and halibut permits, as well as additional information regarding harvest numbers of some marine mammal species. In years for which data were reported between 2000 and 2010, an average of 77 subsistence salmon permits was issued to King Salmon households. Sockeye salmon was the primary species harvested using subsistence permits (an average of 4,743 sockeye per year), along with several hundred Chinook, chum, coho, and pink salmon each year. In addition, in 2007, total harvest of marine invertebrates was 970 pounds, and total harvest of non-salmon fish was 864 pounds in King Salmon. Information about total subsistence harvest of salmon, marine invertebrates, and non-salmon fish (not including halibut) is presented in Table 13.

Between 2003 and 2010, an average of three Subsistence Halibut Registration Certificates (SHARC) were issued to King Salmon residents. No information was reported regarding the number of SHARC cards returned or total pounds harvested during these years (Table 14).

Based on information reported by the U.S. Fish and Wildlife Service, between one and five walrus were harvested per year by King Salmon residents for subsistence purposes from 2001 to 2004. In addition, ADF&G reported harbor seal harvests varying from one to nine animals per year during the 2000-2010 period. No information was reported by management

⁷⁰³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁰⁴ Information about species utilized updated during community review of this profile in October 2013.

⁷⁰⁵ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

agencies regarding harvest of beluga whale, sea otter, Steller sea lion, or spotted seal between 2000 and 2010 (Table 15).

Table 12. Subsistence Participation by Household and Species, King Salmon: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	51%	12%	4%	13%	22%	85
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, King Salmon: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	116	109	228	170	332	274	7,122	n/a	n/a
2001	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	3	3	n/a	n/a	n/a	n/a	12	n/a	n/a
2004	88	67	197	78	135	126	4,588	n/a	n/a
2005	86	76	189	58	246	46	6,141	n/a	n/a
2006	79	67	176	153	233	177	4,904	n/a	n/a
2007	93	81	131	91	270	42	5,182	970	864
2008	76	68	124	55	118	51	5,251	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, King Salmon: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	3	n/a	n/a
2004	4	n/a	n/a
2005	4	n/a	n/a
2006	2	n/a	n/a
2007	2	n/a	n/a
2008	2	n/a	n/a
2009	2	n/a	n/a
2010	2	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, King Salmon: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	3	n/a
2001	n/a	n/a	5	n/a	n/a	9	n/a
2002	n/a	n/a	2	n/a	n/a	3	n/a
2003	n/a	n/a	3	n/a	n/a	7	n/a
2004	n/a	n/a	1	n/a	n/a	5	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	7	n/a
2007	n/a	n/a	n/a	n/a	n/a	1	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kokhanok (KOCK-hone-ack)



People and Place

*Location*⁷⁰⁶

Kokhanok is located on the south shore of Iliamna Lake, 22 miles south of Iliamna, 88 miles northeast of King Salmon, and 207 miles southwest of Anchorage. The community occupies 21.3 square miles of land and 0.1 square miles of water. Kokhanok is unincorporated and is located in the Lake and Peninsula Borough.

*Demographic Profile*⁷⁰⁷

In 2010, there were 170 residents in Kokhanok ranking it as the 211th largest of 352 Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 11.8%. Between 2000 and 2009, the population grew by 5.8% and there was an average annual growth rate of 0.14%, which was lower than the statewide average of 0.75% and indicative of modest growth. However, the population declined between 2000 and 2010; highlighting differences between U.S. Decennial Census and State estimates. Information regarding population trends can be found in Table 1.

The population of Kokhanok is primarily Yup'ik, Athabascan, and Aleut. In 2010, 80.0% of residents identified themselves as American Indian or Alaska Native, compared to 86.8% in 2000; 9.4% identified themselves as White, compared to 8.0% in 2000; 10.0% identified themselves as two or more races, compared to 4.0% in 2000; and 0.6% identified themselves as some other race, compared to 1.1% in 2000 (Figure 1). In addition, 1.8% of residents identified themselves as Hispanic or Latino, compared to 1.1% in 2000.

In 2010, the average household size in Kokhanok was 3.27, compared to 4.0 in 1990 and 3.35 in 2000. In that year, there were a total of 65 housing units, compared to 41 in 1990 and 59 in 2000. Of the households surveyed in 2010, 54% were owner-occupied, compared to 54% in 2000; 26% were renter-occupied, compared to 34% in 2000; 5% were vacant, compared to 2% in 2000; and 15% were occupied seasonally, compared to 10% in 2000. No residents lived in group quarters between 1990 and 2010.

In 2010, the gender distribution of Kokhanok was 47.1% male and 52.9% female. This was more female biased than both the gender distribution statewide (52.0% male, 48.0% female) and distribution in 2000 (51.3% male, 48.7% female). The median age that year was estimated to be 27.0 years, which was lower than both the statewide median of 33.8 years and 2000 median of 29.5 years.

⁷⁰⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁰⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

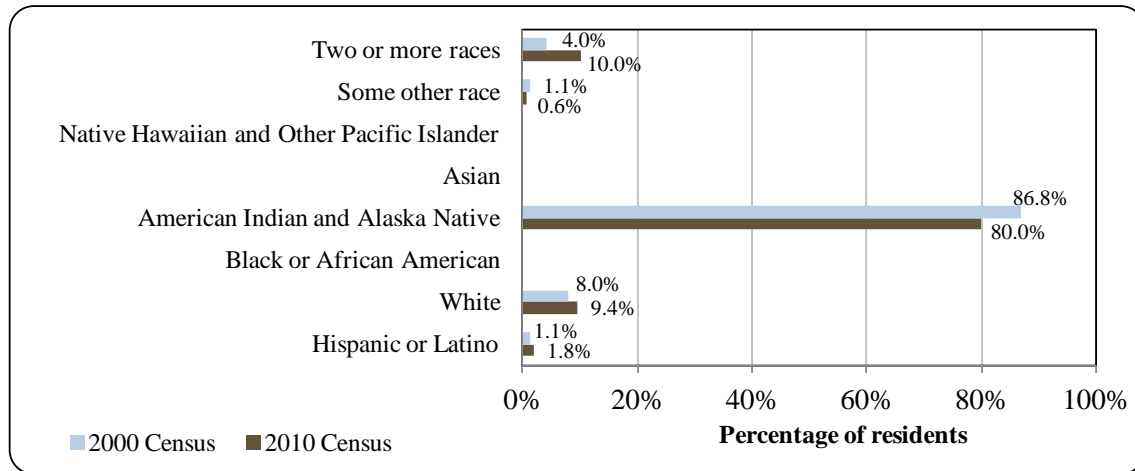
Table 1. Population in Kokhanok from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	152	-
2000	174	-
2001	-	172
2002	-	179
2003	-	181
2004	-	167
2005	-	179
2006	-	169
2007	-	174
2008	-	177
2009	-	184
2010	170	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kokhanok: 2000-2010 (U.S. Census).

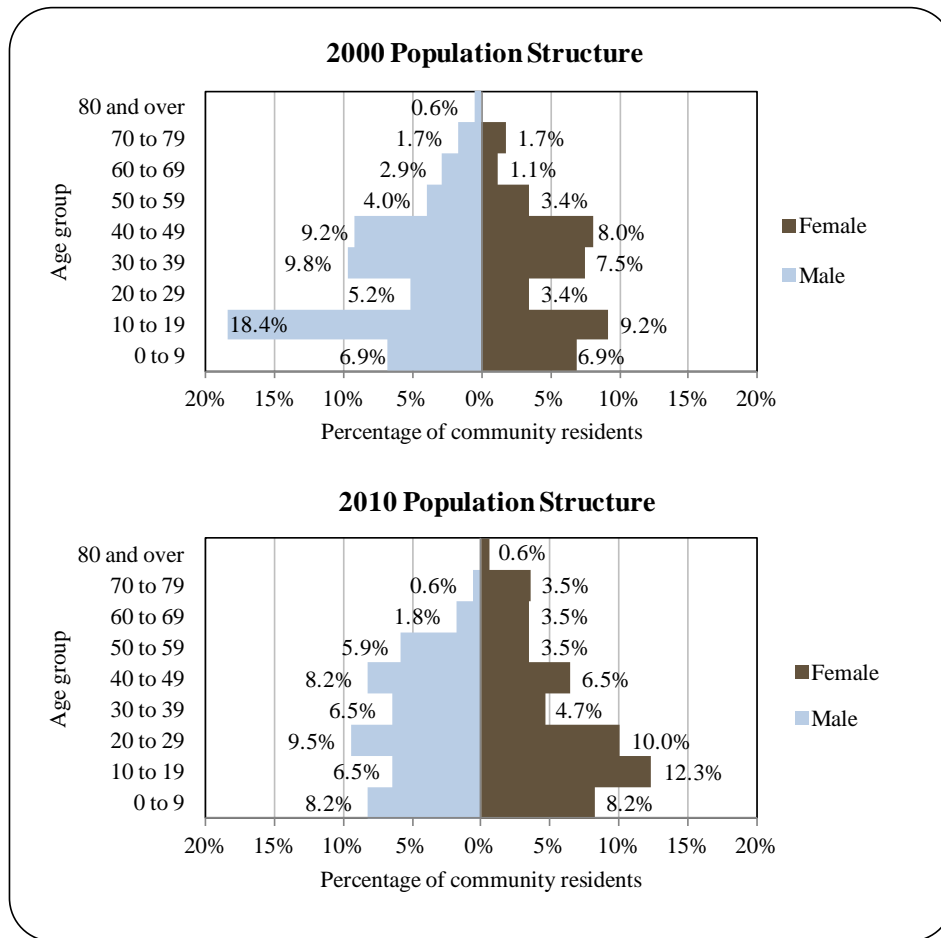


Compared with 2000, the population structure in 2010 was somewhat more constricted. In that year, 35.2% of residents were under the age of 20, compared to 41.4% in 2000; 6.5% were over the age of 59, compared to 8% in 2000; and 35.3% were between the ages of 30 and 59, compared to 41.9% in 2000. The largest change in distribution from 2000 to 2010 occurred in the 10 to 19 age group (18.8% in 2000 compared to 27.6% in 2000) and the 20 to 29 age group (19.5% in 2010 compared to 8.6% in 2000).

Gender distribution by age cohort was slightly more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 10 to 19 age range (6.5% male,

12.3% female), followed by the 70 to 79 (0.6% male, 3.5% female) and 40 to 49 (8.2% male, 6.5% female) ranges. Of those three, the greatest relative gender difference occurred within the 10 to 19 range. Further information regarding trends in Kokhanok’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Kokhanok Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the 2006-2010 American Community Survey (ACS)⁷⁰⁸ estimated that 93.8% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, no resident had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 6.3% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 50% had some college but no

⁷⁰⁸ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

degree, compared to an estimated 28.3% of Alaskan residents overall; 3.1% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and no resident held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The Dena'ina people have occupied the Iliamna Lake region historically. During the early 1800s, Russian fur traders moved into the area, and conflicts with local inhabitants ensued. There are 14 historic, 14 prehistoric, and 2 mixed historic/prehistoric sites within the region.⁷⁰⁹

According to oral history, Kokhanok was founded by a group of "misfits" who were looking for a place to call home, where hunting and fishing were good. The village began as two settlements of familial groups living along the south shore of Lake Iliamna.⁷¹⁰

This fishing village was first listed in the U.S. Census in 1890 by A.B. Schanz. The community was relocated to higher ground a few years ago when the rising level of Iliamna Lake threatened several community buildings.⁷¹¹

Natural Resources and Environment

Kokhanok lies in the transitional climatic zone. Average summer temperatures range from 40 to 64 °F (4 to 18 °C); winter temperatures average 3 to 30 °F (-16 to -1 °C). The record high is 84 °F (29 °C) and the record low -47 °F (-44 °C). Precipitation averages 32 inches annually, with 89 inches of snowfall. Wind storms and ice fog are common during winter.⁷¹²

The region surrounding Kokhanok is characterized by a variety of landscapes, including mountains, fast-flowing rivers, tundra, marshy lowlands, and ponds. Most of the land is covered by, depending on elevation and location, alpine tundra, low or tall shrublands, or areas of mixed broadleaf and spruce trees. The region is characterized by steep and mountainous terrain except for the major river drainages and areas around the larger lakes. Drainage basins on the east end of Iliamna Lake include the Pike, Iliamna, and Copper rivers. Major waterbodies include east Iliamna Lake and Gibraltar, Kokhanok, Meadow, Moose, and Upper and Lower Copper lakes. Topographic relief is significant with over 4,600 feet from Iliamna Lake to the summit of Three Sisters Mountain, all within about six miles of the shore. Vegetation consists of alpine tundra and barrens at higher elevations, and a mixture of short and tall shrub thickets throughout the remainder. Riparian areas are populated by mixed spruce and broadleaf stands.⁷¹³

Most of the region's resources are associated with subsistence uses by local communities, and commercial recreation related to sportfishing during the summer. There are no known areas of state land with grazing, agriculture, or commercial harvest potential.⁷¹⁴

⁷⁰⁹ Alaska Dept. of Natural Resources. (n.d.). *Region 9: Eastern Iliamna Lake. Summary of Resources and Uses in the Region*. Retrieved September 6, 2012 from:

http://dnr.alaska.gov/mlw/planning/areaplans/bristol/pdf/bbap_ch3_reg09.pdf.

⁷¹⁰ Kokhanok Tribal Council. (2004). *A Well Made Basket: The Kokhanok Community Plan*. Retrieved September 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kokhanok-GCP-2004.pdf>.

⁷¹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷¹² Ibid.

⁷¹³ See footnote 709.

⁷¹⁴ Ibid.

Mineral resources in the area are associated with mafic intrusive occurring north of Pedro Bay and east of Kokhanok. A wide range of minerals are represented by these occurrences including copper, molybdenum, gold, silver, and arsenic. Fog Lake presents the most significant gold deposit in the area, with secondary occurrences of silver and minor copper values. There has also been significant exploration. There is little oil and gas potential in the area as the bedrock in the region consists predominately of a mix of volcanic, intrusive, and metamorphic terrains. Wildlife within the region includes significant moose and caribou populations as well as many species of freshwater and anadromous fish. Moose rutting areas occur near Kokhanok, on non-state lands, and calving areas occur along the Pile River. Caribou frequent small portions of the region, although there are no known rutting or calving areas. Brown bears concentrate along streams throughout the region. Freshwater sport fish are generally prolific and, along with sockeye salmon, provide the basis for the commercial and sport fish industries.⁷¹⁵

According to the *Lake and Peninsula Borough Hazard Mitigation Plan*, wildfire is the community's number one concern in terms of environmental hazards. The community is located in a heavily vegetated area, with a high concentration of standing dead spruce trees resulting from widespread spruce bark beetle infestation. Hot wildfires can easily be intensified by high winds, which are commonplace in the community. The village has responded to several wildfires in the past, although residents report that fire response equipment is nonexistent. In addition to wildfires, the community is also concerned about effects from nearby volcanism. These effects could manifest in the form of ash fallouts and reduced air quality.⁷¹⁶

The Pebble copper-gold-molybdenum site is located approximately 25 miles north of Newhalen, at the divide between the Kuktuli River and Uppler Talarik Creek.⁷¹⁷ Northern Dynasty Minerals Limited calls the Pebble deposit, "one of the greatest stores of mineral wealth ever discovered," and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion lbs of copper, 66.9 million ounces of gold and 3.3 billion lbs of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion lbs of copper, 40.4 million ounces of gold and 2.3 billion lbs of molybdenum.⁷¹⁸ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.⁷¹⁹

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active within Kokhanok in 2010.⁷²⁰

⁷¹⁵ Ibid.

⁷¹⁶ Missal, J.; and Smith, M. (2009). *Lake and Peninsula Borough Multi-Hazard Mitigation Plan*. Retrieved September 6, 2012 from:

http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

⁷¹⁷ Parker, G. Y., F. M. Raskin, C. A. Woody, and L. Trasky. 2008. Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's Large Mine Permitting Process. *Alaska Law Review* 25:1.

⁷¹⁸ Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

⁷¹⁹ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁷²⁰ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved September 6, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy⁷²¹

Kokhanok's economy is largely subsistence based, as wage employment is limited. The largest year-round employer in the community is the local school, followed by the local Village Council. Commercial fishing provides seasonal employment, and many residents seek additional wage employment outside of Kokhanok in areas such as the North Slope oil fields. Residents identified several areas of potential economic growth including tourism, retail, construction, and other local services.⁷²²

In 2010,⁷²³ the per capita income was estimated at \$10,388 and the median household income was estimated at \$30,125, compared to \$7,732 and \$19,583 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,⁷²⁴ the real per capita income (\$10,167) and real median household income (\$25,751), indicating that while individual earnings remained largely the same, household earnings declined. In 2010, Kokhanok ranked 268th of 305 communities from which per capita income was estimated, and 247th of 299 communities from which median household income was estimated.

However, Kokhanok's small population size may have prevented the ACS from accurately portraying economic conditions.⁷²⁵ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$1.54 million in total wages in 2010.⁷²⁶ When matched with the 2010 Decennial Census population, the per capita income equals \$9,088, which is slightly less than what the ACS estimated.⁷²⁷ This low level of per capita income led the Denali Commission to qualify the community as "distressed," indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁷²⁸

According to 2006-2010 ACS estimates,⁷²⁹ 55.0% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 8.8%, compared to an estimated 5.9% statewide; and an estimated 40.3% of residents lived below the poverty level, compared to an estimated 9.5% of Alaskan residents overall. Again, Kokhanok's small population size may have prevented the ACS from accurately capturing economic

⁷²¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁷²² Lake and Peninsula Borough. (n.d.). *Kokhanok Community Action Plan*. Retrieved September 6, 2012 from: [http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan\(2\).pdf](http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan(2).pdf).

⁷²³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁷²⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁷²⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷²⁶ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁷²⁷ Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁷²⁸ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

⁷²⁹ See footnote 725.

conditions. Based on 2010 ALARI estimates, which were based on unemployment insurance claimants, the unemployment rate (26.5%) was over three times the ACS estimate. In 2005, only 16% of employed residents were employed year-round.⁷³⁰ It should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy. An elevated poverty or unemployment rate can be misleading considering that many residents are working full time in the subsistence economy. Nevertheless, opportunities for wage employment are still important considering that many supplies necessary for daily life require purchasing.

Of those employed in 2010,⁷³¹ an estimated 51.4% worked in the private sector and an estimated 48.6% worked in the public sector. By industry, most (37.8%) were estimated to work in public administration sectors; followed by transportation, warehousing, and utilities sectors (21.6%); and agriculture, forestry, fishing, hunting, and mining sectors (16.2%). Between 2000 and 2010, local employment by industry sector diversified significantly. In 2000, most employed residents worked in education services, healthcare, and social assistance sectors (66.7%), with public administration sectors and transportation, warehousing, and utilities sectors accounting for 5.1% and 7.7% of sector employment, respectively. By 2010, estimated employment in education services, healthcare, and social assistance sectors had declined to 8.1%. According to 2010 ALARI estimates,⁷³² most (65.3%) employed residents worked in local government sectors; followed by natural resources and mining sectors (7.1%); professional and business sectors (5.1%); and educational and health service sectors (5.1%). Both the ACS and DCRA estimates conflict with Lake and Peninsula Borough's report that the local school is the community's largest employer.⁷³³ This may be attributed to the fact that many residents hold positions outside the community. Therefore, ALARI employment statistics on occupations may be more representative of regional employers than local ones.

According to 2010 ALARI estimates, most employed residents held education related occupations; followed by construction or labor, oil and gas, and janitorial occupations. According to ACS, estimates of occupational employment, most (32.4%) employed residents held sales or office positions; followed by production, transportation, or material moving (27.0%); management or professional (18.9%); service (10.8%); and natural resources, construction, or maintenance positions (10.8%). As with employment by industry sector, employment by occupation type diversified between 2000 and 2010. In 2000, a significant proportion of employed residents held management or professional positions (61.5%). However, by 2010, only an estimated 18.9% of residents held those occupation types, while all other occupations (with the exception of service occupations) experienced significant proportional gains. Information regarding ACS employment trends can be found in Figures 3 and 4.

⁷³⁰ Krieg, T. M.; Holen, D. L.; and Koster, D. (2009). *Subsistence Harvests and Uses of Wild Resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005*. Technical Paper No. 322. Retrieved September 7, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp322.pdf>.

⁷³¹ See footnote 723.

⁷³² See footnote 727.

⁷³³ See footnote 722.

Figure 3. Local Employment by Industry in 2000-2010, Kokhanok (U.S. Census).

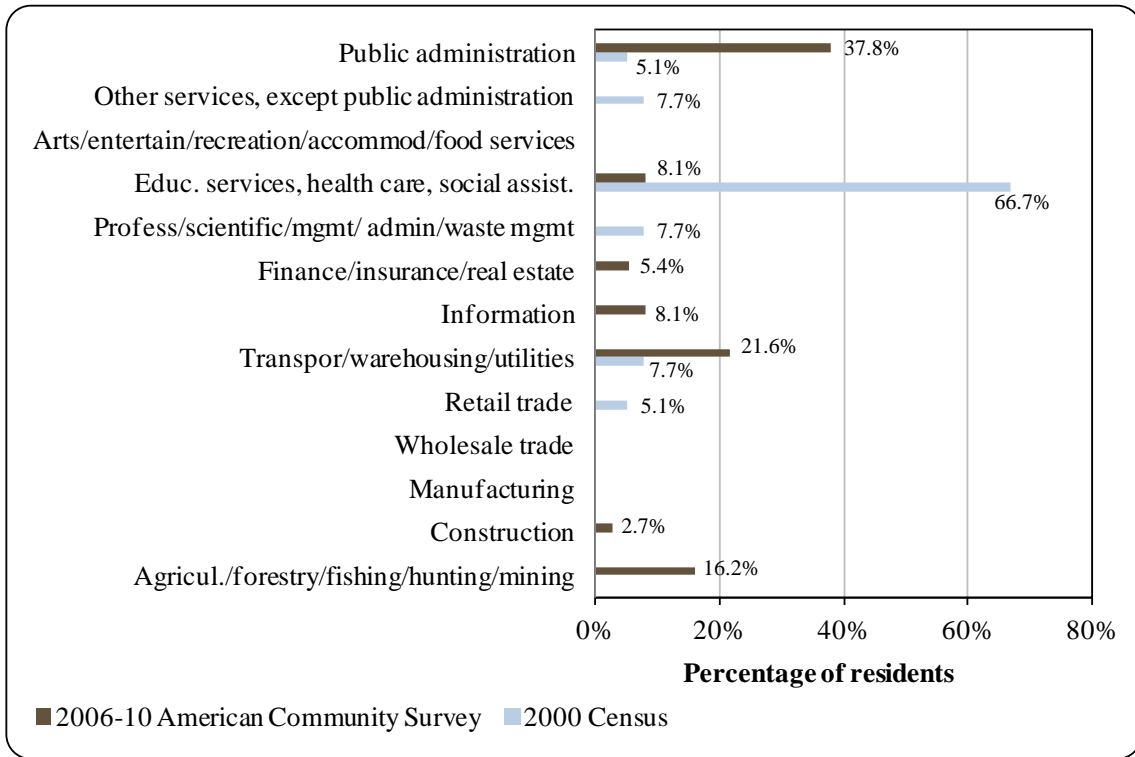
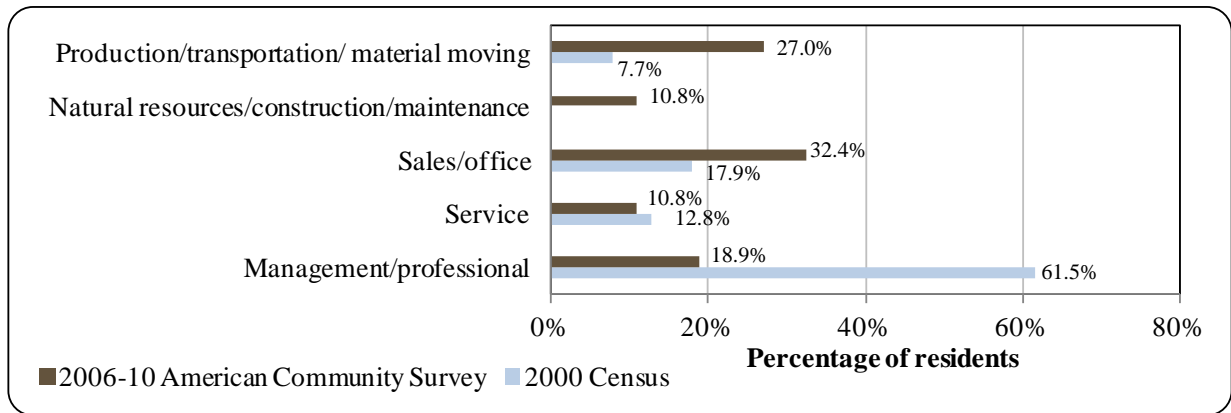


Figure 4. Local Employment by Occupation in 2000-2010, Kokhanok (U.S. Census).



Governance

Kokhanok is an unincorporated village under the jurisdiction of the Lake and Peninsula Borough. In addition, there is a federally recognized tribal government located in Kokhanok. The sale of alcohol is prohibited within the community. Kokhanok is unincorporated and unable to collect municipal taxes or fees. However, it was reported that in 2002, the community was awarded \$2.5 million in public grants for a harbor feasibility and design project (Table 2)

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kokhanok from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	\$2,500,000
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Kokhanok is the Bristol Bay Native Corporation, and the local ANCSA chartered non-profit is the Bristol Bay Native Association. The ANCSA chartered village corporation is Alaska Peninsula Corporation. Kokhanok is also a member of the Nilavena Consortium of Villages.

The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage, 207 miles northeast. The closest Alaska Department of Fish and Game (ADF&G) office is located in King Salmon, 88 miles southwest.

Infrastructure

*Connectivity and Transportation*⁷³⁴

Kokhanok is accessible by air and water. There is a state-owned 3,300-ft long by 75-ft wide gravel airstrip and a seaplane base. Freight service is provided by air and barge, and large amounts of freight are delivered in the summer by barge either up the Kvichak River from

⁷³⁴ Kokhanok Tribal Council. (2004). *A Well Made Basket: The Kokhanok Community Plan*. Retrieved September 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kokhanok-GCP-2004.pdf>.

Naknek, or by Cook Inlet or Pile Bay portages. Small freight is delivered by Desert Air, Iliamna Air Taxi, or Lake and Peninsula Air.

Residents can generally travel to Iliamna and Anchorage through Iliamna Air Taxi or Birchwood Air Service, with Iliamna Air Taxi providing scheduled air service. Travel to Dillingham, King Salmon, and other communities typically require chartering. Local travel is done primarily by ATV, skiff, or snowmobile.

Facilities

Kokhanok generates power only during the summer months; in winter, electricity is purchased from the school district. Kokhanok Electric is operated by the village council. The village council also operates a piped water and sewer system that serves 35 households. Water is also available through a central watering point, a community well source, and individual wells. Water is neither filtered nor chlorinated before distribution. The school operates its own well and water treatment facility. The Kokhanok Improvement Corporate operates a “washeteria” in the community, and privies pits and sewage pits are available in the community. The Village Council collects refuse.⁷³⁵

Safety services are provided by a Village Public Safety Officer in Kokhanok and a state trooper post in McGrath. The community also maintains its own volunteer fire department with equipment provided through Project Code Red and additional fire and rescue services provided by the Kokhanok First Responders. Kokhanok also has a post office and local and long-distance telephone services provided by Alaska Communications Systems of the Northland and AT&T. Internet access is currently only available in the school and is provided by GCI.⁷³⁶

Kokhanok lacks port or harbor infrastructure. There is a local boat landing area, and a new barge landing is scheduled for completion in 2013.⁷³⁷

*Medical Services*⁷³⁸

The Kokhanok Clinic provides residents with basic medical needs and is operated by the Bristol Bay Area Health Corporation. Kokhanok is an isolated location it is part of the Southern Emergency Medical Services Region. Emergency services are provided by a community health aide. Additional long-term, specialized, and acute medical services are provided in Dillingham and Anchorage.

Educational Opportunities

Kokhanok School provides preschool through 12th grade instruction. As of 2011, there were 28 students enrolled and 6 teachers employed.⁷³⁹ Some residents participate in distance

⁷³⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷³⁶ Ibid.

⁷³⁷ Lake and Peninsula Borough. (n.d.). *Kokhanok Community Action Plan*. Retrieved September 6, 2012 from: [http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan\(2\).pdf](http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan(2).pdf).

⁷³⁸ See footnote 735.

⁷³⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

learning opportunities through the Rural Alaska Native Adult Program provided by the University of Alaska and Alaska Pacific University.⁷⁴⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The region surround Iliamna Lake is both a historic and contemporary subsistence use area and is heavily used by villages along the Lake and Nushagak/Mulchatna drainages. Most subsistence activity in the region is concentrated around the Nondalton area, north of Kokhanok.⁷⁴¹ Iliamna Lake and surrounding drainages and lakes provide popular subsistence areas, and many locals rely on sockeye salmon and freshwater seal.

Kokhanok residents participate exclusively in the Bristol Bay salmon fishery, which began in 1888 (although residents did not participate until later). In 1883, the exploratory vessel *Neptune* anchored in Nushagak Bay to assess potential commercial salmon prospects. Plentiful runs prompted a cannery to be built at the village of Kanulik. By the late 1880s, canneries were built at Scandinavian Creek, Kanakanak, and Clark's Point. Gillnetters flocked to the region and by 1890, canneries were producing more product than there were buyers. This posed a problem for packers, who reacted by forming the Alaska Packers Association in order to control production. By 1895, landings in Bristol Bay reached five million sockeye and new canneries were built on the Ugashik, Egegik, Naknek, and Kvichak Rivers.⁷⁴²

The Spanish American War and Klondike Gold Rush bolstered the demand for canned salmon in the late nineteenth and early twentieth century's. By 1901, there were 18 canneries throughout Bristol Bay, and landings reached 10 million sockeye. Mechanization and industry expansion increased production substantially, causing it to peak in 1912 at 20 million salmon landed by over 1,000 gillnetters. For the next seven years, production would range between 20 and 25 million. Fueled by demand for canned salmon during World War I, canneries operated 24 hours a day, seven days a week, and recorded record profits. This caused a major crash in sockeye runs throughout Bristol Bay in 1919.⁷⁴³

Following the salmon crash, the White Act of 1924 assigned the federal government with managing the Alaska salmon fishery and mandated a 50% escapement rate. This prompted fishery closures and gear restrictions including the abolishment of powerboats, purse seines, and fish traps. However, new regulations being put in place were rarely enforced during the early years following the passage of the White Act.⁷⁴⁴

Commercial salmon fishing prospered in the 1920s and early 1930s and accounted for 80% of tax revenues collected by the territorial government. However, variable runs, foreign

⁷⁴⁰ See footnote 734.

⁷⁴¹ The Pebble Partnership. (2012). *Subsistence & Traditional Knowledge Studies*. Retrieved September 7, 2012 from:

<http://www.arlis.org/docs/vol2/Pebble/2012%20Agency%20Meetings/29%20Subsistence%20and%20Traditional%20Resources%20-%20Steven%20Braund.pdf>.

⁷⁴² The Bristol Bay Economic Development Corporation. (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved March 14, 2012 from: <http://www.bbsalmon.com/FinalReport.pdf>.

⁷⁴³ Ibid.

⁷⁴⁴ Ibid.

encroachment, and the Great Depression stressed the industry and in 1935, only 3 million salmon were caught almost prompting a total shut-down of the Bristol Bay salmon fishery.⁷⁴⁵

World War II brought significant changes to the Bristol Bay commercial fishing industry. Worker shortages prompted canneries to hire local labor and local fishermen and communities began to organize. In Dillingham, fishermen and cannery workers formed co-ops in 1944 to counter what was seen as an overly influential industry. Following World War II, salmon runs were once again in decline, although the Pacific Decadal Oscillation coupled with lower ocean productivity was to blame this time. However, further threats faced the industry from overfishing in the Bering Sea. By 1955, deep-sea catches by Japanese vessels reached 50 million salmon. Inshore catches on the other hand, averaged at 6.7 million sockeye annually during the 1950s. At this point, many seafood producers switched to more lucrative tuna, which became the iconic fish of the baby boom years.⁷⁴⁶

Following statehood in 1959, salmon management responsibility shifted to state managers. In Bristol Bay, this meant more aggressive forms of in-season management and escapement monitoring. Seasons were regulated according to in-season run strength indicators instead of pre-season forecasts. Despite rigorous management, salmon recovery was slow. Bristol Bay salmon fell to historic lows in 1973 when fewer than one million sockeye salmon were harvested. The state's response was both a scathing indictment of Japanese fishing effort and limits to fishery entry. Following an amendment to Alaska's constitution in 1972, the state issued transferable limited entry permits based on experience and economic dependence to the fishery. In 1976, the U.S. asserted jurisdiction over much of the outer continental shelf surrounding its coastlines. The 200-mile exclusive economic zone, along with revised Bering Sea fishing boarders and favorable environmental conditions, set the stage for salmon recovery.⁷⁴⁷

Salmon returned to the Bristol Bay region in 1978, when after a weak sockeye season, a surge in pink salmon into the Nushagak River overwhelmed processing capacity for the region. Sockeye returned in force the following year, and strong demands elevated prices over \$1.00 per lb. In 1980, over 64 million sockeye returned to Bristol Bay and subsequent seasons remained strong. By 1988, sockeye prices rose to \$2.40 per lb. Average gross earnings by drift boat exceeded \$100,000 and the value of Bristol Bay drift permits surged to almost \$250,000. As permit value rose, entry into the fishery became increasingly contested and litigated, resulting in additional permits being issued. However, during this time Chile began exporting farmed salmon to Japan. While insignificant at first, salmon farming would soon subvert the Alaska salmon industry and cause a significant drop in prices. A year after salmon prices peaked, they dropped to \$1.09 per lb. By 1991, seafood processors were offering \$0.50 per lb which resulted in fishermen striking. Once again, the Japanese were the focus of ire, with many fishermen making accusations of price-fixing from Japanese-owned seafood processors. During that time, Bristol Bay still maintained record salmon harvests, with 45 million fish taken in 1995. Revenues remained high despite low prices due to large harvests. However, once again the fishery would falter, and once again the Pacific Decadal Oscillation was to blame.

In previous lean years, production shortages would drive prices up. However, the abundance of farmed fish within the market changed this. By 1997, the overall value of Bristol Bay salmon was cut in half from the previous year to \$63 million. Runs in years following were characterized by modest rebounds followed by more declines. In that time, Bristol Bay was

⁷⁴⁵ Ibid.

⁷⁴⁶ Ibid.

⁷⁴⁷ Ibid.

declared both a state and federal disaster area and many permit holders opted to not participate in the 2001 season. In 2002, additional fishermen as well as several canneries and cold storage facilities opted out as well. In that year, the Bristol Bay drift permit once valued at \$250,000 was valued at less than \$20,000. In addition, total ex-vessel value of the fishery was down 90% from its peak in 1992.⁷⁴⁸

Kokhanok is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. The community is not eligible for the Community Quota Entity program or the Community Development Quota program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Kokhanok does not have a registered processing plant. The closest seafood processing facility is located in Naknek.

Fisheries-Related Revenue

Between 2000 and 2010 there was no known fisheries-related revenue received by the community of Kokhanok (Table 3).

Commercial Fishing

In 2010, 11 residents, or 6.5% of the population, held 10 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2010, eight residents held nine CFEC permits. The number of CFEC permits held in the community peaked in 2007 at 12. Of the CFEC permits held in 2010, 100% were for salmon and were used to fish in the Bristol Bay drift and set gillnet salmon fisheries.⁷⁴⁹ Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. In addition, no residents held halibut, crab, or sablefish quota between 2010 and when the programs began.

Residents held 21 commercial crew licenses in 2010, compared to 32 in 2000; which was also the year the number of crew licenses held in the community peaked. Also in 2010, residents held majority ownership of one commercial fishing vessel, compared to four in 2000.

No commercial landings were reported in Kokhanok between 2000 and 2010. Landings reported by residents of Kokhanok between 2000 and 2010 are considered confidential, with the exception of salmon landings in 2000 and 2001. In 2001, residents reported landing 134,415 lbs of salmon valued at \$56,641, compared to 115,309 lbs valued at \$75,642 in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁷⁴⁸ Ibid.

⁷⁴⁹ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kokhanok: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kokhanok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Kokhanok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	9	9	10	10	8	9	9	12	11	11	10
	Fished permits	8	8	7	8	6	8	8	11	9	9	7
	% of permits fished	89%	89%	70%	80%	75%	89%	89%	92%	82%	82%	70%
	Total permit holders	8	9	10	10	8	9	9	12	11	11	11
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>9</i>	<i>9</i>	<i>10</i>	<i>10</i>	<i>8</i>	<i>9</i>	<i>9</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>10</i>
	<i>Fished permits</i>	<i>8</i>	<i>8</i>	<i>7</i>	<i>8</i>	<i>6</i>	<i>8</i>	<i>8</i>	<i>11</i>	<i>9</i>	<i>9</i>	<i>7</i>
	<i>% of permits fished</i>	<i>89%</i>	<i>89%</i>	<i>70%</i>	<i>80%</i>	<i>75%</i>	<i>89%</i>	<i>89%</i>	<i>92%</i>	<i>82%</i>	<i>82%</i>	<i>70%</i>
	<i>Permit holders</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>10</i>	<i>8</i>	<i>9</i>	<i>9</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>11</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kokhanok: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Kokhanok ²	Total Net Lbs Landed In Kokhanok ²	Total Ex-Vessel Value Of Landings In Kokhanok ²
2000	32	0	0	4	2	0	0	\$0
2001	21	0	0	4	2	0	0	\$0
2002	18	0	0	4	7	0	0	\$0
2003	25	0	0	6	4	0	0	\$0
2004	16	0	0	4	4	0	0	\$0
2005	26	0	0	4	3	0	0	\$0
2006	14	0	0	1	2	0	0	\$0
2007	16	0	0	1	3	0	0	\$0
2008	19	0	0	1	2	0	0	\$0
2009	16	0	0	1	1	0	0	\$0
2010	21	0	0	1	2	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Kokhanok: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kokhanok: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kokhanok: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kokhanok: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kokhanok Residents:
 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	115,309	134,415	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>115,309</i>	<i>134,415</i>	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$75,642	\$56,641	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$75,642</i>	<i>\$56,641</i>	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Bristol Bay salmon sportfishing season typically begins by the end of May when Chinook salmon begin to enter Bristol Bay drainages. Dolly Varden, Arctic char, and grayling can often be found feeding on out-migrating salmon fry, and northern pike are active as well. Most of the Kvichak River and drainages flowing into Iliamna Lake remained closed to fishing until June 8, when rainbow trout fishing opens in eastern sections of the river. Chinook become more accessible in eastern portions of Bristol Bay drainages, and Arctic char, Dolly Varden, northern pike, and grayling remain active. Sockeye salmon become popular targets for anglers in July, and are plentiful in the Kvichak River early in the month. Chum salmon are found in abundance by mid-July, and some coho can be found by the end of the month. Chinook salmon are closed to sportfishing in most Bristol Bay drainages by the end of July. Coho salmon are most plentiful in August and September, and by October, sportfishing opportunities are primarily limited to resident fish. Throughout the winter months, rainbow trout, Dolly Varden, grayling, smelt, Arctic char, and northern pike can be targeted.⁷⁵⁰

Because of Kokhanok's remote location and lack of visitor infrastructure, recreational fishing from within the community is limited. No sport fish guide businesses were registered within the community between 2002 and 2010, and only one was registered in 2000 and 2001 (although not active). In addition, no sportfishing licenses were sold within the community between 2000 and 2010. Residents held 19 sportfishing licenses in 2010, compared to 7 in 2000. The number of sportfishing licenses held by residents peaked in 2010.

Kokhanok is located in the Kvichak River Drainage ADF&G Harvest Survey Area, which includes all lakes and tributaries of the Kvichak River drainage. In 2010, there was a total of 25,681 freshwater angler days fished, compared to 31,145 in 2000. In that year, non-Alaska residents accounted for 78.1% of freshwater angler days fished, compared to 66.9% in 2000. Total angler days fished peaked in 2007 at 33,417. In each year, Alaska residents accounted for significantly less freshwater angler days fished than non-Alaska residents. Saltwater sportfishing made up a comparatively insignificant portion of angler days fished within the Survey Area. In 2010, there were 22 saltwater angler days fished, compared to 236 in 2000. In that year, non-Alaska residents accounted for 100% of saltwater angler days fished, compared to 28.8% in 2000. The number of saltwater angler days fished peaked in 2002 at 449. Further information regarding sportfishing trends can be found in Table 11.

⁷⁵⁰ Alaska Dept. of Fish and Game. (n.d.). *Sport Fish Area Fishing Report – Bristol Bay*. Retrieved September 10, 2012 from: http://www.adfg.alaska.gov/sf/FishingReports/index.cfm?ADFG=R2.summary&Area_key=19&RecordID=40.

Table 11. Sport Fishing Trends, Kokhanok: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kokhanok ²
2000	0	1	7	0
2001	0	0	12	0
2002	0	0	17	0
2003	0	0	8	0
2004	0	0	12	0
2005	0	0	14	0
2006	0	0	17	0
2007	0	1	15	0
2008	0	1	18	0
2009	0	1	17	0
2010	0	1	19	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	0	0	17,234	6,514
2010	0	22	20,068	5,613

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence is an essential part of daily life for residents of Kokhanok. Without easy access to regional centers, the community is substantially dependent upon subsistence resources. Many families spend their summers at fish camps near the Gibraltar River.⁷⁵¹ Residents commonly harvest sockeye salmon along Iliamna Lake using set gillnets. Coho salmon are harvested at fish camps on Gibraltar Lake in late fall; spawning sockeye are harvested as well. Freshwater species are harvested along bays east of Kokhanok, as well as the surrounding smaller lakes and streams. Ice fishing for Arctic grayling and northern pike is popular in the spring. While sockeye are the most harvested subsistence species, moose and caribou are also extremely important. However, many residents feel that sport and predation management needs to be more responsive to the subsistence needs of community members. Freshwater harbor seals are an important subsistence food. Many residents hunt seal on islands or around haul-out points on the ice created by pressure cracks.

According to a survey conducted by ADF&G in 2005, 93% of Kokhanok households surveyed participated in salmon subsistence activities, 14% participated in halibut subsistence activities, 40% participated in marine mammal subsistence activities, 4% participated in marine invertebrate subsistence activities, and 43% participated in non-salmon fish subsistence activities (Table 12). Per capita harvest of those species was estimated at 556.5 lbs. In a similar ADF&G study of household subsistence participation in 2005, most (97.1%) of surveyed households reported using sockeye salmon; followed by Chinook (31.4%), coho (25.7%), chum (14.3%), and pink (11.4%) salmon. In addition, 65.7% reported using rainbow trout, 51.4% reported using Arctic char, 41.7% reported using Dolly Varden, 34.3% reported using grayling, 34.3% reported using northern pike, 34.3% reported using whitefish, 14.3% reported using halibut, 11.4% reported using lake trout, 17.1% reported using smelt, and 2.9% reported using lingcod. Finally, 40.0% of households reported using bearded seal, and 40.0% reported using freshwater harbor seal.⁷⁵²

Of the species reported by ADF&G in Table 13, residents reported harvesting sockeye salmon the most often, followed by coho, chum, pink, and Chinook salmon. In 2008, residents reported harvesting 15,698 salmon, compared to 8,835 in 2000. Reported salmon harvests peaked in 2007 at 19,078 fish. In 2005, residents reported harvesting 6,544 lbs of non-salmon fish, and 73 lbs of marine invertebrates. Between 2009 and 2003, no residents were issued Subsistence Halibut Registration Certificates (SHARC) (Table 14). Although there is no data available specific to marine mammal harvests between 2000 and 2010 (Table 15), it is understood that residents harvest freshwater harbor seals. According to ADF&G's Community Subsistence Information System (CSIS),⁷⁵³ species that Kokhanok residents have historically harvested or used include butter clams, Dungeness crab, freshwater clams, horse clams, octopus, littleneck clams, pinkneck clams, razor clams, shrimp, Tanner crab, bearded seal, harbor seal

⁷⁵¹ Lake and Peninsula Borough. (n.d.). *Kokhanok Community Action Plan*. Retrieved September 6, 2012 from: [http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan\(2\).pdf](http://www.lakeandpen.com/vertical/sites/%7B0B64B15E-4D75-4DD6-ACBB-14563D943AB9%7D/uploads/Kokhanok_Community_Plan(2).pdf).

⁷⁵² Krieg, T. M., D. L. Holen, and D. Koster, D. (2009). *Subsistence Harvests and Uses of Wild Resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005*. Technical Paper No. 322. Retrieved September 10, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp322.pdf>.

⁷⁵³ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

(freshwater and saltwater), ringed seal, Steller sea lion, blackfish, broad whitefish, sculpin, burbot, Arctic char, Dolly Varden, flounder, grayling, herring, humpback whitefish, lake trout, cisco, lingcod, rainbow trout, rockfish, round whitefish, smelt, sucker, and stickleback.

Table 12. Subsistence Participation by Household and Species, Kokhanok: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	93%	14%	40%	4%	43%	556.5
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kokhanok: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	25	22	18	2	n/a	1	8,814	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	25	21	18	6	12	43	11,869	n/a	n/a
2005	34	33	30	321	392	125	17,101	73	6,544
2006	28	21	12	17	13	8	19,028	n/a	n/a
2007	29	20	6	22	26	1	15,705	n/a	n/a
2008	26	21	7	5	n/a	2	15,684	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kokhanok: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kokhanok: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Koliganek (koh-LIG-uh-neck)



People and Place

*Location*⁷⁵⁴

Koliganek is located on the left bank of the Nushagak River, 65 miles northeast of Dillingham. The village hopes to get its own zip code, although it currently shares one with Dillingham. Koliganek occupies 12.5 square miles of land and 0.1 square miles of water. The community is unincorporated, is located in the Dillingham Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁷⁵⁵

In 2010, there were 209 residents in Koliganek, ranking it 194th of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 15.5%. Between 2000 and 2009, the population grew by 0.00%, with an average annual growth rate of -0.87% indicating some variation between those years. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were an estimated 200 permanent residents living in Koliganek in 2010. Typically, there are seasonal workers living in the community between May and October, with the population peaking in October. Peaks in Koliganek's population are thought to be entirely driven by employment in fisheries sectors. Further information regarding population trends can be found in Table 1.

Koliganek is predominately a Yup'ik Eskimo village with Russian Orthodox influences. Between 2000 and 2010, the community experienced corresponding increases in the Alaska Native population and decreases in the White population. In 2010, 95.7% of residents identified themselves as American Indian or Alaska Native, compared to 87.4% in 2000; 3.3% identified themselves as White, compared to 10.4% in 2000, and 1.0% identified themselves as two or more races, compared to 0.0% in 2000. No residents identified themselves as Hispanic or Latino in 2010. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 3.80, compared to 3.80 in 1990 and 3.43 in 2000. In that year, there were a total of 66 housing units, compared to 50 in 1990 and 77 in 2000. Of the households surveyed in 2010, 53% were owner-occupied, compared to 53% in 2000; 30% were renter-occupied, compared to 16% in 2000; 12% were vacant, compared to 29% in 2000; and 5% were occupied seasonally, compared to 3% in 2000. No residents lived in group quarters between 1990 and 2010.

⁷⁵⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁵⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

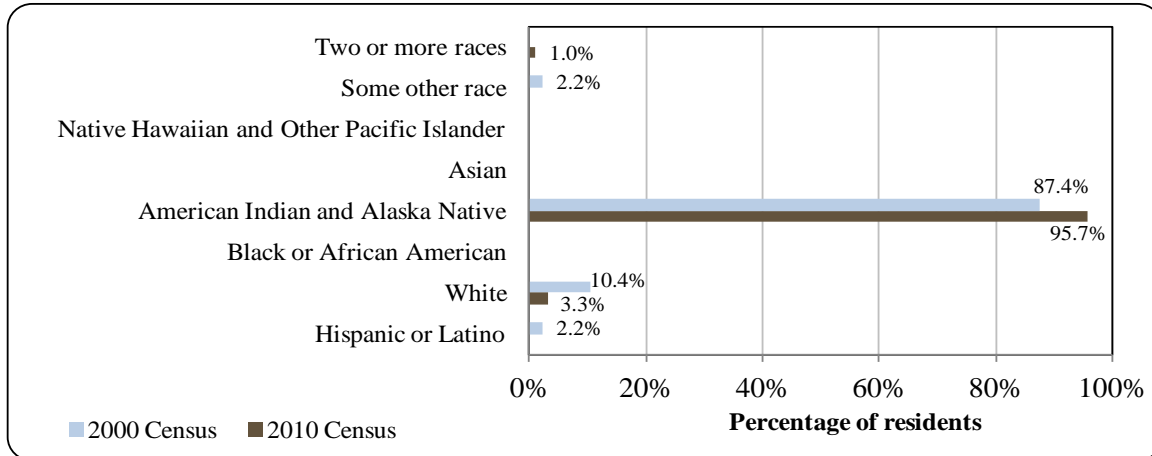
Table 1. Population in Koliganek from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	181	-
2000	182	-
2001	-	177
2002	-	188
2003	-	199
2004	-	188
2005	-	168
2006	-	165
2007	-	192
2008	-	174
2009	-	182
2010	209	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Koliganek: 2000-2010 (U.S. Census).

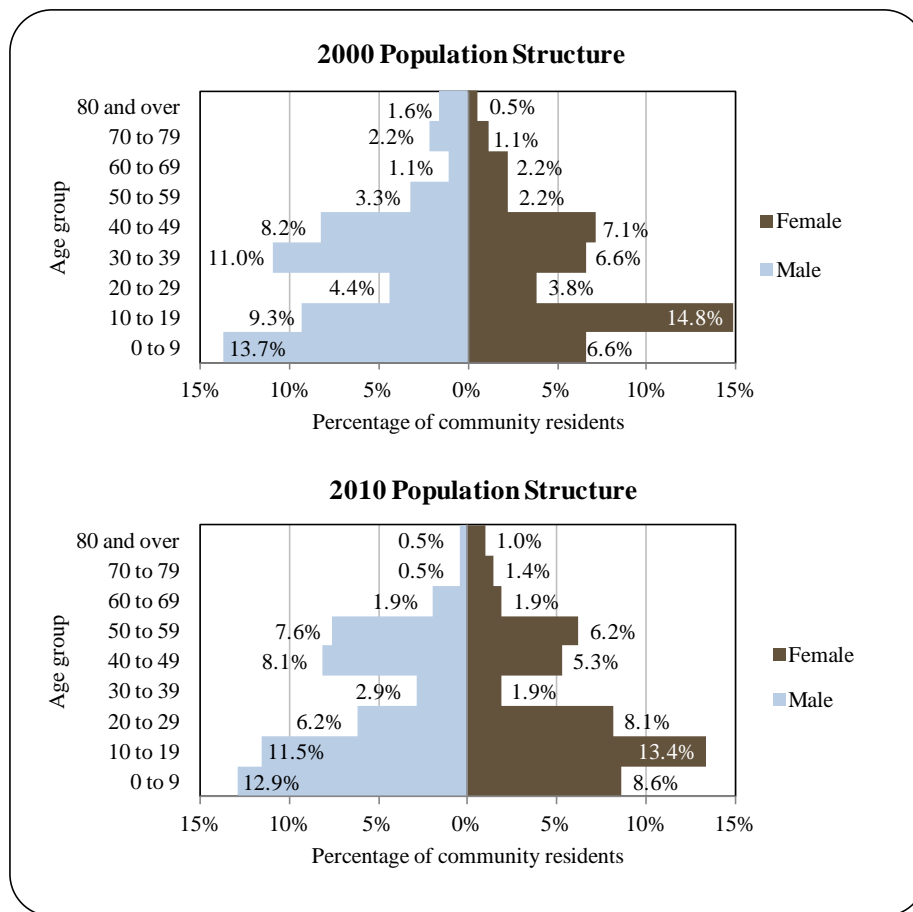


In 2010, the gender distribution of Koliganek was 52.2% male and 47.8% female. This was similar to the gender distribution statewide (52.0% male, 48.0% female), and slightly more even than the distribution in 2000 (54.9% male, 45.1% female). In that year, the median age was 21.3 years, which was lower than both the statewide median of 33.8 years and 2000 median of 26.0 years. Overall, the gender distribution was expansive in both 2000 and 2010, with several significant disparities among several cohorts (Figure 2). In addition, many cohorts displayed characteristics consistent with a stable population, meaning that as they transitioned into new age ranges they maintained their overall structural character. In 2010, 46.4% of residents were under

the age of 20, compared to 44.4% in 2000; 7.2% were over the age of 59, compared to 8.1% in 2000; 32.0% were between the ages of 30 and 59, compared to 38.4% in 2000; and 14.3% were between the ages of 20 and 29, compared to 8.2% in 2000.

Gender distribution by age cohort was significantly more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 0 to 9 range (12.9% male, 8.6% female), followed by 40 to 49 (8.1% male, 5.3% female) and 20 and 29 (8.1% female, 6.2% male) ranges. Of those three, the greatest relative gender difference occurred within the 40 to 49 range. Information regarding trends in population structure can be found in Figure 2.

Figure 2. Population Age Structure in Koliganek Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁷⁵⁶ estimated that 73.2% of residents aged 25 and over held a high school diploma or higher degree in 2010, somewhat less than the estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 14.3% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 12.5% had a 9th to 12th grade

⁷⁵⁶ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 26.8% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 2.7% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 1% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Previous to Russian and European contact, the Nushagak River region was occupied by the Nushagamiut culture of Yup'ik Eskimos. The area's proximity to highly productive salmon grounds and location between the Alaska Peninsula and Yukon-Kuskokwim Delta lent to considerable cultural mixing, trade, and in some instances, conflict. Bristol Bay was visited by Captain James Cook in 1778 while searching for a northwest passage. The Bay was named after the Admiral Earl of Bristol. Although this was the first well recorded visit to Bristol Bay by Europeans, Cook gave evidence of a prior Russian presence in the area.⁷⁵⁷

Koliganek is a Yup'ik Eskimo village with Russian Orthodox practices. Subsistence activities are an important part of the lifestyle. The village was first listed in the 1880 Census as "Kalignak." The name is local, recorded by the U.S. Geological Survey in 1930. Since that time, the village has moved 4 miles downstream from the original site.⁷⁵⁸

The present location of Koliganek, also called "New Koliganek," was established about 1964. Prior to that, the residents lived at another site called "Koliganek" and, before that, in Old Koliganek, on the lower Nuyakuk River. The village of Old Koliganek was occupied until the early 1940s, when residents relocated. The next site was occupied only for about 20 year when frequent flooding forced residents to relocate once more.⁷⁵⁹

Natural Resources and Environment⁷⁶⁰

The area is in a climatic transition zone. The primary influence is maritime, although a continental climate affects the weather. Average summer temperatures range from 37 to 66 °F (3 to 19 °C); winter temperatures range from 4 to 30 °F (-16 to -1 °C).

The Nushagak-Mulchatna River watershed was formed by repeated Pleistocene glacial advances and retreats ending about 12,000 years ago. The modern shoreline of Bristol Bay was created in the same period when sea levels rose. The Nushagak River watershed is composed of mountains, mixed forests, tundra, lakes, and rivers. Dominant vegetation is tundra, mixed coniferous/birch forest, and willow/cottonwood/alder riparian corridors. In general, white spruce and mixed spruce-birch forests as well as muskeg and willow-alder thickets exist in elevations up to 900 feet. Above this, bare rock, heath tundra, and alpine meadow dominate. Wet meadows, marsh, and tidal marsh exist in lower elevations and depressions; as well as the moth of the

⁷⁵⁷ Tryck, Nyman & Hayes. 1985. *City of Dillingham Comprehensive Plan*. Retrieved March 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-1985.pdf>.

⁷⁵⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁵⁹ Krieg, T. M., D. L. Holden, and D. Koster. 2009. *Subsistence Harvests and Uses of Wild Resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005*. Technical Paper No. 322. Retrieved September 5, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp322.pdf>.

⁷⁶⁰ See footnote 758.

Nushagak River. Nushagak Bay is characterized by tidal mudflats, sandy/gravelly shoreline, bluffs, and glaciofluvial material up to 200 feet.⁷⁶¹

The Nushagak River watershed provides important habitat for moose, caribou, brown and black bears, wolverine, wolves, porcupine, lynx, marten, beaver, snowshoe hare, weasels, mink, ground squirrels, and microtones. Caribou breed in the upper Nushagak basin and post-calving congregations have numbered between 40,000 and 200,000 animals. The area also provides staging, nesting, molting, or year-round habitat for over 150 species of birds. The Nushagak River system is the fifth largest river in Alaska by volume, and supports at least 13 anadromous and 16 resident fish species. Local fish species include all five species of Pacific salmon, Northern pike, rainbow trout, rainbow smelt, Arctic char, Dolly Varden, Arctic grayling, and blackfish.⁷⁶²

Significant mineral resources are present in the Bristol Bay region, including the Pebble copper-gold-molybdenum deposit east of Koliganek. The Pebble Mine site is located at the divide between the Koktuli River and Upper Talarik Creek, north of Iliamna Lake.⁷⁶³ Northern Dynasty Minerals Limited calls the Pebble deposit, “one of the greatest stores of mineral wealth ever discovered,” and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion lbs of copper, 66.9 million ounces of gold, and 3.3 billion lbs of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion lbs of copper, 40.4 million ounces gold, and 2.3 billion lbs of molybdenum.⁷⁶⁴ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area. If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.⁷⁶⁵

Reserves of oil and natural gas are also thought to be present on the continental shelf in the Bristol Bay Basin, along the northern edge of the Aleutian Islands and Alaska Peninsula.⁷⁶⁶ However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.⁷⁶⁷ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.⁷⁶⁸

⁷⁶¹ Nushagak-Mulchatna Watershed Council. 2007. *Nushagak River Watershed Traditional Use Area Conservation Plan*. Retrieved September 4, 2012 from:

http://www.nature.org/idc/groups/webcontent/@web/@alaska/documents/document/prd_017469.pdf.

⁷⁶² Ibid.

⁷⁶³ Parker, G. Y., F.M. Raskin, C. A. Woody, and L. Trasky. 2008. Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process. *Alaska Law Review* 25:1.

⁷⁶⁴ Northern Dynasty Minerals Limited. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

⁷⁶⁵ Pg. 36 in: Duffield, J., C. Neher, D. A. Patterson, and O. S. Goldsmith. 2007. *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

⁷⁶⁶ Alaska Department of Natural Resources. 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁷⁶⁷ Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

⁷⁶⁸ The White House, Office of the Press Secretary. March 31, 2010. Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

The Bristol Bay area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surges, a majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall. There is also potential for climate change to augment erosion, as coastal areas of Alaska are freezing later in the season, leaving coastal areas more vulnerable to fall storms and storm surges. Changing temperatures also have the potential to shift distribution of fish and wildlife, with possible consequences for commercial and subsistence activities.⁷⁶⁹

According to a survey conducted by the AFSC in 2011, community leaders reported that Koliganek's future is threatened by mining developments in the region. As one community leader put it "Our fear is mining development in our head waters. We survive on salmon. Mining development is no good. There is too much risk."

Current Economy⁷⁷⁰

Because of limited opportunities for wage employment, subsistence is an important part of the local economy in Koliganek. As in much of the Bristol Bay area, most cash employment is seasonal. Commercial fishing and the public sector have both been especially important sources of employment and income.⁷⁷¹ In a survey conducted by the AFSC in 2011, community leaders reported that Koliganek's economy is dependent on fishing.

In 2010,⁷⁷² the estimated per capita income was \$15,944 and the estimated median household income was \$56,563, compared to \$13,242 and \$44,483 in 2000, respectively. However, after adjusting for inflation by converting 2000 values into 2010 dollars,⁷⁷³ the real per capita income (\$17,413) and real median household income (\$58,626) indicate that both individual and household earnings decreased slightly. In 2010, Koliganek ranked 186th of 305 communities from which per capita was estimated, and 92nd of 299 communities from which median household income was estimated.

Koliganek's small population size may have prevented the ACS from accurately portraying economic conditions.⁷⁷⁴ Another understanding of per capita income is obtained

⁷⁶⁹ Glenn Gray and Associates. 2008. *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from

http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf.

⁷⁷⁰ Unless otherwise noted, all monetary data are reported in nominal values.

⁷⁷¹ New Koliganek Village Council; Agnew::Beck Consulting, LLC; and Bristol Bay Economic Development Corporation. 2005. *Koliganek Comprehensive Plan*. Retrieved August 29, 2012 from:

<http://www.commerce.state.ak.us/dca/plans/Koliganek-CP-2005.pdf>.

⁷⁷² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁷⁷³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁷⁷⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not

through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$1.40 million in total wages in 2010.⁷⁷⁵ When matched with the 2010 Decennial Census population, the per capita income equals \$6,717, which is significantly less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Decennial Census figures. This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁷⁷⁶ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.⁷⁷⁷

According to 2006-2010 ACS estimates,⁷⁷⁸ 58.8% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 18.3%, compared to an estimated 5.9% statewide; and an estimated 7.2% of residents lived below the poverty level, compared to an estimated 9.5% of Alaskan residents overall. Again, Koliganek’s small population may have prevent the ACS from accurately capturing economic conditions. According to 2010 ALARI estimates, the unemployment rate in Koliganek was 24.6% based on unemployment insurance claimants.⁷⁷⁹

Of those employed, an estimated 48.4% worked in the private sector and an estimated 51.6% worked in the private sector. By industry (Figure 3), most (43.5%) employed residents were estimated to work in education services, health care, and social assistance sectors; followed by public administration (24.2%); retail trade (16.1%); and agriculture, forestry, fishing, hunting, and mining sectors (12.9%). Between 2000 and 2010, there were significant proportional increases in the number of residents employed in agriculture, forestry, fishing, hunting, mining, and retail trade sectors. Conversely, there were significant proportional declines in the number of residents employed in construction, transportation, warehousing, utilities, finance, insurance, and real estate sectors. According to 2010 ALARI estimates,⁷⁸⁰ most (44.1%) employed residents worked in local government sectors; followed by “other” unspecified sectors (19.4%); information sectors (7.5%); and professional and business sectors (7.5%).

By occupation type (Figure 4), most (43.5%) employed residents were estimated to hold management or professional positions; followed by sales or office (29.0%); service (17.7%); and production, transportation, or material moving positions (9.7%). Between 2000 and 2010, there were significant proportional increases in the number of sales and office positions held by residents. Conversely, there were significant proportional declines in the number of natural resources, construction, and maintenance positions.

collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷⁷⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁷⁷⁶ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

⁷⁷⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁷⁷⁸ See footnote 774.

⁷⁷⁹ See footnote 777.

⁷⁸⁰ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Koliganek (U.S. Census).

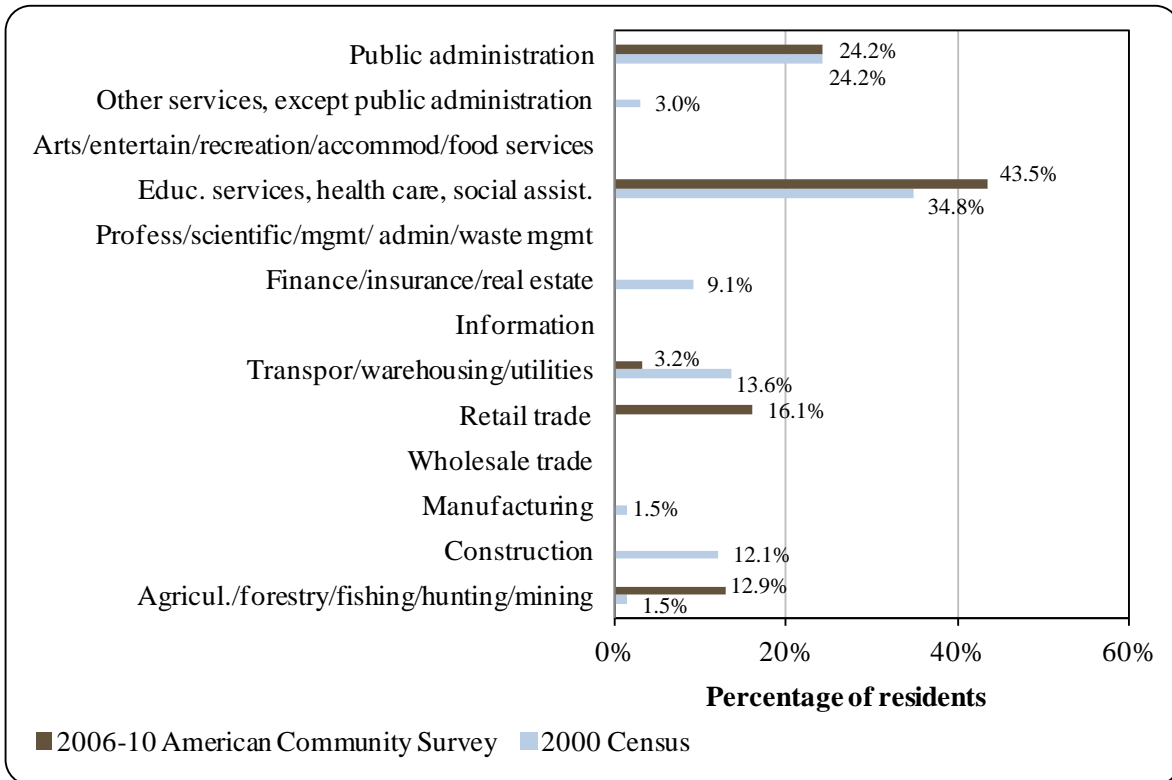
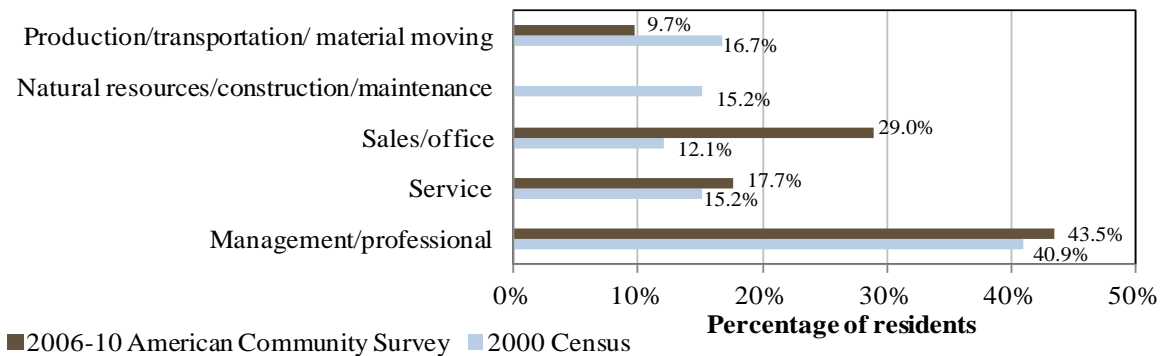


Figure 4. Local Employment by Occupation in 2000-2010, Koliganek (U.S. Census).



Governance

Koliganek is an unincorporated community located in the unorganized borough. Due to its unincorporated status, no taxes or public fees are collected locally. However, the community did receive a total of \$15,189 in State Revenue Sharing between 2000 and 2003 (Table 2).

The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Koliganek is the Bristol Bay Native Corporation, and the local ANCSA chartered non-profit is the Bristol Bay Native Association. The ANCSA chartered village corporation is Koliganek Natives Limited. The closest Alaska Department of Fish and Game (ADF&G) office

is located in Dillingham, 65 miles southwest, the closest National Marine Fisheries Service (NMFS) office is located in Bethel, 162 miles northwest, and the closest U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage, 280 miles northeast.

Table 2. Selected Municipal, State or Federal Revenue Streams for the Community of Koliganek from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*⁷⁸¹

Boats and ATVs are used in the summer and snowmachines in the winter. Locals travel to New Stuyahok frequently. There are no docking facilities; goods are lightered from Dillingham. In a survey conducted by the AFSC in 2011, community leaders reported vessels up to 200 feet long can use moorage in Koliganek but that no dock space is available for public moorage. Community leaders also reported a road system exists in the community.

A state-owned 3,000-ft long by 75-ft wide runway is available and charter service is provided by Grant Aviation and Peninsula Airways. Roundtrip airfare between Anchorage and Dillingham (the closest airport with scheduled service) in June 2012 was \$414.⁷⁸²

⁷⁸¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁸² Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

*Facilities*⁷⁸³

Electricity in Koliganek is provided by a diesel powerhouse owned by the Koliganek Village Council. Koliganek also purchases power from the school district and owns its own generator. The village council has operated a piped water and sewer system for over 25 years and water is derived from a well and is filtered and treated with chlorine before distribution. Thirty-three homes and facilities are connected to the piped water and a community septic tank. Eight homes have individual wells and septic systems. Fifteen homes haul water from multiple watering points and utilize individual privies. A sewage haul is not available, but residents can use designated pits. In addition to a piped sewer system, the village council operates a community septic tank and a sewage pumper, lagoon, and lift station. Individuals collect their own refuse and deposit it in a village council-operated Class 3 permitted landfill.

Public safety services are provided by the Village Public Safety Officer in Koliganek and state troopers posted in Dillingham. The village also maintains its own volunteer fire department with equipment provided through Project Code Red. Visitor accommodations are provided by Bobby's Bed and Breakfast. In a survey conducted by the AFSC in 2011, community leaders reported that Koliganek also has a post office and telephone service is in place. Internet service is provided by GCI. Community leaders indicate that no fisheries-related businesses are available in Kotzebue.

*Medical Services*⁷⁸⁴

The Koliganek Clinic provides residents with basic medical services and is operated by the Bristol Bay Area Health Corporation. Koliganek is an isolated location in the Southern Emergency Medical Services Region. Emergency Services have river and air access and First Responders are available in the community. Emergency service is provided by a health aide. The closest hospital is located in Dillingham.

*Educational Opportunities*⁷⁸⁵

Koliganek has one school offering preschool through 12th grade instruction. As of 2011, there were 59 students enrolled and 7 teachers employed. Koliganek is part of the Southwest Region School District.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence fishing activities have been important to residents of the Koliganek area for thousands of years. The Nushagak region was historically inhabited by a coastal population that combined fishing and hunting of marine mammals and an interior population that focused on

⁷⁸³ See footnote 781.

⁷⁸⁴ Ibid.

⁷⁸⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

hunting and fishing with frequent trips to the coast, especially during summer months.⁷⁸⁶ Today, a combination of commercial and subsistence harvest of marine resources provide the foundation for Koliganek's economy.⁷⁸⁷

Bristol Bay is the world's largest wild sockeye salmon fishery; however, exploitation of salmon on the Nushagak did not begin until the late 19th century. In 1883, the schooner Neptune prospected for salmon in Nushagak Bay, which was the same year the first cannery was built by the Arctic Packing Company in the village of Kanulik. The first salmon pack was produced in 1884, which consisted of a harvest of approximately 4,200 salmon. However, within a few years, the harvest topped one million fish as canneries were established in Scandinavian Beach, Wood River, Kanakanak, Snag Point, Clark's Point, Ekuk, and Nushagak. By 1900, the industry was also well established on the east side of Bristol Bay. Early fishing was conducted using traps. However, traps were discontinued in 1924 in favor of drift gillnetting from sailboats. In the early 1950s, sailboats were replaced by more modern vessels after a federal ban on the use of power boats for fishing in Bristol Bay was lifted.⁷⁸⁸

Koliganek is located on the Nushagak River which empties into Bristol Bay. This marine area is encompassed by the Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and Bering Sea Sablefish Regulatory Area. Because Koliganek is located more than 50 nautical miles from the coast, the community is not eligible to participate in the Community Development Quota program. Given its location outside the Gulf of Alaska, Koliganek is also not eligible to participate in the Community Quota Entity program. According to a survey conducted by the AFSC in 2011, community leaders reported that Koliganek does not participate directly in fisheries management processes in Alaska.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Koliganek does not have a registered processing plant. The closest seafood processor is located in Dillingham.

Fisheries-Related Revenue

Between 2000 and 2010, there was no known fisheries-related revenue received by the community of Koliganek (Table 3).

⁷⁸⁶ VanStone, James W. 1968. "An Annotated Ethnographic Bibliography of the Nushagak River Region, Alaska." *Anthropology*, v. 54, no. 2. Field Museum of Natural History. Chicago.

⁷⁸⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁸⁸ Nushagak-Mulchatna Watershed Council. (2007). *Nushagak River Watershed Traditional Use Area Conservation Plan*. Retrieved September 4, 2012 from: http://www.nature.org/idc/groups/webcontent/@web/@alaska/documents/document/prd_017469.pdf.

Commercial Fishing

Between 1990 and 1997, Koliganek residents participated in both herring and salmon commercial fisheries; however, herring permit activity ceased during the following years. Since 1990, the total number of permits held by Koliganek community members has slowly declined. This is a trend experienced in other Bristol Bay communities as well.⁷⁸⁹

In 2010, 21 residents, or 10.0% of the population, held 20 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 21 residents held 23 CFEC permits. Of the permits held in 2010, 100% were for salmon, compared to 87% in 2000. Of the salmon permits held in 2010, 75% were actively fished, compared to 74% in 2000. Fisheries prosecuted by Koliganek residents that year included: Bristol Bay drift and set gillnet salmon.⁷⁹⁰ Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. In addition, residents did not participate in federal fisheries for halibut, crab, or sablefish. Residents held 26 commercial crew licenses in 2010, compared to 38 in 2000. The number of residents who held commercial crew licenses peaked at 38 in both 2000 and 2004. In addition, residents held majority ownership of 10 vessels in 2010, compared to 13 in 2000. Vessel ownership peaked in 2002 at 15 vessels (Table 5).

A lack of fish buyers and shoreside processors in the community prevented commercial landings from being reported in Koliganek between 2000 and 2010. However, landings were reported by Koliganek residents. Non-confidential information about landings by residents is limited to salmon. In 2010, residents landed 513,896 lbs of salmon valued at \$460,313 ex-vessel, compared to 432,639 lbs valued at \$284,520 ex-vessel; representing no change in value after adjusting for inflation⁷⁹¹ and without considering the species composition of landings. This represents a significant and steady increase in salmon landings and ex-vessel value between 2000 and 2010. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁷⁸⁹ New Koliganek Village Council; Agnew::Beck Consulting, LLC; and Bristol Bay Economic Development Corporation. (2005). *Koliganek Comprehensive Plan*. Retrieved August 29, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Koliganek-CP-2005.pdf>.

⁷⁹⁰ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁷⁹¹ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Koliganek: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Koliganek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	3	2	1	1	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	3	2	1	1	1	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Koliganek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	20	20	21	22	27	24	22	18	19	22	20
	Fished permits	17	16	9	13	14	16	17	13	15	14	15
	% of permits fished	85%	80%	43%	59%	52%	67%	77%	72%	79%	64%	75%
	Total permit holders	20	23	21	23	29	25	23	20	20	25	21
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>23</i>	<i>22</i>	<i>22</i>	<i>23</i>	<i>28</i>	<i>24</i>	<i>22</i>	<i>18</i>	<i>19</i>	<i>22</i>	<i>20</i>
	<i>Fished permits</i>	<i>17</i>	<i>16</i>	<i>9</i>	<i>13</i>	<i>14</i>	<i>16</i>	<i>17</i>	<i>13</i>	<i>15</i>	<i>14</i>	<i>15</i>
	<i>% of permits fished</i>	<i>74%</i>	<i>73%</i>	<i>41%</i>	<i>57%</i>	<i>50%</i>	<i>67%</i>	<i>77%</i>	<i>72%</i>	<i>79%</i>	<i>64%</i>	<i>75%</i>
	<i>Permit holders</i>	<i>21</i>	<i>24</i>	<i>21</i>	<i>23</i>	<i>29</i>	<i>25</i>	<i>23</i>	<i>20</i>	<i>20</i>	<i>25</i>	<i>21</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Koliganek: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Koliganek ²	Total Net Lbs Landed In Koliganek ^{2,5}	Total Ex-Vessel Value Of Landings In Koliganek ^{2,5}
2000	38	0	0	13	12	0	0	\$0
2001	29	0	0	13	12	0	0	\$0
2002	27	0	0	13	15	0	0	\$0
2003	27	0	0	12	8	0	0	\$0
2004	38	0	0	15	12	0	0	\$0
2005	37	0	0	9	3	0	0	\$0
2006	32	0	0	10	4	0	0	\$0
2007	27	0	0	10	4	0	0	\$0
2008	22	0	0	10	3	0	0	\$0
2009	28	0	0	9	4	0	0	\$0
2010	26	0	0	10	4	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Koliganek: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Koliganek: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Koliganek: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Koliganek: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Koliganek Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	432,639	241,251	120,494	416,288	581,450	588,504	525,992	483,438	493,276	503,243	513,896
<i>Total²</i>	<i>432,639</i>	<i>241,251</i>	<i>120,494</i>	<i>416,288</i>	<i>581,450</i>	<i>588,504</i>	<i>525,992</i>	<i>483,438</i>	<i>493,276</i>	<i>503,243</i>	<i>513,896</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$284,520	\$92,750	\$51,754	\$192,569	\$274,236	\$321,485	\$319,768	\$294,776	\$347,578	\$372,822	\$460,313
<i>Total²</i>	<i>\$284,520</i>	<i>\$92,750</i>	<i>\$51,754</i>	<i>\$192,569</i>	<i>\$274,236</i>	<i>\$321,485</i>	<i>\$319,768</i>	<i>\$294,776</i>	<i>\$347,578</i>	<i>\$372,822</i>	<i>\$460,313</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing began in the Nushagak River area in 1950, with the opening of a the Angler's Paradise Lodges on the Kvichak side of Bristol Bay. Operating from an old scow, the Wood River Trout Camp was the first lodge to open on the west side of Bristol Bay in 1959, which would eventually become the Wood River Lodge on the Agulowak River. In the 1980s, Chinook salmon within the Nushagak River began to attract more interest, and Native village corporations began making temporary commercial land leases available.⁷⁹²

Today, recreational fishing on the Nushagak River is a very popular activity with private anglers. Chinook salmon begins to run in early June and continue to build throughout the month. Fish availability begins to decline after the first week of July. The Nushagak River hosts the largest Chinook sport fishery in the United States, as well as large rainbow trout, grayling, Arctic char, Dolly Varden, northern pike, and lake trout fisheries.⁷⁹³

For one month from mid-June to mid-July, more than 40 sportfishing lodges host clients that come from around the world to catch fish. Sportfishing on the Nushagak has been steadily increasing to the point that many local residents fear that congestion on the river may eventually reach levels seen on the Kenai River outside of Anchorage. Such congestion may result in reduced Chinook salmon escapement and increased habitat degradation. Most sportfishing camps and lodges are located within the Lower Mainstem Nushagak River Corridor, and many are situated on land leased from local Native village corporations, which all participate in a unified leasing and permitting program managed by Choggiung Ltd. While leasing activity is strictly monitored by this program, growth is largely unregulated in other areas, and many commercial guide lodges purchase private allotments, fee of building and client number restrictions. Fishing activity associated with lodges and sportfishing camps is also growing in the Middle Nushagak and Mulchatna River Corridors, closer to Koliganek. Most of the land within this conservation area is owed by the State, but there are also many Native allotment inholdings.⁷⁹⁴

In 2010, there were no sport fish guide businesses registered in Koliganek, compared to one in 2000. However, no registered sport fish guide businesses were active between 2000 and 2010 (Table 11). Very few sport fish guide licenses were issued in the community between those years, peaking at six in 2004. In addition, 2009 was the only year in which sportfishing licenses were sold within the community. Residents held a total of 35 sportfishing licenses in 2010, compared to 25 in 2000. The number of sportfishing licenses held by residents peaked in 2009 at 58. According to ADF&G Harvest Survey records, local private anglers target Chinook and coho salmon, rainbow trout, Arctic grayling, and northern pike. In a survey conducted by the AFSC in 2011, community leaders also reported that local private anglers target all five species of Pacific salmon. ADF&G Charter logbook data indicating species targeted by charter businesses in 2010 are unavailable.

Koliganek is located within the Nushagak, Wood River and Togiak ADF&G Harvest Survey Area, which includes the Nushagak River, Mulchatna River, Wood River, and Tilchik Lake drainages, as well as water westward to Cape Newenham.⁷⁹⁵ Overall, there was a steady

⁷⁹² Nushagak-Mulchatna Watershed Council. 2007. *Nushagak River Watershed Traditional Use Area Conservation Plan*. Retrieved September 4, 2012 from: <http://www.conservationgateway.org/Files/Pages/nushagak-river-watershed-.aspx>.

⁷⁹³ Ibid.

⁷⁹⁴ Ibid.

⁷⁹⁵ Alaska Department of Fish and Game. (n.d.). *Alaska Sport Fishing Survey*. Retrieved February 13, 2012 from: <http://www.adfg.alaska.gov/sf/sportfishingsurvey/index.cfm?ADFG=area.home>

decline in freshwater angler days fished in the survey area between 2000 and 2010. In 2010, freshwater resident and non-Alaska resident angler days fished totaled 23,385 days, compared to 43,083 in 2000. In that year, non-Alaska residents accounted for 89% of angler days fished, compared to 73% in 2000. Between 2000 and 2010, there was significantly less saltwater angler days fished than freshwater. In 2009, there was 147 total saltwater angler days fished, compared to 429 in 2000. Information regarding sportfishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Koliganek: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Koliganek ²
2000	0	2	25	0
2001	0	3	31	0
2002	0	3	39	0
2003	0	4	25	0
2004	0	6	41	0
2005	0	2	33	0
2006	0	2	38	0
2007	0	2	47	0
2008	0	2	46	0
2009	0	2	58	3
2010	0	0	35	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	0	44	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Evidence of the earliest Nushagak inhabitants is scarce, but archaeologists predict that human occupation began shortly following glacial retreat during the end of the last glacial period; around 7,000 years ago. Although methods have changed, Yup'ik residents, like their ancestors, still rely on subsistence resources found in the watershed. Moose, caribou, salmon, geese, berries, and plants are principal resources that are relied on. Hunting, fishing, and gathering all constitute a way of life for local residents. The Middle Nushagak and Mulchatna River provide important nearshore rearing and mainstem spawning habitat for Chinook salmon. Sockeye salmon spawn and rear in slow moving off-channel habitats. Coho salmon rear in slower-moving sites within the upper Mulchatna River.

Much of Koliganek's economic activity is conducted on a household level. In the past, there was little importation of food, and families relied on harvesting fish, game, and wild plants. To supplement subsistence resource harvesting, many residents maintain small gardens during the summer.⁷⁹⁶ In a household survey conducted by ADF&G in 2005 (Table 12), 82% of households were found to be participating in salmon subsistence activities, 18% were found to be participating in halibut subsistence activities, and 70% were found to be participating in non-salmon fish subsistence activities. Per capita subsistence harvest of those species was estimated to be 656.6 lbs.⁷⁹⁷ Broken down by activity, 63% of surveyed households fished and 73% processed fish that year. In addition, 21.4% of respondents said that they removed Chinook salmon from commercial catch for subsistence purposes; 32.1% reported that they removed sockeye salmon, 7.1% reported that they removed chum salmon, and 7.1% reported that they removed coho salmon.

Chinook salmon return to the Nushagak River in late May and are the most harvested species according to a 2005 ADF&G survey⁷⁹⁸ (this is not reflected in returned salmon permits seen in Table 13). Chinook are harvested on the Nushagak River at locations near the village, and downstream as far as the historical location of the village of Nushagak at Nushagak Point. Some residents travel as far as Ekuik during the commercial salmon season. Sockeye and chum are next to return to the Nushagak watershed, followed by coho and pink. Pink and chum salmon usually are not targeted, but are utilized when caught. Sockeye runs typically peak in Bristol Bay the first week of July and reach Koliganek around the middle to latter half of that month. Although not related to subsistence fisheries, berry picking in late summer is popular among Koliganek residents, with 93% of surveyed households participating in the activity or in 2005. The Nushagak River and its tributaries support numerous freshwater fish species, which are harvested throughout the year. Whitefish are caught with nets, mainly in the fall. Ice fishing is a major subsistence activity in the winter, with residents harvesting northern pike and Arctic grayling.⁷⁹⁹

⁷⁹⁶ New Koliganek Village Council, Agnew::Beck Consulting, LLC., and Bristol Bay Economic Development Corporation. 2005. *Koliganek Comprehensive Plan*. Retrieved August 29, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Koliganek-CP-2005.pdf>.

⁷⁹⁷ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁷⁹⁸ Krieg, T. M., Holen, D. L., and Koster, D. 2009. *Subsistence Harvests and Uses of Wild Resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005*. Technical Paper No. 322. Retrieved September 5, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp322.pdf>.

⁷⁹⁹ Ibid.

Of the species reported by ADF&G in Table 13, residents reported harvesting sockeye salmon most often, followed by chum, Chinook, coho, and pink salmon. According to data collected from returned subsistence salmon permits, residents reported harvesting 4,423 salmon in 2008, compared to 2,792 in 2000. Reported salmon harvests peaked in 2005 at 8,422 fish, a year which coincided with a relatively extensive ADF&G subsistence study in Koliganek. Also in that year, an estimated 13,254 lbs of other salmon fish was harvested. No data specific to subsistence halibut or marine mammal harvests are available for Koliganek between 2000 and 2010 (Tables 14 and 15)

According to ADF&G Community Subsistence Information System (CSIS) data, species that residents of Koliganek have harvested and/or used include butter clams, Dungeness crab, horse clams, octopus, littleneck clams, pinkneck clams, razor clams, shrimp, Tanner crab, bearded seal, harbor seal, ringed seal, Steller sea lion, blackfish, broad whitefish, sculpin, burbot, char Dolly Varden, flounder, grayling, herring, herring roe, humpback whitefish, lake trout, cisco, lingcod, rainbow trout, rockfish, round whitefish, smelt, steelhead, stickleback, whale, sucker, cod, and northern pike.⁸⁰⁰

Additional Information

In a survey conducted by the AFSC in 2011, community leaders emphasized the importance of commercial salmon, sportfishing, and subsistence to the local economy. They expressed that although the community has not been heavily impacted by specific fisheries policies or management actions, there is local anxiety over mining development and potential impacts to headwaters. Risks to subsistence resources are a chief concern to Koliganek residents.

Table 12. Subsistence Participation by Household and Species, Koliganek: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	82%	18%	n/a	n/a	70%	656.6
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

⁸⁰⁰ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

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Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Koliganek: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	15	15	835	770	140	n/a	1,047	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	16	11	940	1,245	282	73	1,079	n/a	n/a
2005	22	22	1,402	2,582	266	358	3,814	n/a	13,254
2006	13	9	1,102	1,349	144	108	1,182	n/a	n/a
2007	14	14	1,054	600	194	16	1,216	n/a	n/a
2008	12	11	957	1,189	252	97	1,928	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Koliganek: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Koliganek: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Levelock (LEEV-lock)



People and Place

*Location*⁸⁰¹

The unincorporated community of Levelock lies on the west bank of the Kvichak River, 10 miles inland from Kvichak Bay. Anchorage is 278 air miles to the northwest. The town is located near the Alagnak Wild and Scenic River Corridor and Katmai National Park and Preserve. The Levelock CDP (Census Designated Place) encompasses 14.5 square mi of land and no water area. Levelock is located in the Lake and Peninsula Borough Census Area and the Kvichak Recording District.

*Demographic Profile*⁸⁰²

In 2010, there were 69 inhabitants in Levelock, making it the 281st largest of 352 total Alaskan communities with recorded populations that year. The town did not appear in U.S. Census records until the 1950s. Overall between 1990 and 2010, the population of Levelock decreased by 34%. According to Alaska Department of Labor population estimates, between 2000 and 2009, the population of permanent residents in Levelock fell by 43%. However, the average annual growth rate during this time was 1.92%. This is explained by a decline in population from 122 inhabitants in 2000 to 54 in 2005, followed by growth in the second half of the decade (Table 1).

In 2010, a majority of Levelock residents identified themselves as American Indian and Alaska Native (81.4%), along with 10.1% that identified as White, and 5.8% identifying as two or more races. None of Levelock's residents identified themselves as Hispanic in 2010. The percentage of the population made up of White residents increased between 2000 and 2010, but compared to 1990, White residents made up 7% less of the population in 2010 (Figure 1).

In 2010, the average household size in Levelock was 2.56, a slight decline from 2.7 in 2000 and 2.6 in 1990. The total number of households in Levelock increased between 1990 and 2000 from 46 to 50, then declined by almost half, to 27 occupied units by 2010. Of the 48 housing units surveyed for the 2010 U.S. Census, 29.2% were owner-occupied, compared to 42% in 2000. The percentage of housing that was renter occupied in 2010 was 27.1%, compared to 48% in 2000. In 2010, 43.8% of all housing units were vacant or used only seasonally, a large increase from 15.2% in 1990 and 10% in 2000. Between 1990 and 2010, no Levelock residents lived in group quarters.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Levelock's population has a yearly peak between August and

⁸⁰¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁰² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

May, when school teachers and families are present for the school year. Construction needs bring in some seasonal workers in the summer as well. Community leaders indicated that seasonal population fluctuations are only slightly driven by employment in fishing sectors, and the school year is the primary determining factor.

In 2010, the gender makeup in Levelock was 55% male and 45% female, slightly less balanced than the population of the state as a whole, which was 52% male and 48% female. The median age was 32.5 years, slightly lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, gender distributions were particularly skewed toward males in the age groups 10 to 19 and 40 to 49. Few Levelock residents were age 60 or older. The overall population structure of Levelock in 2000 and 2010 is shown in Figure 2.

Table 1. Population in Levelock from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate ²
1990	105	-
2000	122	-
2001	-	107
2002	-	83
2003	-	71
2004	-	58
2005	-	54
2006	-	61
2007	-	70
2008	-	70
2009	-	88
2010	69	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Levelock: 2000-2010 (U.S. Census).

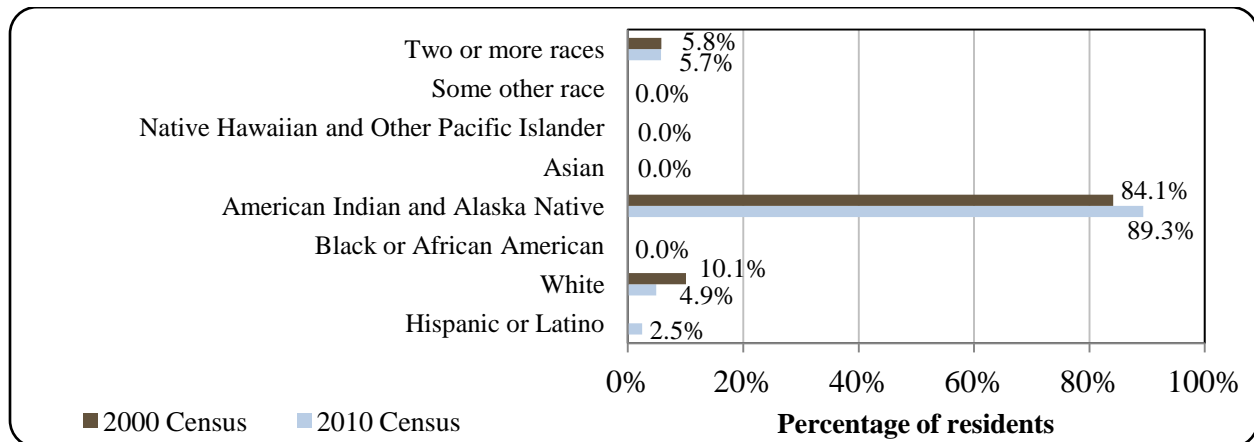
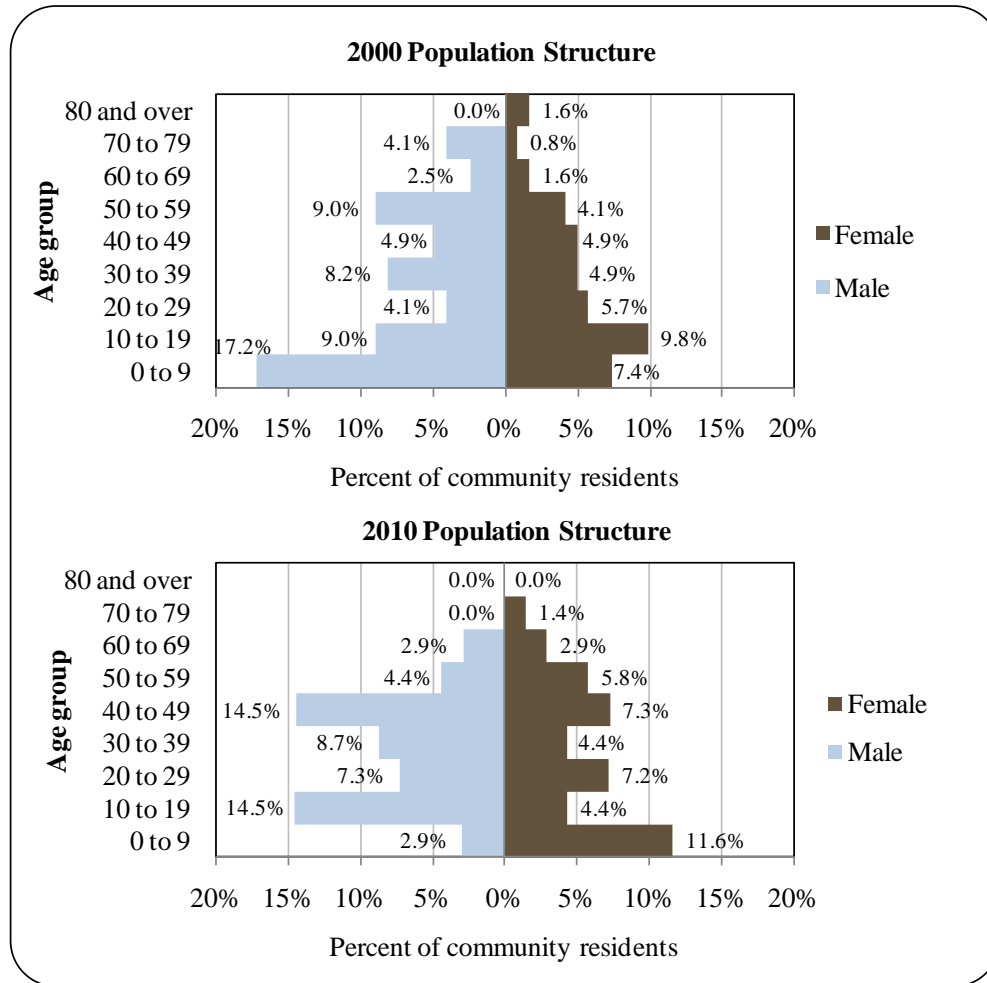


Figure 2. Population Age Structure in Levelock Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to American Community Survey (ACS) estimates,⁸⁰³ 94.2% of Levelock residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 0% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 5.8% were estimated to have a 9th to 12th grade education but no diploma, the same as the percentage of Alaska residents overall; 38.5% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 0% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 0% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

⁸⁰³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Levelock was historically, and remains, a mixed Alutiiq and Yup'ik village. Most of the villages in the area are less than 2,200 years old, although cultural evidence suggests that people lived along river banks and at lake outlets since the retreat of the last ice age 12,000 years ago.⁸⁰⁴ Nineteenth century Russian accounts reported the presence of a community known as "Kvichak". The village was again mentioned by the name of Kvichak in the 1890 census, although the population was not counted, and no systematic census data was recorded for Levelock until the 1950s. A 1908 survey of Russian missions identified Levelock as "Lovelock's Mission". The Bristol Bay area suffered successive waves of epidemics, in 1837, 1900, and 1918, which had a devastating effect on the communities in the area. Although many communities were abandoned during these years, Levelock survived and prospered with the rise of commercial fisheries.⁸⁰⁵

The North Alaska Salmon Company built a cannery at Levelock in 1900. Salmon were freighted to the cannery using a narrow gauge railroad from the company's other cannery, located downstream near the mouth of the Kvichak River. The Levelock cannery ran until 1936 when changes in the channel of the Kvichak River made operations impossible. The cannery reportedly burned down in 1937. Lumber was salvaged from the cannery to build houses in Levelock.⁸⁰⁶ In 1930, the first school was built, and a post office was established in 1939. By this time, families had converted their homes to oil heat. During the early 1950s, another cannery was in operation. Today, commercial fishing and subsistence activities are the main focus of the community.⁸⁰⁷

Natural Resources and Environment

Levelock is located in a climatic transition zone. It is primarily influenced by the maritime climate, but also by continental weather patterns. Summer temperatures average between 30 and 66 °F, and winter temperatures between 4 and 30 °F. Levelock receives 26 inches of rain and 70 inches of snow on average per year. Fog and low clouds are common during the summer. The river is ice-free from June through mid-November.⁸⁰⁸

The area east of Levelock is protected as Katmai National Park and Preserve and Alagnak National Wild and Scenic River. Katmai National Park is a 7,383-square-mile wilderness area known for its high concentration of brown bears and the Valley of 10,000 Smokes. Park tourism does not affect Levelock, as visitors do not pass through Levelock to access the park.⁸⁰⁹ The Alagnak River, also known as the "Branch River", is a 79-mile-long river with headwaters in Katmai National Park that joins the Kvichak River at Levelock. Sixty-seven miles of the Alagnak River are designated as wild.⁸¹⁰

⁸⁰⁴ National Park Service (n.d.). *Guide to the Cultural History of the Alagnak Wild River*. Retrieved November 17, 2011 from <http://www.nps.gov/alag/historyculture>.

⁸⁰⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁰⁶ See footnote 804.

⁸⁰⁷ See footnote 805.

⁸⁰⁸ Ibid.

⁸⁰⁹ National Park Service (2011). *Katmai National Park & Preserve*. Retrieved November 17, 2011 from <http://www.nps.gov/katm/>.

⁸¹⁰ See footnote 804.

According to a survey conducted by the AFSC in 2011, community leaders reported that fishing is the primary natural resource-based industry upon which the local economy depends. The Kvichak River System, including the Alagnak River and Iliamna Lake, is the single most important source of salmon in the Bristol Bay area, providing resources for commercial, subsistence, and recreational fisheries. The Alagnak River attracts a large number of anglers each year for salmon, Arctic grayling, Arctic char, and lake trout fisheries. The river's rainbow trout fishery has a world-class reputation.⁸¹¹

Significant mineral resources are present in the Bristol Bay region, including the Pebble copper-gold-molybdenum deposit north of Levelock. The Pebble Mine site is located at the divide between the Kuktuli River and Uppler Talarik Creek, north of Iliamna Lake.⁸¹² Northern Dynasty Minerals Limited calls the Pebble deposit, "one of the greatest stores of mineral wealth ever discovered," and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion lb of copper, 66.9 million oz of gold, and 3.3 billion lb of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion lb of copper, 40.4 million oz gold, and 2.3 billion lb of molybdenum.⁸¹³ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble mine is copper. Dissolved copper is known to be toxic to fish.⁸¹⁴ If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.⁸¹⁵

Reserves of oil and natural gas are also thought to be present on the continental shelf in the Bristol Bay Basin, along the northern edge of the Aleutian Islands and Alaska Peninsula.⁸¹⁶ Given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010, Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.⁸¹⁷ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.⁸¹⁸

According to the Bristol Bay Coastal Management Plan, the Levelock area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surge, and sea ice. A majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely

⁸¹¹ Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁸¹² Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky (2008). Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's Large Mine Permitting Process. *Alaska Law Review* 25:1.

⁸¹³ Northern Dynasty Minerals Limited website (2012). *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

⁸¹⁴ See footnote 812.

⁸¹⁵ See page 36 in: Duffield, John, Christopher Neher, David A. Patterson, and Oliver S. Goldsmith (2007). *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

⁸¹⁶ See footnote 811.

⁸¹⁷ Minerals Management Service (2010). *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

⁸¹⁸ The White House, Office of the Press Secretary (2010). *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall. Coastal flooding and erosion is affected by wind, site exposure and sea ice conditions. The management plan notes the potential for climate change to augment erosion, as coastal areas of Alaska are freezing later in the season, leaving coasts more vulnerable to fall storms and storm surges. Changing temperatures also have the potential to shift distribution of fish and wildlife, with possible consequences for commercial and subsistence activities.⁸¹⁹

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in Levelock as of April 2012.⁸²⁰

Current Economy⁸²¹

Levelock's economy is based around commercial fishing and government jobs. Many residents travel to Naknek during the summer season to fish or work in canneries. Subsistence practices are present in the area and play a significant role on the local economy. The community relies upon subsistence activities for a large portion of its diet. Salmon, trout, moose, caribou and berries are harvested.⁸²² In a survey conducted by the AFSC in 2011, community leaders reported that whitefish are also an important subsistence resource for the community. Several seasonal fishing lodges operate in the Levelock area.^{823,824} In 2010, other top local employers in Levelock included the Levelock Village Council, the school district, and Levelock Electric Cooperative Inc.⁸²⁵

Based on household surveys conducted for the 2006-2010 ACS,^{826,827} in 2010, the per capita income in Levelock was estimated to be \$8,400 and the median household income was estimated to be \$46,607. Interestingly, although these estimates indicate that median household income increased from \$18,750 in 2000, per capita income decreased over the decade, from \$12,199 in 2000. This is reflected in Levelock's low per capita income ranking in 2010, at 290th out of 305 Alaskan communities with per capita income information that year. This drop in per capita income between 2000 and 2010 is even greater when accounting for inflation by

⁸¹⁹ Glenn Gray and Associates (2008). *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from

http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf.

⁸²⁰ Alaska Dept. of Environmental Conservation (n.d.). Retrieved April 17, 2012 from

<http://dec.alaska.gov/spar/csp/list.htm>.

⁸²¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁸²² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸²³ Ibid.

⁸²⁴ National Park Service (n.d.). *Guide to the Cultural History of the Alagnak Wild River*. Retrieved November 17, 2011 from <http://www.nps.gov/alag/historyculture>.

⁸²⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸²⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸²⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

converting the 2000 value to 2010 dollars,⁸²⁸ revealing a real per capita income in 2000 of \$16,042. In contrast, the increase in median household income between 2000 and 2010 remained substantial after accounting for inflation: real median household income in 2000 was \$24,656. In 2010, Levelock ranked 153rd in median household income, out of 299 Alaskan communities with household income data that year.

This decline in per capita income from 2000 to 2010 is supported by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Levelock in 2010 is \$8,016.^{829,830} This estimate is similar to the ACS estimate of \$8,400, providing additional evidence for an overall decrease in per capita income compared to the real per capita income values reported by the U.S. Census in 2000.⁸³¹ This decline in per capita income is reflected in the fact that the community was recognized as “distressed” by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁸³² It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 71.8% of the Levelock population age 16 and older was estimated to be in the civilian labor force, compared to 68.8% in the civilian labor force statewide. In the same year, 20.2% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskans overall, and the unemployment rate was estimated to be 12.8%, compared to the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 32.7%, compared to a statewide unemployment rate estimate of 11.5%.⁸³³

Also based on household surveys conducted for the 2006-2010 ACS, a majority of the Levelock workforce was estimated to be employed in the public sector (76.1%), while 10.9% were estimated to be working in the private sector, and 13% self-employed. Out of 46 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number of workers was estimated to be in public administration (52.2%) and educational, health care, and social services industries (26.1%). The occupations in which the greatest percentages of the workforce were estimated to be employed were service (30.4%), management/professional (28.3%), and natural resource/construction/maintenance occupations (23.9%). It is important to note that, although 23.9% of the workforce was estimated to be employed in natural resource/construction/maintenance occupations, a breakdown of this category reveals that all 11 workers were employed in construction and extraction occupations, while 0 were employed in farming, fishing, and forestry occupations. Likewise, the ACS estimated that 0% of the work force was working in the agriculture, forestry, and fishing

⁸²⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸²⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include 2000 Decennial Census SF1100% data. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸³⁰ See footnote 825.

⁸³¹ Ibid.

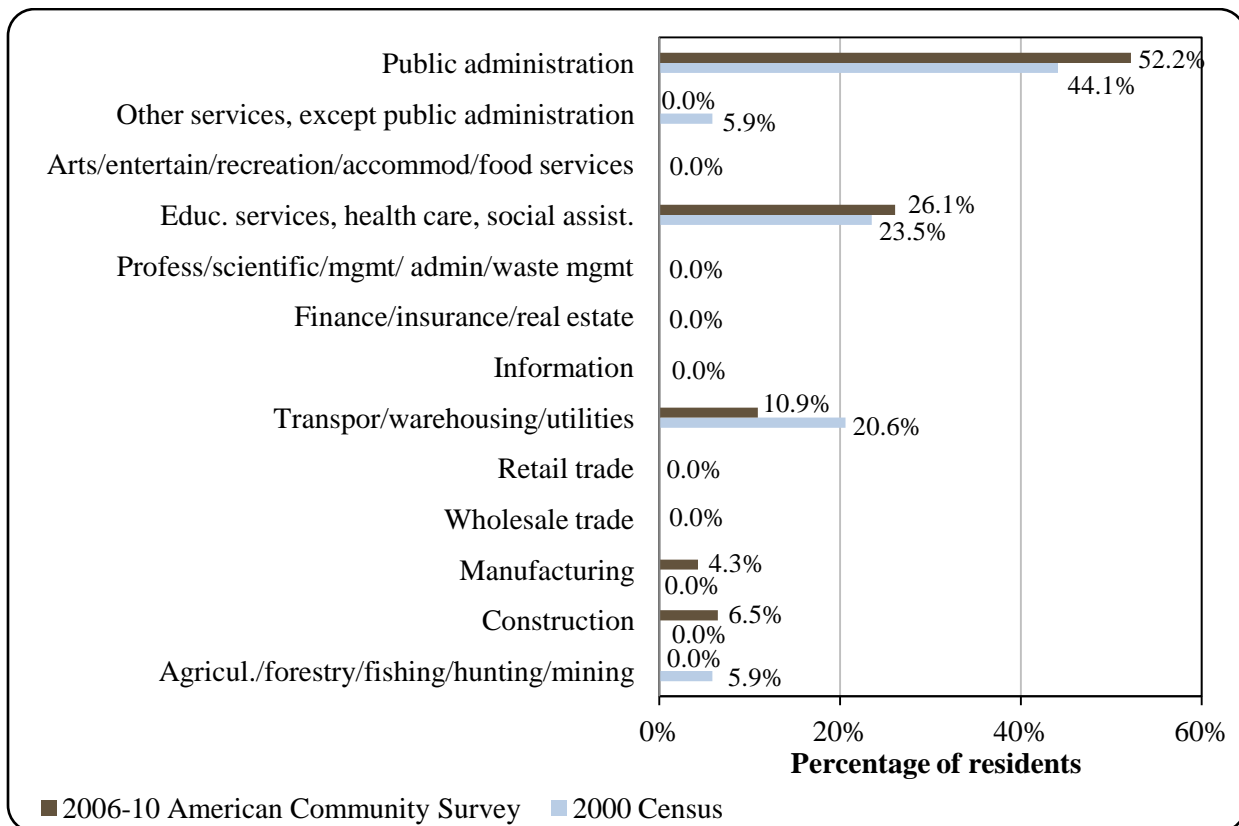
⁸³² Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

⁸³³ See footnote 825.

industries in 2010. Although not captured in this estimate, it is important to note that part of the Levelock workforce travels to Naknek to fish or work in the canneries during the summer season.⁸³⁴ The number of individuals employed in farming, fishing, and forestry industries and occupations may be underestimated in census statistics if fishermen hold another job and characterize their employment accordingly. This information about employment by industry in Levelock is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 34 employed residents in Levelock in 2010, of which 73.5% were employed in local government, 17.6% in trade, transportation, and utilities, 2.9% in financial activities, 2.9% in educational and health services, and 2.9% in leisure and hospitality industries.⁸³⁵ As with income statistics, it should also be noted that both ACS and ALARI employment statistics do not reflect residents' activity in the subsistence economy.

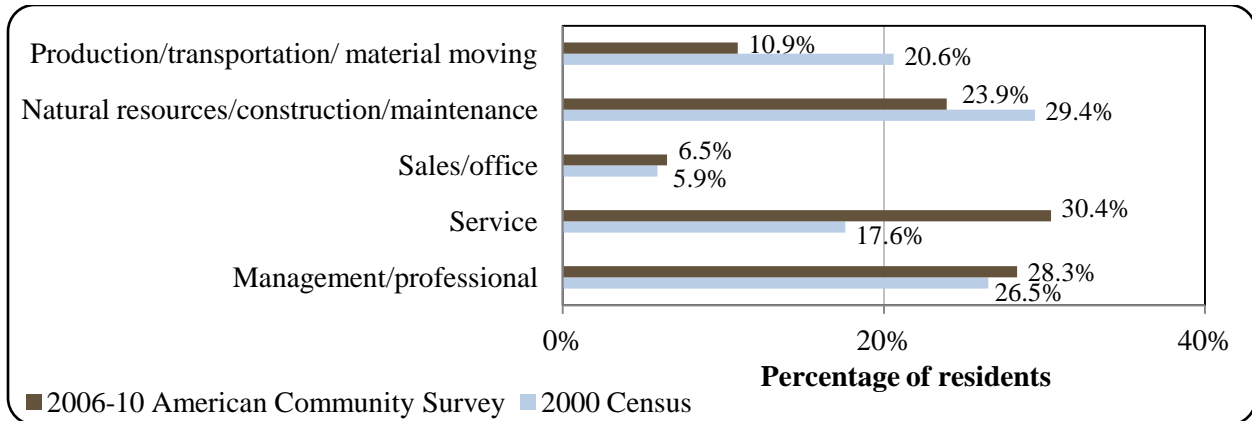
Figure 3. Local Employment by Industry in 2000-2010, Levelock (U.S. Census).



⁸³⁴ See footnote 822.

⁸³⁵ See footnote 825.

Figure 4. Local employment by occupation in 2000-2010, Levelock (U.S. Census).



Governance

Levelock is an unincorporated community under the jurisdiction of the Lake and Peninsula Borough. As of 2010, the community of Levelock did not administer any local taxes. The Borough did administer a 2% fish tax, a 6% bed tax, a \$3 per person/day guide tax, and a \$1 per person/day lodge guide tax.⁸³⁶ Levelock is not a municipality and did not administer a municipal budget. Given this, Levelock does not receive sales tax revenue or State or Community Revenue Sharing contributions. This is reflected in Table 2, in which no data were reported about community finances between 2000 and 2010.

Levelock was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Levelock Village Council. The Native village corporation is Levelock Natives Limited, which manages 96,800 acres of land. The regional Native corporation to which Levelock belongs is the Bristol Bay Native Corporation.⁸³⁷

Levelock is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.⁸³⁸ The BBNA is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁸³⁹

⁸³⁶ Alaska Dept. of Comm. And Rural Affairs (n.d.). *Community Information Summaries*. Retrieved November 16, 2011 from http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm.

⁸³⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸³⁸ Bristol Bay Native Association (n.d.). BBNA homepage. Retrieved November 16, 2011 from www.bbna.com.

⁸³⁹ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Levelock From 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham and King Salmon. Kodiak and Homer have the nearest National Marine Fisheries Service (NMFS) offices, and Homer also hosts the nearest office of the Alaska Department of Natural Resources. However, the Anchorage offices of these agencies may be more accessible to people of this area. Anchorage and Kodiak have the closest Bureau of Citizenship and Immigration Services offices.

Infrastructure

Connectivity and Transportation

Levelock is mainly accessible by air and water. In winter, when the river freezes and the winds are too strong for river access, some trails to surrounding villages are used. The state operates a 3,281-ft by 59-ft lighted gravel runway in Levelock.⁸⁴⁰ Scheduled and charter flights are available through companies including King Air and Peninsula Air. The price of a roundtrip ticket by plane from Levelock to Anchorage, with connections in King Salmon and Dillingham

⁸⁴⁰ See footnote 837.

in early June of 2012, was \$699.⁸⁴¹ According to a survey conducted by the AFSC in 2011, community leaders reported that Levelock also has a seaplane base.

Facilities

Electricity in Levelock is provided by a diesel powerhouse owned by the Levelock Electric Cooperative. The village council provides septic pumping and refuse collection services between May and September. Levelock homes and facilities use individual water wells and septic systems. Thirty-five homes have complete plumbing. The school operates its own well and water treatment facility. The village council operates a “washeteria”.⁸⁴² A library, recreational center and multi-purpose hall are also available in the community.⁸⁴³ The nearest VPSO (village public safety officer) is stationed in King Salmon,⁸⁴⁴ and the nearest state trooper post is also in King Salmon.⁸⁴⁵ Visitor accommodations are provided by Levelock Natives Ltd. Lodging.⁸⁴⁶ In a survey conducted by the AFSC in 2011, community leaders reported that Levelock also has a post office, telephone service is in place, and broadband internet access is currently being established.

With regard to fisheries-related infrastructure, the DCCED community profile of Levelock states that both a 110-ft dock and a beach with an unloading area are present in the community.⁸⁴⁷ However, in the 2011 AFSC survey, community leaders reported that no dock space is available for permanent, transient or public moorage. Community leaders did indicate that a fish cleaning station and roads serving the dock space are currently under development, and that improvements are planned within the next 10 years to the barge landing area and the dock, including construction of new dock space and the addition of electricity and water serving the dock. Community leaders indicated that no boat repair services, infrastructure, or other fisheries-related businesses are available in Levelock, and that residents typically travel to nearby villages of Naknek, King Salmon, and Dillingham to access fisheries-related businesses and services.

Medical Services

Local hospitals or health clinics include the Levelock Clinic. Emergency Services have river and air access. Local emergency service is provided by a health aide. Auxiliary health care is provided by the Levelock First Responders.⁸⁴⁸ The nearest hospital is located in Dillingham.

⁸⁴¹ This price was calculated on November 21, 2011 using kayak.com.

⁸⁴² A washeteria is another word for laundromat. In Alaska, washeterias often include shower facilities.

⁸⁴³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁴⁴ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁸⁴⁵ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁸⁴⁶ See footnote 843.

⁸⁴⁷ Ibid.

⁸⁴⁸ Ibid.

Educational Opportunities

Levelock School offers a pre-school through 12th grade education. As of 2011 there were 2 teachers and 20 students attending the school.⁸⁴⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest of fisheries resources has been important to Levelock since the time of its settlement.⁸⁵⁰ Commercial exploitation of salmon was initiated shortly after the United States purchased Alaska from Russia in 1867.⁸⁵¹ Levelock was the site of several canneries during the early years of Bristol Bay commercial fisheries development. Koggiung Packers operated the first cannery at Levelock in 1925 and 1926, but its operation was short-lived due to a fire that destroyed the cannery in 1926, and also threatened the entire village. Residents dug fire lines to save their homes. A second cannery operated from 1928 to 1929. During the early 1950s, another cannery operated for a short period. Today, nearby Naknek serves as a hub of processing facilities in the area. Levelock residents participate in commercial fishing activities, and subsistence harvest also continues to be an important foundation for the local economy.⁸⁵²

Bristol Bay is the nearest marine area to the community of Levelock. The Bay is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and Bering Sea Sablefish Regulatory Area. Levelock participates in the CDQ (Community Development Quota) program as a member of the Bristol Bay Economic Development Corporation (BBEDC). The community is not eligible for the CQE (Community Quota Entity) program. According to a survey conducted by the AFSC in 2011, community leaders reported that Levelock's participation in fisheries management processes is facilitated by regional organizations such as the Southwest Alaska Municipal Conference, which provides information to the community regarding fisheries management.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there are no registered processing plants in Levelock, but facilities were registered in nearby communities in Bristol Bay, including Dillingham, Egegik, and Naknek. In a survey conducted by the AFSC in 2011, community leaders reported that plans are underway to construct a fish processing plant in Levelock.

⁸⁴⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁸⁵⁰ Morris, J. (1985). The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska. *Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

⁸⁵¹ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁸⁵² See footnote 843.

Fisheries-Related Revenue

The only information about fishing-related revenue received by Levelock came from community leaders in the 2011 AFSC survey. They reported that, in 2010, Levelock received \$3,000 in funds from the Lake and Peninsula Borough fish tax as well as \$150,000 in funding or grants from their CDQ entity, the BBEDC. In its annual report, the BBEDC reported use of fisheries revenue from the CDQ program to provide grants for infrastructure, fuel and electrical assistance to member communities. The BBEDC also offered educational scholarships, vocational training, and fishing permit acquisition and financing assistance to local residents.⁸⁵³ No other data were reported about fishing-related revenue received by the community of Levelock from municipal, state, or federal sources (Table 3).

Commercial Fishing

Levelock lies on the shore of the Kvichak River, ten miles upstream from its mouth. Even though Levelock is not a coastal community, it is still intimately involved with the fishing industry. Although there were no fish buyers in Levelock between 2000 and 2010 (Table 5) and no direct fisheries landings or ex-vessel revenue were generated in Levelock in during the period (Table 9), local residents participated in state fisheries as permit holders, crew members and vessel owners. Between 2000 and 2010, all Levelock vessel owners landed an average of 281,335 combined net lb of salmon, earning combined \$184,292 in ex-vessel revenue on average. Information about landings and ex-vessel revenue earned by Levelock vessel owners in other fisheries between 2000 and 2010 is considered confidential due to the small number of participants (Table 10). It should be noted here that local residents also held permits in herring and groundfish fisheries in the year 2000, while no permits were held in fisheries other than salmon throughout the rest of the 2000 to 2010 period (Table 4).

In total, eight Levelock residents held eight state Commercial Fisheries Entry Commission (CFEC) permits in 2010. All were held for salmon fisheries (Bristol Bay drift and set gill net fisheries), and six were actively fished that year. These numbers represent a decline of almost 50% from salmon permit numbers in the year 2000, when 17 residents held 14 salmon permits, of which 12 were actively fished. Two non-salmon CFEC permits were also held by Levelock residents in the year 2000. One was for groundfish (statewide hand troll for miscellaneous finfish, not actively fished in 2000), and one was for herring (Bristol Bay herring roe gill net fishery, actively fished in 2000). However, Levelock residents did not hold permits in either the groundfish or herring fishery from 2001 to 2010. No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Levelock residents between 2000 and 2010 (Table 4). Also in 2010, no quota share accounts were held by Levelock residents in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8).

In 2010, 12 Levelock residents held state commercial crew licenses, a notable decrease from 20 crew licenses in 2000. Also in 2010, six residents were the primary owner of a fishing vessel and seven vessels were homeported in Levelock. According to the 2011 AFSC survey, commercial fishing boats using Levelock as a base of fishing operations were all under 35 ft in length, and were gill-netters primarily involved in the Bristol Bay salmon fishery. Characteristics of the Levelock commercial fishing sector are presented in Table 5.

⁸⁵³ Bristol Bay Economic Development Corporation (2010). *Annual Report 2010*. Retrieved November 16, 2011 from <http://www.bbcdc.com>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Levelock: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. . (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Levelock: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Levelock: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	14	15	13	12	11	10	8	9	8	7	8
	Fished permits	11	9	7	7	8	7	7	8	7	6	6
	% of permits fished	79%	60%	54%	58%	73%	70%	88%	89%	88%	86%	75%
	Total permit holders	17	17	15	13	11	10	8	10	8	8	8
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>16</i>	<i>15</i>	<i>13</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>8</i>	<i>9</i>	<i>8</i>	<i>7</i>	<i>8</i>
	<i>Fished permits</i>	<i>12</i>	<i>9</i>	<i>7</i>	<i>7</i>	<i>8</i>	<i>7</i>	<i>7</i>	<i>8</i>	<i>7</i>	<i>6</i>	<i>6</i>
	<i>% of permits fished</i>	<i>75%</i>	<i>60%</i>	<i>54%</i>	<i>58%</i>	<i>73%</i>	<i>64%</i>	<i>88%</i>	<i>89%</i>	<i>88%</i>	<i>86%</i>	<i>75%</i>
	<i>Permit holders</i>	<i>18</i>	<i>17</i>	<i>15</i>	<i>13</i>	<i>11</i>	<i>10</i>	<i>8</i>	<i>10</i>	<i>8</i>	<i>8</i>	<i>8</i>

¹National Marine Fisheries Service. 2011. *Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Levelock: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Levelock ²	Total Net Pounds Landed In Levelock ^{2,5}	Total Ex-Vessel Value Of Landings In Levelock ^{2,5}
2000	20	0	0	9	7	0	0	\$0
2001	11	0	0	7	6	0	0	\$0
2002	7	0	0	6	6	0	0	\$0
2003	18	0	0	6	6	0	0	\$0
2004	15	0	0	6	6	0	0	\$0
2005	18	0	0	7	5	0	0	\$0
2006	17	0	0	5	4	0	0	\$0
2007	16	0	0	7	5	0	0	\$0
2008	19	0	0	6	6	0	0	\$0
2009	8	0	0	6	6	0	0	\$0
2010	12	0	0	6	7	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Levelock: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Levelock: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Levelock: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Levelock: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Levelock Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	150,614	151,746	35,416	194,590	190,818	522,607	386,856	482,511	406,176	312,762	260,590
<i>Total²</i>	<i>150,614</i>	<i>151,746</i>	<i>35,416</i>	<i>194,590</i>	<i>190,818</i>	<i>522,607</i>	<i>386,856</i>	<i>482,511</i>	<i>406,176</i>	<i>312,762</i>	<i>260,590</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$99,135	\$63,904	\$17,178	\$96,047	\$97,925	\$318,303	\$245,666	\$311,151	\$296,249	\$242,560	\$239,100
<i>Total²</i>	<i>\$99,135</i>	<i>\$63,904</i>	<i>\$17,178</i>	<i>\$96,047</i>	<i>\$97,925</i>	<i>\$318,303</i>	<i>\$245,666</i>	<i>\$311,151</i>	<i>\$296,249</i>	<i>\$242,560</i>	<i>\$239,100</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses or licensed sport fish guides in Levelock, and no sportfishing licenses were sold in Levelock during this period. However, Levelock community members participated in sport fisheries. In 2010, Levelock residents purchased 14 sportfishing licenses (irrespective of point of sale).

In a survey conducted by the AFSC in 2011, community leaders reported that both Alaska resident and non-Alaska resident sport fishermen fished out of Levelock using private boats, targeting all species of salmon. The Alaska Statewide Harvest Survey,⁸⁵⁴ conducted by ADF&G between 2000 and 2010, did not provide any information about species targeted by private anglers in Levelock specifically. However, the survey noted the following species targeted by private anglers downstream in Naknek: chinook, coho, sockeye and pink salmon, rainbow trout, Dolly Varden char and Arctic grayling, Pacific halibut, whitefish, northern pike, and smelt. The survey also noted harvest of razor and hardshell clams in Naknek. No kept/release log book data were reported for fishing charters out of Levelock between 2000 and 2010.⁸⁵⁵

Levelock is located within Alaska Sport Fishing Survey Area S – Kvichak River Drainage. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Overall between 2000 and 2010, non-resident anglers fished more angler days than Alaska residents in both freshwater and saltwater. Non-Alaska resident anglers fished consistently more days than Alaska resident anglers in both freshwater and saltwater during this period, reflective of the large amount of sportfishing related tourism in the region. Freshwater sportfishing activity was significantly more important than saltwater fishing in the region. The number of freshwater angler days for non-Alaska resident sport fishermen varied between 17,234 and 30,340 between 2000 and 2010, while Alaska resident freshwater angler days varied between 3,077 and 10,297. This information about the sportfishing sector in and near Levelock is also displayed in Table 11.

⁸⁵⁴ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sportfishingsurvey> (Accessed September 2011).

⁸⁵⁵ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Levelock: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Levelock ²
2000	0	0	6	0
2001	0	0	6	0
2002	0	0	10	0
2003	0	0	5	0
2004	0	0	9	0
2005	0	0	6	0
2006	0	0	9	0
2007	0	0	4	0
2008	0	0	7	0
2009	0	0	11	0
2010	0	0	14	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler days fished –Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	n/a	n/a	17,234	6,514
2010	n/a	22	20,068	5,613

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest has been noted as a primary focus of the Levelock's economy and culture. Sharing is a way of life in the village, providing for those who are unable to hunt or fish on their own.⁸⁵⁶ In a survey conducted by the AFSC in 2011, community leaders reported that salmon, whitefish, and trout were particularly important subsistence target species for residents of Levelock. Historically, residents have reported the most subsistence harvesting of sockeye salmon and non-salmon fish.

In 2005, the only year that a subsistence survey was conducted by ADF&G in the community of Levelock between 2000 and 2010, 76% of households were estimated to participate in salmon subsistence, 51% were estimated to participate in non-salmon fish subsistence (not including halibut), 34% participated in marine mammal subsistence, and 19% participated in marine invertebrate subsistence. No households were estimated to participate in halibut subsistence that year. This finding matches the lack of reported information about Subsistence Halibut Registration Certificates (SHARC) issued to residents of Levelock between 2000 and 2010 (Table 14). In 2005, the per capita subsistence harvest of land and sea-based resources in Levelock was 531 lb. Information about per capita subsistence and household participation is presented in Table 12. Also in 2005, an estimated 97 lb of marine invertebrates and 1,352 lb of non-salmon fish (not including halibut) were harvested by Levelock residents (Table 13).

Information about subsistence salmon harvest was available for 6 years between 2000 and 2010. During these years, subsistence salmon permits were issued to between 1 and 14 Levelock households per year. Sockeye salmon were the most heavily harvested, followed in quantity by chinook, coho, pink, and chum salmon (Table 13). Information about subsistence harvest of marine mammals was reported for some years during the 2000-2010 period. According to data reported by NMFS, for years in which information was reported, between one and seven beluga whales were harvested by Levelock residents per year. According to ADF&G data, the number of harbor seals harvested varied from 3 to 13 per year from 2000 to 2008. No information was reported by management agencies regarding harvest of sea otter, walrus, polar bear, Steller sea lion, or spotted seal between 2000 and 2010. This information about marine mammal subsistence harvest is presented in Table 15.

According to ADF&G's Community Subsistence Information System (CSIS), in 2005, Levelock residents also harvested ringed seal, bearded seal, and Steller sea lion, although no number estimates were available. The CSIS also provides species-level information about non-salmon fish species and marine invertebrate species harvested by the greatest percentage of Levelock households in 2005. Non-salmon fish species included northern pike, smelt, rainbow trout, humpback whitefish, grayling, Dolly Varden char, broad whitefish, lake trout, and flounder. Marine invertebrate species harvested by Levelock households included razor clams, butter clams, freshwater clams, horse clams, Pacific littleneck clams, pinkneck clams, cockles, mussels, scallops, Dungeness crab, Tanner crab, shrimp, and octopus.⁸⁵⁷

⁸⁵⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁵⁷ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Levelock: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	76%	0%	34%	19%	51%	531
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Levelock: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	14	11	81	19	51	64	1467	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3874
2004	4	3	83	4	27	n/a	1200	n/a	n/a
2005	11	11	127	19	70	4	914	97	1352
2006	2	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	1	1	6	n/a	n/a	102	n/a	n/a
2008	2	1	4	20	30	25	30	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Levelock: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Levelock: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	7	n/a	n/a	n/a	n/a	3	n/a
2001	2	n/a	n/a	n/a	n/a	n/a	n/a
2002	1	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	2	n/a	n/a	n/a	n/a	3	n/a
2006	2	n/a	n/a	n/a	n/a	n/a	n/a
2007	2	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	13	n/a
2009	2	n/a	n/a	n/a	n/a	n/a	n/a
2010	4	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. "Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006." *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

Levelock is located near the intersection of the Kvichak and "Branch" Rivers. The Native name for the Branch River – Alagnak – means "making mistakes". In the words of a local elder, "the channel is always changing, causing mistakes and getting lost."⁸⁵⁸

⁸⁵⁸ National Park Service (n.d.). *Guide to the Cultural History of the Alagnak Wild River*. Retrieved November 17, 2011 from <http://www.nps.gov/alag/historyculture>.

Manokotak (man-noh-KOH-tuck)



People and Place

Location

Manokotak is situated on the Igushik River, the outlet of the Ualik and Amanka lake system, which empties into Nushagak Bay before entering Bristol Bay. The community is 25 miles southwest of Dillingham and 347 miles southwest of Anchorage. Manokotak is located in the Dillingham Census Area and Bristol Bay Recording District. The City of Manokotak encompasses 36.4 square miles of land and 0.9 square miles of water.^{859,860}

*Demographic Profile*⁸⁶¹

In 2010, there were 442 residents in Manokotak, making it the 129th largest of 352 Alaskan communities with recorded populations that year, and the 4th most populated village in the Dillingham Census Area. Overall between 1990 and 2010, the population of Manokotak increased by 15%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 9.8%. The average annual growth rate during this period was 1.2%, indicating a slow steady upward trend in population. In 2010, the majority of the population of Manokotak identified themselves as American Indian and Alaska Native (94.7%), while 4.8% identified as White, 0.3% as Black, and 0.3% identified with two or more races. The percentage of the population made up of individuals identifying as White increased slightly between 1990 and 2000, from 4.4% to 4.7%, and then declined by 2010 to 3.6%. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Manokotak was 3.65, a decline from 4.29 persons per household in 2000, but an overall increase from 3 persons per household in 1990. The number of households in Manokotak has increased over time, from 90 households in 1990 to 93 in 2000, and 121 in 2010. Of the 138 housing units surveyed for the 2010 Decennial Census, 68.1% were owner-occupied, 19.6% were rented, and 12.3% were vacant or used only seasonally. Between 1990 and 2010, no residents of Manokotak lived in group quarters.

⁸⁵⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁶⁰ City of Manokotak. October 2005. *Manokotak Comprehensive Plan*. Retrieved November 28, 2011 from <http://www.agnewbeck.com>.

⁸⁶¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

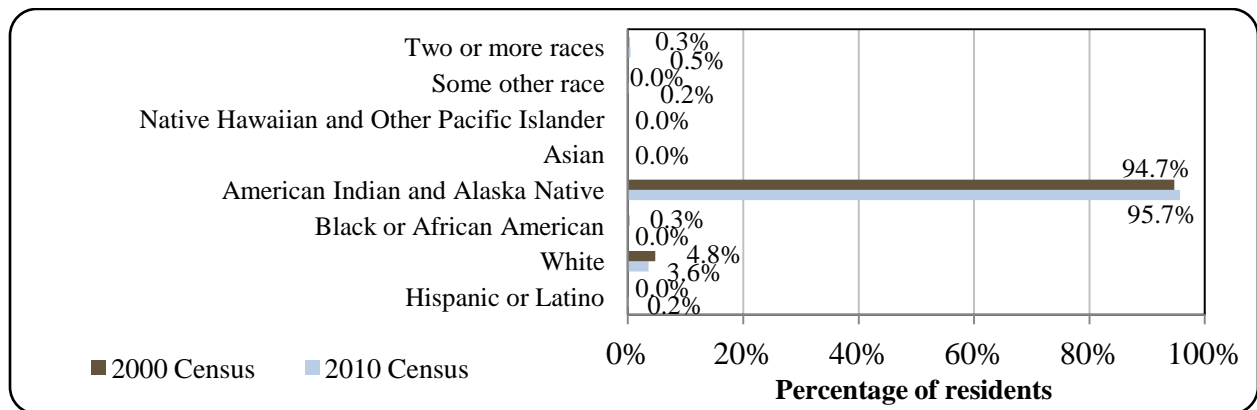
Table 1. Population in Manokotak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	385	-
2000	399	-
2001	-	412
2002	-	407
2003	-	405
2004	-	407
2005	-	438
2006	-	424
2007	-	430
2008	-	429
2009	-	438
2010	442	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Manokotak: 2000-2010 (U.S. Census).

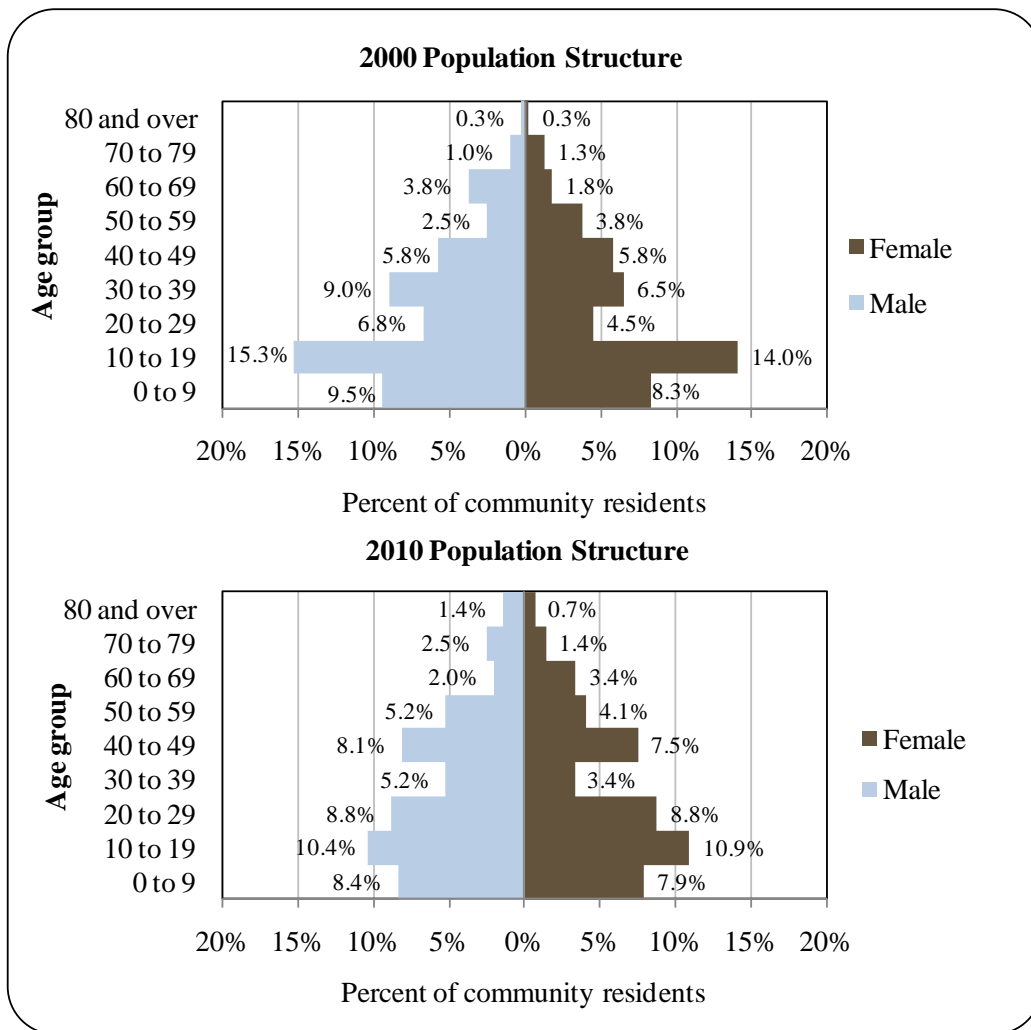


In a survey conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the population of Manokotak reaches its peak during fall, winter and spring months, between August and May. They estimated that 15 seasonal workers or transients are present in the community during this period. They said population fluctuations are somewhat driven by employment in the commercial fishing sector. The City of Manokotak’s Comprehensive Plan also states that a majority of residents leave during the summer to travel to

fish camps in Iguishik or Ekuk,⁸⁶² suggesting that subsistence harvest is a key factor influencing population fluctuation.

In 2010, the gender makeup of Manokotak’s population was the same as the makeup of the state population as a whole, with 52% male and 48% female. The median age of Manokotak residents was 26.4 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, there was a relatively even spread of males and females across age categories in Manokotak. That year, 11% of Manokotak’s population was 60 or older. The overall population structure of Manokotak in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Manokotak Based on the 2000 and 2010 U.S. Decennial Census.



⁸⁶² City of Manokotak. October 2005. *Manokotak Comprehensive Plan*. Retrieved November 28, 2011 from <http://www.agnewbeck.com>.

In terms of educational attainment, according to 2006-2010 American Community Survey (ACS) estimates,⁸⁶³ 61.4% of Manokotak residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 32.4% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 6.3% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 16.9% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 3.4% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 5.8% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

The community of Manokotak is a Yup'ik Eskimo village. It is one of the newer villages in the Bristol Bay region, having become a permanent settlement between 1946 and 1947. The original residents came from the consolidation of the Villages of Igushik and Tuklung, along with some from Kulukak, Togiak, and Aleknagik.⁸⁶⁴ The original impetus for the formation of the new village was the arrival and settlement of Evon Minista, a Yup'ik Eskimo from the local region who settled at the site to be closer to his commercial fishing grounds.⁸⁶⁵ Others came to the site of the new village from the surrounding countryside to join Minista. Moravian missionaries also followed, establishing the first church in Manokotak in 1948.⁸⁶⁶ The first school started in 1949, conducted in the church building, and by 1959 a separate school had been built. In 1960 a U.S. post office was established in Manokotak. Trapping opportunities initially attracted residents, although resources have declined in the area since the 1960s. In 1970 the City was incorporated. Manokotak residents use Igushik as a summer fish camp. Today, the Village of Manokotak remains primarily a Yup'ik community with a lifestyle that includes fishing, trapping, and subsistence. The sale, importation, and possession of alcohol are all banned in the Village.⁸⁶⁷

Natural Resources and Environment

Manokotak is located in a climatic transition zone; it is primarily influenced by the maritime climate, but also by arctic climate patterns. Summer temperatures average between 40 and 70 °F, and winter temperatures between 4 and 30 °F. Manokotak receives 25.5 inches of rain

⁸⁶³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁶⁵ Schichnes, J., and M. Chythlook (1988). *Use of Fish and Wildlife in Manokotak, Alaska*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 152, Anchorage, pg. 19-20. Retrieved November 29, 2011 from <http://www.subsistence.adfg.state.ak.us>.

⁸⁶⁶ Harrison, B. (1986). Monokotak: A Study of School Adaptation. *Anthropology & Education Quarterly*. 17 (1986):100-110.

⁸⁶⁷ See footnote 864.

and 83 inches of snow on average per year. Fog and high winds are common throughout the year. The river is ice-free from June through mid-November.^{868,869}

According to a survey conducted by the AFSC in 2011, community leaders reported that fishing is the primary natural resource-based industry upon which the local economy depends. Bristol Bay drainages produce the world's largest runs of sockeye salmon, and the area is productive for other species of salmon and marine fish as well.⁸⁷⁰ One of the largest runs of Chinook salmon in Alaska returns to the Nushagak River, but the run is not heavily harvested, partially due to low prices in the region.⁸⁷¹ The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, southwest of Manokotak near the Village of Togiak.⁸⁷²

Significant mineral resources are present in the Bristol Bay region, including the Pebble copper-gold-molybdenum deposit west of Manokotak. The Pebble Mine site is located at the divide between the Koktuli River and Uppler Talarik Creek, north of Iliamna Lake.⁸⁷³ Northern Dynasty Minerals Limited calls the Pebble deposit, "one of the greatest stores of mineral wealth ever discovered," and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion lb of copper, 66.9 million oz of gold, and 3.3 billion lb of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion lb of copper, 40.4 million oz gold, and 2.3 billion lb of molybdenum.⁸⁷⁴ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.⁸⁷⁵ According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble mine is copper. Dissolved copper is known to be toxic to fish.⁸⁷⁶ If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.⁸⁷⁷

The Nushagak Peninsula has modest potential for shallow development of oil and gas, as well as coalbed methane. Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin, which runs along the northern edge of the Aleutian Islands and Alaska Peninsula.⁸⁷⁸ However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing

⁸⁶⁸ Ibid.

⁸⁶⁹ Rainfall and snowfall numbers retrieved November 28, 2011 from www.weatherbase.com.

⁸⁷⁰ Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁸⁷¹ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁸⁷² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁸⁷³ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky (2008). Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's Large Mine Permitting Process. *Alaska Law Review* 25:1.

⁸⁷⁴ Northern Dynasty Minerals Limited website (2012). *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

⁸⁷⁵ See footnote 870.

⁸⁷⁶ See footnote 873.

⁸⁷⁷ Pg. 36 in Duffield, John., Christopher Neher, David A. Patterson, and Oliver S. Goldsmith (2007). *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

⁸⁷⁸ See footnote 870.

for the 2007-2012 program.⁸⁷⁹ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.⁸⁸⁰

Wood-Tilchik State Park lies just north of Manokotak. Wood-Tilchik is the largest state park in the United States. The park includes a diversity of terrain and ecosystems. The Wood River and Tilchik River systems host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, Arctic char, Dolly Varden char, and northern pike. Tilchik Lake is an important site for whitefish subsistence harvest. Moose, caribou, and brown bear are common in the park, along with black bear in limited area of the park. Small game present in the area include beaver, muskrat, otter, fox, wolverine, mink, and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.⁸⁸¹

It is important to note that the Manokotak area provides important habitat for beluga whales. The mouth of the Igushik River is used by the whales as a calving ground.⁸⁸²

The Alaska Department of Environmental Conservation did not list active environmental cleanup sites located in Manokotak as of May 2012.⁸⁸³ However, Manokotak participates in the Environmental Protection Agency-funded Indian General Assistance Program (IGAP). The program is managed through the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham (see the *Governance* section for more information). Through the IGAP program, several environmental concerns have been identified in the community, including poor air quality from dusty unpaved roads in summer and fall, noise pollution from snow machines and ATVs, fuel spills, the importance of protecting subsistence sites near the Village, dilapidated buildings that present safety hazards, the need for a new landfill, and the need for an upgraded water and sewer system.⁸⁸⁴ In the 2011 AFSC survey, community leaders indicated that a new landfill and improved sewer and water system are currently in progress.

According to the Bristol Bay Coastal Management Plan, the Manokotak area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surges, and sea ice. A majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian Trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall. Coastal flooding and erosion is affected by wind, site exposure and sea ice conditions. The Coastal Management Plan notes the potential for climate change to

⁸⁷⁹ U.S. Dept. of the Interior, Minerals Management Service (2010). *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

⁸⁸⁰ The White House, Office of the Press Secretary (2010). *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

⁸⁸¹ Alaska Dept. of Natural Resources (n.d.) *Wood-Tilchik State Park website*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

⁸⁸² See footnote 870.

⁸⁸³ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁸⁸⁴ City of Manokotak. October 2005. *Manokotak Comprehensive Plan*. Retrieved November 28, 2011 from <http://www.agnewbeck.com>.

augment erosion, as coastal areas of Alaska are freezing later in the season, resulting in greater vulnerability to fall storms and storm surges. Changing temperatures also have the potential to shift distribution of fish and wildlife, possibly affecting commercial and subsistence activities.⁸⁸⁵

Current Economy⁸⁸⁶

The economy of Manokotak depends for the most part on commercial fishing, trapping, and subsistence activities.⁸⁸⁷ Between 2000 and 2010, the number of residents holding state Commercial Fisheries Entry Permits (CFEC) was equivalent to an average of 24.6% of the local population (see *Commercial Fishing* section). Residents also rely heavily on subsistence, in part due to limited opportunities for year-round cash employment. Many move to fish camps in Igushik or Ekuk each summer. Important subsistence resources include salmon, herring, sea lion, beluga whale, trout, ptarmigan, ducks, and berries. Many residents also trap fox, beaver, mink, and otter. Sharing relationships exist with several villages in the area, especially with the Villages of Togiak and Twin Hills.^{888,889}

The government provides a majority of wage employment in the area.⁸⁹⁰ In addition to the City and Village Council, top employers in Manokotak in 2010 included the local village Native corporation, the Bristol Bay Native Association, the regional school system, Manokotak Power Company, Bristol Bay Area Health Corporation, Bristol Bay Area Housing Authority, and several home care service companies.⁸⁹¹

Based on household surveys conducted for the 2006-2010 ACS,⁸⁹² in 2010, the per capita income in Manokotak was estimated to be \$11,459, and the median household income was estimated to be \$32,500. This represents a slight increase from the per capita and median household incomes reported in the year 2000 (\$9,294 and \$26,875, respectively). However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁸⁹³ the real median per capita income in 2000 is revealed to have been \$12,221, and the real median household income was \$35,340, showing that real earnings actually decreased slightly over the period. In 2010, Manokotak ranked 249th of 305 Alaskan communities with per capita income data that year, and 232nd in median household income, out of 299 Alaskan communities with household income data.

⁸⁸⁵ Glenn Gray and Associates (2008). *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from

http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf.

⁸⁸⁶ Unless otherwise noted, all monetary data are reported in nominal values.

⁸⁸⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁸⁸ Ibid.

⁸⁸⁹ See footnote 884.

⁸⁹⁰ See footnote 887.

⁸⁹¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸⁹² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸⁹³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Manokotak's small population size may have prevented the ACS from accurately portraying economic conditions.⁸⁹⁴ A potentially more accurate understanding of per capita income is obtained from economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Manokotak in 2010 is \$5,681,⁸⁹⁵ which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000. This decline in income is reflected in the fact that the community was recognized as “distressed” by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁸⁹⁶ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a lower percentage of Manokotak residents was estimated to be in the civilian labor force (40.9%) than in the civilian labor force statewide (68.8%). In the same year, approximately 25.5% of local residents were estimated to be living below the poverty line, compared to a 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 14.1%, compared to a statewide unemployment rate of 5.9%. An alternative estimate of unemployment is based on the ALARI database, which indicates that the 2010 unemployment rate in Manokotak was 20.7%, compared to a statewide unemployment rate estimate of 11.5%.⁸⁹⁷ The lack of cash employment opportunities and the predominance of seasonal employment and traditional subsistence lifestyle contribute to a higher percentage of Manokotak residents not participating in the labor force.⁸⁹⁸

Also based on the 2006-2010 ACS, the greatest number of Manokotak workers was estimated to be employed in the public sector (56.9%), with 34.7% in the private sector, and 8.3% estimated to work as unpaid family workers. Of the 72 people aged 16 and over that were estimated to be employed in the civilian labor force, the majority was estimated to work in educational services, health care, and social assistance (59.7%). The occupations in which the greatest percentages of the workforce were estimated to be employed were service (33.3%) and management, business, science, and arts occupations (31.9%). It is important to note that, although four people (5.6% of the civilian labor force) was estimated to be employed in natural resource/construction/maintenance occupations, a breakdown of this category reveals that two of these workers were employed in construction and extraction occupations, and two were employed in installation, maintenance, and repair activities. None were employed in farming, fishing, and forestry occupations. Likewise, 0% of the civilian labor force was estimated to be employed in agriculture, forestry, and fishing industries in 2010. The number of individuals employed by fishing may be underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. Further information about

⁸⁹⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled

⁸⁹⁵ See footnotes 891 and 892.

⁸⁹⁶ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁸⁹⁷ See footnote 891.

⁸⁹⁸ City of Manokotak. October 2005. *Manokotak Comprehensive Plan*. Retrieved November 28, 2011 from <http://www.agnewbeck.com>.

employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 192 employed residents in Manokotak in 2010, of which 53.6% were employed in local government, 9.9% in trade, transportation, and utilities, 9.4% were employed in education and health services, 8.3% in financial activities, 2.6% in manufacturing, 2.1% in leisure and hospitality, 1.6% in natural resources and mining, 0.5% in construction, 0.5% in information, 0.5% in professional and business services, 0.5% in state government, and 10.4% in other industries.⁸⁹⁹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Manokotak (U.S. Census).

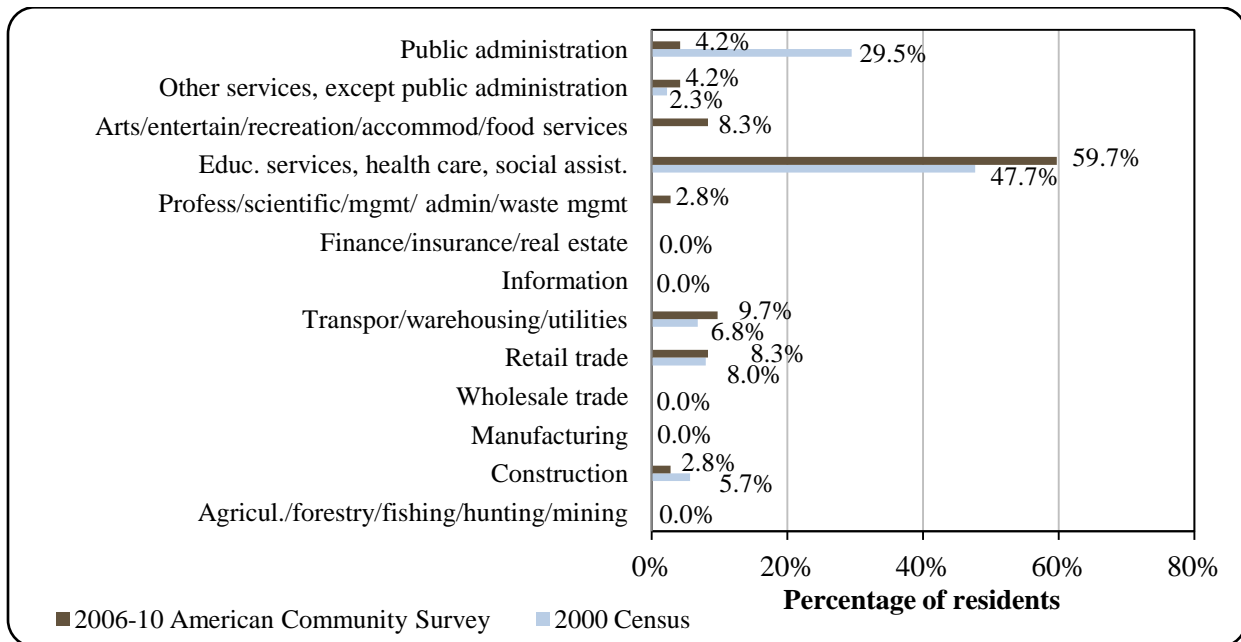
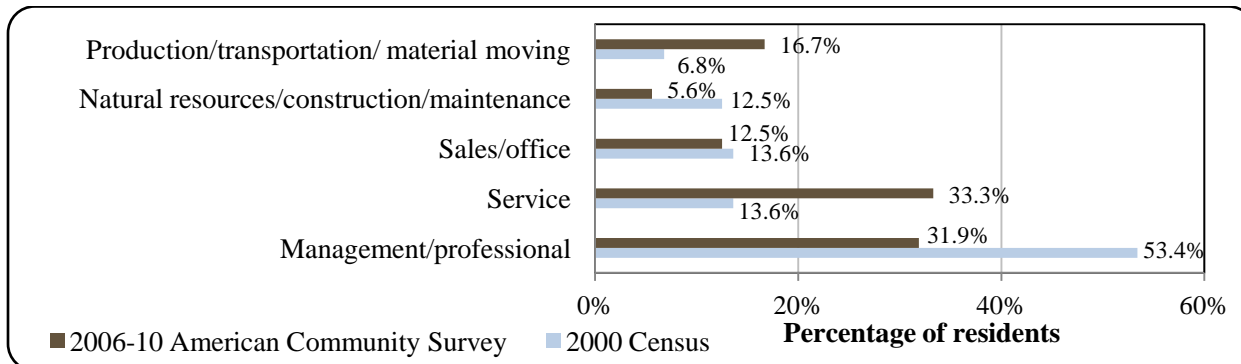


Figure 4. Local Employment by Occupation in 2000-2010, Manokotak (U.S. Census).



⁸⁹⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Governance

Manokotak is a 2nd Class City, and is not part of an organized borough. The City was incorporated in 1970 and has a Strong Mayor form of government, which includes a seven-person city council, including the mayor, a five-person advisory school board, and several municipal employees. As of 2010, the City administered a 2% sales tax and did not collect property tax.⁹⁰⁰ Annual municipal revenue more than doubled between 2000 and 2010. In addition to sales tax, local revenue sources in Manokotak during the decade included rental of spaces and equipment, and water, sewer, and other service fees. The City received contributions through the State Revenue Sharing program of just over \$25,000 per year from 2000 to 2003, and Community Revenue Sharing contributions of almost \$120,000 per year in 2009 and 2010. Additional state revenue sharing came from the state raw fish tax and telephone tax, and the City also received funds from the federal Payment In Lieu of Taxes program, as well as a variety of grants.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Manokotak From 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$273,929	\$7,626	\$26,505	n/a
2001	\$198,266	\$3,259	\$27,866	n/a
2002	\$141,369	\$2,972	\$25,871	n/a
2003	\$335,774	\$26,666	\$26,011	n/a
2004	\$168,254	\$1,023	n/a	n/a
2005	\$179,651	\$16,205	n/a	n/a
2006	\$376,369	\$6,938	n/a	n/a
2007	\$704,062	\$27,952	n/a	n/a
2008	\$479,832	\$9,987	n/a	n/a
2009	\$522,564	\$28,207	\$118,212	n/a
2010	\$822,914	\$11,944	\$117,936	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department. of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

⁹⁰⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

The increasing trend in total municipal revenue in the second half of the 2000-2010 period can be explained both by large Community Revenue Sharing payments in 2009 and 2010, and also by an increase in grants to the City of Manokotak from entities including the U.S. Department of Agriculture, the Bristol Bay Economic Development Corporation (BBEDC) – the Community Development Quota (CDQ) entity representing the Bristol Bay region, and the Bristol Bay Native Association (BBNA). Community grants were also received from the Alaska Leader Fisheries Foundation based in Kodiak. No specific fisheries-related grant revenue was reported between 2000 and 2010. Refer to Table 2 for details on selected community finances from 2000 to 2010.

Manokotak was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Manokotak Village Council. The Native village corporation is Manokotak Natives Limited, which manages 125,620 acres of land. The regional Native corporation to which Manokotak belongs is the Bristol Bay Native Corporation (BBNC).⁹⁰¹

Manokotak is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.⁹⁰² The BBNA is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁹⁰³

The closest office of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community and Economic Development are located in Dillingham. Kodiak has the closest offices of the Alaska Department of Natural Resources, the National Marine Fisheries Service (NMFS), and Bureau of Citizenship and Immigration Services, although the Anchorage offices of these agencies may be more accessible to people from the Manokotak area.

Infrastructure

Connectivity and Transportation

The City of Manokotak is accessible by both air and water. A state-owned, 3,300-ft-long by 75-ft-wide lighted gravel airstrip is located 1 mile north of the community, and a designated seaplane base is also present. Both regularly scheduled and charter flights are available from Dillingham.⁹⁰⁴ The price of a roundtrip ticket by plane from Manokotak to Anchorage in early June 2012 was \$588.⁹⁰⁵ There are no docking facilities on the Igushik River, and supplies that are lightered each summer must be pulled up to the mud beach. Traveling by boat on the Igushik River can be difficult, as the river is made up of meandering loops. This means that many miles must be traveled by water to cover a short distance in air miles. Residents use ATVs,

⁹⁰¹ Ibid.

⁹⁰² Bristol Bay Native Association (n.d.). *BBNA homepage*. Retrieved November 16, 2011 from www.bbna.com.

⁹⁰³ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁹⁰⁴ See footnote 900.

⁹⁰⁵ This price was calculated on November 21, 2011 using [kayak.com](http://www.kayak.com).

snowmobiles, and some vehicles for transportation. During the winter months, snowmobiles are used to travel on the Manokotak Trail to Dillingham to retrieve fuel.⁹⁰⁶

Facilities

Electricity in town is provided by a diesel powerhouse called the Manokotak Power Company, which is operated by the Village Corporation. The primary source of water for the community is two wells. Water is stored in a 150,000-gallon water storage tank and distributed via a city-operated piped water system that serves 99 households and the school. The community also has a few individual wells. Manokotak Heights, located four miles to the south, is served by a well system, but water shortages have occurred. The City also operates the piped sewer system and the landfill, although individuals are responsible for collecting their own refuse.⁹⁰⁷ Police services are provided by the State VPSO (Village Public Safety Officer) stationed in Manokotak⁹⁰⁸ and state troopers stationed in Dillingham.⁹⁰⁹ Manokotak currently has a school library and gymnasium. Telephone service is provided by Nushagak Telephone Co-op and AT&T Alascom GCI Nushagak Telephone, and internet and cable service are also available in town.⁹¹⁰ In the 2011 AFSC survey, community leaders indicated that improvements are underway to water and sewer pipelines, and a new landfill/solid waste site is being developed. They also noted that publicly subsidized housing is available in Manokotak. According to a business and jobs survey conducted in April 2005 by the City of Manokotak, a local business provides occasional lodging to visitors, and there is a U.S. post office in the community.⁹¹¹

With regard to fisheries-related facilities, community leaders reported in the 2011 AFSC survey that Manokotak has a haulout facility for boats less than 60 tons, and fishing gear repair services are available locally. They indicated that plans are underway to improve the barge landing area and construct new dock space within the next 10 years. They also indicated that residents typically travel to the nearby City of Dillingham to access fisheries-related businesses and services not available in Manokotak.

Medical Services

Health care is available at the Manokotak Health Clinic, which is owned by the Village Council and operated by the Bristol Bay Area Health Corporation. Emergency Services are provided by volunteers and five health aides; emergency services have river and air access. Alternate health care is provided by the Manokotak First Responders.⁹¹² The nearest hospital is located in Dillingham.

⁹⁰⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁰⁷ Ibid.

⁹⁰⁸ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁹⁰⁹ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁹¹⁰ See footnote 906.

⁹¹¹ City of Manokotak. October 2005. *Manokotak Comprehensive Plan*. Retrieved November 28, 2011 from <http://www.agnewbeck.com>.

⁹¹² See footnote 906.

Educational Opportunities

One school, Manokotak School, is located in the community, and provides a Kindergarten through 12th grade education. As of 2011, there were 12 teachers and 121 students in attendance.⁹¹³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence fishing activities have been important to residents of the Manokotak area for thousands of years. The Nushagak region was historically inhabited by a coastal population that combined fishing and hunting of marine mammals, and an interior population that focused on hunting and fishing with frequent trips to the coast, especially during summer months.⁹¹⁴ By the time of Manokotak's settlement in the mid-1900s, commercial fishing – particularly the sockeye salmon fishery – was well established in Bristol Bay.⁹¹⁵ The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, southwest of Manokotak near the Village of Togiak. In Alaska, commercial catch of herring for human consumption began in 1878, commercial harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.⁹¹⁶

Today, a combination of commercial and subsistence harvest of marine resources provides the foundation for the local economy.⁹¹⁷ In recent decades, the number of fishing permits held by Manokotak residents has declined. Trends in permit ownership between 2000 and 2010 are described in the *Commercial Fishing* section below, but it is important to note that numbers of permits had already fallen dramatically prior to the year 2000. The City of Manokotak's Comprehensive Plan summarizes the decline over the previous decade, with overall permits held by residents falling from 261 in 1990 to 150 permits in 2002, a reduction of 43%. The number of "other finfish" permits dropped from 15 to 1 during the 1990-2000 period. Halibut permits declined by 75% in the first half of the 1990s, prior to rationalization of that fishery in the middle of the decade.⁹¹⁸

Manokotak is located on the Igushik River, which joins Nushagak Bay before it empties into Bristol Bay. This marine area is encompassed by the Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Manokotak participates in the CDQ program as a member of the BBEDC (Bristol Bay Economic

⁹¹³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁹¹⁴ VanStone, J. W. (1968). An Annotated Ethnographic Bibliography of the Nushagak River Region, Alaska. *Anthropology*, 54(2). Field Museum of Natural History. Chicago.

⁹¹⁵ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹¹⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹¹⁷ See footnote 906.

⁹¹⁸ See footnote 911.

Development Corporation). The community is not eligible for the Community Quota Entity (CQE) program.

According to a survey conducted by the AFSC in 2011, community leaders reported that Manokotak's participation in fisheries management processes in Alaska occurs through a representative. The representative participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Manokotak. Several processing facilities are registered in nearby communities throughout Bristol Bay, including Dillingham, Egegik, and Naknek.

Fisheries-Related Revenue

Overall, in 2010, the City of Manokotak received \$19,805 from fisheries-related taxes and fees. These revenue sources include the Shared Fisheries Business Tax and a raw fish tax. Table 3 provides information about selected fisheries-related revenue sources in Manokotak.⁹¹⁹

It is also important to note that the BBEDC uses fisheries revenue from the CDQ program to provide grants for infrastructure, fuel and electrical assistance to member communities. The BBEDC also offers educational scholarships, vocational training, and fishing permit acquisition and financing assistance to residents of its member communities.⁹²⁰ Manokotak reported receipt of between \$22,000 and \$35,000 in funds per year from the BBEDC between 2005 and 2009.⁹²¹

Commercial Fishing

Although Manokotak is not located directly on the coast it still has a large tie to the commercial fishing industry. Local residents participate in state and federal fisheries as permit and quota share account holders, crew members, and vessel owners. In the 2011 AFSC survey, community leaders reported that Manokotak residents participate in the sockeye salmon fishery in June and July, the coho salmon fishery in August and September, and the herring fishery in April and May. In 2010, Manokotak vessel owners landed 928,017 net lb of salmon, earning \$805,375 in ex-vessel revenue. Other landings and ex-vessel revenue are considered confidential that year due to the small number of participants. Information about salmon harvest by Manokotak residents was reported for all years from 2000 to 2010, while herring landings and ex-vessel revenue are considered confidential in all years but 2000 and 2001, and halibut landings and ex-vessel revenue in all years but 2002. This information about landings and ex-vessel revenue generated by Manokotak vessel owners is presented in Table 10. Since no buyers or shore-side processors were present in the community between 2000 and 2010 (Table 5), no

⁹¹⁹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

⁹²⁰ Bristol Bay Economic Development Corporation (2010). *Annual Report 2010*. Retrieved November 16, 2011 from <http://www.bbedc.com>.

⁹²¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

deliveries were made locally, and no ex-vessel revenue was generated in Manokotak in 2010 (Table 9).

In 2010, 99 Manokotak residents held a total of 119 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). The bulk of CFEC permits were held in salmon and herring fisheries in 2010. That year there were 72 permit holders holding 66 salmon permits for Bristol Bay drift and set gill net fisheries, of which 53 were actively fished. There were also 50 permit holders holding 52 herring permits in the Bristol Bay roe fishery, the Bristol Bay spawn on kelp fishery, and the Goodnews Bay roe and food/bait fishery. Of these, only one Bristol Bay roe permit was actively fished in 2010. In addition, there was one active halibut permit holder in 2010 (longline vessel under 60 ft, statewide permit). It is important to note that there was also one CFEC groundfish permit held by a Manokotak resident between 2000 and 2004, but this permit was not actively fished during these years.

These numbers represent large declines in total number of permits in these fisheries over the decade, with a 34% decrease in herring permits and a 16% decrease in salmon permits (27% decrease in total permits overall) between 2000 and 2010. The number of permit holders remained more stable, with only a 6% decline overall. No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Manokotak residents between 2000 and 2010. This permit information is presented in Table 4.

Between 2000 and 2010, two quota share accounts were held by Manokotak residents in the federal catch share halibut fishery, and a total of 1,601 halibut quota shares were held in the federal halibut fishery. The annual halibut individual fishing quota (IFQ) allotment declined over the 2000-2010 period. No quota share accounts were held in Manokotak in federal catch share fisheries for sablefish or crab between 2000 and 2010. Information about federal catch share participation is presented in Tables 6 through 8.

In 2010, Manokotak residents held 103 commercial crew licenses, 30 residents were the primary owner of a fishing vessel, and 16 vessels were homeported in Manokotak. The total crew licenses held in 2010 (103 licenses) was slightly higher than in 2000 (97 licenses); the number of crew licenses decreased by about 25% between 2000 and 2006, but rebounded by 2010. In contrast, there was a substantial downward trend in vessel ownership and homeported vessels, with a 48% decrease in vessel ownership and 49% decrease in vessels homeported in Manokotak between 2000 and 2010. According to the 2011 AFSC survey, community leaders reported that the remaining vessels using Manokotak as a base of fishing operations were all under 35 feet in length, and were gillnetters primarily involved in the Bristol Bay salmon fishery. These characteristics of the Manokotak commercial fishing sector are presented in Table 5.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Manokotak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$4,000	\$3,833	\$6,000	\$5,000	\$4,500	\$5,144	\$4,750	\$6,500	\$8,000	\$8,000	\$10,000
Shared Fisheries Business Tax ¹	\$3,833	\$6,816	\$5,954	\$4,751	\$4,364	\$5,144	\$6,605	\$8,014	\$7,556	\$9,587	\$9,183
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$7,833	\$10,649	\$11,954	\$9,751	\$8,864	\$10,288	\$11,390	\$14,606	\$15,903	\$18,177	\$19,805
Total municipal revenue⁵	\$273,929	\$198,266	\$141,369	\$335,774	\$168,254	\$179,651	\$376,369	\$704,062	\$479,832	\$522,564	\$822,914

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Manokotak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	3	4	6	8	4	4	1	1	1	0	1
	Fished permits	1	0	2	1	1	1	0	0	0	0	1
	% of permits fished	33%	0%	33%	13%	25%	25%	0%	0%	0%	-	100%
	Total permit holders	3	4	6	8	4	4	1	1	1	0	1
Herring (CFEC) ²	Total permits	79	76	68	65	59	58	57	53	52	52	52
	Fished permits	8	5	7	5	2	2	1	1	1	2	1
	% of permits fished	10%	7%	10%	8%	3%	3%	2%	2%	2%	4%	2%
	Total permit holders	56	57	52	53	50	52	53	51	50	50	50

Table 4 cont'd. Permits and Permit Holders by Species, Manokotak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	1	1	1	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	-	-	-	-	-	-
	Total permit holders	1	1	1	1	1	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	79	82	78	76	73	77	73	72	73	68	66
	Fished permits	72	75	51	55	53	57	56	51	57	49	53
	% of permits fished	91%	91%	65%	72%	73%	74%	77%	71%	78%	72%	80%
	Total permit holders	82	89	80	80	82	84	80	81	77	70	72
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>162</i>	<i>163</i>	<i>153</i>	<i>150</i>	<i>137</i>	<i>139</i>	<i>131</i>	<i>126</i>	<i>126</i>	<i>120</i>	<i>119</i>
	<i>Fished permits</i>	<i>81</i>	<i>80</i>	<i>60</i>	<i>61</i>	<i>56</i>	<i>60</i>	<i>57</i>	<i>52</i>	<i>58</i>	<i>51</i>	<i>55</i>
	<i>% of permits fished</i>	<i>50%</i>	<i>49%</i>	<i>39%</i>	<i>41%</i>	<i>41%</i>	<i>43%</i>	<i>44%</i>	<i>41%</i>	<i>46%</i>	<i>43%</i>	<i>46%</i>
	<i>Permit holders</i>	<i>105</i>	<i>113</i>	<i>101</i>	<i>102</i>	<i>104</i>	<i>106</i>	<i>106</i>	<i>106</i>	<i>102</i>	<i>95</i>	<i>99</i>

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Manokotak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Manokotak ²	Total Net Lb Landed In Manokotak ^{2,5}	Total Ex-Vessel Value Of Landings In Manokotak ^{2,5}
2000	97	0	0	59	31	0	0	\$0
2001	110	0	0	58	28	0	0	\$0
2002	86	0	0	50	24	0	0	\$0
2003	69	0	0	46	24	0	0	\$0
2004	77	0	0	41	21	0	0	\$0
2005	76	0	0	40	19	0	0	\$0
2006	75	0	0	35	17	0	0	\$0
2007	80	0	0	32	15	0	0	\$0
2008	84	0	0	34	17	0	0	\$0
2009	103	0	0	32	17	0	0	\$0
2010	103	0	0	30	16	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Manokotak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	2	1,601	198
2001	2	1,601	221
2002	2	1,601	225
2003	2	1,601	225
2004	2	1,601	231
2005	2	1,601	224
2006	2	1,601	212
2007	2	1,601	198
2008	2	1,601	188
2009	2	1,601	170
2010	2	1,601	155

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Manokotak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Manokotak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Manokotak: 2000-2010.

	<i>Total Net Pounds¹</i>											
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	
Crab	0	0	0	0	0	0	0	0	0	0	0	
Finfish	0	0	0	0	0	0	0	0	0	0	0	
Halibut	0	0	0	0	0	0	0	0	0	0	0	
Herring	0	0	0	0	0	0	0	0	0	0	0	
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0	
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0	
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0	
Pollock	0	0	0	0	0	0	0	0	0	0	0	
Sablefish	0	0	0	0	0	0	0	0	0	0	0	
Salmon	0	0	0	0	0	0	0	0	0	0	0	
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	
	<i>Ex-vessel Value (nominal U.S. dollars)</i>											
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011.
 Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science
 Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Manokotak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	13,774	-	-	-	-	-	-	-	-
Herring	152,868	183,447	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	1,397,097	960,616	366,711	1,008,967	1,388,368	1,200,884	1,212,458	873,193	935,262	1,050,747	928,017
<i>Total²</i>	<i>1,549,965</i>	<i>1,144,063</i>	<i>380,485</i>	<i>1,008,967</i>	<i>1,388,368</i>	<i>1,200,884</i>	<i>1,212,458</i>	<i>873,193</i>	<i>935,262</i>	<i>1,050,747</i>	<i>928,017</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	\$29,036	-	-	-	-	-	-	-	-
Herring	\$16,195	\$14,252	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$905,472	\$362,729	\$156,526	\$462,604	\$645,653	\$653,032	\$718,206	\$530,870	\$638,486	\$775,147	\$805,375
<i>Total²</i>	<i>\$921,667</i>	<i>\$376,981</i>	<i>\$185,562</i>	<i>\$462,604</i>	<i>\$645,653</i>	<i>\$653,032</i>	<i>\$718,206</i>	<i>\$530,870</i>	<i>\$638,486</i>	<i>\$775,147</i>	<i>\$805,375</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses were located in Manokotak. Likewise, no sport fish guide licenses were registered in the community during the 2000-2010 period, with the exception of 2003 and 2004 when one guide license was registered to a Manokotak resident each year. In 2010, 31 sportfishing licenses were sold in Manokotak. That same year, 56 Manokotak residents purchased sportfishing licenses (irrespective of point of sale). Between 2000 and 2010, there were consistently more licenses sold to Manokotak residents than total licenses sold in Manokotak. This, along with the lack of support businesses in the community, indicates that sportfishing is not a major local tourism draw. This information about the sportfishing sector in Manokotak is presented in Table 11.

In a survey conducted by the AFSC in 2011, community leaders reported that both Alaska resident and non-Alaska resident sport fishermen fished out of Manokotak using private boats, primarily targeting sockeye salmon. The Alaska Statewide Harvest Survey,⁹²² conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Manokotak: coho, sockeye, and pink salmon, rainbow trout, Dolly Varden char, whitefish, northern pike, and smelt. The survey also noted harvest of hardshell clams in Manokotak. No kept/release log book data were reported for fishing charters out of Manokotak between 2000 and 2010.⁹²³

Manokotak is located within Alaska Sport Fishing Survey Area T – Nushagak, Wood River and Togiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Overall between 2000 and 2010, there were more non-Alaska resident than Alaska resident angler days fished, and there was significantly greater freshwater harvest than saltwater. Between 2000 and 2010, non-Alaska resident anglers fished between 15,676 and 33,089 freshwater angler days and between 81 and 767 saltwater angler days per year. Alaska resident anglers fished between 7,356 and 19,980 freshwater angler days and between 31 and 921 saltwater angler days per year. This information about the sportfishing sector in and near Manokotak is displayed in Table 11.

⁹²² Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁹²³ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Manokotak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Manokotak ²
2000	0	0	24	9
2001	0	0	39	25
2002	0	0	44	41
2003	0	1	29	13
2004	0	1	58	25
2005	0	0	57	30
2006	0	0	69	50
2007	0	0	52	0
2008	0	0	56	9
2009	0	0	84	37
2010	0	0	56	31

Year	Saltwater Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Freshwater Angler days fished –Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	0	44	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Residents of Manokotak are heavily dependent on subsistence harvests. Relationships exist with neighboring communities for the sharing of resources, especially with Togiak and Twin Hills.^{924,925} In a survey conducted by the AFSC in 2011, community leaders reported that salmon and other fish, waterfowl, and marine mammals are the most important aquatic subsistence resources used by residents of Manokotak.

In 2008, the only year that a subsistence survey was conducted by ADF&G in the community of Manokotak between 2000 and 2010, 89% of households were estimated to participate in salmon subsistence, 83% in non-salmon fish subsistence (not including halibut), 81% in marine invertebrate subsistence, 62% participated in marine mammal subsistence, and 13% participated in halibut subsistence (Table 12). These results can be compared an earlier 1985 ADF&G subsistence survey of 54 households in Manokotak. That year, 100% of households reported using salmon, 100% used non-salmon fish (herring, herring roe, smelt, flounder, blackfish, turbot, Arctic char, Arctic grayling, northern pike, trout, and whitefish), 83.3% used marine mammals, and 88.9% used marine invertebrates. The per capita harvest of land and sea-based resources by Manokotak's residents in 1985 was 384 lb, of which 35.4% was salmon, 22.2% was non-salmon fish, 8.5% was marine mammals, 1.2% was marine invertebrates, 4.4% was birds and eggs, 24.7% was land mammals, and 3.7% was vegetation.⁹²⁶

Additional information was available from 2000 to 2008 regarding subsistence salmon permits in Manokotak. In 2000 and from 2004 to 2007, the number of subsistence permits issued to Manokotak households varied between 20 and 22. In 2008, the number increased to 57. The increase may be due to the fact that ADF&G conducted a subsistence harvest survey in the Village that year, resulting in increased participation and a higher number of permits recorded.⁹²⁷ Information was also available regarding marine invertebrate and non-salmon fish for the year 2008 only. That year, Manokotak residents harvested 3,570 lb of marine invertebrates and 109,526 lb of non-salmon fish (not including halibut) (Table 13).

Available data regarding individual subsistence harvest of halibut and marine mammals are presented in Tables 14 and 15. Between 2004 and 2010, either one or two Subsistence Halibut Registration Certificates (SHARC) were issued to Manokotak residents per year, but no information was reported about the number of SHARC cards fished or total lb of halibut harvested during these years (Table 14). Between 2000 and 2010, ADF&G reported harvest of between 1 and 9 harbor seals and between 5 to 46 spotted seals per year. In addition, beluga whale harvests were reported from 1 to 10 animals per year from 2000 to 2010. No information was reported by management agencies regarding harvest of sea otter, walrus, or Steller sea lion by Manokotak residents between 2000 and 2010 (Table 15).

⁹²⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹²⁵ City of Manokotak. October 2005. *Manokotak Comprehensive Plan*. Retrieved November 28, 2011 from <http://www.agnewbeck.com>.

⁹²⁶ Schichnes, J., and M. Chythlook (1988). *Use of Fish and Wildlife in Manokotak, Alaska*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 152, Anchorage, pg. 19-20. Retrieved November 29, 2011 from <http://www.subsistence.adfg.state.ak.us>.

⁹²⁷ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg (2011, revised). Alaska subsistence salmon fisheries 2008 annual report. ADF&G Division of Subsistence, Technical Paper No. 359, Anchorage. Pg. 73. Retrieved December 5, 2011 from <http://www.adfg.alaska.gov/techpap/TP359.pdf>.

Table 12. Subsistence Participation by Household and Species, Manokotak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	89%	13%	62%	81%	83%	975
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Manokotak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	22	21	331	24	171	8	2,639	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	20	18	289	39	266	12	1,447	n/a	n/a
2005	21	21	110	2	192	n/a	1,272	n/a	n/a
2006	22	18	165	42	56	6	1,386	n/a	n/a
2007	21	20	440	51	32	6	1,915	n/a	n/a
2008	57	54	816	110	454	69	3,981	3,570	109,526
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Manokotak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	2	n/a	n/a
2005	2	n/a	n/a
2006	2	n/a	n/a
2007	2	n/a	n/a
2008	2	n/a	n/a
2009	1	n/a	n/a
2010	2	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Manokotak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	3	n/a	n/a	n/a	n/a	1	23
2001	4	n/a	n/a	n/a	n/a	4	8
2002	1	n/a	n/a	n/a	n/a	n/a	n/a
2003	10	n/a	n/a	n/a	n/a	2	5
2004	4	n/a	n/a	n/a	n/a	4	27
2005	3	n/a	n/a	n/a	n/a	7	46
2006	5	n/a	n/a	n/a	n/a	7	46
2007	4	n/a	1	n/a	n/a	n/a	18
2008	3	n/a	n/a	n/a	n/a	9	17
2009	4	n/a	2	n/a	n/a	n/a	n/a
2010	6	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

In 1985, a lifelong resident of Manokotak, Anecia Lomack, recounted the story of Manokotak's founder:

Evon Minista is credited with being the founder of Manokotak. Originally from the Nushagak Peninsula, and his wife Susie was from Togiak. He was one of many who spent the winters of 1944 and 1945 at the end of the Igushik River to be closer to his commercial fishing grounds in Nushagak Bay. Following World War II, when gas was still in short supply, Minista's ration was insufficient either to get to Togiak to re-establish his family's residence or to return to their winter home. Searching for a new winter home along the Igushik River, he selected the current site of Manokotak in 1946 and other families soon joined.⁹²⁸

Others followed Minista to the new village site from areas of Kulukak, Nushagak, and Togiak bays. These villages were abandoned for a variety of reasons. Most notable, some people left Kulukak because of disease that they believed was caused by a curse placed on the village by a local who disliked others in the community.⁹²⁹

⁹²⁸ Schichnes, J., and M. Chythlook (1988). *Use of Fish and Wildlife in Manokotak, Alaska*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 152, Anchorage, pg. 19-20. Retrieved November 29, 2011 from <http://www.subsistence.adfg.state.ak.us/techpap/tp152.pdf>. Quoted on pgs. 19-20.

⁹²⁹ Ibid. Quoted on pg. 18.

Naknek (NACK-neck)



People and Place

*Location*⁹³⁰

Naknek is situated on a 100-ft bluff overlooking the northern bank of the mouth of the Naknek River, at the northeastern end of Bristol Bay. It lies 297 miles southwest of Anchorage. The Census Designated Place (CDP) encompasses 84.2 square miles of land and 0.7 square miles of water. Naknek lies about 20 miles from the western border of Katmai National Park and Preserve, which contains Mt. Katmai, Mt. Novarupta, and the Valley of 10,000 Smokes. Naknek is located in the Bristol Bay Borough, the Bristol Bay Borough Census Area, and the Kvichak Recording District.

*Demographic Profile*⁹³¹

In 2010, there were 544 inhabitants in Naknek, making it the 112th largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in the 1890 U.S. Census. Overall from 1990 to 2010, the population of Naknek declined by 5.4%. Between 1990 and 2000, the population of Naknek grew by 18%, and between 2000 and 2010 declined again by 19.8%, which is reflected in the average annual growth rate from 2000 to 2009 of -1.95%. In 2010, a majority of Naknek residents identified themselves as White (45.5%) and American Indian and Alaska Native (30.3%). In addition, 24.1% of residents identified with two or more races, and a smaller percentage identified as Native Hawaiian and Other Pacific Islander (0.7%) or “some other race” (0.4%). In addition, in 2010, 2.6% of the population of Naknek identified themselves as Hispanic. Individuals identifying as White or as Alaska Native and American Indian both made up a smaller percentage of the population in 2010 compared to 2000, and individuals of mixed race made up 21.7% more of the population in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Naknek was 2.35, a decrease from 2.7 persons per household in 2000 and 2.6 in 1990. The total number of households in Naknek increased from 108 in 1990 to 247 in 2000, and then declined to 231 occupied housing units by 2010. Of the 460 housing units surveyed for the 2010 Decennial Census, 29.8% were owner-occupied, 20.4% were renter-occupied, and 49.8% of all housing units were vacant or used only seasonally. From 1990 to 2010 no residents of Naknek were reported to be living in group quarters.

⁹³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹³¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

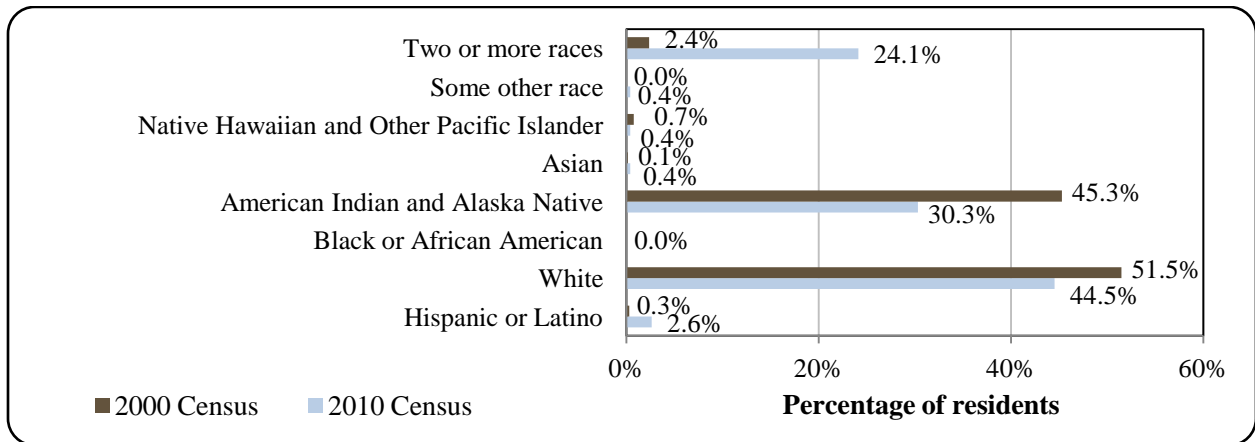
Table 1. Population in Naknek from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	575	-
2000	678	-
2001	-	657
2002	-	642
2003	-	612
2004	-	613
2005	-	582
2006	-	583
2007	-	542
2008	-	549
2009	-	516
2010	544	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

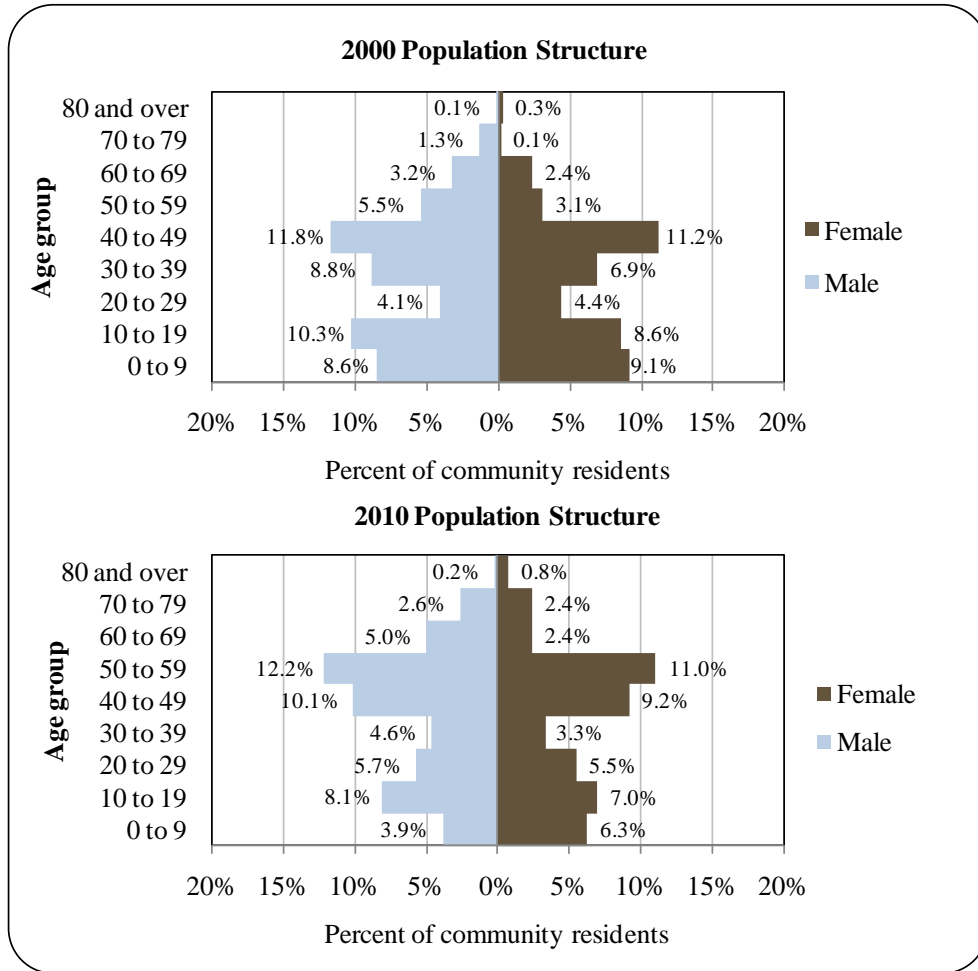
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Naknek: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Naknek was 51.9% male and 48.1% female, very similar to the state population as a whole (52% male, 48% female). The median age was estimated to be 39.3 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, males outnumbered females in all age groups but 0 to 9 years and 80 years and over, and there were very similar numbers of males and females in the 20 to 29 age group. In 2010, 13.3% of the Naknek population was age 60 or older. The overall population structure of Naknek in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Naknek Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS), 90.2% of Naknek residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 7.5% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 2.3% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 44.4% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 8.9% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 11.5% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 3.5% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall. During community review of this profile, a representative of the Bristol Bay

Borough noted that the 2006-2010 ACS appears to underestimate the percentage of the adult population holding Bachelor's degrees.⁹³²

⁹³² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Naknek is a fishing community with a mixed population of non-Natives, Yup'ik Eskimo, Aleut, and Athabascan residents.^{933,934} Starting 8,000 years ago there is evidence of seasonal camps along the Kvichak River by people of the Paleo-Arctic tradition. These people likely arrived following herds of caribou. By 6,000 years ago, ancestors of the Kodiak and Aleutian traditions made seasonal use of the Naknek area, probably utilizing both caribou and marine resources. By 1,900 B.C., ancestors of historic Yup'ik populations settled in the area. They were fishermen and hunters of caribou and marine mammals. Evidence of permanent settlements and river salmon fishing in the Naknek area starts around 400 B.C.⁹³⁵

By the time of European contact in the late 1700s, residents of villages used rivers to interact with each other and for transport in pursuit of seasonal subsistence resources. In 1821, the original Yup'ik village of “Naugeik” was noted by Capt. Lt. Vasiliev. The village was called Kinuyak and later spelled Naknek by the Russian Navy. The Russians built a fort near the village, and fur trappers inhabited the area prior to the U.S. purchase of Alaska in 1867.⁹³⁶ Other abandoned village sites located on the Naknek River include Paugvik and New Savonoski.⁹³⁷

Soon after the sale of Alaska, the commercial fishing industry began to develop in the region, and the community of Naknek developed alongside this activity. The first salmon cannery opened on the Naknek River in 1890. The Homestead Act enabled canneries to acquire land for their plants, and also made land available to other institutions and individuals including the Russian Orthodox Church. People arrived from surrounding villages to build shelters on the church property, and were eventually sold lots in what became the center of Naknek.⁹³⁸ Native Alaskan inhabitants of the area were joined by new residents who arrived to assist in the construction of canneries.⁹³⁹

The lack of fishermen and cannery labor led to a practice of importing cannery crews and fishermen from outside Alaska, increasing the non-Native presence in the community, especially during the summer salmon season. Historically this contributed to a low rate of hire of local Native residents as fishermen and cannery workers in the Bristol Bay salmon fishery. However, the start of World War II created a labor shortage and provided an opportunity for local residents to enter the fishery.^{940,941} In 1920, the first official school was constructed, and the first aircraft landed in 1929. By the 1930s and 1940s, bush pilots were making regular flights to the area, and an Air Force Station was built in nearby King Salmon in 1942. In 1949, a 15-mile road was

⁹³³ Visit Bristol Bay website. (n.d.). *Bristol Bay Cultures and History*. Retrieved November 7, 2013 from <http://www.visitbristolbay.com/visitor-guide/cultures.html>.

⁹³⁴ Information updated during community review of this profile by a representative of the Bristol Bay Borough. Personal communication, October 2013.

⁹³⁵ Morris, Judith (1985). *The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska*. Alaska Dept. of Fish and Game Technical Paper Number 123. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

⁹³⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹³⁷ See footnote 933.

⁹³⁸ Ibid.

⁹³⁹ See footnote 935.

⁹⁴⁰ Ibid.

⁹⁴¹ Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

constructed between Naknek and King Salmon.⁹⁴² Today, Naknek is a hub of fishing and shipping activity in the Bristol Bay region.⁹⁴³

Natural Resources and Environment

The climate of Naknek is mainly maritime, characterized by cool, humid, and windy weather. Average summer temperatures range from 42 to 63 °F; average winter temperatures range from 29 to 44 °F. Extremes from -60 to 88 °F are becoming more common. Total precipitation averages 20 inches annually, with 45 inches of snowfall. Precipitation patterns are also changing, with increasingly dry summers and more rain in the fall season. Fog is common during summer months.^{944,945}

Naknek is located on the Alaska Peninsula, close to the Becharof National Wildlife Refuge (NWR) to the south, Katmai National Park and Preserve to the east, and the Alagnak National Wild and Scenic River to the northeast. The Becharof NWR covers an area of 1,157,000 acres and contains Becharof Lake, the second largest lake in Alaska, and Mt. Peulik, a 4,800-ft volcano. Wildlife present in the NWR includes brown bears, caribou, moose, and over 200 species of migratory and resident birds. It also provides an important nursery for Pacific salmon.⁹⁴⁶ Katmai National Park and Preserve is a 7,383-square-mile wilderness area known for its high concentration of brown bears, the volcanoes Mt. Katmai and Mt. Novarupta, and the Valley of 10,000 Smokes. The National Park and Preserve is also a popular sportfishing destination.⁹⁴⁷ The Alagnak River, also known as the “Branch River”, is a 79-mile-long river with headwaters in Katmai National Park and Preserve that joins the Kvichak River at the community of Levelock. Sixty-seven miles of the Alagnak River are designated as wild.⁹⁴⁸ Nearby King Salmon is one of the primary departure points for charter flights to these wilderness destinations.⁹⁴⁹ Minimal traffic passes through Naknek en route, however, as most visitors transfer directly from the airport in King Salmon to transportation with smaller guide services. Many also charter flights directly to the wilderness areas from Anchorage or Homer.⁹⁵⁰

The Kvichak River system, including the Alagnak River and Iliamna Lake, is the single most important source of salmon in the Bristol Bay area, providing resources for commercial, subsistence, and recreational fisheries. The Alagnak River attracts a large number of anglers each

⁹⁴² See footnote 935.

⁹⁴³ See footnote 936.

⁹⁴⁴ Ibid.

⁹⁴⁵ Comments about the changing climate patterns provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

⁹⁴⁶ U.S. Fish and Wildlife Service (2011). *Becharof National Wildlife Refuge*. Retrieved December 21, 2011 from <http://becharof.fws.gov/>.

⁹⁴⁷ National Park Service (2011). *Katmai National Park & Preserve*. Retrieved November 17, 2011 from <http://www.nps.gov/katm/>.

⁹⁴⁸ Lake Clark-Katmai Studies Center, National Park Service (n.d.). *Alagnak Wild River: An Illustrated Guide to the Cultural History of the Alagnak Wild River*. Retrieved November 17, 2011 from <http://www.nps.gov/alag/historyculture>.

⁹⁴⁹ Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁹⁵⁰ Information about visitation rates to Naknek provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

year for salmon, Arctic grayling, Arctic char, and lake trout fisheries. The River's rainbow trout fishery has a world-class reputation.⁹⁵¹

Significant mineral resources are present in the Bristol Bay region, including the Pebble copper-gold-molybdenum deposit northwest of Naknek, near Nondalton. The Pebble Mine site is located at the divide between the Koktuli River and Upper Talarik Creek, north of Iliamna Lake.⁹⁵² Northern Dynasty Minerals Limited calls the Pebble deposit, "one of the greatest stores of mineral wealth ever discovered," and estimates that the deposit includes 80.6 billion lb of copper, 107.3 oz of gold, and 5.6 billion lb of molybdenum, including both indicated (high confidence) and inferred (low confidence) deposits.⁹⁵³ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble Mine is copper. Dissolved copper is known to be toxic to fish.⁹⁵⁴ If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.⁹⁵⁵

The immediate Naknek area has no known mineral occurrences, but local potential exists for subsurface oil and gas resources. Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin, which runs along the northern edge of the Aleutian Islands and Alaska Peninsula.⁹⁵⁶ However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007 to 2012 program.⁹⁵⁷ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.⁹⁵⁸

According to the Bristol Bay Coastal Management Plan, the Naknek area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surges, and sea ice. A majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river

⁹⁵¹ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

⁹⁵² Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky (2008). Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's Large Mine Permitting Process. *Alaska Law Review* 25:1.

⁹⁵³ Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

⁹⁵⁴ See footnote 952.

⁹⁵⁵ Pg. 36 in: Duffield, John., Christopher Neher, David A. Patterson, and Oliver S. Goldsmith (2007). *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

⁹⁵⁶ See footnote 951.

⁹⁵⁷ Minerals Management Service (2010). *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

⁹⁵⁸ The White House, Office of the Press Secretary (2010). *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall.⁹⁵⁹

Coastal erosion and land loss are the primary natural hazard concerns in the community of Naknek.⁹⁶⁰ Coastal flooding and erosion is affected by wind, site exposure, and sea ice conditions. The Bristol Bay Coastal Management Plan notes the potential for climate change to augment erosion, as coastal areas of Alaska are freezing later in the season, leaving coastal areas more vulnerable to fall storms and storm surges. Changing temperatures are already beginning to shift the distribution of fish and wildlife, with possible consequences for commercial and subsistence activities.⁹⁶¹

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Naknek as of July 2012.⁹⁶²

Current Economy⁹⁶³

As the political and economic seat of the Bristol Bay Borough, Naknek is the business center for Bristol Bay. Naknek's local economy is driven by seasonal fluctuations of the fishing industry, in particular the huge Bristol Bay sockeye salmon fishery.⁹⁶⁴ Herring and halibut are secondary commercial fish species harvested in the area.⁹⁶⁵ In addition to fishing, other top employers in Naknek in 2010 included the Bristol Bay Borough, the School District, utilities such as Naknek Electric Association and Bristol Bay Telephone Cooperative, Peninsula Airways, the Bristol Bay Housing Authority, state government, and local retailers and restaurants.⁹⁶⁶ Local residents supplement wage employment to some degree with subsistence practices (see the *Subsistence Fishing* section of this profile for more information).⁹⁶⁷

In 2010, more than 100 Naknek residents held commercial fishing permits (see the *Commercial Fishing* section of this profile), and several thousand additional people typically flood the area during the summer salmon fishing season. Millions of lb of frozen salmon are shipped from Naknek in containers each year, and fresh product is trucked over the road between Naknek and King Salmon where jets transport the fish to the lower 48.⁹⁶⁸ Trident Seafoods,

⁹⁵⁹ Glenn Gray and Associates (2008). *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from

http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf.

⁹⁶⁰ Information provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

⁹⁶¹ See footnotes 959 and 960.

⁹⁶² Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁹⁶³ Unless otherwise noted, all monetary data are reported in nominal values.

⁹⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁶⁵ Southwest Alaska Municipal Conference (n.d.). *Bristol Bay Borough*. Retrieved December 21, 2011 from <http://www.swamc.org/html/southwest-alaska/bristol-bay-borough-raquo.php>.

⁹⁶⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹⁶⁷ See footnote 964.

⁹⁶⁸ Details on shipping provided by a Bristol Bay Borough representative during community review of this profile in October 2013.

Ocean Beauty, and other fish processors operate facilities in Naknek.⁹⁶⁹ For more information, see the *Processing Plants* section of this profile.

Based on household surveys conducted for the 2006-2010 ACS,⁹⁷⁰ in 2010, per capita income in Naknek was estimated to be \$30,378 and the median household income was estimated to be \$93,750, compared to \$21,182 and \$53,393 reported in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,⁹⁷¹ the real per capita income in 2000 is shown to have been \$27,854 and the real 2000 median household income was \$70,211. This shows that per capita income stayed stable over the period, while there was a real increase in per capita income. In 2010, Naknek ranked 59th of 305 Alaskan communities with per capita income that year, and 11th out of 299 Alaskan communities with household income data.

However, Naknek's small population size may have prevented the ACS from accurately portraying economic conditions.⁹⁷² An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Naknek in 2010 is \$17,812.⁹⁷³ Although this estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution may be warranted when citing an increase in per capita income in Naknek from 2000 to 2010. During community review of this profile, a representative of the Bristol Bay Borough noted that these estimates are low and would not cover the cost of living in Naknek. It should also be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not reflect the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 70.3% of the Naknek population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. That year, approximately 5.1% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall, and the unemployment rate was estimated to be 7.4%, compared to the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Naknek in 2010 was 9.2%, compared to a statewide unemployment rate estimate of 11.5%.⁹⁷⁴

Also based on the 2006-2010 ACS, the greatest percentage of the Naknek workforce was estimated to be employed in the private sector (48.1%), along with 36.3% in the public sector and 13.1% estimated to be self-employed, and 2.5% working as unpaid family workers. Out of 237 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in the following industries: educational services, health care,

⁹⁶⁹ Ibid.

⁹⁷⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁹⁷¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁹⁷² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁹⁷³ See footnotes 966 and 970.

⁹⁷⁴ See footnote 966.

and social services (34.6%), transportation, warehousing, and utilities (18.1%), professional, scientific, management, and administrative and waste management services (11.8%), and retail trade (11.4%). The occupations in which the greatest percentages of the workforce were estimated to be employed were management/professional (42.4%) and sales/office occupations (23.3%). Between 2000 and 2010, there was a large increase in the percentage of the labor force employed in management/professional occupations, and a commensurate decrease in employment in service occupations. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. In 2010, only 3.8% of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining industries. Although 28 workers were estimated to be employed in natural resource/construction/maintenance occupations (20.9%), a breakdown of this category reveals that only 4 individuals were employed in the census category, “farming, fishing, and forestry occupations” (1.7% of the total labor force).

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 258 employed residents in Naknek in 2010, of which 32.6% were employed in local government, 26.7% in trade, transportation, and utilities, 6.6% in financial activities, 6.6% in leisure and hospitality, 5.8% in construction, 4.7% in information, 3.9% in professional and business services, 3.9% in education and health services, 3.9% in state government, 3.5% in manufacturing, 1.2% in natural resources and mining, and 0.8% in other industries.⁹⁷⁵ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Naknek (U.S. Census).

⁹⁷⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

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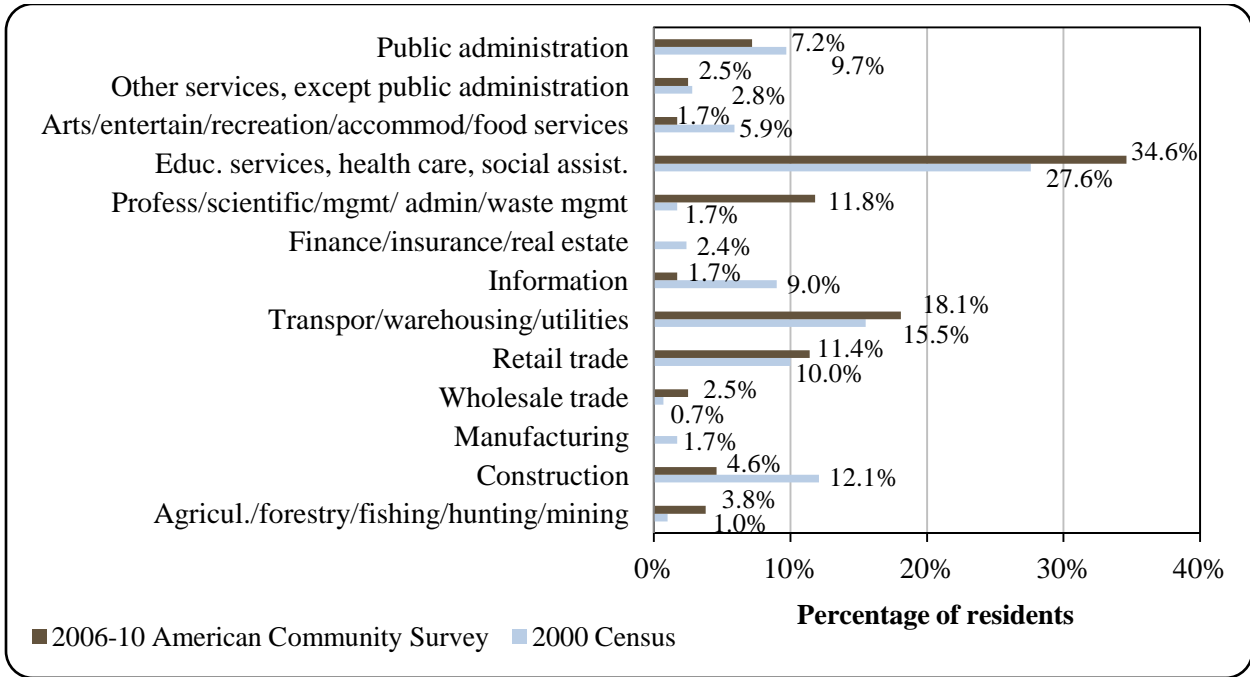
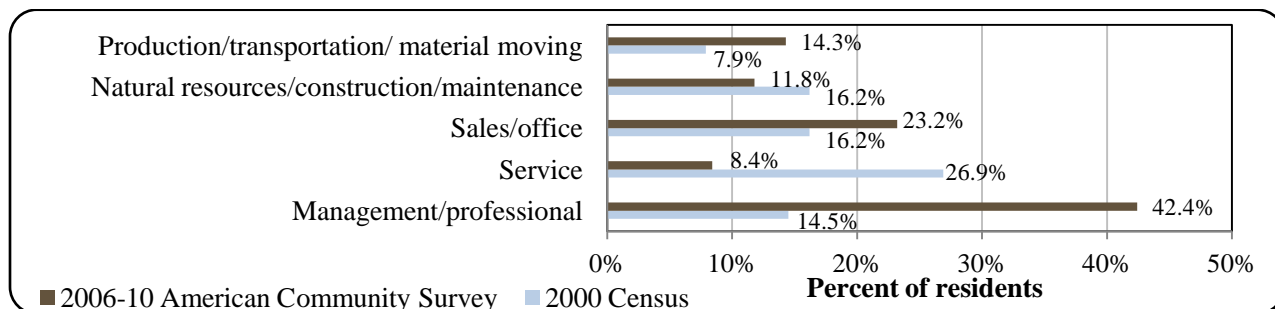


Figure 4. Local Employment by Occupation in 2000-2010, Naknek (U.S. Census).



Governance

Naknek is an unincorporated community in the Bristol Bay Borough. The Borough was incorporated in 1962, making it the first borough in Alaska. It is also one of the smallest boroughs in the State. It contains three CDPs – Naknek, South Naknek, and King Salmon. The seat of the Bristol Bay Borough is located in Naknek.⁹⁷⁶

As of 2013, the Bristol Bay Borough did not administer a sales tax, but did levy a 12 mills property tax, 3% raw fish tax, and 12% bed tax (transient occupancy tax).^{977,978} In addition to tax revenues, other locally-generated income sources received by the Bristol Bay Borough between 2000 and 2010 included building and equipment rental income, charges for services provided by the Borough such as water and sewer, ambulance fees, and pool fees, land sales, building permit fees, and investment income. Outside revenue sources included state and federal grants and revenue sharing programs, as well as some state contracts including jail and special services contracts. State of Alaska sources of shared revenue during the 2000-2010 period included the State Revenue Sharing program from 2000 to 2003, the Community Revenue Sharing program in 2009 and 2010, municipal energy assistance, and state fish tax refunds (see the *Fisheries-Related Revenue* section of this profile for more information). Federal shared revenue sources included funds from the Payment In Lieu of Taxes program. A variety of special project and capital project grants were also received from the state and federal governments during this period.⁹⁷⁹ Fisheries-related grants were received for projects including Port of Bristol Bay dock engineering, expansion and repair, dock equipment, the design and development the Fisherman’s Dock and Industrial Park, and funding for a Bristol Bay Salmon Camp.⁹⁸⁰ A majority of this funding was received by Naknek community entities, while the Borough

⁹⁷⁶ Southwest Alaska Municipal Conference. (n.d.) *Bristol Bay Borough*. Retrieved October 21, 2013 from <http://www.swamc.org/html/southwest-alaska/bristol-bay-borough-raquo/bristol-bay-borough.php>.

⁹⁷⁷ Alaska Department of Commerce, Community, and Economic Development. 2013. *Alaska Taxable 2012*. Retrieved October 18, 2013 from <http://commerce.alaska.gov/dnn/Portals/4/pub/OSA%20TAXABLE%202012%20-%20FINAL%202013-02-05.pdf>.

⁹⁷⁸ Tax information updated by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

⁹⁷⁹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

⁹⁸⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

received \$70,671 in 2008 toward purchase of land for development of the Fisherman’s Dock and Industrial Park. Information regarding selected community revenue sources is found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Bristol Bay Borough, including Naknek, from 2000 to 2010.

Year	Total Borough Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{1,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$7,175,572	n/a	\$29,923	n/a
2001	\$6,318,332	n/a	\$27,975	\$39,918
2002	\$4,801,219	n/a	\$27,960	\$84,895
2003	\$4,163,996	n/a	\$28,013	\$174,900
2004	\$6,098,710	n/a	n/a	n/a
2005	\$4,213,625	n/a	n/a	\$213,930
2006	\$5,475,184	n/a	n/a	n/a
2007	\$6,248,803	n/a	n/a	\$400,000
2008	\$8,374,133	n/a	n/a	\$1,770,671
2009	\$8,489,105	n/a	\$498,484	\$3,740,000
2010	\$8,839,652	n/a	\$497,231	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

In addition to the Borough, Naknek Native Village serves as a governing body for the Native population in the community. Naknek Native Village was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized by the Bureau of Indian Affairs. The Native village corporation is Paug-Vik Incorporated, Limited, which manages 115,000 acres of land. The regional Native corporation to which Naknek belongs is the Bristol Bay Native Corporation.⁹⁸¹

Naknek Native Village is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.⁹⁸² The BBNA is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁹⁸³

⁹⁸¹ See footnote 978.

⁹⁸² Bristol Bay Native Association (n.d.). *BBNA homepage*. Retrieved November 16, 2011 from www.bbna.com.

⁹⁸³ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham and King Salmon. Nearby King Salmon also hosts offices of the National Park Service and U.S. Fish and Wildlife Service, and Dillingham has an office of the Alaska Department of Commerce, Community, and Economic Development's Division of Community and Regional Affairs. Kodiak and Homer have the nearest National Marine Fisheries Service (NMFS) offices. However, the Anchorage office of NMFS may be more easily accessible for the people of the Bristol Bay region. The Alaska Department of Natural Resources and the U.S. Bureau of Citizenship and Immigration Services also have offices in Anchorage.

Infrastructure

Connectivity and Transportation

Naknek is accessible both by air and sea. The main road in Naknek, the Alaska Peninsula Highway, connects overland to King Salmon, approximately 15 miles to the east. Scheduled Alaska Airlines and Peninsula Air commercial flights serve the King Salmon airport, including summer jet service.^{984,985} The airport has a state-owned 8,901-ft by 150-ft asphalt runway.⁹⁸⁶ The price of a roundtrip ticket by plane from King Salmon to Anchorage in early June of 2012 was \$425.⁹⁸⁷ The state-owned Naknek Airport is located one mile north of Naknek. It has a 1,950-ft-long by 50-ft-wide lighted gravel runway, a 1,850-ft-long and 45-ft-wide gravel runway, and 2,000-ft floatplane landing area, and is open to general aviation and air taxi service. A private 1,700-ft-long by 60-ft-wide gravel cross strip is also available at Tibbetts Field, located south of the Naknek Airport, just off the Alaska Peninsula Highway.^{988,989}

The Borough operates a cargo dock at Naknek, which is the Port of Bristol Bay. It has 800 ft of berthing space, a concrete surface, and several cranes. No commercial docking facilities are available at the canneries. Pickup trucks and cars are common, and taxis are available.⁹⁹⁰

Facilities

A majority of public and private buildings in Naknek have individual wells. A community well source is also available for the HUD public housing project, operated by the Naknek Village Council. Most homes are fully plumbed with a piped sewer system that feeds into a sewage lagoon operated by the Bristol Bay Borough. Some homes have individual septic tanks, and the Borough is available to provide septic pumping services. Some of the collective sewage network is shared with the nearby community of King Salmon. The community landfill is operated by the Borough, and private refuse collection services are provided by Patterson Sanitation Company. Electricity is provided to the community by a diesel powerhouse operated

⁹⁸⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁸⁵ Information about summer jet service updated by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

⁹⁸⁶ Airport information retrieved December 20, 2011 from <http://www.airnav.com/>.

⁹⁸⁷ This price was calculated on November 21, 2011 using kayak.com.

⁹⁸⁸ See footnote 986.

⁹⁸⁹ See footnote 984.

⁹⁹⁰ Ibid.

by the Naknek Electric Association. The Borough Police Department headquarters are located in King Salmon. The Department provides local police services throughout the Borough area, including Naknek and South Naknek.^{991,992} An Alaska State Trooper post is also located in King Salmon.⁹⁹³ A variety of facilities are available to accommodate tourists in Naknek. These include retail stores, hotels, restaurants, a public library, public beaches, fishing lodges, boat rentals, sport rentals including ATVs and kayaks, and a U.S. post office. Local telephone and cable services are offered by Bristol Bay Telephone Cooperative (BBTC), and internet service is provided by GCI. Cellular service is available via BBTC or GCI.⁹⁹⁴

Fishing-related facilities in Naknek include the Port of Bristol Bay, which consists of a cargo dock operated by the Borough. A fisherman's dock, freight dock, and Industrial Park have recently been completed, and the freight dock is being expanded. A number of cannery facilities are also in operation in Naknek (see the *Processing Plants* section of this profile). Two public boat launches are available: one in Naknek and one in King Salmon.⁹⁹⁵

Medical Services

Local health care is provided at the Camai Community Health Center and the Naknek Clinic. The Camai Community Health Center is operated through grant funding under the municipal guidance of the Bristol Bay Borough. The Naknek Clinic is located in the Naknek Native Village Council Building. It is operated by the Bristol Bay Area Health Corporation (BBAHC), primarily on behalf of Naknek Village tribal members. The Naknek clinic is staffed by health aides and supported by BBAHC doctors.⁹⁹⁶ Emergency Services have coastal, river, floatplane, and air access, as well as limited highway access. Ambulance and EMT services are provided by the Bristol Bay Borough Fire Department, which is supported by volunteers as well as paid staff. Emergency service is provided through a 911 Telephone System.⁹⁹⁷ The nearest hospital is located in Dillingham.

Educational Opportunities

Naknek is within the Bristol Bay Borough School District. The Bristol Bay Borough School is located in Naknek and also serves students from King Salmon and South Naknek. The Bristol Bay Borough School has an Elementary School wing and a Middle/High School wing. As of 2011, the Elementary School (grades preschool through 6th) was attended by 93 students and had 7 teachers. That same year, the Middle/High School had 85 students and 8 teachers.⁹⁹⁸

⁹⁹¹ Ibid.

⁹⁹² Bristol Bay Borough. (n.d.). *Police*. Retrieved November 8, 2013 from <http://www.bristolbayboroughak.us/administration/police/index.html>.

⁹⁹³ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁹⁹⁴ Information provided by a representative of the Bristol Bay Borough during community review of this profile in October 2013.

⁹⁹⁵ See footnotes 984 and 994.

⁹⁹⁶ See footnote 994.

⁹⁹⁷ See footnotes 984 and 994.

⁹⁹⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

During community review of this profile, a representative of the Bristol Bay Borough noted that enrollment numbers have been steadily decreasing in the Bristol Bay School District system.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Starting in 6,000 B.C., there is evidence of Ocean Bay peoples – ancestors of the Kodiak and Aleutian traditions – living in the Bristol Bay region. These people likely made use of marine resources along the coast. By 400 B.C., there is archaeological evidence of fishing activity by people of the Norton tradition in the Naknek area. Notched pebbles used as sinkers allowed access to fishing sites along the Naknek River where deep swift water made wading impossible.⁹⁹⁹

The present community of Naknek developed alongside the development of the commercial fishing industry in Bristol Bay. An influx of workers arrived from outside Alaska to help in the construction of canneries. The continued need for fishermen and cannery labor led to a practice of importing cannery crews and fishermen from outside Alaska.¹⁰⁰⁰ Historically this contributed to a lack of participation by local Native residents as fishermen in the Bristol Bay salmon fishery, although the start of World War II created a labor shortage in the country and provided an opportunity for local residents to enter the fishery.^{1001,1002} Today, over 80% of the workforce in a majority of Naknek processing facilities consists of non-residents,¹⁰⁰³ and includes many foreign workers.¹⁰⁰⁴

A majority of commercial fishery permit holders in Naknek participate in the Bristol Bay salmon fishery, although many also participate in fisheries for halibut, herring, crab, groundfish, sablefish, and “other shellfish”. The commercial salmon fishery began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of the Bristol Bay region, although several other species are harvested in lower volumes.¹⁰⁰⁵ Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, southwest of the Nushagak River near the Village of Togiak.¹⁰⁰⁶ Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed

⁹⁹⁹ Morris, J. 1985. “The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska.” *Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

¹⁰⁰⁰ Ibid.

¹⁰⁰¹ Ibid.

¹⁰⁰² Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

¹⁰⁰³ Alaska Dept. of Labor and Workforce Development (2011). *Nonresidents Working in Alaska 2009*. Prepared by Jeff Hadland, Economist. Retrieved December 21, 2011 from <http://www.cfec.state.ak.us/plook/>.

¹⁰⁰⁴ Public Radio International’s The World. (2011). *Why Foreign Students are Hired for Alaskan Fish Processing* August 15, 2011). Retrieved December 21, 2011 from <http://www.theworld.org/>.

¹⁰⁰⁵ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁰⁰⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

fishing vessels to undertake longer trips.¹⁰⁰⁷ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission (IPHC).

Naknek is located at the mouth of the Naknek River, which empties into Bristol Bay. The area is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Naknek participates in the Community Development Quota (CDQ) program as a member of the Bristol Bay Economic Development Corporation (BBEDC). The community is not eligible for the Community Quota Entity (CQE) program. The Naknik/Kvichak Advisory Committee for the Alaska Board of Fish (BOF) hosts local meetings in Naknek. The activities of the advisory committee include developing regulatory proposals; evaluating regulatory proposals and making recommendations to the BOF; providing a local forum for fish and wildlife conservation and use, including matters relating to habitat; advising the appropriate regional council on resources; and consulting with individuals, organizations, and agencies.¹⁰⁰⁸

Processing Plants

According to ADF&G's 2010 Intent to Operate list, nine processing facilities were in operation in Naknek. History and current information about the Naknek operations of Alaska General Seafoods, Great Ruby Fish Company, Leader Creek Fisheries, Naknek Family Fisheries, LLC, North Pacific Seafoods, Ocean Beauty Seafoods, Inc., Trident Seafoods Corporation, Wild Alaska Salmon and Seafood, and Yarmarm Knot Fisheries is presented below.

The Alaska General Seafoods (AGS) Naknek cannery is located ¼ mile east of the community of Naknek. A saltery was opened on the site of the current plant in the 1940s by Allen Nelson, and was operated until the mid-1950s. The property was then leased to American Pacific Company, which operated a floating cannery on site. In the late 1950s, Nelson Brothers Fisheries purchased the operations of American Pacific. In 1961, the Nelson Brothers founded the Nelbro Packing Company. The cannery operated under Nelbro Packing Co. until Nelbro's merger with Kanaway Seafoods and Alaska General Seafoods in 1999. Today, Alaska General Seafoods processes pink, sockeye, chum, and coho salmon at its Naknek facility, with an operating season from June 16th to July 22nd. Alaska General provides free room, board, shower, and laundry facilities to its fish processing workforce.¹⁰⁰⁹

Leader Creek Fisheries began operating a seafood processing plant in Naknek in 2000.¹⁰¹⁰ In late 2010, a Canadian company called Canfisco agreed to purchase Leader Creek Fisheries. Canfisco is also the owner of Alaska General Seafoods.¹⁰¹¹ Leader Creek focuses on

¹⁰⁰⁷ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://ww.iphc.int/publications/scirep/Report0005.pdf>.

¹⁰⁰⁸ Southwest Alaska Municipal Conference (2010). *Southwest Alaska Comprehensive Economic Development Strategy*. Prepared for the U.S. Department of Commerce Economic Development Association. Retrieved December 21, 2011 from <http://www.swamc.org/>.

¹⁰⁰⁹ Alaska General Seafoods (2013). *Locations: Naknek*. Retrieved August 9, 2013 from http://www.akgen.com/locations/index_naknek.asp

¹⁰¹⁰ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

¹⁰¹¹ Bluemink, E. December 9, 2013. "Canadian firm acquiring Bristol Bay seafood processor." *Anchorage Daily News*. Retrieved November 8, 2013 from <http://community.adn.com/node/154734>.

processing sockeye salmon from mid-June to as late as mid-August, with a fish processor workforce of up to 450. It also processes herring from late April to mid-May, with an approximate workforce of 150. Leader Creek Fisheries provides free room and board to its fish processor workforce. Facilities and services available to workers including laundry service and shower facilities, a large communal TV and VCR, Wi-fi “hotspot” in the company galley, and free transportation from and to Anchorage or Kodiak. The on-site company store sells items like cigarettes, candy, and phone cards for the local pay phones. As of 2010, Leader Creek hired “a diverse mix of hardworking and motivated men and women from across the country and around the world.” Foreign workers include students on J1 visas from Eastern European countries like Slovakia, the Czech Republic, and Poland, as well as people of other nationalities provided they have appropriate documentation.¹⁰¹² During community review of this profile, a representative of the Bristol Bay Borough noted that Leader Creek Fisheries has expanded its workforce since 2010, and also noted that modifications to the J1 visa program have changed the way that canneries hire their workers. In 2012, the U.S. State Department removed “food manufacturing” from the J-1 program and put new restrictions on working hours. As of 2013, legislation was pending in Congress regarding alternative worker visas.¹⁰¹³

The Great Ruby Fish Co. facility in Naknek primarily processes sockeye salmon.¹⁰¹⁴ According to a survey of plant managers conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, the plant began operations in 2002, and is a small business that employs between six and eight workers during June and July.

Naknek Family Fisheries, LLC was formed by fishing family members from within the village of Naknek. Naknek Family Fisheries processes salmon, and from May through early June it also processes halibut.¹⁰¹⁵

The North Pacific Seafoods Naknek-area plant is known as “Pederson Point”. It is located 3.5 miles north of the village of Naknek, situated on Kvichak Bay. The plant was built in the 1890s as a saltery, and was later converted to a salmon canning operation. The facility was purchased by North Pacific Seafoods in 1983. Currently, the plant processes herring during early May and salmon and salmon roe from mid-June until the end of July. It employs 225 people during peak season. The facility provides free raingear and bunkhouse accommodations (including shared showers) for its fish processor workforce. It also provides free meals to workers.¹⁰¹⁶

Ocean Beauty Seafoods, Inc. originated in 1910 as Washington Fish & Oyster in Seattle and began operations in Alaska in the 1930s. Ocean Beauty purchased its present Naknek facility in 1988. The Naknek facility processes red salmon and herring from late April to mid-August. The facility employs approximately 360 people and offers optional transfer work until September

¹⁰¹² Leader Creek Fisheries (n.d.). *Employment with Leader Creek Fisheries*. Retrieved August, 2011 from <http://leadercreefisheries.com/employment.php>.

¹⁰¹³ Matheson, B. June 24, 2013. “Senate to Consider Reinstating J1 Visa Program for Seafood Processors.” *KDLG Public Radio, Dillingham*. Retrieved November 8, 2013 from <http://kdllg.org/post/senate-consider-reinstating-j1-visa-program-seafood-processors>.

¹⁰¹⁴ Alaska Seafood Marketing Institute (2005). *Supplier Information*. Retrieved August 2011 from <http://alaskaseafood.org/industry/suppliers/detail.cfm?Supplier=317>.

¹⁰¹⁵ Naknek Family Fisheries (2007). *Our Family Tradition*. Retrieved August, 2011 from <http://naknefish.com/>.

¹⁰¹⁶ North Pacific Seafoods (n.d.). *Production Facilities: Pederson Point*. Retrieved August, 2011 from http://northpacificseafoods.com/index.php?option=com_content&task=view&id=41&Itemid=51.

5th. Ocean Beauty offers free laundry service to its fish processing workforce, as well as raingear, boots, gloves, and safety equipment.¹⁰¹⁷

Trident Seafoods Corporation was founded in 1973 and its North Naknek facility is located on the Naknek River, across the river from the company's South Naknek boat storage facility. The North Naknek plant processes canned, frozen, and fresh sockeye salmon during the summer season, which ranges from mid-June through the end of July. Plant employment varies between 200 and 225 employees. Trident offers room and board (including shared bathroom facilities) at a nominal charge and free air transportation from and to Seattle to its fish processing workers, provided they fulfill their contractual obligations.¹⁰¹⁸

According to the 2011 survey of plant managers conducted by the AFSC, Wild Alaska Salmon and Seafood is a small processor that began operations in Naknek in 2008. The survey also found that the plant employs a total of 12 workers between June and September. The plant specializes in sockeye salmon more than any other salmon or fish.¹⁰¹⁹

The Yardarm Knot Fisheries facility, known as Red Salmon Cannery, processes herring from mid-April to mid-May and salmon (sockeye, Chinook, and chum) from mid-June to late July. The facility was constructed in the early 1920s by Red Salmon Canning Company. Freezing capacity was added in 1985, and Yardarm Knot Fisheries upgraded both the freezing and cannery operating in 2004 and 2005. At the peak of the salmon season, Yardarm Knot employs a workforce of approximately 450 employees. The facility provides room and board (including shared bathroom facilities) for free to its fish processing workforce. Yardarm Knot also provides free air transportation from and to Anchorage or Seattle if workers fulfill their contractual obligations.¹⁰²⁰

It is important to note that, in addition to the processing facilities listed above that were in operation in 2010, two new plants were under construction in Naknek as of 2013. Sitka-based Silver Bay Seafoods was in the process of constructing a Naknek plant, and hoped to begin operations in the 2014 season. The fishermen-owned company hoped to process a large portion of the salmon from the Bristol Bay drift gillnet fishery, as well as herring from the Togiak sacroe fishery.¹⁰²¹ In addition, during community review of this profile in October 2013, a representative of the Bristol Bay Borough noted that Extreme Seafoods is constructing a new plant in Naknek.

Fisheries-Related Revenue

Between 2000 and 2010, the primary sources of revenue to the Bristol Bay Borough that were directly tied to fisheries included income from both a borough and a state raw fish tax, as well as revenue sharing from the state Fisheries Business Tax. Based on information reported in the Bristol Bay Borough's yearly audits, the local raw fish tax remained a more stable source of

¹⁰¹⁷ Ocean Beauty Seafoods (n.d.). *Production locations: Naknek, Alaska*. Retrieved August, 2011 from <http://www.oceanbeauty.com/about/naknek.htm>.

¹⁰¹⁸ Trident Seafoods (2011). *Alaska Plants*. Retrieved August, 2011 from http://www.tridentseafoods.com/company/plants_alaska.php.

¹⁰¹⁹ Wild Alaska Salmon and Seafood (2010). *Homepage*. Retrieved August, 2011 from <http://www.wildalaskasalmonandseafood.com>.

¹⁰²⁰ Yardarm Knot Inc. (n.d.) *Red Salmon Cannery*. Retrieved August, 2011 from <http://yardarm.net/>.

¹⁰²¹ Mason, M. December 26, 2012. "Silver Bay to open Bristol Bay plant in '14." *KCAW Public Radio, Sitka*. Retrieved November 8, 2013 from <http://www.kcaw.org/2012/12/26/silver-bay-to-open-bristol-bay-plant-in-14/>.

revenue than the state raw fish tax through the decade, and the shared Fisheries Business Tax increased in importance over time, rising to \$1.5 million per year in several later years of the period. Information about fisheries-related revenue sources is presented in Table 3.

It is important to note that the BBEDC uses fisheries revenue from the CDQ program to provide grants for infrastructure, fuel, and electrical assistance to member communities. The BBEDC also offers educational scholarships, vocational training, and fishing permit acquisition and financing assistance to residents of its member communities.¹⁰²²

Commercial Fishing

Naknek is a hub of commercial fishing activity in Bristol Bay. A large fishing fleet is based in Naknek. In 2010, 251 vessels were homeported in Naknek, and 942 vessels landed catch in the community (Table 5). Permit holders come from all over Alaska and the rest of the country each summer to work in the salmon set and drift gill net fisheries. In 2010, over half of the current permit holders were from Alaska and another quarter were from Washington State. The remaining permit holders came from every corner of the country, with particular representation from California, Oregon, Montana, Minnesota, and Idaho.¹⁰²³ The processing sector also draws employees from a wide geographical area. Over 80% of the workforce in a majority of Naknek processing facilities were non-Alaska residents,¹⁰²⁴ continuing the early tradition of importing labor to work in this fishery.^{1025,1026} Today, processing labor includes many foreign workers as well.¹⁰²⁷

Naknek was among the top ports in Alaska in landings and ex-vessel revenue in 2010, ranking 10th in landings and 7th in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings. That year, 66,678,398 net lb of salmon were landed at Naknek processing facilities, generating \$61,939,904 in ex-vessel revenue. Herring and halibut were also landed during some years between 2000 and 2010 in Naknek. For most years information about herring and halibut landings and ex-vessel revenue is considered confidential due to the small number of participants, with the exception of herring landings in 2000. That year, 4,619,819 net lb of herring were landed in Naknek, representing an ex-vessel value of \$20,277,288. Information about landings and ex-vessel revenue generated in Naknek is presented in Table 9.

Residents of Naknek participated in state and federal fisheries as vessel owners, permit and quota share account holders, and crew members. In 2010, 116 Naknek residents held commercial fishing crew permits and 50 fishing vessels were primarily owned by residents

¹⁰²² Bristol Bay Economic Development Corporation. *Annual Report 2010*. Retrieved November 16, 2011 from <http://www.bbcdc.com>.

¹⁰²³ Alaska Dept. of Fish and Game (n.d.). *CFEC Public Lookup Database*. Retrieved December 21, 2011 from <http://www.cfec.state.ak.us/plook/>.

¹⁰²⁴ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁰²⁵ Morris, Judith (1985). The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska. *Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

¹⁰²⁶ Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

¹⁰²⁷ See footnote 1024.

(Table 5). Naknek vessel owners landed 3,198,634 net lb of salmon in 2010 (including all delivery locations), valued at \$2,768,181 in ex-vessel revenue. Other landings and ex-vessel revenue are considered confidential that year due to the small number of participants. Information about salmon harvest by Naknek residents was reported for all years, while herring and halibut landings were only reported for some years. From 2000 to 2003, Naknek vessel owners landed an average of 546,269 net lb of herring per year, earning an average of \$47,784 in ex-vessel revenue. In the year 2000, Naknek vessel owners landed 64,516 net lb of halibut, earning \$159,281 in ex-vessel revenue. Landings and ex-vessel revenue earned by Naknek vessel owners are presented in Table 10.

In 2010, a total of 125 Naknek residents held 127 state-issued Commercial Fisheries Entry Commission (CFEC) permits. A majority of these permits (119) were held for Bristol Bay salmon drift and set gill net fisheries. Of these, 105 were actively fished in 2010. The number of salmon permit holders and total salmon permits decreased slightly between 2000 and 2010, from 131 permit holders and 127 permits in 2000 to 123 permit holders and 119 permits held in 2010. The percentage of salmon permits fished did not change substantially over this period. Other CFEC permits held in 2010 included three herring permits held by three individuals (Norton Sound herring roe and food/bait fishery; one permit fished in 2010), two halibut permits held by two individuals (statewide halibut fishery; longline vessel under 60 ft; one permit actively fished in 2010), one crab permit held by one individual (Norton Sound king crab fishery; pot gear; vessel under 60 ft; permit actively fished in 2010), one sablefish permit held by one individual (statewide sablefish fishery; longline vessel under 60 ft; one permit actively fished in 2010), and one “other shellfish” permit held by one individual in the Southeast Alaska sea urchin dive fishery (not actively fished in 2010).

It is important to note that several Naknek residents held groundfish CFEC permits in earlier and middle years of the decade. In 2000, 2004, and 2005, the groundfish permits were held in the Gulf of Alaska mechanical jig fishery, while the permit issued in 2001 was for the groundfish longline fishery. It is also important to note dramatic declines in the number of permits and permit holders in several fisheries in Naknek between 2000 and 2010. In the herring fishery, numbers declined from 29 permits held by 20 Naknek permit holders in 2000 to 3 permits and permit holders in 2010. In the halibut fishery, 17 permits were held by 17 permit holders in 2000, declining to 2 permits and permit holders in 2010. CFEC permit information is presented in Table 4.

Between 2003 and 2010, one active License Limitation Program permit (LLP) was held by a Naknek resident each year in a federal crab fishery, and one inactive Federal Fisheries Permit (FFP) was held between 2000 and 2005. No LLPs were held in federal groundfish fisheries during the decade (Table 4). In 2000, five Naknek residents held quota share accounts in the federal halibut catch share fishery, declining to two by 2010. The annual halibut individual fishing quota (IFQ) allotment also declined over the period. No quota share accounts were held by Naknek residents in federal crab or sablefish catch share fisheries during this period. Information about federal catch share participation is presented in Tables 6 through 8.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Bristol Bay Borough: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Borough raw fish tax ¹	\$1,376,536	\$529,759	\$337,112	\$131,111	\$311,369	\$464,884	\$729,623	\$838,199	\$1,143,108	\$1,587,484	\$1,170,907
State raw fish tax ¹	\$789,759	\$1,439,586	\$918,305	\$504,399	n/a	n/a	n/a	n/a	n/a	n/a	n/a
State Shared Fisheries Business Tax ¹	\$8,232	\$14,275	\$12,108	n/a	\$393,836	\$460,752	\$834,661	\$1,178,357	\$29,353	\$1,581,617	\$1,559,831
State Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue received by the Bristol Bay Borough⁴</i>	<i>\$2,174,527</i>	<i>\$1,983,620</i>	<i>\$1,267,525</i>	<i>\$635,510</i>	<i>\$705,205</i>	<i>\$925,636</i>	<i>\$1,564,284</i>	<i>\$2,016,556</i>	<i>\$1,172,461</i>	<i>\$3,169,101</i>	<i>\$2,730,738</i>
<i>Total municipal revenue reported by the Bristol Bay Borough⁵</i>	<i>\$7,175,572</i>	<i>\$6,318,332</i>	<i>\$4,801,219</i>	<i>\$4,163,996</i>	<i>\$6,098,710</i>	<i>\$4,213,625</i>	<i>\$5,475,184</i>	<i>\$6,248,803</i>	<i>\$8,374,133</i>	<i>\$8,489,105</i>	<i>\$8,839,652</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the Bristol Bay Borough reports each year in its audit. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Naknek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	1	1	1	1	1	1	1	1
	Active permits	0	0	0	1	1	1	1	1	1	1	1
	% of permits fished	-	-	-	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	0	0	0	1	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	1	1	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	-	-	-	-	-
	Total permit holders	1	1	1	1	1	1	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	1	1	1	1	1	1	1	1
	% of permits fished	-	-	0%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	0	0	1	1	1	1	1	1	1	1	1
Other shellfish (CFEC) ²	Total permits	0	0	0	0	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	1	1	1	1	1	1	1
Halibut (CFEC) ²	Total permits	17	12	12	12	9	9	6	7	4	2	2
	Fished permits	4	2	2	3	3	2	2	2	0	1	1
	% of permits fished	24%	17%	17%	25%	33%	22%	33%	29%	0	50%	50%
	Total permit holders	17	12	12	12	9	9	6	7	4	2	2
Herring (CFEC) ²	Total permits	29	26	17	13	10	9	11	7	5	2	3
	Fished permits	17	14	9	4	2	2	2	0	0	0	1
	% of permits fished	59%	54%	53%	31%	20%	22%	18%	0%	0%	0%	33%
	Total permit holders	20	17	13	11	8	8	9	6	4	2	3

Table 4 cont'd. Permits and Permit Holders by Species, Naknek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	1	1	1
	% of permits fished	-	-	-	-	-	-	-	-	100%	100%	100%
	Total permit holders	0	0	0	0	0	0	0	0	1	1	1
Groundfish (CFEC) ²	Total permits	2	1	0	0	2	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	-	-	0%	0%	-	-	-	-	-
	Total permit holders	2	1	0	0	2	1	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	127	122	125	124	120	119	119	119	119	119	119
	Fished permits	121	108	98	106	101	106	108	108	104	101	105
	% of permits fished	95%	89%	78%	85%	84%	89%	91%	91%	87%	85%	88%
	Total permit holders	131	129	130	130	121	130	126	125	123	126	123
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>175</i>	<i>161</i>	<i>155</i>	<i>150</i>	<i>143</i>	<i>140</i>	<i>138</i>	<i>135</i>	<i>131</i>	<i>126</i>	<i>127</i>
	<i>Fished permits</i>	<i>142</i>	<i>124</i>	<i>109</i>	<i>114</i>	<i>107</i>	<i>111</i>	<i>113</i>	<i>111</i>	<i>106</i>	<i>104</i>	<i>109</i>
	<i>% of permits fished</i>	<i>81%</i>	<i>77%</i>	<i>70%</i>	<i>76%</i>	<i>75%</i>	<i>79%</i>	<i>82%</i>	<i>82%</i>	<i>81%</i>	<i>83%</i>	<i>86%</i>
	<i>Permit holders</i>	<i>132</i>	<i>132</i>	<i>133</i>	<i>130</i>	<i>123</i>	<i>131</i>	<i>128</i>	<i>126</i>	<i>124</i>	<i>128</i>	<i>125</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Naknek: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Naknek ²	Total Net Lb Landed In Naknek ^{2,5}	Total Ex-Vessel Value Of Landings In Naknek ^{2,5}
2000	161	17	13	72	312	912	35,571,247	\$20,724,575
2001	157	3	11	64	286	308	-	-
2002	120	18	9	63	246	432	9,768,235	\$4,678,612
2003	117	17	9	72	260	517	21,750,985	\$11,078,875
2004	109	18	10	64	249	552	29,305,128	\$14,949,781
2005	106	22	15	58	242	663	45,067,021	\$27,223,900
2006	120	16	10	56	258	820	44,789,762	\$27,996,185
2007	111	21	12	56	253	703	53,506,374	\$34,663,590
2008	112	21	12	47	242	772	62,499,589	\$45,848,482
2009	109	23	13	43	246	636	53,982,801	\$40,563,513
2010	116	23	9	50	251	942	66,679,699	\$61,941,233

Note: Cells showing “-” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Naknek: 2000-2010.

Year	Number Of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Lb)
2000	5	147,551	46,094
2001	5	193,826	62,186
2002	4	18,919	2,297
2003	4	63,247	17,395
2004	4	64,598	13,221
2005	4	63,247	12,737
2006	2	7,778	535
2007	2	7,778	501
2008	2	6,921	349
2009	2	6,921	312
2010	2	6,921	284

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Naknek: 2000-2010.

Year	Number Of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island crab Catch Share Program Participation by Residents of Naknek: 2000-2010.

Year	Number Of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-Vessel Revenue, by Species, in Naknek: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	4,619,819	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	30,951,428	-	9,768,235	21,750,985	29,305,128	45,067,021	44,789,762	53,506,374	62,499,589	52,015,163	66,678,398
<i>Total²</i>	<i>35,571,247</i>	-	<i>9,768,235</i>	<i>21,750,985</i>	<i>29,305,128</i>	<i>45,067,021</i>	<i>44,789,762</i>	<i>53,506,374</i>	<i>62,499,589</i>	<i>52,015,163</i>	<i>66,678,398</i>
	<i>Ex-Vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	\$447,288	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$20,277,288	-	\$4,678,612	\$11,078,875	\$14,949,781	\$27,223,900	\$27,996,185	\$34,663,590	\$45,848,482	\$40,413,632	\$61,939,904
<i>Total²</i>	<i>\$20,724,575</i>	-	<i>\$4,678,612</i>	<i>\$11,078,875</i>	<i>\$14,949,781</i>	<i>\$27,223,900</i>	<i>\$27,996,185</i>	<i>\$34,663,590</i>	<i>\$45,848,482</i>	<i>\$40,413,632</i>	<i>\$61,939,904</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-Vessel Revenue, by Species, by Naknek Residents: 2000-2010.

	<i>Total Net Pounds</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	64,516	-	-	-	-	-	-	-	-	-	-
Herring	841,394	679,376	408,375	255,932	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	2,115,873	2,298,785	1,143,290	2,013,733	2,815,380	3,395,241	2,834,125	3,279,465	2,411,253	2,646,197	3,198,634
<i>Total²</i>	<i>3,021,783</i>	<i>2,978,161</i>	<i>1,551,665</i>	<i>2,269,665</i>	<i>2,815,380</i>	<i>3,395,241</i>	<i>2,834,125</i>	<i>3,279,465</i>	<i>2,411,253</i>	<i>2,646,197</i>	<i>3,198,634</i>
	<i>Ex-Vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$159,281	-	-	-	-	-	-	-	-	-	-
Herring	\$84,610	\$54,281	\$30,747	\$21,498	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$1,382,800	\$956,740	\$550,959	\$998,509	\$1,414,045	\$2,056,578	\$1,802,387	\$2,115,838	\$1,741,948	\$1,983,408	\$2,768,181
<i>Total²</i>	<i>\$1,626,690</i>	<i>\$1,011,021</i>	<i>\$581,706</i>	<i>\$1,020,008</i>	<i>\$1,414,045</i>	<i>\$2,056,578</i>	<i>\$1,802,387</i>	<i>\$2,115,838</i>	<i>\$1,741,948</i>	<i>\$1,983,408</i>	<i>\$2,768,181</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses registered in Naknek, although there were licensed sport fish guides present each year except 2005. In 2010, Naknek residents purchased 174 sportfishing licenses (irrespective of point of sale), and 18 sportfishing licenses were sold in the community. Between 2000 and 2010, residents consistently purchased more licenses than the total number of licenses purchased in Naknek, suggesting that residents may travel to other areas or nearby communities to participate in sportfishing activity.

Naknek is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Naknek is also displayed in Table 11.

The Alaska Statewide Harvest Survey,¹⁰²⁸ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Naknek: Chinook, coho, sockeye, and pink salmon, rainbow trout, Dolly Varden char, Arctic grayling, Pacific halibut, “other whitefish”, northern pike, and smelt. The survey also noted sport harvest of razor and hardshell clams in Naknek. No kept/release log book data were reported for fishing charters out of Naknek between 2000 and 2010.¹⁰²⁹

Table 11. Sport Fishing Trends, Naknek: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Naknek ²
2000	0	3	194	42
2001	0	3	193	31
2002	0	3	177	30
2003	0	3	159	54
2004	0	4	161	16
2005	0	0	170	23
2006	0	3	178	20
2007	0	3	165	42
2008	0	2	191	23
2009	0	1	216	39
2010	0	2	174	18

¹⁰²⁸ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁰²⁹ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Naknek: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence resources provide an important supplement to wage employment opportunities for Naknek residents. Local people utilize marine and land-based resources, including salmon, halibut, waterfowl, moose, and caribou.^{1030,1031} Statistics presented in this section relate to marine subsistence resource harvest only. However, it is important to note that during community review of this profile, a representative from the Bristol Bay Borough noted that local participation in subsistence hunting has declined sharply due to changes in Tier II subsistence hunting regulations.

In 2007, the only year that a subsistence survey was conducted by ADF&G in the community of Naknek between 2000-2010, 54% of households were recorded as participating in salmon subsistence activities, 36% in halibut subsistence, 33% used non-salmon fish subsistence (other than halibut), 4% in marine mammal subsistence, and 32% in marine invertebrate subsistence. Per capita, residents of Naknek harvested 142 lb of land and sea-based subsistence

¹⁰³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁰³¹ Information about species utilized updated during community review of this profile in October 2013.

resources that year. This is similar to the 2005 per capita harvest of residents in Levelock, a subsistence-based village north of Naknek on the Kvichak River. Compared to Levelock, a greater percentage of Naknek households participated in halibut and marine invertebrate subsistence activity (36% and 32% respectively, compared to 0% and 19% in Levelock), but fewer households participated in salmon, marine mammal, and non-salmon fish subsistence (not including halibut). Information about per capita subsistence harvest and household participation in subsistence activities is presented in Table 12.

In years for which data were reported between 2000 and 2010, an average of 104 subsistence salmon permits was issued to Naknek households. Sockeye salmon were the primary species harvested using subsistence permits (an average of 9,923 sockeye per year), along with several hundred Chinook, chum, coho, and pink salmon each year. In addition, in 2007, per capita harvest of marine invertebrates was 2,208 lb, and per capita harvest of non-salmon fish was 7,259 lb in Naknek. Information about total subsistence harvest of salmon, marine invertebrates, and non-salmon fish (not including halibut) is presented in Table 13.

Between 2003 and 2010, an average of nine Subsistence Halibut Registration Certificates (SHARC) was issued to Naknek residents. In 2010, nine SHARC cards were issued and one was returned. That year, no information was reported regarding the total lb of halibut harvested. These numbers represent a large decline from the middle of the decade. In 2005, 11 SHARC cards were issued and 8 were returned, with a reported harvest of 598 lb of halibut. Information about subsistence halibut harvest is presented in Table 14.

Information about subsistence harvest of several species of marine mammals was reported between 2000 and 2010. An AFSC study reported beluga whale harvests of between 1 and 4 animals per year (for those years in which information was available), and ADF&G reported harbor seal harvests varying between 6 and 26 animals per year during the 2000-2010 period. No information was reported by management agencies regarding harvest of sea otters, walrus, Steller sea lion, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals is presented in Table 15.

Additional Information

The 1890 Census observed that Bristol Bay was “dotted with the sails of over 100 fishing smacks.” By the early 1900s, sailboats began to be replaced by power boats. In response to an early crash of sockeye runs in 1919, the White Act was passed in 1924. This early fisheries management legislation gave the federal government responsibility for management of the fishery, mandated 50% escapement of the annual salmon run and a 36-hour closed period each week, and banned power boats, purse seines, and fish traps in Bristol Bay.¹⁰³² Sailboats continued to be the only vessel type allowed in the Bristol Bay salmon fishery until the 1950s.^{1033,1034}

¹⁰³² Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

¹⁰³³ Atkinson, C. E. (1988). Fisheries Management: An Historical Overview. *Marine Fisheries Review* 50(4). Retrieved January 23, 2012 from <http://spo.nmfs.noaa.gov/mfr504/mfr50423.pdf>.

¹⁰³⁴ See footnote 1032.

Table 12. Subsistence Participation by Household and Species, Naknek: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	54%	36%	4%	32%	33%	142
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Naknek: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb Of Marine Inverts ²	Lb Of Non-Salmon Fish ²
2000	108	96	311	177	314	177	10,873	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	108	86	359	349	206	885	8,877	n/a	n/a
2005	104	92	383	137	271	19	10,165	n/a	n/a
2006	109	92	434	158	236	514	9,798	n/a	n/a
2007	94	86	249	114	408	82	10,682	2,208	7,259
2008	100	91	335	184	769	417	9,141	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Naknek: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	5	3	40
2004	7	4	28
2005	10	8	598
2006	11	7	422
2007	10	5	75
2008	9	2	21
2009	9	8	n/a
2010	9	1	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Naknek: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	1	n/a	n/a	n/a	n/a	16	n/a
2001	n/a	n/a	n/a	n/a	n/a	15	n/a
2002	n/a	n/a	n/a	n/a	n/a	26	n/a
2003	n/a	n/a	n/a	n/a	n/a	11	n/a
2004	1	n/a	n/a	n/a	n/a	15	n/a
2005	1	n/a	n/a	n/a	n/a	6	n/a
2006	4	n/a	n/a	n/a	n/a	15	n/a
2007	2	n/a	n/a	n/a	n/a	20	n/a
2008	3	n/a	n/a	n/a	n/a	15	n/a
2009	1	n/a	n/a	n/a	n/a	n/a	n/a
2010	1	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

New Stuyahok (STEW-yuh-hawk)



People and Place

*Location*¹⁰³⁵

New Stuyahok is located on the Nushagak River, about 12 miles upriver from Ekwok and 52 miles northeast of Dillingham. The village has been constructed at two elevations, one 25 ft above river level and one about 40 ft above river level. The City encompasses 32.6 square miles of land and 2 square miles of water. New Stuyahok is located in the Dillingham Census Area and the Bristol Bay Recording District.

*Demographic Profile*¹⁰³⁶

In 2010, there were 510 inhabitants in New Stuyahok, making it the 116th largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in U.S. Census records in 1950. Overall between 1990 and 2010, the population of New Stuyahok increased by 30.4%. Most of this growth took place between 1990 and 2000, although the population continued to increase after 2000. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 10.2%, with an average annual growth rate of 1.02%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that a majority of residents live in New Stuyahok on a seasonal basis. They indicated that a larger population is present in the community during spring and summer, and sometimes fall, and that population fluctuations are mostly driven by employment in fishing sectors.

In 2010, a majority of New Stuyahok residents identified themselves as American Indian and Alaska Native (93.5%), while 3.5% identified as White and 2.7% identified with two or more races. That year, 1.2% of New Stuyahok residents also identified themselves as Hispanic. Compared to 2000, individuals identifying as American Indians and Alaska Natives made up 0.7% more of the population in 2010, while those identifying as White made up 0.3% less of the population. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in New Stuyahok was 4.47, a decline from 4.87 persons per household in 2000, but an overall slight increase from 4.40 persons per household in 1990. The number of households in New Stuyahok has increased over time, from 88 in 1990 and 105 in 2000, to 114 occupied housing units in 2010. Of the 130 housing units surveyed for the 2010 U.S. Decennial Census, 58.5% were owner-occupied, 29.2% were rented, and 12.3% were

¹⁰³⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰³⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

vacant or used only seasonally. Between 1990 and 2010, no residents of New Stuyahok lived in group quarters.

In 2010, the gender makeup of New Stuyahok’s population (55.1% male and 44.9% female) was much more weighted toward males compared to the population of the State as a whole, which was 52% male and 48% female. That year, the median age of New Stuyahok residents was 22.5 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, all age groups except 60 to 69 years and 80 years and over had more men than women. In 2010, 10.8% of New Stuyahok’s population was age 60 years or older. The overall population structure of New Stuyahok in 2000 and 2010 is shown in Figure 2.

Table 1. Population in New Stuyahok from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	391	-
2000	471	-
2001	-	489
2002	-	483
2003	-	491
2004	-	472
2005	-	462
2006	-	468
2007	-	446
2008	-	491
2009	-	519
2010	510	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, New Stuyahok: 2000-2010 (U.S. Census).

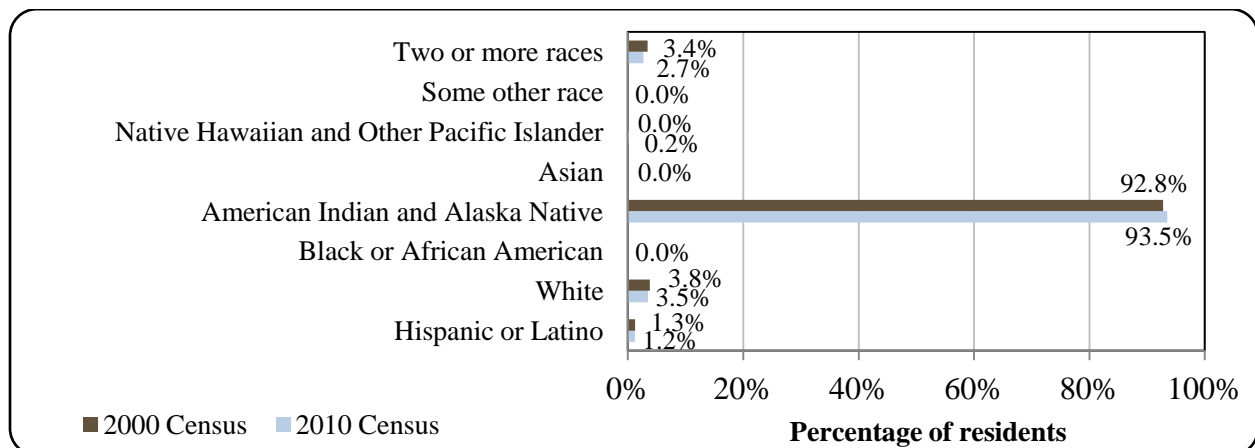
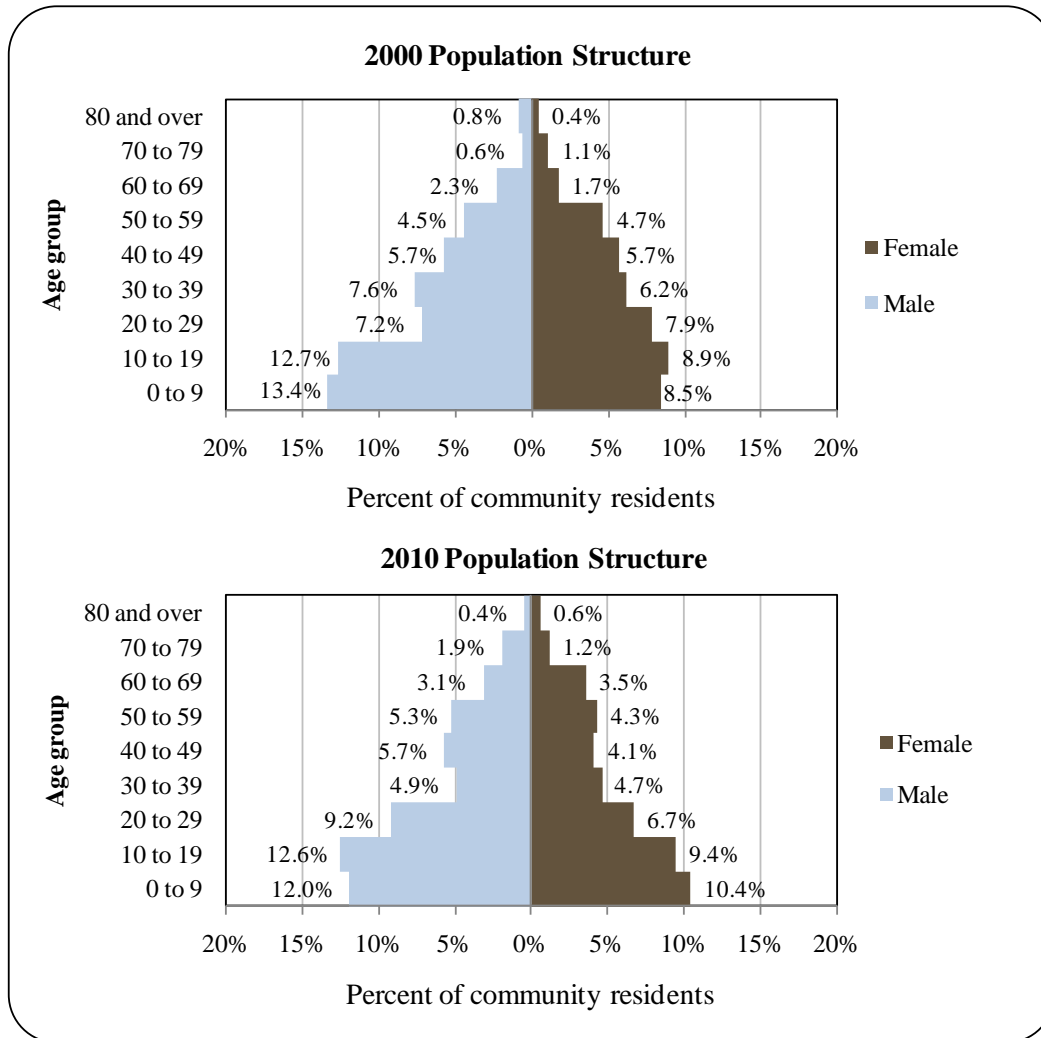


Figure 2. Population Age Structure in New Stuyahok Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁰³⁷ 73.6% of New Stuyahok residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 21.1% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 5.3% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 16.2% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 1.9% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 3% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 3.4%

¹⁰³⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹⁰³⁸

New Stuyahok is a southern Yup'ik Eskimo village with Russian Orthodox influences. Residents practice a fishing and subsistence lifestyle. The present location is the third community site that villagers can remember. The Village moved downriver in 1918 to “Old Stuyahok,” at the confluence of the Mulchatna and Stuyahok Rivers. During the 1920s and 1930s, residents of the Village were engaged in herding reindeer for the U.S. government. However, by 1942, the herd had dwindled to nothing, the Village had been subjected to flooding, and the site was too far inland to receive barge service. In search of an improved location, in 1942 villagers moved downriver to the present site of New Stuyahok. “Stuyahok” is translated as “going downriver place.”

According to New Stuyahok elders, residents initially lived in tents at the present Village site. In 1941, 14 log homes were built. School took place in a tent until Chief Ivan Blunka gave up his log home to be used as a school. The school still bears his name. In 1942, the community constructed a log school. Between 1942 and 1943, residents brought down the existing Russian Orthodox Church from the old site to the present Village site. In 1961, a new school was built and a post office was established. An airstrip was built soon afterward, and the 1960s saw a 40% increase in the village population. The City was incorporated in 1972.

Natural Resources and Environment

New Stuyahok is located in a climatic transition zone. The primary influence is maritime, although a continental climate also affects the weather. Average summer temperatures range from 37 to 66 °F, and winter temperatures average between 4 and 30 °F. Annual precipitation ranges from 20 to 35 inches. Fog and low clouds are common during the summer. Strong winds often preclude access during the winter. The river is ice-free from June through mid-November.¹⁰³⁹

According to a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing and sport hunting and fishing are the most important natural resource-based industries for the local economy. Bristol Bay drainages produce the world's largest runs of sockeye salmon, and the area is productive for other species of salmon and marine fish as well.¹⁰⁴⁰ One of the largest runs of Chinook salmon in Alaska returns to the Nushagak River, but the run is not heavily harvested, partially due to low prices in the region.¹⁰⁴¹ The largest

¹⁰³⁸ City of New Stuyahok (2005). *New Stuyahok Comprehensive Plan*. Retrieved January 12, 2012 from <http://www.commerce.state.ak.us/dca/plans/NewStuyahok-CP-2005.pdf>.

¹⁰³⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁰⁴⁰ Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹⁰⁴¹ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the Village of Togiak.¹⁰⁴²

Significant mineral resources are present in the Bristol Bay region, including the Pebble copper-gold-molybdenum deposit east of New Stuyahok. The Pebble Mine site is located at the divide between the Koktuli River and Upper Talarik Creek, north of Iliamna Lake.¹⁰⁴³ Northern Dynasty Minerals Limited calls the Pebble deposit, “one of the greatest stores of mineral wealth ever discovered,” and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion lb of copper, 66.9 million oz of gold, and 3.3 billion lb of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion lb of copper, 40.4 million oz gold, and 2.3 billion lb of molybdenum.¹⁰⁴⁴ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.¹⁰⁴⁵ According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble Mine is copper. Dissolved copper is known to be toxic to fish.¹⁰⁴⁶ If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.¹⁰⁴⁷

Reserves of oil and natural gas are also thought to be present on the continental shelf in the Bristol Bay Basin, along the northern edge of the Aleutian Islands and Alaska Peninsula.¹⁰⁴⁸ However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007 to 2012 program.¹⁰⁴⁹ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.¹⁰⁵⁰

Wood-Tilchik State Park lies northwest of New Stuyahok. Wood-Tilchik is the largest State Park in the United States, and includes a diversity of terrain and ecosystems. The Wood River and Tilchik River systems host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, Arctic char, Dolly Varden char, and northern pike. Tilchik Lake is an important site for whitefish subsistence harvest. Moose, caribou, and brown bear are common in the park, along with black bear in limited area. Small game present in the area include beaver,

¹⁰⁴² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁰⁴³ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky (2008). Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process. *Alaska Law Review* 25:1.

¹⁰⁴⁴ Northern Dynasty Minerals Limited (2012). *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

¹⁰⁴⁵ See footnote 1040.

¹⁰⁴⁶ See footnote 1043.

¹⁰⁴⁷ Pg. 36 in Duffield, John., Christopher Neher, David A. Patterson, and Oliver S. Goldsmith (2007). *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

¹⁰⁴⁸ See footnote 1040.

¹⁰⁴⁹ Minerals Management Service (2010). *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

¹⁰⁵⁰ The White House, Office of the Press Secretary (2010). *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Signed March 31, 2010. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

muskrat, otter, fox, wolverine, mink, and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.¹⁰⁵¹

According to the Bristol Bay Coastal Management Plan, the New Stuyahok area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surges, and sea ice. A majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall. Coastal flooding and erosion is affected by wind, site exposure, and sea ice conditions. The Management Plan notes the potential for climate change to augment erosion, as coastal areas of Alaska are freezing later in the season, leaving coastal areas more vulnerable to fall storms and storm surges. Changing temperatures also have the potential to shift distribution of fish and wildlife, with possible consequences for commercial and subsistence activities.¹⁰⁵²

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in New Stuyahok as of May 2012.¹⁰⁵³

Current Economy¹⁰⁵⁴

According to a survey conducted by the AFSC in 2011, community leaders reported that 90% of local residents make their living from commercial fishing. In 2010, 28 residents held state Commercial Fisheries Entry Permits (CFEC), primarily for Bristol Bay salmon set and drift gill net fisheries, along with one permit for Bristol Bay herring and one in the Kuskokwim salmon gill net fishery. These permit holders made up 5.5% of the New Stuyahok population in 2010, a reduction from the year 2000, when almost 10.5% of the New Stuyahok population held CFEC permits (see *Commercial Fishing* section). Community leaders also noted in the AFSC survey that sportfishing and hunting are important local industries. The entire community also depends on subsistence harvest of marine and land-based resources, including salmon, moose, caribou, rabbit, ptarmigan, duck, and geese. Subsistence items are often traded between communities.¹⁰⁵⁵

In addition to fisheries, top employers in New Stuyahok in 2010 included Southwest Region Schools, local government offices, local and regional Native corporations and non-profit

¹⁰⁵¹ Alaska Dept. of Natural Resources. (n.d.) Wood-Tilchik State Park website. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

¹⁰⁵² Glenn Gray and Associates (2008). *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf.

¹⁰⁵³ Alaska Dept. of Environmental Conservation (2012). *List of Contaminated Site Summaries By Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁰⁵⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

organizations, the Bristol Bay Housing Authority, and several private companies, including the village store, a construction company, and a home care service company.¹⁰⁵⁶

Based on household surveys conducted for the 2006-2010 ACS,¹⁰⁵⁷ in 2010, the per capita income in New Stuyahok was estimated to be \$10,284 and the median household income was estimated to be \$43,000. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$7,931 and \$26,042, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,¹⁰⁵⁸ per capita income is shown to have remained stable, from a real 2000 per capita income of \$10,429, while there was a real increase in household income, from a real median household income in 2000 of \$34,245. In 2010, New Stuyahok ranked 271st of 305 Alaskan communities with per capita income data that year, and 176th in median household income, out of 299 Alaskan communities with household income data.

However, New Stuyahok's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁰⁵⁹ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Mountain Village in 2010 is \$5,912.¹⁰⁶⁰ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in New Stuyahok between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,¹⁰⁶¹ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a much smaller percentage of New Stuyahok residents was estimated to be in the civilian labor force (43.1%) than the civilian labor force statewide (68.8%). In the same year, 29.3% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 7.4%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the

¹⁰⁵⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁰⁵⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁰⁵⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁰⁵⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁶⁰ See footnotes 1056 and 1057.

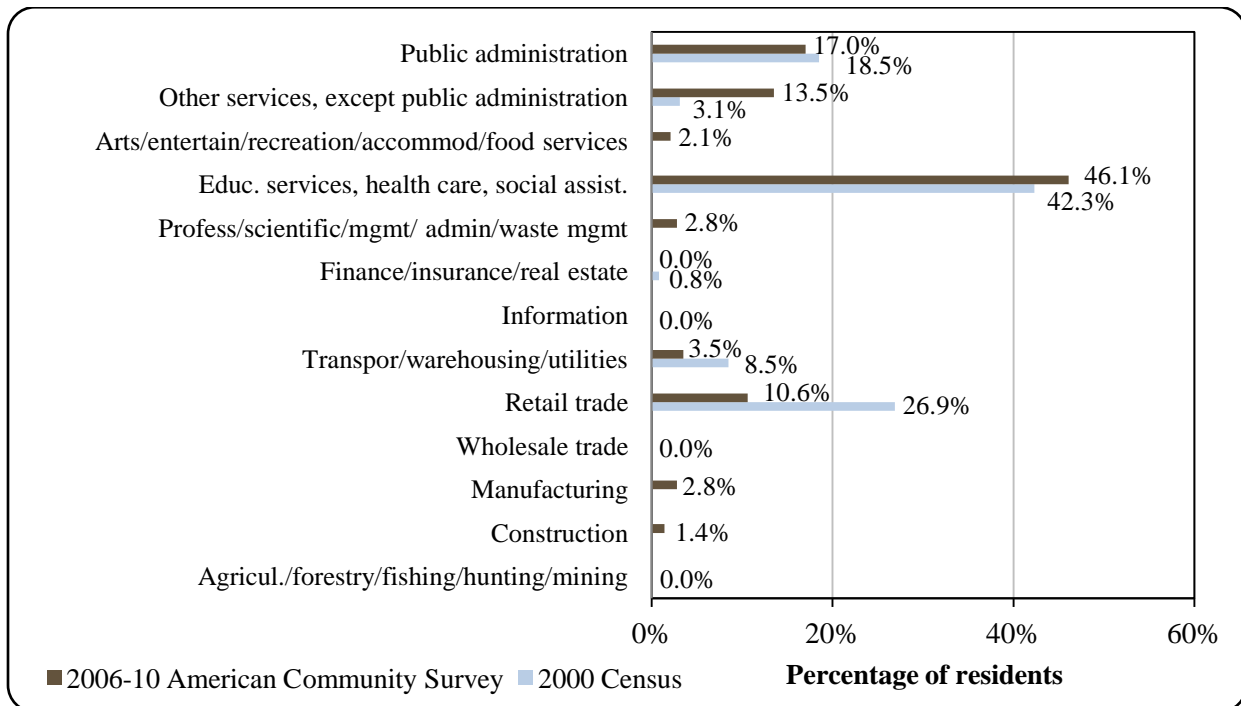
¹⁰⁶¹ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

unemployment rate in New Stuyahok in 2010 was 15.8%, compared to a statewide unemployment rate estimate of 11.5%.¹⁰⁶²

Also based on the 2006-2010 ACS, 54.6% of the New Stuyahok workforce was estimated to be employed in the private sector, and the remaining 45.4% in the public sector. Of the 141 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest numbers were estimated to be working in the following industries: educational services, health care, and social assistance (46.1%), public administration (17%), other services except public administration (13.5%), and retail trade (10.6%). The occupations in which the greatest percentages of the workforce were estimated to be employed were management/professional (35.5%), service (31.9%), and sales/office occupations (21.3%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

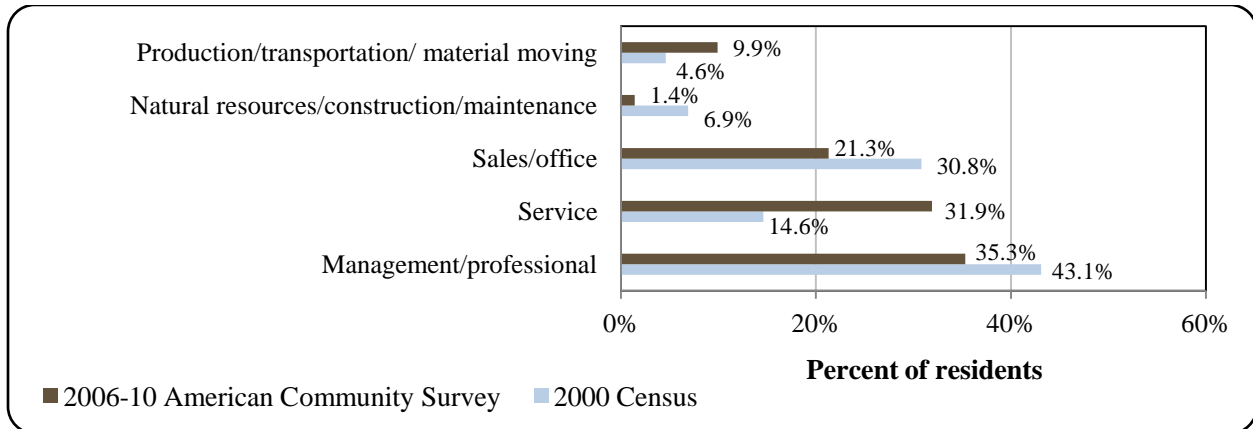
It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. In 2010, none of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining industries, and only two workers (1.4% of the labor force) were employed in natural resource/construction/maintenance occupations. A breakdown of this occupational category reveals that both workers were employed in construction, and zero workers were employed in farming, fishing, and forestry occupations.

Figure 3. Local Employment by Industry in 2000-2010, New Stuyahok (U.S. Census).



¹⁰⁶² See footnote 1056.

Figure 4. Local Employment by Occupation in 2000-2010, New Stuyahok (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 209 employed residents in 2010, of which 43.1% were employed in local government, 18.2% in trade, transportation, and utilities industries, 8.6% in educational and health services, 4.8% in construction, 4.3% in financial activities, 4.3% in leisure and hospitality, 1.9% in manufacturing, 1.9% in professional and business services, 1.4% in state government, 0.5% in natural resources and mining, and 11% in other industries.¹⁰⁶³ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

New Stuyahok was incorporated as a 2nd Class City in 1972. The City is not part of an organized borough. No municipal taxes are administered in New Stuyahok. The City has a Strong Mayor form of government, a seven-person city council, including the mayor, a seven-person advisory school board, and several municipal employees.¹⁰⁶⁴ Total municipal revenue fluctuated between a low of \$79,801 in 2006 and a high of \$265,890 in 2010. Locally-generated revenue sources during the decade included facility lease fees, heavy equipment rental, and water and sewer service fees. Outside revenue sources included State Revenue Sharing contributions of approximately \$25,000 per year between 2000 and 2003, and Community Revenue Sharing contributions in 2009 and 2010 of approximately \$120,000 per year. New Stuyahok also received revenue from the Payment In Lieu of Taxes program, state fisheries taxes (see the *Fisheries-Related Revenue* section of this profile, and special project grants in some years. No information was reported regarding fisheries-related grants received by the City of New Stuyahok. Information about selected aspects of New Stuyahok’s municipal revenue is presented in Table 2.

New Stuyahok was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by

¹⁰⁶³ Ibid.

¹⁰⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

the Bureau of Indian Affairs, is the New Stuyahok Village. The Native village corporation is Stuyahok Natives, Limited, which manages 118,952 acres of land. The regional Native corporation to which New Stuyahok belongs is the Bristol Bay Native Corporation.¹⁰⁶⁵

New Stuyahok is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.¹⁰⁶⁶ The BBNA is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.¹⁰⁶⁷

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of New Stuyahok from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$166,117	n/a	\$25,889	n/a
2001	\$205,103	n/a	\$24,905	n/a
2002	\$175,232	n/a	\$24,907	n/a
2003	\$213,919	n/a	\$25,087	n/a
2004	\$213,919	n/a	n/a	n/a
2005	\$117,409	n/a	n/a	n/a
2006	\$79,801	n/a	n/a	n/a
2007	\$200,131	n/a	n/a	n/a
2008	\$157,863	n/a	n/a	n/a
2009	\$244,246	n/a	\$121,048	n/a
2010	\$265,890	n/a	\$122,029	n/a

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁰⁶⁵ Ibid.

¹⁰⁶⁶ Bristol Bay Native Association (n.d.). BBNA homepage. Retrieved November 16, 2011 from www.bbna.com.

¹⁰⁶⁷ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community, and Economic Development are located in Dillingham. Kodiak has the closest offices of the Alaska Department of Natural Resources, the National Marine Fisheries Service (NMFS), and U.S. Bureau of Citizenship and Immigration Services, although the Anchorage offices of these agencies may be more accessible to people in the Bristol Bay region.

Infrastructure

Connectivity and Transportation

Air transport is the most frequent mode of transportation used to reach New Stuyahok. The state owns a lighted, gravel airstrip in New Stuyahok that is 3,281-ft-long by 98-ft-wide. Regular and charter flights are available from Dillingham.¹⁰⁶⁸ The approximate cost to travel by air roundtrip to Anchorage from New Stuyahok in early June 2012 was \$658.¹⁰⁶⁹ Barges are used to lighter goods to New Stuyahok on a regular basis during the summer. Skiffs, ATVs, and snowmobiles are the prevalent forms of local transportation.¹⁰⁷⁰ According to a survey conducted by the AFSC in 2011, community leaders reported that construction of additional roads is currently underway.

Facilities

Water in New Stuyahok is derived from a well and chlorinated. A majority of housing and facilities, as well as the school, have complete plumbing and are connected to a piped water and sewer system that was installed in 1971.¹⁰⁷¹ In a survey conducted by the AFSC in 2011, community leaders reported that additional water and sewer pipelines are expected to be completed in the next decade. Some homes use individual wells, and a community well is available with multiple watering points. Some individual septic tanks are in use. A sewage lagoon is used for sewage treatment, and there is also a sewage lift station in the City. The City of New Stuyahok operates a landfill and provides refuse collection services.¹⁰⁷² In the 2011 AFSC survey, community leaders noted that construction of a new landfill/solid waste site is expected to be completed in 2012. A diesel powerhouse, operated by AVEC (the Alaska Village Electric Cooperative), provides electricity in New Stuyahok. Telephone and internet service is available in the community, but no cable provider offers local service.¹⁰⁷³ In the 2011 AFSC survey, community leaders indicated that alternative energy opportunities are being explored and expected to come online within 3 years.

The Village Council operates a washeteria¹⁰⁷⁴ in the community. Other community facilities include City Hall and a City Public Safety Building, a community center, recreational

¹⁰⁶⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁰⁶⁹ This price was calculated on November 21, 2011 using kayak.com.

¹⁰⁷⁰ See footnote 1068.

¹⁰⁷¹ Ibid.

¹⁰⁷² Ibid.

¹⁰⁷³ Ibid.

¹⁰⁷⁴ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

facilities, and a library at the school.¹⁰⁷⁵ Public safety services are provided by two VPSOs (Village Public Safety Officers) stationed in New Stuyahok.¹⁰⁷⁶ The nearest state trooper posts are in Dillingham and King Salmon.¹⁰⁷⁷ In the 2011 AFSC survey, community leaders reported that a fire department and police station are expected to be completed within the next decade. They also noted that New Stuyahok has a post office, and local public services include a food bank, job placement services, and publicly subsidized housing.

With regard to fishing-related infrastructure, in the 2011 AFSC survey, community leaders reported that moorage is available in New Stuyahok for private vessels up to 32 ft in length, but no public dock space is available for vessel moorage. New Stuyahok is only capable of handling fuel barges and private boats and skiffs. They said that tackle sales and dry dock storage are available in the Village, and haul-out facilities are expected to be completed within the next 2 years. Community leaders also said that New Stuyahok residents travel to Dillingham to access fisheries-related businesses and services not available locally.

Medical Services

A local health clinic is owned by the Village Council and operated by the Bristol Bay Area Health Corporation. The New Stuyahok Clinic is a Community Health Aide Program site. Emergency Services have river and air access. Emergency service is provided by volunteers and a health aide.¹⁰⁷⁸ The nearest hospital is located in Dillingham.

Educational Opportunities

There is one school in the community, which offers preschool through 12th grade instruction. As of 2011, the Chief Ivan Blunka School had a total of 152 students and 14 teachers.¹⁰⁷⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence fishing activities have been important to residents of the New Stuyahok area for thousands of years. The Nushagak region was historically inhabited by a coastal population that combined fishing and hunting of marine mammals, and an interior population that focused on hunting and fishing with frequent trips to the coast, especially during summer months.¹⁰⁸⁰ Today, a combination of commercial and subsistence harvest of marine resources provide the

¹⁰⁷⁵ See footnote 1068.

¹⁰⁷⁶ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

¹⁰⁷⁷ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.state.ak.us/ast/detachments.aspx>.

¹⁰⁷⁸ See footnote 1068.

¹⁰⁷⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰⁸⁰ VanStone, James W. (1968). An Annotated Ethnographic Bibliography of the Nushagak River Region, Alaska." *Anthropology*, v. 54, no. 2. Field Museum of Natural History. Chicago.

foundation for New Stuyahok’s economy.¹⁰⁸¹ In 2010, New Stuyahok residents held permits in salmon and herring fisheries (see *Commercial Fishing* section).

The commercial salmon fishery began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of the Bristol Bay region, although several other species are harvested in lower volumes. One of the largest runs of Chinook salmon in Alaska occurs in the Nushagak River.¹⁰⁸² Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, southwest of New Stuyahok near the village of Togiak.¹⁰⁸³

New Stuyahok is located on the Nushagak River which empties into Bristol Bay. This marine area is encompassed by the Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and Bering Sea Sablefish Regulatory Area. Because New Stuyahok is located more than 50 miles from the coast, the community is not eligible to participate in the Community Development Quota (CDQ) program. It is also not eligible to participate in the Community Quota Entity (CQE) program. According to a survey conducted by the AFSC in 2011, community leaders reported that New Stuyahok does not participate directly in fisheries management processes in Alaska.

Processing Plants

ADF&G’s 2010 Intent to Operate list does not list a registered processing plant in New Stuyahok. Processing facilities were registered in nearby communities throughout Bristol Bay, including Dillingham, Egegik, and Naknek.

Fisheries-Related Revenue

In 2010, the City of New Stuyahok received \$22,930 of revenue from fisheries-related taxes and fees. Revenue sources reported in the municipal budget that year included a raw fish tax, the Shared Fisheries Business Tax, and the Fisheries Resource Landing Tax. In addition, in the 2011 AFSC survey, community leaders reported revenue from harbor usage fees. It is also important to note that municipal budget reports included \$2,400 in revenue from boat hauls in 2005 only. Annual fisheries-related revenue fluctuated between just under \$9,000 and just over \$22,000 between 2000 and 2010, with an upward trend over time. Table 3 shows the annual revenue from selected sources between 2000 and 2010.¹⁰⁸⁴

¹⁰⁸¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁸² Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁰⁸³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁰⁸⁴ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Between 2000 and 2010, New Stuyahok residents participated in state fisheries as permit holders, crew members, and vessel owners. In the 2011 AFSC survey, community leaders reported that New Stuyahok residents engage in commercial fishing activity between June and August each year. During the 2000-2010 period, New Stuyahok vessel owners landed an average of 605,568 net lb of salmon, earning an average of \$367,754 in ex-vessel revenue. Landings and ex-vessel revenue in other fisheries are considered confidential due to the low number of participants (Table 10). Since no fish buyers or processing plants were present in New Stuyahok between 2000 and 2010 (Table 5), no local deliveries were made and no ex-vessel revenue was generated in the community during the period (Table 9).

In 2010, a total of 28 New Stuyahok residents held 29 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). All but one of these permits were for Bristol Bay salmon set and drift gill net fisheries, and the remaining permit was for the Bristol Bay herring spawn on kelp, hand pick fishery. Of the 28 salmon permits held, 19 were actively fished in 2010, while the herring permit was not actively fished that year. These numbers represent large declines in the total number of permits held in these fisheries over the decade, with a 95% decrease in herring permits and a 36% decrease in salmon permits (55% decrease in total permits overall). The same trend was observed in the number of permit holders in New Stuyahok (Table 4). It is important to note that the last year during the 2000-2010 period in which a herring permit was actively fished was 2002. It is also of note that one halibut CFEC permit was held by a New Stuyahok resident in 2000 and 2001, but was not actively fished during those years.

No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to New Stuyahok residents between 2000 and 2010, and no quota share accounts or quota shares were held in federal catch share fisheries for halibut, sablefish, or crab during the decade. Information about CFEC, FFP, and LLP permits is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

In 2010, New Stuyahok residents held 45 crew licenses, a 53% decline from 96 crew licenses held in 2000. That same year, 11 residents were the primary owner of a fishing vessel, a 66% decline from 32 vessels in 2000. The number of vessels homeported in New Stuyahok followed a similar trend, falling from 11 in 2000 to 3 in 2010, a decline of 73%. According to a survey conducted by the AFSC in 2011, community leaders reported that no vessels used New Stuyahok as a base of fishing operations in 2011. They said the number of commercial fishing boats and boats under 35 ft hasn't changed in the last five years, but the number of charter boats and larger boats (35 ft and above) frequenting New Stuyahok has decreased significantly. These characteristics of the New Stuyahok commercial fishing sector are presented in Table 5.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of New Stuyahok: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$4,732	\$3,833	\$7,000	\$5,183	\$4,500	\$4,700	\$5,700	\$7,000	\$560	\$8,000	\$10,170
Shared Fisheries Business Tax ¹	\$4,116	\$7,476	\$6,428	\$5,183	\$4,783	\$5,756	\$6,932	\$8,253	\$8,026	\$9,793	\$9,890
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$36	\$94	\$368	\$602	\$670
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	\$2,400	n/a	n/a	n/a	n/a	n/a
Harbor usage ^{2,3}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$2,200
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$8,848</i>	<i>\$11,309</i>	<i>\$13,428</i>	<i>\$10,366</i>	<i>\$9,283</i>	<i>\$12,856</i>	<i>\$12,668</i>	<i>\$15,347</i>	<i>\$8,954</i>	<i>\$18,395</i>	<i>\$22,930</i>
<i>Total municipal revenue⁵</i>	<i>\$166,177</i>	<i>\$205,103</i>	<i>\$175,232</i>	<i>\$213,919</i>	<i>\$213,919</i>	<i>\$117,409</i>	<i>\$79,801</i>	<i>\$200,131</i>	<i>\$157,863</i>	<i>\$121,048</i>	<i>\$265,890</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, New Stuyahok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	19	16	9	5	5	5	2	4	4	4	1
	Fished permits	5	1	1	0	0	0	0	0	0	0	0
	% of permits fished	26%	6%	11%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	15	12	8	4	4	4	2	3	3	3	1

Table 4 cont'd. Permits and Permit Holders by Species, New Stuyahok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	44	44	41	34	31	30	28	28	27	28	28
	Fished permits	42	37	15	18	17	20	18	20	18	17	19
	% of permits fished	95%	84%	37%	53%	55%	67%	64%	71%	67%	61%	68%
	Total permit holders	46	46	42	37	33	33	29	30	27	29	28
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>64</i>	<i>61</i>	<i>50</i>	<i>39</i>	<i>36</i>	<i>35</i>	<i>30</i>	<i>32</i>	<i>31</i>	<i>32</i>	<i>29</i>
	<i>Fished permits</i>	<i>47</i>	<i>38</i>	<i>16</i>	<i>18</i>	<i>17</i>	<i>20</i>	<i>18</i>	<i>20</i>	<i>18</i>	<i>17</i>	<i>19</i>
	<i>% of permits fished</i>	<i>73%</i>	<i>62%</i>	<i>32%</i>	<i>46%</i>	<i>47%</i>	<i>57%</i>	<i>60%</i>	<i>63%</i>	<i>58%</i>	<i>53%</i>	<i>66%</i>
	<i>Permit holders</i>	<i>49</i>	<i>49</i>	<i>43</i>	<i>38</i>	<i>34</i>	<i>33</i>	<i>30</i>	<i>31</i>	<i>28</i>	<i>30</i>	<i>28</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in New Stuyahok: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In New Stuyahok ²	Total Net Lb Landed In New Stuyahok ^{2,5}	Total Ex-Vessel Value Of Landings In New Stuyahok ^{2,5}
2000	96	0	0	32	11	0	0	\$0
2001	77	0	0	26	11	0	0	\$0
2002	43	0	0	22	9	0	0	\$0
2003	41	0	0	19	8	0	0	\$0
2004	52	0	0	22	11	0	0	\$0
2005	67	0	0	15	5	0	0	\$0
2006	56	0	0	14	5	0	0	\$0
2007	43	0	0	12	3	0	0	\$0
2008	41	0	0	12	3	0	0	\$0
2009	45	0	0	10	2	0	0	\$0
2010	45	0	0	11	3	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in New Stuyahok: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of New Stuyahok: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of New Stuyahok: 2000-2010.

Year	Number Of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in New Stuyahok: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by New Stuyahok Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	1,186,029	629,003	157,478	362,157	702,799	742,497	643,743	628,092	445,592	632,001	531,852
<i>Total²</i>	<i>1,186,029</i>	<i>629,003</i>	<i>157,478</i>	<i>362,157</i>	<i>702,799</i>	<i>742,497</i>	<i>643,743</i>	<i>628,092</i>	<i>445,592</i>	<i>632,001</i>	<i>531,852</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$774,295	\$238,644	\$70,823	\$168,878	\$331,902	\$415,806	\$399,147	\$390,331	\$311,528	\$473,548	\$470,388
<i>Total²</i>	<i>\$774,295</i>	<i>\$238,644</i>	<i>\$70,823</i>	<i>\$168,878</i>	<i>\$331,902</i>	<i>\$415,806</i>	<i>\$399,147</i>	<i>\$390,331</i>	<i>\$311,528</i>	<i>\$473,548</i>	<i>\$470,388</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to a survey conducted by the AFSC in 2011, community leaders reported that sport fish guiding was also an important industry in New Stuyahok, after commercial and subsistence fishing. Although no active sport fish guide businesses were registered in New Stuyahok between 2000 and 2010, a number of licensed sport fish guides were present in the community. The number of guides residing in New Stuyahok varied between two and five per year over the decade (Table 11).

Sportfishing licenses are not sold in the community, but New Stuyahok residents purchased licenses elsewhere: In 2010, 57 New Stuyahok residents purchased sportfishing licenses. In the 2011 AFSC survey, community leaders reported that almost all sportfishing activity in New Stuyahok can be attributed to local residents who use their own private boats. They indicated that local sport fishermen target all five species of salmon. The Alaska Statewide Harvest Survey,¹⁰⁸⁵ conducted by ADF&G between 2000 and 2010, confirmed catches of coho and chum salmon and noted additional catches of rainbow trout and Dolly Varden. The survey also noted harvest of razor clams by New Stuyahok residents. No kept/release log book data were reported for fishing charters out of New Stuyahok between 2000 and 2010.¹⁰⁸⁶

New Stuyahok is located within Alaska Sport Fishing Survey Area T – Nushagak, Wood River, and Togiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Overall between 2000 and 2010, there were more non-Alaska resident than Alaska resident angler days fished, and there was significantly greater freshwater harvest than saltwater. Between 2000 and 2010, the non-Alaska resident anglers fished between 15,676 and 33,089 freshwater angler days and between 81 and 767 saltwater angler days per year. Alaska resident anglers fished between 7,356 and 19,980 freshwater angler days and between 31 and 921 saltwater angler days per year. This information about the sportfishing sector in and near New Stuyahok is displayed in Table 11.

¹⁰⁸⁵ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁰⁸⁶ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, New Stuyahok: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold To Residents ²	Sport Fishing Licenses Sold In New Stuyahok ²
2000	0	3	43	0
2001	0	3	41	0
2002	0	3	43	0
2003	0	5	50	0
2004	0	4	51	0
2005	0	4	67	0
2006	0	4	50	0
2007	0	4	48	0
2008	0	4	58	0
2009	0	3	74	0
2010	0	4	57	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	0	44	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

The entire community of New Stuyahok depends on subsistence harvest of marine and land-based resources. Salmon is of particular importance as a marine resource. Trading networks are active between New Stuyahok and other communities.¹⁰⁸⁷ In 2005, the only year between 2000 and 2010 for which ADF&G reported subsistence harvest household use estimates for New Stuyahok, 75% of households were reported to participate in salmon subsistence, 62% in non-salmon fish subsistence (not including halibut), and 4% in marine invertebrate subsistence. No information was reported regarding the percentage of households utilizing halibut or marine mammals for subsistence purposes in New Stuyahok that year. Per capita subsistence harvest of marine and land-based resources in 2005 was estimated to be 390 lb. Information about household participation is presented in Table 12.

Although no households were reported to actively harvest marine mammals in 2005, ADF&G's Community Subsistence Information System did report information about the percentage of households that used several species of marine mammals: 12% of New Stuyahok households reported using bearded seal, 31% used harbor seal, and 4% used ringed seal.¹⁰⁸⁸ This information suggests that these resources were received through trading networks with other communities.

Also in 2005, 88 lb of marine invertebrates and 12,107 lb of non-salmon fish were harvested by New Stuyahok residents for subsistence purposes (Table 13). Specific species of marine invertebrates harvested by New Stuyahok residents included butter, horse, Pacific littleneck, pinkneck, razor, and freshwater clams, cockles, mussels, and scallops, Dungeness, Tanner, and king crab, octopus, and shrimp. Species of non-salmon fish harvested included humpback, broad, and round whitefish, blackfish, bullhead sculpin, burbot, Arctic char, Dolly Varden char, flounder, Arctic grayling, herring, Bering and least cisco, lingcod, unknown cod, rockfish, smelt, rainbow and lake trout, steelhead, stickleback (needlefish), sucker, and northern pike. Of these species, the highest percentage of households reported harvesting grayling, pike, Arctic char, Dolly Varden, humpback whitefish, and rainbow trout. That year, a harvest of 2,011 grayling, 708 pike, 132 Arctic char, 107 Dolly Varden, 513 humpback whitefish, and 63 rainbow trout was reported. In addition, New Stuyahok residents harvested herring roe in subsistence spawn on kelp fisheries.¹⁰⁸⁹

In 2008, the last year for which subsistence salmon permit information was available during the 2000-2010 period, 35 permits were issued to New Stuyahok households and 32 were returned, a decline from 51 issued and 44 returned in 2005. Sockeye was the salmon species most heavily harvested in all years for which information was reported. The next most harvested species, in order of importance, were Chinook, chum, and coho salmon. A small number of pink salmon were also harvested each year. Information about subsistence salmon permits is presented in Table 13. No information was reported by management agencies regarding subsistence harvest of halibut between 2003 and 2010 (Table 14) or harvest of marine mammals between 2000 and 2010 (Table 15).

¹⁰⁸⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁸⁸ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁰⁸⁹ Ibid.

Table 12. Subsistence Participation by Household and Species, New Stuyahok: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	75%	n/a	n/a	4%	62%	390
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, New Stuyahok: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	46	33	1,954	397	369	71	1,091	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	49	44	3,710	651	709	340	1,304	n/a	n/a
2005	51	44	3,345	967	890	183	4,316	88	12,107
2006	38	34	2,356	1,007	678	19	2,100	n/a	n/a
2007	46	35	3,098	781	612	197	3,597	n/a	n/a
2008	35	32	1,822	1,089	196	13	2,634	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, New Stuyahok: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, New Stuyahok: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Newhalen (NOO-hale-en)



People and Place

*Location*¹⁰⁹⁰

Newhalen is located on the north shore of Iliamna Lake, at the mouth of the Newhalen River. The City is located 320 miles southwest of Anchorage across the Cook Inlet, and 100 miles northeast of Naknek. The City encompasses 6.1 square miles of land and 2.3 square miles of water. Newhalen is located in the Lake and Peninsula Borough Census Area and the Iliamna Recording District.

*Demographic Profile*¹⁰⁹¹

In 2010, there were 190 inhabitants in Newhalen, making it the 201st largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in U.S. Census records in the 1890s with 16 inhabitants. Overall between 1990 and 2010, the population of Newhalen decreased by 18.8%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of Newhalen increased from 160 to 184 and then decreased again to 162 by 2009, resulting in an average annual growth rate of -0.63%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Newhalen's population is stable throughout the year and is not at all driven by employment in fishing sectors. They also reported the presence of seasonal or transient workers throughout the year.

In 2010, a majority of Newhalen residents identified themselves as American Indian and Alaska Native (80%), along with 7.4% identifying as White, 0.5% as Black or African American, and 12.1% identifying with two or more races. Also in 2010, 2.6% of Newhalen residents identified themselves as Hispanic. Individuals identifying as White made up 1.2% less of the population in 2010 compared to 2000, those identifying as American Indian and Alaska Natives made up 5% less of the population, and the percentage of individuals identifying with two or more races increased between 2000 and 2010 by 5.8%. It is also important to note the apparent increase in racial diversity from 2000 to 2010, with several additional racial and ethnic groups represented. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹⁰⁹⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁹¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

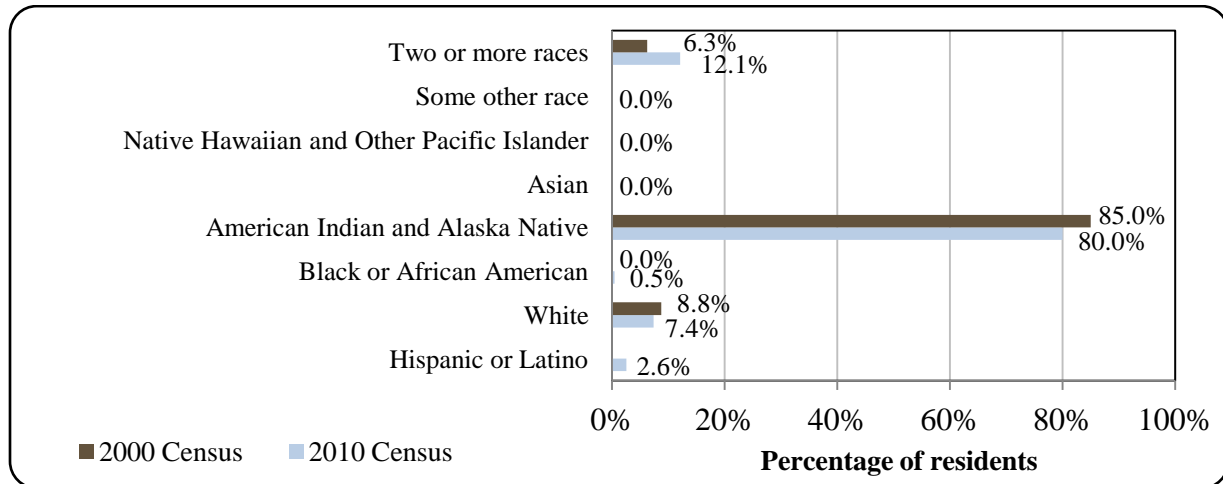
Table 1. Population in Newhalen from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	160	-
2000	160	-
2001	-	156
2002	-	166
2003	-	171
2004	-	184
2005	-	180
2006	-	168
2007	-	185
2008	-	171
2009	-	162
2010	190	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

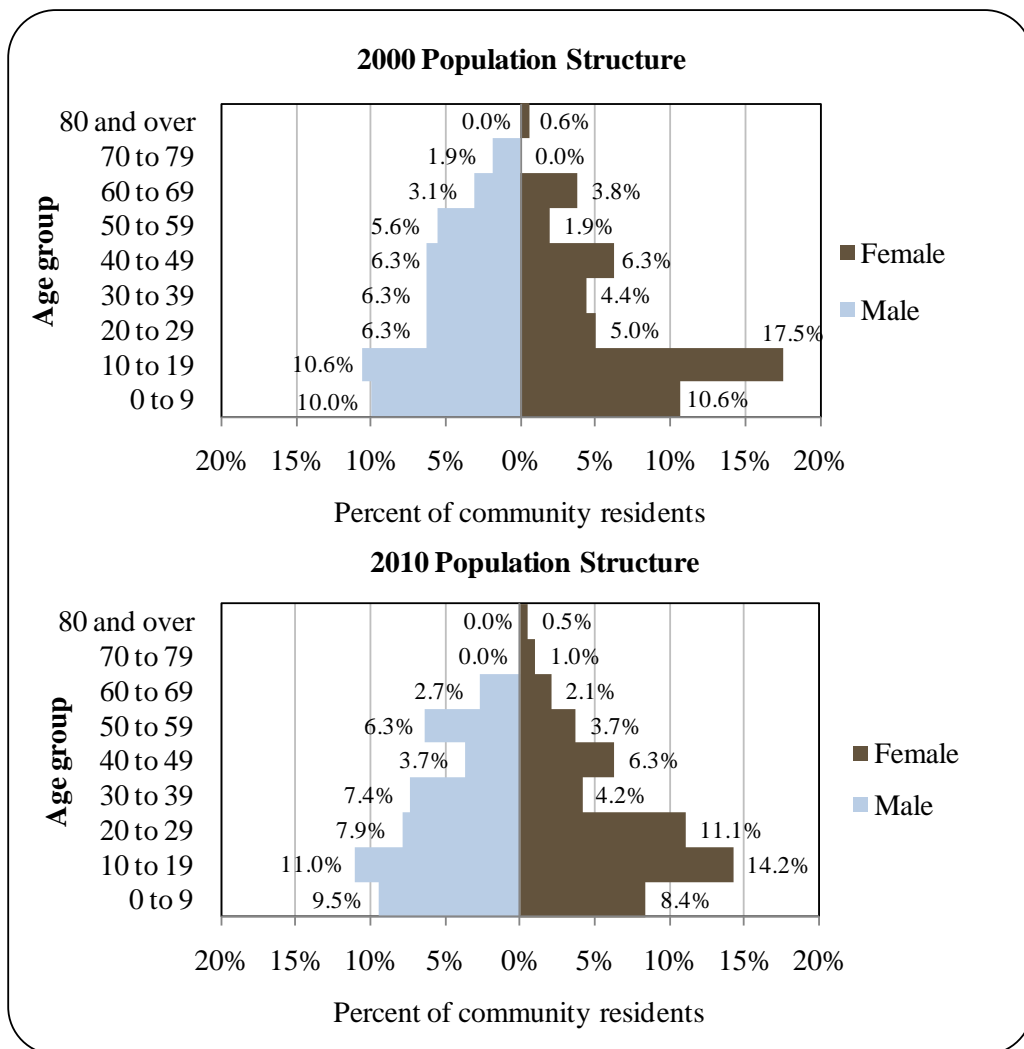
Figure 1. Racial and Ethnic Composition, Newhalen: 2000-2010 (U.S. Census).



In 2010 the average household size in Newhalen was 3.8, a decrease from 4.22 persons per household in 2000 and 4.4 in 1990. The total number of households in Newhalen increased between from 36 in 1990 and 39 in 2000, to 50 occupied housing units in 2010. Of the 51 housing units surveyed for the 2010 U.S. Census, 58.8% were owner-occupied, 39.2% were renter-occupied, and 1.9% were vacant or used only seasonally. Between 1990 and 2010, no residents of Newhalen lived in group quarters.

In 2010, the gender makeup in Newhalen was 48.5% male and 51.6% female. The greater number of women than men in Newhalen is anomalous compared to the population of Alaska as a whole, which overall has more men than women (52% male, 48% female in 2010). The median age in Newhalen was 22.8 years in 2010, much lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, gender distributions were particularly skewed toward females in age groups 10 to 19 and 20 to 29 years, while there were more males than females in age groups 30 to 39 and 50 to 59. Only 1.5% of Newhalen residents were age 60 or older in 2010. The overall population structure of Newhalen in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Newhalen Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁰⁹² 98.6% of Newhalen residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 1.4% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 0% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 35.1% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 14.9% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 14.9% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 10.8% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Newhalen is a Native village comprised primarily of Yup'ik Eskimos, Alutiiq, and Athabascan people.¹⁰⁹³ The area of Newhalen has been occupied by humans since prehistory. Two distinct indigenous populations historically inhabited the Iliamna Lake region: the Central Yup'ik Eskimos south and west of the lake, and the Dena'ina Athabascans on the northern and eastern shores. Distinctions between Native populations were blurred during European contact as a result of population decline due to epidemic disease and movement of people to participate in activities surrounding the fur trade and emerging commercial salmon fishery in Bristol Bay.¹⁰⁹⁴

In 1910, when a schoolteacher named Hannah Breece arrived in the area, she noted a small community of Yup'ik people living along the Newhalen River, near the City's present site.¹⁰⁹⁵ The name "Newhalen" is an Anglicization of "Noghelingamuit", meaning, "people of the Land of Prosperity or Abundance" in Yup'ik. The natural resources in the area are abundant and include salmon, trout, moose, rabbit, seal, and caribou. Most residents rely primarily on subsistence hunting and fishing for their livelihoods.¹⁰⁹⁶

Natural Resources and Environment

Newhalen is located in a climatic transition zone, influenced by both maritime and continental weather patterns. Summer temperatures average between 42 and 62 °F, and winter temperatures between 6 and 30 °F. Newhalen receives 26 inches of rain and 64 inches of snow on average per year.¹⁰⁹⁷ The immediate landscape in Newhalen is rolling tundra.¹⁰⁹⁸ The

¹⁰⁹² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁹³ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁹⁴ Fall, J. A., D. L. Holen, B. Davis, T. Krieg, and D. Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹⁰⁹⁵ Ibid.

¹⁰⁹⁶ See footnote 1093.

¹⁰⁹⁷ Ibid.

Newhalen River valley contains areas of spruce woodlands and shrubs, as well as open spruce forest-shrub-bog mosaic in some places.¹⁰⁹⁹

The Iliamna Lake and Kvichak River drainage is the single most important source of salmon in the Bristol Bay area, producing approximately 50% of the sockeye salmon caught in the Bristol Bay salmon fishery.¹¹⁰⁰ The Newhalen River and its source, Lake Clark, are a major sockeye salmon spawning area, producing 16% of the world's wild sockeye salmon commercial harvest.¹¹⁰¹ A large number of sport fishermen travel to the Iliamna Lake area every year to participate in a trophy rainbow trout fishery¹¹⁰² along with other sport fisheries (see the *Recreational Fishing* section of this profile). A number of lodges are present along the Newhalen River for sport hunters and fishermen.¹¹⁰³

The area across Iliamna Lake to the south of Newhalen is protected as Katmai National Park and Preserve, a 7,383-square-mile wilderness area known for its high concentration of brown bears and the Valley of 10,000 Smokes. Katmai National Park tourism does not affect Newhalen directly, as visitors primarily pass through the King Salmon airport to access the park.¹¹⁰⁴ Lake Clark National Park and Preserve is located northeast of Newhalen, occupying 4 million acres at the north end of the Alaska Peninsula. This National Park and Preserve was established to protect scenic beauty, wild rivers and waterfalls, populations of fish and wildlife, watersheds essential for sockeye salmon, and the traditional lifestyle of local residents. Subsistence activities are permitted in Lake Clark National Park and Preserve. The National Park Service works closely with state and federal fish and wildlife management agencies to determine seasons, bag limits, and similar harvest controls.¹¹⁰⁵ A diversity of fish and wildlife are found in both of these National Parks and Preserves, including bears, caribou, moose, wolves, lynx, sea mammals, salmon, Arctic char, Arctic grayling, Dolly Varden char, northern pike, lake trout, rainbow trout, burbot, and whitefish.¹¹⁰⁶

It is also of note that Iliamna Lake is home to a freshwater population of harbor seals.¹¹⁰⁷ Seal numbers consistently range between 150 and 220 during molting season, and some portion of the population over-winters in the lake. Local subsistence hunters harvest a small number of these seals each year.¹¹⁰⁸

¹⁰⁹⁸ LaRoche + Associates (2011). *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from

http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹⁰⁹⁹ Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹¹⁰⁰ Nondalton Tribal Council (2006). *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹¹⁰¹ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹¹⁰² See footnote 1093.

¹¹⁰³ See footnotes 1099 and 1100.

¹¹⁰⁴ National Park Service (2011). *Katmai National Park & Preserve*. Retrieved November 17, 2011 from <http://www.nps.gov/katm/>.

¹¹⁰⁵ National Park Service (2011). *Lake Clark National Park & Preserve Management*. Retrieved June 13, 2012 from <http://www.nps.gov/lacl/parkmgmt/index.htm>.

¹¹⁰⁶ See footnotes 1104 and 1105.

¹¹⁰⁷ See footnote 1101.

¹¹⁰⁸ Withrow, D. and K. Yano, J. Burns, C. Gomez, and T. Askoak (2011). *Freshwater Harbor Seals of Lake Iliamna, Alaska. Do They Pup and Over-Winter in the Lake?* Poster presented at the 2011 Alaska Marine Science

Significant mineral resources are present in the Bristol Bay region, including the Pebble copper-gold-molybdenum deposit. The Pebble Mine site is located approximately 25 miles north of Newhalen, at the divide between the Kaktuli River and Upper Talarik Creek.¹¹⁰⁹ Northern Dynasty Minerals Limited calls the Pebble deposit, “one of the greatest stores of mineral wealth ever discovered,” and estimates that the deposit includes 5.94 billion tons in the measured and indicated category, including 55 billion lb of copper, 66.9 million oz of gold, and 3.3 billion lb of molybdenum, and 4.84 billion tons in the inferred category, including 25.6 billion lb of copper, 40.4 million oz gold, and 2.3 billion lb of molybdenum.¹¹¹⁰ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.¹¹¹¹ According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble Mine is copper. Dissolved copper is known to be toxic to fish.¹¹¹² If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.¹¹¹³

Potential hazards in Newhalen include wildfire, flooding, severe weather, and earthquakes. Firefighting capacity is lacking in the community, and terrain characterized by heavy vegetation, dry brush, and tall grasses leaves the area subject to wildfire fanned by winds. Flooding is a threat during ice break-up, when ice jams and ice overflows may funnel water into the community. Severe weather in the form of high winds (70 to 100 mph) affects the community approximately twice a year, leading to blackouts and brownouts. Extreme temperatures can also lead to frost heaves and frozen ground, severing or damaging electrical lines. Although no earthquakes have been recorded in Newhalen, seismic activity from volcanoes or fault shifts are a large threat in the area. Newhalen was rated as “not vulnerable” to tsunamis, although the community’s proximity to Iliamna Lake makes it vulnerable to seiche activity. See the *Additional Information* section for more information on seiches, “waves that oscillate in partially or totally enclosed bodies of water.”¹¹¹⁴

According to the Alaska Department of Environmental Conservation, one active environmental cleanup site was located on the south shore of Iliamna Lake as of May 2012. In 1956, the U.S. Air Force constructed a radio relay station on the southern shore of Iliamna Lake as part of a defense communication network and aircraft warning system throughout the State of Alaska. Hazardous materials were stored at the site, including diesel fuel and gasoline, oils, antifreeze, solvents, batteries, asbestos, and electrical transformers containing PCBs (polychlorinated biphenyls). Excavation and thermal treatment of petroleum-contaminated soils

Symposium. Retrieved January 18, 2012 from ftp://ftp.afsc.noaa.gov/posters/pWithdraw04_freshwater-seals_2011.pdf.

¹¹⁰⁹ Parker, G. Y., F. M. Raskin, C. A. Woody, and L. Trasky (2008). “Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process.” *Alaska Law Review* 25:1.

¹¹¹⁰ Northern Dynasty Minerals Limited (2012). *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

¹¹¹¹ See footnote 1099.

¹¹¹² See footnote 1109.

¹¹¹³ Pg. 36 in Duffield, J., C. Neher, D. A. Patterson, and O. S. Goldsmith (2007). *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

¹¹¹⁴ Lake and Peninsula Borough (2009). *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

was undertaken in 2004 and 2005, removing the source of potential future groundwater contamination. Groundwater wells were also dug to monitor water quality at the site.¹¹¹⁵

Current Economy¹¹¹⁶

Newhalen's economy is based on seasonal employment in commercial and recreational fishing sectors. Many residents travel to Bristol Bay to work in salmon fisheries, and many work in Iliamna.¹¹¹⁷ Between 2000 and 2010, the number of Newhalen residents holding state Commercial Fisheries Entry Permits (CFEC) was equivalent to between 5% and 9% of the total local population. The tourism industry is important to the region, with thousands of sport fishermen visiting every year to participate in the trophy rainbow trout fishery.¹¹¹⁸ Lodges for both hunting and fishing are common in the area.¹¹¹⁹ Subsistence harvest of salmon, trout, grayling, moose, caribou, rabbit, porcupine, and seal are important for Newhalen residents. Most families travel to fish camps during the summer.¹¹²⁰

In a survey conducted by the AFSC in 2011, community leaders projected that mining will become the most important natural resource-based industry in Newhalen in the future. The proposed site of the Pebble Mine, described above in the *Natural Resources and Environment* section, is located approximately 25 miles north of Newhalen.

Based on household surveys conducted for the 2006-2010 ACS,¹¹²¹ in 2010, the per capita income in Newhalen was estimated to be \$16,000 and the median household income was estimated to be \$66,250. This represents a large increase from the per capita and median household incomes reported in the year 2000 (\$9,448 and \$36,250, respectively). The increase in income remains substantial even when inflation is taken into account by converting 2000 values to 2010 dollars,¹¹²² revealing a real per capita income in 2000 of \$12,424 and a real median household income of \$47,668. In 2010, Newhalen ranked 185th of 305 Alaskan communities with per capita income data that year, and 56th in median household income, out of 299 Alaskan communities with household income data.

However, Newhalen's small population size may have prevented the ACS from accurately portraying economic conditions.¹¹²³ An alternative estimate of per capita income is

¹¹¹⁵ Alaska Dept. of Environmental Conservation (n.d.) *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹¹¹⁶ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹¹⁷ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹¹⁸ Ibid.

¹¹¹⁹ Fall, J. A., D. L. Holen, B. Davis, T. Krieg, and D. Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹¹²⁰ See footnote 1117.

¹¹²¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹²² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹¹²³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not

provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Newhalen in 2010 is \$6,947.^{1124,1125} This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Newhalen between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as “distressed” by the Denali Commission in 2011,¹¹²⁶ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a much higher percentage of Newhalen residents was estimated to be in the civilian labor force (80.6%) than in the civilian labor force statewide (68.8%). In the same year, 15.6% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 12.9% in Newhalen, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 31.8%, compared to a statewide unemployment rate estimate of 11.5%.¹¹²⁷

Also based on the 2006-2010 ACS, 60.3% of the Newhalen workforce was estimated to be employed in the public sector, along with 38.1% in the private sector and 1.6% self-employed. Of the 63 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest numbers were estimated to be working in the following industries: educational services, health care, and social assistance (49.2%), agriculture, forestry, fishing, hunting, and mining (15.9%), and retail trade (11.1%). The occupations in which the greatest percentages of the workforce were estimated to be employed were management/professional (34.9%) and sales/office occupations (27%). This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. In the case of Newhalen, employment reported by the census in natural resource-related industries and occupations is primarily related to mining activity rather than fishing. In 2010, 15.9% of the population was estimated to be employed in agricultural, forestry, fishing, hunting, and mining industries and in natural resource/construction/maintenance occupations. A breakdown of the natural resource/construction/maintenance occupational category reveals that, of the 10 workers in this category, 9 were employed in construction and extraction occupations, and 1 was employed in an installation-related occupation.

collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹¹²⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹²⁵ See footnote 1121.

¹¹²⁶ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹¹²⁷ See footnote 1124.

Figure 3. Local Employment by Industry in 2000-2010, Newhalen (U.S. Census).

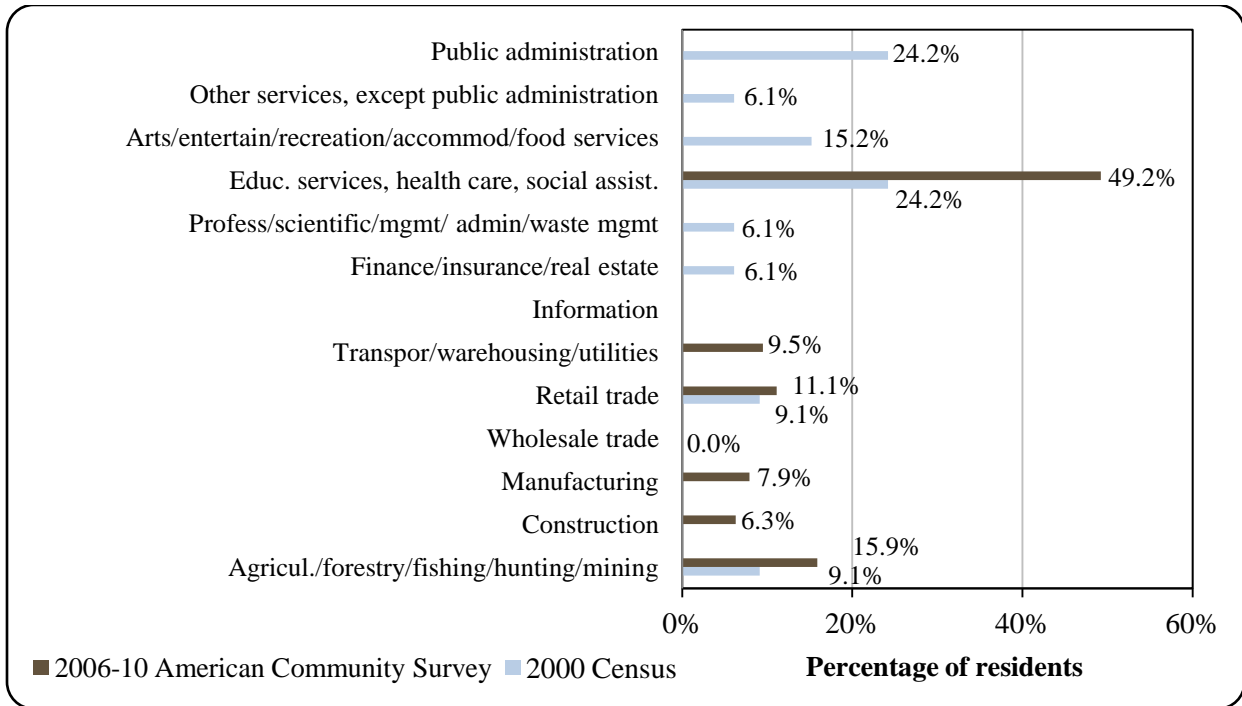
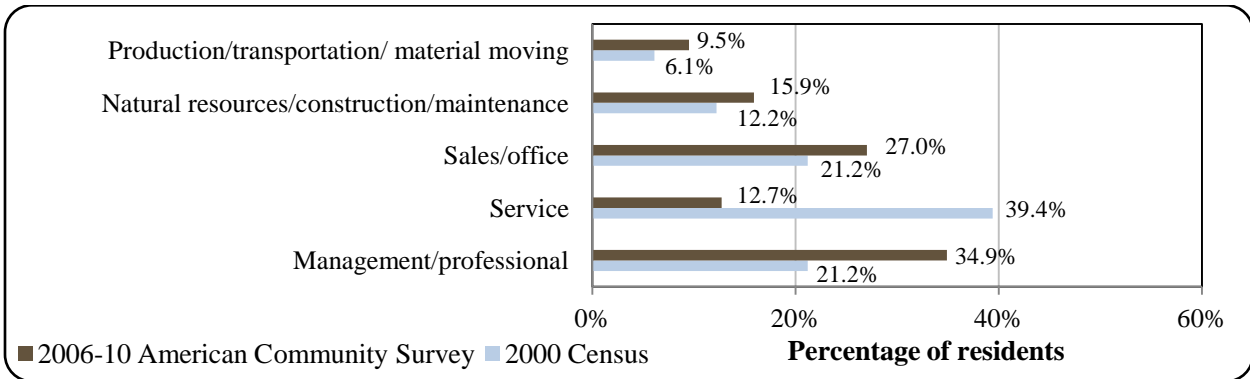


Figure 4. Local Employment by Occupation in 2000-2010, Newhalen (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 51 employed residents in Newhalen in 2010, of which 33.3% were employed in local government, 31.4% in professional and business services, 9.8% in trade, transportation, and utilities, 9.8% in education and health services, 5.9% in natural resources and mining, 5.9% in construction, 2% in manufacturing, and 2% in other industries.¹¹²⁸ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

¹¹²⁸ Ibid.

Governance

Newhalen was incorporated as a 2nd Class City in 1971. The City is located in the Lake and Peninsula Borough. Newhalen has a Strong Mayor form of government, including a seven-person city council, including the mayor, a seven-person advisory school board, and several municipal employees. The City administers a 2% sales tax but has no other taxes. In addition, the Borough administers a 6% bed tax, \$3 per person/day Guide Tax and \$1 per person/day lodge Guide Tax.¹¹²⁹ Municipal revenue in Newhalen averaged over \$150,000 per year between 2000 and 2010. Locally-generated revenue sources during the decade included facility and equipment lease fees, building and equipment rentals, water and sewer service fees, and gravel sales. Outside revenue sources included various state revenue sharing contributions and capital project grants. Between 2000 and 2003, Newhalen received approximately \$25,000 per year in State Revenue Sharing contributions, and in 2009 and 2010 received just over \$104,000 per year in Community Revenue Sharing contributions. Newhalen also received Federal Magnuson-Stevens Commercial Fishery Disaster Assistance grants in 2000 and 2001. Information about selected aspects of Newhalen's community revenue sources is presented in Table 2.

Newhalen was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Newhalen Village. The Native village corporation is the Alaska Peninsula Corporation, which manages 71,526 acres of land. The regional Native corporation to which Newhalen belongs is the Bristol Bay Native Corporation.¹¹³⁰

Newhalen is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.¹¹³¹ The BBNA is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.¹¹³²

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham and King Salmon, and the Alaska Department of Commerce, Community, and Economic Development also has an office in Dillingham. Kodiak and Homer have the nearest offices of the Alaska Department of Natural Resources and the National Marine Fisheries Service (NMFS), and Kodiak is also the location of the nearest U.S. Bureau of Citizenship and Immigration Services office. However, the Anchorage offices of these agencies are perhaps more accessible for the people of the Iliamna Lake region.

¹¹²⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹³⁰ Ibid.

¹¹³¹ Bristol Bay Native Association (n.d.). *BBNA homepage*. Retrieved November 16, 2011 from <http://www.bbna.com>.

¹¹³² U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Newhalen From 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$164,438	n/a	\$27,332	n/a\$61,089
2001	\$249,160	n/a	\$25,677	n/a\$50,135
2002	n/a	n/a	\$25,674	n/a
2003	\$118,425	n/a	\$25,821	n/a
2004	\$63,763	n/a	n/a	n/a
2005	\$111,905	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	\$147,286	n/a	n/a	n/a
2008	\$163,284	n/a	n/a	n/a
2009	\$175,367	n/a	\$104,264	n/a
2010	\$277,874	n/a	\$104,125	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Due to a lack of infrastructure in the Newhalen region, travel between communities is usually by small plane, and seasonally by boat, four-wheeler, or snowmobile. Individuals also use personal vehicles, ATVs, and skiffs.¹¹³³ Barges deliver bulk goods to the Newhalen area via the Kvichak River, which are lightered to shore. A state-owned, 4,800-ft runway is located approximately 3 miles north of Newhalen, between Newhalen and Iliamna. A paved road connects these communities and the airport.¹¹³⁴ Iliamna Air Taxi, Inc. provides scheduled mail, freight, and passenger air service to several Iliamna Lake communities. As of June 2012, a roundtrip flight from the Iliamna Airport to Anchorage cost \$460.¹¹³⁵

¹¹³³ Bristol Bay Native Association (2011). *Bristol Bay Comprehensive Economic Development Strategy, 2011-2016*. Funded by the U.S. Department of Commerce, Economic Development Administration. Retrieved January 17, 2012 from http://www.bbna.com/website/BBCEDS_2011-10-31.pdf.

¹¹³⁴ See footnote 1129.

¹¹³⁵ Personal communication, Iliamna Air Taxi reservation agent, June 13, 2012.

During the winter, a road is passable between Newhalen and Nondalton, 22 miles to the north, although the road is only paved half way.¹¹³⁶ An unimproved trail, the Iliamna-Pile Bay Trail, runs along the northern shore of Iliamna Lake, connecting Newhalen with the communities of Pedro Bay and Pile Bay Village to the east. Pile Bay Village is also connected to the Cook Inlet by road.¹¹³⁷

Facilities

The Tazimina Hydroelectric Project provides electricity to the communities of Iliamna, Newhalen and Nondalton. The Iliamna – Newhalen – Nondalton Electric Cooperative owns 50 miles of distribution line connecting the three member communities, and also owns a backup diesel powerhouse in Newhalen.^{1138,1139} According to a survey conducted by the AFSC in 2011, Newhalen community leaders indicated that construction of a new diesel powerhouse and alternative energy sources is currently in progress. The City of Newhalen operates a piped water system serving all homes in the community. Water is derived from a well and filtered. The City also operates a piped sewer system serving 10 homes and facilities. Individual septic tanks are used by remaining homes, and outhouses are also in use. A sewage lagoon is used for sewage treatment. The City operates a landfill, but does not provide refuse collection services.¹¹⁴⁰

The Village Council operates a washeteria.^{1141, 1142} Newhalen and Iliamna share a post office and a school.¹¹⁴³ The school provides aluminum and paper recycling services, and also offers public use of the school library and gymnasium. Additional community facilities include a Teen Recreation Center, City Hall, and a city holding cell.¹¹⁴⁴ Public safety services are provided by a VPSO (Village Public Safety Officer) stationed in Newhalen¹¹⁴⁵ and state troopers stationed nearby in the City of Iliamna.¹¹⁴⁶ Fire and rescue services are provided by the Iliamna/Newhalen Rescue Squad. Taxi service is available in the City, and visitor accommodations are provided by Gram's Bed and Breakfast. Telephone and internet service are available from Interior Telephone

¹¹³⁶ Fall, J. A., D. L. Holen, B. Davis, T. Krieg, and D. Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹¹³⁷ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹¹³⁸ Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnwebek.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹¹³⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁴⁰ Ibid.

¹¹⁴¹ Ibid.

¹¹⁴² "Washeteria" is another word for laundromat. In Alaska, washeterias often include shower facilities.

¹¹⁴³ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

¹¹⁴⁴ See footnote 1139.

¹¹⁴⁵ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

¹¹⁴⁶ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

Co./TelAlaska and GCI. However, no cable carriers provide service in the community.¹¹⁴⁷ In the 2011 AFSC survey, community leaders reported that Newhalen has publicly subsidized housing.

With regard to fisheries-related infrastructure, community leaders also reported that no dock space is available for moorage in Newhalen, and the community does not have the capacity to handle regulated vessels. Further, they indicated that no private vessels use Newhalen as a base of operations for fishing. They noted that residents typically travel to Iliamna when they need to access fisheries-related businesses and services not available in Newhalen.

Medical Services

The local health clinic is the Newhalen Clinic. The Clinic is a Community Health Aide Program site. Emergency Services have lake, floatplane, and air access. Emergency services are provided by volunteers and a health aide, and rescue services are provided by the Iliamna/Newhalen Rescue Squad.¹¹⁴⁸ The nearest hospitals are located in Dillingham and Homer, although hospitals in Anchorage may be equally accessible by air for residents of Newhalen.

Educational Opportunities

The Newhalen School offers a pre-school through 12th grade education. As of 2011, there were 8 teachers and 77 students attending the school.¹¹⁴⁹ The Newhalen School also serves students from the community of Iliamna.¹¹⁵⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest of fisheries resources has been important for residents of the Iliamna Lake region since prehistory. Commercial exploitation of salmon resources began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of the Bristol Bay region, along with several other species harvested in lower volumes.¹¹⁵¹ Subsistence harvest continues to be an important foundation for the local economy in Newhalen,¹¹⁵² and tourism related to sportfishing activity has grown in importance in the Iliamna Lake region,^{1153,1154} as outlined in the *Subsistence Fishing* and *Recreational Fishing* sections of this profile.

¹¹⁴⁷ See footnote 1139.

¹¹⁴⁸ Ibid.

¹¹⁴⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹¹⁵⁰ See footnote 1143.

¹¹⁵¹ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹¹⁵² See footnote 1139.

¹¹⁵³ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

Bristol Bay is the nearest marine area to the community of Newhalen. The Bay is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and Bering Sea Sablefish Regulatory Area. Newhalen is not eligible to participate in the Community Development Quota (CDQ) program or the Community Quota Entity (CQE) program. According to a survey conducted by the AFSC in 2011, community leaders reported that Newhalen does not actively participate in fisheries management processes in Alaska, but they do stay informed through participation in a yearly fisheries meeting. One community leader expressed concern that commercial fisheries are declining, and that Newhalen residents may become more dependent on the mining industry for employment in the future.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Newhalen. Several processing facilities were listed in nearby communities in Bristol Bay, including Naknek, Egegik, and Dillingham.

Fisheries-Related Revenue

Overall, in 2010, the City of Newhalen received \$6,489 from fisheries-related taxes and fees, representing a steady increase in annual fisheries-related revenue since 2000. Revenue sources reported in Newhalen's annual budgets included the Shared Fisheries Business Tax and the Fisheries Resource Landing Tax. Table 3 presents the annual revenue for these categories.¹¹⁵⁵

Commercial Fishing

Newhalen is an inland community, located on the northern shore of Iliamna Lake. Even though it is not located on the coast, Newhalen's economy is still tied to commercial fishing activities. Between 2000 and 2010, local residents participated in state fisheries as permit holders, crew members, and vessel owners. Over this period, the number of Newhalen residents holding state Commercial Fisheries Entry Permits (CFEC) per year was equivalent to between 5% and 9% of the local population.

In the 2011 AFSC survey, community leaders reported that Newhalen residents primarily participate in the Bristol Bay salmon fishery, which takes place each year in June and July. In 2010, 12 Newhalen residents held a total of 11 CFEC permits in salmon fisheries, including 6 in the Bristol Bay drift gill net fishery, 4 in the Bristol Bay set gill net fishery, and 1 in the Lower Yukon gill net fishery. Of these, five Bristol Bay drift gill net and four Bristol Bay set gill net permits were actively fished that year. One Lower Yukon permit was held per year between 2000 and 2010, with the exception of 2000 and 2008. The Lower Yukon permit was actively fished during this period in 2002-2004 and 2006 only. The number of salmon permits held in Newhalen remained relatively stable between 2000 and 2010. No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Newhalen residents between 2000 and

¹¹⁵⁴ Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹¹⁵⁵ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

2010. This permit information is presented in Table 4. Between 2000 and 2010, no quota share accounts or quota shares were held by Newhalen residents in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8).

Since no fish buyers or processing plants were present in Newhalen (Table 5), no ex-vessel revenue was generated in the community between 2000 and 2010 (Table 9). Newhalen vessel owners delivered their catches elsewhere. In 2010, Newhalen vessel owners landed 205,650 net lb of salmon, earning \$193,517 in ex-vessel revenue. For those year in which information can be reported, this was slightly lower than average for salmon landings and ex-vessel revenue. Salmon landings and ex-vessel revenue information are considered confidential in 2001 and 2009 due to the small number of participants. This information about landings and ex-vessel revenue generated by Newhalen vessel owners is presented in Table 10.

In 2010, only 1 Newhalen resident held a crew license, a precipitous decrease from 20 licenses held in the year 2000. The number of Newhalen residents that were the primary owner of a fishing vessel initially increased from 5 in 2000 to 10 in 2005, and then declined again to 6 vessels by 2010. Between four and six vessels were homeported in Newhalen over this period. These characteristics of the commercial fishing sector are presented in Table 5. Although several vessels may call Newhalen their homeport, according to a survey conducted by the AFSC in 2011, community leaders reported that no vessels use Newhalen as a base of operations during the fishing season.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Newhalen: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$2,832	\$4,898	\$4,286	\$3,316	\$2,979	\$3,569	\$4,531	\$5,454	\$10,617	\$6,395	\$6,077
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$24	\$62	\$234	\$393	\$412
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$2,832	\$4,898	\$4,286	\$3,316	\$2,979	\$3,569	\$4,554	\$5,516	\$10,851	\$6,788	\$6,489
Total municipal revenue⁵	\$164,438	\$249,160	\$118,425	\$118,425	\$63,763	\$111,905	n/a	\$147,286	\$163,284	\$175,367	\$277,874

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Newhalen: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Newhalen: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	8	9	9	10	12	13	14	13	12	11	11
	Fished permits	8	7	9	10	12	12	13	11	10	8	9
	% of permits fished	100%	78%	100%	100%	100%	92%	93%	85%	83%	73%	82%
	Total permit holders	8	9	9	10	13	15	15	14	16	12	12
<i>Total CFEC Permits²</i>	<i>Permits</i>	8	9	9	10	12	13	14	13	12	11	11
	<i>Fished permits</i>	8	7	9	10	12	12	13	11	10	8	9
	<i>% of permits fished</i>	100%	78%	100%	100%	100%	92%	93%	85%	83%	73%	82%
	<i>Permit holders</i>	8	9	9	10	13	15	15	14	16	12	12

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Newhalen: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Newhalen ²	Total Net Lb Landed In Newhalen ^{2,5}	Total Ex-Vessel Value Of Landings In Newhalen ^{2,5}
2000	20	0	0	5	5	0	0	\$0
2001	11	0	0	4	6	0	0	\$0
2002	5	0	0	5	4	0	0	\$0
2003	2	0	0	7	6	0	0	\$0
2004	10	0	0	9	6	0	0	\$0
2005	10	0	0	10	5	0	0	\$0
2006	13	0	0	9	6	0	0	\$0
2007	0	0	0	9	6	0	0	\$0
2008	1	0	0	8	6	0	0	\$0
2009	3	0	0	6	6	0	0	\$0
2010	1	0	0	6	5	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Newhalen: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Newhalen: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Newhalen: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Newhalen: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011.
 Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries
 Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Newhalen Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	85,297	-	59,063	97,802	209,088	427,265	245,184	359,737	296,754	-	205,650
<i>Total²</i>	<i>85,297</i>	<i>-</i>	<i>59,063</i>	<i>97,802</i>	<i>209,088</i>	<i>427,265</i>	<i>245,184</i>	<i>359,737</i>	<i>296,754</i>	<i>-</i>	<i>205,650</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$56,827	-	\$28,830	\$49,898	\$107,438	\$265,574	\$160,762	\$239,654	\$221,337	-	\$193,517
<i>Total²</i>	<i>\$56,827</i>	<i>-</i>	<i>\$28,830</i>	<i>\$49,898</i>	<i>\$107,438</i>	<i>\$265,574</i>	<i>\$160,762</i>	<i>\$239,654</i>	<i>\$221,337</i>	<i>-</i>	<i>\$193,517</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010 there were no active sport fish guide businesses or licensed sportfishing guides in Newhalen, and no sportfishing licenses were sold in the community. However, Newhalen community members participated in sport fisheries. In 2010, Newhalen residents purchased 17 sportfishing licenses (irrespective of point of sale). It is important to note that economic activity in Newhalen is very tied to economic activity in the City of Iliamna, located only 5 miles away by road. Between 7 and 18 licensed sport fish guides were present each year in Iliamna over the 2000-2010 period, and sportfishing licenses are sold in the City (see the community profile for Iliamna for more information). Newhalen and Iliamna attract a large number of recreational fishermen each year to participate in the trophy rainbow trout fishery on Iliamna Lake, as well as fisheries for numerous other species, including salmon. Numerous sportfishing and hunting lodges are present along the Newhalen River.^{1156,1157,1158}

In a survey conducted by the AFSC in 2011, community leaders reported that local residents use private boats for sportfishing, and non-residents fish out of lodges. They also indicated that sockeye salmon is the primary salmon species targeted, along with trout and northern pike. The Alaska Statewide Harvest Survey,¹¹⁵⁹ conducted by ADF&G between 2000 and 2010, confirmed this and noted the following species targeted by private anglers in Iliamna-Newhalen: sockeye salmon, rainbow trout, Dolly Varden char, and Arctic grayling. No kept/release log book data were reported for fishing charters out of Newhalen between 2000 and 2010.¹¹⁶⁰

Newhalen is located within Alaska Sport Fishing Survey Area S – Kvichak River Drainage. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Non-Alaska resident anglers fished consistently more days than Alaska resident anglers in both freshwater and saltwater between 2000 and 2010, reflective of the large amount of sportfishing-related tourism in the region. Freshwater sportfishing activity was significantly more important than saltwater fishing in the region. The number of freshwater angler days for non-Alaska resident sport fishermen varied between 17,234 and 30,340 between 2000 and 2010, while Alaska resident freshwater angler days varied between 3,077 and 10,297. This information about the sportfishing sector in and near Newhalen is displayed in Table 11.

¹¹⁵⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁵⁷ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹¹⁵⁸ Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹¹⁵⁹ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹¹⁶⁰ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Newhalen: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold To Residents ²	Sport Fishing Licenses Sold In Newhalen ²
2000	0	0	5	0
2001	0	0	14	0
2002	0	0	24	0
2003	0	0	21	0
2004	0	0	22	0
2005	0	0	21	0
2006	0	0	15	0
2007	0	0	14	0
2008	0	0	15	0
2009	0	0	26	0
2010	0	0	17	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	0	0	17,234	6,514
2010	0	22	20,068	5,613

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest remains a fundamental aspect of Newhalen's local economy.¹¹⁶¹ In a survey conducted by the AFSC in 2011, community leaders reported that fish, caribou, and moose are three of the most important subsistence resources for Newhalen residents. During fieldwork for a 2004 survey of subsistence resource use in Newhalen and surrounding communities, researchers recorded current resource concerns in the communities of Newhalen and Iliamna. Local residents' concerns centered around caribou, and particularly the Mulchatna Herd. They expressed concern about overharvest of the herd by nonlocal hunters, and were also concerned about lichen being too thin to support the formerly large herd of caribou near the Mulchatna River. They indicated that lichen was thicker around the Nushagak River, and felt that the herd may not return to the Mulchatna River for 10 years.¹¹⁶²

In addition to caribou, sockeye salmon are an important subsistence resource in Newhalen, as they return in great numbers to the Newhalen River. Other salmon species are also used for subsistence purposes, along with trout and Arctic grayling. In addition, harbor seals are utilized for subsistence purposes by Newhalen residents.¹¹⁶³ Iliamna Lake is home a freshwater population of harbor seals.¹¹⁶⁴ Local subsistence hunters harvest a small number of these seals each year.^{1165,1166}

In 2004, the only year between 2000 and 2010 that a full focused household subsistence survey was conducted by ADF&G in the community of Newhalen, 99% of households were recorded as participating in salmon subsistence, 70% in halibut subsistence, 52% in marine mammal subsistence, 56% in marine invertebrate subsistence, and 61% in non-salmon fish subsistence (other than halibut). The per capita annual subsistence harvest of land and sea based resources in Newhalen was 691 lb in 2004. In addition, ADF&G reported that 85% of households surveyed in 2008 participated in salmon subsistence that year. Information about per capita subsistence harvest and subsistence participation by household and species is presented in Table 12.

Information about subsistence salmon permits is available for six years between 2000 and 2008. During this period, the number of subsistence salmon permits issued to Newhalen households varied between 20 and 32. Sockeye salmon was by far the most heavily harvested salmon species in the area. Information about subsistence salmon harvest is presented in Table 13, along with information regarding marine invertebrate and non-salmon fish subsistence use by residents of Newhalen. The 2004 ADF&G subsistence household survey found that a total of 312 lb of marine invertebrates and 3,887 lb of non-salmon fish were harvested in 2004. ADF&G also

¹¹⁶¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁶² Fall, J. A., D. L. Holen, B. Davis, T. Krieg, and D. Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹¹⁶³ Ibid.

¹¹⁶⁴ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹¹⁶⁵ Ibid.

¹¹⁶⁶ Withrow, David and Kymberly Yano, Jennifer Burns, Courternay Gomez, and Tatiana Askoak. 2011. *Freshwater Harbor Seals of Lake Iliamna, Alaska. Do They Pup and Over-Winter in the Lake?* Poster presented at the 2011 Alaska Marine Science Symposium. Retrieved January 18, 2012 from ftp://ftp.afsc.noaa.gov/posters/pWithrow04_freshwater-seals_2011.pdf.

reported harvest of 13,572 lb of non-salmon fish by New Stuyahok residents in 2003 (Table 13). Specific species of marine invertebrates harvested by Newhalen residents in 2004 included butter, horse, Pacific littleneck, pinkneck, razor, and freshwater clams, mussels, cockles, scallops, Dungeness, Tanner, and king crab, octopus, and shrimp. Specific species of non-salmon fish harvested by Newhalen residents included Arctic char, Dolly Varden char, rainbow and lake trout, humpback, broad, and round whitefish, burbot, black, red, and unknown rockfish, lingcod, Pacific cod, unknown cod, sablefish, walleye pollock, wolf fish, smelt, least cisco, sucker, stickleback (needlefish), unknown pike, unknown flounder, unknown sole, unknown sturgeon, unknown greenling, and unknown shark. Species harvested by the highest percentage of Newhalen households included Dolly Varden, grayling, rainbow trout, pike, and lake trout. It is of note that a number of species were reported as used by additional households that did not engage directly in harvest, suggesting that they received these fish through sharing networks.¹¹⁶⁷

No information was reported by the NMFS regarding the number of Subsistence Halibut Registration Certificates (SHARC) issued to residents of Newhalen between 2003 and 2010 (Table 14), despite the fact that ADF&G reported a high percentage of households participating in halibut subsistence (Table 12). Some information about subsistence harvest of marine mammals was reported in several years during the 2000-2010 period. According to data reported by NMFS, a small number of beluga whales were harvested in 5 different years during the decade. No information was reported by management agencies regarding subsistence harvest of sea otter, walrus, polar bear, Steller sea lion, harbor seal, or spotted seal (Table 15), although harbor seals are a known subsistence resource locally.

Table 12. Subsistence Participation by Household and Species, Newhalen: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	99%	70%	52%	56%	61%	691
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	85%	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹¹⁶⁷ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Newhalen: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	20	19	31	45	n/a	n/a	3,023	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13,572
2004	32	29	105	n/a	n/a	n/a	15,565	312	3,887
2005	20	17	n/a	n/a	n/a	n/a	6,574	n/a	n/a
2006	20	16	n/a	n/a	n/a	n/a	6,338	n/a	n/a
2007	20	16	n/a	n/a	n/a	n/a	6,338	n/a	n/a
2008	31	29	1	11	n/a	8	7,698	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Newhalen: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Newhalen: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	1	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	3	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	1	n/a	n/a	n/a	n/a	n/a	n/a
2010	1	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and

Nondalton (*non-DOLL-tun*)



People and Place

*Location*¹¹⁶⁸

Nondalton is located on the west shore of Six Mile Lake, at the southwestern edge of Lake Clark National Preserve. Lake Clark begins 5 miles northeast of Nondalton, and the north shore of Iliamna Lake is located approximately 15 miles to the south. Nondalton is 190 miles southwest of Anchorage. The community is located in the Iliamna Recording District and Lake and Peninsula Borough Census Area. The City encompasses 8.4 square miles of land and 0.4 square miles of water.

*Demographic Profile*¹¹⁶⁹

In 2010, there were 164 residents in Nondalton, ranking it as the 215th largest of 352 communities in Alaska with recorded populations that year. Between 1990 and 2000 the population of Nondalton increased by 24.2%, and then decreased again to 7.8% below the 1990 population level by 2010. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 15.8%, with an average annual growth rate of -1.96%. According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that a sizeable number of seasonal workers and transients is also present in Nondalton each year, primarily between July and November, and seasonal teaching staff are also present during other times of year. They also indicated that the population peak in Nondalton occurs between June and September, and is somewhat driven by employment in fishing sectors.

In 2010, over half of the population of Nondalton identified themselves as American Indian and Alaska Native (63.4%), along with 20.7% individuals identifying with two or more races, 15.9% as White, and 0.5% as Native Hawaiian or Other Pacific Islander. In addition, 0.5% of Nondalton residents identified themselves as Hispanic in 2010. These figures represent a substantial shift from 2000 numbers, with individual identifying as American Indian and Alaska Native making up 25.7% less of the population in 2010, and individuals identifying with two or more races making up 19.2% more of the population in 2010 compared to 2000. The percentage of the population that identified themselves as White increased over time, from approximately 10% in 1990 and 2000, to 15.9% in 2010. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹¹⁶⁸ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁶⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Based on household surveys conducted for the U.S. Census, the average household size in Nondalton decreased slightly between 1990 and 2010, with 3.3 persons per household in 1990, 3.25 in 2000, and 2.88 in 2010. The number of households in Nondalton followed population trends, increasing between 1990 and 2000 from 54 to 68, before decreasing again to 57 occupied housing units in 2010. Of the total 94 housing units surveyed for the 2010 U.S. Decennial Census, 38.3% were owner-occupied, 22.3% were rented, and 39.4% were vacant or used only seasonally. From 1990 to 2010, no Nondalton residents were reported to be living in group quarters.

In 2010, the gender makeup in Nondalton was 48.5% male and 51.6% female. The greater number of women than men in Nondalton is anomalous compared to the population of Alaska as a whole, which overall has more men than women (52% male and 48% female in 2010). The median age of Nondalton residents in 2010 was 30 years, slightly younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. That year, 10.5% of Nondalton’s population was age 60 or older. The overall population structure of Nondalton in 2000 and 2010 is shown in Figure 2.

Table 1. Population in Nondalton from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	178	-
2000	221	-
2001	-	210
2002	-	206
2003	-	216
2004	-	206
2005	-	204
2006	-	196
2007	-	194
2008	-	199
2009	-	186
2010	164	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nondalton: 2000-2010 (U.S. Census).

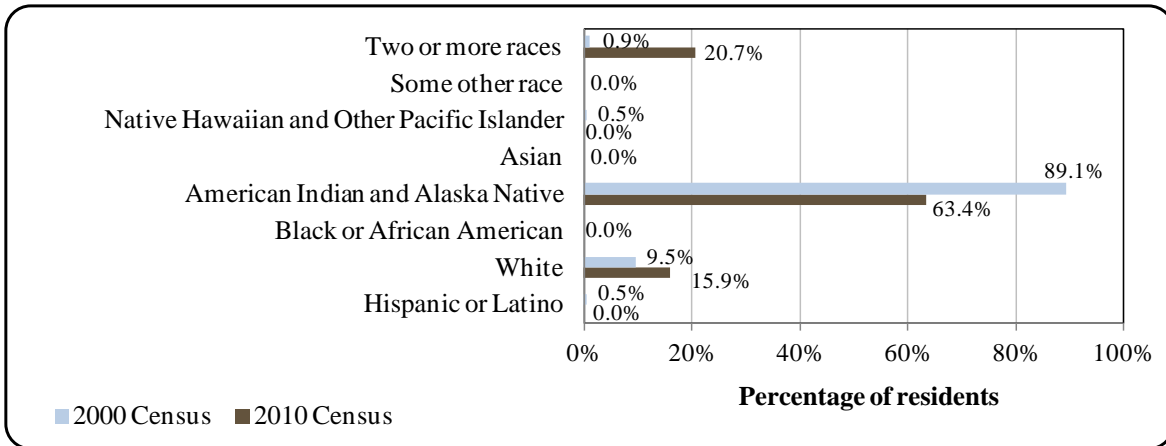
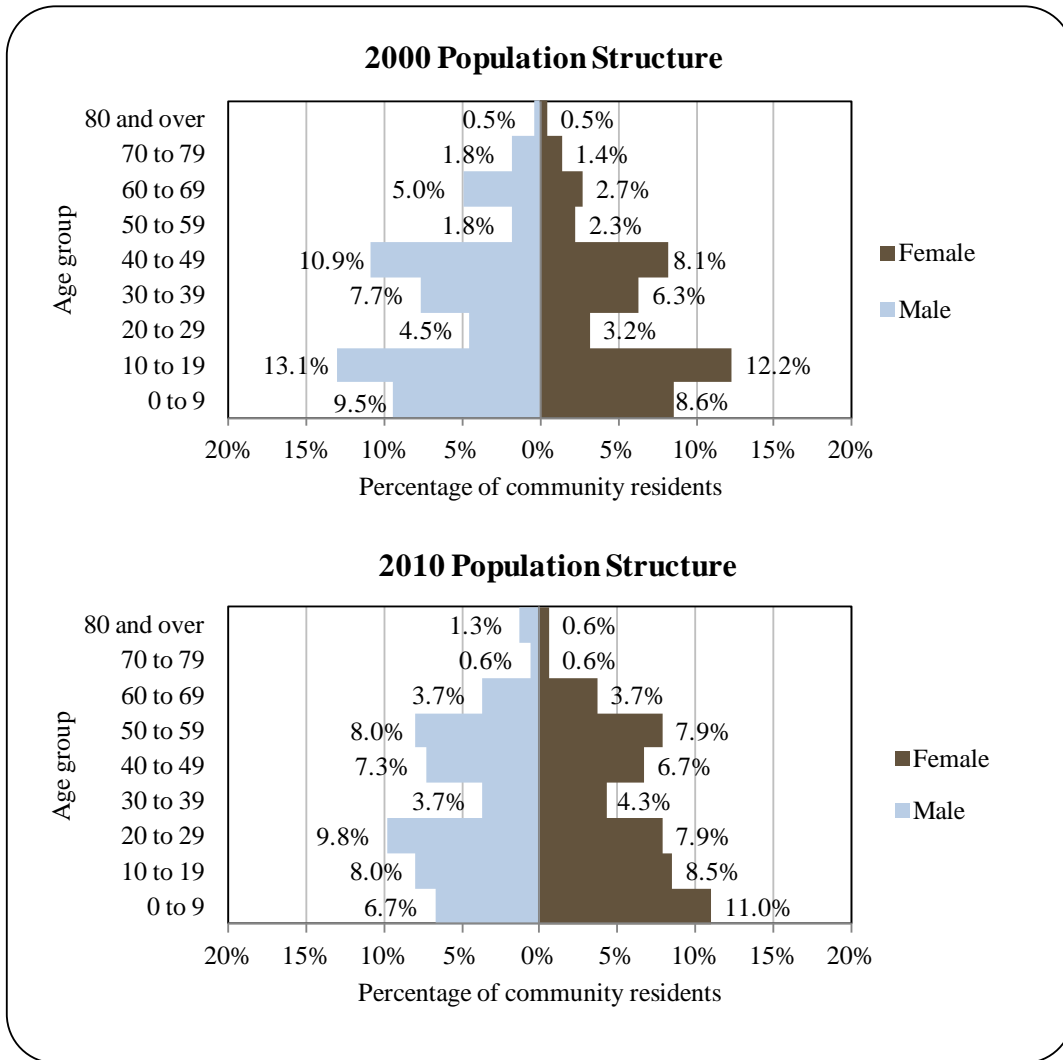


Figure 2. Population Age Structure in Nondalton Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹¹⁷⁰ 68.6% of Nondalton residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 22.5% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 8.8% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 6.9% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 7.8% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 9.8% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Lake Clark is within the territory of Dena'ina Athabascan people. Few Russian explorers entered Dena'ina country during their occupation of Alaska, which ended in 1867 with the sale of Alaska to the United States. The Dena'ina residents of Lake Clark traveled across mountain passes to trade with the Russians at posts located along Cook Inlet. In the late 19th century, American explorers began to enter the Lake Clark area. The first documented American exploration occurred in January 1891, when a party under the leadership of Alfred B. Schanz and John W. Clark (an agent of the Alaska Commercial Company) – for whom the lake was named – explored the area. They visited Kijik, a Dena'ina village on Lake Clark near the mouth of the Chulitna River.¹¹⁷¹

Kijik was the major community of Inland Dena'ina in this area until 1902, when residents began moving to a new village site (Old Nondalton) on neighboring Six Mile Lake. The reason for the move in 1902 was a measles epidemic that decimated the population. The new village site was also closer to trading posts on Iliamna Lake and the increasing number of salmon canneries along the shores of Bristol Bay. Kijik was completely abandoned by 1914.¹¹⁷² The name Nondalton was first recorded by the U.S. Geological Survey in 1909. The village was originally located on the north shore of Six Mile Lake, but in 1940 growing mudflats and wood depletion in the surrounding area caused the village to move to its present location on the west shore. The post office, established in 1938, relocated with the villagers. Nondalton formed an incorporated City government in 1971. Today, the population of Nondalton remains largely Dena'ina, and community members maintain a fishing and subsistence lifestyle. The sale of alcohol is prohibited in the community, although importation and possession are allowed.¹¹⁷³

¹¹⁷⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹¹⁷¹ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹¹⁷² Ibid.

¹¹⁷³ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment

Nondalton lies in the transitional climatic zone. Average summer temperatures range from 42 to 62 °F, and winter temperatures average 6 to 30 °F. The record high is 91 °F, and the record low is -47 °F. Annual average rainfall is 26 inches, with 64 inches of snowfall.¹¹⁷⁴ The landscape along the shores of Six Mile Lake is covered by mixed spruce and birch woodlands and shrubs. Higher elevations surrounding Nondalton are characterized by alpine tundra and barrens.¹¹⁷⁵

Lake Clark National Park and Preserve is located directly east of Nondalton, occupying 4 million acres at the north end of the Alaska Peninsula. This National Park and Preserve was established to protect scenic beauty, wild rivers and waterfalls, populations of fish and wildlife, watersheds essential for sockeye salmon, and the traditional lifestyle of local residents. Subsistence activities are permitted in Lake Clark National Park and Preserve. The National Park Service works closely with state and federal fish and wildlife management agencies to determine seasons, bag limits, and similar harvest controls.¹¹⁷⁶ A diversity of fish and wildlife are found in the Nondalton area, including several salmon species, black bear, caribou, sheep, moose, beaver, red fox, lynx, several species of migratory birds including geese and swans, and many non-migratory birds including grouse and ptarmigan.¹¹⁷⁷

Nondalton lies in an area that is integral to the Kvichak, the single most important salmon-producing watershed in the Bristol Bay area.¹¹⁷⁸ Area lakes and rivers feed into Lake Clark, which is the 6th largest freshwater lake in Alaska. Lake Clark flows directly into Six Mile Lake. Waters are then funneled via the Newhalen River into Iliamna Lake, which in turn flows into Bristol Bay via the Kvichak River. Approximately 50% of the sockeye salmon caught in Bristol Bay spawn in the lakes and rivers of the Kvichak watershed, representing 33% of the entire U.S. sockeye catch.¹¹⁷⁹

The region contains significant mineral potential for base, precious, rare, and strategic minerals, including the Pebble copper-gold-molybdenum deposit.¹¹⁸⁰ The Pebble site is located approximately 16 miles west of Nondalton, at the divide between the Koktuli River and Upper Talarik Creek.¹¹⁸¹ Northern Dynasty Minerals Limited calls the Pebble deposit, “one of the greatest stores of mineral wealth ever discovered,” and estimates that the deposit includes 80.6 billion lb of copper, 107.3 oz of gold, and 5.6 billion lb of molybdenum, including both indicated (high confidence) and inferred (low confidence) deposits.¹¹⁸² Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon.

¹¹⁷⁴ Ibid.

¹¹⁷⁵ Nondalton Tribal Council (2006). *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹¹⁷⁶ National Park Service (2011). *Lake Clark National Park & Preserve Management*. Retrieved June 13, 2012 from <http://www.nps.gov/lacl/parkmgmt/index.htm>.

¹¹⁷⁷ See footnote 1175.

¹¹⁷⁸ Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹¹⁷⁹ Ibid.

¹¹⁸⁰ See footnote 1178.

¹¹⁸¹ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky (2008). “Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process.” *Alaska Law Review* 25:1.

¹¹⁸² Northern Dynasty Minerals Limited (2012). *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.¹¹⁸³ According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble Mine is copper. Dissolved copper is known to be toxic to fish.¹¹⁸⁴ If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.¹¹⁸⁵ According to the 2006 Long-Range Environmental Plan published by the Nondalton Tribal Council, with input from Kijik Corporation, the City of Nondalton and local residents, “Nondalton has established a collective position against the activities proposed by Northern Dynasty. The community strongly considers their subsistence lifestyle to be a higher priority than mineral development.”¹¹⁸⁶

Natural hazards present in Nondalton include high risk of wildfire and severe weather, medium risk of earthquakes, and low risk of avalanche, erosion and flooding. Volcanic activity also poses a threat. Wildfire was determined to be the top hazard in Nondalton, due to many standing dead trees and lack of water sources for fire fighting. Severe weather, and particularly high winds, commonly damage power lines during the coldest times of the year. The Village has no backup generator. Earthquakes are a large threat in Alaska. Although there is no recent history of earthquake damage, several small earthquakes have occurred in the area and the northern portion of the Lake and Peninsula Borough is close to a major fault line. The community is also concerned about volcanic activity, with recent eruptions of Novarupta (1912), Iliamna (1953), and Mt. Redoubt (1989) emphasizing the ongoing risk posed by the large number of volcanoes in the region. Ash fall in the region could disrupt transportation to the area and harm the salmon fishery.¹¹⁸⁷

According to the Alaska Department of Environmental Conservation (DEC), there were no notable active environmental cleanup sites in the Nondalton area as of May 2012.¹¹⁸⁸

Current Economy¹¹⁸⁹

According to a survey conducted by the AFSC in 2011, community leaders indicated that the local economy depends on commercial fishing, firefighting, sport hunting and fishing, and mining. Top employers in Nondalton in 2010 included the Lake and Peninsula School District, local government, the Iliamna Development Corporation (a for-profit subsidiary of Iliamna Natives Limited, the Village Corporation for the Village of Iliamna), utilities, Alaska Earth Sciences, Inc. (a consulting firm with expertise in mineral resource exploitation and development), regional health and housing service organizations, the University of Alaska, and transportation services.¹¹⁹⁰ The Bristol Bay salmon fishery is also an important source of income

¹¹⁸³ See footnote 1178.

¹¹⁸⁴ See footnote 1181.

¹¹⁸⁵ Pg. 36 in Duffield, John., Christopher Neher, David A. Patterson, and Oliver S. Goldsmith (2007). *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

¹¹⁸⁶ See footnote 1175.

¹¹⁸⁷ Lake and Peninsula Borough (2009). *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

¹¹⁸⁸ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹¹⁸⁹ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁹⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

in Nondalton, and firefighting provides an additional source of summer employment. The community also relies heavily on subsistence hunting and fishing. During the summer, many families travel to a subsistence fish camp located on the east side of Six Mile Lake, across from Nondalton. Salmon, trout, grayling, moose, caribou, bear, Dall sheep, rabbit, and porcupine are all utilized for subsistence purposes.¹¹⁹¹

Based on household surveys conducted for the 2006-2010 ACS,¹¹⁹² in 2010, the per capita income in Nondalton was estimated to be \$8,763 and the median household income was estimated to be \$37,188. This represents a decrease in per capita income and an increase in median household income over time. In 2000, reported per capita income was \$8,411 and reported median household income was \$19,583. These trends remain in place even after accounting for inflation by converting the 2000 values to 2010 dollars,¹¹⁹³ revealing a real per capita income in 2000 of \$11,060, and real median household income of \$25,751. In 2010, Nondalton ranked 287th of 305 Alaskan communities with per capita income data that year, and 207th in median household income, out of 299 Alaskan communities with household income data.

Nondalton's small population size may have prevented the ACS from accurately portraying economic conditions.¹¹⁹⁴ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nondalton in 2010 is \$9,582.¹¹⁹⁵ This estimate remains lower than the per capita income reported in the 2000 U.S. Census, supporting the decreasing per capita income trend suggested by the 2010 ACS estimate. These declining per capita income estimates are reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,¹¹⁹⁶ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a lower percentage of Nondalton residents were estimated to be in the civilian labor force (60%) than in the civilian labor force statewide (68.8%). In the same year, 44.5% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 14.8%, compared to a statewide unemployment rate of 5.9%. An additional

¹¹⁹¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁹² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹⁹³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹¹⁹⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹¹⁹⁵ See footnotes 1190 and 1192.

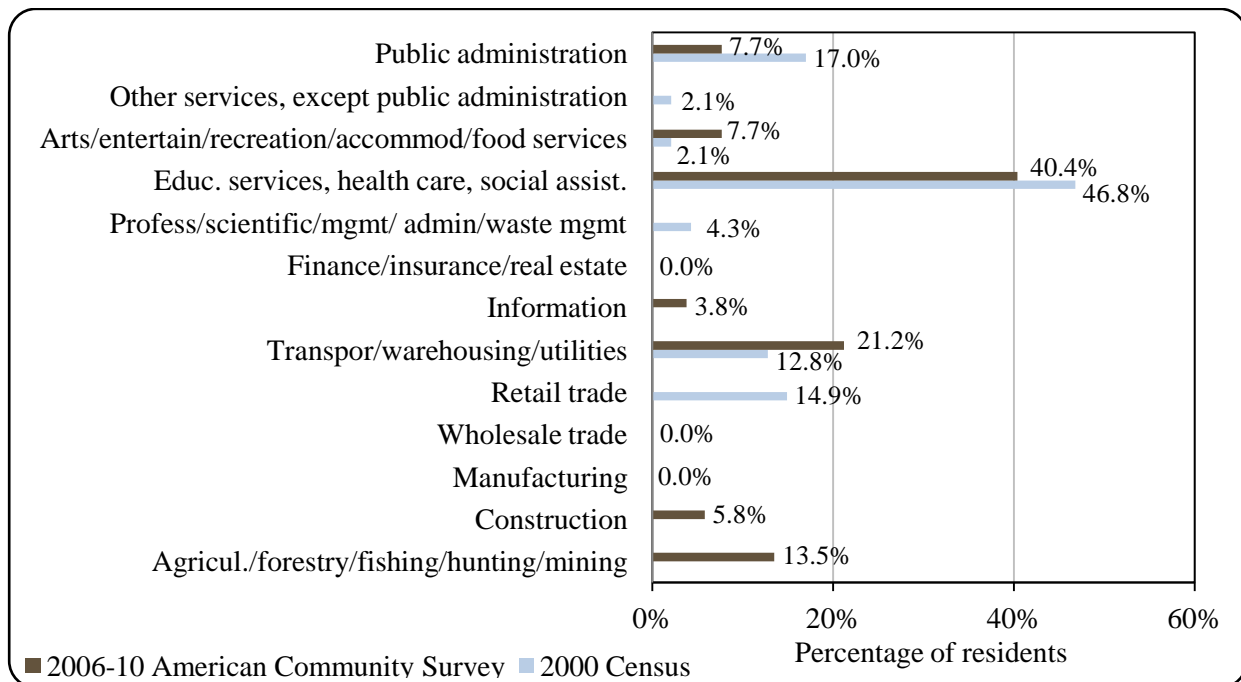
¹¹⁹⁶ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 21%, compared to a statewide unemployment rate estimate of 11.5%.¹¹⁹⁷

Also based on the 2006-2010 ACS, the majority of Nondalton’s workforce was estimated to be employed in the public sector (55.8%), along with 42.3 in the private sector, and 1.9% estimated to be were self-employed. Of the 52 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in the following industries: educational services, health care, and social assistance (40.4%), transportation, warehousing, and utilities (21.2%), and agriculture, forestry, fishing, hunting, and mining (13.5%). The civilian labor force was relatively evenly spread across the five occupational categories reported in the 2006-2010 ACS, with the greatest percentage estimated to be employed in natural resource/construction/maintenance occupations (26.9%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

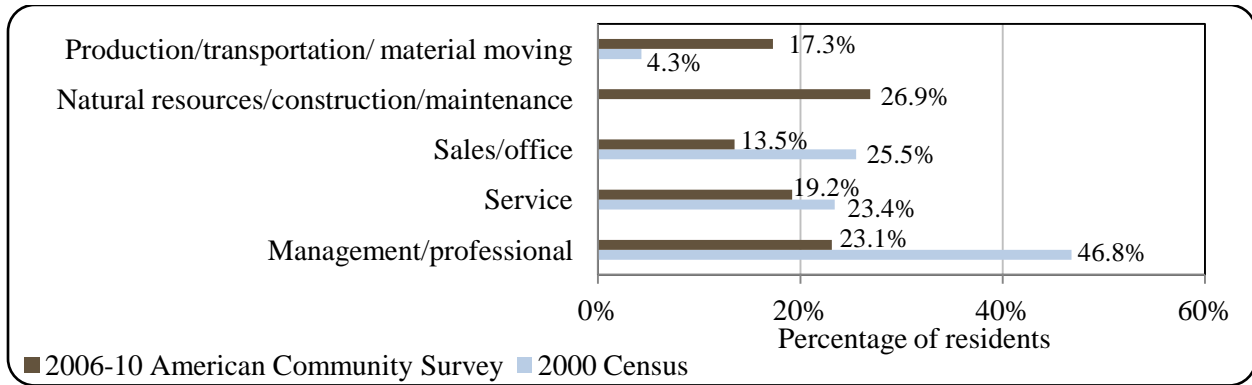
It is important to note that employment in fishing may not be adequately reported in census statistics, as fishermen may hold another job and characterize their employment accordingly. It is also important to note that, although census estimates show relatively high levels of employment in natural resource industries and occupations, a majority of these paid positions are likely tied to mining and other non-fishing jobs. A breakdown of the 26.9% of the labor force that was employed in “natural resources/construction/maintenance” occupations reveals that none of the labor force in Nondalton was employed in “farming, fishing, and forestry” occupations. Instead, these workers were employed primarily employed in construction and extraction occupations (23.1%) and installation, maintenance, and repair occupations (3.8%).

Figure 3. Local Employment by Industry in 2000-2010, Nondalton (U.S. Census).



¹¹⁹⁷ See footnote 1190.

Figure 4. Local Employment by Occupation in 2000-2010, Nondalton (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 89 employed residents in Nondalton in 2010, of which 61.8% were employed in local government, 14.6% in professional and business services, 6.7% in financial activities, 4.5% in education and health services, 3.4% in trade, transportation, and utilities, 3.5% in state government, 1.1% in natural resources and mining, 1.1% in information, 1.1% in leisure and hospitality, and 2.2% in other industries.¹¹⁹⁸ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

Nondalton was incorporated as a 2nd Class City in 1971. The City is located in the Lake and Peninsula Borough. Newhalen has a Strong Mayor form of government, including a seven-person city council, including the mayor, a seven-person advisory school board, and several municipal employees. The City administers a 3% sales tax but has no other taxes. In addition, the Borough administers a 6% bed tax, \$3 per person/day Guide Tax, and \$1 per person/day Lodge Guide Tax.¹¹⁹⁹ In addition to local taxes, other locally-generated revenue sources in Nondalton include water/sewer, telephone/electric co-op, and landfill service fees, equipment and building rentals and leases, land leases, and fuel sales. Annual municipal revenue followed an increasing trend in Nondalton through the 2000-2010 period. The increase is partly explained by a large increase in total fuel sales reported over the period. Outside revenue sources included a variety of revenue sharing programs. From 2000 to 2004, the City received between \$25,000 and \$29,000 per year in State Revenue Sharing contributions, and in 2009 and 2010 received just over \$100,000 per year in Community Revenue Sharing contributions. Nondalton also received Borough Revenue Sharing contributions from the Lake and Peninsula Borough, averaging \$17,244 per year between 2000 and 2010. These Borough funds are generated, in large part,

¹¹⁹⁸ Ibid.

¹¹⁹⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

from the Borough bed tax.¹²⁰⁰ No information was reported regarding fisheries-related grants received by Nondalton between 2000 and 2010, although some revenues were received from fisheries-related state revenue sharing (see the *Fisheries-Related Revenue* section of this profile). Information about selected community revenue sources in Nondalton is presented in Table 2.

Nondalton was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native Village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is Nondalton Village. The Native village corporation is the Kijik Corporation, which manages 126,410 acres of land. The regional Native corporation to which Nondalton belongs is the Bristol Bay Native Corporation.¹²⁰¹

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nondalton from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Borough Revenue Sharing ¹	Fisheries-Related Grants (State and Federal) ⁵
2000	\$142,597	\$352	\$28,913	\$25,000	n/a
2001	\$103,574	n/a	\$28,913	\$23,000	n/a
2002	\$130,276	n/a	\$28,913	\$22,000	n/a
2003	\$182,803	\$240	\$28,002	\$21,000	n/a
2004	\$197,136	\$492	\$25,000	\$10,500	n/a
2005	\$180,453	\$320	n/a	\$17,608	n/a
2006	\$351,871	\$294	n/a	\$15,000	n/a
2007	\$440,408	\$688	n/a	\$2,571	n/a
2008	\$546,270	\$533	n/a	\$15,000	n/a
2009	\$519,412	\$7,518	\$106,101	\$19,000	n/a
2010	\$665,153	\$564	\$106,305	\$19,000	n/a

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹²⁰⁰ Nondalton Tribal Council (2006). *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹²⁰¹ See footnote 1199.

Nondalton is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the tribes and the Native people of Bristol Bay.¹²⁰² The BBNA is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.¹²⁰³

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham and King Salmon. The nearest Alaska Department of Natural Resources office is a Division of Parks and Outdoor Recreation office in Homer, and the nearest Alaska Department of Commerce, Community, and Economic Development office is in Anchorage. Kodiak and Homer have the nearest National Marine Fisheries Service (NMFS) offices, although the Anchorage offices of these agencies is perhaps more accessible for the people of this area. Anchorage and Kodiak have the closest Bureau of Citizenship and Immigration Services offices.

Infrastructure

Connectivity and Transportation

The community of Nondalton is primarily accessible by air and water.¹²⁰⁴ During the winter, a road is passable between Nondalton and Newhalen, 22 miles to the south on the shore of Iliamna Lake. The road is only paved half way.¹²⁰⁵ Air taxi, skiff, snow machine, and four-wheelers are the main modes of transport for residents and visitors. A state-owned 2,800-ft by 75-ft gravel runway is present in Nondalton. Iliamna Air Taxi, Inc. offers scheduled air taxi service to Nondalton.¹²⁰⁶ As of June 2012, a roundtrip ticket between Nondalton and Anchorage with Iliamna Air Taxi, Inc. was \$530.¹²⁰⁷ Other air taxi companies serving the area include Birchwood Air, Lake Clark Air, Lake and Peninsula Air, and Peninsula Air.¹²⁰⁸ There are no docking facilities in Nondalton. Bulk goods are received in Iliamna then taken by a cat-trail to Fish Camp, located across from Nondalton on the east side of the Six Mile Lake. From there, they are ferried by skiff or barge to the west side of the lake.¹²⁰⁹

¹²⁰² Bristol Bay Native Association (n.d.). *Homepage*. Retrieved November 16, 2011 from www.bbna.com.

¹²⁰³ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹²⁰⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁰⁵ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹²⁰⁶ See footnote 1204.

¹²⁰⁷ Personal communication, Iliamna Air Taxi, Inc. reservation agent, June 13, 2012.

¹²⁰⁸ Nondalton Tribal Council (2006). *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹²⁰⁹ See footnote 1204.

Facilities

Water in Nondalton is derived from an “infiltration gallery”¹²¹⁰ at Six Mile Lake. The water is chlorinated, and the City has storage capacity for up to 88,000 gallons. Seventy residences are fully plumbed and connected to the City-operated piped water and sewer system. A sewage lagoon is used for sewage treatment.¹²¹¹ According to a survey conducted by the AFSC in 2011, community leaders reported that improvements in water and sewage treatment, and water and sewer pipelines, are currently in progress. The City operates a landfill, but does not provide refuse collection services. Electricity is provided to Nondalton through the Tazimina Hydroelectric Project which also provides electricity to communities of Iliamna and Newhalen. The Iliamna – Newhalen – Nondalton (INN) Electric Cooperative owns 50 miles of distribution line connecting the three member communities, and also owns a backup diesel powerhouse in Newhalen.¹²¹² According to the 2011 AFSC survey, Nondalton community leaders indicated that construction of a new diesel powerhouse and alternative energy sources are currently in progress in their community. Police services are provided by City Hall and state troopers stationed in Iliamna. Nondalton City Hall has a jail holding cell. Local fire and rescue services are provided by the Nondalton First Responders.¹²¹³

Additional community facilities and services include a school gym, school library, recreation center, and community building.¹²¹⁴ According to the 2011 AFSC survey, community leaders reported that several facilities are planned to be completed within the next 10 years, including a new community center/library, a police department, emergency response system, and a fire department. Some visitor services are currently available in Nondalton, including taxi service to and from the airport and accommodations at several lodges in the area. Broadband internet and telephone services are provided in Nondalton, but no cable provider currently serves the community.¹²¹⁵ In the 2011 AFSC survey, community leaders also noted the presence of a post office, a food bank, and publicly subsidized housing in Nondalton.

With regard to fishing-related infrastructure, no docking facilities are currently present in Nondalton. However, community leaders reported in the 2011 AFSC survey that vessels up to 40 ft in length can use beach landing moorage at Nondalton. They also indicated that a barge landing area is in progress, and construction is in process on new dock facilities, including roads and electricity serving the dock. Within the next 10 years, community leaders indicated that water pipes will also be connected to the new dock facility, construction of pilings and a breakwater will be completed, and harbor dredging will take place.

Community leaders also reported that some fisheries-related services are available in Nondalton, including boat repair (electrical, welding, and mechanical services), boat fuel sales, and fishing gear repair. They also noted the presence of fish lodges, and air taxi service facilitating fishing activity. Finally, community leaders reported that Nondalton residents

¹²¹⁰ Infiltration galleries are a type of well constructed near rivers or ponds to collect infiltrated surface waters. Since the water infiltrates through a layer of soil/sand, it is significantly free from suspended impurities including microorganisms usually present in surface water. (Definition retrieved February 22, 2012 from http://phys4.harvard.edu/~wilson/arsenic/conferences/Feroze_Ahmed/Sec_3.htm.)

¹²¹¹ See footnote 1204.

¹²¹² Ibid.

¹²¹³ Ibid.

¹²¹⁴ Ibid.

¹²¹⁵ Ibid.

commonly travel to Iliamna to access fisheries-related businesses and services not available in Nondalton.

Medical Services

Local health care is provided by the Nondalton Clinic, which is owned by the City and operated by the Bristol Bay Area Health Corporation. The Nondalton Clinic is a Community Health Aide Program site. Emergency Services have river and air access. Emergency service is provided by 911 Telephone Service and a health aide. Alternative health care is provided by the Nondalton First Responders.¹²¹⁶ By air, the nearest hospitals are located in Homer, Soldotna, and Dillingham.

Educational Opportunities

There is one school in Nondalton, which offers preschool through 12th grade instruction. As of 2011, the Nondalton School had a total of 35 students and 5 teachers.¹²¹⁷

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest of fisheries resources has been important for residents of the Iliamna Lake region since prehistory. Commercial exploitation of salmon resources began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of the Bristol Bay region, along with several other species harvested in lower volumes.¹²¹⁸ Subsistence harvest continues to be an important foundation for the local economy in Nondalton,¹²¹⁹ and tourism related to sportfishing activity has also grown in importance in the Iliamna Lake region,^{1220,1221,1222} as outlined in the *Recreational Fishing* section of this profile.

Bristol Bay is the nearest marine area to the community of Nondalton. The Bay is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory

¹²¹⁶ Ibid.

¹²¹⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹²¹⁸ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). *The Commercial Salmon Fishery in Alaska*. Alaska Fisheries Research Bulletin 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹²¹⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²²⁰ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹²²¹ Nondalton Tribal Council (2006). *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹²²² Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

Area 4E, and Bering Sea Sablefish Regulatory Area. Nondalton is not eligible to participate in the Community Development Quota (CDQ) program or the Community Quota Entity (CQE) program.

According to a survey conducted by the AFSC in 2011, community leaders report that Nondalton actively participates in fisheries management processes in Alaska. They indicated that a Nondalton representative sits on regional fishery advisory and/or working groups run by ADF&G and sends a representative to participate in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process. In addition, they indicated that Nondalton relies on regional organizations to provide information on fisheries management issues. They noted that Nondalton also financially supports research organizations, industry coalitions, and trade associations. In the survey, community leaders also indicated that one challenge for Nondalton's fishing economy is effective taxation of sport fish lodges. In particular, collection of taxes is challenging.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Nondalton. According to ADF&G, however, several processing facilities are located in nearby communities in Bristol Bay, including Naknek, Egegik, and Dillingham.

Fisheries-Related Revenue

Overall, in 2010, the City of Nondalton received \$6,984 from fisheries-related taxes and fees. These revenue sources include the Shared Fisheries Business Tax and the Fisheries Resource Landing Tax. Table 3 shows the annual revenue for these categories between 2000 and 2010.¹²²³ In a survey conducted by the AFSC in 2011, community leaders indicated that roads, water, and wastewater systems are at least partially funded by these fisheries-related revenue sources.

Commercial Fishing

Nondalton is located approximately 100 miles inland from the outlet of the Kvichak River into Bristol Bay. Even though it is not located on the coast, Nondalton's economy is still tied to commercial fishing activities. Between 2000 and 2010, local residents were active in state commercial fisheries, participating as crew license holders, vessel owners, and permit holders. Some Nondalton residents also held federal permits and quota share accounts in federal catch share fisheries between 2000 and 2010. In a survey conducted by the AFSC in 2011, community leaders reported that Nondalton residents primarily participate in the Bristol Bay salmon fishery, which takes place each year between June and August.

In 2010, nine Nondalton residents held a total of nine commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC), all of which were issued for salmon fisheries. Six permits were held for Bristol Bay salmon drift and set gill net fisheries. Of these, two were actively fished in 2010. Nondalton's participation in salmon fisheries decreased

¹²²³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

between 2000 and 2010 in terms of both the number of permit holders (from 16 in 2000 to 9 in 2010), the total number of permits held (from 17 in 2000 to 9 in 2010), and the percentage of permits that were actively fished (from 65% in 2000 to 22% in 2010).

It is important to note that several CFEC permits were held in other fisheries between 2000 and 2010. In 2004 and 2005, one permit holder held one permit each year in the statewide halibut longline fishery using vessels under 60 ft in length. The permit was actively fished both years. In 2000 and 2001, one permit holder held one permit each year in the Norton Sound herring roe and food/bait fishery. The permit was actively fished in 2000 only. In addition to CFEC permits, one Nondalton resident held one Federal Fisheries Permit (FFP) per year in 2004 and 2005. The FFP was not actively fished in either year. No federal License Limitation Program permits (LLP) were held in federal groundfish or crab fisheries by Nondalton residents between 2000 and 2010. Information and state and federal fishing permits is presented in Table 4.

In addition to permits, one quota share account in the federal halibut catch share fishery was held by a Nondalton resident in 2004. That year, 77,772 quota shares were held, with an allotment of 10,538 lb of halibut. Between 2000 and 2010, no quota share accounts or quota shares were held by Nondalton residents in federal catch share fisheries for sablefish or crab. Information about federal catch share participation is presented in Tables 6 through 8.

In 2010, 6 Nondalton residents held crew licenses, a substantial decrease from 31 licenses held in the year 2000. The number of Nondalton residents that were the primary owner of a fishing vessel fell from eight in 2001 to one between 2006 and 2010. Between 31 and 32 vessels were homeported in Nondalton from 2000 to 2004, and no vessels were homeported there from 2005 to 2010. These characteristics of the commercial fishing sector are presented in Table 5. According to a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing vessels operating out of Nondalton primarily use gill net and beach seine gear. However, they indicated that at lot fewer commercial fishing boats were present in Nondalton compared to previous years, and that skiffs and larger vessels are increasingly basing out of Port Alsworth, a port located on the southern shore of Lake Clark.

Between 2000 and 2010, information regarding landings and ex-vessel revenue generated by Nondalton vessel owners is considered confidential due to the small number of participants (Table 10). Since no fish buyers or shore-side processing plants were present in Nondalton (Table 5), no ex-vessel revenue was generated in the community between 2000 and 2010 (Table 9). Nondalton vessel owners delivered their catches elsewhere.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nondalton: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$3,008	\$5,297	\$4,534	\$8,216	\$3,263	\$3,900	\$4,710	\$5,683	\$5,379	\$6,745	\$6,541
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$25	\$65	\$247	\$414	\$443
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>\$3,008</i>	<i>\$5,297</i>	<i>\$4,534</i>	<i>\$8,216</i>	<i>\$3,263</i>	<i>\$3,900</i>	<i>\$4,735</i>	<i>\$5,748</i>	<i>\$5,625</i>	<i>\$7,160</i>	<i>\$6,984</i>
<i>Total municipal revenue</i> ⁵	<i>\$142,597</i>	<i>\$103,574</i>	<i>\$130,276</i>	<i>\$182,803</i>	<i>\$197,136</i>	<i>\$180,453</i>	<i>\$351,871</i>	<i>\$440,408</i>	<i>\$546,270</i>	<i>\$519,412</i>	<i>\$665,153</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Nondalton: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished											
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	0%	0%	-	-	-	-	-
	Total permit holders	0	0	0	0	1	1	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	1	1	0	0	0	0	0
	% of permits fished	-	-	-	-	100%	100%	-	-	-	-	-
	Total permit holders	0	0	0	0	1	1	0	0	0	0	0
Herring (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	0
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	0%	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Nondalton: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	17	14	13	10	12	13	11	10	10	9	9
	Fished permits	11	6	5	3	5	4	3	3	3	2	2
	% of permits fished	65%	43%	38%	30%	42%	31%	27%	30%	30%	22%	22%
	Total permit holders	16	15	13	11	11	13	11	11	10	9	9
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>18</i>	<i>15</i>	<i>13</i>	<i>10</i>	<i>13</i>	<i>14</i>	<i>11</i>	<i>10</i>	<i>10</i>	<i>9</i>	<i>9</i>
	<i>Fished permits</i>	<i>12</i>	<i>6</i>	<i>5</i>	<i>3</i>	<i>6</i>	<i>5</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>2</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>40%</i>	<i>38%</i>	<i>30%</i>	<i>46%</i>	<i>36%</i>	<i>27%</i>	<i>30%</i>	<i>30%</i>	<i>22%</i>	<i>22%</i>
	<i>Permit holders</i>	<i>17</i>	<i>16</i>	<i>13</i>	<i>11</i>	<i>11</i>	<i>13</i>	<i>11</i>	<i>11</i>	<i>10</i>	<i>9</i>	<i>9</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nondalton: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Nondalton ²	Total Net Lb Landed In Nondalton ^{2,5}	Total Ex-Vessel Value Of Landings In Nondalton ^{2,5}
2000	31	0	0	5	32	0	0	\$0
2001	13	0	0	8	32	0	0	\$0
2002	4	0	0	7	33	0	0	\$0
2003	15	0	0	7	33	0	0	\$0
2004	13	0	0	5	31	0	0	\$0
2005	10	0	0	2	0	0	0	\$0
2006	16	0	0	1	0	0	0	\$0
2007	12	0	0	1	0	0	0	\$0
2008	10	0	0	1	0	0	0	\$0
2009	11	0	0	1	0	0	0	\$0
2010	6	0	0	1	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Nondalton: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	1	77,772	10,538
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nondalton: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nondalton: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nondalton: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nondalton Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing and hunting have become important to the local economy in the Six Mile Lake and Lake Clark area. Some Nondalton residents work as fishing guides.¹²²⁴ Numerous sportfishing and hunting lodges are present along the Newhalen River.¹²²⁵ Lodges near Nondalton include the Newhalen Lodge and Valhalla Lodge.¹²²⁶ Although sport fish businesses are present throughout the area, only a small number are located in the City of Nondalton itself. There were no active sport fish guide businesses in Nondalton between 2000 and 2010. However, a small number of licensed sport fish guides was present during this period.

From 2000 to 2010, Nondalton residents purchased between 13 and 27 sportfishing licenses per year (irrespective of point of sale), and no sportfishing licenses were sold in the community itself. This indicates that the sportfishing sector in Nondalton is linked to other communities in the region, including nearby Iliamna and regional hubs such as Naknek/King Salmon. The City of Iliamna, located approximately 15 miles south of Nondalton, had between 7 and 18 licensed guides per year between 2000 and 2010, and fishing licenses are sold in the City (see the community profile for Iliamna for more information). Iliamna Lake attracts a large number of recreational fishermen each year to participate in the trophy rainbow trout fishery, as well as fisheries for numerous other species including salmon.¹²²⁷ According to a survey conducted by the AFSC in 2011, community leaders indicated that the most popular sport species targeted near Nondalton are coho and sockeye salmon.

Community leaders also reported in the 2011 AFSC survey that a majority of recreational fishing activity near Nondalton is made up of non-residents using private boats. Local residents also participate in recreational fishing using private boats. The Alaska Statewide Harvest Survey,¹²²⁸ conducted by ADF&G between 2000 and 2010, did not provide information regarding species targeted by private anglers in Nondalton. However, the survey did list species targeted downstream in Iliamna-Newhalen. These species include sockeye salmon, rainbow trout, Dolly Varden, and Arctic grayling. No kept/release log book data were reported for fishing charters out of Nondalton, Iliamna, or Newhalen between 2000 and 2010.¹²²⁹

Nondalton is located within Alaska Sport Fishing Survey Area S – Kvichak River Drainage. Information is available about both saltwater and freshwater sportfishing activity at

¹²²⁴ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹²²⁵ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²²⁶ Nondalton Tribal Council (2006). *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew:Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹²²⁷ Alaska Department of Natural Resources (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹²²⁸ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹²²⁹ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

this regional scale. Overall between 2000 and 2010, non-Alaska resident anglers fished more angler days than Alaska residents in both freshwater and saltwater. Non-Alaska resident anglers fished consistently more days than Alaska resident anglers in both freshwater and saltwater during this period, reflective of the large amount of sportfishing related tourism in the region. Freshwater sportfishing activity was significantly more important than saltwater fishing in the region. The number of freshwater angler days for non-Alaska resident sport fishermen varied between 17,234 and 30,340 between 2000 and 2010, while Alaska resident freshwater angler days varied between 3,077 and 10,297. This information about the sportfishing sector in and near Nondalton is also displayed in Table 11.

Table 11. Sport Fishing Trends, Nondalton: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nondalton ²
2000	0	3	15	0
2001	0	2	16	0
2002	0	2	13	0
2003	0	3	23	0
2004	0	2	22	0
2005	0	1	18	0
2006	0	1	21	0
2007	0	2	23	0
2008	0	1	21	0
2009	0	0	27	0
2010	0	2	21	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	0	0	17,234	6,514
2010	0	22	20,068	5,613

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest remains a fundamental aspect of Nondalton's local economy.¹²³⁰ In a survey conducted by the AFSC in 2011, community leaders reported that salmon and trout are two of the most important aquatic or marine subsistence resources used by residents of Nondalton, and that bear, moose, and birds are also primary resources. In addition, Arctic grayling, caribou, Dall sheep, rabbit, and porcupine are commonly utilized.¹²³¹ Sockeye salmon returning to Six Mile Lake and Lake Clark have traditionally been an essential subsistence resource, breaking the spring season of hunger for area residents. According to a harvest survey conducted by ADF&G in 2005, 87% of Nondalton households utilized sockeye salmon for subsistence purposes in 2004. Other common freshwater fish species utilized for subsistence by Nondalton residents in 2004 included rainbow trout (63% of households), lake trout (61%), Arctic grayling (55%), humpback whitefish (55%), and northern pike (37%).¹²³²

During fieldwork for the 2004 survey of subsistence resource use in Nondalton and surrounding communities, researchers recorded current resource concerns voiced by community members in Nondalton. Local residents' concerns centered around caribou, and particularly the Mulchatna Herd. They expressed concern that local residents cannot compete with fly-in hunters, and that helicopter traffic noise causes caribou to move further from Nondalton. They also expressed the belief that non-local hunters overharvest caribou and moose, waste parts of the carcass, and displace local people. Finally, Nondalton community members voiced concern about possible development of the nearby Pebble Mine. They continue to use traditional trapping and hunting areas around Groundhog Mountain, which could be directly impacted by mining activities.¹²³³

According to the same ADF&G survey, 92% of households were estimated to participate in salmon subsistence (all species) in 2004, 37% were estimated to participate in halibut subsistence, 9% in marine invertebrates subsistence, and 48% in non-salmon fish subsistence (other than halibut). The per capita annual subsistence harvest of land- and sea-based resources in Nondalton that year was 367 lb, including 65 lb of marine invertebrates and 5,231 lb of non-salmon fish. An estimate was also available for non-salmon fish in 2003. That year, 79% of Nondalton households were estimated to participated in non-salmon fish subsistence. Information about per capita subsistence harvest and subsistence participation by household and species is presented in Table 12, and some information about marine invertebrates and non-salmon fish is also presented in Table 13.

Nondalton residents harvested relatively few marine invertebrates in 2004, given the distance from the community to marine areas. Of the marine invertebrates harvested, a majority were razor clams. Butter clams, mussels, and crab were also primary species harvested. The species of non-salmon fish harvested by the greatest number of households in Nondalton in 2004 included rainbow trout (61%), lake trout (61%), humpback whitefish (55%), Arctic grayling (55%), Dolly Varden char (34%), northern pike (29%), burbot (26%), and sucker (18%). A

¹²³⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²³¹ Ibid.

¹²³² Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹²³³ Ibid.

greater percentage of Nondalton households used many of these resources than were involved in harvesting, which suggests that a sharing network is present in the community. No households reported harvesting marine mammals for subsistence in 2004, although about 8% of households did report receiving gifts of seal meat, revealing that sharing networks extend between communities as well.¹²³⁴

Information about subsistence salmon permits is available for seven years between 2000 and 2008. In the years for which information was reported, the number of subsistence salmon permits issued to Nondalton households varied between 1 and 34. Sockeye was by far the most heavily harvested salmon species in the area. Information about subsistence salmon harvest is presented in Table 13. No information was reported regarding the number of Subsistence Halibut Registration Certificates (SHARC) issued to residents of Nondalton between 2003 and 2010 (Table 14), despite the fact that ADF&G reported 37% of households participating in halibut subsistence in 2004 (Table 12). In addition, no was information reported by management agencies regarding marine mammal harvest by Nondalton residents between 2000 and 2010 (Table 15).

Table 12. Subsistence Participation by Household and Species, Nondalton: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	79%	n/a
2004	92%	37%	n/a	9%	48%	357
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹²³⁴ Ibid.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nondalton: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb Of Marine Inverts ²	Lb Of Non-Salmon Fish ²
2000	25	19	n/a	n/a	n/a	n/a	12,451	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	1	1	n/a	n/a	n/a	n/a	19	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3,433
2004	41	35	n/a	n/a	n/a	n/a	8,789	65	5,231
2005	34	32	n/a	n/a	n/a	n/a	9,092	n/a	n/a
2006	26	24	n/a	n/a	n/a	n/a	8,885	n/a	n/a
2007	29	26	n/a	n/a	n/a	n/a	7,902	n/a	n/a
2008	28	24	n/a	n/a	n/a	n/a	8,917	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nondalton: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nondalton: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Pedro Bay (*P-droh*)



People and Place

*Location*¹²³⁵

Pedro Bay is located on the Alaska Peninsula, at the east end of Iliamna Lake, at the head of Pedro Bay. The town is 176 air miles southwest of Anchorage. Pedro Bay is located in the Iliamna Recording District and the Lake and Peninsula Borough Census Area.

*Demographic Profile*¹²³⁶

In 2010, there were 42 inhabitants in Pedro Bay, making it the 303rd largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in the U.S. Census records in the 1950 with 44 inhabitants. The population has stayed relatively stable since that time. There was 0% population change overall between 1990 and 2010. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of Pedro Bay increased to 62, then decreased again to 48 by 2009, with an average annual growth rate of 1.95%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that approximately 5 to 15 seasonal workers or transients are present in Pedro Bay each year, especially during summer months (June to September). They also indicated that Pedro Bay's population typically peaks between June and August, and that population fluctuations are mostly driven by fishing activities, with a primarily subsistence focus.

In 2010, a majority of Pedro Bay residents identified themselves as American Indian and Alaska Native (66.7%), along with 28.6% who identified as White, and 4.8% identifying with two or more races. In 2010, no Pedro Bay residents identified themselves as Hispanic. The percentage of the Pedro Bay population made up of White residents decreased by 7.4% between 2000 and 2010. However, these numbers represent an overall increase in the percentage of White residents, from 9.5% in 1990. Likewise, although the percentage of the population that identified themselves as American Indians or Alaska Natives increased by 26.7% between 2000 and 2010, there was an overall decrease from 1990, when 90.5% of the population identified as American Indian or Alaska Native. These percentage fluctuations may be accentuated due to the low overall population in Pedro Bay. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹²³⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²³⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

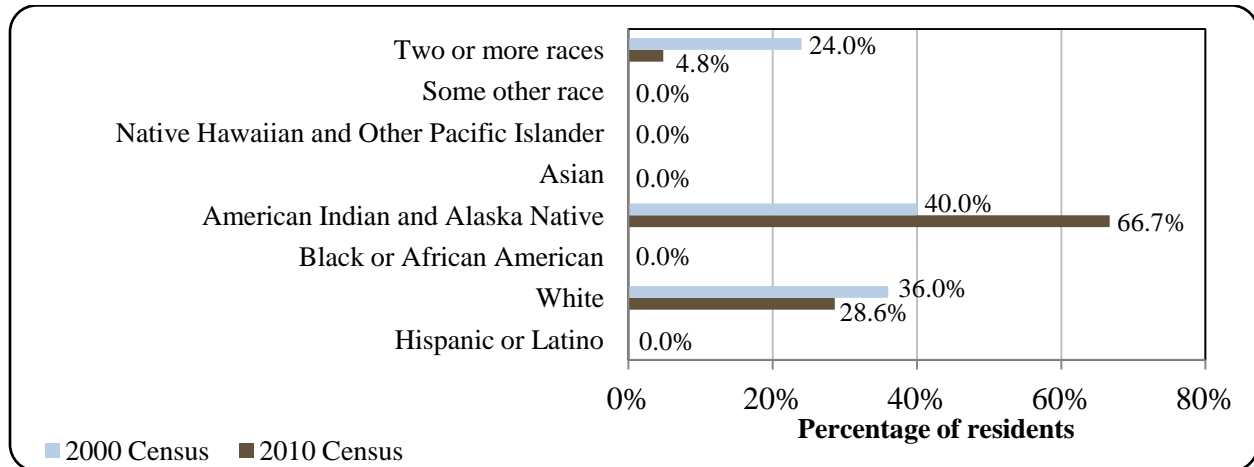
Table 1. Population in Pedro Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	42	-
2000	50	-
2001	-	50
2002	-	46
2003	-	45
2004	-	46
2005	-	62
2006	-	54
2007	-	38
2008	-	44
2009	-	48
2010	42	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Pedro Bay: 2000-2010 (U.S. Census).

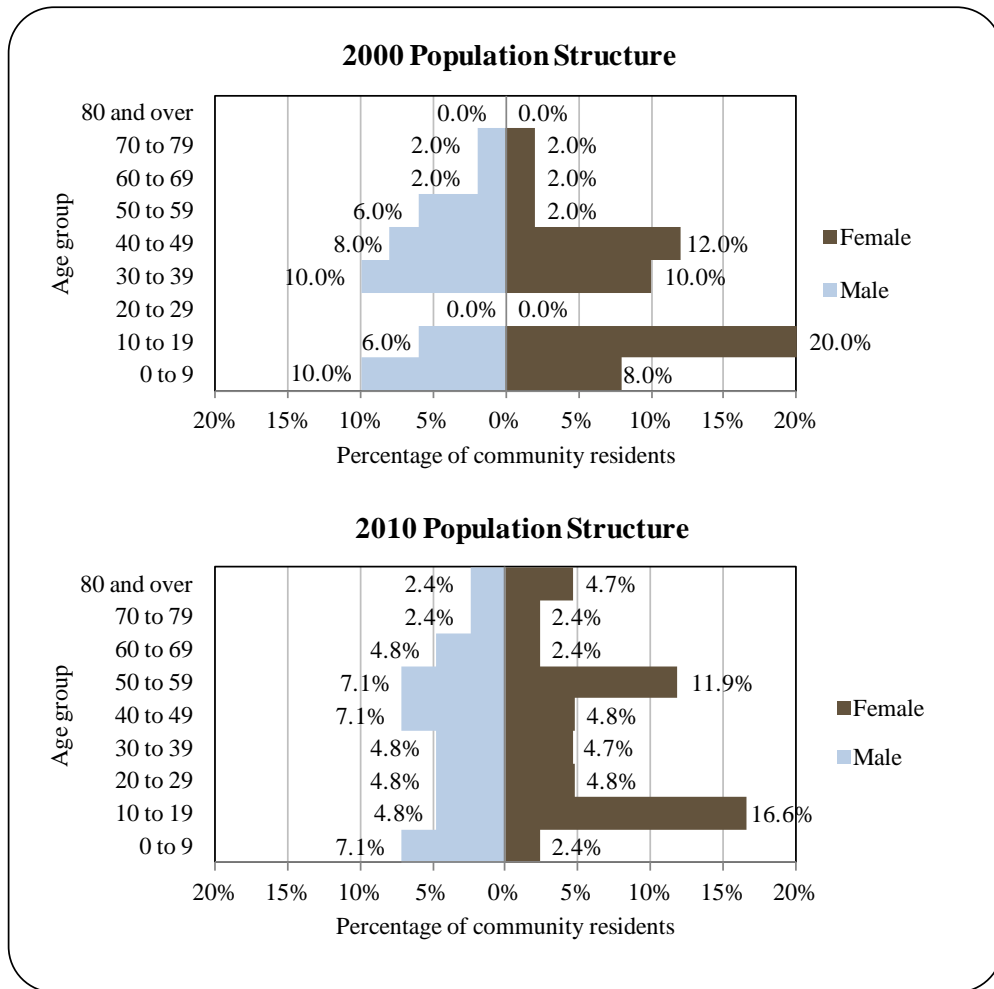


In 2010 the average household size in Pedro Bay was 2.21, a decrease from 2.94 persons per household in 2000 and 2.4 in 1990. The total number of households in Pedro Bay stayed stable over time, with 17 in 1990, 17 in 2000, and 19 occupied housing units in 2010. Of the 33 housing units surveyed for the 2010 U.S. Census, 27.3% were owner-occupied, 30.3% were renter-occupied, and 42.4% were vacant or used only seasonally. Between 1990 and 2010, no residents of Pedro Bay lived in group quarters.

In 2010, the gender makeup in Pedro Bay was 45.2% male and 54.8% female. The greater number of women than men in Pedro Bay is anomalous compared to the population of

Alaska as a whole, which overall has more men than women (52% male, 48% female in 2010). The median age in Pedro Bay was 44.5 years in 2010, higher than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, gender distributions were particularly skewed toward females in the age groups 10-19 and 50-59. There were more males than females in age groups 0-9 and 40-49. In 2010, 19% of Pedro Bay residents were age 60 or older. It is also important to note that no Pedro Bay residents were between the ages of 20 and 29 in 2000. The overall population structure of Pedro Bay in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Pedro Bay Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹²³⁷ 61.5% of Pedro Bay residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 0% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 38.5% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 0% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 0% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 38.5% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The Pedro Bay area has been occupied by humans since prehistory. Two distinct indigenous populations historically inhabited the Iliamna Lake region: the Central Yup'ik Eskimos south and west of the lake, and the Dena'ina Athabascans on the northern and eastern shores. Most communities in the region are mixed between these groups, but Pedro Bay is the only Iliamna Lake community that is inhabited primarily by Athabascans. In the historic period, archaeological evidence indicates Pedro Bay was occupied in the mid-1700s and was subsequently abandoned.¹²³⁸ During the Russian period in the early 1800s, the Dena'ina fought with Russian fur traders over trade practices.¹²³⁹ In 1906, a man named 'Old Pedro' lived at the site of Pedro Bay, from which the name is derived. Later, in 1935, families from nearby villages began to relocate to Pedro Bay.¹²⁴⁰ A post office was established in the village in 1936.¹²⁴¹

Natural Resources and Environment

Pedro Bay lies in a transitional climatic zone with strong maritime influences. Average summer temperatures range from 42 to 62 °F, and winter temperatures range from 6 to 30 °F. Annual rainfall averages 26 inches, with 64 inches of snowfall.¹²⁴² The landscape around Pedro Bay is mountainous, with 4,600 of elevation gain within six miles of the shore of Iliamna Lake. Pedro Bay is located in a dense spruce forest.¹²⁴³ Vegetation in many lowland areas in the region

¹²³⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²³⁸ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster. December 2006. *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹²³⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁴⁰ See footnote 1238.

¹²⁴¹ See footnote 1239.

¹²⁴² Ibid.

¹²⁴³ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

is a mixture of short and tall shrub, with a mix of spruce and broadleaf forest along river corridors. Higher elevation vegetation is characterized by alpine tundra and barrens.¹²⁴⁴

Lake Clark National Park and Preserve (Preserve) is located north of Pedro Bay, occupying 4 million acres at the north end of the Alaska Peninsula. The Preserve was established to protect scenic beauty, wild rivers and waterfalls, populations of fish and wildlife, watersheds essential for sockeye salmon, and the traditional lifestyle of local residents. Subsistence activities are permitted in the Preserve. The National Park Service works closely with state and federal fish and wildlife management agencies to determine seasons, bag limits, and similar harvest controls. A diversity of fish and wildlife is found in the Preserve, including bears, caribou, moose, wolves, sea mammals, salmon, Arctic char, Arctic grayling, Dolly Varden, northern pike, lake trout, rainbow trout, burbot, and whitefish.¹²⁴⁵

It is also of note that Iliamna Lake is home to North America's only freshwater population of seals.¹²⁴⁶ Seal numbers consistently range between 150 and 220 during molting season, and some portion of the population over-winters in the Lake. Local subsistence hunters harvest a small number of these seals each year.¹²⁴⁷

Significant mineral resources are present throughout the Iliamna region. The east end of Iliamna Lake is one of the areas with the highest potential for mineral occurrence in the Lake and Peninsula Borough.¹²⁴⁸ Northwest of Pedro Bay, at the divide between the Koktuli River and Upper Talarik Creek, exploration is underway on the Pebble copper-gold-molybdenum deposit.¹²⁴⁹ Northern Dynasty Minerals Limited calls the Pebble deposit, "one of the greatest stores of mineral wealth ever discovered," and estimates that the deposit includes 80.6 billion pounds of copper, 107.3 ounces of gold, and 5.6 billion pounds of molybdenum, including both indicated (high confidence) and inferred (low confidence) deposits.¹²⁵⁰ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.¹²⁵¹ According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble mine is copper. Dissolved copper is known to be toxic to fish.¹²⁵² If the Pebble Mine is developed, Bristol Bay salmon fisheries could

¹²⁴⁴ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹²⁴⁵ National Park Service. 2011. *Lake Clark National Park & Preserve Management*. Retrieved June 13, 2012 from <http://www.nps.gov/lac/parkmgmt/index.htm>.

¹²⁴⁶ LaRoche + Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹²⁴⁷ Withrow, David and Kymberly Yano, Jennifer Burns, Courternay Gomez, and Tatiana Askoak. 2011. *Freshwater Harbor Seals of Lake Iliamna, Alaska. Do They Pup and Over-Winter in the Lake?* Poster presented at the 2011 Alaska Marine Science Symposium. Retrieved January 18, 2012 from ftp://ftp.afsc.noaa.gov/posters/pWithrow04_freshwater-seals_2011.pdf.

¹²⁴⁸ See footnote 1246.

¹²⁴⁹ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky. 2008. "Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's Large Mine Permitting Process." *Alaska Law Review* 25:1.

¹²⁵⁰ Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

¹²⁵¹ See footnote 1244.

¹²⁵² See footnote 1249.

be affected.¹²⁵³ In a survey conducted by the AFSC in 2011, community leaders expressed concern that development of the Pebble Mine will damage the subsistence way of life.

In the past, the oil and gas industry was interested in the potential for oil and gas development in the eastern Iliamna region. Between 1902 and 1981, 26 onshore exploration wells drilled were drilled on the Alaska Peninsula, but all have been plugged and abandoned.¹²⁵⁴ Offshore in Cook Inlet, the oil and gas industry is very active, with a number of new wells being drilled each year.¹²⁵⁵

Natural hazards in the Pedro Bay area include risk of wildfire, severe weather, earthquake and volcanic activity, and flooding. Pedro Bay was at the highest risk from wildfire and severe weather. Wildfire was identified as the number one hazard in Pedro Bay because the community is located in a dense spruce forest with many trees that have been killed by spruce bark beetle outbreaks. Water for firefighting is not readily available, and no fire department is present in the community.¹²⁵⁶ With regard to weather, high winds are a particular concern in the community, and the Pedro Bay airport often experiences high wind shear.¹²⁵⁷ Pedro Bay was rated as having a medium risk of earthquakes and volcanic activity, and a low risk of flooding. Many fault lines pass through the Lake and Peninsula Borough, and numerous active volcanoes are present in the Alaska Peninsula. Earthquakes and volcanic activity occur at regular intervals in the area. Flooding in Pedro Bay is a particular problem along the road to the airport, and may be associated with ice jams at culverts on the road. Avalanche hazard is not a threat in the immediate village of Pedro Bay, but is a threat for residents who travel in nearby avalanche zones.¹²⁵⁸

According to the Alaska Department of Environmental Conservation, one active environmental cleanup site was located in Pedro Bay as of June 2012. A tank farm was located adjacent to the Dena'ina schoolyard in Pedro Bay. Site assessment between 1993 and 1998 found that the storage and distribution of fuel at the site had resulted in extensive soil and groundwater contamination, with the possibility of contamination to migrate to a nearby creek and into Iliamna Lake. In April of 1999, a spill took place within the tank farm. Acute spill response took place in the days following the spill, and further cleanup activities in 1999 included capture and treatment of impacted site groundwater and capping of the site using clean fill soil. In subsequent years, bioremediation techniques were being used to metabolize petroleum contamination. In addition, a groundwater interception and treatment system was being used to treat groundwater at the site and prevent leaching into the creek.¹²⁵⁹

¹²⁵³ Pg. 36 in Duffield, John., Christopher Neher, David A. Patterson, and Oliver S. Goldsmith. 2007. *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

¹²⁵⁴ See footnote 1244.

¹²⁵⁵ Resource Development Council. (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

¹²⁵⁶ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

¹²⁵⁷ See footnote 1246.

¹²⁵⁸ See footnote 1256.

¹²⁵⁹ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹²⁶⁰

Pedro Bay's economy is based around seasonal summer employment in Bristol Bay salmon fisheries and the Iliamna Lake tourism industry. In 2010, three area residents held commercial salmon fishing permits.¹²⁶¹ In a survey conducted by the AFSC in 2010, community leaders indicated that subsistence fishing and sport hunting and fishing are important foundations of the local economy. Several wilderness lodges operate in Pedro Bay. Most families also depend heavily on subsistence activities, utilizing resources including salmon, trout, moose, bear, rabbit, and seal.¹²⁶² Most families in Pedro Bay and other Iliamna-area communities travel to fish camps along Iliamna Lake's many tributaries during the summer.¹²⁶³

Based on household surveys conducted for the 2006-2010 ACS,¹²⁶⁴ in 2010, the per capita income in Pedro Bay was estimated to be \$17,526 and the median household income was estimated to be \$40,750. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$18,420 and \$36,750, respectively). However, if inflation is taken into account by converting 2000 values to 2010 dollars,¹²⁶⁵ real per capita and median household income are both shown to have decreased, from a real per capita income of \$24,222 and real median household income of \$48,326 in the year 2000. In 2010, Pedro Bay ranked 174th of 305 Alaskan communities with per capita income data that year, and 185th in median household income, out of 299 Alaskan communities with household income data.

Although Pedro Bay's small population size may have prevented the ACS from accurately portraying economic conditions,¹²⁶⁶ additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Pedro Bay in 2010 is \$14,656.^{1267,1268} Despite the apparent decline in per capita income in the community between 2000 and 2010, Pedro Bay was not recognized as "distressed" by the Denali

¹²⁶⁰ Unless otherwise noted, all monetary data are reported in nominal values.

¹²⁶¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁶² Ibid.

¹²⁶³ LaRoche + Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹²⁶⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²⁶⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²⁶⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²⁶⁷ See footnote 1264.

¹²⁶⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Commission in 2010.¹²⁶⁹ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Pedro Bay residents was estimated to be in the civilian labor force (47.4%) than was estimated to be in the civilian labor force statewide (68.8%). In the same year, 0% of Pedro Bay residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 0%, compared to a statewide unemployment rate of 5.9%. A very different picture of unemployment is provided by data compiled on the ALARI database, which indicates that a higher than average percentage (22.6%) of the Pedro Bay labor force was unemployed, compared to a statewide unemployment rate estimate of 11.5%.¹²⁷⁰

Also based on the 2006-2010 ACS, nine people aged 16 and older were estimated to be employed in the civilian labor force. Compared to 2000, this represents a substantial decline in the workforce, from 27 to 9. In addition, it is important to note that many fewer industries and occupations were represented in 2010 than in 2000. In 2010, 6 people (66.7% of the labor force) was estimated to be employed in the public sector, and a majority of the (66.7%) was estimated to be working in information services industries and sales/office occupations. While the concentration of the workforce in fewer industries and occupations may be due to a real population decline in Pedro Bay, it is also important to note that the sampling methods utilized by the U.S. Census Bureau were altered between 2000 and 2010. The shift in sampling methods may also account for some of the differences observed in employment estimates.¹²⁷¹ It is also important to note that, while none of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining in 2010, the number of individuals employed by fishing may be underestimated in census statistics. Fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 25 employed residents in Pedro Bay in 2010, of which 72% were employed in local government, 12% in educational and health services, 4% in natural resources and mining, 4% in professional and business services, 4% in leisure and hospitality, and 4% in other industries.¹²⁷² As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

¹²⁶⁹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹²⁷⁰ See footnote 1268.

¹²⁷¹ See footnote 1266.

¹²⁷² See footnote 1268.

Figure 3. Local Employment by Industry in 2000-2010, Pedro Bay (U.S. Census).

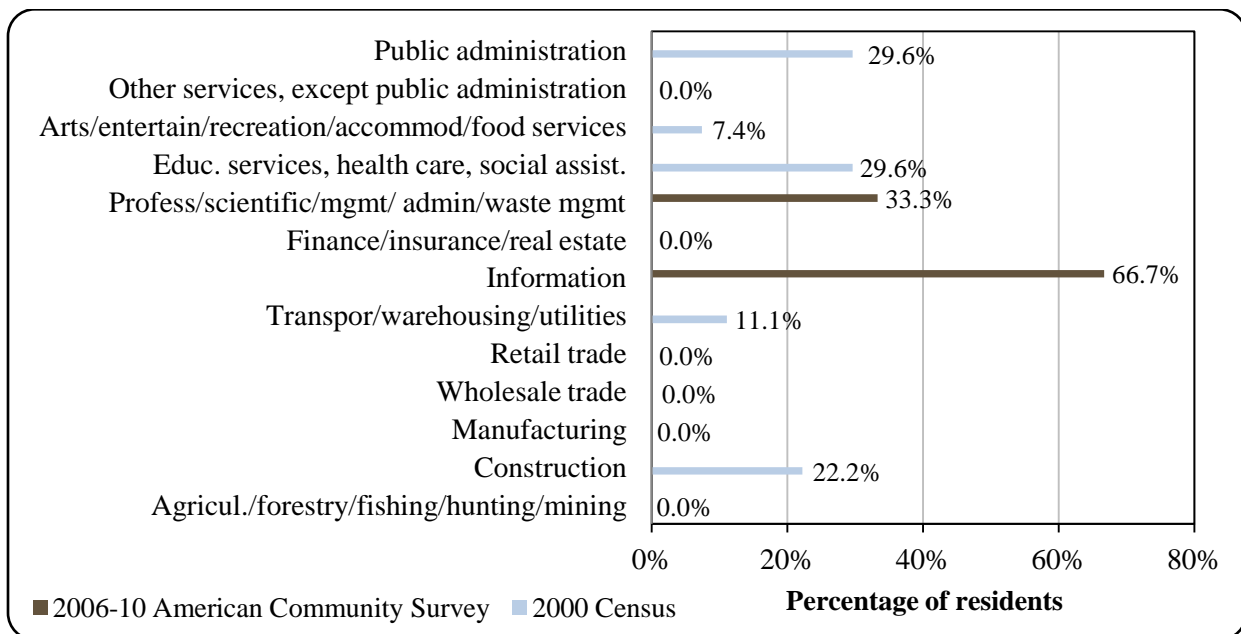
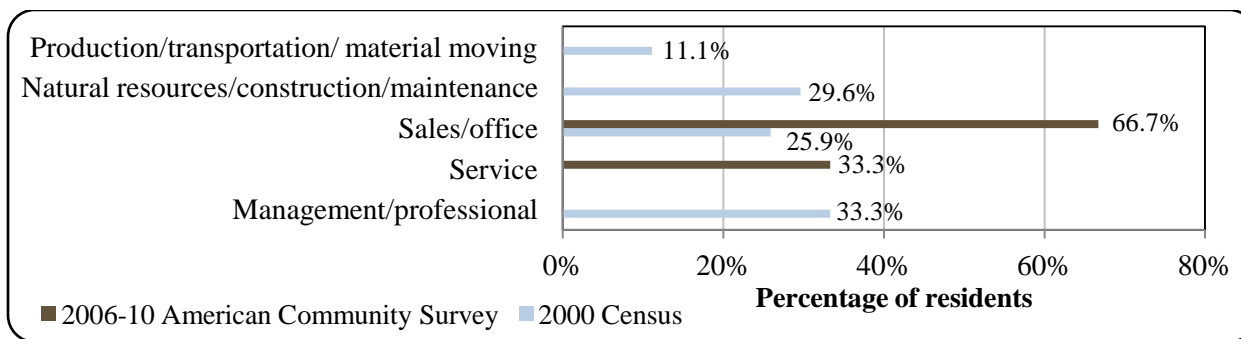


Figure 4. Local Employment by Occupation in 2000-2010, Pedro Bay.



Governance

Pedro Bay is an unincorporated community under the jurisdiction of the Lake and Peninsula Borough. The community does not administer any local taxes, although the Borough does administer a 2% fish tax, 6% bed tax, \$3/person per day guide tax, and \$1/person per day lodge guide tax.¹²⁷³ Given that Pedro Bay is not incorporated, no municipal revenue or municipal sales tax revenue was reported between 2000 and 2010. Pedro Bay did not receive Community or State Revenue Sharing contributions between 2000 and 2010. The community did receive one fisheries-related grant during the period: in 2010, the Denali Commission provided \$30,000 for design of the waterfront and a boat launch (Table 2).

¹²⁷³ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved January 24, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Pedro Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	\$30,000
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Pedro Bay was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is Pedro Bay Village. The Native village corporation is the Pedro Bay Native Corporation, which manages 97,002 acres of land. The regional Native corporation to which Pedro Bay belongs is the Bristol Bay Native Corporation (BBNC).¹²⁷⁴

Pedro Bay is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.¹²⁷⁵ The BBNA is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹²⁷⁶

The closest regional office of the Alaska Department of Fish and Game (ADF&G) is located in King Salmon. The nearest Alaska Department of Natural Resources office is a Division of Parks and Outdoor Recreation office in Homer, and the nearest Alaska Department of Commerce, Community, and Economic Development offices are in Dillingham and

¹²⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁷⁵ Bristol Bay Native Association. (n.d.). *BBNA homepage*. Retrieved November 16, 2011 from www.bbna.com.

¹²⁷⁶ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

Anchorage. Kodiak and Homer have the nearest National Marine Fisheries Service (NMFS) offices, although the Anchorage office may be more accessible for the people from this area. Anchorage and Kodiak have the closest U.S. Bureau of Citizenship and Immigration Services offices.

Infrastructure

Connectivity and Transportation

Pedro Bay is accessible by air and water. There is a state-owned 3,000 feet long by 60 feet wide gravel airstrip.¹²⁷⁷ Scheduled and charter air service to Pedro Bay is available through Iliamna Air Service, Inc. As of spring 2012, roundtrip flights from Pedro Bay to Anchorage, with a transfer in the regional hub of Iliamna, cost approximately \$500.¹²⁷⁸ Barge service is available from Naknek via the Kvichak River. Goods are also sent by barge from Homer to Iliamna Bay on the Cook Inlet side and portaged over a 14-mile road to Pile Bay, a village 10 miles to the east of Pedro Bay.¹²⁷⁹ An unimproved trail, the Iliamna-Pile Bay Trail, runs along the northern shore of Iliamna Lake, connecting Pile Bay to Pedro Bay and the communities of Iliamna and Newhalen to the west.¹²⁸⁰

The existing road between Cook Inlet and Pile Bay is used for the transport of fishing vessels from winter retrofitting in Homer to summer fishing grounds in Bristol Bay and back. It is also often the only route by which heavy equipment can reach the Iliamna area. The road has not been adequately maintained. It is narrow in places and several bridges need to be replaced. Improvements to this transportation link were identified as a priority in the 2011 Lake and Peninsula Borough Coastal Management Plan.¹²⁸¹

Facilities

Water in Pedro Bay is derived from Iliamna Lake and individual wells. Most of the occupied homes in Pedro Bay use individual wells and septic tank systems. Water is also derived directly from Iliamna Lake. Some households use honeybuckets or outhouses. There is no piped water or sewer system in the community, but the Village Council does operate a sewage lagoon for sewage treatment and offers honeybucket hauling and septic pumping services. The Village Council also operates a landfill and provides refuse collection services. According to a survey conducted by the AFSC in 2011, community leaders reported that a road is currently being constructed to a new landfill site which is scheduled to be completed starting in 2012. An aluminum recycling program is organized by the local school. Electricity is provided to Pedro Bay from a diesel powerhouse owned and operated by the Village Council.¹²⁸² In the future, Pedro Bay could be connected to distribution of hydroelectric power from the Tazamina

¹²⁷⁷ See footnote 1274.

¹²⁷⁸ Personal communication, Iliamna Air Service Inc., March 15, 2012.

¹²⁷⁹ See footnote 1274.

¹²⁸⁰ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹²⁸¹ LaRoche + Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹²⁸² See footnote 1274.

Hydroelectric Project, which currently serves the communities of Iliamna, Newhalen, and Nondalton.¹²⁸³ Additional community facilities and services in Pedro Bay include a school library, post office, and emergency response services provided by the Pedro Bay First Responders. No police services are provided locally.¹²⁸⁴ The nearest state trooper post is located in the City of Iliamna.¹²⁸⁵ Telephone service is available in Pedro Bay. No cable providers offer service locally. Internet is available at the school only.¹²⁸⁶ According to the 2011 AFSC survey, community leaders reported that fiber optic cables are in development.

Regarding fisheries-related facilities, community leaders reported in the 2011 AFSC survey that there are no dock facilities in Pedro Bay. They indicated that residents tie boats of up to 20 feet in length on the shore. The community cannot accommodate larger vessels, and no commercial fishing boats are moored in Pedro Bay. They did indicate the presence of haul-out facilities, and that plans were underway to construct a barge landing area, and to provide roads and electricity serving boat landing areas. Community leaders also reported that Pedro Bay residents travel to Anchorage, Dillingham or Iliamna to access fisheries-related businesses and services not available locally.

Medical Services

Local hospitals or health clinics include the Pedro Bay Clinic. The clinic is a Community Health Aide Program site. Emergency Services have lake and air access. Emergency services are provided by a health aide, and alternate health care is provided by the Pedro Bay First Responders.¹²⁸⁷ The nearest hospital is located in Homer.

Educational Opportunities

There is one school in Pedro Bay, the Dena'ina School. The school offers a pre-school through 12th grade education. As of 2011, no students were enrolled in the Dena'ina School, and one teacher was employed.¹²⁸⁸ According to a survey conducted by the AFSC in 2011, community leaders reported that the school closed in November, 2010.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest of fisheries resources has been important for residents of the Iliamna Lake region since prehistory. Commercial exploitation of salmon resources began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of

¹²⁸³ See footnote 1281.

¹²⁸⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁸⁵ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

¹²⁸⁶ See footnote 1284.

¹²⁸⁷ Ibid.

¹²⁸⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

the Bristol Bay region, along with several other species harvested in lower volumes.¹²⁸⁹ Subsistence harvest continues to be an important foundation for the local economy in Pedro Bay, and some residents are also involved in commercial salmon fisheries. Several sportfishing lodges are located in Pedro Bay as well.¹²⁹⁰

Cook Inlet is the nearest marine area to the community of Pedro Bay. The Inlet is encompassed by Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. In addition, Bristol Bay, the area where most Pedro Bay residents engage in commercial fishing activity, is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Pedro Bay is not eligible to participate in either the Community Development Quota program or the Community Quota Entity program. According to a survey conducted by the AFSC in 2011, community leaders reported that Pedro Bay engaged in the fisheries management process in Alaska through sending a representative to sit on regional fisheries advisory and/or working groups run by ADF&G.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Pedro Bay. According to the list, processing facilities were located in Bristol Bay communities including Dillingham, Egegik, and Naknek, as well as Cook Inlet communities including Homer, Kenai, and Nikiski.

Fisheries-Related Revenue

No data were reported about fishing-related revenue received by the community of Pedro Bay from municipal, state or federal sources (Table 3).

Commercial Fishing

Pedro Bay is an inland community, located on the eastern shore of Iliamna Lake. Pedro Bay residents primarily utilize fisheries resources for subsistence purposes, but some residents also engage in commercial fishing activity. In a survey conducted by the AFSC in 2011, community leaders reported that Pedro Bay residents primarily participate in the Bristol Bay fishery for sockeye salmon between July 1st and August 31st each year. In 2010, three Pedro Bay residents held state Commercial Fisheries Entry Commission (CFEC) permits for the set gillnet salmon fishery in Bristol Bay. Of these, two were actively fished in 2010. No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Pedro Bay residents between 2000 and 2010. This permit information is presented in Table 4. Between 2000 and 2010, no quota share accounts or quota shares were held by Pedro Bay residents in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8).

Also in 2010, no Pedro Bay residents held commercial crew licenses, and no residents were the primary owner of a fishing vessel (Table 5). These numbers represent a decline from

¹²⁸⁹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹²⁹⁰ See footnote 1284.

the year 2000, when five Pedro Bay residents held crew licenses and nine residents were the primary owner of a fishing vessel. In 2010, no fishing vessels were homeported in Pedro Bay. According to the 2011 AFSC survey, local residents use boats of up to 20 feet in length, and larger vessels cannot be accommodated in the community, although ADF&G did report some vessels as homeported there between 2000 and 2009 (Table 5).

Given the lack of fish buyers or shore-side fish processors in Pedro Bay (Table 5), no landings or ex-vessel revenue information was reported for the community (Table 9). Pedro Bay vessel owners and permit holders delivered their catches elsewhere between 2000 and 2010. Information regarding landings and ex-vessel revenue generated by vessel owners residing in Pedro Bay is considered confidential between 2000 and 2004 due to the small number of participants, and no vessel owners were present in the community between 2005 and 2010 (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Pedro Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Pedro Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Pedro Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	3	3	2	3	3	3	3	2	3	3	3
	Fished permits	3	3	1	3	3	2	3	2	3	3	2
	% of permits fished	100%	100%	50%	100%	100%	67%	100%	100%	100%	100%	67%
	Total permit holders	3	3	2	3	3	3	3	2	3	3	3
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>3</i>	<i>3</i>
	<i>Fished permits</i>	<i>3</i>	<i>3</i>	<i>1</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>3</i>	<i>2</i>
	<i>% of permits fished</i>	<i>100%</i>	<i>100%</i>	<i>50%</i>	<i>100%</i>	<i>100%</i>	<i>67%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>67%</i>
	<i>Permit holders</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>3</i>	<i>3</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Pedro Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Pedro Bay ²	Total Net Pounds Landed In Pedro Bay ^{2,5}	Total Ex-Vessel Value Of Landings In Pedro Bay ^{2,5}
2000	5	0	0	9	11	0	0	\$0
2001	2	0	0	9	12	0	0	\$0
2002	2	0	0	13	15	0	0	\$0
2003	3	0	0	11	13	0	0	\$0
2004	1	0	0	13	14	0	0	\$0
2005	1	0	0	0	1	0	0	\$0
2006	0	0	0	0	1	0	0	\$0
2007	1	0	0	0	1	0	0	\$0
2008	1	0	0	0	1	0	0	\$0
2009	2	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Pedro Bay: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Pedro Bay: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Pedro Bay: 2000-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Pedro Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Pedro Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	0	0	0	0	0	0
Finfish	-	-	-	-	-	0	0	0	0	0	0
Halibut	-	-	-	-	-	0	0	0	0	0	0
Herring	-	-	-	-	-	0	0	0	0	0	0
Other Groundfish	-	-	-	-	-	0	0	0	0	0	0
Other Shellfish	-	-	-	-	-	0	0	0	0	0	0
Pacific Cod	-	-	-	-	-	0	0	0	0	0	0
Pollock	-	-	-	-	-	0	0	0	0	0	0
Sablefish	-	-	-	-	-	0	0	0	0	0	0
Salmon	-	-	-	-	-	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Herring	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Although active sport fish guide businesses were only present in Pedro Bay in a few years during the 2000-2010 period, licensed sport fish guides were present in all years. The number of licensed guides present in the community varied between two and eight per year. Pedro Bay residents purchased between 7 and 19 sport fish licenses per year. The number of licenses sold in Pedro Bay was consistently larger, varying between 101 and 174 per year. This indicates that sportfishing activities are a tourism draw in Pedro Bay. This information about the sportfishing sector is presented in Table 11.

In a survey conducted by the AFSC in 2011, community leaders reported that residents use private boats for sportfishing, and sportfishing lodges are also present in the area. Community leaders also indicated that sockeye, chinook, and pink salmon are the primary

species targeted by recreational fishermen in the area. The Alaska Statewide Harvest Survey,¹²⁹¹ conducted by ADF&G between 2000 and 2010, also noted sockeye salmon as the primary recreational target of Pedro Bay sport fishermen. No kept/release log book data were reported for fishing charters out of Newhalen between 2000 and 2010.¹²⁹²

Pedro Bay is located within Alaska Sport Fishing Survey Area S – Kvichak River Drainage. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Overall between 2000 and 2010, non-Alaska resident anglers fished more angler days than Alaska residents in both freshwater and saltwater. Non-Alaska resident anglers fished consistently more days than Alaska resident anglers in both freshwater and saltwater during this period, reflective of the large amount of sportfishing related tourism in the region. Freshwater sportfishing activity was significantly more important than saltwater fishing in the region. The number of freshwater angler days for non-Alaska resident sport fishermen varied between 17,234 and 30,340 from 2000 to 2010, while Alaska resident freshwater angler days varied between 3,077 and 10,297. This information about the sportfishing sector in and near Pedro Bay is also displayed in Table 11.

Table 11. Sport Fishing Trends, Pedro Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Pedro Bay ²
2000	0	6	14	122
2001	0	6	13	125
2002	0	4	14	106
2003	0	4	7	101
2004	0	3	12	132
2005	1	2	17	174
2006	1	6	16	154
2007	1	7	19	172
2008	1	8	16	156
2009	0	5	12	160
2010	1	3	7	108

¹²⁹¹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹²⁹² Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Pedro Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	0	0	17,234	6,514
2010	0	22	20,068	5,613

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

In a survey conducted by the AFSC in 2011, community leaders indicated that the local economy is largely based on subsistence fishing and hunting for salmon, seal, moose, and other resources, and commercial fishing is less important for the community. Community leaders also expressed concern that development of the Pebble Mine may threaten the subsistence way of life. The ADF&G also recorded community concerns during fieldwork for a 2004 survey of subsistence resource use in Pedro Bay and surrounding communities. They noted local residents' concerns about overharvest of Dolly Varden char in the sport fishery and the impact of motorized boat traffic on stream habitat. In addition, they expressed concern that the Pile River moose herd is declining due to increasing wolf and bear populations.¹²⁹³

Pedro Bay residents reported using the eastern third of Iliamna Lake and the area as far inland to the north as Sixmile Lake for subsistence purposes. In addition to salmon, Pedro Bay residents harvested freshwater including northern pike, rainbow trout, Dolly Varden char, lake

¹²⁹³ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster. December 2006. *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

trout, and Arctic grayling. Lake trout and Dolly Varden char are taken in the greatest quantities. Pedro Bay residents also hunt harbor seal for subsistence.¹²⁹⁴

Results of the 2004 ADF&G subsistence survey indicate that every household in Pedro Bay successfully harvested at least one subsistence resource in 2004. Data show that the entire population of Pedro Bay is active in its subsistence pursuits, involving young people as well as adults, although local residents expressed fears that decreasing abundance of fish and wildlife resources would discourage younger people from fully embracing the subsistence way of life.¹²⁹⁵ In 2004, 100% of households participated in salmon subsistence, 72% participated in halibut subsistence, and 56% participated in non-salmon fish subsistence (not including halibut). A 2003 estimate of non-salmon fish subsistence participation suggested a higher rate of participation of 84%. No information was reported by ADF&G regarding participation in marine invertebrate or marine mammal subsistence by residents of Pedro Bay during the 2000-2010 period. This information is presented in Table 12.

Per capita, Pedro Bay residents were estimated to have harvested 305 pounds of land and sea-based subsistence resources in 2004 (Table 12). ADF&G also reported estimates of total non-salmon fish harvest in 2003 (831 pounds) and 2004 (963 pounds) (Table 13). According to results of the ADF&G subsistence survey, the species of non-salmon fish that were harvested by the greatest number of households in Pedro Bay in 2004 included Dolly Varden char, rainbow trout, northern pike, lake trout, steelhead, cod, and rockfish.¹²⁹⁶

Information was available regarding total subsistence salmon harvest for seven years between 2000 and 2008. During this period, the number of subsistence salmon permits issued to Pedro Bay households varied between 1 and 22. Sockeye salmon was by far the most heavily harvested salmon species in the area. For those years in which data were reported, an average of 3,641 sockeye was harvested per year. This information is presented in Table 13.

No information was reported regarding the number of Subsistence Halibut Registration Certificates (SHARC) issued to residents of Pedro Bay between 2003 and 2010 (Table 14), despite the fact that ADF&G reported a high percentage of households participating in halibut subsistence in 2004 (Table 12). This may be due to the fact that only 6% of Pedro Bay households reported harvesting halibut directly, given the long distance they must travel to access saltwater fisheries, while 67% of households received halibut through subsistence sharing networks.¹²⁹⁷ Likewise, no information was reported by management agencies regarding subsistence harvest of marine mammals by residents of Pedro Bay (Table 15), although harbor seals are a known subsistence resource locally.

¹²⁹⁴ LaRoche + Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹²⁹⁵ See footnote 1293.

¹²⁹⁶ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹²⁹⁷ See footnote 1293.

Table 12. Subsistence Participation by Household and Species, Pedro Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	84%	n/a
2004	100%	72%	n/a	n/a	56%	305
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Pedro Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	10	10	n/a	n/a	n/a	n/a	1,815	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	1	1	n/a	n/a	n/a	n/a	20	n/a	831
2004	22	20	n/a	n/a	n/a	n/a	4,803	n/a	963
2005	16	15	n/a	n/a	n/a	n/a	4,162	n/a	n/a
2006	21	18	n/a	n/a	n/a	n/a	4,319	n/a	n/a
2007	19	15	n/a	n/a	n/a	n/a	5,487	n/a	n/a
2008	18	17	n/a	n/a	n/a	n/a	4,884	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Pedro Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Pedro Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Perryville

People and Place

*Location*¹²⁹⁸



Perryville is located on the south coast of the Alaska Peninsula near the outlet of the Kametolook River, 275 miles southwest of Kodiak and 500 miles southwest of Anchorage. Perryville is located in the Aleutian Islands Recording District and the Lake and Peninsula Borough Census Area.

*Demographic Profile*¹²⁹⁹

In 2010, there were 113 inhabitants in Perryville, making it the 234th largest of 352 total Alaskan communities with recorded populations that year. Perryville first appeared in U.S. Census records in 1920 with 85 inhabitants. Overall between 1990 and 2010, the population of Perryville stayed relatively stable, increasing by 4.6%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 14%, with an average annual growth rate of 2.21%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that approximately six seasonal workers or transients are present in Perryville between June and August, and the greatest number of residents is generally present in September. They also indicated that population fluctuations are mostly driven by employment in fishing sectors.

In 2010, a majority of Perryville residents identified themselves as American Indian and Alaska Native (95.6%), 2.7% identified themselves as White, and 1.8% identified with two or more races. That year, 2.7% of Perryville residents also identified themselves as Hispanic. Compared to 2000, individuals identifying as American Indian and Alaska Native made up 1.6% less of the population in 2010, while residents identifying as White or two or more races made up 0.8% more of the population than in 2000. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Perryville decreased over time, from 3.4 persons per household in 1990 to 3.24 per household in 2000, and 2.97 in 2010. The number of households in Perryville increased slightly over time, from 31 occupied households in 1990 and 33 in 2000, to 38 occupied housing units in 2010. Of the 50 total housing units surveyed for the 2010 U.S. Census, 54% were owner-occupied, 22% were rented, and 24% were vacant or used only seasonally. Between 1990 and 2010, no residents of Perryville lived in group quarters.

¹²⁹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

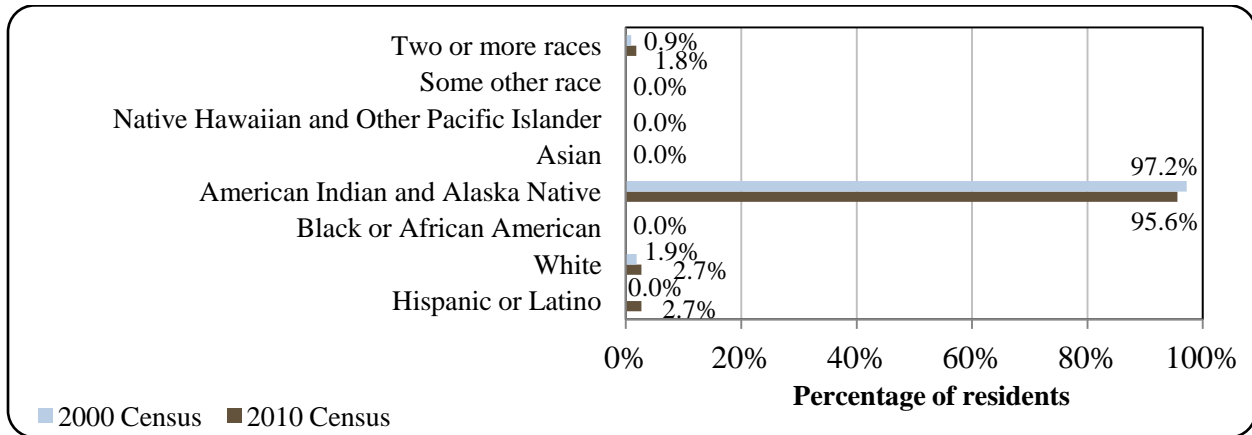
Table 1. Population in Perryville from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	108	-
2000	107	-
2001	-	114
2002	-	111
2003	-	106
2004	-	110
2005	-	114
2006	-	120
2007	-	117
2008	-	132
2009	-	122
2010	113	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

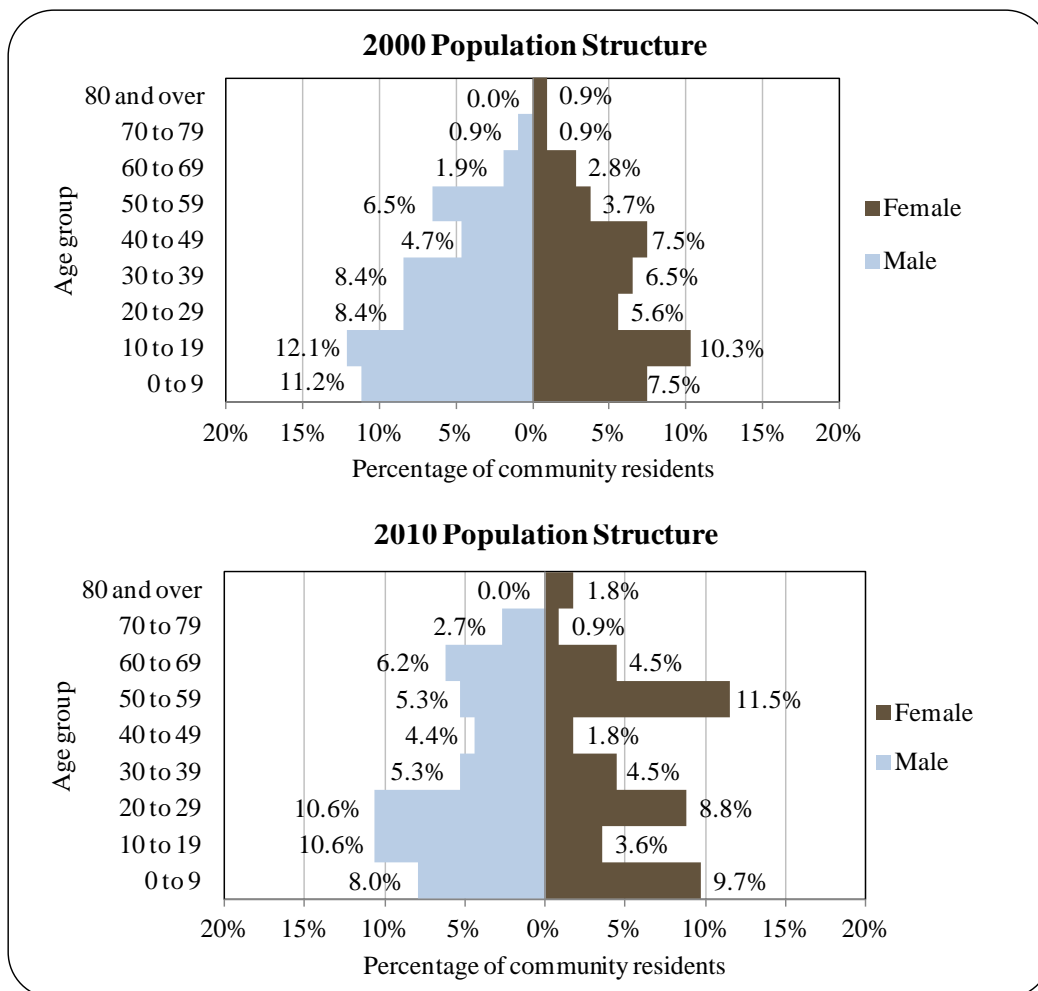
Figure 1. Racial and Ethnic Composition, Perryville: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Perryville’s population (53.1% male and 46.9% female) was slightly more weighted toward males than the population of Alaska as a whole, which was 52% male and 48% female. The median age of Perryville residents was 27.8 years, younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 16% of Perryville’s population was between 60 and 69 years of age, and no one was over 70. The overall population structure of Perryville in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹³⁰⁰ 68.1% of Perryville residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 29.8% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 2.1% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 0% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 4.3% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

Figure 2. Population Age Structure in Perryville Based on the 2000 and 2010 U.S. Decennial Census.



¹³⁰⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Archaeological evidence suggests that Aleut (Unanga and Alutiiq) peoples have occupied the Alaska Peninsula for approximately 9,000 years.^{1301,1302} Subsistence harvest of marine mammals and salmon has historically been of primary importance for the Aleut, and today salmon, Pacific halibut, octopus, shellfish, seal, and sea lion are an important part of the subsistence diet, along with some harvest of land mammals.¹³⁰³

The community of Perryville was founded in 1912 as a refuge for Alutiiq people driven away from their villages by the eruption of Mt. Katmai. Many villagers from Douglas and Katmai, two Alutiiq villages on the southern coast of the Peninsula near present day Katmai National Park and Preserve, survived the eruption because they were out fishing at the time. Captain Perry of the ship “Manning” transported people from the Katmai area to Ivanof Bay and later to the new village site. The village was originally called “Perry,” but the “ville” was added to conform to the name of the post office, which was established in 1930. The village maintains an Alutiiq culture and a subsistence lifestyle.¹³⁰⁴

Natural Resources and Environment

Perryville’s maritime climate is characterized by cool summers, warm winters, and rainy weather. Average summer temperatures range from 39 to 60 °F; winter temperatures average 21 to 50 °F. Low clouds, rain squalls, fog, and snow showers frequently limit visibility. Average annual precipitation is 127 inches, with 58 inches of snow.¹³⁰⁵ Local topography is steep, rugged, and mountainous, with headlands that jut into the ocean. Mt. Veniaminof is Perryville’s backdrop, an active volcano that rises to an elevation of 7,075 feet within 30 miles of the coast.¹³⁰⁶

Perryville is located within the boundaries of the Alaska Peninsula National Wildlife Refuge (NWR), which extends as far west as False Pass and east beyond Chignik Bay, and includes a separate unit south of Ugashik. Between the two units of the Alaska Peninsula NWR lies Aniakchak National Monument and Preserve, and, extending along the southern coast of the Peninsula, the Alaska Maritime NWR, which stretches from the Aleutian Islands to the Southeast Alaska Panhandle. All three protected areas were formed under the Alaska National Interest Land Conservation Act (ANILCA) of 1980.

The 3.7 million acre Alaska Peninsula NWR hosts a dramatic landscape of towering mountain peaks, including a number of active volcanoes, rolling tundra, and rugged coastlines. Salmon return to the rivers of the Alaska Peninsula NWR, supporting brown bear populations.

¹³⁰¹ LaRoche + Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹³⁰² WHPacific. 2010. *Aleutians East Multi-Jurisdictional/Multi-Hazard Mitigation Plan*. Retrieved December 7, 2011 from: <http://www.aleutianseast.org/>.

¹³⁰³ Alaska Native Heritage Center. (n.d) *The Unangax & Alutiiq (Supiaq) People - Who We Are*. Retrieved January 4, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/unangax/.

¹³⁰⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁰⁵ Ibid.

¹³⁰⁶ Alaska Department of Natural Resources. 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

Other land mammals include wolverine, the 7,000-animal Northern Alaska Peninsula caribou herd, wolves, and moose. It is of note that no black bears are found in the Alaska Peninsula NWR. Marine mammals living along the coastline include sea otters, harbor seals, sea lions, and migrating whales. The Alaska Peninsula NWR also provides important habitat for migrating birds.¹³⁰⁷

The Alaska Maritime NWR hosts a similar array of species in the Alaska Peninsula region. However, it contains a greater diversity overall, as it stretches from the tip of the Aleutian Islands to the Southeast Alaska Panhandle, and includes St. Matthew Island in the Bering Sea, Hagemester Island in northern Bristol Bay, and two units bordering the Chukchi Sea. It was created in part to promote a program of scientific research on marine ecosystems. The Alaska Maritime NWR “protects breeding habitat for seabirds, marine mammals, and other wildlife on more than 2,500 islands, spires, rocks, and coastal headlands.”¹³⁰⁸

Aniakchak National Monument and Preserve was established to recognize the unique geological significance of a six-mile wide, 2,500 feet deep caldera formed by a massive eruption that took place 3,500 years ago. The explosion caused the loss of approximately 3,000 feet of the upper mountain. The Aniakchak volcano was last active in 1931, when a small explosion pockmarked the caldera floor.¹³⁰⁹

This National Monument calls attention to the highly active tectonic zone in which Perryville is located. The Alaska Peninsula and Aleutian Island chain form part of the Pacific “Ring of Fire,” one of the most active earthquake areas in the world.¹³¹⁰ Some of these earthquakes are associated with explosive volcanic eruptions.¹³¹¹ Indeed, the original inhabitants of Perryville were relocated to the site after the 1912 explosion of the Mt. Katmai/Novarupta volcano destroyed the villages of Katmai and Douglas further northeast along the Alaska Peninsula.¹³¹²

The Perryville and Chignik region has at least 49 identified occurrences of base and precious metal deposits, as well as the Chignik and Herendeen Bay coalfields. Estimates of coal resources range from 200 million to 3 billion short tons. Reserves of oil and natural gas are thought to be present on the outer continental shelf (OCS) in the Bristol Bay Basin along the northern edge of the Aleutian Islands and Alaska Peninsula.¹³¹³ However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010, Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.¹³¹⁴ On March 31, 2010, President Obama withdrew

¹³⁰⁷ U.S. Fish and Wildlife Service. (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved March 23, 2012 from <http://www.fws.gov/refuges/profiles/index.cfm?id=74512>.

¹³⁰⁸ U.S. Fish and Wildlife Service (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved January 4, 2012 from <http://alaskamaritime.fws.gov/>.

¹³⁰⁹ National Park Service. 2011. *Aniakchak National Monument & Preserve*. Retrieved March 23, 2012 from <http://www.nps.gov/ania/>.

¹³¹⁰ Sykes, Lynn R., Jerome B. Kisslinger, Leigh House, John N. Davies and Klaus H. Jacob. 1980. “Rupture Zones and Repeat Times of Great Earthquakes along the Alaska-Aleutian Arc, 1784-1980.” *Science* 19 December 1980, Vol. 210 no. 4476 pp. 1343-1345.

¹³¹¹ U.S. Geological Survey. 1998. “Can Another Great Volcanic Eruption Happen in Alaska?” Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

¹³¹² See footnote 1304.

¹³¹³ See footnote 1306.

¹³¹⁴ Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, for both exploratory or production purposes, through 2017.¹³¹⁵ The Proposed OCS Oil & Gas Leasing Program for 2012-2017 does not include any lease sales adjacent to National Monument or NWR boundaries along the Alaska Peninsula. The Alaska Peninsula Unit of the Alaska Maritime NWR has been identified as an area of special concern, in which a large oil spill could have negative impacts on coastal habitats and fauna, and could affect subsistence use, commercial or recreational fisheries, and tourism.¹³¹⁶

A hazard analysis conducted for communities in the Lake and Peninsula Borough determined that Perryville is at high risk of tsunami, volcanic activity, and severe weather, and at medium risk of earthquake and wildfire.¹³¹⁷ According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Perryville as of October, 2012.¹³¹⁸

Current Economy¹³¹⁹

According to a survey conducted by the AFSC in 2011, community leaders indicated that the local community is dependent on commercial fishing, as well as the sport hunting and fishing industries. During the summer, they indicated that a majority of Perryville residents leave town to fish in the Chignik salmon fishery. In 2000, the number of Perryville residents holding state fishing permits was equal to 11% of the total local population, and the number of crew license holders was equal to 27%. These numbers declined to 7% and 13% of the local population by 2010, respectively. Some local residents trap during the winter, and all rely heavily on subsistence food sources. Salmon, trout, marine fish, crab, clams, moose, caribou, bear, porcupine, and seal are harvested. Only a few year-round jobs are available in Perryville.¹³²⁰ In 2010, top employers in Perryville included the school, local government, regional housing, health, and other community services, and telecommunications.¹³²¹

Based on household surveys for the 2006-2010 ACS,¹³²² in 2010, the per capita income in Perryville was estimated to be \$9,351 and the median household income was estimated to be \$23,750. This represents a large decrease from the per capita and median household incomes

¹³¹⁵ The White House, Office of the Press Secretary. March 31, 2010. *Memorandum for the Secretary of the Interior: Withdrawl of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

¹³¹⁶ U.S. Dept. of the Interior, Minerals Management Service. November, 2011. *Proposed Outer Continental Shelf Oil and Gas Leasing Program 2012-2017*. Retrieved February 2, 2012 from http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

¹³¹⁷ Lake and Peninsula Borough. 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

¹³¹⁸ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved October 18, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹³¹⁹ Unless otherwise noted, all monetary data are reported in nominal values.

¹³²⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹³²¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹³²² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

reported in the year 2000 (\$20,935 and \$51,875, respectively). The decrease is even greater if inflation is taken into account by converting the 2000 values to 2010 dollars,¹³²³ revealing a real per capita income in 2000 of \$27,529 and a real median household income of \$68,215. In 2010, Perryville ranked 283rd of 305 Alaskan communities with per capita income data, and 264th in median household income, out of 299 Alaskan communities with household income data that year.

Although Perryville's small population size may have prevented the ACS from accurately portraying economic conditions,¹³²⁴ additional evidence for an even larger decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Perryville in 2010 is \$5,543.¹³²⁵ This is lower than the 2006-2010 ACS estimate, providing additional evidence that per capita income declined in Perryville between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,¹³²⁶ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Perryville residents was estimated to be in the civilian labor force (58.3%) than the percentage of Alaska residents estimated to be in the civilian labor force statewide (68.8%). In the same year, 47.4% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 1.7%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which suggests a higher unemployment rate in 2010 of 16.9%, compared to a statewide unemployment rate estimate of 11.5%.¹³²⁷

Also based on the 2006-2010 ACS, a majority of the Perryville workforce (61.8%) was estimated to be employed in the public sector, and the remaining 38.2% was estimated to work in the private sector. Of the 34 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number were estimated to be working in educational services, health care, and social assistance (44.1%), public administration (17.6%), transportation, warehousing, and utilities (14.7%), agriculture, forestry, fishing, hunting, and mining (11.8%), and information (11.8%) (Figures 3 and 4). However, the number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly.

¹³²³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹³²⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹³²⁵ See footnotes 1321 and 1322.

¹³²⁶ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹³²⁷ See footnote 1321.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 47 employed residents in Perryville in 2010, of which 59.6% were employed in local government, 10.6% in financial activities, 8.5% in educational and health services, 4.3% in professional and business services, 4.3% in information, 2.1% in construction, 2.1% in leisure and hospitality, and 8.5% in other industries.¹³²⁸ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Perryville (U.S. Census).

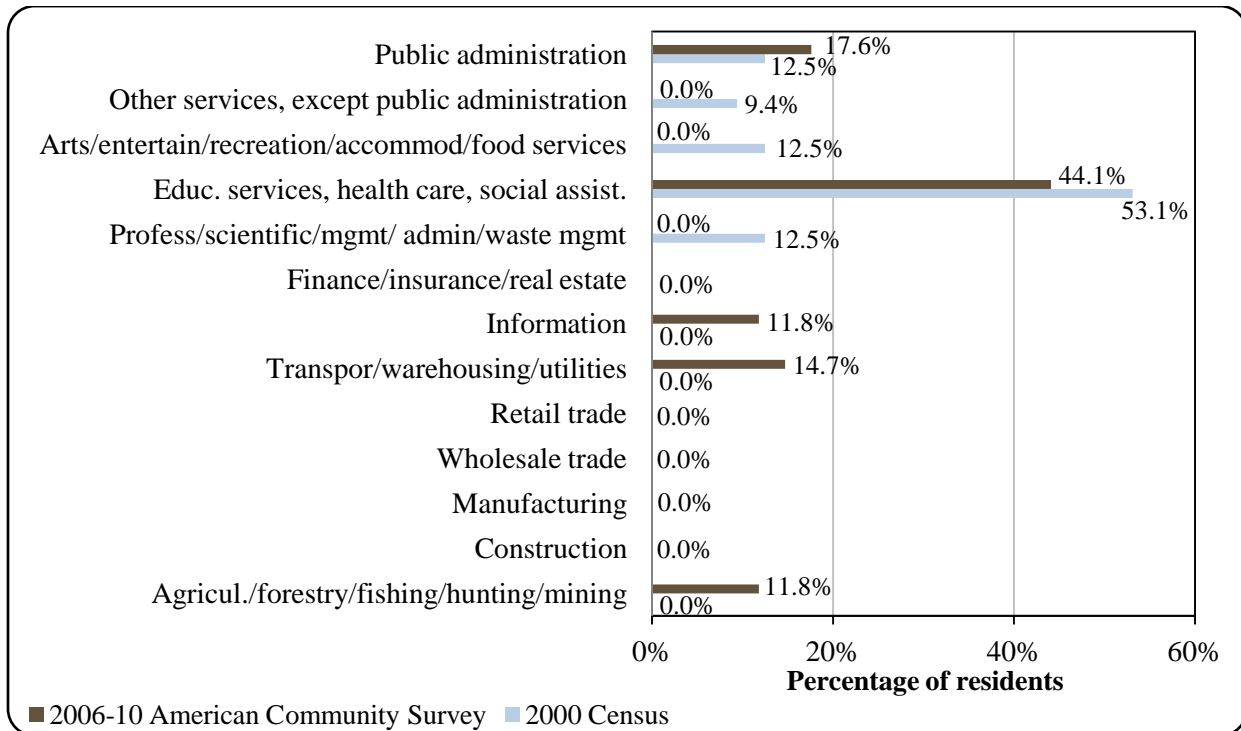
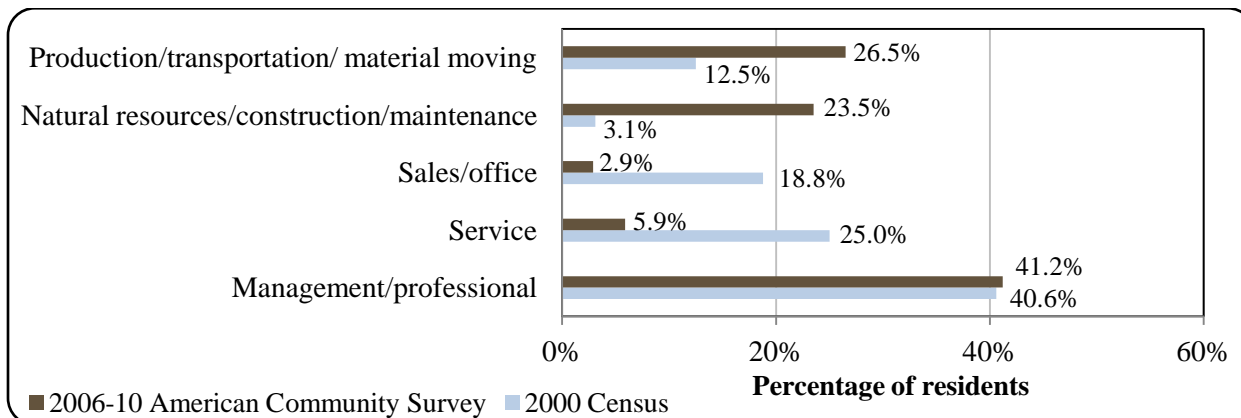


Figure 4. Local Employment by Occupation in 2000-2010, Perryville (U.S. Census).



¹³²⁸ Ibid.

Governance

Perryville is an unincorporated community in the Lake and Peninsula Borough. No municipal revenue was reported and no taxes were administered by the community between 2000 and 2010. However, the Borough administers a 2% fish tax, 6% bed tax, \$3 per person/day guide tax, and a \$1 person/day lodge guide tax.¹³²⁹ Perryville did not receive State or Community Revenue Sharing contributions between 2000 and 2010. However, Perryville did receive several fisheries-related grants during this period. These included \$2,500,000 from the U.S. Army Corps of Engineers in 2002 for harbor construction, \$10,200 in 2003 from the Alaska Department of Transportation and Public Facilities for a harbor feasibility study, \$75,000 in 2003 from the Alaska Division of Community and Regional Affairs for coho salmon restoration in the Kametolook River, and \$1,000,000 in 2010 from the Denali Commission for design and construction of a barge landing. Information about some of Perryville’s revenue sources is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Perryville from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	\$2,500,000
2003	n/a	n/a	n/a	\$85,200
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	\$1,000,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹³²⁹ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved November 16, 2011 from http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm.

Perryville was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity recognized by the Bureau of Indian Affairs (BIA) is the Native Village of Perryville. The Native village corporation is the Oceanside Corporation, which manages 93,926 acres of land. The regional Native corporation to which Perryville belongs is the Bristol Bay Native Corporation (BBNC).¹³³⁰

Perryville is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the tribes and the Native people of Bristol Bay.¹³³¹ The BBNA is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹³³²

The closest regional office of the Alaska Department of Fish and Game (ADF&G) is located in Sand Point. Kodiak has the nearest National Marine Fisheries Service (NMFS) office, including a NOAA Fisheries Sustainable Fisheries Division and Enforcement Office, as well as the nearest office of the Alaska Department of Natural Resources (DNR). The nearest Alaska Department of Commerce, Community, and Economic Development office is in Dillingham, and the closest offices of the U.S. Bureau of Citizenship and Immigration Services are located in Unalaska and Kodiak. However, the Anchorage offices of these agencies may be more accessible to people from the Alaska Peninsula region.

Infrastructure

Connectivity and Transportation

Perryville is accessible by air and sea. There is a state-owned 3,300 feet long by 75 feet wide gravel runway and seaplane base.¹³³³ As of spring 2012, Peninsula Airways offered flights between King Salmon and Perryville on Mondays, Wednesdays, Fridays, and Saturdays for \$608 roundtrip,¹³³⁴ and the price of a roundtrip ticket from King Salmon to Anchorage in early June of 2012 was \$425.¹³³⁵ Cargo barges deliver fuel and supplies each spring. ATVs and skiffs are the primary means of local transportation.¹³³⁶

Facilities

Water in Perryville is supplied by a nearby stream and 60,000-gallon timber dam system. Water is filtered and chlorinated and stored in a 50,000-gallon tank. The Village Council

¹³³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³³¹ Bristol Bay Native Association. (n.d.). *Homepage*. Retrieved November 16, 2011 from www.bbna.com.

¹³³² U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹³³³ See footnote 1330.

¹³³⁴ Timetable information retrieved March 22, 2012 from <http://www.penair.com/>.

¹³³⁵ This price was calculated on November 21, 2011 using [kayak.com](http://www.kayak.com).

¹³³⁶ See footnote 1330.

operates a piped water system which serves 30 homes and the school. A central watering point is available for hauling water. There is no piped sewer system in the community. Most homes have individual septic tanks, and community facilities are connected to a separate septic system. The Village Council also operates a diesel powerhouse that provides electricity to the community. A landfill is present in Perryville, but is not permitted. Police services are provided by state troopers stationed in King Salmon, and fire and rescue services are provided by the Perryville First Responders.¹³³⁷ According to a survey conducted by the AFSC in 2011, community leaders reported that progress is currently underway to develop alternative energy sources for Perryville, and a new landfill is also under development.

Additional community services and facilities in Perryville include a school library and a nutrition program for elders. Telephone and broadband internet service is available in Perryville, but no cable provider is present.¹³³⁸ According to the 2011 AFSC survey, community leaders indicated that a post office is also present.

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that no dock space is available for either permanent or transient vessel moorage. They also indicated that construction is currently under way for an improved barge landing area, dry dock space, and haul-out facilities. In addition, they reported that no fisheries-related businesses or services are available in Perryville, and local residents typically travel to Homer, Chignik Bay or Sand Point to access fisheries-related services.

Medical Services

Health care is provided by the Emillin Health Clinic in Perryville, which is owned by the Village Council and operated by the Bristol Bay Area Health Corporation. The Emillin Clinic is a Community Health Aide Program site. Emergency Services have coastal and air access. Emergency service is provided by a health aide. Alternative health care is provided by the Perryville First Responders.¹³³⁹ The nearest hospitals are located in Dillingham and Kodiak.

Educational Opportunities

There is one school in the community, which offers preschool through 12th grade. As of 2011, the Perryville School had a total of 29 students and 3 teachers.¹³⁴⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Perryville area for thousands of years. Villages and fish camps were often located at mouths of streams for access to both fresh

¹³³⁷ Ibid.

¹³³⁸ Ibid.

¹³³⁹ Ibid.

¹³⁴⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

water and abundant salmon runs.¹³⁴¹ During Alaska’s Russian period, salmon remained a subsistence resource, but soon after the purchase of Alaska by the United States in 1867, commercial exploitation of salmon was initiated.¹³⁴² Herring was one of the earliest commercial fisheries, along with salmon, during the period when the product was salted for storing and shipment to be used for human consumption. Commercial harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.¹³⁴³ Halibut and groundfish fisheries began to develop in the Alaska Peninsula region by the 1920s with the development of diesel engines, which allowed fishing vessels to undertake longer trips.^{1344,1345}

Perryville participates in the Community Quota Entity (CQE) program, and has established a CQE nonprofit called Perryville CQE, Inc. Perryville is not eligible to participate in the Community Development Quota (CDQ) program. Perryville is located in Federal Statistical and Reporting Area 620, the Western Gulf of Alaska (GOA) Sablefish Regulatory Area, Pacific Halibut Fishery Regulatory Area 3B, and the Chignik Salmon Fishery Management Area.

Between 2000 and 2010, a majority of salmon permits held by Perryville residents were for the local Chignik purse seine fishery (see *Commercial Fishing* section). The Chignik salmon harvesting area extends along the south side of the Alaska Peninsula between Kilokak Rocks and Kupreanof Point. In the early years of this salmon fishery, pile traps were the primary harvest method, and historical harvest activity was focused in Chignik Lagoon and Chignik Bay. Fish traps were the primary harvest method until 1954. Starting in 1955, only purse seine gear has been permitted in the Chignik salmon fishery. Sockeye salmon makes up the greatest percentage of salmon catch in the Chignik area. Between 1980 and 2004, Chignik salmon harvests made up only 1.81% of total commercial salmon harvest in Alaska. However, based on average market value in 2004, as determined from permit sales, the most valuable limited entry permit types in Alaska were purse seine permits in the Chignik area.¹³⁴⁶ As of 2010, there were 91 total limited entry permits in the Chignik salmon fishery, a reduction from 99 in the year 2000.¹³⁴⁷

In the early 2000s, a group of permit holders in the Chignik salmon fishery proposed a new fisheries management strategy, and in 2002 the Alaska Board of Fisheries passed regulations allowing for a portion of salmon harvest to be allocated to a cooperative. The Chignik Salmon Cooperative (Co-op) formed that year. Of approximately 100 limited entry permit holders in the Chignik salmon fishery in 2002, more than three-quarters joined the Co-op between 2002 and 2005. Approximately 20 of the Co-op member fishermen were hired to fish the Co-op’s allocation annually, and all Co-op members were paid equal shares of the Co-op’s profits. The Co-op was opposed by a minority of permit holders. It was eventually ended in

¹³⁴¹ Alaska Native Heritage Center. (n.d) *The Unangax & Alutiiq (Supiaq) People - Who We Are*. Retrieved January 4, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/unangax/.

¹³⁴² Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹³⁴³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹³⁴⁴ See footnote 1342.

¹³⁴⁵ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹³⁴⁶ See footnote 1342.

¹³⁴⁷ Alaska Dept. of Fish and Game. CFEC Fisheries Statistics. *CFEC Public Lookup Database*. Retrieved March 22, 2012 from <http://www.cfec.state.ak.us/plook/>.

2006, after the Alaska Supreme Court ruled that it violated a state law requiring permit holders to operate their own vessels.¹³⁴⁸

In addition to salmon, between 2000 and 2010, Perryville residents participated in fisheries for halibut, groundfish, and herring. Groundfish fisheries target a variety of species, including pollock, Pacific cod, sablefish, Atka mackerel, lingcod, and various rockfish and flatfish species. Herring are harvested for bait in the vicinity of Unalaska when Togiak-spawning herring are in residence during the summer feeding period. On occasion, a herring sac roe fishery occurs near Port Moller when aerial surveys determine that a sufficient quantity of herring is present, and if processing capacity is available.¹³⁴⁹

According to a survey conducted by the AFSC in 2011, community leaders indicated that Perryville participated in the fisheries management process in Alaska through sending a representative to sit on a regional fisheries advisory and/or working groups run by ADF&G, sending a representative to participate in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process, and also relies on organizations such as the Southwest Alaska Municipal Conference to gain access to information on fisheries management issues.

Community leaders also expressed the opinion that the transition to a catch share system and individual fishery quotas (IFQs) in the Pacific halibut fishery has resulted in fewer halibut boats actively fishing and has presented challenges for the younger generation of Perryville residents to enter the fishery. They were also concerned about the ability of smaller boats to compete in the state-waters Pacific cod fishery in state waters. They explained that the season begins in March, when marginal weather conditions favor larger vessels. In addition, larger vessels have a greater fishpack capacity. These factors combine to allow larger vessels to catch a majority of the cod quota early in the season, before smaller vessels have had a chance to catch enough to pay for their expenses in the fishery.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Perryville. However, the 2010 Intent to Operate list shows that active processing facilities are located in nearby communities of Chignik and Sand Point. More information about these processing facilities can be found in the profiles for each of these communities.

Fisheries-Related Revenue

No information was reported regarding fisheries-related revenue sources in Perryville between 2000 and 2010 (Table 3).

Commercial Fishing

Between 2000 and 2010, Perryville residents participated in commercial fisheries as permit holders, crew members, and vessel owners. In 2010, 8 Perryville residents held a total of 13 Commercial Fisheries Entry Commission (CFEC) permits. These included eight salmon permits in the Chignik purse seine fishery, of which seven (88%) were actively fished that year.

¹³⁴⁸ Knapp, Gunnar. 2008. "The Chignik Salmon Cooperative." In *Case studies in fisheries self-governance*. Eds. R. Townsend, R. Shotton, and H. Uchida. FAO Fisheries Technical Paper 504.

¹³⁴⁹ See footnote 1343.

It is important to note that almost all salmon permits held during the 2000-2010 period were for the Chignik purse seine fishery, with the exception of one Bristol Bay drift gillnet permit held in 2002 and two held in 2006.

In 2010, two halibut CFEC permits were held in the statewide longline fishery (vessels under 60 feet in length), both of which were actively fished. Also that year, two residents held a total of three groundfish CFEC permits in miscellaneous saltwater finfish fisheries. Two of these groundfish permits for the Gulf of Alaska mechanical jig gear fishery, and one was for the Gulf of Alaska pot gear fishery (vessels under 60 feet). No groundfish CFEC permits were actively fished in 2010.

The number of salmon permits and the percentage of salmon permits actively fished decreased slightly between 2000 and 2010, from 10 actively fished permits in 2000. The number of halibut permits increased slightly, while the number of groundfish permits decreased between 2000 and 2010. In 2000 and 2001, several Perryville residents were also involved in CFEC herring fisheries, although permits were not actively fished in those years. Information about CFEC permits held by Perryville residents is presented in Table 4.

Between 2000 and 2010, one Perryville resident held a License Limitation Permit (LLP) in a federal groundfish fishery. The last year during the 2000-2010 period in which this permit was actively fished was 2005. No LLPs were held by Perryville residents in federal crab fisheries between 2000 and 2010. From 2003 to 2005, two Federal Fisheries Permits (FFP) were held by Perryville residents, of which one was fished actively in those years. In 2006, the number of FFPs held decreased to one, which was actively fished in 2008 and 2010 (Table 4).

In 2000, one quota share account was held by a Perryville resident in the federal halibut catch share fishery, increasing to two account holders between 2001 and 2010. A total of 23,265 halibut quota shares were held in 2000, increasing to a stable level of 37,903 shares held between 2001 and 2010 (Table 6). The annual halibut individual fishing quota (IFQ) allotment decreased to 35% under 2000 levels by 2010. No Perryville residents held quota share accounts in the federal sablefish or crab catch share fisheries between 2000 and 2010 (Tables 7 and 8).

In 2010, a total of 15 Perryville residents held commercial crew licenses, 10 fishing vessels were primarily owned by Perryville residents, and 7 fishing vessels were registered as homeported in Perryville. These numbers represent declines in all categories, from 31 crew license holders in 2001 (a decline of approximately 50%), 15 primary owners of fishing vessels in 2000 (a 33% reduction), and 10 homeported vessels in 2000 (a 30% reduction). Information about the commercial fishing sector in Perryville is presented in Table 5. According to a survey conducted by the AFSC in 2011, community leaders indicated that the vessels using Perryville as a base of operations during the fishing season primarily vessels between 35 and 60 feet in length using purse seine or pot gear. They also reported that, compared to five years ago, there are fewer fishing boats in Perryville.

No landings or ex-vessel revenue were recorded in Perryville (Table 9), given the lack of fish buyers in the community (Table 5). Information about landings and ex-vessel revenue generated by vessels owned by Perryville residents is largely considered confidential between 2000 and 2010 due to the small number of participants, with the exception of salmon harvest data and Pacific cod landings and revenue in several years during the 2000-2010 period. On average, Perryville vessel owners harvested an average of 742,528 net pounds of salmon annually, valued on average at \$590,402 in ex-vessel revenue. Pacific cod landings in 2002 totaled 274,257 net pounds, valued at \$56,834, and landings in 2004 totaled 218,974 net pounds, valued at \$52,116 in ex-vessel revenue (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Perryville: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Perryville: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	1	1	1	0	1	1	0	0	0	0	0
	% of permits fished	100%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	2	2	2	1	1	1	1	1
	Fished permits	0	0	0	1	1	1	0	0	1	0	1
	% of permits fished	-	-	-	50%	50%	50%	0%	0%	100%	0%	100%
	Total permit holders	0	0	0	2	2	2	1	1	1	1	1
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	2	2	2	1	2	2	2	2	2
	Fished permits	1	1	2	2	2	1	2	2	2	2	2
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	1	1	2	2	2	1	2	2	2	2	2
Herring (CFEC) ²	Total permits	2	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	-	-	-	-	-	-	-	-	-
	Total permit holders	2	1	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Perryville: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	4	3	5	5	5	4	3	0	4	3	3
	Fished permits	2	3	4	3	4	3	1	0	1	0	0
	% of permits fished	50%	100%	80%	60%	80%	75%	33%	-	25%	0%	0%
	Total permit holders	4	3	5	5	5	4	3	0	4	2	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	10	9	12	10	9	9	10	9	7	8	8
	Fished permits	10	9	7	7	5	9	6	8	7	7	7
	% of permits fished	100%	100%	58%	70%	56%	100%	60%	89%	100%	88%	88%
	Total permit holders	10	10	13	13	11	12	10	10	8	8	8
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>17</i>	<i>14</i>	<i>19</i>	<i>17</i>	<i>16</i>	<i>14</i>	<i>15</i>	<i>11</i>	<i>13</i>	<i>13</i>	<i>13</i>
	<i>Fished permits</i>	<i>13</i>	<i>13</i>	<i>13</i>	<i>12</i>	<i>11</i>	<i>13</i>	<i>9</i>	<i>10</i>	<i>10</i>	<i>9</i>	<i>9</i>
	<i>% of permits fished</i>	<i>76%</i>	<i>93%</i>	<i>68%</i>	<i>71%</i>	<i>69%</i>	<i>93%</i>	<i>60%</i>	<i>91%</i>	<i>77%</i>	<i>69%</i>	<i>69%</i>
	<i>Permit holders</i>	<i>12</i>	<i>10</i>	<i>14</i>	<i>13</i>	<i>12</i>	<i>12</i>	<i>11</i>	<i>10</i>	<i>8</i>	<i>8</i>	<i>8</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Perryville: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Perryville ²	Total Net Pounds Landed In Perryville ^{2,5}	Total Ex-Vessel Value Of Landings In Perryville ^{2,5}
2000	29	0	0	15	10	0	0	\$0
2001	31	0	0	15	10	0	0	\$0
2002	18	0	0	19	10	0	0	\$0
2003	28	0	0	17	10	0	0	\$0
2004	16	0	0	15	10	0	0	\$0
2005	30	0	0	13	10	0	0	\$0
2006	19	0	0	13	8	0	0	\$0
2007	20	0	0	12	6	0	0	\$0
2008	19	0	0	11	6	0	0	\$0
2009	16	0	0	12	6	0	0	\$0
2010	15	0	0	10	7	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Perryville: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	23,265	6,486
2001	2	37,903	11,622
2002	2	37,903	12,044
2003	2	37,903	11,978
2004	2	37,903	10,908
2005	2	37,903	9,185
2006	2	37,903	7,585
2007	2	37,903	6,447
2008	2	37,903	7,622
2009	2	37,903	7,622
2010	2	37,903	6,922

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Perryville: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Perryville: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Perryville: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Perryville Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	274,257	-	218,974	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	917,750	674,297	491,974	1,131,752	520,993	738,963	616,478	697,178	724,723	951,892	701,806
<i>Total²</i>	<i>917,750</i>	<i>674,297</i>	<i>766,231</i>	<i>1,131,752</i>	<i>739,967</i>	<i>738,963</i>	<i>616,478</i>	<i>697,178</i>	<i>724,723</i>	<i>951,892</i>	<i>701,806</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	\$56,834	-	\$52,116	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$798,568	\$434,823	\$342,781	\$752,825	\$487,331	\$632,481	\$463,185	\$439,881	\$537,595	\$894,767	\$710,188
<i>Total²</i>	<i>\$798,568</i>	<i>\$434,823</i>	<i>\$399,615</i>	<i>\$752,825</i>	<i>\$539,446</i>	<i>\$632,481</i>	<i>\$463,185</i>	<i>\$439,881</i>	<i>\$537,595</i>	<i>\$894,767</i>	<i>\$710,188</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were present in Perryville. Licenses were not sold locally in Perryville. However, between 2 and 13 Perryville residents purchased sportfishing licenses each year, irrespective of point of sale. According to a survey conducted by the AFSC in 2011, community leaders indicated that Chinook, coho, chum, and sockeye salmon, halibut, and rockfish are the primary targets of sportfishing activity in Perryville, along with sport harvest of crab and clams. The Alaska Statewide Harvest Survey,¹³⁵⁰ conducted by ADF&G between 2000 and 2010, noted harvest of Chinook salmon in freshwater and pink salmon in saltwater. Given the lack of sport fish guide businesses, no kept/released log book data were reported for sportfishing charters out of Perryville between 2000 and 2010.¹³⁵¹

Perryville is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. This area includes all Alaskan waters, plus drainages, between Cape Douglas and the community of Naknek. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Perryville is also displayed in Table 11.

Table 11. Sport Fishing Trends, Perryville: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Perryville ²
2000	0	0	13	0
2001	0	0	10	0
2002	0	0	13	0
2003	0	0	14	0
2004	0	0	8	0
2005	0	0	10	0
2006	0	0	5	0
2007	0	0	2	0
2008	0	0	7	0
2009	0	0	6	0
2010	0	0	6	0

¹³⁵⁰ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹³⁵¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11, cont'd. Sport Fishing Trends, Perryville: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Perryville residents maintain a subsistence lifestyle. Some residents trap during the winter, and all rely heavily on subsistence food sources. Salmon, trout, marine fish, crab, clams, moose, caribou, bear, porcupine, and seal are harvested.¹³⁵² In a survey conducted by the AFSC in 2011, Perryville community leaders said that salmon, seal, and halibut are the most important marine subsistence resources utilized by local residents.

Results of an ADF&G subsistence survey found that, in 2003, 83% of Perryville households participated in salmon subsistence, 81% participated in halibut subsistence, 40% participated in marine invertebrate subsistence, 65% participated in marine mammal subsistence, and 43% participated in non-salmon fish subsistence (not including halibut). That year, the per capita harvest of land and sea-based subsistence resources was 518 pounds. This information about household and per capita use of subsistence resources is presented in Table 12.

Species of non-salmon fish harvested by the greatest number of Perryville households in 2003 were euchalon (hooligan candlefish), Pacific cod, Dolly Varden, and black rockfish. Species of marine invertebrate harvested by the greatest number of households were black

¹³⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

chitons, butter clams, sea urchin, Dungeness crab, cockles, red chitons, Pacific littleneck clams, Tanner crab, and mussels.¹³⁵³ A total of 4,599 pounds of marine invertebrates and 1,674 pounds of non-salmon fish were harvested by Perryville residents for subsistence purposes in 2003 (Table 13).

Some data are also available regarding total subsistence harvest of salmon, halibut, and marine mammals by Perryville residents during the 2000-2010 period. Between 2000 and 2008, the number of Perryville households that were issued subsistence salmon permits varied between 20 and 42. Coho, pink, and sockeye were the three most heavily harvested salmon species, averaging 1,309, 1,043, and 1,620 individual salmon harvested per year, respectively. A smaller number of Chinook and chum salmon were also reported harvested each year. This information about subsistence harvest of salmon is presented in Table 13.

Between 2003 and 2010, the number of Perryville residents that participated in the Subsistence Halibut Registration Certificates (SHARC) program varied between 11 and 47, and the number of SHARC cards returned each year varied between 7 and 28. The greatest subsistence harvest of halibut was reported in 2007, when 7,095 pounds of halibut were harvested using 26 SHARC cards. This information about the subsistence halibut fishery is presented in Table 14.

Marine mammal harvest by residents of Perryville was significant. According to data reported by ADF&G, this harvest appears to have been focused primarily on sea lion and harbor seal. No information was reported by management agencies regarding harvest of spotted seal, walrus, sea otter, or beluga whale between 2000 and 2010. Information about subsistence harvest of marine mammals by Perryville residents is presented in Table 15.

Additional Information

The 1912 Mount Katmai/Novarupta eruption was the largest volcanic eruption in recent history in North America, and the largest eruption on Earth in the 20th century, to date. This violent eruption forced several villages to relocate to the present community of Perryville.¹³⁵⁴

¹³⁵³ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹³⁵⁴ LaRoche + Associates. March 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

Table 12. Subsistence Participation by Household and Species, Perryville: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	83%	81%	40%	65%	43%	518
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Perryville: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	42	40	29	177	1,037	805	1,747	n/a	n/a
2001	27	27	9	88	1,312	2,688	911	n/a	n/a
2002	30	25	11	23	1,058	390	1,692	n/a	n/a
2003	46	45	28	279	1,962	1,498	2,199	4,599	1,674
2004	31	22	31	179	1,556	977	1,846	n/a	n/a
2005	38	34	4	315	1,576	600	1,863	n/a	n/a
2006	42	34	75	268	1,293	1,018	2,018	n/a	n/a
2007	34	29	25	162	1,231	899	1,495	n/a	n/a
2008	20	20	3	33	759	510	808	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Perryville: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	11	8	1,809
2004	45	18	5,225
2005	38	26	3,708
2006	47	28	4,391
2007	45	26	7,095
2008	39	14	2,007
2009	20	11	3,168
2010	18	7	1,945

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Perryville: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	5	21	n/a
2001	n/a	n/a	n/a	n/a	1	24	n/a
2002	n/a	n/a	n/a	n/a	3	34	n/a
2003	n/a	n/a	n/a	n/a	1	51	n/a
2004	n/a	n/a	n/a	n/a	2	20	n/a
2005	n/a	n/a	n/a	n/a	1	21	n/a
2006	n/a	n/a	n/a	n/a	0	27	n/a
2007	n/a	n/a	n/a	n/a	0	19	n/a
2008	n/a	n/a	n/a	n/a	3	47	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Pilot Point

People and Place

*Location*¹³⁵⁵



Pilot Point is located on the northern coast of the Alaska Peninsula, on the east shore of Ugashik Bay. The community lies 84 air miles south of King Salmon and 368 air miles southwest of Anchorage. Pilot Point is in the Lake and Peninsula Borough Census Area and the Kvichak Recording District. The City encompasses 25.4 square miles of land and 115.1 square miles of water.

*Demographic Profile*¹³⁵⁶

In 2010, there were 68 inhabitants in Pilot Point, making it the 283rd largest of 352 total Alaskan communities with recorded populations that year. Pilot Point first appeared in U.S. Decennial Census records in 1970. The population of Pilot Point almost doubled between 1990 and 2000, then declined by 32% between 2000 and 2010. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 34%, with an average annual growth rate of -1.55%. The change in population from 1990 to 2010 is provided in Table 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that, in addition to year-round residents, approximately 1,825 seasonal workers or transients are present in Pilot Point each year between May and August. They reported that the annual population peak takes place in June and July, and population fluctuations are entirely driven by employment in commercial fishing. It is also important to note that some people from the nearby village of Ugashik live part of the year in Pilot Point as well.¹³⁵⁷

In 2010, a majority of Pilot Point residents identified themselves as American Indian and Alaska Native (66.2%), 16.2% identified themselves as White, and 17.2% identified with two or more races. That year, no Pilot Point residents identified themselves as Hispanic. Compared to 2000, the number of residents of mixed race increased substantially, and the number of individuals identifying only as American Indians and Alaska Natives made up 19.8% less of the population in 2010. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹³⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁵⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹³⁵⁷ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

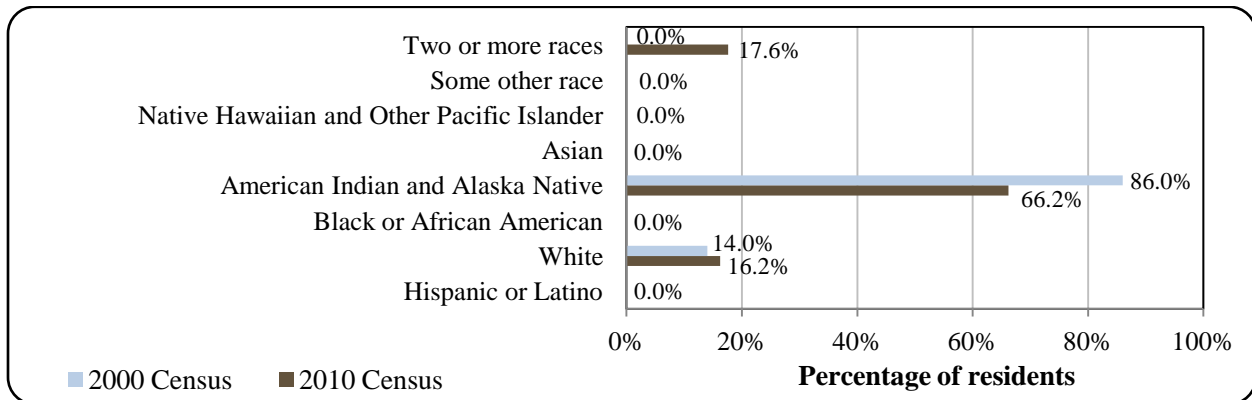
Table 1. Population in Pilot Point from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	53	-
2000	100	-
2001	-	86
2002	-	75
2003	-	70
2004	-	76
2005	-	73
2006	-	66
2007	-	60
2008	-	72
2009	-	66
2010	68	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

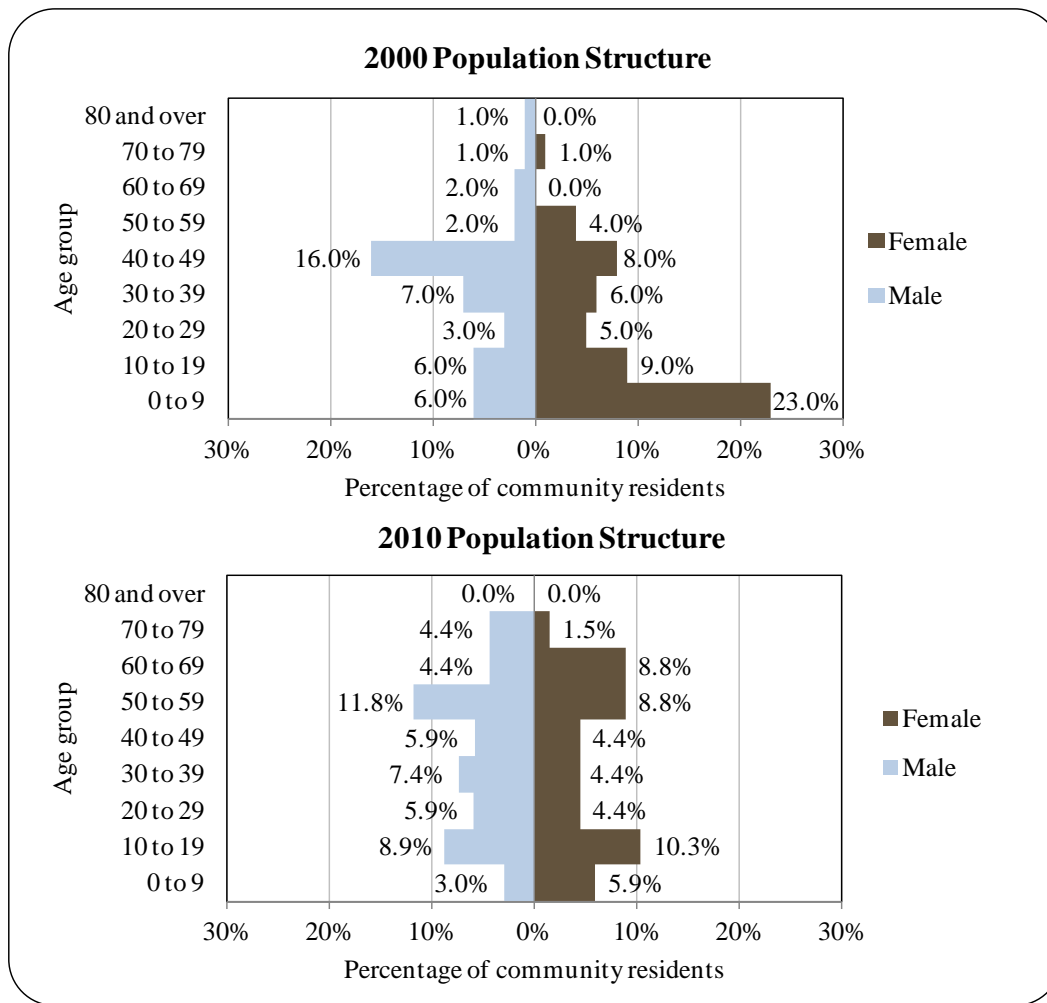
Figure 1. Racial and Ethnic Composition, Pilot Point: 2000-2010 (U.S. Census).



The average household size in Pilot Point increased between 1990 and 2000, from 3.1 persons per household to 3.45, and then decreased to 2.52 persons per household by 2010. The number of households in Pilot Point followed a similar pattern, increasing from 17 to 60 occupied housing units between 1990 and 2000, before decreasing to 27 occupied units in 2010. Of the 65 total housing units surveyed for the 2010 U.S. Census, 26.2% were owner-occupied, 15.4% were rented, and 58.5% were vacant or used only seasonally. This high vacancy rate reflects the steep population decline between 2000 and 2010. Between 1990 and 2010, no residents of Pilot Point lived in group quarters.

In 2010, the gender makeup of Pilot Point’s population (51.6% male and 48.6% female) was similar to the state population as a whole, which was 52% male and 48% female. The median age of Pilot Point residents was 40.5 years, slightly older than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 19.1% of Pilot Point’s population was between 60 and 79 years of age, and no one was over 80. In 2000, it is of note that 23% of the population of Pilot Point were females between the age of 0 and 9. By 2010, this age cohort (females 10-19 years) made up 10.3% of the population. The overall population structure of Pilot Point in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Pilot Point Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹³⁵⁸ 68.4% of Pilot Point residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 0% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 31.6% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 31.6% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 15.8% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 15.8% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Maritime hunters lived on the Alaska Peninsula as early as 7,000 years ago. The dividing line between prehistoric Aleutian and Eskimo linguistic groups was near Pilot Point, just west of Aniakchak National Monument and National Preserve. These two groups shared cultural traits as descendents of Eskaleut people and shared existence as marine hunters.¹³⁵⁹ Numerous cultural resource sites exist in the Pilot Point area, reflecting this long history of human occupancy.¹³⁶⁰

A permanent settlement developed at Pilot Point after a fish salting plant was established by C.A. Johnson in 1889. At that time, the community was called "Pilot Station," after the river pilots stationed here to guide boats upriver to a large cannery located at Ugashik. In 1892, Charles Nelson opened a saltery, which was sold to the Alaska Packer's Association in 1895. The saltery continued to expand, and by 1918 had developed into a three-line cannery. Immigrants of diverse ethnicities, including Italians, Chinese and northern Europeans, came to work in the canneries. Reindeer-herding experiments at Ugashik helped to repopulate the area after the devastating 1918 flu epidemic, although the herding eventually failed. A Russian Orthodox church and a Seventh Day Adventist church were built in the village. A post office was established in 1933, and because another Alaskan village had already officially claimed the name Pilot Station, the name of the community was changed to Pilot Point at that time. The deterioration of the harbor forced the cannery to close in 1958. The City of Pilot Point incorporated in 1992. Today, Pilot Point remains a mixed Alutiiq and Yup'ik community. Inhabitants practice a commercial fishing and subsistence lifestyle.¹³⁶¹

¹³⁵⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹³⁵⁹ National Park Service. (n.d.). *Prehistory of Alaska: Southwest Alaska and Pacific Coast*. Retrieved April 5, 2012 from <http://www.nps.gov/akso/akarc/swest.htm>.

¹³⁶⁰ Alaska Department of Natural Resources. 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹³⁶¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment

Pilot Point's marine climate is characterized by cool, humid, and windy weather. Average summer temperatures range from 41 to 60 °F, and average winter temperatures range from 20 to 37 °F. Low cloud cover and fog frequently limit travel. Precipitation averages 19 inches per year, with 38 inches of snowfall.¹³⁶² Pilot Point is located on the treeless coastal lowland that characterizes the northern side of the Alaska Peninsula. To the south, the Pacific side of the Alaska Peninsula provides a rugged, mountainous backdrop.¹³⁶³

Protected areas in the vicinity of Pilot Point include the Pilot Point Critical Habitat Area (CHA), the Alaska Peninsula National Wildlife Refuge (NWR), Becharof NWR, and Aniakchak National Monument and National Preserve. The Pilot Point CHA and four other CHAs in the Bristol Bay region were established by the State of Alaska in 1972 to protect natural habitat and game populations, especially waterfowl and shorebirds. Together, the five CHAs encompass 284,050 acres.¹³⁶⁴ The NWRs and Aniakchak National Monument were established under the Alaska National Interest Land Conservation Act (ANILCA) of 1980. The Alaska Peninsula NWR has a total area of 3.7 million acres, including a smaller "Ugashik unit" immediately south of Pilot Point, and a larger unit further west on the Peninsula, extended approximately between Chignik Bay and False Pass. The dramatic mountains of the Alaska Peninsula NWR include a number of active volcanoes. The landscape also includes areas of rolling tundra and rugged coastlines. Salmon return to the rivers of this NWR, supporting brown bear populations. Other land mammals include wolverine, the 7,000-animal Northern Alaska Peninsula caribou herd, wolves, and moose. It is of note that no black bears are found in the Alaska Peninsula NWR. Marine mammals living along the coastline include sea otters, harbor seals, sea lions, and migrating whales. The Alaska Peninsula NWR also provides important habitat for migrating birds.¹³⁶⁵

The Becharof NWR covers an area of 1,157,000 acres northwest of Pilot Point. It contains Becharof Lake, the second largest lake in Alaska, and Mt. Peulik, a 4,800-foot volcano. Wildlife species present in this NWR include brown bears, caribou, moose, over 200 species of migratory and resident birds, and provides an important nursery for Pacific salmon.¹³⁶⁶

Aniakchak volcano is one of the most striking features in the landscape surrounding Pilot Point, rising to 4,400 feet¹³⁶⁷ in elevation within approximately 60 miles of the community. Aniakchak National Monument and Preserve, south of Pilot Point, was established to recognize the unique geological significance of a six-mile wide, 2,500 foot deep caldera formed by a massive eruption 3,500 years ago. The explosion caused the loss of approximately 3,000 feet of the upper mountain. The Aniakchak volcano was last active in 1931, when a small explosion

¹³⁶² Ibid.

¹³⁶³ LaRoche + Associates. 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from

http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹³⁶⁴ Alaska Dept. of Fish and Game. 2012. *Bristol Bay – Critical Habitat Area Management Plan*. Retrieved July 3, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=bristolbay.draftplan>.

¹³⁶⁵ U.S. Fish and Wildlife Service. (n.d.). *Alaska Peninsula National Wildlife Refuge*. Retrieved March 23, 2012 from <http://www.fws.gov/refuges/profiles/index.cfm?id=74512>.

¹³⁶⁶ U.S. Fish and Wildlife Service. 2011. *Becharof National Wildlife Refuge*. Retrieved December 21, 2011 from <http://becharof.fws.gov/>.

¹³⁶⁷ Global Volcanism Program. (n.d.). *Aniakchak Volcano Information*. Retrieved April 4, 2012 from <http://www.volcano.si.edu/world/volcano.cfm?vnum=1102-09->.

pockmarked the caldera floor.¹³⁶⁸ This National Monument calls attention to the highly active tectonic zone in which Pilot Point is located. The Alaska Peninsula and Aleutian Island chain form part of the Pacific “Ring of Fire,” one of the most active earthquake areas in the world.¹³⁶⁹ Some of these earthquakes are associated with explosive volcanic eruptions.¹³⁷⁰

No known mineral resources occur in the Pilot Point area. However, oil and gas potential in the Pilot Point area are believed to be moderate to high, and both State and Native landowners are pursuing licenses for oil and gas exploration and leasing. The Alaska Department of Natural Resources and the Lake and Peninsula Borough have both signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region.¹³⁷¹ In a survey conducted by the AFSC in 2011, community leaders in Pilot Point indicated that oil and gas exploration is one of the natural resource-based industries on which the local economy is most dependent.

Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin, which runs along the northern edge of the Aleutian Islands and Alaska Peninsula.¹³⁷² However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010, Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.¹³⁷³ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.¹³⁷⁴

Natural hazards with the potential to impact Pilot Point include severe weather, wildfire, flooding, earthquakes, and volcanic activity. Severe weather was identified to be the greatest threat, in part because of high probability of occurrence. Wildfire was rated as a medium-level threat with high likelihood of occurring. Flooding from storm surges was also rated a medium risk with high probability, while earthquakes and volcanic activity were rated as medium threats with low probability of occurrence. However, Pilot Point residents indicated that their proximity to active volcanoes is the hazard they are most concerned about.¹³⁷⁵

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Pilot Point as of July 2012.¹³⁷⁶

¹³⁶⁸ National Park Service. 2011. *Aniakchak National Monument & Preserve*. Retrieved March 23, 2012 from <http://www.nps.gov/ania/>.

¹³⁶⁹ Sykes, Lynn R., Jerome B. Kisslinger, Leigh House, John N. Davies and Klaus H. Jacob. 1980. “Rupture Zones and Repeat Times of Great Earthquakes along the Alaska-Aleutian Arc, 1784-1980.” *Science* 19 December 1980, Vol. 210 no. 4476 pp. 1343-1345.

¹³⁷⁰ U.S. Geological Survey. 1998. “Can Another Great Volcanic Eruption Happen in Alaska?” Retrieved December 5, 2011 from <http://volcanoes.usgs.gov/about/publications/factsheets.php>.

¹³⁷¹ Alaska Department of Natural Resources. 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹³⁷² Ibid.

¹³⁷³ U.S. Dept. of the Interior, Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

¹³⁷⁴ The White House, Office of the Press Secretary. March 31, 2010. *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

¹³⁷⁵ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

¹³⁷⁶ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹³⁷⁷

Residents of Pilot Point depend upon commercial fishing for the majority of their cash income. Up to 700 commercial boats fish in the Ugashik district of the Bristol Bay salmon fishery.¹³⁷⁸ Between 2000 and 2010, the number of Pilot Point residents holding state commercial fishing permits was equivalent to between 19% and 27% of the total local population each year, and the number of crew license holders fluctuated between 18% and 41% of the population. Subsistence is also an important part of the community lifestyle, and trapping is a source of income during the fishing off-season. Salmon, caribou, moose, geese, and porcupine are harvested.¹³⁷⁹ According to a survey conducted by the AFSC in 2011, community leaders also indicated that oil and natural gas exploration and drilling and sport hunting and fishing are important industries for the local economy. They also noted the presence of sport fish lodges in the Pilot Point area. In addition to resource-based industries, top local employers in Pilot Point in 2010 included local government offices, the school, health services, and utilities.¹³⁸⁰

Based on household surveys conducted for the 2006-2010 ACS,¹³⁸¹ in 2010, the per capita income in Pilot Point was estimated to be \$16,818 and the median household income was estimated to be \$33,333. This represents an increase from the per capita income reported in 2000, but a decrease from the reported median household income (\$12,627 and \$41,250, respectively). The decrease in median household income is even greater if inflation is taken into account by converting the 2000 values to 2010 dollars,¹³⁸² revealing a real median household income in 2000 of \$54,243. Accounting for inflation, the real per capita income in 2000 (\$16,604) was similar to the estimated per capita income in 2010. In 2010, Pilot Point ranked 177th of 305 Alaskan communities with per capita income data, and 228th in median household income, out of 299 Alaskan communities with household income data that year.

Pilot Point's small population size may have prevented the ACS from accurately portraying economic conditions.¹³⁸³ An additional estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Pilot Point in 2010 is \$13,813.¹³⁸⁴ This estimate is slightly lower than the 2010 ACS estimate, providing evidence that per capita

¹³⁷⁷ Unless otherwise noted, all monetary data are reported in nominal values.

¹³⁷⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁷⁹ Ibid.

¹³⁸⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹³⁸¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹³⁸² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹³⁸³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹³⁸⁴ See footnotes 1380 and 1381.

income remained stable between 2000 and 2010, and is more likely to have decreased slightly than to have increased over the period. In 2010, Pilot Point did not meet the criteria of a “distressed” community according to the Denali Commission.¹³⁸⁵ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly lower percentage of Pilot Point residents was estimated to be in the civilian labor force (63%) than was estimated to be in the civilian labor force statewide (68.8%). In the same year, 2.3% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 18.5%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 20.4%, compared to a statewide unemployment rate estimate of 11.5%.¹³⁸⁶

Also based on the 2006-2010 ACS, 75% of the Pilot Point workforce was estimated to be employed in the public sector and 25% were estimated to be self-employed. No Pilot Point residents were estimated to be employed in the private sector. Of the 12 people aged 16 and over that were estimated to be employed in the civilian labor force, 50% were estimated to be working in public administration, 25% in professional, scientific, management, and administrative and waste management services, and 25% in education, health care, and social assistance. None of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting and mining in 2010. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 42 employed residents in 2010, of which 76.2% were employed in local government, 11.9% in education and health services, 4.8% in trade, transportation, and utilities, 2.4% in construction, 2.4% in information, and 2.4% in other industries.¹³⁸⁷ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

¹³⁸⁵ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹³⁸⁶ See footnote 1380.

¹³⁸⁷ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Pilot Point (U.S. Census).

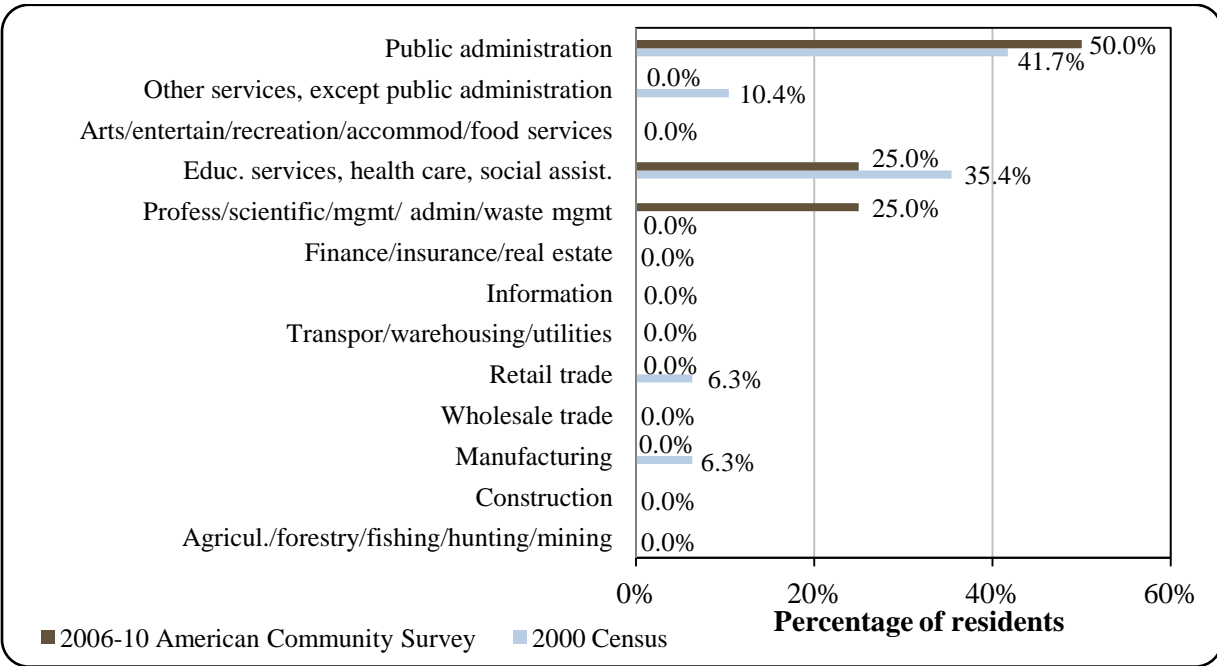
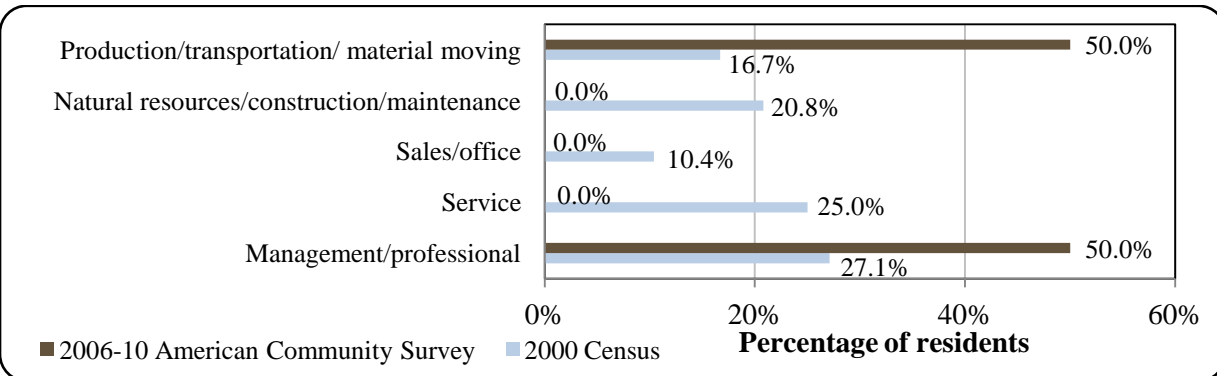


Figure 4. Local Employment by Occupation in 2000-2010, Pilot Point (U.S. Census).



Governance

Pilot Point is a 2nd Class City in the Lake and Peninsula Borough. The City was incorporated in 1992 and has a Strong Mayor form of government, which includes the mayor, a seven-person city council, a seven-person advisory school board, and several municipal employees.¹³⁸⁸ As of 2010, the City administered a 3% sales tax and a 3% raw fish tax. In addition, the Borough administered an additional 2% raw fish tax, a 6% bed tax, a \$3 per person/day guide tax, and a \$1 per person/day lodge guide tax.¹³⁸⁹ Municipal revenue in Pilot Point fluctuated between \$309,575 and \$762,394 per year between 2000 and 2010. Sales tax

¹³⁸⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁸⁹ Ibid.

revenue was only reported in Certified Financial Statements in one year during the period (2000). The City also collects a local fish tax, which made up a large percentage of total municipal revenues in some years (see Table 3 in the *Fisheries-Related Revenue* section). Other locally-generated municipal revenue sources in Pilot Point between 2000 and 2010 included charges for services such as water and sewer, equipment rentals, fuel sales, finance charges, and bank interest. Outside revenue sources received by the City of Pilot Point included state and federal grants, an airport maintenance contract, and shared revenues. Sources of shared revenue included the State Revenue Sharing program (approximately \$25,000 per year from 2000 to 2003), the Community Revenue Sharing program (just under \$100,000 per year in 2009 and 2010), and state raw fish tax refunds in some years during the period (see Table 3). One fisheries-related grant was reported to have been received by the City in 2001. The grant was received through a federal fisheries disaster relief funding program, and totaled \$4,591. Refer to Table 2 for details on selected community finances from 2000 to 2010.

Pilot Point was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Pilot Point. The Native village corporation is Pilot Point Native Corporation, which manages 98,937 acres of land. The regional Native corporation to which Pilot Point belongs is the Bristol Bay Native Corporation (BBNC).¹³⁹⁰

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Pilot Point from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$606,800	\$266,681	\$25,803	n/a
2001	\$656,842	n/a	\$26,227	\$4,591
2002	\$566,830	n/a	\$25,186	n/a
2003	\$431,542	n/a	\$26,347	n/a
2004	\$492,277	n/a	n/a	n/a
2005	\$657,706	n/a	n/a	n/a
2006	\$742,374	n/a	n/a	n/a
2007	\$647,950	n/a	n/a	n/a
2008	\$762,917	n/a	n/a	n/a
2009	\$745,394	n/a	\$99,673	n/a
2010	\$309,575	n/a	\$99,310	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹³⁹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Pilot Point is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the tribes and the Native people of Bristol Bay.¹³⁹¹ The BBNA is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹³⁹²

The closest offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham, King Salmon, and Port Moller. The Port Moller station operates seasonally between May and September. An office of the Alaska Department of Commerce, Community, and Economic Development is located in Dillingham, and the nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Natural Resources, and U.S. Bureau of Citizenship and Immigration Services are located in Kodiak. However, the Anchorage offices of these agencies may be more accessible to people in the Bristol Bay region.

Infrastructure

Connectivity and Transportation

Pilot Point is accessible by both air and water. A state-owned 3,280-foot-long by 75-foot-wide gravel airstrip is available. Air taxis provide regular flights six days a week out of King Salmon as part of the mail service.¹³⁹³ As of spring 2012, the lowest roundtrip airfare between Pilot Point and King Salmon was \$338,¹³⁹⁴ and as of early June 2012, the roundtrip airfare between King Salmon and Anchorage was \$452.¹³⁹⁵ There is a second 5,280-foot-long by 125-foot-wide gravel airstrip, owned by the U.S. Bureau of Land Management, located 10 miles southeast at Ugashik. Barge service is provided from Seattle in the spring and fall and is chartered from Naknek. Dago Creek serves as a natural harbor, and a dock is available there. The entrance to Dago Creek is only accessible at high tide. Modes of local transport include ATVs, snowmobiles, skiffs, and trucks.¹³⁹⁶

Pilot Point and other communities on the Alaska Peninsula are currently very isolated. The Southwest Alaska Transportation Plan published in November 2002 prioritized development of a transportation corridor along the Alaska Peninsula. The desired corridor would link the communities of Egegik, Pilot Point, Ugashik, and Port Heiden via an overland route to Chignik on the south coast, from which fuel and supplies could be disbursed to these communities. The corridor would also extend west from Chignik to the communities of Perryville and Ivanof Bay, and east to Naknek.¹³⁹⁷

¹³⁹¹ Bristol Bay Native Association. (n.d.). *Homepage*. Retrieved November 16, 2011 from www.bbna.com.

¹³⁹² U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹³⁹³ See footnote 1390.

¹³⁹⁴ Personal communication, Peninsula Airways reservation agent, April 6, 2012.

¹³⁹⁵ This price was calculated on November 21, 2011 using kayak.com.

¹³⁹⁶ See footnote 1390.

¹³⁹⁷ Parsons Brinkerhoff. 2002. *Southwest Alaska Transportation Plan Final Edition*. Prepared for the Alaska Department of Transportation and Public Facilities. Retrieved April 4, 2012 from <http://www.dot.state.ak.us/stwdplng/areaplans/pub/SWplanfinalnov02.pdf>.

Facilities

Water in Pilot Point is derived from surface water sources and individual wells. The City does not operate a piped water or sewer system. Individual homes use septic tanks or outhouses. The City operates a sewage lagoon for sewage treatment.¹³⁹⁸ According to a survey conducted by the AFSC in 2011, some water and sewer pipelines were completed in the last 10 years, and water treatment is available in Pilot Point. The City also operates a landfill, but does not provide refuse collection services. Electricity in Pilot Point is provided by a diesel powerhouse operated by the City.¹³⁹⁹ According to the 2011 AFSC survey, community leaders indicated that alternative energy sources are currently in development. Police services are provided by a Village Public Safety Officer stationed in Pilot Point, as well as state troopers stationed in King Salmon. Fire and rescue services are provided by the Pilot Point First Responders.¹⁴⁰⁰ Additional community facilities and services include a City Office building and school library. Internet and telephone service is available in Pilot Point, but there is no local cable service provider.¹⁴⁰¹ According to the 2011 AFSC survey, community leaders reported the presence of a fire department and post office in Pilot Point as well.

With regard to fishing-related infrastructure, community leaders reported in the 2011 AFSC survey that a barge landing area is present in Pilot Point. They also noted that 200 feet of dock space is available for transient commercial or recreational vessels to moor, but no permanent vessel moorage is available. They indicated that vessels of up to 60 feet in length can use this dock facility. They reported that roads currently serve the dock, and electricity to the dock is currently in progress. The community plans to improve the existing dock structure and add a fish cleaning station within the next 10 years. Community leaders also indicated that Pilot Point offers haulout facilities for small boats (less than 60 tons), as well as dry dock storage, fishing gear storage, and fishing gear repair. Several types of boat repair services are available locally, including welding, hydraulics, and mechanical services. In addition, community leaders indicated that ice is available for sale in Pilot Point, and fishing lodges are present in the area. For fishing-related businesses and services not available in Pilot Point, community leaders indicated that local residents typically travel to Port Heiden, Dillingham, or Naknek.

In the 2011 AFSC survey, community leaders also noted that a majority of municipal services are funded by revenue from a raw fish tax, including harbor maintenance, roads, water and wastewater systems, police, enforcement, fire protection, and educational scholarships. Details about the raw fish tax and other fisheries-related revenue are discussed in the *Involvement in North Pacific Fisheries* section and presented in Table 3 below.

Medical Services

Local health care is provided by the Pilot Point Clinic, which is owned by the City and operated by Bristol Bay Area Health Corporation. The Pilot Point Clinic is a Community Health Aide Program site. Emergency Services have coastal and air access. Emergency service is

¹³⁹⁸ See footnote 1390.

¹³⁹⁹ Ibid.

¹⁴⁰⁰ Ibid.

¹⁴⁰¹ Ibid.

provided by a health aide. Alternate health care is provided by the Pilot Point First Responders.¹⁴⁰² The nearest hospital is located in Dillingham.

Educational Opportunities

There is one school in the community, which offers preschool through 12th grade. As of 2011, the Pilot Point School had a total of 19 students and 2 teachers.¹⁴⁰³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Pilot Point area for thousands of years. Early inhabitants of the Alaska Peninsula were maritime hunters.¹⁴⁰⁴ During Alaska's Russian period, salmon remained a subsistence resource, but soon after the U.S. purchase of Alaska in 1867, commercial exploitation of salmon was initiated.¹⁴⁰⁵

In addition to salmon, commercial fisheries that have played a role in Pilot Point's history include herring, halibut, and groundfish fisheries. Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the village of Togiak. On occasion, a herring sac roe fishery occurs near Port Moller, when aerial surveys determine that a sufficient quantity of herring is present, and if processing capacity is available.¹⁴⁰⁶ Halibut and groundfish fisheries began to develop in the Alaska Peninsula region by the 1920s with the development of diesel engines that extended the range of fishing vessels.^{1407,1408} Major groundfish fisheries in the Alaska Peninsula region include a jig fishery for black rockfish out of Unalaska and a Pacific cod fishery, in addition to a statewide lingcod fishery, a sablefish fishery within 0-3 miles of the coast for non federal sablefish quota share holders, and a statewide Pacific cod fishery in state waters.¹⁴⁰⁹

Pilot Point is located in Federal Statistical and Reporting Area 508, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. In addition Pilot Point is located in the Ugashik Salmon District of the Bristol Bay salmon fishery. Pilot Point participates in the Community Development Quota (CDQ) program as a member of the Bristol

¹⁴⁰² Ibid.

¹⁴⁰³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁴⁰⁴ National Park Service. (n.d.). *Prehistory of Alaska: Southwest Alaska and Pacific Coast*. Retrieved April 5, 2012 from <http://www.nps.gov/akso/akarc/swest.htm>.

¹⁴⁰⁵ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." Alaska Fisheries Research Bulletin 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁴⁰⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁴⁰⁷ Ibid.

¹⁴⁰⁸ International Pacific Halibut Commission. 1978. *The Pacific Halibut: Biology, Fishery, and Management*. Technical Report No. 16 (Revision of No. 6).

¹⁴⁰⁹ See footnote 1406.

Bay Economic Development Corporation (BBEDC). The community is not eligible for the Community Quota Entity program.

According to a survey conducted by the AFSC in 2011, community leaders indicated that Pilot Point participates in fisheries management processes in Alaska through sending a representative to sit on regional fisheries advisory and/or working groups run by ADF&G. Community leaders also reported challenges for the Pilot Point fishing sector, noting that the current Pilot Point runway is not long enough to support the weights of fish necessary for cost-effective shipping of raw or processed products.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Pilot Point. A cannery near Pilot Point closed in 1958. It was originally established as a saltery in 1892, and began operating as a three-line cannery in 1918.¹⁴¹⁰ Ownership of the old Pilot Point cannery was transferred to the City of Pilot Point in the 1990s. The buildings are currently used for storage by the City, and renovations are underway to convert the facility to a museum, visitor's center, metalsmithing and woodworking shops, and other potential uses. The Alaska Department of Environmental Conservation (DEC)'s Brownfield Program is providing assistance in resolving environmental concerns at the site, including asbestos insulation, lead-based paint, and possible leaching of the fuel-storage tank farm at the facility.¹⁴¹¹

According to the 2010 Intent to Operate list, a processing facility is currently located upriver near Ugashik, and processing facilities are also in Bristol Bay communities of Egegik, Naknek, Port Moller, and Dillingham. More information about these processing facilities can be found in the profiles for each of these communities.

Fisheries-Related Revenue

In 2010, the City of Pilot Point received a greater amount of fisheries-related revenue than was reported in the municipal budget that year. According to Alaska Taxable, revenue from a raw fish tax totaled \$382,983 that year, and an additional \$5,034 was received from the Shared Fisheries Business Tax. Table 3 shows the annual revenue for these categories.¹⁴¹² In a survey conducted by the AFSC in 2011, community leaders reported additional "fish tax" revenue of \$810,000 in 2010. This number is not reflected in Table 3. In addition to the revenue sources referenced above, from 2000 to 2005, Pilot Point received between \$1,000 and \$2,000 per year from the DEC's Brownfield Program to assess potential environmental threats at the old Pilot Point cannery and resolve known environmental concerns.¹⁴¹³

In addition to the revenue sources presented in Table 3, Pilot Point is also a member of the BBEDC. Fisheries revenue from the CDQ program is used to provide grants for

¹⁴¹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴¹¹ Alaska Dept. of Environmental Conservation. 2006. "Special Focus: Old Alaskan Canneries are Ripe for Brownfield Redevelopment." *Brownfield Bulletin*, Volume 06-3. Retrieved April 5, 2012 from http://dec.alaska.gov/spar/csp/docs/brownfields/bf_bull_10_06.htm.

¹⁴¹² A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

¹⁴¹³ See footnote 1410.

infrastructure, fuel and electrical assistance to member communities. The BBEDC also offers educational scholarships, vocational training, and fishing permit acquisition and financing assistance to residents of its member communities.¹⁴¹⁴ Pilot Point community leaders did not report receipt of funds from the BBEDC in 2010 in the 2011 AFSC survey.

Commercial Fishing

Between 2000 and 2010, Pilot Point residents participated in commercial fisheries as permit holders, crew members, and vessel owners. In 2010, there were 14 Pilot Point residents (equivalent to 21% of the local population) holding a total of 16 Commercial Fisheries Entry Commission (CFEC) permits. These included 15 salmon permits, of which 67% were actively fished that year. The number of salmon permits and permit holders decreased over the decade, from a high of 21 permit holders and 21 salmon permits held in 2000. All permits were for Bristol Bay set and drift gillnet fisheries, with the exception of one Lower Yukon set gillnet permit held by a Pilot Point fisherman in 2009.

In addition to salmon permits, in some years Pilot Point residents held CFEC permits in fisheries for halibut (2000-2008 and 2010), herring (2000-2001, 2005-2008), and groundfish (2000-2002). The number of halibut permits decreased from five in 2000 to one in 2010. The last year during the 2000-2010 period in which a herring permit was actively fished was 2005, while no groundfish permit was actively fished in any year during the 2000-2010 period. Information about CFEC permits is presented in Table 4.

From 2008-2010, one Pilot Point resident held one Federal Fisheries Permit (FFP), and one quota share account was held in the federal halibut catch share fishery. The amount of halibut quota stayed constant during these three years at 706 shares. The annual halibut individual fishing quota (IFQ) allotment decreased by more than a quarter during these three years. Between 2000 and 2010, no Pilot Point residents held License Limitation Program permits (LLP) in federal crab or groundfish fisheries. Likewise, no Pilot Point residents held quota share accounts or quota shares in federal catch share fisheries for sablefish or crab. Information about federal permits is presented in Table 4 and information about federal catch share participation is presented in Tables 6 through 8.

In 2010, a total of 17 Pilot Point residents (equivalent to 25% of the local population) held commercial crew licenses, and 5 fishing vessels were primarily owned by Pilot Point residents. The number of crew license holders declined over the decade, from 33 in the year 2000, while the number of vessels owned by local residents fluctuated between 9 and 5 between 2000 and 2010. The number of vessels homeported in Pilot Point was slightly higher, fluctuating between 8 and 14 during these years. Information about the commercial fishing sector in Pilot Point is presented in Table 5. According to a survey conducted by the AFSC in 2011, community leaders indicated that the vessels using Pilot Point as a base of operations during the fishing season were primarily salmon gillnet boats of 35 feet or less in length. They also noted that there are currently more commercial fishing boats of a variety of sizes in Pilot Point than were present five years ago, due to increased profitability of commercial fishing in recent years.

No landings or ex-vessel revenue were recorded in Pilot Point given the lack of fish buyers and shore-side processors in the community (Tables 5 and 9). Information about landings and ex-vessel revenue generated by vessels owned by Pilot Point residents is largely considered

¹⁴¹⁴ Bristol Bay Economic Development Corporation. *Annual Report 2010*. Retrieved November 16, 2011 from <http://www.bbdc.com>.

confidential between 2000 and 2010 due to the small number of participants, with the exception of salmon harvest data. For the years reported between 2000 and 2009, Pilot Point vessel owners harvested an average of 358,033 net pounds of salmon, with an average ex-vessel value of the catch of \$220,757. It is of interest to note that the year with the highest landings (2006 with 579,435 net pounds landed) did not coincide with the highest ex-vessel revenue, which was earned in 2009 when 478,814 net pounds of salmon were landed. This may reflect variations in species composition of the harvest, differences in price from year to year, and possible differences in the location where vessel owners delivered their catches. Information about commercial harvest and ex-vessel revenue earned by vessel owners residing in Pilot Point is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Pilot Point: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$170,552	\$38,000	n/a	\$112,500	\$3,000	n/a	n/a	\$257,712	\$480,902	\$518,349	\$382,983
Shared Fisheries Business Tax ¹	\$5,128	\$4,240	\$6,604	\$2,968	\$2,536	\$2,927	\$3,648	\$4,489	\$4,132	\$5,113	\$5,034
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$19	\$50	\$190	\$314	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Maintenance of old cannery site ²	\$1,204	\$1,204	n/a	\$2,000	\$2,000	\$1,500	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$176,884	\$43,444	\$6,604	\$117,468	\$7,536	\$4,427	\$3,668	\$262,251	\$485,223	\$523,776	\$388,017
Total municipal revenue⁵	\$606,800	\$656,842	\$566,830	\$431,542	\$492,277	\$657,706	\$742,374	\$647,950	\$762,917	\$745,394	\$309,575

Note: n/a indicates that no data were reported for that year. Also, the percent of total municipal revenue sources that is derived from fisheries-related sources cannot be calculated for this community given that raw fish tax revenue is not always included in the municipal budget.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Pilot Point: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	1	1	1
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	5	1	3	1	2	1	1	1	1	0	1
	Fished permits	1	0	1	0	1	1	1	1	0	0	0
	% of permits fished	20%	0%	33%	0%	50%	100%	100%	100%	0%	-	0%
	Total permit holders	5	1	3	1	2	1	1	1	1	0	1
Herring (CFEC) ²	Total permits	1	2	0	0	0	1	1	1	1	0	0
	Fished permits	0	1	0	0	0	1	0	0	0	0	0
	% of permits fished	0%	50%	-	-	-	100%	0%	0%	0%	-	-
	Total permit holders	1	1	0	0	0	1	1	1	1	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Pilot Point: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	2	1	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	-	-	-	-	-	-	-	-
	Total permit holders	2	1	1	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	21	17	15	13	15	13	16	15	15	18	15
	Fished permits	15	14	11	10	11	9	10	9	11	12	10
	% of permits fished	71%	82%	73%	77%	73%	69%	63%	60%	73%	67%	67%
	Total permit holders	21	19	16	15	15	14	17	16	16	18	14
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>29</i>	<i>21</i>	<i>19</i>	<i>14</i>	<i>17</i>	<i>15</i>	<i>18</i>	<i>17</i>	<i>17</i>	<i>18</i>	<i>16</i>
	<i>Fished permits</i>	<i>16</i>	<i>15</i>	<i>12</i>	<i>10</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>10</i>
	<i>% of permits fished</i>	<i>55%</i>	<i>71%</i>	<i>63%</i>	<i>71%</i>	<i>71%</i>	<i>73%</i>	<i>61%</i>	<i>59%</i>	<i>65%</i>	<i>67%</i>	<i>63%</i>
	<i>Permit holders</i>	<i>21</i>	<i>19</i>	<i>16</i>	<i>15</i>	<i>15</i>	<i>14</i>	<i>17</i>	<i>16</i>	<i>16</i>	<i>18</i>	<i>14</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Pilot Point: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Pilot Point ²	Total Net Pounds Landed in Pilot Point ^{2,5}	Total Ex-Vessel Value of Landings in Pilot Point ^{2,5}
2000	33	0	0	9	8	0	0	\$0
2001	32	0	0	8	8	0	0	\$0
2002	28	0	0	6	10	0	0	\$0
2003	28	0	0	6	9	0	0	\$0
2004	19	0	0	8	10	0	0	\$0
2005	21	0	0	8	7	0	0	\$0
2006	21	0	0	7	11	0	0	\$0
2007	18	0	0	7	13	0	0	\$0
2008	13	0	0	7	14	0	0	\$0
2009	27	0	0	8	9	0	0	\$0
2010	17	0	0	5	8	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. Dolly Varden Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Pilot Point: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	1	706	47
2009	1	706	38
2010	1	706	34

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Pilot Point: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Pilot Point: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Pilot Point: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Pilot Point Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	370572	168398	223400	205945	531105	345147	579435	425648	251865	478814	-
<i>Total²</i>	<i>370572</i>	<i>168398</i>	<i>223400</i>	<i>205945</i>	<i>531105</i>	<i>345147</i>	<i>579435</i>	<i>425648</i>	<i>251865</i>	<i>478814</i>	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$236,345	\$66,474	\$108,375	\$104,074	\$271,978	\$209,387	\$369,736	\$278,806	\$182,074	\$380,323	-
<i>Total²</i>	<i>\$236,345</i>	<i>\$66,474</i>	<i>\$108,375</i>	<i>\$104,074</i>	<i>\$271,978</i>	<i>\$209,387</i>	<i>\$369,736</i>	<i>\$278,806</i>	<i>\$182,074</i>	<i>\$380,323</i>	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses were present in Pilot Point. Over the same period, the number of licensed sport fish guides residing in Pilot Point varied from zero to two. Although no sportfishing licenses were sold in Pilot Point, local residents purchased them elsewhere. The number of sportfishing licenses held by residents of Pilot Point residents varied between 5 and 12 during the 2000-2010 period. According to a survey conducted by the AFSC in 2011, community leaders indicated that Chinook, coho, sockeye, and chum salmon are the primary targets of sportfishing activity in Pilot Point, along with clams. They also indicated that sport fishermen fish both from private boats and from the shore or docks, and that sportfishing lodges are present in the Pilot Point area.

Pilot Point is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Nelson Lagoon is also displayed in Table 11.

The Alaska Statewide Harvest Survey,¹⁴¹⁵ conducted by ADF&G between 2000 and 2010, did not include information about species targeted by private anglers in Pilot Point, and no kept/release log book data were reported for sportfishing charters out of Pilot Point between 2000 and 2010.¹⁴¹⁶

¹⁴¹⁵ ADF&G. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁴¹⁶ ADF&G. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Pilot Point: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Pilot Point ²
2000	0	1	8	0
2001	0	2	9	0
2002	0	2	5	0
2003	0	2	6	0
2004	0	2	11	0
2005	0	2	12	0
2006	0	1	9	0
2007	0	0	10	0
2008	0	1	7	0
2009	0	0	11	0
2010	0	1	11	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Pilot Point residents combine subsistence harvest of a wide variety of marine resources with employment opportunities in commercial fishing.¹⁴¹⁷ In a survey conducted by the AFSC in 2011, Pilot Point community leaders said that salmon, trout, and clams are the most important aquatic subsistence resources utilized by local residents.

No information is available from ADF&G regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, a survey of 1987 subsistence activity conducted by ADF&G provides information about harvest of marine invertebrates, non-salmon fish (not including halibut), and marine mammals at the household level. That year, the following species of marine invertebrates were harvested: cockles (41% of households reported harvest), razor clams (35%), butter clams (6%), butter clams (6%) and Tanner crab (6%). Species of non-salmon fish that were reported as harvested by Pilot Point households in 1987 included smelt (harvest reported by 65% of households), Dolly Varden char (41%), northern pike (24%), grayling (18%), lake trout (18%), cod (12%), and flounder (6%). Harvest of herring and whitefish was also reported, but no information was reported regarding the percentage of households using these resources. In addition, 6% of households reported harvesting herring roe spawn on kelp. Also in 1987, 18% of households reported harvesting harbor seal. In many cases, the number of households that reported using these subsistence resources was higher than the number of households involved in harvest, indicating the importance of sharing within the community.¹⁴¹⁸

Data are available for some years during the 2000-2010 period regarding total subsistence salmon harvest. In 2000, subsistence salmon permits were issued to 13 Pilot Point households, and this number declined to 4 permits issued in 2008. In all years for which information was reported, sockeye were the most heavily harvested of the salmon species, followed by coho. A small number of Chinook, chum, and pink were also harvested each year. No information was reported regarding subsistence harvest of marine invertebrates or non-salmon fish (not including halibut) between 2000 and 2010. Information about subsistence salmon permits and harvest of marine invertebrates and non-salmon fish is presented in Table 13.

Information about the Subsistence Halibut Registration Certificate (SHARC) program was reported by ADF&G for 2009 and 2010 only. In both of these years, two SHARC cards were issued to Pilot Point residents, but no information was reported about the number of SHARC cards returned or the total pounds of subsistence halibut harvested. This information about the subsistence halibut fishery is presented in Table 14.

Information is also available regarding marine mammal harvest by residents of Pilot Point between 2000 and 2010. According to data reported by the U.S. Fish and Wildlife Service and ADF&G, this harvest focused primarily on sea otter and harbor seal. No information was reported by management agencies regarding harvest of beluga whale, walrus, sea lion, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals by Pilot Point residents is presented in Table 15.

¹⁴¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴¹⁸ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Pilot Point: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Pilot Point: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	13	10	23	33	272	n/a	794	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	5	5	4	3	n/a	2	84	n/a	n/a
2005	5	5	n/a	14	73	2	110	n/a	n/a
2006	7	7	11	n/a	152	12	286	n/a	n/a
2007	7	6	13	13	76	4	349	n/a	n/a
2008	4	4	11	2	16	n/a	151	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). Dolly Varden Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Pilot Point: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	2	n/a	n/a
2010	2	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Pilot Point: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	5	n/a
2001	n/a	n/a	n/a	n/a	n/a	2	n/a
2002	n/a	2	n/a	n/a	n/a	2	n/a
2003	n/a	n/a	n/a	n/a	n/a	3	n/a
2004	n/a	n/a	n/a	n/a	n/a	2	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	3	n/a
2007	n/a	n/a	n/a	n/a	n/a	3	n/a
2008	n/a	n/a	n/a	n/a	n/a	3	n/a
2009	n/a	n/a	n/a	n/a	n/a	5	n/a
2010	n/a	n/a	n/a	n/a	n/a	2	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Port Alsworth (also known as Tanalian)



People and Place

*Location*¹⁴¹⁹

Port Alsworth is on the east shore of Lake Clark at Hardenburg Bay, 22 miles northeast of Nondalton, 28 miles north of Iliamna Lake, and 165 miles southwest of Anchorage. It lies within the boundaries of the Lake Clark National Park and Preserve. Port Alsworth is located in the Iliamna Recording District and the Lake and Peninsula Borough Census Area.

*Demographic Profile*¹⁴²⁰

In 2010, there were 159 residents in Port Alsworth, ranking it as the 217th largest of 352 communities in Alaska with populations recorded that year. The population of Port Alsworth almost tripled between 1990 and 2010, increasing by 189%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 13.5%, with an average annual growth rate of 1.47%. In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that between 40 and 75 seasonal workers or transients are present in Port Alsworth each year between May and October. They also noted that the local population peaks in July and August, and population fluctuations are somewhat driven by fishing-related activities, and particularly subsistence harvest activities.

In 2010, over half of the population of Port Alsworth identified themselves as White (67.9%), along with 21.4% individuals identifying as American Indian or Alaska Native, 4.4% identifying as Black or African American, 0.6% identifying as Asian, and 5.7% identifying with two or more races. In addition, 10.1% of Port Alsworth residents identified themselves as Hispanic in 2010. Compared to 2000, the percentage of the population that identified as White was 10% lower in 2010, while the percentage of the population identifying as Alaska Native was 22.2% higher in 2010. Several racial and ethnic groups appear to have been present in Port Alsworth in 2010 that were not present in 2000, including Black and African Americans, Asians and Hispanics. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

Based on household surveys conducted for the U.S. Census, the average household size in Port Alsworth increased from 3.2 persons per household in 1990 to 3.64 in 2000, and then remained relatively stable, with 3.61 persons per household by 2010. The number of households in Port Alsworth stayed stable between 1990 (17 households), and 2000 (18 households), and then increased to 44 households by 2010. Of the total 74 housing units surveyed for the 2010

¹⁴¹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴²⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

U.S. Decennial Census, 24.3% were owner-occupied, 35.1% were rented, and 40.5% were vacant or used only seasonally. From 1990 to 2010, no Port Alsworth residents were reported to be living in group quarters.

In 2010, the gender makeup in Port Alsworth’s population was 54.6% male and 45.4% female, more heavily weighted toward males than the population of Alaska as a whole, which was 52% male and 48% female. That year, the median age of Port Alsworth residents was 25.1 years, significantly younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 6.9% of Port Alsworth’s population was age 60 or older. The overall population structure of Port Alsworth in 2000 and 2010 is shown in Figure 2.

Table 1. Population in Port Alsworth from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	55	-
2000	104	-
2001	-	105
2002	-	109
2003	-	104
2004	-	114
2005	-	106
2006	-	112
2007	-	115
2008	-	124
2009	-	118
2010	159	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Port Alsworth: 2000-2010 (U.S. Census).

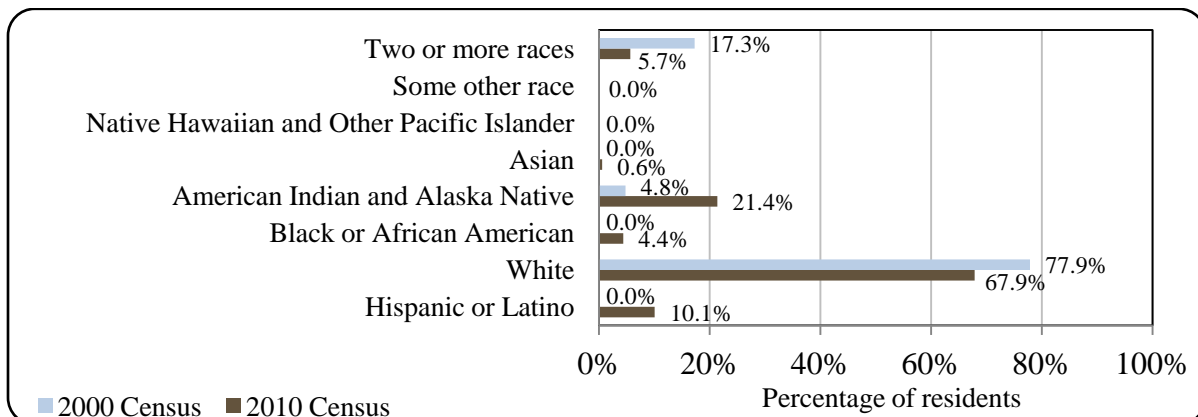
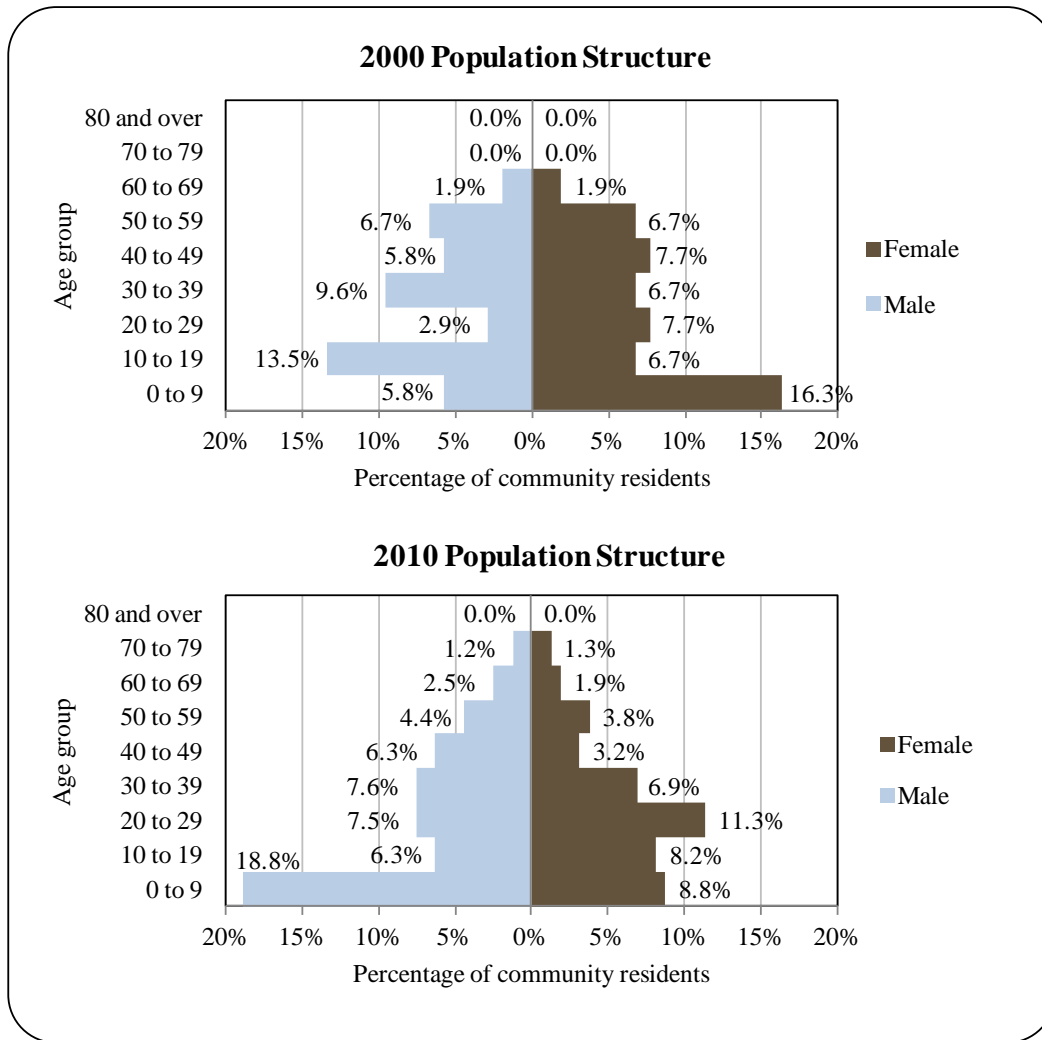


Figure 2. Population Age Structure in Port Alsworth Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁴²¹ 100% of Port Alsworth residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 82.7% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 17.3% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

¹⁴²¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

By 1500 AD, Dena'ina Athabascans had expanded from the east, establishing settlements as far south as Iliamna Lake and Lake Clark.¹⁴²² Although the Dena'ina traveled across the mountains to Cook Inlet for trade during the Russian occupation of Alaska, few Russian explorers entered the Lake Clark area. The first documented American expedition into the region took place in 1891 under the leadership of Alfred B. Schanz and John W. Clark (an agent of the Alaska Commercial Company), for whom the lake was named. At the time of this expedition, the Dena'ina village of Kijik was present. It was at the mouth of the Kijik River, on the Northwest shore of Lake Clark.^{1423,1424}

Port Alsworth was originally settled in the late 1880s by Euro-American prospectors who arrived in search of copper and gold. After the settlement was established, some Dena'ina from Kijik moved to the site as well. The village shrank several decades later, after most of the prospectors had left, and the Dena'ina abandoned Kijik and moved to a new settlement at Nondalton in 1914.¹⁴²⁵

A new era began in Port Alsworth in the 1940s, when the Leon “Babe” Alsworth and Mary Alsworth moved their family from Bristol Bay to Lake Clark. They originally settled on the north shore of the Lake, but in August 1944 relocated to Hardenburg Bay for its protected seaplane access and for the availability of level ground in the area that enabled construction of an airport.¹⁴²⁶ Babe Alsworth had a passion for aviation. He built a 4000-foot runway and started Lake Clark Air. Since that time, many guide services and lodges have been established in the area and have made Port Alsworth a base of operations. The establishment of Lake Clark National Park and Preserve in 1980, and the presence of the National Park Service Field Headquarters in Port Alsworth, make the community a jumping off point for adventure and ecotourism as well as sport hunting and fishing activity.¹⁴²⁷ A post office was established in Port Alsworth in 1950. Today, a majority of the population is non-Native.¹⁴²⁸

Natural Resources and Environment

Port Alsworth lies in a transitional climatic zone. Average summer temperatures range from 42 to 62 °F; winter temperatures range from 6 to 30 °F. Annual rainfall averages 26 inches, with 70 inches of snowfall.¹⁴²⁹ Port Alsworth is located on the south shore of Lake Clark, within

¹⁴²² Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹⁴²³ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster. December 2006. *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹⁴²⁴ Kijik village location information was provided in a personal communication with the son of Leon and Mary Alsworth, November 16, 2012.

¹⁴²⁵ See footnote 1423.

¹⁴²⁶ Personal communication with the son of Leon and Mary Alsworth, November 16, 2012.

¹⁴²⁷ Ibid.

¹⁴²⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴²⁹ Ibid.

the boundaries of Lake Clark National Park and Preserve. The land immediately surrounding the community is characterized by flat, lake-dotted tundra, and the landscape east of Lake Clark rises to steep, forested mountains.¹⁴³⁰

Port Alsworth is located within the boundaries of the Lake Clark National Park and Preserve (Park), which occupies 4 million acres at the northeast end of the Alaska Peninsula. The Park was established to protect scenic beauty, wild rivers and waterfalls, populations of fish and wildlife, watersheds essential for sockeye salmon, and the traditional lifestyle of local residents. Subsistence use is permitted in the park. The National Park Service works closely with state and federal fish and wildlife management agencies to determine seasons, bag limits, and similar harvest controls. A diversity of wildlife is found in the Port Alsworth area, including brown and black bear, caribou, Dall sheep, moose, beaver, red fox, wolf, coyote, lynx, and over 125 species of birds.¹⁴³¹

Port Alsworth lies in an area that is integral to the Kvichak watershed, a highly productive spawning ground for sockeye and other salmon of Bristol Bay. Area lakes and rivers feed into Lake Clark, which is the 6th largest freshwater lake in Alaska. Lake Clark flows directly into Six Mile Lake. Waters are then funneled via the Newhalen River into Iliamna Lake, which in turn flows into Bristol Bay via the Kvichak River. Approximately 50% of the sockeye salmon caught in Bristol Bay spawn in the lakes and rivers of the Kvichak watershed, representing 33% of the entire U.S. sockeye catch.¹⁴³² Sport fish in Lake Clark include Arctic char, Arctic grayling, Dolly Varden, northern pike, lake trout, rainbow trout, and sockeye and coho salmon. In addition, locals catch whitefish and burbot in the winter through the ice.¹⁴³³

The region contains significant mineral potential for base, precious, rare, and strategic minerals, including the Pebble copper-gold-molybdenum deposit.¹⁴³⁴ The Pebble site is located approximately 40 miles southwest of Port Alsworth, at the divide between the Koktuli River and Upper Talarik Creek.¹⁴³⁵ Northern Dynasty Minerals Limited calls the Pebble deposit, “one of the greatest stores of mineral wealth ever discovered,” and estimates that the deposit includes 80.6 billion pounds of copper, 107.3 ounces of gold, and 5.6 billion pounds of molybdenum, including both indicated (high confidence) and inferred (low confidence) deposits.¹⁴³⁶ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.¹⁴³⁷ According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble mine is copper. Dissolved

¹⁴³⁰ LaRoche + Associates. 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹⁴³¹ National Park Service. 2011. *Lake Clark National Park & Preserve*. Retrieved January 18, 2012 from <http://www.nps.gov/lac/>.

¹⁴³² Nondalton Tribal Council. 2006. *Nondalton Long-Range Environmental Plan*. Produced with assistance from Agnew::Beck Consulting. Retrieved January 17, 2012 from http://www.agnewbeck.com/pdf/bristolbay/Nondalton_LREP_Background.pdf.

¹⁴³³ See footnote 1431.

¹⁴³⁴ See footnote 1422.

¹⁴³⁵ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky. 2008. “Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska’s Large Mine Permitting Process.” *Alaska Law Review* 25:1.

¹⁴³⁶ Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

¹⁴³⁷ See footnote 1422.

copper is known to be toxic to fish.¹⁴³⁸ If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.¹⁴³⁹

Natural hazards present in Port Alsworth include high risk of wildfire and severe weather, medium risk of earthquakes and flooding, and low risk of volcanic activity. Wildfire was determined to be a top hazard since Port Alsworth is located in a heavily forested area with many dead trees resulting from a spruce bark beetle outbreak. Several homes in Port Alsworth are located in the floodplain of the Tanalian River, which is subject to shifting course. Power and telephone supply lines are also vulnerable to flooding. While wildfire and flooding were determined to have low likelihood of taking place, severe weather has a high probability of affecting Port Alsworth. Winds of greater than 100 mph are recorded several times per year.¹⁴⁴⁰

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Port Alsworth as of July 2012.¹⁴⁴¹

Current Economy¹⁴⁴²

According to a survey conducted by the AFSC in 2011, community leaders indicated that some of the most important local industries are ecotourism and sport hunting and fishing. Port Alsworth offers several lodges and outfitters/guides for summer recreational enthusiasts.¹⁴⁴³ In 2010, two Port Alsworth residents also held state commercial fishing permits in Bristol Bay salmon drift and set gillnet fisheries. In addition to commercial fishing and fishing lodges, top employers in Port Alsworth in 2010 included the Lake and Peninsula School District, Lake Clark Air, Inc., and a missionary emergency relief organization.¹⁴⁴⁴

Based on household surveys conducted for the 2006-2010 ACS,¹⁴⁴⁵ in 2010, the per capita income in Port Alsworth was estimated to be \$20,834, a decrease from the per capita income reported in 2000 (\$21,716), and the median household income was estimated to be \$87,679, an increase from the reported median household income in 2000 (\$58,750). After accounting for inflation by converting the 2000 values to 2010 dollars,¹⁴⁴⁶ real per capita income in 2000 is revealed to have been \$28,556, and real median household income was \$77,255,

¹⁴³⁸ See footnote 1435.

¹⁴³⁹ Pg. 36 in Duffield, John, Christopher Neher, David A. Patterson, and Oliver S. Goldsmith. 2007. *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

¹⁴⁴⁰ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

¹⁴⁴¹ Alaska Dept. of Environmental Conservation. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁴⁴² Unless otherwise noted, all monetary data are reported in nominal values.

¹⁴⁴³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁴⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁴⁴⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁴⁴⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

indicating an overall decrease in per capita income and increase in median household income over the period. In 2010, Port Alsworth ranked 144th of 305 Alaskan communities with per capita income data that year, and 18th in median household income, out of 299 Alaskan communities with household income data.

Although Port Alsworth's small population size may have prevented the ACS from accurately portraying economic conditions,¹⁴⁴⁷ additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Port Alsworth in 2010 is \$4,542.¹⁴⁴⁸ This is lower than the 2006-2010 ACS estimate and provides additional evidence that per capita income declined in Port Alsworth between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,¹⁴⁴⁹ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a higher percentage of Port Alsworth residents were estimated to be in the civilian labor force (80%) than in the civilian labor force statewide (68.8%). In the same year, 4% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 0% in Port Alsworth, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 9.5%, compared to a statewide unemployment rate estimate of 11.5%.¹⁴⁵⁰

Also based on the 2006-2010 ACS, half of Port Alsworth's workforce was estimated to be employed in the public sector (50%), and half in the private sector (50%). No Port Alsworth residents were estimated to be self-employed in 2010. Of the 48 people aged 16 and over that were estimated to be employed in the civilian labor force, 41.7% were estimated to be employed in transportation, warehousing, and utilities, 20.8% in educational services, health care, and social assistance, 20.8% in arts, entertainment, recreation, accommodation, and food services, and 16.7% in public administration. No Port Alsworth residents were estimated to be employed in agriculture, forestry, fishing, hunting and mining in 2010. However, given the participation that some residents have in fishing (see *Commercial fisheries* section below), the number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

¹⁴⁴⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁴⁴⁸ See footnotes 1444 and 1445.

¹⁴⁴⁹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹⁴⁵⁰ See footnote 1444.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 33 employed residents in 2010, of which 33.3% were employed in local government, 27.3% in trade, transportation, and utilities, 15.2% in educational and health services, 9.1% in professional and businesses services, 9.1% in leisure and hospitality, 3% in natural resources and mining, and 3% in information industries.¹⁴⁵¹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Port Alsworth (U.S. Census).

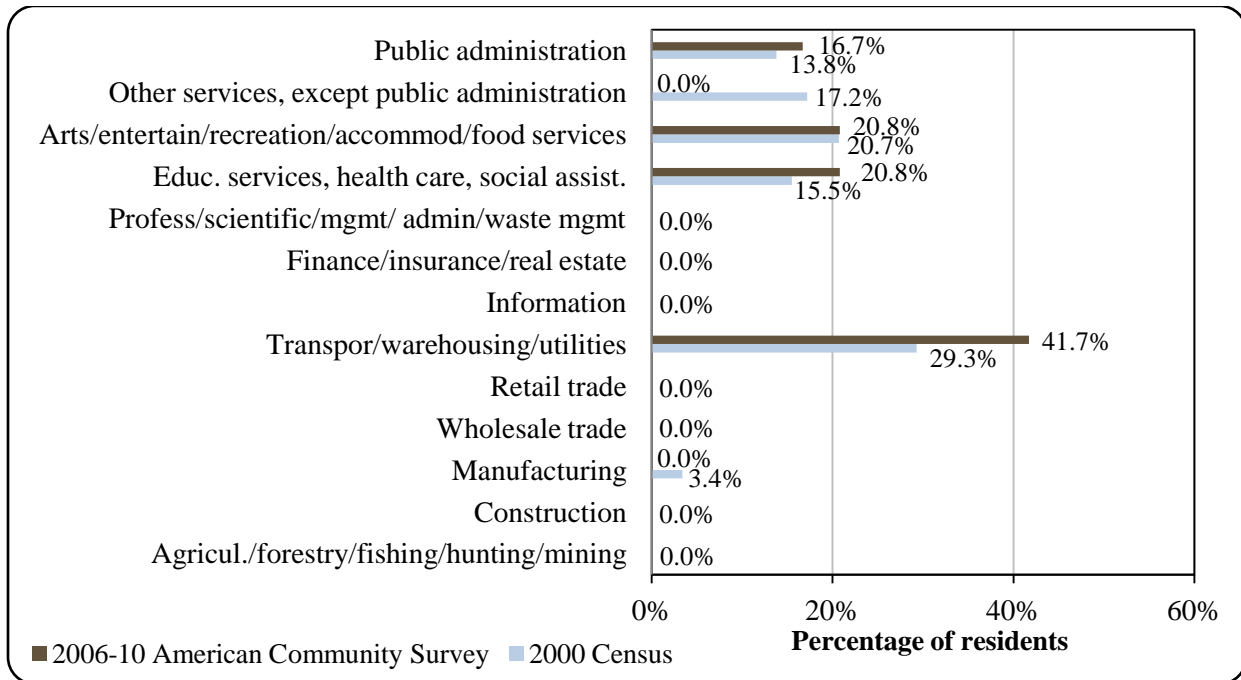
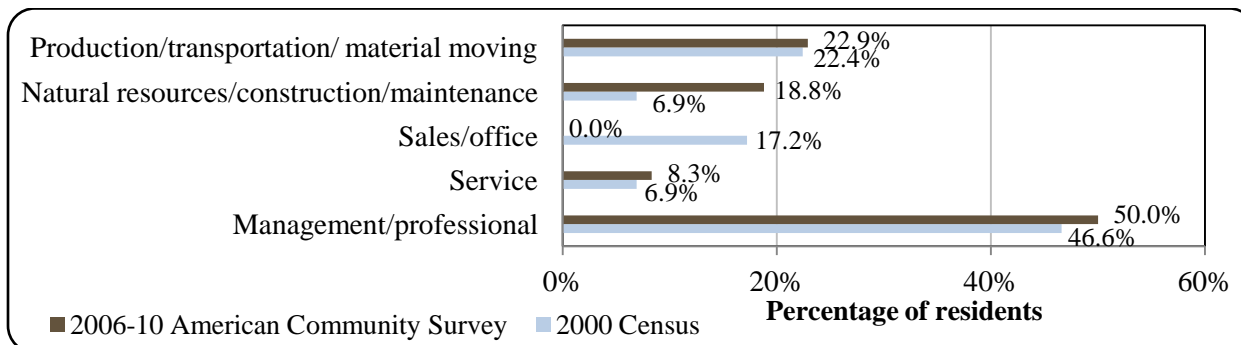


Figure 4. Local Employment by Occupation in 2000-2010, Port Alsworth (U.S. Census).



¹⁴⁵¹ Ibid.

Governance

Port Alsworth is an unincorporated community located in the Lake and Peninsula Borough. The community is represented by the Port Alsworth Improvement Corporation, a non-profit that provides very limited local services, including fuel distribution.¹⁴⁵² Although no taxes are administered by Port Alsworth, the Borough administers a 2% fish tax, 6% bed tax, \$3 per person/day guide tax, and \$1 per person/day lodge guide tax.¹⁴⁵³

Given that Port Alsworth is not incorporated and did not administer taxes, the community did not receive municipal revenue or sales tax revenue between 2000 and 2010. No information was reported regarding State or Community Revenue Sharing contributions or fisheries-related grants received by Port Alsworth between 2000 and 2010. Information about selected revenue sources is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Port Alsworth from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁴⁵² LaRoche + Associates. 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

¹⁴⁵³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved October 17, 2011 from <http://www.commerce.state.ak.us/dca/commdb/CIS.cfm>.

Port Alsworth was not included under the Alaska Native Claims Settlement Act (ANCSA), is not federally recognized as a Native village.¹⁴⁵⁴ However, under Title 14 Amendments to ANCSA, individual Native residents in Port Alsworth that were enrolled at-large in the regional Bristol Bay Native Corporation (BBNC) were recognized to have formed a new group corporation, known as Tanalian Corporation.^{1455,1456}

Infrastructure

Connectivity and Transportation

There are two privately-owned and operated airstrips in the area: a 4,200 feet long and 100 feet wide gravel airstrip and a 3,000 feet long by 100 feet wide dirt/gravel airstrip operated by Glen Alsworth and The Farm Lodge.¹⁴⁵⁷ As of June 2012, there was no scheduled air service to Port Alsworth. Iliamna Air Taxi offered charter service as well as mailplane several times per week. The price of a roundtrip ticket between Anchorage and Iliamna in June 2012 was \$460, and a charter from Iliamna to Port Alsworth was \$387. It is also possible to ride to Port Alsworth with scheduled mailplane service for \$60 one-way from Iliamna. The mailplane departs Iliamna at 9:30 am on Mondays, Wednesdays, and Fridays.¹⁴⁵⁸

Facilities

Approximately 50% of homes in Port Alsworth use individual wells and septic systems, and are fully plumbed. The remainder haul water from a nearby surface water source and use outhouses.¹⁴⁵⁹ The National Park Service operates a sewage lagoon in Port Alsworth.¹⁴⁶⁰ The Tanalian Electric Cooperative operates a diesel powerhouse in Port Alsworth.¹⁴⁶¹ According to a survey conducted by the AFSC in 2011, community leaders indicated that alternative energy is expected to be available within the next 10 years. The Iliamna-Newhalen-Nondalton Electric Cooperative recently completed the first phase of the Tazimina Hydroelectric Project, which brings hydroelectric power from the Tazimina River to the communities of Iliamna, Newhalen, and Nondalton. The distribution system is expected to be expanded to serve Port Alsworth, as well as Pedro Bay and Kokhanok.¹⁴⁶² A landfill/incinerator is operated by the National Park

¹⁴⁵⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁵⁵ Alaska Native Claims Settlement Act, 1991 Amendments. *Title XIV – Amendments to the Alaska Native Claims Settlement Act and Related Provisions*. Retrieved April 20, 2012 from <http://alaska.fws.gov/asm/nilca/title14.html>.

¹⁴⁵⁶ Tanalian Incorporated. (n.d.). *About Tanalian Incorporated*. Retrieved July 5, 2012 from <http://alaskalakefrontproperty.com/ti.html>.

¹⁴⁵⁷ See footnote 1454.

¹⁴⁵⁸ Personal communication, Iliamna Air Taxi reservation agent, June 13, 2012.

¹⁴⁵⁹ See footnote 1454.

¹⁴⁶⁰ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

¹⁴⁶¹ See footnote 1454.

¹⁴⁶² LaRoche + Associates. 2011. *Lake and Peninsula Borough Coastal Management Plan, Revised Public Hearing Draft*. Retrieved January 17, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/LakeandPen/revised_phd/vol1_rphd.pdf.

Service,¹⁴⁶³ but no refuse collection services are available, and residents and lodges typically burn their own refuse.¹⁴⁶⁴ According to the 2011 AFSC survey, community leaders expect a new landfill to be completed within the next 10 years.

Police services are provided by state troopers stationed in the City of Iliamna, and fire and rescue services are provided by the Port Alsworth First Responders. Telephone service is available in the community. Broadband internet is only available at the local school, and no cable service is available in Port Alsworth.¹⁴⁶⁵ According to the 2011 AFSC survey, community leaders expect broadband internet service to be in place within the next 10 years. Additional community facilities and services include a multi-purpose building owned by the Port Alsworth Improvement Corporation, including offices, a post office operated by a private contractor, a community hall that is also used as a school gymnasium, and teachers' quarters.¹⁴⁶⁶

With regard to fisheries-related infrastructure, community leaders indicated in the 2011 AFSC survey that no dock space is available in Port Alsworth for either transient or permanent vessel moorage. They also reported that Port Alsworth cannot accommodate regulated vessels, such as Coast Guard, ferries, cruise ships, fuel barges, or HAZMAT. They indicated that a barge landing area is expected to be completed within the next 10 years. They did report that several fisheries-related businesses and services are available locally, including electrical, welding, and mechanical boat repair services, recreational fishing vessel moorage, dry dock storage, sale of boat fuel and fishing tackle, fishing lodges, and both seaplane and air taxi service.

Medical Services

No medical facilities are present in Port Alsworth. Emergency services have lake and helicopter access. Emergency service is provided by the Port Alsworth First Responders.¹⁴⁶⁷ According to a 2001 survey report by the Alaska Native Tribal Health Consortium, a metal prefabricated building has been erected in Port Alsworth, with plans to use half of the building for a new health clinic.¹⁴⁶⁸ Until the clinic is completed, the nearest health clinic is located in Nondalton, and the nearest hospital is located in Soldotna.

Educational Opportunities

The Tanalian School in Port Alsworth offers a pre-school through 12th grade education. As of 2011, there were 4 teachers and 36 students attending the school.¹⁴⁶⁹

¹⁴⁶³ See footnote 1460.

¹⁴⁶⁴ See footnote 1454.

¹⁴⁶⁵ Ibid.

¹⁴⁶⁶ See footnote 1460.

¹⁴⁶⁷ Ibid.

¹⁴⁶⁸ Alaska Native Tribal Health Consortium. 2001. *Port Alsworth Health Clinic*. Retrieved April 20, 2012 from <https://www.denali.gov/dcpdb/Data/attachments/Port%20Alsworth%20Code%20and%20Condition%20Survey.pdf>.

¹⁴⁶⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest of fisheries resources has been important for residents of the Iliamna Lake region since prehistory. Commercial exploitation of salmon resources began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of the Bristol Bay region, along with several other species harvested in lower volumes.¹⁴⁷⁰

Subsistence harvest remains important in Port Alsworth. A majority of local households participate in subsistence harvest of wild resources, although subsistence participation is slightly lower in Port Alsworth than other communities in the Lake Clark – Iliamna Lake region.¹⁴⁷¹ A number of sportfishing lodges are present in Port Alsworth, and recreational fishing is an important sector of the local economy.¹⁴⁷²

Cook Inlet is the nearest marine area to the community of Port Alsworth. The Inlet is included in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. In addition, Bristol Bay, the area where most Port Alsworth residents engage in commercial fishing activity, is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Port Alsworth is not eligible to participate in either the Community Development Quota program or the Community Quota Entity program.

According to a survey conducted by the AFSC in 2011, community leaders reported that Port Alsworth participates in fisheries management processes in Alaska through sending a representative to sit on regional fisheries advisory and/or working groups run by ADF&G. In addition, they indicated that the community also sends a representative to participate in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council Process. A representative of Port Alsworth serves as a fisheries advisor to the Lake and Peninsula Borough. In the survey, community leaders also noted challenges for Port Alsworth's fishing economy, including the fact that fishing income is unlikely to yield sufficient year-round income, and a lack of space for boats along the shoreline. Community leaders also reported that most residents have sold their commercial fishing permits in recent years, and few participate in commercial fishing any more. They also noted that sportfishing and tourism have replaced commercial fishing as economy drivers.

¹⁴⁷⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁴⁷¹ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹⁴⁷² Ibid.

Processing Plants

The ADF&G's 2010 Intent to Operate list does not list a registered shore-side processing plant in Port Alsworth. According to the list, several processing facilities are located in nearby communities in Bristol Bay, including Naknek, Egegik, and Dillingham.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Port Alsworth (Table 3). However, in a survey conducted by the AFSC in 2011, community leaders indicated that revenue from a borough raw fish tax and the Shared Fisheries Business is used to support road maintenance as well as police and fire and rescue services locally.

Commercial Fishing

Port Alsworth is an inland community, located on Lake Clark. According to a survey conducted by the AFSC in 2011, community leaders indicated that local involvement in commercial fisheries is minimal, and has been decreasing over time. Between 2000 and 2010, the number of Port Alsworth residents holding state commercial fishing permits varied between two and five per year (Table 4). Although permit and crew license holder numbers remained relatively stable during the period, vessel ownership declined dramatically, from 25 fishing vessels primarily owned by residents in 2000 to 2 in 2010. The number of fishing vessels homeported in Port Alsworth also declined, from 34 in 2000 to 0 in 2010. Community leaders echoed this in the 2011 AFSC survey, noting that no fishing vessels were present in Port Alsworth in 2010. They did note the presence of private pleasure boats and 16-20 foot boats used for recreational and tourism purposes. Information about the commercial fishing sector in Port Alsworth is presented in Table 5.

In 2010, two Port Alsworth residents held a total of three commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC), all of which were issued for salmon fisheries. Two permits were held for Bristol Bay drift gillnet salmon and one was held in the Bristol Bay set gillnet salmon fishery. All three were actively fished in 2010.

In addition to salmon permits, several groundfish permits and a shrimp permit were held in 2005. One of the groundfish permits was held in the statewide lingcod dinglebar troll fishery, and the other in the Southeast Alaska demersal rockfish longline fishery. The shrimp permit was for the Southeast Alaska pot gear fishery. No Federal Fisheries Permits (FFP) or License Limitation Program permits (LLP) in federal crab or groundfish fisheries were issued to Port Alsworth residents between 2000 and 2010. Information and state and federal permits is presented in Table 4. In addition, between 2000 and 2010, no quota share accounts or quota shares were held by Port Alsworth residents in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8).

Between 2000 and 2010, information about landings and ex-vessel revenue generated by Port Alsworth vessel owners is considered confidential due to the small number of participants (Table 10). Since no fish buyers or processing plants were present in Port Alsworth (Table 5), no ex-vessel revenue was generated in the community between 2000 and 2010 (Table 9). Newhalen vessel owners delivered their catches elsewhere.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Port Alsworth: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Port Alsworth: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	1	0	0	0	0	0
	% of permits fished	-	-	-	-	-	100%	-	-	-	-	-
	Total permit holders	0	0	0	0	0	1	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Port Alsworth: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	2	0	0	0	0	0
	Fished permits	0	0	0	0	0	1	0	0	0	0	0
	% of permits fished	-	-	-	-	-	50%	-	-	-	-	-
	Total permit holders	0	0	0	0	0	1	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	4	4	3	3	3	4	3	2	2	2	3
	Fished permits	4	3	2	2	1	4	2	2	1	2	3
	% of permits fished	100%	75%	67%	67%	33%	100%	67%	100%	50%	100%	100%
	Total permit holders	4	5	3	4	3	4	3	2	2	3	4
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>7</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>3</i>
	<i>Fished permits</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>6</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>3</i>
	<i>% of permits fished</i>	<i>100%</i>	<i>75%</i>	<i>67%</i>	<i>67%</i>	<i>33%</i>	<i>86%</i>	<i>67%</i>	<i>100%</i>	<i>50%</i>	<i>100%</i>	<i>100%</i>
	<i>Permit holders</i>	<i>4</i>	<i>5</i>	<i>3</i>	<i>4</i>	<i>3</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>3</i>	<i>4</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Port Alsworth: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Port Alsworth ²	Total Net Pounds Landed In Port Alsworth ^{2,5}	Total Ex-Vessel Value Of Landings In Port Alsworth ^{2,5}
2000	2	0	0	25	34	0	0	\$0
2001	1	0	0	25	34	0	0	\$0
2002	2	0	0	25	42	0	0	\$0
2003	4	0	0	13	42	0	0	\$0
2004	1	0	0	13	45	0	0	\$0
2005	0	0	0	2	0	0	0	\$0
2006	1	0	0	1	0	0	0	\$0
2007	1	0	0	1	0	0	0	\$0
2008	2	0	0	1	0	0	0	\$0
2009	3	0	0	1	0	0	0	\$0
2010	4	0	0	2	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Port Alsworth: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Port Alsworth: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Port Alsworth: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

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Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Port Alsworth: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Port Alsworth Residents: 2000-2010.

	<i>Total Net Pounds¹</i>											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Crab	-	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Crab	-	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to a survey conducted by the AFSC in 2011, community leaders indicated that recreational fishing is a driver of the Port Alsworth economy. Sport fish lodges began to be established after a local resident, Glen “Babe” Alsworth, built a 4000-foot runway near Hardenberg Bay in the 1940s, providing easier access to the area. With the creation of the Lake Clark National Park and Preserve (Park) under the Alaska National Interest Lands Conservation Act of 1980, Park Field Headquarters were sited there, further establishing Port Alsworth as a center for tourism and recreation in the region.¹⁴⁷³

Between 2000 and 2010, numerous licensed sport fish guides were present in Port Alsworth, although no active sport fish guide businesses were registered in the community (Table 11). The number of licensed guides varied from 11 to 16 per year during the period.

¹⁴⁷³ Ibid.

Despite the predominance of sport fish lodges and guide activity in Port Alsworth,^{1474,1475,1476} no sportfishing charter logbook data was reported between 2000 and 2010.¹⁴⁷⁷

During this same period, Port Alsworth community members purchased between 45 and 72 sportfishing licenses (irrespective of point of sale), while the number of licenses sold in Port Alsworth varied between 194 and 508 per year. The fact that a greater number of licenses were sold in Port Alsworth than were purchased by local residents underscores the importance of recreational fishing as a tourism draw to the community. Information about sportfishing activity in Port Alsworth is presented in Table 11.

According to the 2011 AFSC survey, community leaders indicated that sportfishing takes place using guided charter or party boats, private boats owned by Alaska resident and non-resident sport fishermen, as well as shore-based fishing. The National Park Service notes sportfishing in Lake Clark for species including Arctic char, Arctic grayling, Dolly Varden char, northern pike, lake trout, rainbow trout, and sockeye and coho salmon, as well as winter ice fishing for burbot and whitefish by local residents.¹⁴⁷⁸ The Alaska Statewide Harvest Survey (SWHS),¹⁴⁷⁹ conducted by ADF&G between 2000 and 2010, noted sport harvest of coho salmon, Dolly Varden, Arctic grayling, and burbot in Port Alsworth. The SWHS also noted harvest of Pacific cod by Port Alsworth anglers, although this sportfishing activity took place in saltwater.

Port Alsworth is located within Alaska Sport Fishing Survey Area S – Kvichak River Drainage. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Overall between 2000 and 2010, non-Alaska resident anglers fished more angler days than Alaska residents in both freshwater and saltwater. Non-Alaska resident anglers fished consistently more days than Alaska resident anglers in both freshwater and saltwater during this period, reflective of the large amount of sportfishing related tourism in the region. Freshwater sportfishing activity was significantly more important than saltwater fishing in the region. The number of freshwater angler days for non-Alaska resident sport fishermen varied between 17,234 and 30,340 between 2000 and 2010, while Alaska resident freshwater angler days varied between 3,077 and 10,297 (Table 11).

¹⁴⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁴⁷⁵ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹⁴⁷⁶ Lake and Peninsula Borough. February 2009. *Multi-Hazard Mitigation Plan*. Retrieved January 17, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Lake_Pen_Boro_MJ_HMP.pdf.

¹⁴⁷⁷ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁴⁷⁸ National Park Service. 2011. *Lake Clark National Park & Preserve Management*. Retrieved June 13, 2012 from <http://www.nps.gov/lacl/parkmgmt/index.htm>.

¹⁴⁷⁹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Port Alsworth: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Port Alsworth ²
2000	0	16	62	508
2001	0	15	51	482
2002	0	14	49	414
2003	0	14	52	400
2004	0	15	48	348
2005	0	16	55	266
2006	0	11	59	239
2007	0	11	45	262
2008	0	16	50	194
2009	0	14	57	268
2010	0	16	72	286

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68	168	20,848	10,297
2001	214	43	21,554	8,202
2002	435	14	19,495	6,618
2003	74	50	18,248	5,831
2004	129	101	20,785	5,263
2005	38	79	22,156	4,179
2006	114	28	28,013	4,054
2007	229	38	30,340	3,077
2008	179	65	24,104	5,127
2009	0	0	17,234	6,514
2010	0	22	20,068	5,613

¹ ADF&G. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² ADF&G. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ ADF&G. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest makes an important contribution to Port Alsworth's economy.¹⁴⁸⁰ In a survey conducted by the AFSC in 2011, community leaders reported that the primary local fishery is a subsistence fishery for sockeye salmon between July and August each year, and that other subsistence activities take place throughout the year. They noted that, in addition to sockeye salmon, lake trout and northern pike are two of the most important aquatic subsistence resources. Caribou, moose, and berries are some other commonly utilized subsistence resources in Port Alsworth. Residents typically look for wild food resources relatively close to home, while caribou harvest often requires longer trips. Sockeye salmon is typically harvested along the lakeshore immediately in front of the village, while lake trout, rainbow trout, whitefish, northern pike, and grayling are caught throughout Lake Clark, and Dolly Varden are harvested in Lake Kontrashibuna, south of Port Alsworth.¹⁴⁸¹

Based on a 2004 household subsistence survey conducted by ADF&G in the community of Port Alsworth, 99% of households were estimated to participate in salmon subsistence that year, 50% in halibut subsistence, 46% in marine invertebrate subsistence, and 39% in non-salmon fish subsistence (not including halibut). Estimates were also available in 2007, when 90% of households participated in salmon subsistence, and 2004, when 20% of households participated in non-salmon fish subsistence. No information was reported regarding marine mammal subsistence that year (Table 12).

The per capita annual subsistence harvest of land and sea based resources in Port Alsworth was 133 pounds that year, including 115 pounds of marine invertebrates and 1,175 pounds of non-salmon fish (not including halibut). Information about per capita subsistence harvest and subsistence participation by household and species is presented in Table 12, along with information about marine invertebrates and non-salmon fish presented in Table 13. Species of marine invertebrates harvested by the greatest percentage of Port Alsworth households in 2004 included razor clams and butter clams, and species of non-salmon fish harvested by the greatest percentage of households included lake trout, northern pike, Arctic grayling, Dolly Varden char, burbot, round whitefish, Arctic char, and least cisco. In addition, although no households reported engaging in harvest of sheefish and smelt in 2004, some households reported using these species, indicating the presence of sharing networks between communities.¹⁴⁸²

Information about subsistence salmon permits is available between 2000 and 2008. During this period, the number of subsistence salmon permits issued to Port Alsworth households varied between 25 and 40. Sockeye salmon was by far the most heavily harvested salmon species in the area, with an average of 2,905 sockeye harvested in the years for which information was available (Table 13). No information was reported regarding the number of Subsistence Halibut Registration Certificates (SHARC) issued to residents of Port Alsworth

¹⁴⁸⁰ Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster (2006). *Subsistence Harvests and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth, Alaska, 2004*. Alaska Dept. of Fish and Game, Division of Subsistence, Technical Paper No. 302. Retrieved January 17, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp302.pdf>.

¹⁴⁸¹ Ibid.

¹⁴⁸² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

residents between 2003 and 2010 (Table 14), despite the fact that ADF&G reported a high percentage of households participating in halibut subsistence (Table 12). In addition, no information was reported by management agencies regarding subsistence harvest of marine mammals by Port Alsworth residents between 2000 and 2010 (Table 15).

According to interviews conducted during ADF&G subsistence survey fieldwork, Port Alsworth residents voiced several concerns related to local subsistence resources. These concerns included the impact of wolves and bears on local moose numbers, fluctuations in sockeye salmon returns since 2000, diminished donations of meat from non-local hunters to Port Alsworth community members, and increasingly warm winters and poor snow conditions making winter travel for trapping difficult. In addition, they noted that the failure of Lake Clark and Sixmile Lake to freeze in some recent winters has impeded caribou movement in the area.¹⁴⁸³

Table 12. Subsistence Participation by Household and Species, Port Alsworth: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	99%	50%	n/a	46%	39%	133
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	90%	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁴⁸³ See footnote 1480.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Port Alsworth: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	40	38	1	n/a	n/a	n/a	3,336	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	40
2004	25	24	n/a	n/a	n/a	n/a	2,455	115	1,175
2005	25	24	n/a	n/a	n/a	n/a	2,527	n/a	n/a
2006	26	26	n/a	n/a	n/a	n/a	2,456	n/a	n/a
2007	31	29	n/a	n/a	n/a	n/a	3,238	n/a	n/a
2008	40	39	n/a	n/a	n/a	n/a	3,416	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Port Alsworth: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Port Alsworth: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Port Heiden (*HIGH-dun*)

People and Place

*Location*¹⁴⁸⁴



Port Heiden is located 424 miles southwest of Anchorage, at the mouth of the Meshik River, on the north side of the Alaska Peninsula. It lies near the Aniakchak National Preserve and Monument. Port Heiden is located in the Kvichak Recording District and the Lake and Peninsula Census Area and is part of the Lake and Peninsula Borough. The City encompasses 50.7 square miles of land and 0.7 square miles of water.

*Demographic Profile*¹⁴⁸⁵

In 2010 there were 102 residents, making Port Heiden the 102nd largest City out of 352 total Alaskan communities with recorded populations that year. Overall between 2000 and 2009, the population has experienced a 30.3% decline and the average growth rate during these years was 0.02%, which represents a slowing decline in population over time and a significant increase between 2009 and 2010. The change in population from 1990 to 2010 is provided in Table 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimate that Port Heiden has approximately 20 seasonal workers that live in the city from May to October each year.

The racial composition of Port Heiden in 2010 was as follows: 83.3% of community residents identified themselves as American Indian and Alaska Native, 14.7% identified themselves as White, and 2% identified themselves as two or more races. The percentage of residents who identified themselves as American Indian and Alaska Native increased by 17.8% between 2000 and 2010, with corresponding decreases in the percentage of residents who identified themselves as White, Hispanic, two or more races, and other races. The changes in racial and ethnic composition in Port Heiden from 2000 to 2010 are provided in Figure 1. In 2010, the average household size was 2.91, a very slight increase from 2.8 in 1990 and 2.9 in 2000. However, there has been a slight decrease in the total number of households, from 42 in 1990 to 41 in 2000 to 35 in 2010. Of the 56 total housing units available in Port Heiden, 22 were owner-occupied in 2010, with 21 vacant units and 13 occupied by renters. None of the population of Port Heiden was living in group quarters in 2010.

¹⁴⁸⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁸⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

In 2010, the gender makeup was slightly skewed, with 55.9% males and 44.1% females, with a slightly larger percentage of males than the state as a whole (52% male, 48% female). The median age was 26.7 years, approximately 10 years younger than the U.S. national average of 36.8 years and also lower than the median age for Alaska, 33.8 years. The overall population structure of Port Heiden is shown in Figure 2. The largest percentage of the population fell within the age category 0-29 years old. The next largest percentage of the population fell within the age category 40-59 years old, with relatively few people age 60 or older.

Table 1. Population in Port Heiden from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	119	-
2000	119	-
2001	-	118
2002	-	108
2003	-	85
2004	-	90
2005	-	89
2006	-	79
2007	-	86
2008	-	90
2009	-	83
2010	102	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Port Heiden: 2000-2010 (U.S. Census).

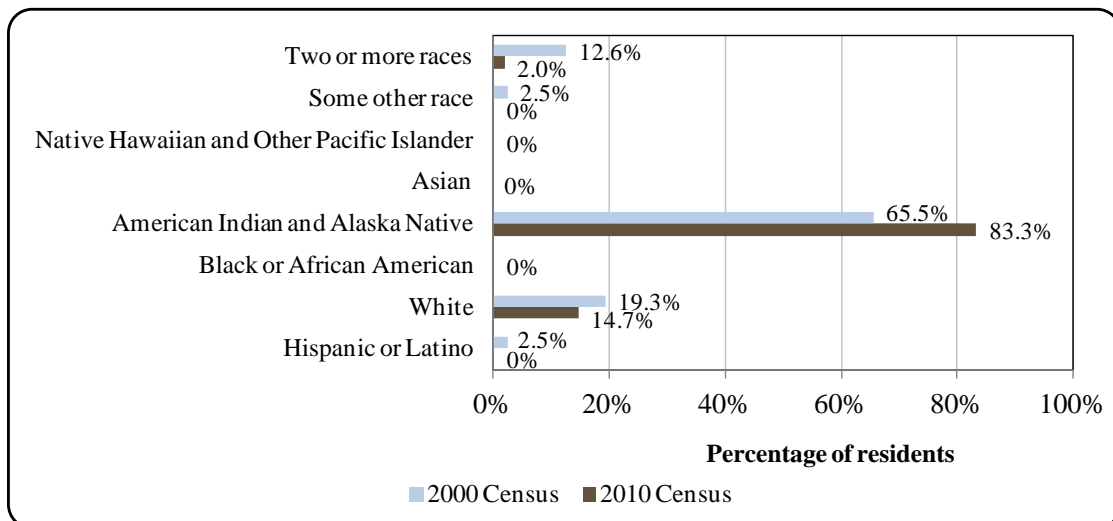
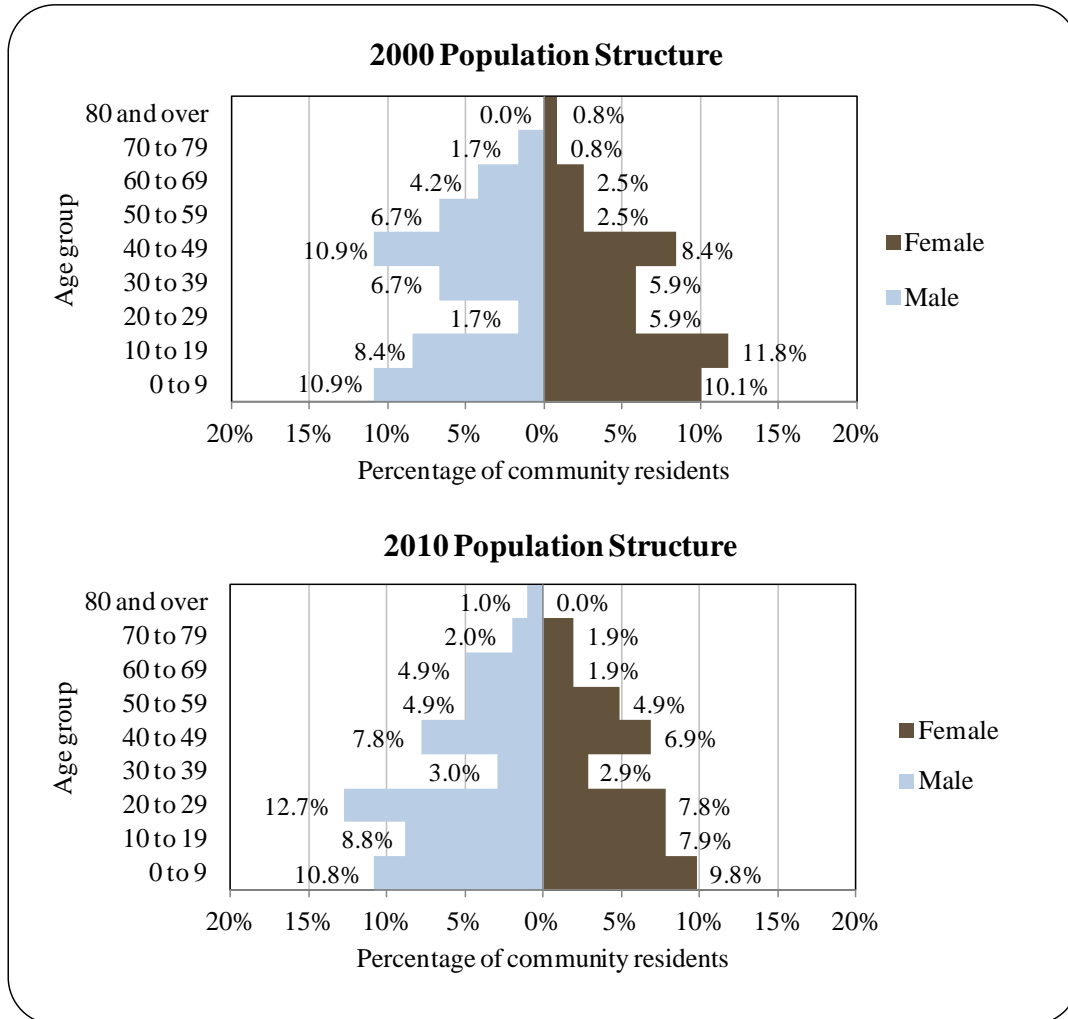


Figure 2. Population Age Structure in Port Heiden Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁴⁸⁶ 81% of residents aged 25 years and older were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also, in 2010, 19% of the population aged 25 years and older had a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 38.1% held a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 26.2% had some college but no degree, compared to 28.3% of Alaskan residents overall; 7.1% held a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 9.5% held a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

¹⁴⁸⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*¹⁴⁸⁷

The old village of Meshik was located at the current site of Port Heiden. Influenza epidemics during the early 1900s forced residents to relocate to other villages. During World War II, Fort Morrow was built nearby and 5,000 personnel were stationed at the base. The fort was closed after the war. A school was established in the early 1950s, which attracted people from surrounding villages. Port Heiden incorporated as a city in 1972. The community relocated inland, because storm waves had eroded much of the old townsite and threatened to destroy community buildings. Port Heiden is a traditional Alutiiq community with a commercial fishing and subsistence lifestyle.

Natural Resources and Environment¹⁴⁸⁸

Port Heiden has a maritime climate with cool summers, relatively warm winters, and abundant rainfall. January temperatures average 25°F (-3.8°C) and July temperatures average 50°F (10°C). Snowfall in Port Heiden averages 58 inches per year.

In a survey conducted by the AFSC in 2011, community leaders reported local reliance on natural resource-based activities, especially fishing, for the Port Heiden economy.

Port Heiden is located on the Alaska Peninsula, near the Becharof National Wildlife Refuge to the north and the Aniakchak National Monument and Preserve to the south. The Becharof National Wildlife Refuge covers an area of 1,157,000 acres and contains Becharof Lake, the second largest lake in Alaska, and Mt. Peulik, a 4,800 foot volcano. Wildlife present in the Refuge includes brown bears, caribou, moose, over 200 species of migratory and resident birds, and provides an important nursery for Pacific salmon.¹⁴⁸⁹ The Aniakchak National Monument and Preserve contains the Aniakchak Caldera. Volcanic activity in the caldera subsided after the most recent eruption in 1931, but hot spots and warm springs on the caldera floor indicate that eruptive activity may resume at any time. Wildlife present in the National Monument and Preserve include brown bear, caribou, moose, wolf, wolverine, waterfowl, sea otter, harbor seal, sea lion, and numerous smaller species. The region also contains extensive wild runs of five species of Pacific salmon, including nursery areas for sockeye salmon runs that are part of the Bristol Bay and Kodiak/Chignik sockeye salmon fisheries.¹⁴⁹⁰

Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin, which runs along the northern edge of the Aleutian Islands and Alaska Peninsula.¹⁴⁹¹ However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012

¹⁴⁸⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁸⁸ Ibid.

¹⁴⁸⁹ U.S. Fish and Wildlife Service. 2011. *Becharof National Wildlife Refuge*. Retrieved December 21, 2011 from <http://becharof.fws.gov/>.

¹⁴⁹⁰ U.S. National Park Service. 2011. *Aniakchak National Monument and Preserve: Nature and Science*. Retrieved April 24, 2012 from <http://www.nps.gov/ania/naturescience/index.htm>.

¹⁴⁹¹ Alaska Department of Natural Resources. 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

program.¹⁴⁹² On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.¹⁴⁹³

Current Economy¹⁴⁹⁴

Commercial fishing and government jobs provide the majority of cash income in Port Heiden. In 2010, 11 residents held commercial fishing permits. Subsistence harvests of salmon, other fish, and marine mammals are important food sources in the community. Game, birds, plants, and berries are also an important part of villagers' diets.¹⁴⁹⁵

Based on household surveys conducted for the 2006-2010 ACS,¹⁴⁹⁶ in 2010, the per capita income in Port Heiden was estimated to be \$22,257 and the median household income was estimated to be \$51,500, compared to \$20,532 and \$31,875 in 2000, respectively. However, after adjusting for inflation by converting the 2000 values to 2010 dollars,¹⁴⁹⁷ the 2000 real per capita income (\$26,999) and real median household income (\$41,915) indicate an overall decrease in per capita income between 2000 and 2010, but a large increase in median household income during the same time period. However, Port Heiden's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁴⁹⁸ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Port Heiden in 2010 is \$14,819.^{1499,1500} This estimate provides support for an overall decrease in per capita income in Port Heiden between 2000 and 2010. Based on Census and ACS data, in 2010, Port Heiden ranked 133rd of 305 communities with per capita income that year, and 123rd out of 299 Alaskan communities with household income data.

Based on the 2006-2010 ACS, in 2010, 67.3% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local

¹⁴⁹² Minerals Management Service. 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

¹⁴⁹³ The White House, Office of the Press Secretary. March 31, 2010. *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

¹⁴⁹⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁴⁹⁵ See footnote 1487.

¹⁴⁹⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁴⁹⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁴⁹⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

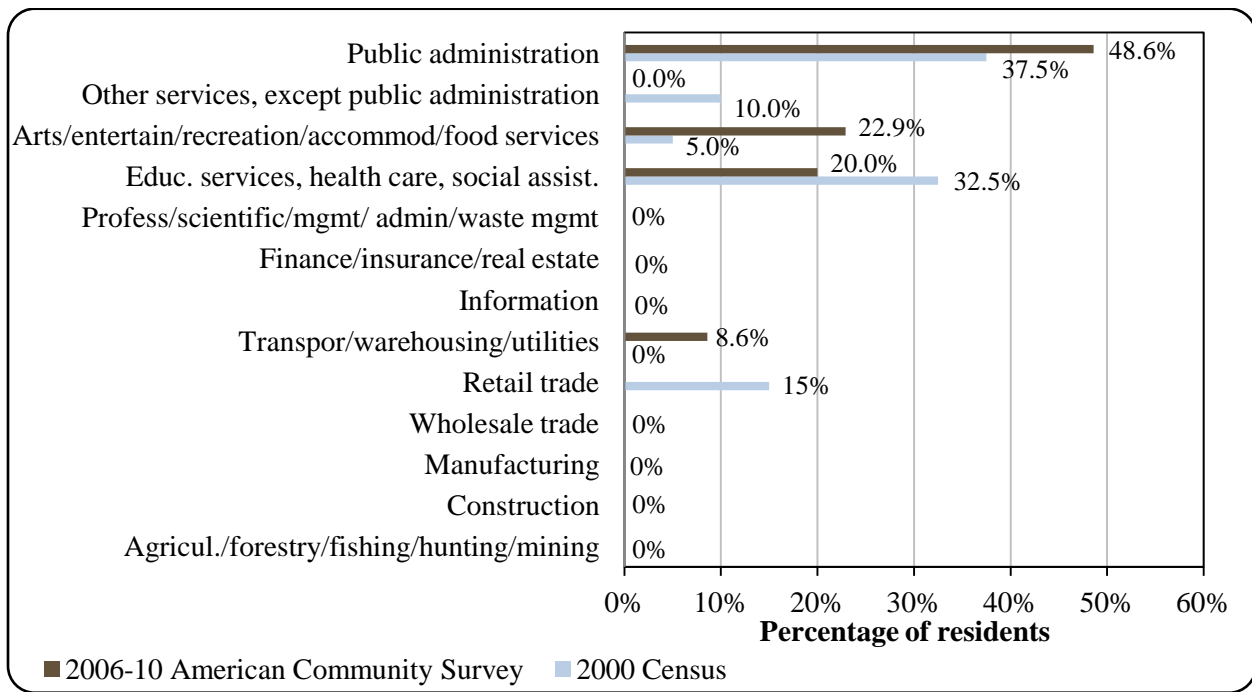
¹⁴⁹⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁵⁰⁰ See footnote 1496.

unemployment rate was 0%, compared to the statewide unemployment rate of 5.9%. Also in 2010, approximately 27.9% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Port Heiden are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely to be inaccurate given Port Heiden’s small population. Another estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 21.2%, twice the statewide ALARI unemployment rate estimate of 11.5%.¹⁵⁰¹

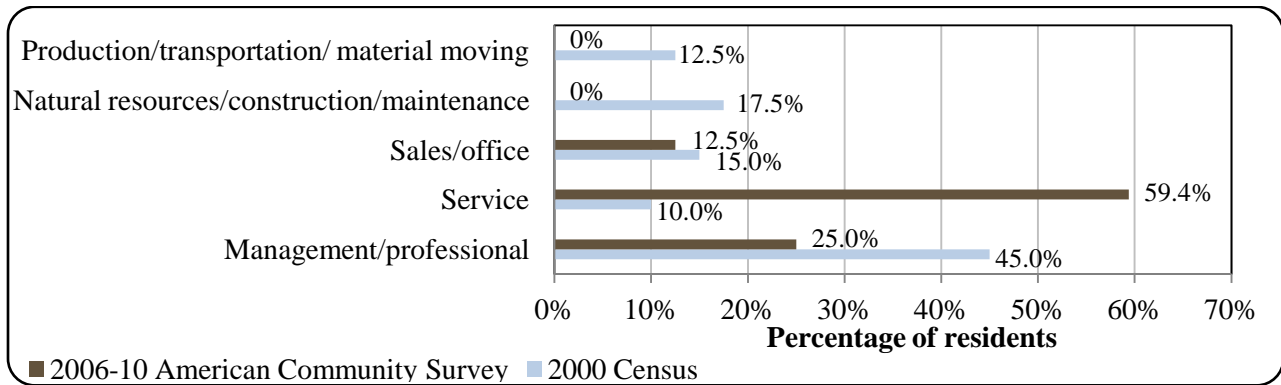
ACS employment estimates suggest that, in 2010, the greatest percentage of workers was employed in the public sector (77.1%), while 8.6% of workers were self-employed and 14.3% were unpaid family workers. Out of 35 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage (48.6%) worked in public administration industries. The remainder of the workforce was employed in three other industries: arts, entertainment, recreation, accommodations, and food services (22.9%), education services, health care, and social assistance (20%), and transportation, warehousing, and utilities (8.6%). All of the Port Heiden workforce was estimated to work in three occupation types, including 40% in service occupations (40%), 37.1% in management, business, science and arts, and the remaining 22.9% in sales and office occupations. No Port Heiden residents were estimated to be employed in fishing-related industries or occupations in 2010. The number of individuals employed in fishing may be underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is provided in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Port Heiden (U.S. Census).



¹⁵⁰¹ See footnote 1499.

Figure 4. Local Employment by Occupation in 2000-2010, Port Heiden (U.S. Census).



Governance

Port Heiden is a 2nd Class City located in the Lake and Peninsula Borough. As of 2010, the City of Port Heiden does not administer a sales tax.¹⁵⁰² Locally-generated revenues in Port Heiden between 2000 and 2010 included charges for services such as electricity, garbage collection, the landfill, and fuel sales, equipment rentals, and land leases. Outside revenue sources included state and federal grants and revenue sharing programs. Sources of shared revenue included the State Revenue Sharing program (approximately \$28,000 per year from 2000 to 2003), the Community Revenue Sharing program (\$100,000 per year in 2009 and 2010), the SAFE Communities program (public safety, utilities, infrastructure, etc.), and state raw fish tax refunds in some years (see the *Fisheries-Related Revenue* section of this profile). Fisheries-related grants are also of note. In 2000, Port Heiden received a Magnuson-Stevens Commercial Fishery Disaster Assistance grant in the amount of \$40,889 (Table 2).

There is also a federally-recognized Tribe in the community, the Native Village of Port Heiden. The village corporation is the Alaska Peninsula Corporation, and the regional Native corporation to which Port Heiden belongs is the Bristol Bay Native Corporation (BBNC).¹⁵⁰³ The Native Village of Port Heiden is also a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the tribes and the Native people of Bristol Bay.¹⁵⁰⁴ The BBNA is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.¹⁵⁰⁵

The nearest Alaska Department of Fish and Game (ADF&G) office is in Chignik, and the nearest National Marine Fisheries Service (NMFS) and Alaska Department of Natural Resources (DNR) offices are in Kodiak. The nearest Alaska Department of Commerce, Community, and

¹⁵⁰² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

¹⁵⁰³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁰⁴ Bristol Bay Native Association. (n.d.). *Homepage*. Retrieved November 16, 2011 from www.bbna.com.

¹⁵⁰⁵ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

Economic Development office is in Dillingham. The nearest offices for U.S. Immigration and Customs Enforcement and the Bureau of Citizenship and Immigration Services are in Unalaska and Kodiak.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Port Heiden from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ³	Fisheries-Related Grants (State and Federal) ⁴
2000	\$565,031	n/a	\$29,081	\$40,889
2001	\$542,604	n/a	\$28,135	n/a
2002	\$305,446	n/a	\$28,119	n/a
2003	\$369,247	n/a	\$28,165	n/a
2004	\$883,050	n/a	n/a	n/a
2005	\$277,794 *	n/a	n/a	n/a
2006	\$873,138	n/a	n/a	n/a
2007	\$755,142	n/a	n/a	n/a
2008	\$549,402	n/a	n/a	n/a
2009	\$635,259	n/a	\$100,591	n/a
2010	\$989,463	n/a	\$100,163	n/a

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

* This number reflects the year's budget estimate rather than the total reported in the certified financial statement.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure¹⁵⁰⁶

Connectivity and Transportation

The state-owned airport consists of a lighted gravel 5,000 feet long by 100 feet wide runway and a 4,000 feet long by 100 feet wide lighted gravel crosswind runway. It can accommodate up to the size of a Boeing 737 aircraft, and regular air services are provided. The airstrip serves as a point-of-transfer for flights to the Pacific side of the Alaska Peninsula. There is a natural boat harbor but no dock. A boat haul-out, a beach off-loading area, boat fuel sales, and marine storage facilities are available. Cargo from Seattle is delivered twice yearly by a Bureau of Indian Affairs (BIA)-chartered barge and is lightered and offloaded on the beach.

¹⁵⁰⁶ See footnote 1503.

Autos, ATVs, and snowmobiles are the local means of transportation. In June 2012, roundtrip airfare between Port Heiden and Anchorage was \$840.¹⁵⁰⁷

*Facilities*¹⁵⁰⁸

Individual wells and septic tank systems are used by most homes in Port Heiden. The school operates its own well and treatment system. Thirty-one (31) of 37 occupied households are fully plumbed. The City provides septic pumping services and collects refuse three times a week. The permitted landfill is located 6.5 miles northeast of the community. Electricity is provided to the community by a diesel powerhouse operated by the City. Police services are provided by a local Village Public Safety Officer and state troopers stationed in Dillingham. Other community facilities include a city holding cell, city office building, high school gymnasium, and a school library. Telephone and internet service is available in Port Heiden, but no cable service providers operate locally.

*Medical Services*¹⁵⁰⁹

The Bristol Bay Area Health Corporation operates the Port Heiden Clinic, which is a Community Health Aid Program site. There is a Port Heiden Volunteer Emergency Medical Service (EMS), and emergency services have coastal and air access, with emergency service provided by a health aide. The nearest hospitals are located in Dillingham and Kodiak.

*Educational Opportunities*¹⁵¹⁰

The Meshik School in Port Heiden provides instruction to students from pre-school through 12th grade. In 2011, the school had 26 students and 3 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Port Heiden area for thousands of years. Villages and fish camps were often located at mouths of streams for access to both fresh water and abundant salmon runs.¹⁵¹¹ Subsistence activities remain important in the community today.¹⁵¹² With regard to commercial harvest, fisheries in which Port Heiden residents were most engaged during the 2000-2010 period included salmon, herring, and halibut.

¹⁵⁰⁷ Airfare was obtained on the travel website <http://www.penair.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on November 21, 2011.

¹⁵⁰⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁰⁹ Ibid.

¹⁵¹⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁵¹¹ Alaska Native Heritage Center. (n.d) *The Unangax & Alutiiq (Supiaq) People - Who We Are*. Retrieved January 4, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/unangax/.

¹⁵¹² See footnote 1508.

Commercial salmon fisheries began in the Alaska Peninsula region in 1882, when canneries were constructed at Orzinski Bay and Thin Point Cove. Today, the Peninsula-Aleutian salmon fishery is managed by ADF&G. Port Heiden is located in the Northern District the Peninsula-Aleutian fishery.¹⁵¹³ Port Heiden residents also have access to the Bristol Bay salmon fishery to the east, and a majority of salmon permits held by Port Heiden residents between 2000 and 2010 were held in Bristol Bay set and drift gillnet salmon fisheries.

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the village of Togiak. During the 2000-2010 period, several Port Heiden residents held permits in Bristol Bay herring fisheries. On occasion, a herring sac roe fishery also occurs west of Port Heiden near Port Moller, when aerial surveys determine that a sufficient quantity of herring is present.¹⁵¹⁴ Herring fisheries are managed by ADF&G.

Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹⁵¹⁵ Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Port Heiden is located in Pacific Halibut Regulatory Area 4E, as well as Federal Statistical and Reporting Area 512 and the Bering Sea Sablefish Regulatory Area.

In a survey conducted by the AFSC in 2011, community leaders reported that Port Heiden's annual population peak is "somewhat" driven by employment in the fishing sectors (e.g., processing plants, commercial fishing, subsistence fishing, recreation and sportfishing, and charter fishing). Port Heiden is a Community Development Quota (CDQ) eligible community and is represented by the Bristol Bay Economic Development Corporation (BBEDC).¹⁵¹⁶ Port Heiden is not eligible to participate in the Community Quota Entity Program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Port Heiden does not have a registered processing plant. In a survey conducted by the AFSC in 2011, community leaders reported that while Port Heiden does not have a fish processing plant, the community is trying to establish one. The nearest processing plant is located in Ugashik.

¹⁵¹³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁵¹⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁵¹⁵ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹⁵¹⁶ Western Alaska Community Development Association. (n.d.) *CDQ Entities*. Retrieved September 14, 2013 from <http://www.wacda.org/pages/cdq-entities.php>.

Fisheries-Related Revenue

Overall, in 2010, the City of Port Heiden received \$11,734 from fisheries-related taxes and fees. This revenue came from the Shared Fisheries Business Tax. Table 3 shows the historical annual revenue for each of the fisheries-related categories.¹⁵¹⁷

Commercial Fishing

According to a survey conducted by the AFSC in 2011, community leaders reported that all local residents go to fish camps in Ugashik or Egegik to fish during the months of June and July. In addition, community leaders reported that Port Heiden does not have any docking or mooring facilities for permanent or transient vessels, and can only accommodate commercial fishing boats under 35 feet in length. In 2010, 14 Port Heiden residents held a total of 14 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Salmon permits made up 93% of the CFEC permits issued in 2010, compared to 67% in 2000. The majority of the salmon CFEC permits issued in 2010 were for the Bristol Bay drift gill net fishery, with the remainder issued for the Bristol Bay set gill net fishery. There was also one statewide halibut longline permit issued for vessels under 60 feet. Overall in 2010, 64% of the permits issued to residents of Port Heiden were actually fished, all of those in the salmon fishery. The halibut permit held in 2010 was not actively fished. It is also important to note that one set gillnet permit was held in the Peninsula-Aleutian salmon fishery from 2000 to 2002, but was not actively fished in these years.

In addition to CFEC permits, one License Limitation Program (LLP) permit was held each year from 2000 to 2010 in a federal crab fishery, but was not actively fished in any year during the period. No LLPs were held in federal groundfish fisheries and no Federal Fisheries Permits (FFP) were issued to Port Heiden residents between 2000 and 2010. Information about state and federal permits is presented in Table 4. While one individual held a quota share account, quota shares, and Individual Fishing Quota (IFQ) allotment in the federal halibut catch share fishery in 2000, no residents of Port Heiden held halibut quota share accounts between 2001 and 2010 (Table 6). In addition, no residents held quota share accounts in federal catch share fisheries for sablefish between 2000 and 2010 or crab between 2005 and 2010 (Table 7 and Table 8).

Those same years, there were no vessels landing catch in Port Heiden, though there were 20 licensed crew members. The number of crew license holders in Port Heiden remained relatively stable between 2000 and 2010, while the number of residents that were primary owners of fishing vessels showed a decreasing trend, declining from 23 in 2000 to 9 in 2010. The number of vessels homeported in Port Heiden followed a similar trend, declining from 19 in 2000 to 11 in 2010. In a survey conducted by the AFSC in 2011, community leaders reported that the community is home to the same amount of commercial fishing boats compared to five years ago. In the same survey, community leaders reported that Port Heiden does not participate in the fisheries management process in Alaska.

¹⁵¹⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the City's financial statements.

Table 3. Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Port Heiden: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$16,098	\$16,098	\$16,098	\$7,775	\$7,775	\$7,500	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$16,098	\$11,911	\$8,489	\$7,760	\$7,857	\$9,309	\$10,535	\$11,969	\$9,241	\$12,474	\$11,734
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	\$16	\$37	\$394	\$1,473	\$1,001	\$2,467	\$1,825	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
<i>Total fisheries-related revenue⁴</i>	<i>\$73,086</i>	<i>\$28,009</i>	<i>\$24,587</i>	<i>\$15,551</i>	<i>\$15,670</i>	<i>\$17,203</i>	<i>\$12,008</i>	<i>\$12,971</i>	<i>\$11,708</i>	<i>\$14,300</i>	<i>\$11,734</i>
<i>Total municipal revenue⁵</i>	<i>\$565,031</i>	<i>\$542,604</i>	<i>\$305,446</i>	<i>\$369,247</i>	<i>\$883,050</i>	<i>\$277,794</i> *	<i>\$873,138</i>	<i>\$755,142</i>	<i>\$549,402</i>	<i>\$635,259</i>	<i>\$989,463</i>

Note: n/a indicates that no data were reported for that year.

* This number reflects the year's budget estimate rather than the total reported in the City's certified financial statement.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Port Heiden: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	4	0	0	1	2	2	1	1	1	1	1
	Fished permits	0	0	0	1	1	1	1	1	1	1	0
	% of permits fished	0%	0%	0%	100%	50%	50%	100%	100%	100%	100%	0%
	Total permit holders	4	0	0	1	2	2	1	1	1	1	1
Herring (CFEC) ²	Total permits	7	1	2	2	2	2	1	1	1	0	0
	Fished permits	1	1	2	1	0	0	0	0	0	0	0
	% of permits fished	14%	100%	100%	50%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	6	1	2	2	2	2	1	1	1	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Port Heiden: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	22	21	20	17	17	17	15	14	12	12	13
	Fished permits	18	14	11	12	12	15	15	13	11	9	9
	% of permits fished	82%	67%	55%	71%	71%	88%	100%	93%	92%	75%	69%
	Total permit holders	21	21	18	18	20	22	18	15	13	12	14
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>33</i>	<i>22</i>	<i>22</i>	<i>20</i>	<i>21</i>	<i>21</i>	<i>17</i>	<i>16</i>	<i>14</i>	<i>13</i>	<i>14</i>
	<i>Fished permits</i>	<i>19</i>	<i>15</i>	<i>13</i>	<i>14</i>	<i>13</i>	<i>16</i>	<i>16</i>	<i>14</i>	<i>12</i>	<i>10</i>	<i>9</i>
	<i>% of permits fished</i>	<i>58%</i>	<i>68%</i>	<i>59%</i>	<i>70%</i>	<i>62%</i>	<i>76%</i>	<i>94%</i>	<i>88%</i>	<i>86%</i>	<i>77%</i>	<i>64%</i>
	<i>Permit holders</i>	<i>21</i>	<i>21</i>	<i>18</i>	<i>18</i>	<i>20</i>	<i>22</i>	<i>18</i>	<i>15</i>	<i>13</i>	<i>12</i>	<i>14</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Port Heiden: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Port Heiden ²	Total Net Pounds Landed In Port Heiden ^{2,5}	Total Ex-Vessel Value Of Landings In Port Heiden ^{2,5}
2000	22	0	0	23	19	0	0	\$0
2001	24	0	0	16	16	0	0	\$0
2002	14	0	0	15	15	0	0	\$0
2003	12	0	0	16	15	0	0	\$0
2004	15	0	0	12	10	0	0	\$0
2005	21	0	0	14	14	0	0	\$0
2006	19	0	0	14	12	0	0	\$0
2007	13	0	0	12	10	0	0	\$0
2008	15	0	0	11	9	0	0	\$0
2009	19	0	0	9	8	0	0	\$0
2010	20	0	0	9	11	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Port Heiden: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	1	1,723	213
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Port Heiden: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Port Heiden: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Port Heiden: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Port Heiden Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	677,752	367,143	650,719	426,273	1,003,202	890,465	1,278,771	1,290,415	738,971	1,010,028	719,060
<i>Total²</i>	<i>677,752</i>	<i>367,143</i>	<i>650,719</i>	<i>426,273</i>	<i>1,003,202</i>	<i>890,465</i>	<i>1,278,771</i>	<i>1,290,415</i>	<i>738,971</i>	<i>1,010,028</i>	<i>719,060</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$416,021	\$149,073	\$315,638	\$215,662	\$513,256	\$550,450	\$849,593	\$847,845	\$537,742	\$802,587	\$678,087
<i>Total²</i>	<i>\$416,021</i>	<i>\$149,073</i>	<i>\$315,638</i>	<i>\$215,662</i>	<i>\$513,256</i>	<i>\$550,450</i>	<i>\$849,593</i>	<i>\$847,845</i>	<i>\$537,742</i>	<i>\$802,587</i>	<i>\$678,087</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

No active sport fish guide businesses or licensed sport fish guides were reported to have been present in Port Heiden between 2000 and 2010. However, a number of sportfishing licenses were sold in Port Heiden each year during this period. In addition, residents of Port Heiden were reported to purchase sportfishing licenses (irrespective of point of sale). According to the ADF&G Statewide Harvest Survey,¹⁵¹⁸ Chinook salmon and coho salmon are caught by private anglers in Port Heiden. Given the lack of sportfishing businesses, no kept/released log book data were reported for sportfishing charters out of Ivanof Bay between 2000 and 2010.¹⁵¹⁹

Port Heiden is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Port Heiden is also displayed in Table 11.

Table 11. Sport Fishing Trends, Port Heiden: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Port Heiden²
2000	0	0	37	66
2001	0	0	23	36
2002	0	0	21	36
2003	0	0	23	26
2004	0	0	18	20
2005	0	0	15	29
2006	0	0	14	11
2007	0	0	10	8
2008	0	0	15	16
2009	0	0	16	12
2010	0	0	10	7

¹⁵¹⁸ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁵¹⁹ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Port Heiden: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Many residents of Port Heiden supplement their incomes and diet with subsistence resources.¹⁵²⁰ According to a survey conducted by the AFSC in 2011, community leaders reported that fish, moose, and berries are the three most important subsistence resources to the residents of Port Heiden.

No information is available from ADF&G between 2000 and 2010 regarding the percentage of Port Heiden households participating in the harvest of various subsistence resources or per capita subsistence harvest (Table 12). However, data were available from management agencies regarding subsistence harvest of salmon, halibut, and some species of marine mammals during this period.

Between 2000 and 2008, the number of subsistence salmon permits issued to Port Heiden households remained between two and three per year through 2006. In 2008, this number jumped dramatically to 29 permits issued. Total salmon harvest in 2008 was also much higher as a result of the increase in permits issued. Over the decade, the most heavily utilized salmon species appear to have been sockeye, coho, and Chinook, while smaller harvests of chum and pink were also reported in some years.

¹⁵²⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

A small number of Subsistence Halibut Registration Certificates (SHARC) were issued to Port Heiden residents between 2003 and 2010. No SHARC card was reported to have been actively fished during this period, and no data were available regarding total pounds of halibut harvested that year (Table 14).

The species of marine mammal that appeared to be harvested most consistently by Port Heiden residents between 2000 and 2010 was harbor seal. For years in which data were available, the average harbor seal harvest was 20 animals. In addition, small numbers of sea otter and walrus were reported harvested in several years (Table 15).

Table 12. Subsistence Participation by Household and Species, Port Heiden: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Port Heiden: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	3	2	6	n/a	21	n/a	n/a	n/a	n/a
2001	3	3	64	10	50	n/a	132	n/a	n/a
2002	3	3	120	6	50	n/a	34	n/a	n/a
2003	3	3	101	6	40	n/a	7	n/a	n/a
2004	3	3	60	n/a	n/a	n/a	80	n/a	n/a
2005	3	2	n/a	n/a	n/a	n/a	375	n/a	n/a
2006	2	2	n/a	n/a	30	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	29	29	182	62	813	33	1,023	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Port Heiden: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	2	n/a	n/a
2009	2	n/a	n/a
2010	2	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Port Heiden: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	4	n/a	n/a	n/a	20	n/a
2001	n/a	n/a	n/a	n/a	n/a	10	n/a
2002	n/a	n/a	n/a	n/a	n/a	30	n/a
2003	n/a	n/a	1	n/a	n/a	10	n/a
2004	n/a	n/a	n/a	n/a	n/a	20	n/a
2005	n/a	n/a	n/a	n/a	n/a	13	n/a
2006	n/a	n/a	n/a	n/a	n/a	17	n/a
2007	n/a	10	n/a	n/a	n/a	24	n/a
2008	n/a	n/a	n/a	n/a	n/a	36	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Portage Creek (a.k.a. Ohgsenakale)



People and Place

Location^{1521,1522}

Portage Creek is located near the confluence of Portage Creek and the eastern braid of the Nushagak River, known as the “Keefer Cutoff”. The community is located 29 miles southeast of Dillingham, 35 miles east of Clarks Point, and 300 miles southeast of Anchorage. Portage Creek is located in the Bristol Bay Recording District and Dillingham Census Area.

*Demographic Profile*¹⁵²³

In 2010, the U.S. Decennial Census recorded two year-round residents in Portage Creek, making it the 2nd smallest of 352 Alaskan communities with populations recorded that year, and the smallest populated village in the Dillingham Census Area. The first permanent residents settled in Portage Creek in 1961, and by the winter of 1964-64, 11 families resided there.¹⁵²⁴ The community first appeared in U.S. Census records in 1970 with a population of 60 individuals. The population remained relatively stable until 1980, but declined to five residents by 1990. The population rebounded to 26 residents in 2000. According to Alaska Department of Labor estimates, the population rose as high as 61 permanent residents in 2003, and then declined to 7 by 2009. Between 2000 and 2009, the population of permanent residents was estimated to decrease by 94.4%, and the average annual growth rate over this period was -80.56%. According to the Portage Creek Comprehensive Plan, many long-time residents who have moved away continue to return seasonally to the Village, and imagine a future in which they will be able to make their year-round residences there.¹⁵²⁵

In 2010, one of the two residents of Portage Creek identified as American Indian or Alaska Native (50% of the population) and the other resident identified as White (50%). In the year 2000, when 36 individuals resided in Portage Creek, 81.6% of the population identified themselves as American Indian or Alaska Native, and 13.9% as White. No Portage Creek residents identified themselves as Hispanic in 2000 or 2010. The change in population from 1990

¹⁵²¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵²² Portage Creek Village Council, residents of Portage Creek, Agnew::Beck Consulting, LLC, and Bristol Environmental & Engineering Services Corporation. 2006. *Portage Creek Indian Reservation Roads Program 2007 Long-Range Transportation Planning*. Retrieved May 14, 2012 from <http://www.commerce.state.ak.us/dca/plans/PortageCreek-TP-2006.pdf>.

¹⁵²³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵²⁴ See footnote 1521.

¹⁵²⁵ Portage Creek Village Council, residents of Portage Creek, and Agnew::Beck Consulting, LLC. 2006. *Portage Creek Comprehensive Plan*. Retrieved May 14, 2012 from <http://www.agnewbeck.com/pages-portfolio/bristolbay/portagecreek-cp-lrtp.htm>.

to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Portage Creek was 2 persons per household, a sizeable decline from 5.14 persons per household in 2000, but an overall increase from 1.6 persons per household in 1990. The number of occupied households in Portage Creek increased from three in 1990 to seven in 2000, and then declined to one by 2010. Of the 12 total housing units surveyed for the 2010 Decennial Census, none were owner-occupied, and one (8.3%) was rented. The remaining 11 housing units were vacant due to seasonal use in 2010 (91.7%). Between 1990 and 2010, no residents of Portage Creek lived in group quarters.

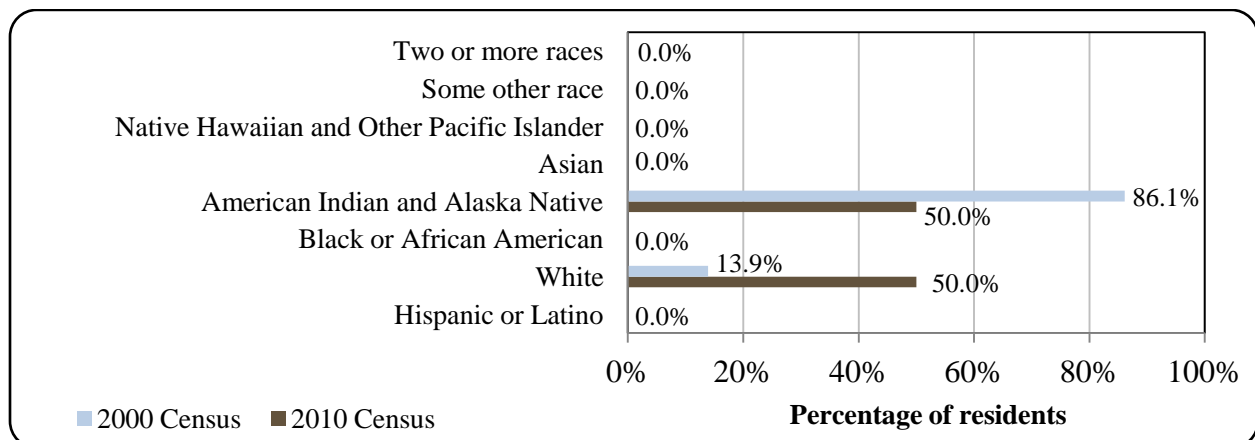
Table 1. Population in Portage Creek from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	5	-
2000	36	-
2001	-	47
2002	-	48
2003	-	61
2004	-	49
2005	-	37
2006	-	20
2007	-	9
2008	-	7
2009	-	7
2010	2	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

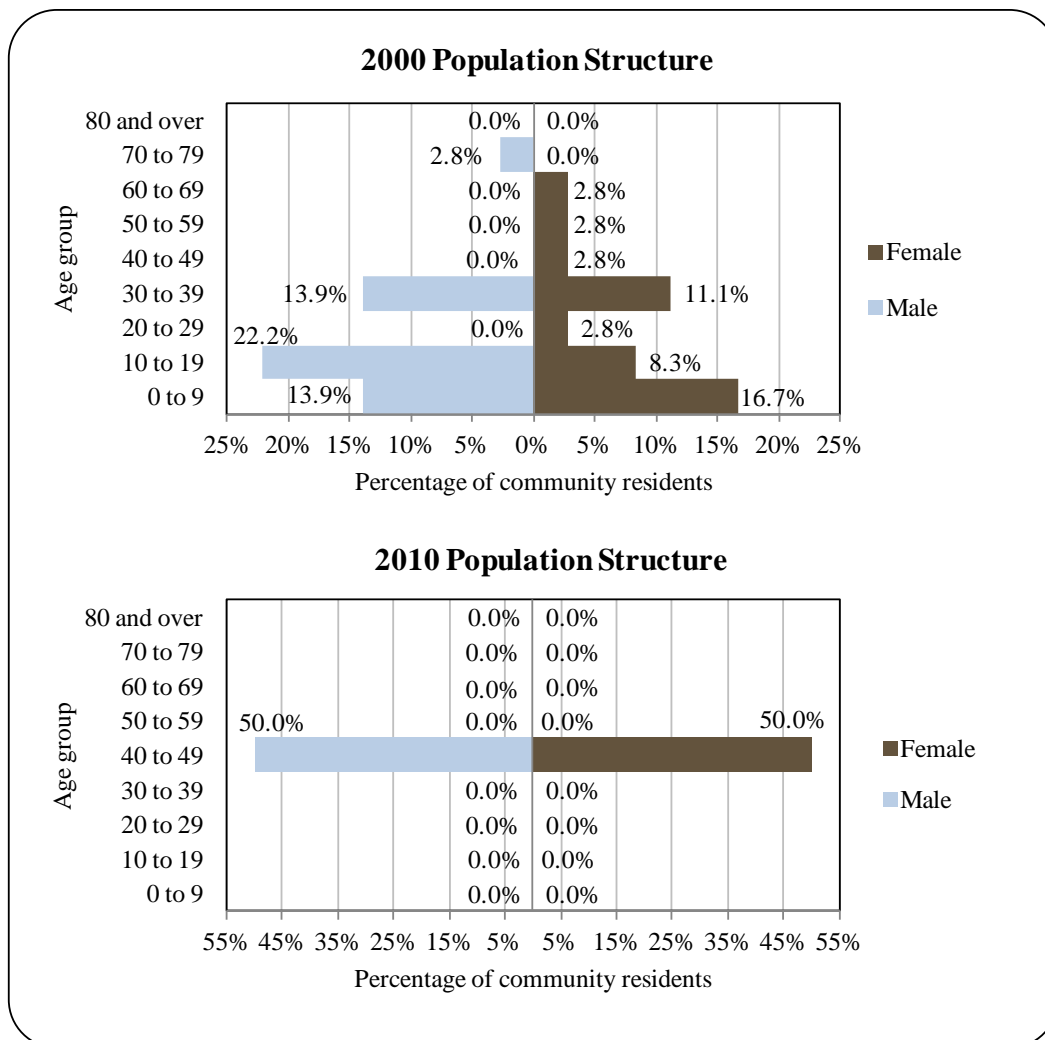
Figure 1. Racial and Ethnic Composition, Portage Creek: 2000-2010 (U.S. Census).



In 2010, one man and one woman were recorded as permanent residents in Portage Creek, making the gender balance evenly split at 50% male and 50% female, compared to a state population that was 52% male and 48% female. Both of Portage Creek’s permanent residents were between the ages of 45 and 49 in 2010, and their median age was 48.5 years, older than the national average of 36.8 years and the median age for Alaska, 33.8 years.

It is also useful to examine the population structure of Portage Creek in 2000, when the population was somewhat higher. In 2000, the gender ratio in the Portage Creek (52.8% male and 47.2% female) was slightly more weighted toward males than the state population as a whole, which was 51.7% male and 48.3% female. The age groups particularly skewed toward males included 10-19 and 70-79, while there were more females than males in the age groups 20-29 and 40 to 69. The median age in 2000, 14 years, was much younger than the 2000 national average of 36.5 years and the 2000 Alaska median age of 32.4 years. In 2000, 61.6% of the population was under the age of 20, and 5.4% of the population was age 60 or older. The population structure of Portage Creek in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Portage Creek Based on the 2000 and 2010 U.S. Decennial Census.



The 2006-2010 American Community Survey (ACS) did not provide any information regarding educational attainment in Portage Creek in 2010. Although the U.S. Decennial Census recorded two individuals as permanent residents in Portage Creek in 2010, the ACS estimated a population of zero.¹⁵²⁶ Given the small population of Portage Creek in 2010, it is useful to look back at education statistics in the year 2000 as well, when the population (36 residents) was slightly higher than in 2010. In 2000, 4 Portage Creek residents were aged 25 or older. Of these, two (50%) held a high school diploma or higher degree, compared to 88.3% of Alaskan residents overall in 2000. Both of these residents had attended some college but had not received a degree, compared to 28.6% of Alaskan residents overall in 2000. The other 2 residents aged 25 or older (50%) had received a 9th to 12th grade education, and did not have a high school diploma, compared to 7.5% of Alaskan residents overall in the year 2000.

History, Traditional Knowledge, and Culture

The Portage Creek village site was historically used by Yup'ik Eskimos as an overnight summer camp. The site received its name because it was used to portage boats from the Nushagak River to the Kvichak River. In this way, travelers could avoid the open waters of Bristol Bay and the long trip around Etolin Point. The village was permanently settled in 1961 by families from Koliganek and other villages up the Nushagak River. A Bureau of Indian Affairs (BIA) school was established in 1963, and, during the winter of 1964-65, 11 families lived in Portage Creek. In 1965, the village was served by a local, scheduled air carrier. Through the mid-1980s, Portage Creek was an active community, but the population has since declined.¹⁵²⁷ According to the U.S. Decennial Census, there were two year-round residents in 2010.

Today, the village is a popular recreational fishing and camping site from May through July and a hunting location for Yup'ik residents.^{1528,1529} Locals enjoy fishing, ice-fishing, berry picking, swimming, four-wheeling, snowmobiling, ice skating on Portage Creek, hiking, maqiis (steam baths), visiting with friends and family from villages along the river, and team sports.¹⁵³⁰

Natural Resources and Environment

Portage Creek is located in a climatic transition zone. The primary influence is maritime, although a continental climate affects the weather. Average summer temperatures range from 30 to 66 °F, and winter temperatures range from well below 0 to 30 °F. Annual precipitation ranges from 20 to 35 inches. Fog and low clouds are common during the summer.¹⁵³¹ Portage Creek is located in the Bristol Bay lowlands, which are characterized by low hills of only several hundred

¹⁵²⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁵²⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵²⁸ Ibid.

¹⁵²⁹ Portage Creek Village Council, residents of Portage Creek, and Agnew::Beck Consulting, LLC. 2006. *Portage Creek Comprehensive Plan*. Retrieved May 14, 2012 from <http://www.agnewbeck.com/pages-portfolio/bristolbay/portagecreek-cp-lrtp.htm>.

¹⁵³⁰ Ibid.

¹⁵³¹ See footnote 1527.

feet in elevation. The Nushagak River valley is covered by low shrubs and lichen tundra. Tidal action reaches approximately 40 miles upstream from the mouth of the Nushagak at Kanakanak, affecting the portion of the River at Portage Creek.¹⁵³² The river is ice-free from June through mid-November.¹⁵³³

Bristol Bay drainages produce the world's largest runs of sockeye salmon, and the area is productive for other species of salmon and marine fish as well.¹⁵³⁴ One of the largest runs of Chinook salmon in Alaska returns to the Nushagak River, but the run is not heavily harvested, partially due to low prices in the region.¹⁵³⁵ The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the Village of Togiak.¹⁵³⁶

Wood-Tilchik State Park lies northwest of the Nushagak River region. Wood-Tilchik is the largest State Park in the U.S., and includes a diversity of terrain and ecosystems. The Wood River and Tilchik lake systems are surrounded by rugged mountains and alpine valleys. The deep, fjord-like lakes and associated rivers host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, Arctic char, Dolly Varden char, and northern pike. Tilchik Lake is an important site for whitefish subsistence harvest. Moose, caribou and brown bear are common in the park, along with black bear in limited areas of the park. Small game present in the area include beaver, muskrat, otter, fox, wolverine, mink, and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.¹⁵³⁷

Significant mineral resources are present in the Bristol Bay region, including the Pebble copper-gold-molybdenum deposit northeast of Portage Creek. The Pebble Mine site is located at the divide between the Kaktuli River and Upper Talarik Creek, north of Iliamna Lake.¹⁵³⁸ Northern Dynasty Minerals Limited calls the Pebble deposit, "one of the greatest stores of mineral wealth ever discovered," and estimates that the deposit includes 80.6 billion pounds of copper, 107.3 ounces of gold, and 5.6 billion pounds of molybdenum, including both indicated (high confidence) and inferred (low confidence) deposits.¹⁵³⁹ Concern has been raised about the possible effects of acid mine drainage from development of the Pebble deposit on salmon. Iliamna Lake is the source of the Kvichak River System, the single most important salmon-producing watershed in the Bristol Bay area.¹⁵⁴⁰ According to the Pebble Partnership, 95% of the metal that would be produced by the Pebble Mine is copper. Dissolved copper is known to be

¹⁵³² Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹⁵³³ See footnote 1527.

¹⁵³⁴ See footnote 1532.

¹⁵³⁵ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁵³⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁵³⁷ Alaska Dept. of Natural Resources. (n.d.) *Wood-Tilchik State Park website*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

¹⁵³⁸ Parker, Geoffrey Y., Francis M. Raskin, Carol Ann Woody, and Lance Trasky. 2008. "Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's Large Mine Permitting Process." *Alaska Law Review* 25:1.

¹⁵³⁹ Northern Dynasty Minerals Limited website. 2012. *The Pebble Deposit*. Retrieved January 13, 2012 from <http://www.northerndynastyminerals.com/ndm/Pebble.asp>.

¹⁵⁴⁰ See footnote 1532.

toxic to fish.¹⁵⁴¹ If the Pebble Mine is developed, Bristol Bay salmon fisheries could be affected.¹⁵⁴²

Reserves of oil and natural gas are also thought to be present on the continental shelf in the Bristol Bay Basin, along the northern edge of the Aleutian Islands and Alaska Peninsula.¹⁵⁴³ However, given the importance of Bristol Bay fisheries to the Nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010, Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.¹⁵⁴⁴ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.¹⁵⁴⁵

According to the Bristol Bay Coastal Management Plan, the Portage Creek area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surges and sea ice. A majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian Trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall. Coastal flooding and erosion is affected by wind, site exposure and sea ice conditions. The management plan notes the potential for climate change to augment erosion, as coastal areas of Alaska are freezing later in the season, leaving coastal areas more vulnerable to fall storms and storm surges. Changing temperatures also have the potential to shift distribution of fish and wildlife, with possible consequences for commercial and subsistence activities.¹⁵⁴⁶

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites in the Portage Creek area as of May 2012.¹⁵⁴⁷

Current Economy¹⁵⁴⁸

All Portage Creek residents depend to some degree on subsistence activities. Salmon, moose, caribou, duck, geese, and berries are primary food sources. Most families have fish camps at Ekuk or Lewis Point. An exchange relationship exists between Portage Creek and

¹⁵⁴¹ See footnote 1538.

¹⁵⁴² Pg. 36 in Duffield, John., Christopher Neher, David A. Patterson, and Oliver S. Goldsmith. 2007. *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from http://www.fs.fed.us/rm/pubs/rmrs_p049/rmrs_p049_035_044.pdf.

¹⁵⁴³ See footnote 1532.

¹⁵⁴⁴ U.S. Dept. of the Interior, Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

¹⁵⁴⁵ The White House, Office of the Press Secretary. March 31, 2010. *Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition*. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

¹⁵⁴⁶ Glenn Gray and Associates. 2008. *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf.

¹⁵⁴⁷ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁵⁴⁸ Unless otherwise noted, all monetary data are reported in nominal values.

coastal communities in the region. Walrus, seal, and herring roe are sought in exchange for inland subsistence resources harvested by Portage Creek residents. Businesses in the community include the Portage Creek General Store and Lodge, which operates during summer months.¹⁵⁴⁹ Additional businesses in Portage Creek in the last decade have included babysitting, lodging opportunities, and guiding services.¹⁵⁵⁰ No information was available from the Alaska Department of Labor and Workforce Development regarding top employers in Portage Creek between 2007 and 2010.¹⁵⁵¹

Although the U.S. Decennial Census reported two residents age 16 or over in Portage Creek in 2010, household surveys conducted for the 2006-2010 ACS estimated that no residents lived in the community.^{1552,1553} The civilian labor force was thus estimated to be zero. An alternative labor force estimate is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, there were three residents in Portage Creek aged 16 and over, but none of these residents were estimated to be employed, lending support for the ACS estimate of a civilian labor force of zero.¹⁵⁵⁴ Portage Creek was recognized as “distressed” by the Denali Commission in 2011, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁵⁵⁵ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Although no income and employment data were reported in 2010, information was reported for the year 2000, when 36 individuals resided in the community. In 2000, the per capita income in Portage Creek was \$8,010 and the median household income was \$41,250. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁵⁵⁶ the real per capita income in 2000 is shown to have been \$10,533, and the real median household income in 2000 was \$41,250. Because no income information was reported for Portage Creek in 2010, the community’s earnings were not ranked against other communities that year. Previously, in the year 2000, Portage Creek had ranked 305th of 344 Alaskan communities with per capita income data that year, and 141st in median household income, out of 341 Alaskan communities with household income data.

¹⁵⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁵⁰ Portage Creek Village Council, residents of Portage Creek, and Agnew::Beck Consulting, LLC. 2006. *Portage Creek Comprehensive Plan*. Retrieved May 14, 2012 from <http://www.agnewbeck.com/pages-portfolio/bristolbay/portagecreek-cp-lrtp.htm>.

¹⁵⁵¹ Alaska Dept. of Labor and Workforce Dev. (n.d.). *Alaska Local and Regional Information*. Retrieved May 22, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹⁵⁵² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵⁵³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁵⁵⁴ See footnote 1551.

¹⁵⁵⁵ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

¹⁵⁵⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

According to the U.S. Census, of 7 Portage Creek residents aged 16 or older in 2000, 4 were in the civilian labor force, with an unemployment rate of 0%. Both of the individuals employed in Portage Creek in 2000 reported working in the public sector, in the educational, health and social services industry, and neither were employed in agriculture, forestry, and fishing industries (Figures 3 and 4). The number of individuals employed in farming, fishing, and forestry industries is probably underestimated as fishermen may hold another job and characterize their employment accordingly. As with income statistics, it should be noted that these employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Portage Creek (U.S. Census).

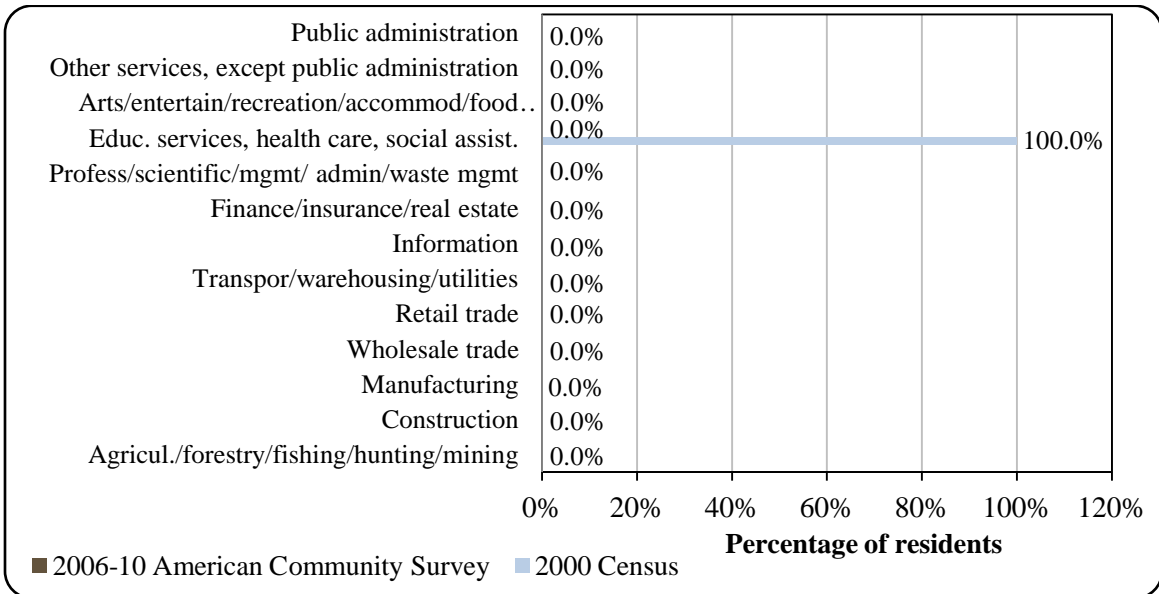
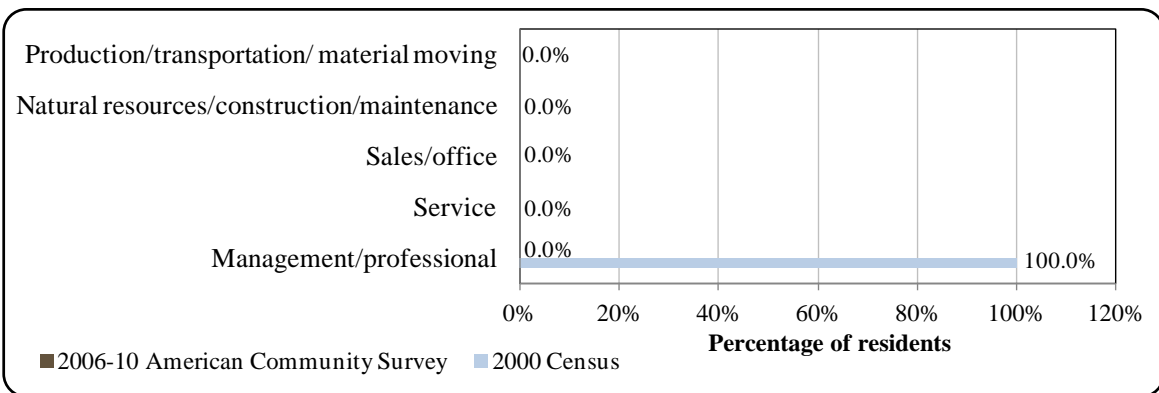


Figure 4. Local Employment by Occupation in 2000-2010, Portage Creek (U.S. Census).



Governance

Portage Creek is an unincorporated community, and is not located in an organized borough. No taxes are administered locally,¹⁵⁵⁷ and no municipal revenue was reported between 2000 and 2010. In addition, no information was reported regarding State and Community Revenue Sharing contributions or fisheries-related grants received by the Portage Creek between 2000 and 2010 (Table 2).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Portage Creek from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁵⁵⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Portage Creek was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the BIA, is the Portage Creek Village, also known as the Ohgksenakale Tribe. In the 1980s, the Native village corporation, the Portage Creek Association, merged with Choggiung, Limited, the Native village corporation for Dillingham.¹⁵⁵⁸ The Portage Creek Association remains Portage Creek's "appropriate village entity," a representative group that speaks for the Village on matters concerning ANCSA lands,¹⁵⁵⁹ while Choggiung, Limited manages 130,673 acres of land on behalf of the Portage Creek Association, in addition to managing its original 175,506-acre land entitlement. The regional Native corporation to which Portage Creek belongs is the Bristol Bay Native Corporation (BBNC).¹⁵⁶⁰

Portage Creek is a member of the Bristol Bay Native Association (BBNA), a regional non-profit organization headquartered in Dillingham that provides social, economic, cultural, and educational opportunities and initiatives for the benefit of the Tribes and the Native people of Bristol Bay.¹⁵⁶¹ The BBNA is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹⁵⁶²

The closest office of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Dillingham. Kodiak hosts an Alaska Department of Natural Resources Parks and Outdoor Recreation office, a National Marine Fisheries Service (NMFS) regional office, research laboratories, and enforcement office, and office of the U.S. Bureau of Citizenship and Immigration Services, although the Anchorage offices of these agencies may be more accessible to people from the Portage Creek area.

Infrastructure

Connectivity and Transportation

Portage Creek is inaccessible by road, although a local road system connects the Village to the airport, boat launch and landfill. In addition, a network of summer and winter trails exists around the Village.¹⁵⁶³ Locals commonly use ATVs and snowmobiles for overland travel. Skiffs and other watercraft are used for fishing and general transportation.¹⁵⁶⁴

¹⁵⁵⁸ Portage Creek Village Council, residents of Portage Creek, and Agnew::Beck Consulting, LLC. 2006. *Portage Creek Comprehensive Plan*. Retrieved May 14, 2012 from <http://www.agnewbeck.com/pages-portfolio/bristolbay/portagecreek-cp-lrtp.htm>.

¹⁵⁵⁹ Alaska Dept. of Commerce, Community, and Economic Development. 2012. *Getting Started on 14(c)(3): A Basic Guide for City and Village Councils*. Retrieved May 14, 2012 from <http://commerce.alaska.gov/dca/pub/14c3GettingStarted2012.pdf>.

¹⁵⁶⁰ See footnote 1557.

¹⁵⁶¹ Bristol Bay Native Association. (n.d.). *BBNA homepage*. Retrieved November 16, 2011 from www.bbna.com.

¹⁵⁶² U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹⁵⁶³ Portage Creek Village Council, residents of Portage Creek, Agnew::Beck Consulting, LLC, and Bristol Environmental & Engineering Services Corporation. 2006. *Portage Creek Indian Reservation Roads Program 2007 Long-Range Transportation Planning*. Retrieved May 14, 2012 from <http://www.commerce.state.ak.us/dca/plans/PortageCreek-TP-2006.pdf>.

¹⁵⁶⁴ See footnote 1557.

Chartered air transport is the most frequent mode of transportation used to reach Portage Creek. There is a state-owned 1,470 feet long by 60 feet wide gravel airstrip, maintained only during summer months, and seaplanes also land on the Nushagak River. Mail and cargo are delivered by air or by barge. Cargo goods delivered by barge are lightered to the beach since there are no docking facilities in Portage Creek.¹⁵⁶⁵ Until the mid-2000s, Peninsula Airways offered weekly scheduled flights to Portage Creek, but since the decline of the local population, regularly scheduled service has been discontinued. As of May 2012, a one-way charter flight with Shannon's Air Taxi from Dillingham to Portage Creek cost \$420 (for up to six passengers).¹⁵⁶⁶ Additional companies that provide charter air service to Portage Creek include Bristol Bay Air and Mulchatna Air.¹⁵⁶⁷ As of early June 2012, roundtrip airfare between Dillingham and Anchorage cost \$452.¹⁵⁶⁸

Facilities

There are no central facilities currently in operation in Portage Creek. The central well is rusty, and most residents haul water from downriver. Some residents also have individual wells. Honeybuckets and outhouses are used for sewage disposal. There is no functioning central electric system, and residents use individual generators. The landfill is unpermitted, and no refuse collection services are provided. Police services are provided by state troopers stationed in Dillingham, and no fire or rescue services are available locally. Internet service is available at the school only. Telephone service is provided by Nushagak Telephone Co-op Inc. and AT&T Alascom. No cable service provider operates in Portage Creek.¹⁵⁶⁹ As of 2006, community facilities included a school, a health clinic building in need of major renovations, and a Village Council building which also needs upgrades.¹⁵⁷⁰

Medical Services

Although a clinic building is present in Portage Creek, consistent medical services have not been provided in the community since the 1980's, and at present the building is old and unsafe. During years in which the school is in operation, a Bristol Bay Area Health Corporation dentist and nurse visit the Village once each year to provide dental work and general check-ups to local students as well as other residents. The school has been closed since the 2005-2006 school year, and as of 2012, no health care service was provided locally.^{1571,1572} The nearest hospital is located in Dillingham.¹⁵⁷³

¹⁵⁶⁵ Ibid.

¹⁵⁶⁶ Personal communication, Shannon's Air Taxi representative, May 22, 2012.

¹⁵⁶⁷ See footnote 1563.

¹⁵⁶⁸ Airfare was calculated using lowest fare. Retrieved November 22, 2011, from <http://www.travelocity.com>.

¹⁵⁶⁹ See footnote 1563.

¹⁵⁷⁰ Portage Creek Village Council, residents of Portage Creek, and Agnew::Beck Consulting, LLC. 2006. *Portage Creek Comprehensive Plan*. Retrieved May 14, 2012 from <http://www.agnewbeck.com/pages-portfolio/bristolbay/portagecreek-cp-lrtp.htm>.

¹⁵⁷¹ Ibid.

¹⁵⁷² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁷³ Bristol Bay Area Health Corporation website. 2006. *Kanakanak Hospital*. Retrieved June 3, 2012 from <http://www.bbahc.org/kanakanak.html>.

Educational Opportunities

As of the 2011 school year, no students were enrolled in Portage Creek. The school last operated during the 2004-2005 school year, when seven students were enrolled.¹⁵⁷⁴

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence fishing activities have been important to residents of the Portage Creek area for thousands of years. The Nushagak region was historically inhabited by a coastal population that combined fishing and hunting of marine mammals and an interior population that focused on hunting and fishing with frequent trips to the coast, especially during summer months.¹⁵⁷⁵ Today, permanent residents of Portage Creek, as well as area residents who come to the Village during summer months, continue to rely on subsistence harvest of fish and wildlife resources.¹⁵⁷⁶ In some years during the 2000-2010 period, Portage Creek residents also held state commercial permits in fisheries for salmon and herring. The number of permits declined over the period, and no permits were held from 2007 to 2010 (Table 4).

The commercial salmon fishery began to develop in Bristol Bay in the 1890s, and today is one of the most important commercial salmon fisheries in the world. Harvest primarily consists of sockeye salmon returning to spawn in the many lakes of the Bristol Bay region, although several other species are harvested in lower volumes. One of the largest runs of Chinook salmon in Alaska occurs in the Nushagak River.¹⁵⁷⁷ The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, southwest of Nushagak River near the village of Togiak. Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.¹⁵⁷⁸

Portage Creek is located on the Nushagak River which empties into Bristol Bay. This marine area is encompassed by the Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and Bering Sea Sablefish Regulatory Area. Portage Creek participates in the Community Development Quota (CDQ) program as a member of the Bristol Bay Economic Development Corporation (BBEDC). The community is not eligible for the Community Quota Entity program.

¹⁵⁷⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁵⁷⁵ VanStone, James W. 1968. "An Annotated Ethnographic Bibliography of the Nushagak River Region, Alaska." *Anthropology*, v. 54, no. 2. Field Museum of Natural History. Chicago.

¹⁵⁷⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁵⁷⁷ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁵⁷⁸ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

Processing Plants

The ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Portage Creek. However, several processing facilities were registered in nearby communities throughout Bristol Bay, including Dillingham, Egegik, and Naknek.

Fisheries-Related Revenue

No information was reported between 2000 and 2010 regarding fisheries-related revenue earned in the community of Portage Creek (Table 3).

Commercial Fishing

Between 2000 and 2006, Portage Creek residents participated in state fisheries as permit holders, crew members, and vessel owners. The number of vessels homeported in Portage Creek declined from 10 in the year 2000 to 1 in 2005 and 2006, and no vessels were reported as homeported in Portage Creek between 2007 and 2010. Similarly, the number of vessels primarily owned by Portage Creek residents declined from two in 2000 to one by 2005-2006, and none were reported as owned between 2007 and 2010. The number of crew license holders varied from one to six between 2000 and 2007, with two crew licenses held by Portage Creek residents in 2007. Between 2008 and 2010, no residents were issued commercial crew licenses. This information about the Portage Creek commercial fishing sector is presented in Table 5.

In 2000 and 2001, two residents held a total of three commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Two of these permits were held in the Bristol Bay drift gillnet salmon fishery, both of which were actively fished in 2000 and 2001. The third permit was held in the Bristol Bay roe herring gillnet fishery, and was not actively fished during these two years. No herring permits were held from 2002 to 2010. The number of Bristol Bay salmon permits held in Portage Creek declined to one between 2002 and 2006. It was actively fished in each of these years. Between 2000 and 2010, no Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Portage Creek residents, and no quota share accounts or quota shares were held in federal catch share fisheries for halibut, sablefish, or crab during the decade. Information about permits held in Portage Creek is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

No fish-buyers or shore-side processing facilities were present in Portage Creek from 2000 to 2010 (Table 5), and no information was reported regarding fisheries landings and ex-vessel revenue generated in the community (Table 9). Local vessel owners made landings between 2000 and 2006, but information about these landings and ex-vessel revenue generated by Portage Creek vessel owners is considered confidential due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Portage Creek: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Portage Creek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Portage Creek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	1	1	1	1	1	0	0	0	0
	Fished permits	2	2	1	1	1	1	1	0	0	0	0
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	-	-	-	-
	Total permit holders	2	2	1	1	1	1	1	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>3</i>	<i>3</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>67%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Portage Creek: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Portage Creek ^{2,5}	Total Net Pounds Landed In Portage Creek ^{2,5}	Total Ex-Vessel Value Of Landings In Portage Creek ^{2,5}
2000	2	0	0	2	10	0	0	\$0
2001	1	0	0	2	9	0	0	\$0
2002	2	0	0	2	9	0	0	\$0
2003	4	0	0	2	9	0	0	\$0
2004	6	0	0	2	9	0	0	\$0
2005	4	0	0	1	1	0	0	\$0
2006	3	0	0	1	1	0	0	\$0
2007	2	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Portage Creek: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Portage Creek: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Portage Creek: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Portage Creek: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Portage Creek Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	0	0	0	0
Finfish	-	-	-	-	-	-	-	0	0	0	0
Halibut	-	-	-	-	-	-	-	0	0	0	0
Herring	-	-	-	-	-	-	-	0	0	0	0
Other Groundfish	-	-	-	-	-	-	-	0	0	0	0
Other Shellfish	-	-	-	-	-	-	-	0	0	0	0
Pacific Cod	-	-	-	-	-	-	-	0	0	0	0
Pollock	-	-	-	-	-	-	-	0	0	0	0
Sablefish	-	-	-	-	-	-	-	0	0	0	0
Salmon	-	-	-	-	-	-	-	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
Finfish	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
Halibut	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
Herring	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
Other Groundfish	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
Other Shellfish	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
Pacific Cod	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
Pollock	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
Sablefish	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
Salmon	-	-	-	-	-	-	-	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Nushagak and Mulchatna River drainage supports vibrant recreational fisheries. Within the drainage, the lower Nushagak River near the Village of Portage Creek is one area of concentrated sportfishing effort for coho and Chinook salmon.¹⁵⁷⁹ Portage Creek is a popular sportfishing site from May through July.¹⁵⁸⁰ Many seasonal residents come to fish camps in Portage Creek during summer months to participate in sportfishing activity. The General Store and Lodge sells products to boaters and fishers along the river, provides lodging facilities, boat storage, hauling, and rentals.¹⁵⁸¹

No active sport fish guide businesses were present in Portage Creek from 2000 to 2010. However, there was one licensed sport fish guide in the community from 2000 to 2002, and again in 2004. Between 2000 and 2010, a greater number of sportfishing licenses were sold in Portage Creek (50 per year on average) than were sold to local residents (3 per year on average, irrespective of point of sale), indicating that Portage Creek attracts sport fishermen from the surrounding region or beyond. This information about the local sportfishing industry in Portage Creek is presented in Table 11.

The Alaska Statewide Harvest Survey,¹⁵⁸² conducted by ADF&G between 2000 and 2010, did not provide information regarding species targeted by private anglers in Portage Creek. However, the survey did note species targeted by anglers in nearby Dillingham: in freshwater, Dillingham recreational fishermen targeted all five salmon species, rainbow trout, Dolly Varden, whitefish, Arctic grayling, and northern pike. In saltwater, Dillingham anglers targeted Pacific halibut, rockfish, and smelt. No kept/release log book data were reported for sportfishing charters out of Portage Creek between 2000 and 2010.¹⁵⁸³

Portage Creek is located within Alaska Statewide Harvest Survey Area T – Nushagak, Wood River and Togiak. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Overall between 2000 and 2010, there were more non-Alaska resident than Alaska resident angler days fished, and there was significantly greater freshwater harvest than saltwater. Between 2000 and 2010, the non-Alaska resident anglers fished between 15,676 and 33,089 freshwater angler days and between 81 and 767 saltwater angler days per year. Alaska resident anglers fished between 7,356 and 19,980 freshwater angler days and between 31 and 921 saltwater angler days per year. This information about the sportfishing sector in and near Portage Creek is displayed in Table 11.

¹⁵⁷⁹ Dunaway, D. O. and S. Sonnichsen. 2001. *Area Management Report for the Recreational Fisheries of the Southwest Alaska Sport Fish Management Area, 1999*. ADF&G Fishery Management Report No. 01-6. Retrieved May 14, 2012 from <http://www.sf.adfg.state.ak.us/FedAidpdfs/Fmr01-06.pdf>.

¹⁵⁸⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁸¹ Portage Creek Village Council, residents of Portage Creek, and Agnew::Beck Consulting, LLC. 2006. *Portage Creek Comprehensive Plan*. Retrieved May 14, 2012 from <http://www.agnewbeck.com/pages-portfolio/bristolbay/portagecreek-cp-lrtp.htm>.

¹⁵⁸² Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁵⁸³ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Portage Creek: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Portage Creek ²
2000	0	1	3	58
2001	0	1	5	63
2002	0	1	4	103
2003	0	0	1	45
2004	0	1	5	69
2005	0	0	4	52
2006	0	0	3	54
2007	0	0	1	50
2008	0	0	2	21
2009	0	0	2	35
2010	0	0	1	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	0	44	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Residents of Portage Creek depend on subsistence resources as food sources. Most families have fish camps at Ekuk or Lewis Point. Salmon, moose, caribou, duck, geese, and berries are the primary foods harvested. An exchange relationship exists between Portage Creek and coastal communities in Bristol Bay. Walrus, seal, and herring roe are sought in exchange for inland foods harvested near Portage Creek.¹⁵⁸⁴

Between 2000 and 2010, no data were available from ADF&G regarding per capita subsistence harvest or the percentage of Portage Creek households utilizing various marine resources for subsistence purposes (Table 12). However, information is available from ADF&G between 2000 and 2008 regarding annual subsistence salmon harvest. For those years in which data were reported, an average of one salmon permit was issued to Portage Creek households. The salmon species most heavily harvested was Chinook, with an average of 75 salmon harvested per year, for those years in which information was reported. Some chum and sockeye salmon harvest was also reported between 2000 and 2008 (Table 13).

No information was reported by management agencies between 2000 and 2010 regarding total subsistence harvest of non-salmon fish, marine invertebrates, or various species of marine mammals (Tables 13 through 15).

Table 12. Subsistence Participation by Household and Species, Portage Creek: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁵⁸⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Portage Creek: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	3	2	117	15	n/a	n/a	15	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	1	1	78	7	n/a	n/a	12	n/a	n/a
2005	1	1	78	9	n/a	n/a	4	n/a	n/a
2006	1	1	87	12	n/a	n/a	4	n/a	n/a
2007	1	1	37	6	n/a	n/a	4	n/a	n/a
2008	1	1	53	3	n/a	n/a	2	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Portage Creek: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Portage Creek: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

South Naknek (NACK-neck)



People and Place

*Location*¹⁵⁸⁵

South Naknek is a Census Designated Place (CDP) located on the south bank of the Naknek River, 297 miles southwest of Anchorage. South Naknek CDP encompasses 94 square miles of land and 2.5 square miles of water. It lies just west of the Katmai National Park and Preserve. South Naknek is located in the Kvichak Recording District, the Bristol Bay Borough, and the Bristol Bay Borough Census Area.

*Demographic Profile*¹⁵⁸⁶

In 2010, there were 79 inhabitants in South Naknek, making it the 267th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Naknek decreased by 50.36% with an average annual growth rate of -4.66%. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, a large majority of South Naknek residents identified themselves as American Indian and Alaska Native (82.3%), while 12.7% identified as White, 1.3% as Asian, and 3.8% identified with two or more races. Compared to 2000, several ethnic groups no longer appeared to be present in 2010, including Native Hawaiian and Other Pacific Islanders, and Black or African American. In addition, individuals identifying as Hispanic no longer appeared to be present in South Naknek in 2010. There were slight declines in the percentages of the population identifying as both White and American Indian and Alaska Native between 2000 and 2010, while there was an increase in the percentages identifying as Asian or identifying with two or more races. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in South Naknek was 2.26, a decrease from 3.4 persons per household in 1990 and 2.98 in 2000. The total number of households increased from 39 in 1990 to 46 in 2000, and then decreased to 35 occupied housing units in 2010. Of the 130 housing units surveyed for the 2010 Decennial Census, 22 were owner-occupied, 13 were renter-occupied, and 95 were vacant or used only seasonally. Throughout this period no residents of South Naknek were reported to be living in group quarters.

¹⁵⁸⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁸⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

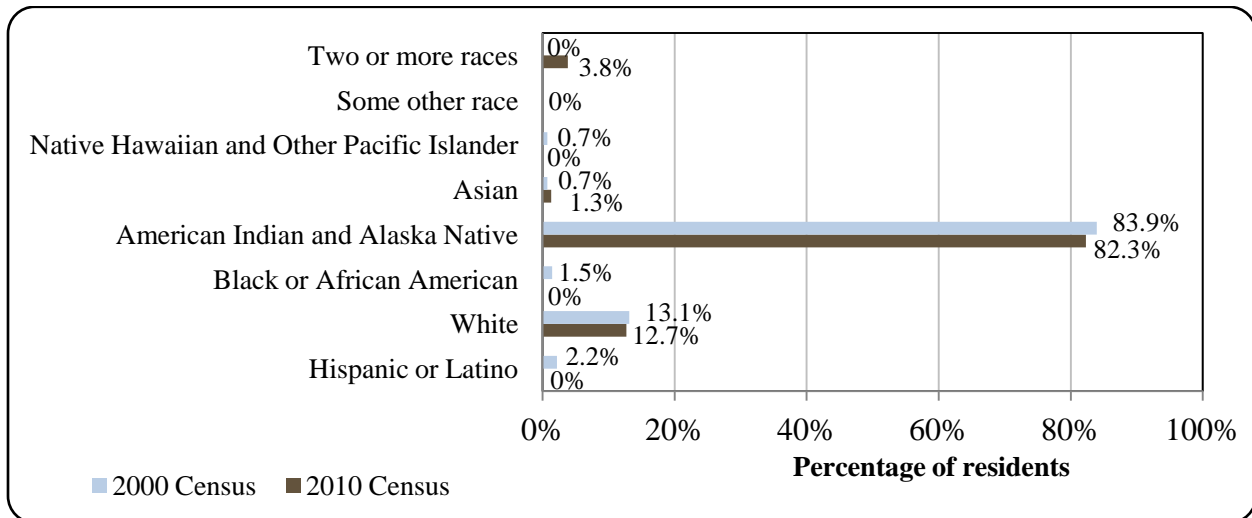
Table 1. Population in South Naknek from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	136	-
2000	137	-
2001	-	124
2002	-	120
2003	-	102
2004	-	89
2005	-	76
2006	-	75
2007	-	66
2008	-	68
2009	-	68
2010	79	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

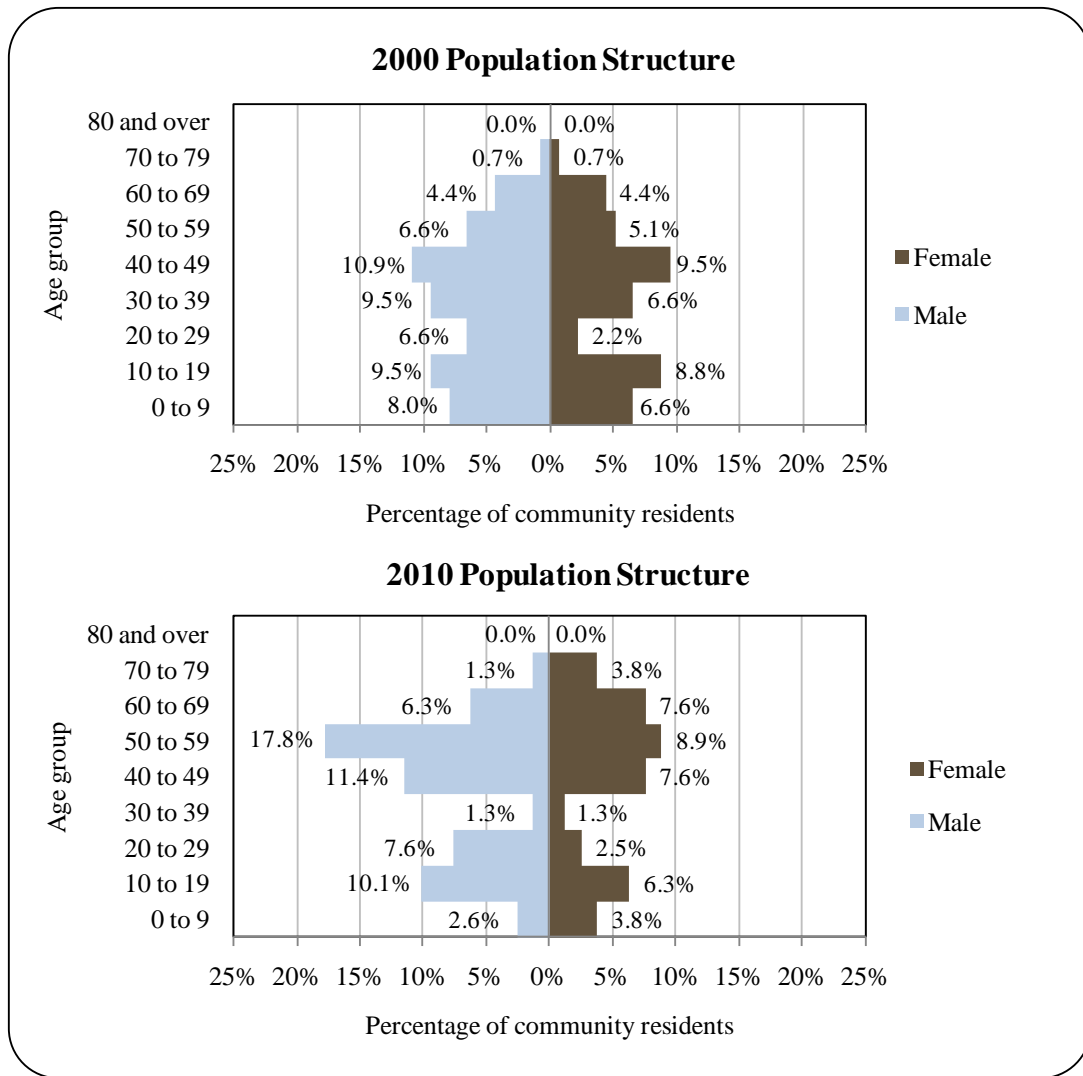
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, South Naknek: 2000-2010 (U.S. Census).



The gender makeup in South Naknek in 2010 was 58.2% male and 41.8% female, very similar to the state as a whole (52% male, 48% female). The local population was male skewed for most age groups in 2010; however, the bias towards males between 40 and 59 is most noteworthy. The median age was estimated to be 45.8 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of the population fell within the age category 50 to 59 years old, with the next largest percentage in the age category 40 to 49 years old. Very few individuals between 30 and 39 years old reside in the community. There were no individuals over age 80 living in South Naknek in 2010, and relatively few individuals between ages 30 and 39 and over age 70. The overall population structure of South Naknek in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in South Naknek Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁵⁸⁷ 93% of South Naknek residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, there were no residents of South Naknek aged 25 and older that were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 7% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 16.3% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 37.2% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 18.6% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; and 20.9% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall. There were not estimated to be any South Naknek residents that had a graduate or professional degree in 2010.

History, Traditional Knowledge, and Culture

Starting 8,000 years ago there is evidence of seasonal camps along the Kvichak River by people of the Paleo-Arctic tradition. These people likely arrived following herds of caribou. By 6,000 ago, ancestors of the Kodiak and Aleutian traditions made seasonal use of the South Naknek area, probably utilizing both caribou and marine resources. By 1,900 B.C., ancestors of historic Yup'ik populations settled in the area. They were fishermen and hunters of caribou and marine mammals. Evidence of permanent settlements and river salmon fishing in the area starts around 400 B.C.¹⁵⁸⁸

South Naknek is located across the Naknek River from Naknek, and the histories of the two communities are closely intertwined. By the time of European contact in the late 1700s, residents of the villages used rivers to interact with each other and for transport in pursuit of seasonal subsistence resources. In the 1880 U.S. Census, a village known as Qinuyang was located at the present site of South Naknek, and a village known as Paugvik was located at the present site of Naknek. At that time, the populations of these villages were counted together, with a total population of 192 Native people. Starting in the 1890 Census, the two villages were counted separately. As of 1890, Qinuyang had a reported population of one white person and 92 Natives.¹⁵⁸⁹

There was a strong Russian presence in the area during the mid-1800s. The Russians built a fort near Naknek, and Russian fur trappers inhabited the area prior to the United States' purchase of Alaska in 1867.¹⁵⁹⁰ Soon after the sale of Alaska, the commercial fishing industry began to develop in the region. The community of South Naknek became more established

¹⁵⁸⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁵⁸⁸ Morris, Judith (1985). *The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska. Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

¹⁵⁸⁹ Bristol Bay Native Association. (n.d.). *South Naknek*. Retrieved September 12, 2013 from <http://www.bbna.com/villages/snaknek/snaknek1b.htm>.

¹⁵⁹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

during the development of canneries along the Naknek River. The first salmon cannery opened on the Naknek River in 1890.¹⁵⁹¹

Many Native residents of South Naknek are descended from inhabitants of “Old Savonoski”, an Aleut village that was located at the eastern end of Naknek Lake, within the modern boundaries of Katmai National Park and Preserve. Old Savonoski was abandoned during the 1912 eruptions of Mt. Katmai and Mt. Novarupta. Villagers relocated to a site at the confluence of King Salmon Creek and the Naknek River, six miles east of today’s South Naknek, which they called “New Savonoski”. Today, many descendants of Old Savonoski live in the present-day villages of King Salmon and South Naknek.^{1592,1593}

Today, South Naknek remains a traditional Sugpiaq (Pacific Yup’ik / Aleut) village with a fishing and subsistence lifestyle.¹⁵⁹⁴

Natural Resources and Environment

The climate is mainly maritime, characterized by cool, humid, and windy weather. Average summer temperatures range from 42 to 63 °F (5.6 to 17.2 °C); average winter temperatures range from 29 to 44 °F (-1.7 to 6.7 °C). Extremes from -46 to 88 °F (-43.3 to 31.1 °C) have been recorded. Total precipitation averages 20 inches annually, with 45 inches of snowfall. Fog is common during summer months.¹⁵⁹⁵

South Naknek is located on the Alaska Peninsula, close to the Becharof National Wildlife Refuge (Refuge) to the south, Katmai National Park and Preserve to the east, and the Alagnak National Wild and Scenic River to the northeast. The Refuge covers an area of 1,157,000 acres and contains Becharof Lake, the second largest lake in Alaska, and Mt. Peulik, a 4,800 foot volcano. Wildlife present in the Refuge includes brown bears, caribou, moose, over 200 species of migratory and resident birds, and provides an important nursery for Pacific salmon.¹⁵⁹⁶ Katmai National Park is a 7,383 square mile wilderness area known for its high concentration of brown bears, volcanoes Mt. Katmai and Mt. Novarupta, and the Valley of 10,000 Smokes. The National Park is also a popular sportfishing destination. Visitors to Katmai may also pass through nearby Naknek, as King Salmon is one of the primary departure points for charter flights to the Park.^{1597,1598} The Alagnak River, also known as the ‘Branch River,’ is a 79-mile long river with headwaters in Katmai National Park that joins the Kvichak River at Levelock. Sixty-seven miles of the Alagnak River are designated as wild.¹⁵⁹⁹

¹⁵⁹¹ See footnotes 1588 and 1590.

¹⁵⁹² Feldman, K.D. Ethnohistory and the IRA Tribal Status Application of King Salmon Natives, Alaska. *Alaska Journal of Anthropology*. 1(1):100-117. Retrieved October 18, 2013 from http://www.uaa.alaska.edu/anthropology/people/upload/King_Salmon.pdf.

¹⁵⁹³ See footnotes 1589 and 1590.

¹⁵⁹⁴ See footnote 1590.

¹⁵⁹⁵ Ibid.

¹⁵⁹⁶ U.S. Fish and Wildlife Service. 2011. *Becharof National Wildlife Refuge*. Retrieved December 21, 2011 from <http://becharof.fws.gov/>.

¹⁵⁹⁷ National Park Service. 2011. *Katmai National Park & Preserve*. Retrieved November 17, 2011 from <http://www.nps.gov/katm/>.

¹⁵⁹⁸ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹⁵⁹⁹ Lake Clark-Katmai Studies Center, National Park Service. *Alagnak Wild River: An Illustrated Guide to the Cultural History of the Alagnak Wild River*. Retrieved November 17, 2011 from <http://www.nps.gov/alag/historyculture>.

The Kvichak River System, including the Alagnak River and Iliamna Lake, is the single most important source of salmon in the Bristol Bay area, providing resources for commercial, subsistence and recreational fisheries. The Alagnak River attracts a large number of anglers each year for salmon, Arctic grayling, Arctic char and lake trout fisheries. The River's rainbow trout fishery has a world-class reputation.¹⁶⁰⁰

Northeast of South Naknek, Iliamna Lake is near the proposed site for the Pebble Mine, a copper-gold-molybdenum mineral deposit. If the mine moves forward, South Naknek and other Bristol Bay communities that depend on local fisheries resources could be affected.^{1601,1602} The immediate South Naknek area has no known mineral occurrences, but local potential exists for subsurface oil and gas resources. Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin, which runs along the northern edge of the Aleutian Islands and Alaska Peninsula.¹⁶⁰³ However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.¹⁶⁰⁴ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.¹⁶⁰⁵

According to the Bristol Bay Coastal Management Plan, the South Naknek area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surges, and sea ice. A majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall. Coastal flooding and erosion is affected by wind, site exposure, and sea ice conditions. The Management Plan notes the potential for climate change to augment erosion, as coastal areas of Alaska are freezing later in the season, leaving coastal areas more vulnerable to fall storms and storm surges. Changing temperatures also have the potential to shift distribution of fish and wildlife, with possible consequences for commercial and subsistence activities.¹⁶⁰⁶

¹⁶⁰⁰ See footnote 1598.

¹⁶⁰¹ Southwest Alaska Municipal Conference website. (n.d.). *Industries: Mining*. Retrieved December 21, 2011 from <http://www.swamc.org/html/industries/mining.php>.

¹⁶⁰² Pg. 36 in Duffield, John., Christopher Neher, David A. Patterson, and Oliver S. Goldsmith. 2007. *Economics of Wild Salmon Ecosystems: Bristol Bay, Alaska*. USDA Forest Service Proceedings RMRS-P-49. Retrieved December 21, 2011 from <http://www.fs.fed.us/>.

¹⁶⁰³ See footnote 1598.

¹⁶⁰⁴ U.S. Dept. of the Interior, Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

¹⁶⁰⁵ The White House, Office of the Press Secretary. March 31, 2010. Memorandum for the Secretary of the Interior: Withdrawl of Certain Areas of the United States Continental Shelf from Leasing Disposition. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

¹⁶⁰⁶ Glenn Gray and Associates (2008). *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf.

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in South Naknek as of September 2013.¹⁶⁰⁷

Current Economy¹⁶⁰⁸

Commercial fishing and salmon processing are the mainstays of South Naknek's economy. In 2010, 24 residents held commercial fishing permits. Seafood processing companies operate in the vicinity. Most other employment is in public services. A few people trap, and most residents depend on subsistence hunting and fishing. Salmon, trout, caribou, rabbit, porcupine, and seal are utilized.¹⁶⁰⁹ Top employers in 2010¹⁶¹⁰ included Trident Seafoods, the South Naknek Village Council, the Bristol Bay Borough, and the Bristol Bay Area Health Corporation

According to the 2006-2010 ACS,¹⁶¹¹ in 2010, the per capita income in South Naknek was estimated to be \$14,667 and the median household income was estimated to be \$52,188, compared to \$13,019 and \$22,344 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁶¹² the real per capita income in 2000 was \$17,120 and the real 2000 median household income was \$29,382. This shows that per capita income decreased between 2000 and 2010, while there was a real increase in household income during this period. In 2010, South Naknek ranked 208th of 305 Alaskan communities with per capita income that year, and 114th of 299 Alaskan communities with household income data. However, South Naknek's small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹⁶¹³ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for South Naknek in 2010 is \$10,637.¹⁶¹⁴ This estimate provides support for a decrease in real per capita income between 2000 and 2010.¹⁶¹⁵ These low per capita income estimates are reflected in

¹⁶⁰⁷ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁶⁰⁸ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁶⁰⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁶¹⁰ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁶¹¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁶¹² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc1.htm>).

¹⁶¹³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁶¹⁴ See footnotes 1610 and 1611.

¹⁶¹⁵ See footnote 1610.

the fact that, in 2011, South Naknek was recognized as a distressed community (using a plus/minus 3% formula) by the Denali Commission, prioritizing it for economic assistance.¹⁶¹⁶

Based on the 2006-2010 ACS, in 2010, 64.7% of the population age 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 11.8%, compared to the statewide unemployment rate of 5.9%. Approximately 17.6% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for South Naknek are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of South Naknek.¹⁶¹⁷ A potentially more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 21.2%, almost double the statewide unemployment rate estimate of 11.5%.¹⁶¹⁸

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers in South Naknek was estimated to be employed in the public sector (55.6%), while 36.1% were employed in the private sector and 8.3% were self-employed. Out of 36 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, a majority were estimated to be employed in three primary industries: education services, health care, and social assistance (47.2%), construction (30.6%), and agriculture, forestry, fishing, hunting, and mining industries (16.7%). The remainder of the workforce was estimated to be employed in public administration (5.6%). The workforce was concentrated in fewer industries in 2010 compared to 2000. While this may be due to a real population decline in South Naknek, it is also important to note that the sampling methods utilized by the U.S. Census Bureau were altered between 2000 and 2010. The shift in sampling methods may also account for some of the differences observed in employment estimates.¹⁶¹⁹ Employment distribution by industry is presented in Figure 3.

Occupations in which the greatest percentages of the South Naknek workforce were estimated to be employed in 2010 were natural resources, construction, and maintenance (36.1%), sales and office (30.6%), and management, business, science, and arts occupations (27.8%). Employment is broken down by occupation in Figure 4.

It is important to note that the number of individuals employed by fishing may be underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly.

¹⁶¹⁶ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

¹⁶¹⁷ See footnote 1613.

¹⁶¹⁸ See footnote 1610.

¹⁶¹⁹ See footnote 1613.

Figure 3. Local Employment by Industry in 2000-2010, South Naknek (U.S. Census).

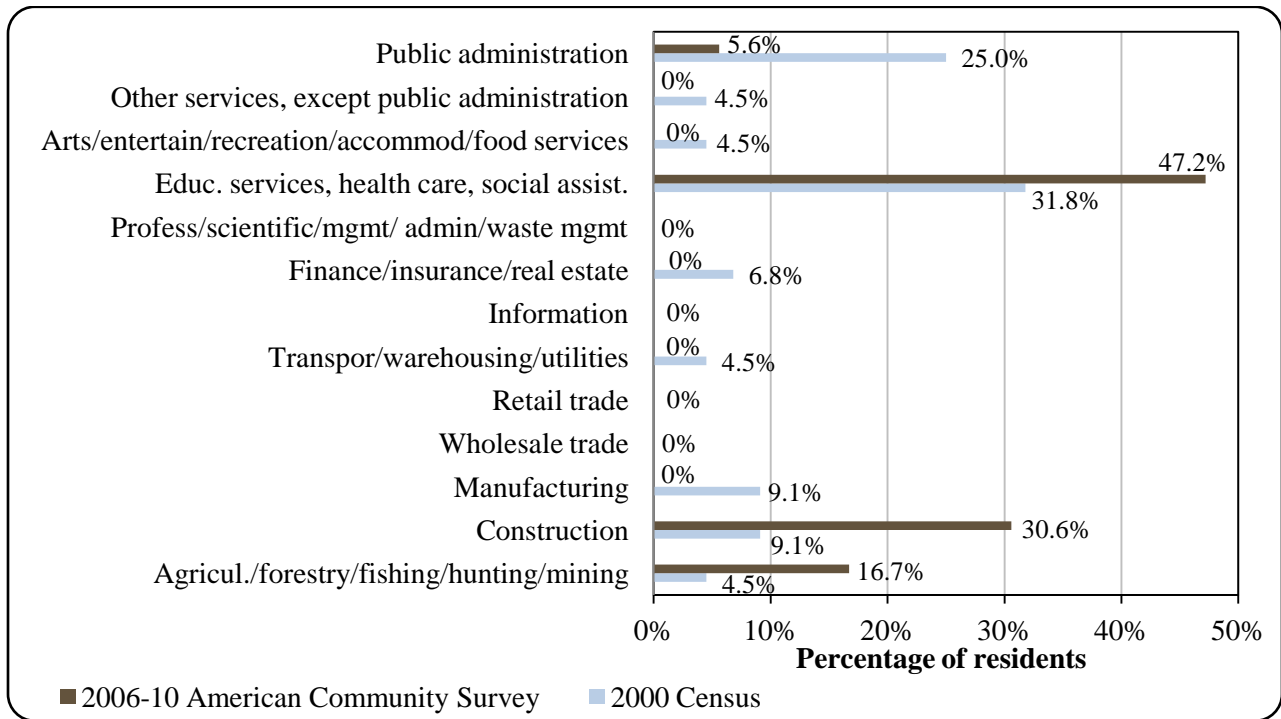
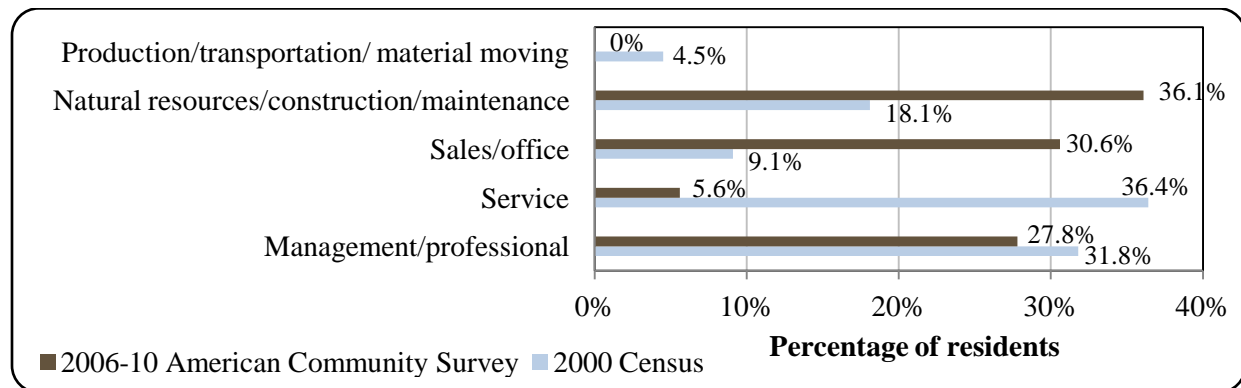


Figure 4. Local Employment by Occupation in 2000-2010, South Naknek (U.S. Census).



Governance

South Naknek is an unincorporated community located in the Bristol Bay Borough. The Bristol Bay Borough serves as the governing body for South Naknek. The Borough was incorporated in 1962, making it the first borough in Alaska. It is also one of the smallest boroughs in the State. It contains three CDPs – South Naknek, Naknek, and King Salmon. The seat of the Bristol Bay Borough is located in Naknek.¹⁶²⁰

¹⁶²⁰ Southwest Alaska Municipal Conference. (n.d.) *Bristol Bay Borough*. Retrieved October 21, 2013 from <http://www.swamc.org/html/southwest-alaska/bristol-bay-borough-raquo/bristol-bay-borough.php>.

As of 2012, the Bristol Bay Borough did not administer a sales tax, but did levy a 13 mills property tax, 10% bed tax, and 3% raw fish tax.^{1621,1622} In addition to tax revenues, other locally-generated income sources received by the Bristol Bay Borough between 2000 and 2010 included building and equipment rental income, charges for services provided by the Borough such as water and sewer, ambulance fees, and pool fees, land sales, building permit fees, and investment income. Outside revenue sources included state and federal grants and revenue sharing programs, as well as some state contracts including jail and special services contracts. State of Alaska sources of shared revenue during the 2000-2010 period included the State Revenue Sharing program from 2000 to 2003, the Community Revenue Sharing program in 2009 and 2010, municipal energy assistance, and state fish tax refunds (see the *Fisheries-Related Revenue* section of this profile for more information). Federal shared revenue sources included funds from the Payment In Lieu of Taxes program. A variety of special project and capital project grants were also received from the state and federal governments during this period.¹⁶²³ In 2008, a fisheries-related grant was received by the Bristol Bay Borough from the Alaska Department of Commerce, Community, and Economic Development's (DCCED's) Division of Community and Regional Affairs (DCRA). The award of \$70,671 was provided to the Borough to purchase land for and development of a Fisherman's Dock and Industrial Park. Information regarding selected community revenue sources is reported in Table 2.

In addition to the Borough, South Naknek Native Village serves as a governing body for the Native population in the community. South Naknek Native Village was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized by the Bureau of Indian Affairs. The local village Native corporation is the Alaska Peninsula Corporation. The regional Native corporation to which Naknek belongs is the Bristol Bay Native Corporation.¹⁶²⁴

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham and King Salmon. Nearby King Salmon also hosts offices of the National Park Service and U.S. Fish and Wildlife Service, and Dillingham has an office of the Alaska Department of Commerce, Community, and Economic Development's Division of Community and Regional Affairs. The nearest Alaska Department of Natural Resources office is a Division of Parks and Outdoor Recreation office in Homer, while Kodiak and Homer have the nearest National Marine Fisheries Service (NMFS) offices. However, the Anchorage offices of these agencies may be more easily accessible for the people of the Bristol Bay region. The U.S. Bureau of Citizenship and Immigration Services has its nearest offices in Kodiak and Anchorage.

¹⁶²¹ Alaska Department of Commerce, Community, and Economic Development. 2013. *Alaska Taxable 2012*. Retrieved October 18, 2013 from <http://commerce.alaska.gov/dnn/Portals/4/pub/OSA%20TAXABLE%202012%20-%20FINAL%202013-02-05.pdf>.

¹⁶²² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶²³ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

¹⁶²⁴ See footnote 1622.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Bristol Bay Borough, including South Naknek, from 2000 to 2010.

Year	Total Borough Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{1,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$7,175,572	n/a	\$29,923	n/a
2001	\$6,318,332	n/a	\$27,975	n/a
2002	\$4,801,219	n/a	\$27,960	n/a
2003	\$4,163,996	n/a	\$28,013	n/a
2004	\$6,098,710	n/a	n/a	n/a
2005	\$4,213,625	n/a	n/a	n/a
2006	\$5,475,184	n/a	n/a	n/a
2007	\$6,248,803	n/a	n/a	n/a
2008	\$8,374,133	n/a	n/a	\$70,671
2009	\$8,489,105	n/a	\$498,484	n/a
2010	\$8,839,652	n/a	\$497,231	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

South Naknek is accessible by air or sea. There are two state-owned lighted gravel runways. One is 2,264-ft-long by 60-ft-wide, and the other is 3,314-ft-long by 60-ft-wide. The Pacific American Fisheries (PAF) Cannery airport lies 3 miles to the southeast. It has a 750-ft-long by 30-ft-wide dirt strip and a 650-ft-long by 75-ft-wide crosswind strip. Scheduled and charter flight services are available. A 3,000-ft designated stretch of the Naknek River is used by float planes. The frozen river provides an ice road to Naknek and King Salmon in winter. There is an unmaintained dirt road to New Savonoski. The Borough operates a mid- and high-tide cargo dock at South Naknek with 200 feet of berth space to accommodate barges. Trucks, cars, ATVs, snowmobiles, and boats are used for local travel.¹⁶²⁵ In June 2012, round-trip airfare to Anchorage was \$588.¹⁶²⁶

¹⁶²⁵ See footnote 1622.

¹⁶²⁶ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

*Facilities*¹⁶²⁷

Individual water wells and septic systems serve the majority of the community; others use a piped water and sewer system. Two permitted landfills are available: one operated by the borough and one by Peter Pan Seafoods. Power lines cross the Naknek River 5 miles east of Naknek and connect to South Naknek. Law enforcement services are provided by the borough police department and Alaska state troopers in King Salmon. Fire and rescue services are provided by the volunteer Bristol Bay Borough Emergency Services. South Naknek also has a public library.

*Medical Services*¹⁶²⁸

Medical services are provided by the South Naknek Health Clinic, which is owned by the Village Council and operated by the Bristol Bay Area Health Corporation. The clinic is a Community Health Aid Program (CHAP) site. Alternate health care is provided by the Camai Medical Center in Naknek. Emergency Services have coastal air and river access and are provided by volunteers and a health aide. The nearest hospital is located in Dillingham.

*Educational Opportunities*¹⁶²⁹

As of 2011, there were no schools located directly in South Naknek, which is within the Bristol Bay Borough School District. The Bristol Bay Borough School is located in nearby Naknek. The school has an Elementary School wing and a Middle/High School wing. As of 2011, the Elementary School (grades preschool through 6th) was attended by 93 students and had 7 teachers. That same year, the Middle/High School had 85 students and 8 teachers.¹⁶³⁰ During community review of this profile, a representative of the Bristol Bay Borough noted that enrollment numbers have been steadily decreasing in the Bristol Bay School District system.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Starting in 6,000 B.C., there is evidence of Ocean Bay peoples, ancestors of the Kodiak and Aleutian traditions, living in the Bristol Bay region. These people likely made use of marine resources along the coast. By 400 B.C., there is archaeological evidence of fishing activity by people of the Norton tradition in the South Naknek area. Notched pebbles used as sinkers

¹⁶²⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶²⁸ Ibid.

¹⁶²⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁶³⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

allowed access to fishing sites along the Naknek River where deep swift water made wading impossible.¹⁶³¹

The community of South Naknek developed alongside the development of the commercial fishing industry in Bristol Bay. An influx of workers arrived from outside Alaska to help in the construction of canneries and to provide a sufficient labor force for fishing and cannery jobs. The lack of fishermen and cannery labor led to a practice of importing cannery crews and fishermen from outside Alaska.¹⁶³² Historically this led to a lack of participation by local Native residents as fishermen in the Bristol Bay salmon fishery, although the start of World War II created a labor shortage in the United States, and provided an opportunity for local residents to enter the fishery.^{1633,1634}

South Naknek is located at the mouth of the Naknek River, which empties into Bristol Bay. The area is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. South Naknek participates in the Community Development Quota program as a member of the Bristol Bay Economic Development Corporation (BBEDC). The community is not eligible for the Community Quota Entity program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, South Naknek does not have a registered processing plant. The nearest processing plants are located in nearby Naknek.

Fisheries-Related Revenue

Between 2000 and 2010, the primary sources of revenue to the Bristol Bay Borough that were directly tied to fisheries included income from both a borough and a state raw fish tax, as well as revenue sharing from the state Fisheries Business Tax. Based on information reported in the Bristol Bay Borough's yearly audits, the local raw fish tax remained a more stable source of revenue than the state raw fish tax through the decade, and the shared Fisheries Business Tax increased in importance over time, rising to \$1.5 million per year in several later years of the period. Information about fisheries-related revenue sources is presented in Table 3.

It is important to note that the BBEDC uses fisheries revenue from the CDQ program to provide grants for infrastructure, fuel, and electrical assistance to member communities. The BBEDC also offers educational scholarships, vocational training, and fishing permit acquisition and financing assistance to residents of its member communities.¹⁶³⁵

¹⁶³¹ Morris, J. 1985. "The Use of Fish and Wildlife Resources by Residents of the Bristol Bay Borough, Alaska." *Alaska Dept. of Fish and Game Technical Paper Number 123*. Retrieved December 22, 2011 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp123.pdf>.

¹⁶³² Ibid.

¹⁶³³ Ibid.

¹⁶³⁴ Bristol Bay Economic Development Corporation (2003). *An Analysis of Options to Restructure the Bristol Bay Salmon Fishery*. Retrieved December 22, 2011 from <http://www.bbsalmon.com/FinalReport.pdf>.

¹⁶³⁵ Bristol Bay Economic Development Corporation. *Annual Report 2010*. Retrieved November 16, 2011 from <http://www.bbetc.com>.

Commercial Fishing

In 2010, there were 28 salmon Commercial Fisheries Entry Commission (CFEC) permit holders that held a total of 29 salmon CFEC permits in South Naknek. Of these, 26 were reported to have been actively fished. Of the 28 salmon CFEC permits issued in 2010, the majority were for the Bristol Bay set gill net fishery, and the remainder were issued for the Bristol Bay drift gill net fishery. Between 2000 and 2010, the number of salmon CFEC permits, permit holders, and permits reported as fished all decreased substantially. Prior to 2007, South Naknek residents also held CFEC permits for halibut and herring, though the number of permits and permit holders were small. The halibut CFEC permits were issued for the statewide longline fishery using vessels under 60 feet. The herring CFEC permits were issued for roe herring gill net fishery in Bristol Bay. Herring permits were actively fished from 2000 to 2006, and a halibut permit was actively fished in 2006 only. Information on CFEC permits and permit holders by species between 2000 and 2010 is presented in Table 4.

There were 13 crew license holders in South Naknek in 2010, which represents an overall decrease from 39 crew license holders in 2000 and a peak of 43 crew license holders in 2002. There were no fish buyers located in South Naknek between 2000 and 2010, and there have been no shore-side processing facilities located in the community since 2002. In 2010, 11 vessels were primarily owned by South Naknek residents and 39 vessels were homeported in South Naknek. Both of these numbers represent declines from 2000. Given the lack of fish buyers in South Naknek, no vessels were reported to land catch in South Naknek between 2000 and 2010. Table 5 presents information about characteristics of the commercial fishing sector.

Between 2000 and 2010, one halibut quota share account holder resided in South Naknek. The number of halibut quota shares held in this account remained stable at 1,575 throughout the period. The annual halibut IFQ allotment varied slightly from year to year. Between 2000 and 2010, there were no sablefish or crab quota account holders in South Naknek. This information about federal halibut, sablefish, and crab catch share participation is presented in Tables 6 through 8.

As previously noted, no commercial fishing vessels landing catch in South Naknek between 2000 and 2010 (Table 9). For catch landed in other ports by South Naknek vessel owners, a majority of landings and associated ex-vessel revenue for all species except salmon between 2000 and 2010 are considered confidential due to a small number of participants (Table 10).

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Bristol Bay Borough: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Borough raw fish tax ¹	\$1,376,536	\$529,759	\$337,112	\$131,111	\$311,369	\$464,884	\$729,623	\$838,199	\$1,143,108	\$1,587,484	\$1,170,907
State raw fish tax ¹	\$789,759	\$1,439,586	\$918,305	\$504,399	n/a	n/a	n/a	n/a	n/a	n/a	n/a
State Shared Fisheries Business Tax ¹	\$8,232	\$14,275	\$12,108	n/a	\$393,836	\$460,752	\$834,661	\$1,178,357	\$29,353	\$1,581,617	\$1,559,831
State Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue received by the Bristol Bay Borough⁴</i>	<i>\$2,174,527</i>	<i>\$1,983,620</i>	<i>\$1,267,525</i>	<i>\$635,510</i>	<i>\$705,205</i>	<i>\$925,636</i>	<i>\$1,564,284</i>	<i>\$2,016,556</i>	<i>\$1,172,461</i>	<i>\$3,169,101</i>	<i>\$2,730,738</i>
<i>Total municipal revenue reported by the Bristol Bay Borough⁵</i>	<i>\$7,175,572</i>	<i>\$6,318,332</i>	<i>\$4,801,219</i>	<i>\$4,163,996</i>	<i>\$6,098,710</i>	<i>\$4,213,625</i>	<i>\$5,475,184</i>	<i>\$6,248,803</i>	<i>\$8,374,133</i>	<i>\$8,489,105</i>	<i>\$8,839,652</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Reported by community leaders in a survey conducted by the the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the Bristol Bay Borough reports each year in its audit. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, South Naknek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	3	2	2	1	2	0	1	0	0	0	0
	Fished permits	0	0	0	0	0	0	1	0	0	0	0
	% of permits fished	-	-	-	-	-	-	100%	-	-	-	-
	Total permit holders	3	2	2	1	2	0	1	0	0	0	0
Herring (CFEC) ²	Total permits	3	3	1	1	3	3	2	0	0	0	0
	Fished permits	2	1	1	1	1	1	1	0	0	0	0
	% of permits fished	67%	33%	100%	100%	33%	33%	50%	-	-	-	-
	Total permit holders	3	3	1	1	2	2	2	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, South Naknek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	49	48	51	51	53	47	43	38	36	31	29
	Fished permits	46	45	43	44	49	44	41	34	30	26	26
	% of permits fished	94%	94%	84%	86%	92%	94%	95%	89%	83%	84%	90%
	Total permit holders	53	49	55	52	53	48	43	37	36	32	28
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>55</i>	<i>53</i>	<i>54</i>	<i>53</i>	<i>58</i>	<i>50</i>	<i>46</i>	<i>38</i>	<i>36</i>	<i>31</i>	<i>29</i>
	<i>Fished permits</i>	<i>48</i>	<i>46</i>	<i>44</i>	<i>45</i>	<i>50</i>	<i>45</i>	<i>43</i>	<i>34</i>	<i>30</i>	<i>26</i>	<i>26</i>
	<i>% of permits fished</i>	<i>87%</i>	<i>87%</i>	<i>81%</i>	<i>85%</i>	<i>86%</i>	<i>90%</i>	<i>93%</i>	<i>89%</i>	<i>83%</i>	<i>84%</i>	<i>90%</i>
	<i>Permit holders</i>	<i>54</i>	<i>50</i>	<i>55</i>	<i>52</i>	<i>53</i>	<i>48</i>	<i>43</i>	<i>37</i>	<i>36</i>	<i>32</i>	<i>28</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in South Naknek: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in South Naknek ²	Total Net Pounds Landed in South Naknek ^{2,5}	Total Ex-Vessel Value of Landings in South Naknek ^{2,5}
2000	39	0	2	18	48	0	0	\$0
2001	17	0	2	17	43	0	0	\$0
2002	43	0	1	17	35	0	0	\$0
2003	41	0	0	17	38	0	0	\$0
2004	35	0	0	18	41	0	0	\$0
2005	26	0	0	14	41	0	0	\$0
2006	28	0	0	12	47	0	0	\$0
2007	26	0	0	12	46	0	0	\$0
2008	20	0	0	11	45	0	0	\$0
2009	22	0	0	10	39	0	0	\$0
2010	13	0	0	11	39	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in South Naknek: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	1	1,575	19
2001	1	1,575	22
2002	1	1,575	22
2003	1	1,575	22
2004	1	1,575	23
2005	1	1,575	22
2006	1	1,575	21
2007	1	1,575	19
2008	1	1,575	18
2009	1	1,575	16
2010	1	1,575	15

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of South Naknek: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of South Naknek: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in South Naknek: 2000-2010.

Total Net Pounds¹											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
Total²	0	0	0	0	0	0	0	0	0	0	0
Ex-vessel Value (nominal U.S. dollars)											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total²	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by South Naknek Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	494,244	624,125	300,832	343,600	485,195	817,008	504,233	605,077	555,688	739,669	465,588
<i>Total²</i>	<i>494,244</i>	<i>624,125</i>	<i>300,832</i>	<i>343,600</i>	<i>485,195</i>	<i>817,008</i>	<i>504,233</i>	<i>605,077</i>	<i>555,688</i>	<i>739,669</i>	<i>465,588</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$317,103	\$260,292	\$146,276	\$169,939	\$248,015	\$491,868	\$319,171	\$391,751	\$408,837	\$581,077	\$433,843
<i>Total²</i>	<i>\$317,103</i>	<i>\$260,292</i>	<i>\$146,276</i>	<i>\$169,939</i>	<i>\$248,015</i>	<i>\$491,868</i>	<i>\$319,171</i>	<i>\$391,751</i>	<i>\$408,837</i>	<i>\$581,077</i>	<i>\$433,843</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish were registered in South Naknek. The number of sportfishing licenses sold to community residents (irrespective of the point of sale) varied between 8 and 33 per year. The number of sportfishing licenses sold within the community was minimal, and in all years was lower than the number of licenses sold to community residents, indicating the potential that South Naknek residents may travel to nearby Naknek and King Salmon or other areas to prepare for and engage in sportfishing activity.

South Naknek is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-Alaska resident anglers during this period. In contrast, non-Alaska resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near South Naknek is also displayed in Table 11.

The Alaska Statewide Harvest Survey,¹⁶³⁶ conducted by the ADF&G between 2000 and 2010, noted the following species targeted by private anglers in South Naknek: sockeye salmon, smelt, razor clam, hardshell clam, and other shellfish. No kept/release log book data were reported for fishing charters out of South Naknek between 2000 and 2010.¹⁶³⁷

Table 11. Sport Fishing Trends, South Naknek: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in South Naknek ²
2000	0	0	27	0
2001	0	0	33	0
2002	0	0	30	0
2003	0	0	33	22
2004	0	0	28	9
2005	0	0	18	16
2006	0	0	25	17
2007	0	0	9	8
2008	0	0	25	16
2009	0	0	14	10
2010	0	0	8	2

¹⁶³⁶ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁶³⁷ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, South Naknek: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Most residents of South Naknek depend on subsistence hunting and fishing. Salmon, trout, caribou, rabbit, porcupine, and seal are particularly important local resources.¹⁶³⁸ Data regarding subsistence participation by household and species were available in 2007, the year that ADF&G conducted a household subsistence survey in South Naknek. That year, 49% of South Naknek households were reported to participate in salmon subsistence, 19% in halibut subsistence, 24% in marine mammal subsistence, 9% in marine invertebrate subsistence, and 68% in non-salmon fish subsistence (not including halibut). In addition, the survey provided a per capita estimate of 151 pounds of land- and sea-based resources utilized by South Naknek residents that year (Table 12).

Information about permits and total harvest is available for the 2000-2010 period for salmon, halibut, marine invertebrates and non-salmon fish, and marine mammals. The number of subsistence salmon permits issues to South Naknek households declined from 42 in 2000 to 26 in 2008, and the number reported as actively fished also declined over the period. Sockeye were consistently the most heavily harvested species, along with smaller harvests of Chinook, chum,

¹⁶³⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

pink, and coho in all years for which salmon harvest data were reported. This information is presented in Table 13, along with information about total harvests of marine invertebrates and non-salmon fish. In 2007, the year of the ADF&G household subsistence survey, 185 pounds of marine invertebrates and 233 pounds of non-salmon fish (not including halibut) were estimated to have been harvested in South Naknek.

Additional detail is available from ADF&G regarding the species of marine invertebrates and non-salmon fish harvested. Marine invertebrate species harvested by South Naknek residents in 2007 were butter and softshell clams, and non-salmon fish species harvested were smelt, rainbow trout, and lake trout. It is important to note that, in addition to the species reported to have been actively harvested by South Naknek households, other species were also reported to have been used. Additional marine invertebrate species included razor clams, Dungeness crab, and king crab, while additional non-salmon fish species included herring and Pacific gray cod. In addition, the percentages of South Naknek households using smelt and clams were greater than the percentages engaged in their harvest.¹⁶³⁹ These facts point to the presence of sharing networks both within the community and between households in South Naknek and other communities.

Halibut subsistence harvest was minimal in South Naknek. From 2003 to 2009, the number of Subsistence Halibut Registration Certificate (SHARC) cards issued to South Naknek residents varied between one and three per year. No data were available regarding the number of SHARC cards were actively fished each year, or the total pounds of halibut harvested (Table 14).

The only marine mammal species harvested by South Naknek residents between 2000 and 2010 was harbor seal. For the years in which data were reported, total harbor seal harvest varied from 1 to 17 animals per year. No information was available from management agencies regarding subsistence harvest of sea otter, walrus, Steller sea lion, or spotted seal over the decade (Table 15). Additional data are available from ADF&G regarding marine mammal subsistence use patterns in South Naknek. Although South Naknek households did not report participating in harvest activities of species other than harbor seal in 2007, they reported using bowhead whale for subsistence purposes.¹⁶⁴⁰ As with marine invertebrate and non-salmon fish harvest and use patterns described above, this information suggests the presence of sharing networks between South Naknek and other communities that engage in bowhead harvest.

¹⁶³⁹ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁶⁴⁰ Ibid.

Table 12. Subsistence Participation by Household and Species, South Naknek: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	49%	19%	24%	9%	68%	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, South Naknek: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	42	40	118	119	231	272	2,571	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	34	33	337	10	210	19	2,320	n/a	n/a
2005	31	27	219	18	352	64	1,561	n/a	n/a
2006	33	29	208	19	249	55	1,936	n/a	n/a
2007	26	22	171	117	287	134	1,967	185	233
2008	26	26	139	43	423	159	1,838	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, South Naknek: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	3	n/a	n/a
2006	3	n/a	n/a
2007	3	n/a	n/a
2008	2	n/a	n/a
2009	2	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, South Naknek: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	4	n/a
2001	n/a	n/a	n/a	n/a	n/a	11	n/a
2002	n/a	n/a	n/a	n/a	n/a	16	n/a
2003	n/a	n/a	n/a	n/a	n/a	1	n/a
2004	n/a	n/a	n/a	n/a	n/a	15	n/a
2005	n/a	n/a	n/a	n/a	n/a	17	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	1	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Togiak (TOAG-ee-ack)



People and Place

*Location*¹⁶⁴¹

Togiak is located at the head of Togiak Bay, 67 miles west of Dillingham and approximately 400 miles southwest of Anchorage. It lies in the Togiak National Wildlife Refuge and is the gateway to Walrus Island Game Sanctuary. The community encompasses 45.2 square miles of land and 183.3 square miles of water. Togiak was incorporated as a 2nd Class city in 1969, is located within the Dillingham Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*¹⁶⁴²

There were 817 inhabitants in Togiak in 2010, making it the 77th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Togiak grew by 1.36%, though the average annual growth rate during that period was -0.26%, indicating a very slow rate of decline (Table 1).

In 2010, a majority of Togiak residents identified themselves as American Indian and Alaska Native (78%) (Figure 1). Other ethnic groups present in Togiak that year included White (5.5%), two or more races (15.9%), Hispanic or Latino (1.8%), some other race (0.2%), Black or African American (0.2%), and Native Hawaiian or Other Pacific Islander (0.1%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaska Native fell by 8.3%, and the percentage of the population identifying themselves as White also decreased. During this period, there were corresponding increases in the percentages of the population identifying themselves as two or more races, Native Hawaiian and Other Pacific Islander, Black or African American, and Hispanic or Latino.

The average household size in Togiak in 2010 was 3.54, a decrease from 4.0 persons per household in both 1990 and 2000. There were a total of 261 housing units that year, compared to 200 in 1990 and 221 in 2000. Of the households surveyed in 2010, 61.3% were owner-occupied, compared to 74.7% in 2000; 27.2% were renter-occupied, compared to 16.7% in 2000; 9.2% were vacant, compared to 5.4% in 2000; and 2.3% were occupied seasonally, compared to 3.2% in 2000. No residents lived in group quarters between 1990 and 2010.

In 2010, the gender makeup in Togiak was 52.0% male and 48.0% female, which was the same as the statewide distribution (52.0% male, 48.0% female) and less even than the distribution in 2000 (50.3% male, 49.7% female). The median age was estimated to be 24.5 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska,

¹⁶⁴¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁴² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

33.8 years. In 2010 the largest percentage of the population fell within the age group 0-19 years old, with the next largest percentage falling within the age group 40-59 years old. Relatively few individuals were age 60 or older (Figure 2).

According to the 2006-10 American Community Survey,¹⁶⁴³ in terms of educational attainment, 64.6% of Togiak residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 23.5% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 11.9% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 33.2% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 2.7% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; and 1.5% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall.

Table 1. Population in Togiak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	613	-
2000	809	-
2001	-	787
2002	-	809
2003	-	820
2004	-	803
2005	-	779
2006	-	783
2007	-	786
2008	-	801
2009	-	820
2010	817	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

¹⁶⁴³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 1. Racial and Ethnic Composition, Togiak: 2000-2010 (U.S. Census).

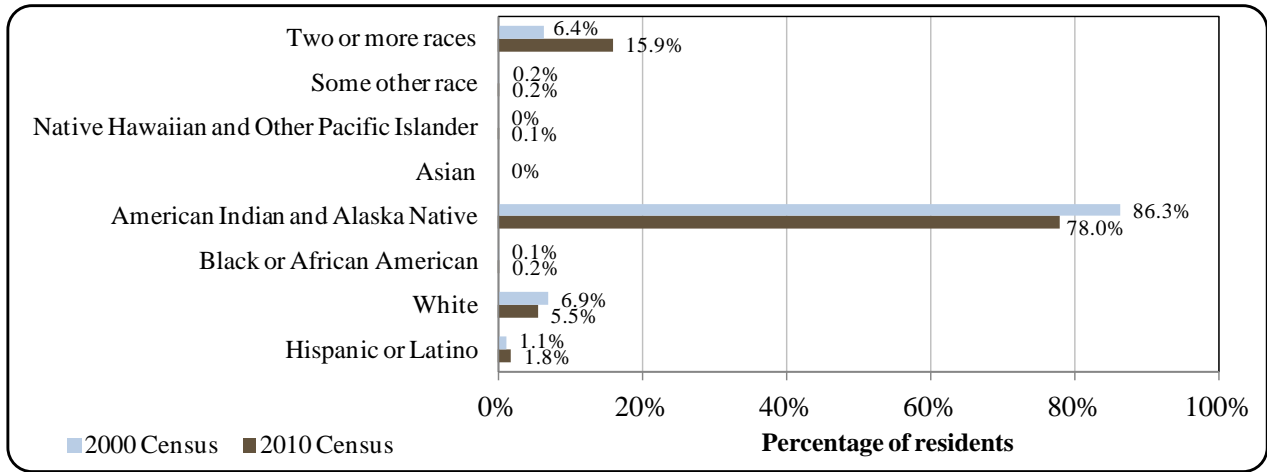
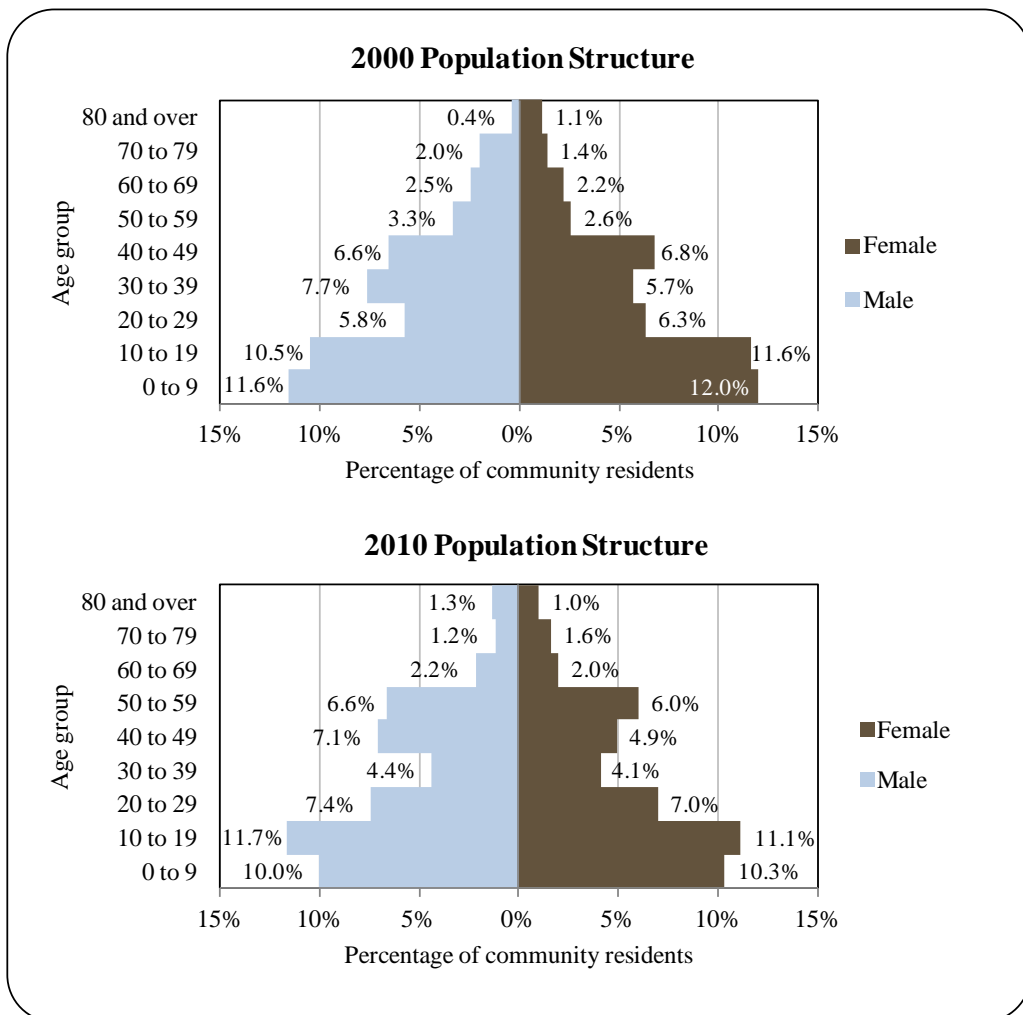


Figure 2. Population Age Structure in Togiak Based on the 2000 and 2010 U.S. Decennial Census.



*History, Traditional Knowledge, and Culture*¹⁶⁴⁴

Togiak first appeared in the records of Lt. Gavrilla Sarichev of the Imperial Russian Navy between 1790 and 1792. The village was later recorded on maps produced between 1836 and 1850 by the Russian America Company.¹⁶⁴⁵ In 1880, “Old Togiak” or “Togiagamute” was located across the bay and had a population of 276. Heavy winter snowfalls made wood-gathering difficult at Old Togiak, so gradually people settled at a new site on the opposite shore, where the task was easier. Many residents of the Yukon-Kuskokwim region migrated south to the Togiak area after a devastating influenza epidemic in 1918-19. A school was established in an old church in 1950. A school building and a National Guard armory were constructed in 1959. Togiak was flooded in 1964, and many fish racks and stores of gas, fuel oil, and stove oil were destroyed. Three or four households left Togiak after the flood and developed the village of Twin Hills upriver. The city government was incorporated in 1969. Today, Togiak is a traditional Yup’ik Eskimo village with that is dependent on fishing and a subsistence lifestyle. The sale, importation, and possession of alcohol is banned in the village.

Natural Resources and Environment¹⁶⁴⁶

Togiak is located in a climatic transition zone; however, the arctic climate also affects this region. Average summer temperatures range from 37 to 66 °F (2.8 to 18.9 °C); winter temperatures average 4 to 30 °F (-15.6 to -1.1 °C). Precipitation averages 20 to 26 inches annually. Fog and high winds are prevalent during the winter. The bay is ice-free from June through mid-November.

Togiak is located within the Togiak National Wildlife Refuge (TNWR), an area that is managed by the U.S. Fish and Wildlife Service (FWS). The following information is from the FWS.¹⁶⁴⁷ The TNWR totals 4.7 million acres. Almost half of these lands, the northern 2.3 million acres, are designated as the Togiak Wilderness Area. This constitutes the second largest contiguous Wilderness Area within the National Wildlife Refuge System. The TNWR was established to conserve fish and wildlife populations and habitats in their natural diversity including salmon, marine birds and mammals, migratory birds, and large mammals, to fulfill international treaty obligations; to provide for continued subsistence use; and to ensure necessary water quality and quantity. Special values of the TNWR include the Togiak Wilderness Area, the Kanektok, Goodnews and Togiak river drainages, and sportfishing. The wild lands of the refuge, including the Togiak Wilderness Area, provide valuable and diverse habitat for the fish and wildlife that make the area their home. The conservation of freshwater streams and rivers, wetland and alpine tundra, boreal forests, and coastal cliffs and beaches allow an amazing diversity of species to find suitable homes here. The lands also offer amazing opportunities for recreation and education.¹⁶⁴⁸

¹⁶⁴⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁴⁵ Tryck Consulting. (2006). *Togiak Comprehensive Plan*. Retrieved July 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Togiak-CP-2006.pdf>.

¹⁶⁴⁶ Ibid.

¹⁶⁴⁷ U.S. Fish and Wildlife Service (2011). *Togiak National Wildlife Refuge*. Retrieved from <http://togiak.fws.gov/> on April 9, 2012.

¹⁶⁴⁸ U.S. Fish and Wildlife Service (2011). *Togiak National Wildlife Refuge: Wildlands*. Retrieved from <http://togiak.fws.gov/wildland.htm> on April 9, 2012.

The TNWR protects habitat that produces nearly 3 million Chinook, sockeye, chum, pink and coho salmon, and 27 other fish species. These fish species are the primary subsistence resource for residents of seven local villages. Fishery resources in this area of Alaska are economically important for commercial fisheries valued at over 8 million dollars, as well as a 6 million dollar sport fishery. Ensuring that adequate numbers of each fish species are allowed to spawn in each drainage is key to this region's aquatic and terrestrial ecosystems. The TNWR also contains prime habitat for several other fish species, including rainbow trout, Arctic grayling, Dolly Varden, and Arctic char. Anglers come from around the world for an opportunity to pursue these prized fish species. The TNWR is working to further our understanding of these fish species.

The TNWR conserves habitat for at least 201 staging, migrating, or breeding bird species. Bird species groups include landbirds, shorebirds, seabirds, raptors, and waterfowl. Birds from the North American Pacific Flyway and several Asiatic routes funnel through the area. It is home to more than 30 species of terrestrial mammals. With a wide variety of habitats, the TNWR supports brown bear, moose, caribou, wolves, and many smaller mammals. The Nushagak Peninsula, in the southeastern portion of the TNWR, was the site of a 1988 caribou reintroduction, and the caribou population continues to grow. Moose populations on the refuge have increased substantially in recent years as well, much to the delight of local people. Lynx and wolverines continue their elusive ways, seldom seen except for tracks they leave in the snow. In addition, 17 species of marine mammals are found along the coastline. The TNWR has haulout sites that provide animals a place to rest after feeding forays in the Bering Sea. Cape Peirce, on the southwestern tip of the TNWR, is one of only two regularly used land-based haulouts for Pacific walrus in North America. Up to 12,000 male walrus may haul out here at one time. Endangered Steller sea lions use haulouts within the TNWR, as do harbor and spotted seals. Marine and terrestrial mammals are important food resources for local village residents, and are important in the local tourism economy as well.¹⁶⁴⁹

Togiak is also the gateway to the Walrus Islands State Game Sanctuary (WISGS), an area managed by the Alaska Department of Fish and Game (ADF&G). The sanctuary protects a group of seven small craggy islands and their adjacent waters in northern Bristol Bay, approximately 65 miles southwest of Dillingham. The WISGS includes Round Island, Summit Island, Crooked Island, High Island, Black Rock and The Twins. The WISGS was established in 1960 to protect one of the largest terrestrial haulout sites in North America for Pacific walrus (*Odobenus rosmarus divergens*). The sanctuary also protects important habitats for several species of seabirds, Steller sea lions (*Eumetopias jubatus*) and other marine and terrestrial birds and mammals. The ADF&G manages the sanctuary primarily to protect these important habitats and wildlife species, and secondarily to provide for public use and enjoyment of these resources including the opportunity for scientific and educational study, viewing, and photography.¹⁶⁵⁰

Reserves of oil and natural gas are also thought to be present on the continental shelf in the Bristol Bay Basin, along the northern edge of the Aleutian Islands and Alaska Peninsula.¹⁶⁵¹ However, given the importance of Bristol Bay fisheries to the nation and the proximity of the

¹⁶⁴⁹ U.S. Fish and Wildlife Service. 2011. Togiak National Wildlife Refuge: Wildlife. Retrieved from <http://togiak.fws.gov/wildlife.htm> on April 9, 2012.

¹⁶⁵⁰ Alaska Department of Fish and Game. 2011. Walrus Islands State Game Sanctuary: Area Overview. Retrieved from <http://www.adfg.alaska.gov/index.cfm?ADFG=walrusislands.main> on April 9, 2012.

¹⁶⁵¹ Alaska Department of Natural Resources. 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.¹⁶⁵² On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.¹⁶⁵³

The Bristol Bay area is at risk of earthquakes and volcanic activity, landslides and avalanches, flooding and erosion, storm surges, a majority of earthquake activity takes place to the south of the Alaska Peninsula, in the Aleutian trench. As a result, communities located on the south side of the Peninsula are more vulnerable to tsunamis than communities inside the Bay. Soils in Bristol Bay are made up largely of glacial till left behind in moraines, and depending on slope, saturation, loading, or earthquake activity, these soils have a potential to slide. Floods are a potential hazard on almost every river in the Bristol Bay region. They can be caused by spring snowmelt and breakup, river ice jams, and heavy rainfall. There is also potential for climate change to augment erosion, as coastal areas of Alaska are freezing later in the season, leaving coastal areas more vulnerable to fall storms and storm surges. Changing temperatures also have the potential to shift distribution of fish and wildlife, with possible consequences for commercial and subsistence activities.¹⁶⁵⁴

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active in Togiak in 2010.¹⁶⁵⁵

Current Economy¹⁶⁵⁶

Togiak's economic base is primarily commercial salmon, herring, and herring roe-on-kelp fisheries. In 2010, 224 residents held commercial fishing permits; fishermen use flat-bottom boats for the shallow waters of Togiak Bay. There is one on-shore fish processor and several floating processing facilities near Togiak. The entire community depends heavily on subsistence activities. Salmon, herring, seal, sea lion, whale, and walrus are among the species harvested. A few residents trap.¹⁶⁵⁷ Top employers in 2010¹⁶⁵⁸ included: Southwest Region Schools, City of Togiak, Alaska Commercial Co., Togiak Seafoods, Bristol Bay Area Health Corp., Bristol Bay Native Association, Traditional Council of Togiak, Omni Enterprises Inc., Togiak Native Ltd., and Alaska Island Air Inc.

In 2010, the per capita income in Togiak was estimated to be \$10,406 and the median household income was estimated to be \$42,813, compared to \$9,676 and \$23,977 in 2000,

¹⁶⁵² Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

¹⁶⁵³ The White House, Office of the Press Secretary. March 31, 2010. Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

¹⁶⁵⁴ Glenn Gray and Associates. 2008. *Bristol Bay Coastal Resource Service Area Coastal Management Plan*. Retrieved February 7, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BBCRSA/BB_Final_Plan_Amendment.pdf.

¹⁶⁵⁵ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved January 28, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

¹⁶⁵⁶ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁶⁵⁷ See footnote 1644.

¹⁶⁵⁸ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁶⁵⁹ the real per capita income in 2000 is shown to have been \$12,724 and the real 2000 median household income was \$31,529. This shows that per capita income decreased over the period, while there was a real increase in median household income. In 2010, Togiak ranked 267th of 305 Alaskan communities with per capita income that year, and 177th of 299 Alaskan communities with household income data. However, Togiak's small population size may have prevented the American Community Survey (ACS) from accurately portraying economic conditions.¹⁶⁶⁰ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Togiak in 2010 was \$5,338, which indicates a more significant decrease compared to the real per capita income values reported by the U.S. Census in 2000.¹⁶⁶¹ This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁶⁶² However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in the same year, 47% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 30.9%, compared to the statewide unemployment rate of 5.9%. Approximately 16.6% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Togiak are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Togiak. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 14.3%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the public sector (63.5%), while 32.4% were employed in the private sector and 4.1% were self-employed. Out of 170 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (34%), retail trade (26.3%), public administration (12.8%), and transportation, warehousing, and utilities (12.2%). Smaller percentages of the workforce were employed in manufacturing (8.3%), other services, except public administration (4.5%), and construction (1.9%) (Figures 3 and 4). According to 2010 ALARI estimates,¹⁶⁶³ most (45.9%) employed residents worked in local government sectors; followed by trade,

¹⁶⁵⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁶⁶⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁶⁶¹ See footnote 1658.

¹⁶⁶² Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

¹⁶⁶³ See footnote 1658.

transportation, and utilities (19.2%); education and health service (9.4%); and manufacturing (8.6%) sectors.

According to the 2006-2010 ACS, no residents were estimated to work in agriculture, forestry, hunting, or mining sectors. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed fishing industries is likely underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

Figure 3. Local Employment by Industry in 2000-2010, Togiak (U.S. Census).

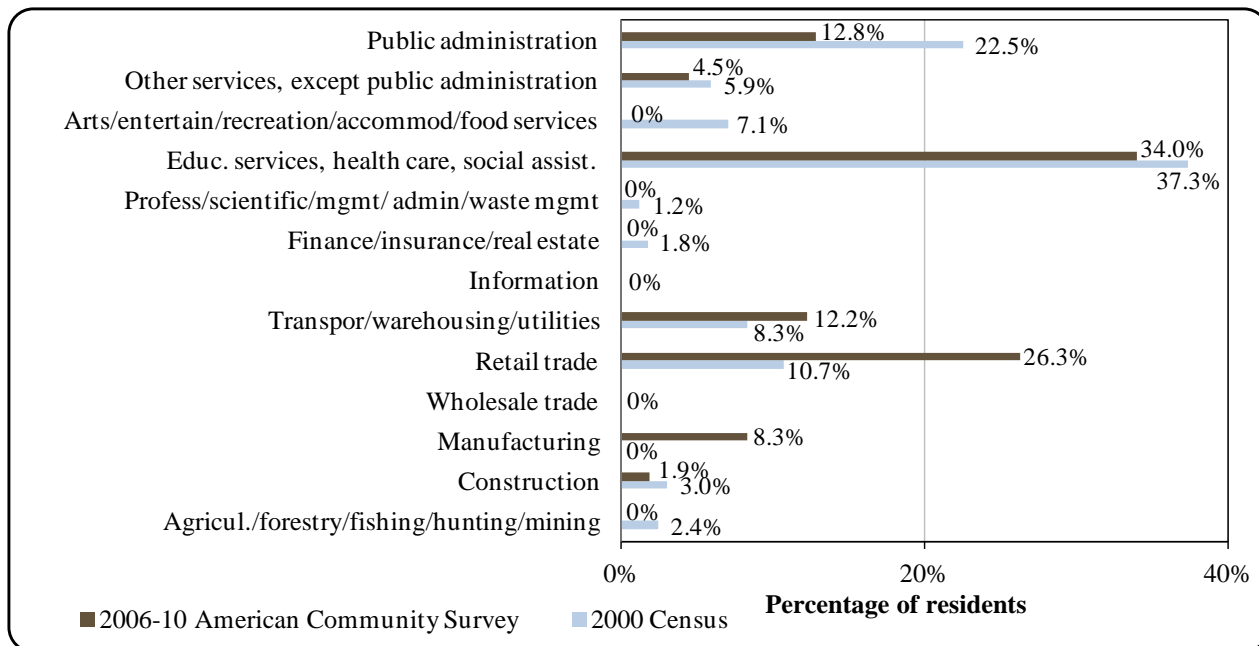
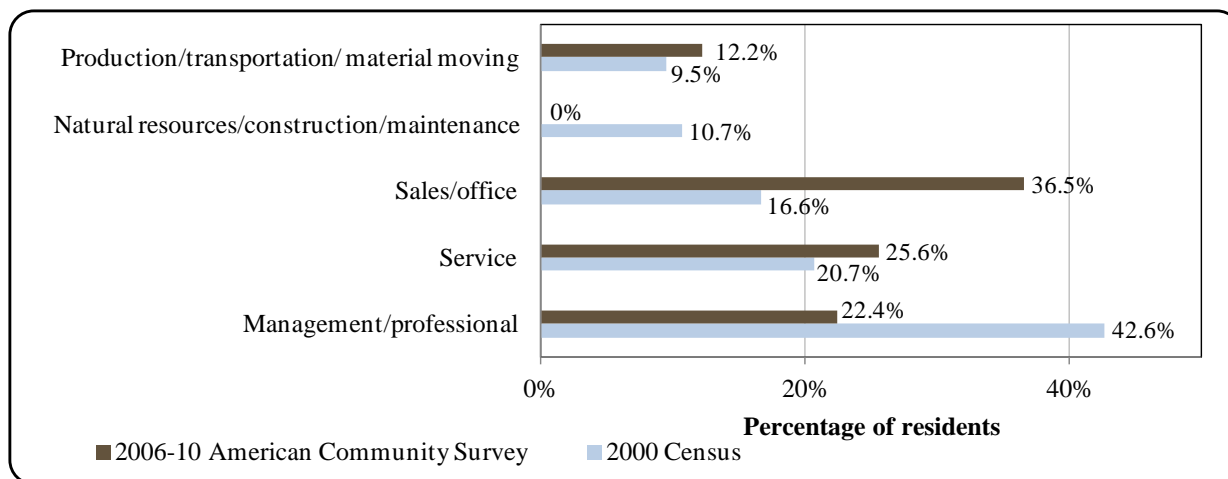


Figure 4. Local Employment by Occupation in 2000-2010, Togiak (U.S. Census).



Governance

Togiak is a Second-class city located in the Dillingham Borough. Total municipal revenue received by the city was highly variable between 2000 and 2010. The city of Togiak administered a 2% sales tax in 2010. Total municipal revenue was taken from *Certified Financial Statements* and financial audits (financial audits were used for 2002 through 2005, and 2008 figures.)¹⁶⁶⁴ When adjusted for inflation,¹⁶⁶⁵ total municipal revenues declined by 21.1% between 2000 and 2010 from \$1.07 million, to \$1.09 million. Yearly revenues were somewhat variable, peaking in 2004 at \$1.47 million; thanks in part to sizable state and federal grants. In 2010, general fund revenues accounted for 82.1% of total municipal revenues, while utility, clinic, and grant revenues accounted for the remainder. In that year, 64.6% of general fund revenues were collected locally, while the remaining came from state revenue sharing sources. Of those locally generated revenues, most (21.3%) were collected from gravel sales, followed by sales taxes (20.6%), equipment rentals (15.0%), and raw fish taxes (10.9%). Most (44.5%) outside revenues were collected from federal payments in lieu of taxes, followed by state allocated Community Revenue Sharing (43.7%). Sales tax revenues accounted for 10.9% of total municipal revenues in 2010, compared to 5.5% in 2000. Community Revenue Sharing accounted for 12.6% of total revenues in 2010, compared to 2.5% from State Revenue Sharing in 2000. No fisheries-related grants were awarded to Togiak between 2000 and 2010. Information regarding municipal finances can be found in Table 2.

Togiak was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is Togiak Natives Limited. The regional Native corporation to which Togiak belongs is the Bristol Bay Native Corporation (BBNC). Formed under ANCSA, BBNC has approximately 9,000 shareholders who are Eskimo, Indian, and Aleut. BBNC is a diversified company with investment and business holdings in oilfield and industrial services, construction, government contracting and petroleum distribution. The foundation of BBNC is based on their land and their shareholders. BBNC's founders took their knowledge of the land and culture and built BBNC into a diversified corporation with more than \$1 billion in annual revenue. This revenue has been shared with BBNC's 8,000 shareholders, who have received more than \$70 million in dividends since BBNC's inception. BBNC has been and continues to be a major contributor to Alaska's economy.¹⁶⁶⁶

The closest regional office of the Alaska Department of Fish and Game (ADF&G) and the Department of Commerce, Community, and Economic Development are located in Dillingham. The nearest offices of the Alaska Department of Natural Resources (DNR), National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

¹⁶⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

¹⁶⁶⁵ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

¹⁶⁶⁶ Bristol Bay Native Corporation (2007). *Who We Are*. Retrieved on May 12, 2012 from <http://www.bbnc.net/index.php/who-we-are11>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Togiak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,067,504	\$59,213	\$27,128	n/a
2001	\$851,591	\$64,998	\$26,159	n/a
2002	\$709,105	\$70,728	\$26,155	n/a
2003	\$551,257	\$73,993	\$26,282	n/a
2004	\$1,467,121	\$32,680	-	n/a
2005	\$648,505	\$88,347	-	n/a
2006	\$730,804	\$98,281	-	n/a
2007	\$904,380	\$88,603	-	n/a
2008	\$843,642	\$90,430	-	n/a
2009	\$1,430,811	\$106,155	\$136,913	n/a
2010	\$1,088,817	\$118,933	\$137,124	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

A state-owned 4,400-ft long by 75-ft wide lighted gravel airstrip with a 981-ft long by 59-ft wide crosswind airstrip is available. Scheduled and chartered flights are dispatched from Dillingham. Round-trip airfare between Togiak and Anchorage in June 2012 was \$864.¹⁶⁶⁷ Freight is brought in by air or barge and lightered to shore. There are no docking facilities in Togiak. Skiffs, autos, ATVs, and snowmachines are used for local transportation.¹⁶⁶⁸

*Facilities*¹⁶⁶⁹

Water is derived from a well and is treated and stored in a 500,000-gal tank. The majority (125 residences) of households are connected to the piped water and sewer system; the remaining homes have individual wells and septic tanks. In all, 210 homes are fully plumbed, and 14 are not. The water system is 25 to 30 years old and suffers from broken or corroded pipes, valves,

¹⁶⁶⁷ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹⁶⁶⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁶⁹ Ibid.

and service connections. A permitted landfill is available. Law enforcement services are provided by the Togiak police department and by Alaska state troopers based in Dillingham. Fire and rescue services are provided by the city fire truck. The Togiak Department of Public Safety provides police, fire, emergency medical services and search and rescue. Visitor accommodations include the Ikaiyurvik Family Resource Center and Airport Inn B&B. Additional facilities include the Nangucuilnguq Arts and Crafts Center and the Traditional Council Senior Center, as well as both school and public libraries. Communications services include local and long distance telephone, and local television and radio.

*Medical Services*¹⁶⁷⁰

Medical care is provided by the Togiak Sub-Regional Health Clinic, which is owned by the city and operated by the Bristol Bay Area Health Corporation. The clinic is a Community Health Aid Program site. Alternate health care is provided by the Togiak First Responders Group. Emergency services have coastal and air access and are provided by the Togiak Department of Public Safety.

*Educational Opportunities*¹⁶⁷¹

The Togiak School provides instruction to students in pre-school through 12th grade. In 2011 the school had 222 students enrolled and 17 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Bristol Bay region is historically defined by traditional subsistence harvesting practiced by Yup'ik, Aleuts, and Athabascans of the region for millennia. Subsistence activities historically and continue to define livelihood, exchange, social networks, and social organization in the region. Subsistence supplements wage employment, and is considered culturally necessary for much of the population

The Bristol Bay salmon fishery is one of the most important commercial salmon fisheries in the world. Annual commercial harvests of salmon since statehood have averaged about 17 million sockeye salmon (91.2% of all salmon), about 880,000 chum salmon (4.7%), about 550,000 pink salmon (3.0%), about 120,000 coho salmon (0.6%), and about 100,000 Chinook salmon (0.5%). Commercial sockeye salmon harvests since 1959 have represented about 56% of statewide commercial harvests for that species. Chinook harvests occur mostly in the Nushagak District outside of Dillingham. Coho salmon are underused because fall runs occur after most vessels have ceased fishing efforts. Because of this, coho harvests are directly tied to market conditions rather than abundance. The Togiak River continuously exceeds minimum escapement

¹⁶⁷⁰ Ibid.

¹⁶⁷¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

goals and had relatively few emergency orders issued between 2000 and 2005, compared to other areas within Bristol Bay.¹⁶⁷²

The Togiak area of Bristol Bay supports the largest herring fishery in the state. Large purses seine and gillnet fisheries harvest the spawning herring in a sac roe fishery, and a spawn-on-kelp harvest is also taken by local residents (usually in Togiak Bay). The Togiak sac roe fishery began in 1977, and has supported a fairly stable catch, averaging 40.6 million lbs between 1998 and 2002.¹⁶⁷³

Bristol Bay supports a large, stable red king crab fishery which has been increasing in abundance since the late 1990s. Fishing effort has remained high with an average of 261 active permits between 1998 and 2002. However, no Togiak residents held crab permits or quota between 2000 and 2010.¹⁶⁷⁴

Togiak is located at the head of Togiak Bay. The area is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Togiak participates in the Community Development Quota (CDQ) program through the Bristol Bay Economic Development Corporation (BBEDC). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish catch share to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹⁶⁷⁵ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest allocated quota. BBEDC provides jobs, training, and educational opportunities to CDQ-eligible residents and economic development tools and resources for communities. A partial list of BBEDC programs includes: Bering Sea groundfishing jobs, the Harvey Samuelson scholarship program, vocational funding, internship programs, technical assistance with business plans and feasibility studies, infrastructure and seed funds, and fisheries and economic research.¹⁶⁷⁶

Processing Plants

According to ADF&G's 2010 Intent to Operate list, one shore-based processing plant is in operation in Togiak. The North Pacific Seafoods Togiak plant is known as Togiak Fisheries and began operations in 1957.¹⁶⁷⁷ It is located on Togiak Bay and is 2.5 miles away from the village of Togiak (accessible by boat or plane) and 6 miles away from the village of Twin Hills (by 4-wheel-drive vehicle). The plant was purchased by North Pacific Fisheries in 1996. The plant processes herring during early May, and salmon, halibut, and salmon roe from mid-June until the end of July. In 2010, the plant employed 118 workers during peak season. In 2010, the

¹⁶⁷² Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁶⁷³ Woodby, D. et al. (2005). *Commercial Fisheries in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁶⁷⁴ Ibid.

¹⁶⁷⁵ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹⁶⁷⁶ Bristol Bay Economic Development Corporation (n.d.). *About BBEDC*. Retrieved on May 12, 2012 from <http://www.bbetc.com/web/index.html>.

¹⁶⁷⁷ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

plant employed 18 J-1 workers.¹⁶⁷⁸ The plant provides free room and board, as well as free air transportation between Anchorage and King Salmon, to its fish processing workers. The plant includes a small store.¹⁶⁷⁹

Fisheries-Related Revenue

Between 2000 and 2010, Togiak received fisheries-related revenue from a city-administered 2% raw fish tax, the Shared Fisheries Business Tax, and the Fisheries Resource Landing Tax. Amounts of revenue received from each source varied considerably during this period. Information about fisheries-related revenue received by Togiak between 2000 and 2010 is presented in Table 3.¹⁶⁸⁰

Commercial Fishing

Between 2000 and 2010, there were a total of 330 permits issued by the Commercial Fisheries Entry Commission (CFEC) to 239 Togiak residents (29.3% of the population) for halibut, herring, and salmon. Overall and for each of the three species, the total number of CFEC permits, permit holders, and permits reported as fished declined between 2000 and 2010. The majority of CFEC permits issued during this period were for herring and salmon. In 2010, the majority of herring CFEC permits (160) were issued for the Bristol Bay herring spawn on kelp hand-picking fishery, with the remainder issued for the Goodnews Bay roe herring gill net fishery, the Nelson Island herring gill net fishery, the Bristol Bay and Goodnews Bay roe herring gill net fisheries, and the Cape Romanzof herring gill net fishery. Salmon CFEC permits were issued in 2010 for the Bristol Bay drift gill net and set gill net fisheries and the Kuskokwim gill net fishery. Halibut CFEC permits were issued in 2010 for the statewide longline fishery using vessels under 60 feet. There were no License Limitation Program (LLP) issued in Togiak during this period, and only two Federal Fisheries Permits issued between 2000 and 2002. Information about commercial fishing permits and permit holders by species is presented in Table 4.

The number of crew license holders in Togiak varied between 2000 and 2010, averaging 140 per year (17% of the population). The number of fish buyers located in Togiak also varied during this period, averaging 21 per year but decreasing overall. Throughout this period, there has been one shore-side processing facility located in Togiak. The number of commercial fishing vessels owned primarily by Togiak residents as well as the number of vessels homeported in Togiak both decreased between 2000 and 2010. The number of vessels landing catch in the community increased and then decreased again to 161 vessels in 2010. Both the total net lbs landed and the ex-vessel value of those landings increased overall during this period. Information about characteristics of the commercial fishing sector in Togiak is presented in Table 5. Togiak ranked 11th in landings and 25th in ex-vessel revenue out of 67 communities that received commercial fisheries landings in 2010.

Between 2000 and 2010, the number of halibut quota share account holders in Togiak, the number of quota shares held, and the total Individual Fishing Quota (IFQ) allotment

¹⁶⁷⁸ Ibid.

¹⁶⁷⁹ North Pacific Fisheries (n.d.) *Togiak Fisheries*. Retrieved April 26, 2012 from http://northpacificseafoods.com/index.php?option=com_content&task=view&id=42&Itemid=51.

¹⁶⁸⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

decreased. Information on halibut IFQ between 2000 and 2010 is presented in Table 6. No IFQ shares were held by Togiak residents in the federal sablefish (Table 7) or crab (Table 8) fisheries during this period.

Commercial landings and associated ex-vessel revenue recorded in Togiak are considered confidential due to a small number of participants between 2000 and 2010 for all species except halibut, herring, and salmon in select years. Between 2000 and 2008, the number of lbs of herring landed experienced an increase followed by a decrease, as did the ex-vessel revenue associated with those landings. Herring landings and ex-vessel revenue in Togiak experienced a substantial increase between 2002 and 2010. For years in which data were reportable between 2000 and 2010, salmon landings in Togiak experienced an increase followed by a decrease, while the associated ex-vessel revenue increased overall during this period. Information about landed lbs and ex-vessel revenue in Togiak between 2000 and 2010 is presented in Table 9.

Landings and associated ex-vessel revenue recorded by Togiak residents are also considered confidential between 2000 and 2010 with the exception of landings and revenue for halibut, herring, and salmon in select years. Between 2000 and 2010, both landings and ex-vessel revenue of halibut, herring, and salmon landed by Togiak residents varied considerably. Information regarding landed lbs and ex-vessel revenue by Togiak residents is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Togiak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$481	\$40,952	n/a	\$45,000	\$32,680	\$25,607	\$35,396	\$48,376	\$62,767	\$53,893	\$72,923
Shared Fisheries Business Tax ¹	\$70,395	\$344,228	\$166,704	\$81,469	\$13,064	\$46,028	\$31,514	\$41,617	\$48,629	\$54,677	\$56,088
Fisheries Resource Landing Tax ¹	\$2,961	n/a	n/a	n/a	n/a	n/a	\$50	\$4,133	\$2,476	\$16,636	\$2,235
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$73,837</i>	<i>\$385,180</i>	<i>\$166,704</i>	<i>\$126,469</i>	<i>\$45,744</i>	<i>\$71,635</i>	<i>\$66,960</i>	<i>\$94,126</i>	<i>\$113,872</i>	<i>\$125,205</i>	<i>\$58,323</i>
<i>Total municipal revenue⁵</i>	<i>\$1.07 M</i>	<i>\$851,591</i>	<i>\$709,105</i>	<i>\$551,257</i>	<i>\$1.47 M</i>	<i>\$648,505</i>	<i>\$730,804</i>	<i>\$904,380</i>	<i>\$843,642</i>	<i>\$1.43 M</i>	<i>\$1.09 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Togiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	2	2	2	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	-	-	-	-	-	-	-	-
	Total permit holders	2	2	2	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	31	26	37	34	35	25	22	14	15	13	12
	Fished permits	14	17	22	23	15	15	13	10	9	8	8
	% of permits fished	45%	65%	59%	68%	43%	60%	59%	71%	60%	62%	67%
	Total permit holders	31	26	37	34	35	25	22	14	15	13	12
Herring (CFEC) ²	Total permits	236	215	202	202	207	201	200	199	196	195	192
	Fished permits	22	5	39	32	2	0	0	4	4	4	3
	% of permits fished	9%	2%	19%	16%	1%	0%	0%	2%	2%	2%	2%
	Total permit holders	206	198	183	185	186	181	181	180	177	176	173

Table 4 cont'd. Permits and Permit Holders by Species, Togiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	134	137	140	137	128	123	128	127	127	124	126
	Fished permits	128	128	115	123	114	111	116	110	119	115	119
	% of permits fished	96%	93%	82%	90%	89%	90%	91%	87%	94%	93%	94%
	Total permit holders	150	156	150	151	146	136	143	140	136	140	141
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>401</i>	<i>378</i>	<i>379</i>	<i>373</i>	<i>370</i>	<i>349</i>	<i>350</i>	<i>340</i>	<i>338</i>	<i>332</i>	<i>330</i>
	<i>Fished permits</i>	<i>164</i>	<i>150</i>	<i>176</i>	<i>178</i>	<i>131</i>	<i>126</i>	<i>129</i>	<i>124</i>	<i>132</i>	<i>127</i>	<i>130</i>
	<i>% of permits fished</i>	<i>41%</i>	<i>40%</i>	<i>46%</i>	<i>48%</i>	<i>35%</i>	<i>36%</i>	<i>37%</i>	<i>36%</i>	<i>39%</i>	<i>38%</i>	<i>39%</i>
	<i>Permit holders</i>	<i>263</i>	<i>259</i>	<i>250</i>	<i>257</i>	<i>248</i>	<i>242</i>	<i>244</i>	<i>244</i>	<i>240</i>	<i>239</i>	<i>239</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Togiak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Togiak ²	Total Net Lbs Landed In Togiak ^{2,5}	Total Ex-Vessel Value Of Landings In Togiak ^{2,5}
2000	136	23	1	223	219	99	3,029,952	\$1,740,094
2001	125	15	1	208	215	166	5,783,136	\$2,183,537
2002	108	31	1	190	203	202	7,640,993	\$1,761,888
2003	139	27	1	180	195	317	48,361,794	\$5,901,630
2004	134	31	1	174	192	251	41,753,378	\$4,568,170
2005	142	24	3	164	160	234	44,820,232	\$5,560,616
2006	141	25	1	159	151	236	53,785,400	\$6,666,758
2007	142	22	1	146	141	249	41,125,777	\$6,722,468
2008	137	19	1	146	141	263	48,129,255	\$6,705,046
2009	160	9	1	146	147	178	40,180,353	\$6,027,242
2010	176	10	1	153	145	161	58,442,835	\$8,667,883

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Togiak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
2000	9	6,210	768
2001	8	4,586	633
2002	8	4,586	646
2003	7	4,452	626
2004	7	4,452	643
2005	7	4,452	624
2006	6	3,596	476
2007	6	3,596	445
2008	5	1,456	120
2009	5	1,456	105
2010	5	1,456	95

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Togiak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Togiak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Togiak: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	70,439	146,199	211,128	164,169	88,921	120,667	95,385	125,217	95,144	--	--
Herring	--	--	4,736,957	42,571,352	37,536,200	40,255,658	46,907,928	33,622,488	41,046,192	35,136,963	52,916,435
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	2,692,908	--	4,128,257	4,443,907	--	7,378,072	6,987,919	5,034,950	5,495,610
<i>Total²</i>	<i>70,439</i>	<i>146,199</i>	<i>7,640,993</i>	<i>42,735,521</i>	<i>41,753,378</i>	<i>44,820,232</i>	<i>47,003,313</i>	<i>41,125,777</i>	<i>48,129,255</i>	<i>40,171,913</i>	<i>58,412,045</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$169,820	\$241,887	\$455,928	\$291,256	\$192,268	\$219,965	\$215,648	\$373,012	\$292,434	--	--
Herring	--	--	\$360,009	\$2,954,343	\$2,657,059	\$3,107,427	\$3,256,829	\$2,300,714	\$2,750,186	\$2,642,665	\$4,047,768
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	\$945,951	--	\$1,718,843	\$2,233,224	--	\$4,048,742	\$3,662,427	\$3,367,122	\$4,525,743
<i>Total²</i>	<i>\$169,820</i>	<i>\$241,887</i>	<i>\$1,761,888</i>	<i>\$3,245,599</i>	<i>\$4,568,170</i>	<i>\$5,560,616</i>	<i>\$3,472,476</i>	<i>\$6,722,468</i>	<i>\$6,705,046</i>	<i>\$6,009,788</i>	<i>\$8,573,512</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Togiak Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	29,166	66,110	50,949	72,738	24,491	55,135	25,093	25,861	11,433	8,074	30,059
Herring	203,311	164,846	18,331	2,133	--	--	--	379,110	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	3,366,112	3,439,182	1,272,565	2,429,143	1,991,735	3,048,880	3,878,515	4,123,926	3,428,604	2,829,476	3,132,750
<i>Total²</i>	<i>3,598,589</i>	<i>3,670,138</i>	<i>1,341,845</i>	<i>2,504,014</i>	<i>2,016,226</i>	<i>3,104,015</i>	<i>3,903,608</i>	<i>4,528,897</i>	<i>3,440,037</i>	<i>2,837,550</i>	<i>3,162,809</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$75,789	\$113,775	\$112,292	\$131,656	\$56,746	\$101,834	\$47,903	\$53,118	\$35,019	\$16,697	\$92,131
Herring	\$21,319	\$12,602	\$3,207	\$747	--	--	--	\$27,649	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$1,922,648	\$1,182,390	\$433,162	\$1,122,944	\$817,132	\$1,311,083	\$1,801,833	\$2,046,545	\$1,799,274	\$1,895,228	\$2,527,314
<i>Total²</i>	<i>\$2,019,755</i>	<i>\$1,308,767</i>	<i>\$548,661</i>	<i>\$1,255,346</i>	<i>\$873,877</i>	<i>\$1,412,917</i>	<i>\$1,849,735</i>	<i>\$2,127,313</i>	<i>\$1,834,293</i>	<i>\$1,911,925</i>	<i>\$2,619,445</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Although there were sport fish guide businesses registered in Togiak between 2000 and 2010, none were active during those years. In 2010, five sport fish guide licenses were held in Togiak, compared to seven in 2000. The number of local sport fish guide licenses varied between 2000 and 2010, peaking at eight in 2001 and 2006, and bottoming at zero in 2005. In 2010, Togiak residents purchased 125 sportfishing licenses (irrespective of the location of the point of sale) and 10 licenses were sold in the community. Between 2000 and 2010, there were consistently more sportfishing licenses purchased by community residents than licenses purchased in the community, indicating the potential that residents travel to other areas or nearby communities to participate in sportfishing activities.

Togiak is located within the Nushagak, Wood River, and Togiak Alaska Sport Fishing Survey Area. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. For saltwater sportfishing, non-Alaska resident angler days fished varied between 0 and 767 between 2000 and 2010, while Alaska resident angler days fished varied between 31 and 921 during this period. During this period there were years in which non-Alaska residents fished a greater number of saltwater angler days as well as years in which Alaska residents fished a greater number of saltwater angler days. In contrast, non-Alaska resident anglers fished consistently more angler days in freshwater in this region (26,403 on average) than Alaska resident anglers (12,276 per year on average). Information about the sportfishing sector in and near Togiak is displayed in Table 11.

The Alaska Statewide Harvest Survey,¹⁶⁸¹ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Togiak: Chinook salmon, coho salmon, rainbow trout, Dolly Varden, Arctic grayling, Pacific halibut, lingcod, and smelt. No kept/released log book data were reported for sportfishing charters out of Togiak between 2000 and 2010.¹⁶⁸²

¹⁶⁸¹ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000-2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁶⁸² Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000-2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Togiak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Togiak ²
2000	0	7	69	0
2001	0	8	64	0
2002	0	5	54	3
2003	0	2	64	0
2004	0	2	77	0
2005	0	0	105	0
2006	0	8	88	75
2007	0	5	120	104
2008	0	6	66	48
2009	0	7	38	1
2010	0	5	125	10

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	0	44	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

The entire community of Togiak depends heavily on subsistence activities. Salmon, herring, seal, sea lion, whale, and walrus are among the species harvested.¹⁶⁸³ Information about per capita subsistence harvest and household participation in subsistence activities (Table 12), marine invertebrate harvests, and non-salmon fish harvests (Table 13) was not reported between 2000 and 2010. However, individual species harvest data are available for salmon, halibut and marine mammal harvests.

In years for which data were reported between 2000 and 2010, an average of 55 subsistence salmon permits were issued to Togiak households, with an average of 47 permits returned. Sockeye salmon were the primary species harvested under subsistence permits during this period (an average of 2,650 sockeye per year), along with over a thousand Chinook salmon and several hundred chum, coho, and pink salmon every year (Table 13).

Between 2003 and 2010, an average of seven Subsistence Halibut Registration Certificate (SHARC) cards was issued to Togiak residents. Five SHARC cards were returned in 2004 and two were returned in 2006. Information regarding subsistence harvest of halibut under these permits was not reported during this period. Information about subsistence halibut harvest is presented in Table 14.

The number of marine mammals harvested for subsistence between 2000 and 2010 varied widely. Beluga whales and walrus were among the species harvested by Togiak residents. Information about subsistence harvest of marine mammals is presented in Table 15. There was also significant subsistence harvest of harbor seals (an average of 14 animals per year) and spotted seals (an average of 83 per year) reported in Togiak.

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Togiak during this period: blue mussels, cockles, Dungeness crab, razor clams, red king crab, shrimp, softshell clams, Tanner crab, and unknown clams. Marine mammals reported as harvested for subsistence use included bearded seal, harbor porpoise, harbor seal, ringed seal, Steller sea lion, and unknown seal. Non-salmon fish reported as harvested for subsistence use included: blackfish, burbot, capelin (grunion), Dolly Varden, grayling, herring, herring sac roe, herring spawn on kelp, humpback whitefish, lake trout, least cisco, Pacific cod (gray), Pacific tom cod, pike, rainbow smelt, rainbow trout, round whitefish, salmon shark, sculpin, starry flounder, unknown trout, and yellowfin sole.¹⁶⁸⁴

¹⁶⁸³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁸⁴ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Togiak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Togiak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	52	40	1,014	533	342	83	2,945	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	44	38	1,094	383	204	108	1,770	n/a	n/a
2005	43	36	1,444	259	281	26	2,223	n/a	n/a
2006	59	46	1,589	487	408	342	2,699	n/a	n/a
2007	45	33	1,227	420	110	19	2,521	n/a	n/a
2008	89	88	1,303	691	535	114	3,744	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Togiak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	2	n/a	n/a
2004	5	5	n/a
2005	10	n/a	n/a
2006	10	2	n/a
2007	10	n/a	n/a
2008	9	n/a	n/a
2009	9	n/a	n/a
2010	4	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Togiak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	2	n/a	7	n/a	n/a	5	147
2001	1	n/a	2	n/a	n/a	5	61
2002	n/a	n/a	10	n/a	n/a	14	79
2003	n/a	n/a	7	n/a	n/a	22	33
2004	n/a	n/a	1	n/a	n/a	7	64
2005	n/a	n/a	n/a	n/a	n/a	11	82
2006	n/a	n/a	2	n/a	n/a	12	51
2007	n/a	n/a	2	n/a	n/a	8	63
2008	n/a	n/a	2	n/a	n/a	46	168
2009	n/a	n/a	2	n/a	n/a	5	147
2010	n/a	n/a	n/a	n/a	n/a	5	61

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Twin Hills

People and Place

*Location*¹⁶⁸⁵



Twin Hills is located near the mouth of the Twin Hills River, a tributary of the Togiak River, 386 miles southwest of Anchorage. Twin Hills is located in the Bristol Bay Recording District and the Dillingham Census Area and is not located within an organized Borough.

*Demographic Profile*¹⁶⁸⁶

In 2010, there were 74 inhabitants in Twin Hills, making it the 276th largest of 352 total Alaskan communities with recorded populations that year. The population of Twin Hills grew by 7.25% between 2000 and 2009, with an average annual growth rate of -0.87%, indicating a slow rate of decline. The change in population from 1990 to 2010 is provided in Table 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that seven individuals come to Twin Hills as seasonal workers or transients each year during the months of June, July, and August, with the population reaching its annual peak in July. Community leaders noted that this annual peak in population is mostly driven by employment in the fishing sectors.

A majority of Twin Hills residents identified themselves as American Indian and Alaska Native in 2010 (94.6%). Other ethnic groups present in Twin Hills that year included White (2.7%) and two or more races (2.7%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaska Native increased by 10.5%, with corresponding decreases in the percentages of the population identifying themselves as White and two or more races. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Twin Hills increased from 2.6 in 1990 to 2.88 in 2000, and then decreased to 2.55 persons per household in 2010. The number of households decreased from 25 in 1990 to 24 in 2000, then increased to 29 occupied housing units by 2010. Of the 36 housing units surveyed for the 2010 Decennial Census, 16 were owner occupied and 13 were renter occupied, while seven housing units were vacant or used only seasonally. Throughout this period no residents of Twin Hills were reported to be living in group quarters.

¹⁶⁸⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁸⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

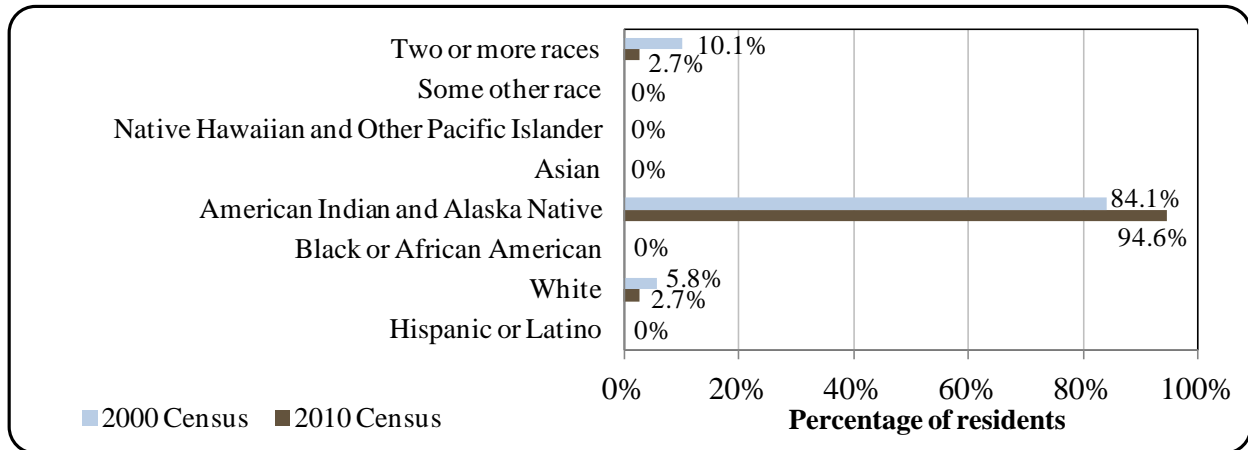
Table 1. Population in Twin Hills from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	66	-
2000	69	-
2001	-	64
2002	-	77
2003	-	76
2004	-	68
2005	-	71
2006	-	77
2007	-	81
2008	-	75
2009	-	74
2010	74	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Twin Hills: 2000-2010 (U.S. Census).

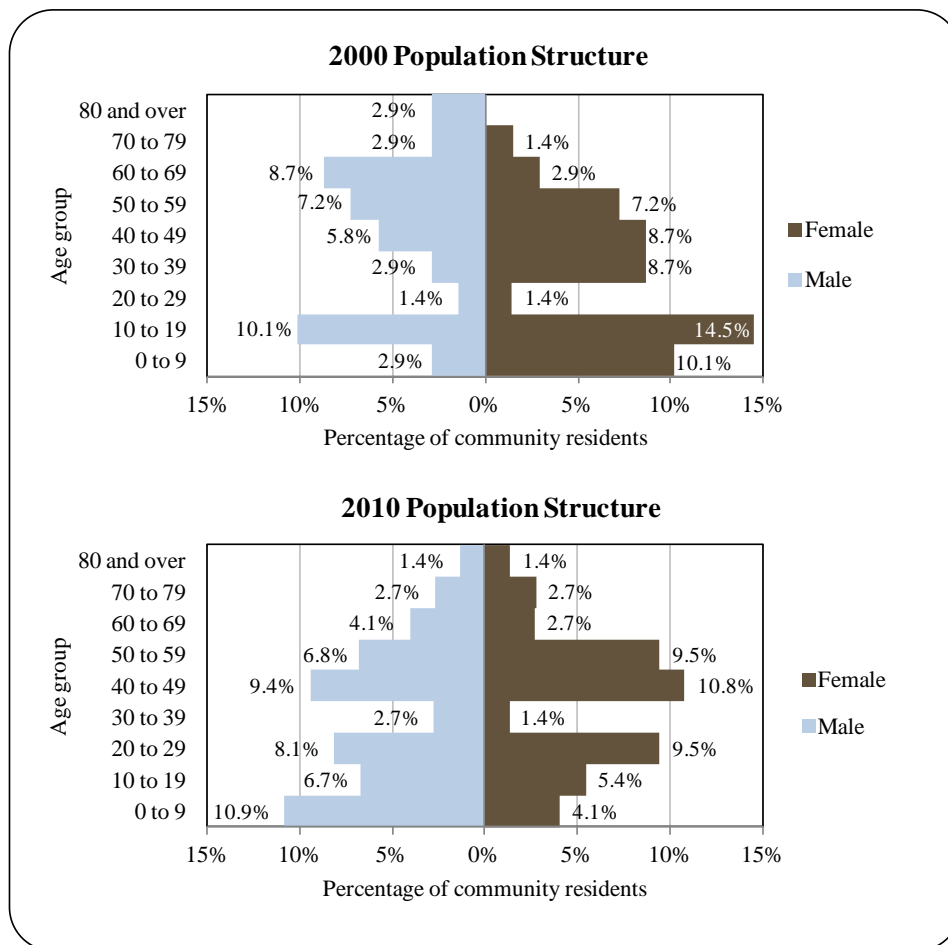


The gender makeup in Twin Hills in 2010 was 52.7% male and 47.3% female, similar to the state as a whole (52% male, 48% female). The median age was estimated to be 41.5 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the greatest percentage of the population fell within the age group 40-49 years, with the second largest percentage falling within the 20-29 age group. Relatively few individuals fell within the 30-39 age group, and few were age 70 or older. While the age groups 20-29, 40-49, and 50-59 were more skewed towards females, the 0-9, 10-19, 30-39, and 60-69 were more skewed towards males. The 70-79 and 80 and older age groups had an even distribution of males

and females. The overall population structure of Twin Hills in 2000 and 2010 is shown in Figure 2.

According to the 2006-10 American Community Survey,¹⁶⁸⁷ in terms of educational attainment, 85.7% of Twin Hills residents aged 25 and older were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 14.3% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 51.4% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 28.6% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; and 5.7% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall. No Twin Hills residents were estimated to have a ninth to 12th grade education but no diploma, an Associate’s degree, or a graduate or professional degree in 2010.

Figure 2. Population Age Structure in Twin Hills Based on the 2000 and 2010 U.S. Decennial Census.



¹⁶⁸⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*¹⁶⁸⁸

Alaska Native populations in Bristol Bay can trace their ancestry to early hunting and gathering societies. The coastal area between Togiak and the Northern Alaska Peninsula was populated early by Yupiit Eskimo; however, there was a great deal of movement and migration between other communities, bringing many different groups into the region. Contact with Europeans occurred in the mid-eighteenth century, and Russians moved into the area around 1818. Following contact, disease epidemics and cultural upheavals created a great deal of social reorganization throughout Bristol Bay communities.¹⁶⁸⁹

The village was established in 1965 by families who moved from Togiak to avoid the recurrent flooding there. Some residents migrated from Quinhagak on Kuskokwim Bay. The people have strong cultural ties to the Yukon-Kuskokwim region, because many of their ancestors migrated to Togiak following the 1918-19 influenza epidemic. School classes were first conducted in the church during 1967-68. A school building was constructed in 1972, but it burned in 1976. A new school was built in 1978. A post office was established around 1977, although there have been some interruptions of service.

Twin Hills is a traditional Yup'ik Eskimo village with a fishing and subsistence lifestyle. The sale, importation, and possession of alcohol is banned in the village.

Natural Resources and Environment¹⁶⁹⁰

The area experiences a transitional climate that is primarily maritime, although the arctic climate also affects this region. Average summer temperatures range from 37 to 66 °F (2.8 to 18.9 °C); winter temperatures average 4 to 30 °F (-15.6 to -1.1 °C). Annual precipitation ranges from 20 to 26 inches. Fog and high winds are prevalent during winter months. The Togiak River is ice-free from June through mid-November.

Twin Hills is located within the Togiak National Wildlife Refuge (Refuge), an area that is managed by the U.S. Fish and Wildlife Service (FWS). The following information is from the FWS.¹⁶⁹¹ The Refuge totals 4.7 million acres - an area about the size of the states of Connecticut and Rhode Island combined. Almost half of these lands, the northern 2.3 million acres, are designated as the Togiak Wilderness Area. This constitutes the second largest contiguous Wilderness Area within the National Wildlife Refuge System. The Refuge was established to conserve fish and wildlife populations and habitats in their natural diversity including salmon, marine birds and mammals, migratory birds, and large mammals, to fulfill international treaty obligations; to provide for continued subsistence use; and to ensure necessary water quality and quantity. Special values of the Refuge include the Togiak Wilderness Area, the Kanektok, Goodnews, and Togiak river drainages, and sportfishing. The wild lands of the Refuge, including the Togiak Wilderness Area, provide valuable and diverse habitat for the fish and wildlife that make the area their home. The conservation of freshwater streams and rivers, wetland and alpine tundra, boreal forests, and coastal cliffs and beaches allow an amazing diversity of species to

¹⁶⁸⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁸⁹ Lowe, M. (2007). *Socioeconomic Review of Alaska's Bristol Bay Region*. Retrieved July 12, 2012 from: <http://www.iser.uaa.alaska.edu/Publications/bb-socio-review.pdf>.

¹⁶⁹⁰ Ibid.

¹⁶⁹¹ U.S. Fish and Wildlife Service (2011). *Togiak National Wildlife Refuge*. Retrieved from <http://togiak.fws.gov/> on April 9, 2012.

find suitable homes here. The lands also offer amazing opportunities for recreation and education.¹⁶⁹²

The Refuge protects habitat that produces nearly 3 million Chinook, sockeye, chum, pink and coho salmon, and 27 other fish species. These fish species are the primary subsistence resource for residents of seven local villages. Fishery resources in this area of Alaska are economically important for commercial fisheries valued at over \$8 million, as well as a \$6 million sport fishery. Ensuring that adequate numbers of each fish species are allowed to spawn in each drainage is key to this region's aquatic and terrestrial ecosystems.

The Refuge also contains prime habitat for several other fish species, including rainbow trout, Arctic grayling, Dolly Varden, and Arctic char. Anglers come from around the world for an opportunity to pursue these prized fish species. The Refuge is working to further our understanding of these fish species. The Refuge conserves habitat for at least 201 staging, migrating, or breeding bird species. Bird species groups include landbirds, shorebirds, seabirds, raptors, and waterfowl. Birds from the North American Pacific Flyway and several Asiatic routes funnel through the area. The Refuge is home to more than 30 species of terrestrial mammals. With a wide variety of habitats, the Refuge supports brown bear, moose, caribou, wolves, and many smaller mammals. The Nushagak Peninsula, in the southeastern portion of the Refuge, was the site of a 1988 caribou reintroduction, and the caribou population continues to grow. Moose populations on the refuge have increased substantially in recent years as well, much to the delight of local people. Lynx and wolverines continue their elusive ways, seldom seen except for tracks they leave in the snow. In addition, 17 species of marine mammals are found along the coastline. The Refuge has haulout sites that provide animals a place to rest after feeding forays in the Bering Sea. Cape Peirce, on the southwestern tip of the Refuge, is one of only two regularly used land-based haulouts for Pacific walrus in North America. Up to 12,000 male walrus may haul out here at one time. Endangered Steller sea lions use haulouts within the Refuge, as do harbor and spotted seals. Marine and terrestrial mammals are important food resources for local village residents, and are important in the local tourism economy as well.¹⁶⁹³

Twin Hills is located near Togiak, which is the gateway to the Walrus Islands State Game Sanctuary (WISGS), an area managed by the Alaska Department of Fish and Game (ADF&G). The sanctuary protects a group of seven small craggy islands and their adjacent waters in northern Bristol Bay, approximately 65 miles southwest of Dillingham. The WISGS includes Round Island, Summit Island, Crooked Island, High Island, Black Rock and The Twins. The WISGS was established in 1960 to protect one of the largest terrestrial haulout sites in North America for Pacific walrus (*Odobenus rosmarus divergens*). The sanctuary also protects important habitats for several species of seabirds, Steller sea lions (*Eumetopias jubatus*) and other marine and terrestrial birds and mammals. The ADF&G manages the sanctuary primarily to protect these important habitats and wildlife species, and secondarily to provide for public use and enjoyment of these resources including the opportunity for scientific and educational study, viewing, and photography.¹⁶⁹⁴

¹⁶⁹² Ibid.

¹⁶⁹³ Ibid.

¹⁶⁹⁴ Alaska Department of Fish and Game (2011). *Walrus Islands State Game Sanctuary: Area Overview*. Retrieved from <http://www.adfg.alaska.gov/index.cfm?ADFG=walrusislands.main> on April 9, 2012.

Current Economy¹⁶⁹⁵

In a survey conducted by the AFSC in 2011, community leaders reported that the Twin Hills economy relies on fishing. In 2010, eight residents held commercial fishing permits, primarily for salmon, herring, herring roe, or sac roe. Fishermen use special flat-bottomed boats for the shallow waters of Togiak Bay. Togiak Fisheries and other fish buyers provide a market for fishermen in nearby Togiak. The community depends heavily on subsistence activities for various food sources. Seal, sea lion, walrus, whale, salmon, clams, geese, and ducks are harvested. An exchange relationship exists between Twin Hills, Togiak, and Manokotak. Seal oil is exchanged for blackfish. Handicrafts also supplement incomes.¹⁶⁹⁶ Top employers in 2010¹⁶⁹⁷ included Twin Hills Village Council, Twin Hills BFU Project, Southwest Region Schools, Bristol Bay Area Health Corp., Bristol Bay Native Association, and Peninsula Airways Inc.

In 2010, the per capita income in Twin Hills was estimated to be \$23,034 and the median household income was estimated to be \$36,667, compared to \$16,856 and \$29,375 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁶⁹⁸ the real per capita income in 2000 is shown to have been \$22,165 and the real 2000 median household income was \$38,628. This shows that per capita income increased in Twin Hills between 2000 and 2010, while the median household income decreased during this period. In 2010, Twin Hills ranked 125th of 305 Alaskan communities with per capita income that year, and 209th of 299 Alaskan communities with household income data. However, Twin Hill's small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹⁶⁹⁹ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Twin Hills in 2010 was \$9,778, which indicates a substantial decrease compared to the real per capita income values reported by the U.S. Census in 2000.¹⁷⁰⁰ This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁷⁰¹ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

Based on the 20069-10 American Community Survey, 68.4% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was zero, compared to the statewide unemployment rate of

¹⁶⁹⁵ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁶⁹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁹⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁶⁹⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2020 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁶⁹⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷⁰⁰ See footnote 1697.

¹⁷⁰¹ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

5.9%. There were no Twin Hills residents estimated to be living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Twin Hills are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Twin Hills. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 12.7%.

Based on household surveys conducted for the 2006-2010 American Community Survey, the greatest percentage of workers was employed in the public sector (61.5%), while 38.5% were employed in the private sector. Out of 26 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (42.9%) and public administration (23.8%). Smaller percentages of the population were employed in transportation, warehousing, and utilities (19%) and retail trade (14.3%). No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Twin Hills (U.S. Census).

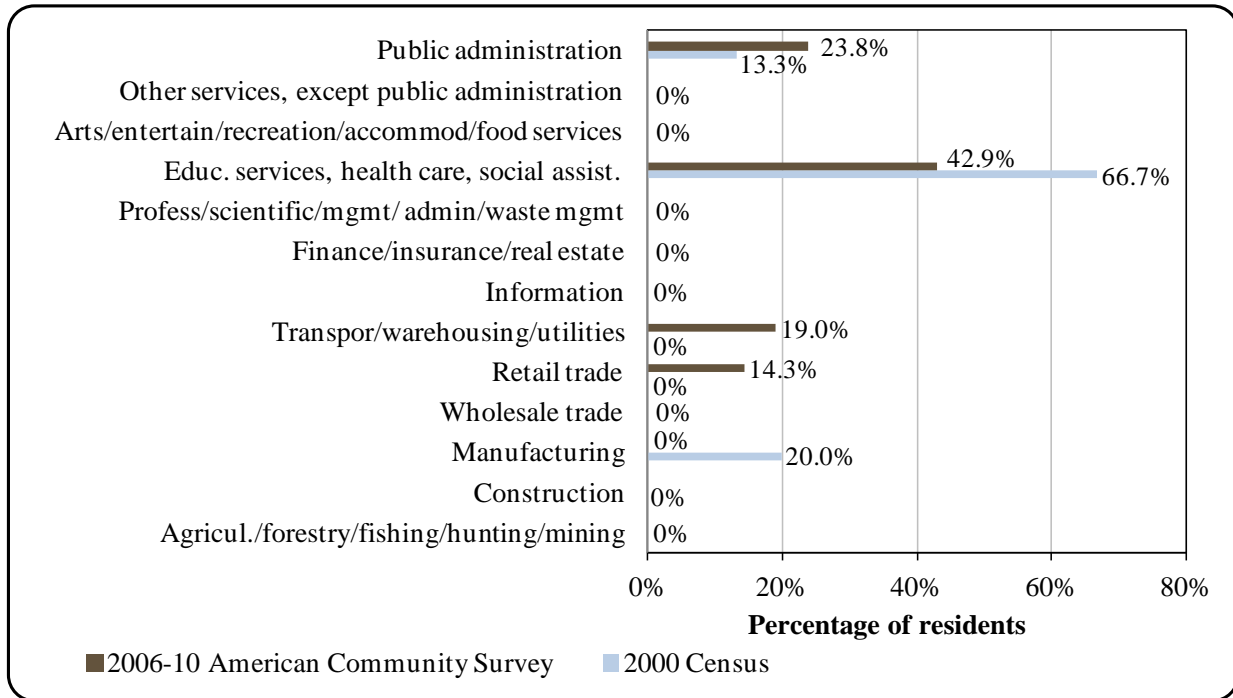
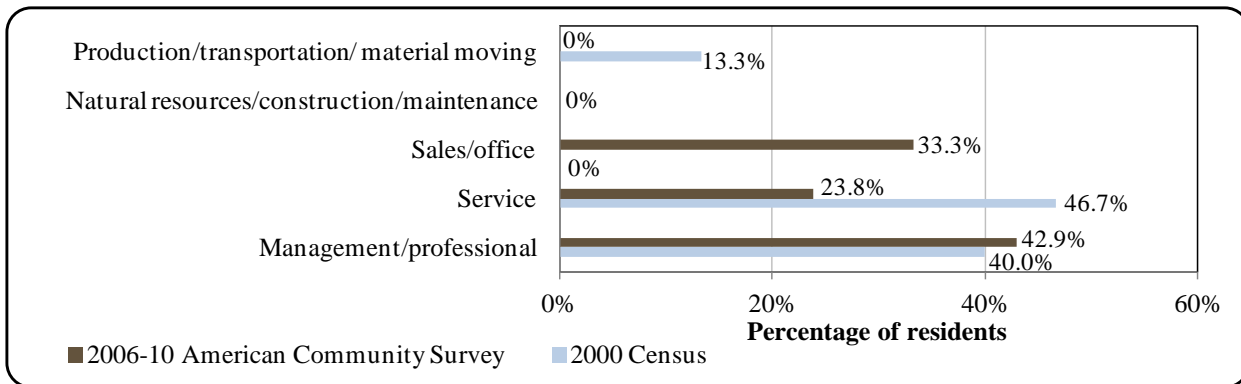


Figure 4. Local Employment by Occupation in 2000-2010, Twin Hills (U.S. Census).



Governance

Twin Hills is an unincorporated town that is not located within an organized borough. Because of the community’s unincorporated status, no municipal taxes were administered between 2000 and 2010. Twin Hills did receive State Revenue Sharing contributions from 2000 to 2003, ranging from approximately \$3,600 to approximately \$4,100 per year. Twin Hills did not receive any fisheries-related grants between 2000 and 2010. Information about selected aspects of the Twin Hills community revenue is presented in Table 2.

Twin Hills was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the

Bureau of Indian Affairs (BIA), is the Twin Hills Native Corporation. The regional native corporation to which Twin Hills belongs is the Bristol Bay Native Corporation.

The closest regional office of ADF&G and the Department of Commerce, Community, and Economic Development are located in Dillingham. The nearest offices of the Alaska Department of Natural Resources, National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Twin Hills from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Twin Hills is primarily accessible by air and water. Regular and charter flights are dispatched from Dillingham. There is a state-owned 3,000 foot long by 60 foot wide lighted gravel runway on a ridge east of the village. Most cargo is delivered by air. In June 2012, round-trip airfare between Twin Hills and Anchorage was \$848.50.¹⁷⁰² There is a boat landing area but no docking facilities; bulk goods must be lightered to shore. Cars, ATVs, and snowmobiles are

¹⁷⁰² Airfare was obtained on the travel website <http://www.penair.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

used for local transportation. Residents drive along the beach to access the Togiak Fisheries cannery. A winter trail for snowmobiles connects Twin Hills with Togiak.¹⁷⁰³

*Facilities*¹⁷⁰⁴

Piped water and sewer systems provide services to some households; other use individual wells and septic tanks. Water is drawn using a submersible pump and is treated and stored in a 60,000-gallon steel tank. The gravity sewage system feeds to a disposal lagoon on the far west side of town. The school operates its own system. A coin-operated washeteria is available. Law enforcement services are provided by a Village Public Safety Officer. Fire and rescue services are provided by the Twin Hills First Responder Group. The community has a recreation center and a village council building. The nearest state trooper's post is located in Dillingham.

In a survey conducted by the AFSC in 2011, community leaders reported that the following infrastructure projects have been completed in the past ten years: haul out facilities, road, airport/seaplane base, water and sewer pipelines, diesel powerhouse, sewage treatment, water treatment, new landfill/solid waste site, public safety-police department, emergency response, fire department, school, telephone service, and a post office. In the same survey, community leaders noted that there is no dock space available for public moorage in Twin Hills, and that the port of Twin Hills is capable of handling rescue vessels and fuel barges.

*Medical Services*¹⁷⁰⁵

Medical care is provided at the Julius Pleasant Health Center, which is owned by the Village Council and operated by the Bristol Bay Area Health Corporation. The health center is a Community Health Aid Program site. Alternate health care is provided by the Twin Hills First Responder Group. Emergency services have limited air and river access and are provided by a health aide. The nearest hospital is located in Dillingham.

*Educational Opportunities*¹⁷⁰⁶

The Twin Hills School provides instruction to students from pre-school through eighth grade. In 2011 the school had 16 students and two teachers.

¹⁷⁰³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁰⁴ Ibid.

¹⁷⁰⁵ Ibid.

¹⁷⁰⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Bristol Bay region is historically defined by traditional subsistence harvesting practiced by Yup'ik, Aleuts, and Athabascans of the region for millennia. Subsistence activities historically and continue to define livelihood, exchange, social networks, and social organization in the region. Subsistence supplements wage employment, and is considered culturally necessary for much of the population

The Bristol Bay salmon fishery is one of the most important commercial salmon fisheries in the world. Annual commercial harvests of salmon since statehood have averaged about 17 million sockeye salmon (91.2% of all salmon), about 880,000 chum salmon (4.7%), about 550,000 pink salmon (3.0%), about 120,000 coho salmon (0.6%), and about 100,000 Chinook salmon (0.5%). Commercial sockeye salmon harvests since 1959 have represented about 56% of statewide commercial harvests for that species. Chinook harvests occur mostly in the Nushagak District outside of Dillingham. Coho salmon are underused because fall runs occur after most vessels have ceased fishing efforts. Because of this, coho harvests are directly tied to market conditions rather than abundance. The Togiak River continuously exceeds minimum escapement goals and had relatively few emergency orders issued between 2000 and 2005, compared to other areas within Bristol Bay.¹⁷⁰⁷

The Togiak area of Bristol Bay supports the largest herring fishery in the state. Large purses seine and gillnet fisheries harvest the spawning herring in a sac roe fishery, and a spawn-on-kelp harvest is also taken by local residents (usually in Togiak Bay). The Togiak sac roe fishery began in 1977, and has supported a fairly stable catch, averaging 40.6 million pounds between 1998 and 2002.¹⁷⁰⁸

Bristol Bay supports a large, stable red king crab fishery which has been increasing in abundance since the late 1990s. Fishing effort has remained high with an average of 261 active permits between 1998 and 2002. However, no Togiak residents held crab permits or quota between 2000 and 2010.¹⁷⁰⁹

Twin Hills is located near the mouth of the Twin Hills River, a tributary of the Togiak River.¹⁷¹⁰ The area is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Twin Hills participates in the Community Development Quota (CDQ) program through the Bristol Bay Economic Development Corporation (BBEDC). The community is not eligible for the Community Quota Entity (CQE) program.

In a survey conducted by the AFSC in 2011, community leaders also noted that Twin Hills does not participate in the fisheries management process in Alaska, and that a current challenge for the local economy is permit retention in the village.

¹⁷⁰⁷ Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁷⁰⁸ Woodby, D. et al. (2005). *Commercial Fisheries in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁷⁰⁹ Ibid.

¹⁷¹⁰ Ibid.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Twin Hills does not have a registered processing plant. However, Togiak Fisheries operates as a fish buyer in nearby Togiak.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Twin Hills (Table 3). However, in a survey conducted by the AFSC in 2011, community leaders reported that Twin Hills received \$150,000 in funding or grants from the BBEDC in 2010. It is also important to note that the BBEDC uses fisheries revenue from the CDQ program to provide grants for infrastructure, fuel, and electrical assistance to member communities. The BBEDC also offers educational scholarships, vocational training, and fishing permit acquisition and financing assistance to residents of its member communities.¹⁷¹¹

Commercial Fishing

In 2010, there were eight Twin Hills residents holding total of 10 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for the salmon, herring, and halibut fisheries. None of the herring or halibut CFEC permits were reported as fished in 2010. Herring CFEC permits were issued for the Bristol Bay herring spawn on kelp hand-picking fishery, the Bristol Bay roe herring gill net fishery, and the statewide halibut long line fishery using vessels under 60 feet. Between 2000 and 2010, the number of halibut CFEC permits issued to Twin Hills residents remained relatively stable, with permits reported as fished between 2002 and 2009. The number of herring CFEC permits and permit holders decreased slightly during this period, but these permits were only reported as fished in 2001, 2002, 2004, and 2006. The number of salmon CFEC permits, permit holders, and permits reported as fished all decreased between 2000 and 2010. In 2010, three salmon CFEC permits were issued for the Bristol Bay drift gill net fishery and one was issued for the Kuskokwim gill net fishery. There were no residents of Twin Hills holding Federal Fisheries Permits or License Limitation Program (LLP) permits during this period. Information on commercial fishing permits and permit holders by species between 2000 and 2010 is shown in Table 4.

The number of crew license holders in Twin Hills decreased overall between 2000 and 2010, and there were no fish buyers or shore-side processing facilities located in the community during this period. The number of vessels homeported in Twin Hills and the number of vessels owned primarily by community residents both decreased between 2000 and 2010. In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing boats under 35 feet using gillnets use Twin Hills as their base of operations during the fishing season. There were no vessels landing catch in Twin Hills during this period; therefore, there are no landings or associated ex-vessel revenue to report during this period. Information on characteristics of the commercial fishing sector in Twin Hills between 2000 and 2010 is presented in Table 5.

There was one halibut quota share account holder in Twin Hills between 2000 and 2010. In each year during this period, the account holder held 270 halibut quota shares and the total

¹⁷¹¹ Bristol Bay Economic Development Corporation. *Annual Report 2010*. Retrieved November 16, 2011 from <http://www.bbdc.com>.

annual Individual Fishing Quota (IFQ) allotment averaged 34 pounds. Information on halibut IFQ between 2000 and 2010 is presented in Table 6. There were no sablefish or crab quota share account holders in Twin Hills between 2000 and 2010 (Tables 7 and 8). As previously stated there were no commercial landings or associated ex-vessel revenue in Twin Hills between 2000 and 2010 (Table 9). Landings and ex-vessel revenue recorded by Twin Hills residents between 2000 and 2010 were considered confidential due to a small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Twin Hills: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Twin Hills: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	2	3	3	1	1	1	1	1	1
	Fished permits	0	0	1	1	2	1	1	1	1	1	0
	% of permits fished	0%	0%	50%	33%	67%	100%	100%	100%	100%	100%	0%
	Total permit holders	1	1	2	3	3	1	1	1	1	1	1
Herring (CFEC) ²	Total permits	8	8	5	5	7	7	7	7	7	5	5
	Fished permits	0	1	3	0	1	0	1	0	0	0	0
	% of permits fished	0%	13%	60%	0%	14%	0%	14%	0%	0%	0%	0%
	Total permit holders	8	7	5	4	5	5	5	5	5	4	4

Table 4 cont'd. Permits and Permit Holders by Species, Twin Hills: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	10	10	9	6	7	5	4	5	5	4	4
	Fished permits	10	9	5	5	7	4	3	4	4	4	3
	% of permits fished	100%	90%	56%	83%	100%	80%	75%	80%	80%	100%	75%
	Total permit holders	12	13	11	7	9	6	5	7	7	5	5
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>19</i>	<i>19</i>	<i>16</i>	<i>14</i>	<i>17</i>	<i>13</i>	<i>12</i>	<i>13</i>	<i>13</i>	<i>10</i>	<i>10</i>
	<i>Fished permits</i>	<i>10</i>	<i>10</i>	<i>9</i>	<i>6</i>	<i>10</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>3</i>
	<i>% of permits fished</i>	<i>53%</i>	<i>53%</i>	<i>56%</i>	<i>43%</i>	<i>59%</i>	<i>38%</i>	<i>42%</i>	<i>38%</i>	<i>38%</i>	<i>50%</i>	<i>30%</i>
	<i>Permit holders</i>	<i>16</i>	<i>16</i>	<i>14</i>	<i>10</i>	<i>13</i>	<i>10</i>	<i>8</i>	<i>10</i>	<i>10</i>	<i>8</i>	<i>8</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Twin Hills: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Twin Hills ²	Total Net Pounds Landed in Twin Hills ^{2,5}	Total Ex-Vessel Value of Landings in Twin Hills ^{2,5}
2000	12	0	0	6	10	0	0	\$0
2001	14	0	0	9	11	0	0	\$0
2002	7	0	0	6	9	0	0	\$0
2003	13	0	0	6	10	0	0	\$0
2004	4	0	0	7	11	0	0	\$0
2005	11	0	0	5	9	0	0	\$0
2006	6	0	0	4	6	0	0	\$0
2007	5	0	0	4	6	0	0	\$0
2008	6	0	0	5	7	0	0	\$0
2009	5	0	0	4	8	0	0	\$0
2010	5	0	0	4	8	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Twin Hills: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	1	270	33
2001	1	270	37
2002	1	270	38
2003	1	270	38
2004	1	270	39
2005	1	270	37
2006	1	270	35
2007	1	270	33
2008	1	270	31
2009	1	270	28
2010	1	270	26

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Twin Hills: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Twin Hills: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Twin Hills: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Twin Hills Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no sport fish guide businesses located in Twin Hills, and no Twin Hills residents holding sport fish guide licenses. Given this, no kept/released log book data were reported for sportfishing charters out of Twin Hills between 2000 and 2010.¹⁷¹² The number of sportfishing licenses sold to community residents (irrespective of the location of the point of sale) during this period varied considerably, between one and 14, with 12 licenses sold to Twin Hills residents in 2010. Between 2000 and 2010, there were no sportfishing licenses sold within the community of Twin Hills (Table 11).

Twin Hills is located within the Nushagak, Wood River, and Togiak Alaska Sport Fishing Survey Area. Information is available from ADF&G about both saltwater and freshwater sportfishing activity at this regional scale. For saltwater sportfishing, non-Alaska resident angler days fished varied between 0 and 767 between 2000 and 2010, while Alaska resident angler days fished varied between 31 and 921 during this period. During this period there were years in which non-Alaska residents fished a greater number of saltwater angler days as well as years in which Alaska residents fished a greater number of saltwater angler days. In contrast, non-Alaska resident anglers fished consistently more angler days in freshwater in this region (26,403 on average) than Alaska resident anglers (12,276 per year on average) (Table 11).

The Alaska Statewide Harvest Survey,¹⁷¹³ conducted by ADF&G between 2000 and 2010, noted that Dolly Varden are targeted by private anglers in Twin Hills. In addition, in a survey conducted by the AFSC in 2011, community leaders reported that the following species are targeted by recreational fishermen that use boats based in Twin Hills: pink salmon, chum salmon, Chinook salmon, coho salmon, sockeye salmon, halibut, and clams. Community leaders also noted that recreational fishing in Twin Hills takes place from private boats owned by local residents.

Table 11. Sport Fishing Trends, Twin Hills: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Twin Hills ²
2000	0	0	5	0
2001	0	0	2	0
2002	0	0	1	0
2003	0	0	3	0
2004	0	0	1	0
2005	0	0	10	0
2006	0	0	14	0
2007	0	0	6	0
2008	0	0	3	0
2009	0	0	8	0
2010	0	0	12	0

¹⁷¹² Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁷¹³ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Twin Hills: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	246	183	31,290	11,793
2001	652	599	31,489	10,779
2002	665	31	20,011	11,911
2003	321	464	26,783	13,419
2004	767	61	25,203	19,980
2005	81	246	33,089	15,662
2006	365	196	28,840	14,858
2007	326	921	28,541	13,762
2008	113	103	27,066	7,356
2009	107	38	22,444	7,805
2010	0	44	15,676	7,709

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

The community of Twin Hills depends heavily on subsistence activities for various food sources. Seal, sea lion, walrus, whale, salmon, clams, geese, and ducks are harvested. An exchange relationship exists between Twin Hills, Togiak, and Manokotak. Seal oil is exchanged for blackfish. Handicrafts also supplement incomes.¹⁷¹⁴ Data are not available for subsistence participation by household and species or per capita subsistence harvest between 2000 and 2010 (Table 12). However, data are available for total harvests at the species level.

In years for which data were reported on salmon harvests between 2000 and 2010, an average of two subsistence salmon permits were issued to Twin Hills households, with an average of one permit returned each year. Chinook salmon were the primary species harvested under subsistence permits during this period (an average of 47 Chinook per year), along with some harvest of sockeye, chum, pink, and coho salmon (Table 13). Data regarding subsistence harvest of marine invertebrates and non-salmon fish were not reported during this period.

Between 2005 and 2010, an average of two Subsistence Halibut Registration Certificate (SHARC) cards were issued to Twin Hills residents. Data regarding how many SHARC cards

¹⁷¹⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

were returned and the amount of halibut harvested were not reported between 2003 and 2010. Information about subsistence halibut harvest is presented in Table 14.

Information about subsistence harvest of marine mammals was reported between 2000 and 2008, with the exception of 2005. Two to five walrus were reportedly harvested by Twin Hills residents in most years. In years for which data were reported between 2000 and 2010, an average of one sea lion, three harbor seals, and five spotted seals were harvested each year. Information about subsistence harvest of seals and sea lions is presented in Table 15.

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Twin Hills during this period: blue mussels, cockles, Dungeness crab, razor clams, red king crab, shrimp, softshell clams, Tanner crab, and unknown clams. The ADF&G also reported that the following species of marine mammals were harvested for subsistence in Twin Hills: bearded seal, harbor porpoise, harbor seal, ringed seal, Steller sea lion, and unknown seal. Non-salmon fish reported as harvested for subsistence use included: blackfish, burbot, capelin (grunion), Dolly Varden, grayling, herring, herring sac roe, herring spawn on kelp, humpback whitefish, lake trout, least cisco, Pacific cod (gray), Pacific tom cod, pike, rainbow smelt, rainbow trout, round whitefish, salmon shark, sculpin, starry flounder, unknown trout, and yellowfin sole.¹⁷¹⁵

In a survey conducted by the AFSC in 2011, community leaders reported that the three most important subsistence marine or aquatic resources are putting up/freezing fish, seal, and herring/roe.

Table 12. Subsistence Participation by Household and Species, Twin Hills: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁷¹⁵ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Twin Hills: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	1	102	36	n/a	7	68	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	33	n/a	n/a	n/a	n/a	n/a	n/a
2006	3	3	61	12	n/a	16	29	n/a	n/a
2007	1	1	6	n/a	n/a	n/a	1	n/a	n/a
2008	2	1	34	10	6	n/a	26	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Twin Hills: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	1	n/a	n/a
2006	2	n/a	n/a
2007	2	n/a	n/a
2008	2	n/a	n/a
2009	2	n/a	n/a
2010	2	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Twin Hills: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	5	n/a	n/a	2	7
2001	n/a	n/a	n/a	n/a	n/a	n/a	3
2002	n/a	n/a	n/a	n/a	n/a	2	10
2003	n/a	n/a	n/a	n/a	n/a	6	4
2004	n/a	n/a	2	n/a	1	7	1
2005	n/a	n/a	n/a	n/a	n/a	2	5
2006	n/a	n/a	5	n/a	n/a	1	4
2007	n/a	n/a	n/a	n/a	n/a	1	2
2008	n/a	n/a	n/a	n/a	n/a	n/a	7
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	3	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Ugashik (yoo-GASH-ick)



People and Place

*Location*¹⁷¹⁶

Ugashik is located on the northwest coast of the Alaska Peninsula, 16 miles up the Ugashik River. Ugashik is located in the Kvichak Recording District, the Lake and Peninsula Borough Census Area, and the Lake and Peninsula Borough.

*Demographic Profile*¹⁷¹⁷

In 2010, there were 12 inhabitants in Ugashik, making it the 342nd largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Ugashik grew by 36.36% with an average annual growth rate of 3.93%, indicating a moderately fast rate of population growth. The change in population from 1990 to 2010 is provided in Table 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that approximately six seasonal workers or transients live in Ugashik each year during the months of June, July, and August, with the population reaching its annual peak in July. Community leaders noted that the annual peak in population is entirely driven by employment in the fishing sectors.

A majority of Ugashik residents identified themselves as American Indian and Alaska Native (58.3%) and White (25%) in 2010. There was also a percentage of the population that identified themselves as two or more races (16.7%) in 2010. Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaska Native decreased by 14.4%, with corresponding increases in the percentages of the population identifying themselves as White and as two or more races (Figure 1).

The average household size in Ugashik in 2010 was 1.71, an increase from 1.57 persons per household in 2000 (data regarding average household size were not available for 1990). The total number of households in Ugashik increased from four occupied housing units in 1990 to seven in 2000 and 2010. Of the 38 housing units surveyed for the 2010 Decennial Census, six were owner-occupied, one was renter-occupied, and 31 were vacant or used only seasonally. Throughout this period no residents of Ugashik were reported to be living in group quarters.

¹⁷¹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷¹⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

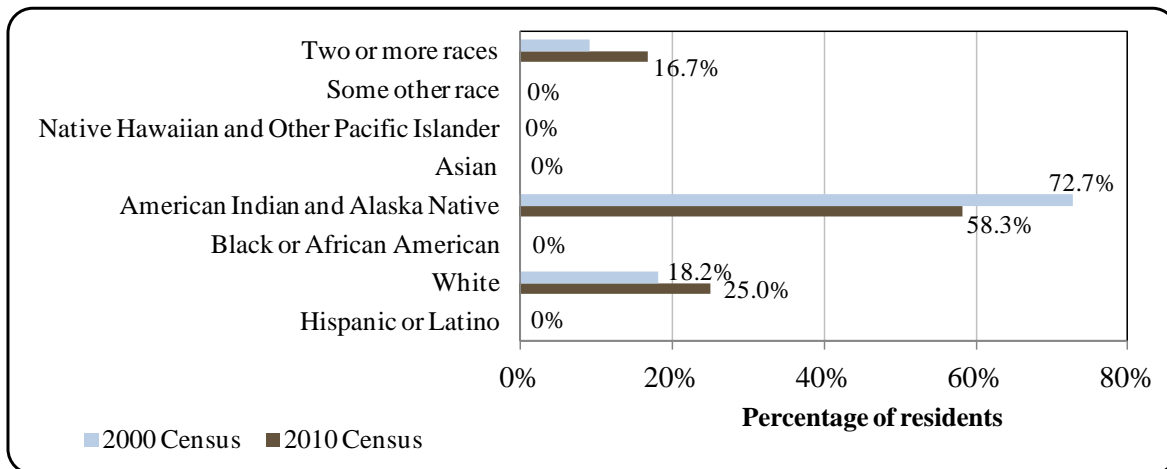
Table 1. Population in Ugashik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	7	-
2000	11	-
2001	-	12
2002	-	12
2003	-	12
2004	-	12
2005	-	15
2006	-	17
2007	-	13
2008	-	15
2009	-	15
2010	12	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Ugashik: 2000-2010 (U.S. Census).

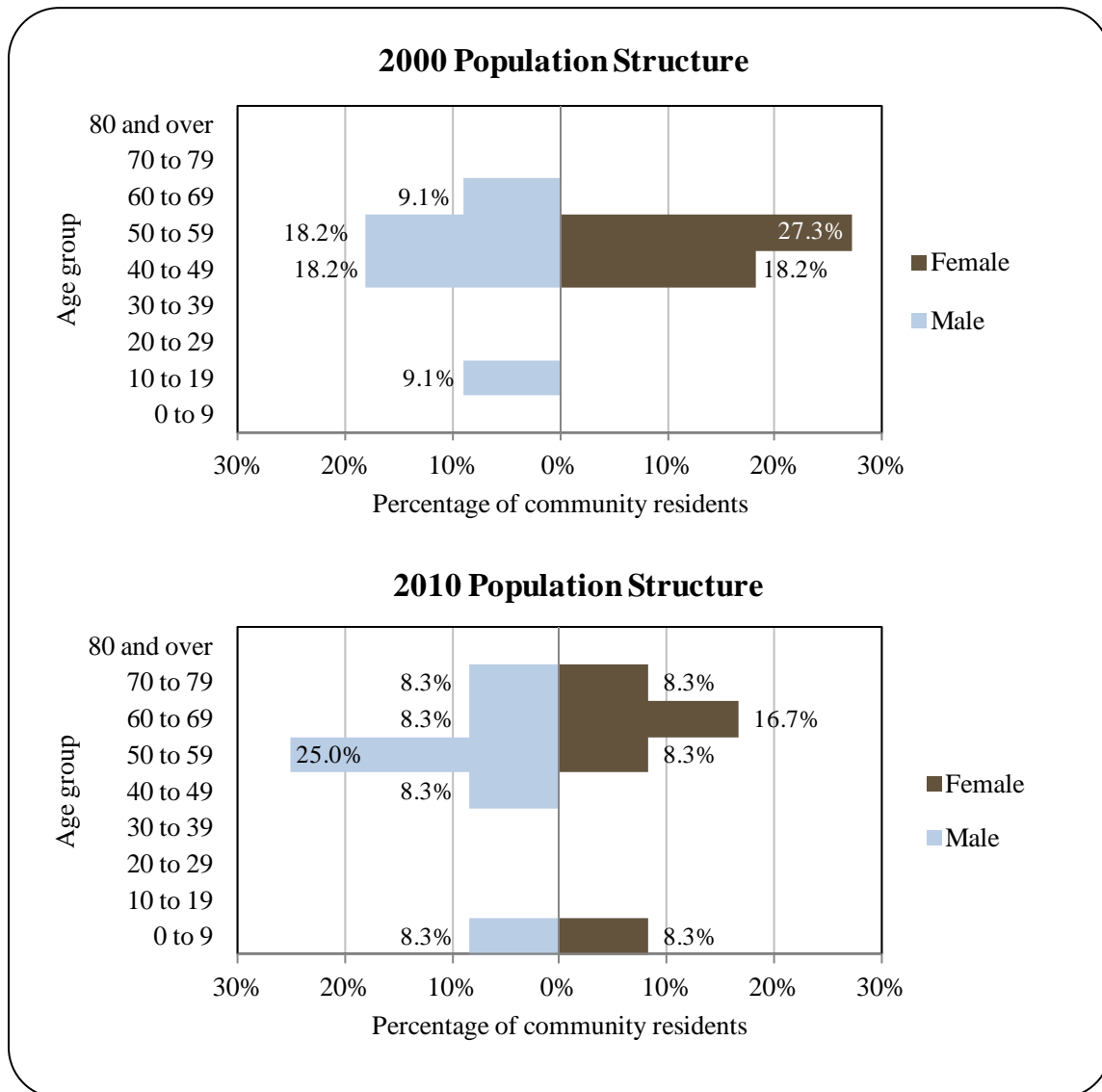


The gender makeup in Ugashik in 2010 was 58.3% male and 41.7% female, similar to the state as a whole (52% male, 48% female). The median age was estimated to be 53.5 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the greatest percentage of the population fell within the age group 50 to 59 years old, with the second largest percentage of the population falling within the age group 60 to 69 years. There were no individuals between ages 10 and 39 or over age 80 in Ugashik in 2010 (Figure 2).

According to the 2006-10 American Community Survey, in terms of educational attainment, 100% of Ugashik residents aged 25 and over were estimated to hold a high school

diploma or higher degree in 210, compared to 90.7% of Alaskan residents overall. Also in 2010, 50% of Ugashik residents aged 25 and older were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 50% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall. However, Ugashik’s small population size may have prevented the American Community Survey from accurately portraying the educational attainment of local residents. While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 2. Population Age Structure in Ugashik Based on the 2000 and 2010 U.S. Decennial Census.



History, Traditional Knowledge, and Culture^{1718,1719}

Aleuts and Yup'ik Eskimos have occupied the Alaska Peninsula for thousands of years. The original occupants of Ugashik were forced to leave the area several thousand years ago following major eruptions of the Aniakchak volcano. The area was again populated approximately 2,250 years ago. Yup'ik Eskimos and Aleuts jointly occupied the area historically. This Aleut village was first recorded in 1880 as “Oogashi”. In the 1890s, the Red Salmon Company developed a cannery, and Ugashik became one of the largest villages in the region. In 1919, the flu epidemic decimated the population. The cannery has continued to operate under various owners. The Briggs Way Cannery opened in 1963. By 1970, many residents had left to find work in other communities following the closure of the local cannery and downturn of the commercial fishing industry. As of 2010, a small year-round population remained.

Ugashik is a traditional site of the Alutiiq; however very few people now live in Ugashik year-round. Some of the village's people live in nearby Pilot Point on the coast. Tribal members live throughout Alaska, California, and Washington. Commercial fishing, fish processing, and subsistence activities sustain residents of the area.

Natural Resources and Environment

Ugashik's maritime climate is characterized by cool, humid, and windy weather. The average summer temperatures range from 41 to 60 °F (5 to 15.6 °C); winter temperatures average 12 to 37 °F (-11.1 to 2.8 °C). Annual precipitation averages 19 inches, 38 inches of snow.¹⁷²⁰

Ugashik is located on the Alaska Peninsula, near the Becharof National Wildlife Refuge (Refuge) to the north and the Aniakchak National Monument and Preserve to the south. The Refuge covers an area of 1,157,000 acres and contains Becharof Lake, the second largest lake in Alaska, and Mt. Peulik, a 4,800 foot volcano. Wildlife present in the Refuge includes brown bears, caribou, moose, over 200 species of migratory and resident birds, and provides an important nursery for Pacific salmon.¹⁷²¹ The Aniakchak National Monument and Preserve contains the Aniakchak Caldera. Volcanic activity in the caldera subsided after the most recent eruption in 1931, but hot spots and warm springs on the caldera floor indicate that eruptive activity may resume at any time. Wildlife present in the National Monument and Preserve include brown bear, caribou, moose, wolf, wolverine, waterfowl, sea otter, harbor seal, sea lion, and numerous smaller species. The region also contains extensive wild runs of five species of Pacific salmon, including nursery areas for sockeye salmon runs that are part of the Bristol Bay and Kodiak/Chignik sockeye salmon fisheries.¹⁷²²

Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin, which runs along the northern edge of the Aleutian Islands and

¹⁷¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷¹⁹ Traditional Village of Ugashik. (2005). *Ugashik Traditional Village Community Comprehensive Strategic Plan*. Retrieved July 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Ugashik-CP-2005.pdf>.

¹⁷²⁰ Ibid.

¹⁷²¹ U.S. Fish and Wildlife Service (2011). *Becharof National Wildlife Refuge*. Retrieved December 21, 2011 from <http://becharof.fws.gov/>.

¹⁷²² U.S. National Park Service (2011). *Aniakchak National Monument and Preserve: Nature and Science*. Retrieved April 24, 2012 from <http://www.nps.gov/ania/naturescience/index.htm>.

Alaska Peninsula.¹⁷²³ However, given the importance of Bristol Bay fisheries to the Nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.¹⁷²⁴ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.¹⁷²⁵

Current Economy¹⁷²⁶

In a survey conducted by the AFSC in 2011, community leaders reported that Ugashik's economy relies on fishing. The top employer in 2010 was Ugashik Traditional Village.

In 2010, estimated per capita and median household income data were not available for Ugashik. Per capita income in 2000 was estimated to be \$12,530 and the median household income in Ugashik in 2000 was estimated to be \$28,750. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁷²⁷ the real per capita income in 2000 is shown to have been \$16,477 and the real 2000 median household income was \$37,806. Based on the American Community Survey, in 2010, 50% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was zero, compared to the statewide unemployment rate of 5.9%. The American Community Survey estimated that none of the local residents were living below the poverty line in 2010, compared to 9.6% of Alaskans overall. However, Ugashik's small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹⁷²⁸ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Ugashik in 2010 was \$13,856, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.¹⁷²⁹

Based on household surveys conducted for the 2006-2010 American Community Survey, all workers were employed in the public sector. Out of three people aged 16 and older that were estimated to be employed in the civilian labor force in 2010, all were estimated to be employed in educational services, health care, and social assistance. No individuals characterized

¹⁷²³ Alaska Department of Natural Resources. April 2005. *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹⁷²⁴ U.S. Dept. of the Interior, Minerals Management Service (2010). *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

¹⁷²⁵ The White House, Office of the Press Secretary (2010). Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

¹⁷²⁶ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁷²⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁷²⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷²⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Ugashik are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Ugashik. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 11.1%.

Figure 3. Local Employment by Industry in 2000-2010, Ugashik (U.S. Census).

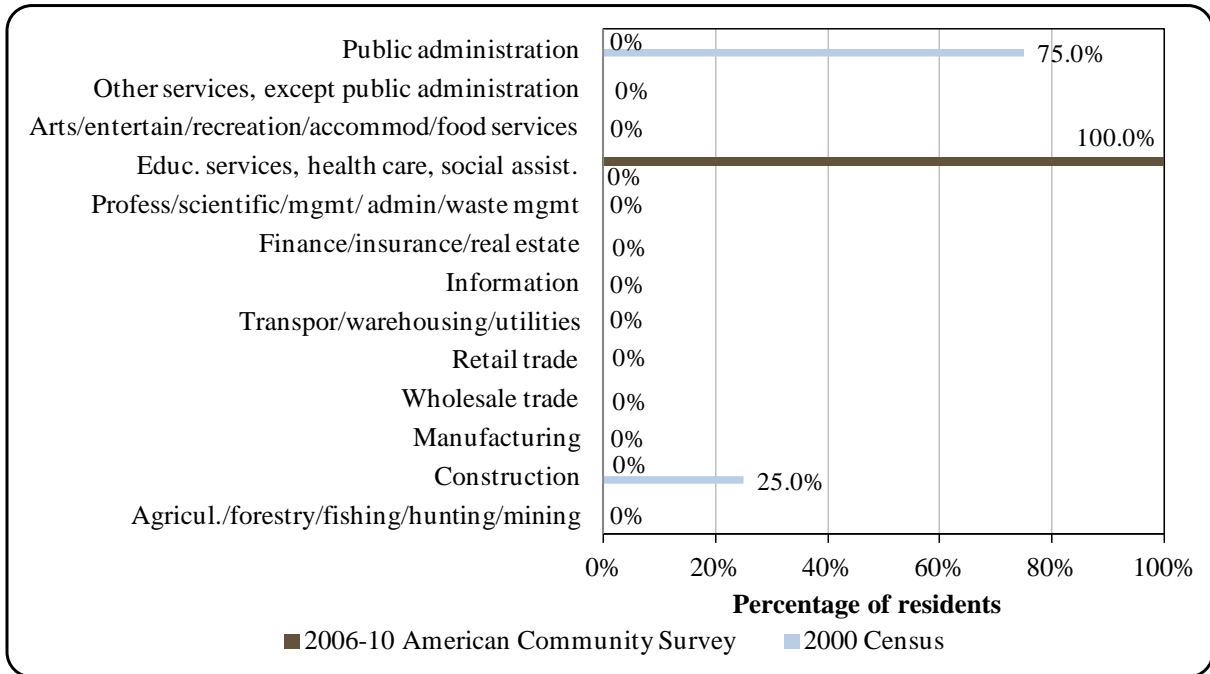
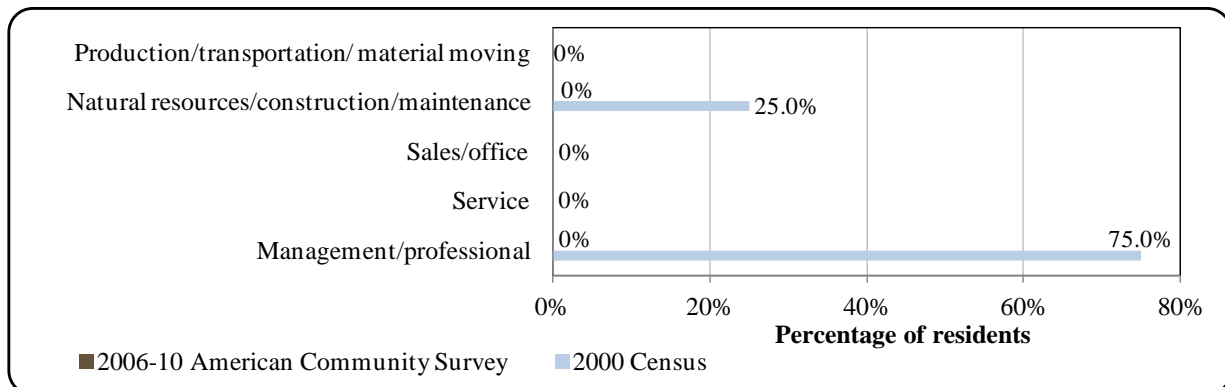


Figure 4. Local Employment by Occupation in 2000-2010, Ugashik (U.S. Census).



Governance

Ugashik is an unincorporated town located in the Lake and Peninsula Borough. Because of Ugashik’s unincorporated status, no municipal taxes were administered between 2000 and 2010. Ugashik did not receive State or Community Revenue Sharing contributions or fisheries-related grants between 2000 and 2010. Information about selected aspects of Ugashik’s community revenue is presented in Table 2.

Ugashik was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Alaska Peninsula Corporation. The regional native corporation to which Ugashik belongs is the Bristol Bay Native Corporation.

The closest regional offices of the Alaska Department of Fish and Game (ADF&G) are in Dillingham and King Salmon. The nearest Alaska Department of Natural Resources office is a Division of Parks and Outdoor Recreation office in Homer, and the nearest Alaska Department of Commerce, Community and Economic Development offices are in Anchorage. Kodiak and Homer have the nearest National Marine Fisheries Service (NMFS) offices although Anchorage is also a potentially accessible office for the people of this area. Anchorage and Kodiak have the closest Bureau of Citizenship and Immigration Services offices.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Ugashik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Ugashik is accessible by air and water. There is a 5,280' gravel airstrip at Ugashik Bay, owned by the U.S. Bureau of Land Management, Division of Lands. It is approximately 12 miles from the village of Ugashik. There is a 3,200' gravel airstrip in the village. There is also a state-owned 3,100' long by 60' wide gravel runway available. There is also a barge landing. Barged freight is brought in from Naknek. ATVs and skiffs are the primary means of local transportation.¹⁷³⁰ Round-trip airfare between Ugashik and Anchorage in June of 2012 was \$754.¹⁷³¹

*Facilities*¹⁷³²

Ugashik has no public water, sewer, or electric services. All homes have individual wells. Most residents use septic systems; a sewage pumper is available. There are no law enforcement services available in Ugashik. Fire and rescue services are provided by volunteers. The Village Council operates a community hall. The nearest state troopers post is located in King Salmon.

In a survey conducted by the AFSC in 2011, community leaders reported that the following infrastructure projects have been completed in the past 10 years: barge landing area, roads serving dock space, roads, and a new landfill/solid waste site. Community leaders also noted that infrastructure projects currently in progress include: construction of new dock space, improvements to existing dock structure, dry dock space, airport/sea plane base, and telephone service. In the same survey, community leaders indicated that pilings and emergency response infrastructure are planned for completion during the next 10 years. Currently, community leaders reported, there is no dock space available for permanent or transient vessels to moor in Ugashik, and the port of Ugashik is capable of handling fuel barges. For businesses that are not available in Ugashik, community leaders noted that residents travel to Naknek, King Salmon, and Anchorage.

*Medical Services*¹⁷³³

There are no health care facilities located in Ugashik. The nearest communities with health care facilities are Port Heiden and South Naknek.

*Educational Opportunities*¹⁷³⁴

There were no schools located in Ugashik in 2011.

¹⁷³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷³¹ Airfare was obtained on the travel website <http://www.penair.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹⁷³² See footnote 1730.

¹⁷³³ Ibid.

¹⁷³⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Bristol Bay region is historically defined by traditional subsistence harvesting practiced by Yup'ik, Aleuts, and Athabascans of the region for millennia. Subsistence activities historically and continue to define livelihood, exchange, social networks, and social organization in the region. Subsistence supplements wage employment, and is considered culturally necessary for much of the population

The Bristol Bay salmon fishery is one of the most important commercial salmon fisheries in the world. Annual commercial harvests of salmon since statehood have averaged about 17 million sockeye salmon (91.2% of all salmon), about 880,000 chum salmon (4.7%), about 550,000 pink salmon (3.0%), about 120,000 coho salmon (0.6%), and about 100,000 Chinook salmon (0.5%). Commercial sockeye salmon harvests since 1959 have represented about 56% of statewide commercial harvests for that species. Sockeye salmon are the most important commercial fish in the region, and large runs occur in Egegik and Nushagak River drainages. These fish return to Bristol Bay in late June and early July with most adults entering their spawning stream by late July or early August. In addition, research has shown that the largest outmigrating sockeye salmon smolts in the Bristol Bay area are from the Egegik River system.¹⁷³⁵

Chinook harvests occur mostly in the Nushagak District outside of Dillingham. Coho salmon are underused because fall runs occur after most vessels have ceased fishing efforts. Because of this, coho harvests are directly tied to market conditions rather than abundance. The Togiak River continuously exceeds minimum escapement goals and had relatively few emergency orders issued between 2000 and 2005, compared to other areas within Bristol Bay.¹⁷³⁶

The Togiak area of Bristol Bay supports the largest herring fishery in the state. Large purses seine and gillnet fisheries harvest the spawning herring in a sac roe fishery, and a spawn-on-kelp harvest is also taken by local residents (usually in Togiak Bay). The Togiak sac roe fishery began in 1977, and has supported a fairly stable catch, averaging 40.6 million pounds between 1998 and 2002.¹⁷³⁷

Bristol Bay supports a large, stable red king crab fishery which has been increasing in abundance since the late 1990s. Fishing effort has remained high with an average of 261 active permits between 1998 and 2002. However, no Togiak residents held crab permits or quota between 2000 and 2010.¹⁷³⁸

Ugashik is located on the northwest coast of the Alaska Peninsula, 16 miles up the Ugashik River.¹⁷³⁹ The area is included in Federal Statistical and Reporting Area 512, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Ugashik participates in the Community Development Quota (CDQ) program as a member of the Bristol Bay Economic Development Corporation (BBEDC). The CDQ program was implemented to

¹⁷³⁵ See footnote 1730.

¹⁷³⁶ Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁷³⁷ Woodby, D. et al. (2005). *Commercial Fisheries in Alaska*. Retrieved July 11, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁷³⁸ Ibid.

¹⁷³⁹ See footnote 1730.

help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹⁷⁴⁰ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

In a survey conducted by the AFSC in 2011, community leaders noted that Ugashik participates in the fisheries management process in Alaska through a representative that sits on regional fisheries advisory and/or working groups run by ADF&G. Community leaders stated that the past or current fisheries policy or management action that affected Ugashik the most is, “The allocations program and fishing periods open to protect the biological aspect of the salmon season, not the economics of fishing.”

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Ugashik Wild Salmon Company operates a seafood processing plant in Ugashik. The plant processes salmon and is a family-run operation that began in 1961.¹⁷⁴¹ In 2010, the plant employed between two and nine workers, with largest number of workers employed between June and August.¹⁷⁴² During the months of August and September, the Ugashik Wild Salmon Company is often the only buyer the east side of Bristol Bay.¹⁷⁴³

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Ugashik (Table 3). However, in a survey conducted by the AFSC in 2011, community leaders reported that Ugashik received \$171,600 in funding or grants from BBEDC in 2010. It is also important to note that the BBEDC uses fisheries revenue from the CDQ program to provide grants for infrastructure, fuel, and electrical assistance to member communities. The BBEDC also offers educational scholarships, vocational training, and fishing permit acquisition and financing assistance to residents of its member communities.¹⁷⁴⁴

Commercial Fishing

In 2010, there were four Ugashik residents holding four commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for the Bristol Bay drift gill net and set gill net salmon fisheries. In the same year, all salmon CFEC permits were reported as fished. While the number salmon CFEC permits held by Ugashik residents decreased between 2000 and 2010, the number of permit holders and the number of permits reported as fished

¹⁷⁴⁰ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹⁷⁴¹ Ugashik Wild Salmon Company. 2011. Retrieved from <http://briggsway.com/> in April 2012.

¹⁷⁴² A survey conducted with shore-based processing plant managers in 2011 by NOAA’s Alaska Fisheries Science Center (AFSC).

¹⁷⁴³ Ibid.

¹⁷⁴⁴ Bristol Bay Economic Development Corporation. *Annual Report 2010*. Retrieved November 16, 2011 from <http://www.bbdc.com>.

remained relatively stable during this period. In 2000, one Ugashik resident held a halibut CFEC permit that was not reported as fished. Between 2000 and 2002, between two and five herring CFEC permits were held by Ugashik residents, though only one permit was reported as fished in 2002. There were no Ugashik residents holding Federal Fisheries Permits or License Limitation Program (LLP) permits between 2000 and 2010. Information on permits and permit holders by species is presented in Table 4.

The number of crew license holders in Ugashik varied considerably between 2000 and 2010, from one crew license holder between 2001 and 2003 to 10 in 2005. There were four crew license holders in Ugashik in 2010. There were no fish buyers located in Ugashik in 2000, and between 2001 and 2010 there were an average of 12 fish buyers in Ugashik. There was one shore-side processing facility located in Ugashik between 2000 and 2010 with the exception of 2002, when there were two processing facilities located in Ugashik.

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing vessels under 35 feet use Ugashik as their base of operations during the fishing season, and that the gear types used by these vessels include gill nets and setnets. The number of vessels owned primarily by Ugashik residents decreased from six in 2000 to two in 2010. An average of 13 vessels were homeported in Ugashik between 2000 and 2010. There were no vessels landing catch in Ugashik in 2000, and between 2001 and 2010 an average of 322 vessels landed catch in Ugashik each year. There were 350 vessels landing catch in Ugashik in 2010. The amount of landings and associated ex-vessel revenue recorded in Ugashik varied between 2001 and 2010, with an average of 15,412,468 pounds landed during this period, bringing in an average amount of \$10,325,774 in ex-vessel revenue. Ugashik was among the top ports in Alaska in landings and ex-vessel revenue in 2010, ranking 16th in landings and 18th in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings. Information on characteristics of the commercial fishing sector in Ugashik between 2000 and 2010 is presented in Tables 5 and 9.

Landings and ex-vessel revenue for all species except crab (no landings recorded) and salmon were considered confidential between 2000 and 2010 due to a small number of participants. As previously stated, landings of salmon and the associated ex-vessel revenue were variable during this period. Because landings and ex-vessel revenue for salmon were the only landings reported for Ugashik during this period, the information presented in the discussion of Table 5 is the same as the information presented in the discussion of landings and ex-vessel revenue by species in Ugashik between 2000 and 2010 (Table 9). Landings and associated ex-vessel revenue recorded by Ugashik residents in other communities were considered confidential between 2000 and 2010 due to a small number of participants (Table 10).

There were no Ugashik residents holding quota share account for halibut (Table 6) or sablefish (Table 7) between 2000 and 2010, and no community residents holding quota share account for crab (Table 8) between 2005 and 2010.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Ugashik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city brings in each year from all sources, including fisheries-related revenue streams. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Ugashik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	5	2	2	0	0	0	0	0	0	0	0
	Fished permits	0	0	1	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	50%	-	-	-	-	-	-	-	-
	Total permit holders	2	1	1	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Ugashik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	4	6	6	6	6	6	6	4	4	5	4
	Fished permits	4	5	5	5	4	5	5	4	4	4	4
	% of permits fished	100%	83%	83%	83%	67%	83%	83%	100%	100%	80%	100%
	Total permit holders	4	5	5	5	5	6	5	4	4	5	4
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>10</i>	<i>8</i>	<i>8</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>4</i>	<i>4</i>	<i>5</i>	<i>4</i>
	<i>Fished permits</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>5</i>	<i>4</i>	<i>5</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>
	<i>% of permits fished</i>	<i>40%</i>	<i>63%</i>	<i>75%</i>	<i>83%</i>	<i>67%</i>	<i>83%</i>	<i>83%</i>	<i>100%</i>	<i>100%</i>	<i>80%</i>	<i>100%</i>
	<i>Permit holders</i>	<i>4</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>6</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>5</i>	<i>4</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Ugashik: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Ugashik ²	Total Net Pounds Landed in Ugashik ^{2,5}	Total Ex-Vessel Value of Landings in Ugashik ^{2,5}
2000	3	0	1	6	10	0	0	\$0
2001	1	6	1	3	11	61	638,235	\$267,837
2002	1	15	2	3	10	363	8,493,866	\$4,089,673
2003	1	12	1	3	11	438	11,096,579	\$5,555,885
2004	6	15	1	3	16	442	20,006,510	\$10,162,639
2005	10	13	1	3	9	357	14,671,001	\$8,968,541
2006	5	11	1	3	18	242	15,083,917	\$9,476,283
2007	5	11	1	2	14	417	30,871,411	\$20,027,189
2008	6	13	1	2	16	273	12,836,817	\$9,199,925
2009	4	11	1	3	15	276	15,745,212	\$12,324,169
2010	4	13	1	2	13	350	24,681,134	\$23,185,598

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Ugashik: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Ugashik: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Ugashik: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Ugashik: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	--	--	--	--	--	--	--	--	--	--
Halibut	0	--	--	--	--	--	--	--	--	--	--
Herring	0	--	--	--	--	--	--	--	--	--	--
Other Groundfish	0	--	--	--	--	--	--	--	--	--	--
Other Shellfish	0	--	--	--	--	--	--	--	--	--	--
Pacific Cod	0	--	--	--	--	--	--	--	--	--	--
Pollock	0	--	--	--	--	--	--	--	--	--	--
Sablefish	0	--	--	--	--	--	--	--	--	--	--
Salmon	0	638,235	8,493,866	11,096,579	20,006,510	14,671,001	15,083,917	30,871,411	12,836,817	15,745,212	24,681,134
<i>Total²</i>	<i>0</i>	<i>638,235</i>	<i>8,493,866</i>	<i>11,096,579</i>	<i>20,006,510</i>	<i>14,671,001</i>	<i>15,083,917</i>	<i>30,871,411</i>	<i>12,836,817</i>	<i>15,745,212</i>	<i>24,681,134</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	--	--	--	--	--	--	--	--	--	--
Halibut	\$0	--	--	--	--	--	--	--	--	--	--
Herring	\$0	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$0	--	--	--	--	--	--	--	--	--	--
Other Shellfish	\$0	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$0	--	--	--	--	--	--	--	--	--	--
Pollock	\$0	--	--	--	--	--	--	--	--	--	--
Sablefish	\$0	--	--	--	--	--	--	--	--	--	--
Salmon	\$0	\$267,837	\$4,089,673	\$5,555,885	\$10,162,639	\$8,968,541	\$9,476,283	\$20,027,189	\$9,199,925	\$12,324,169	\$23,185,598
<i>Total²</i>	<i>\$0</i>	<i>\$267,837</i>	<i>\$4,089,673</i>	<i>\$5,555,885</i>	<i>\$10,162,639</i>	<i>\$8,968,541</i>	<i>\$9,476,283</i>	<i>\$20,027,189</i>	<i>\$9,199,925</i>	<i>\$12,324,169</i>	<i>\$23,185,598</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Ugashik Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

There was one sport fish guide business registered in Ugashik in 2000, although it was not active during that year. No sport fish guide businesses were registered in the community between 2001 and 2010. In 2000 and 2001, one sport fish guide license was issued locally per year, but no Ugashik residents held sport fish guide licenses between 2002 and 2010. No kept/released log book data were reported for sportfishing charters out of Ugashik between 2000 and 2010.¹⁷⁴⁵

The number of sportfishing licenses sold to Ugashik residents (irrespective of the location of the point of sale) between 2000 and 2010 varied, averaging six per year. No sportfishing licenses were sold in the community during this period, indicating the potential that Ugashik residents travel to other areas or nearby communities to participate in sportfishing activities.

Ugashik is located within Alaska Sport Fishing Survey Area R – Alaska Peninsula / Aleutian Islands. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region varied considerably. For saltwater sportfishing, non-resident angler days fished varied between 1,603 and 4,126 during this period, while Alaska resident angler days fished varied between 3,261 and 12,721 days. Alaska resident anglers fished consistently more saltwater days than non-resident anglers during this period. In contrast, non-resident anglers fished more angler days in freshwater in the Alaska Peninsula / Aleutian Islands region on average (18,462 per year on average) than Alaska resident anglers (15,290 per year on average). This information about the sportfishing sector in and near Ugashik is also displayed in Table 11.

The Alaska Statewide Harvest Survey,¹⁷⁴⁶ conducted by ADF&G between 2000 and 2010, did not report any species targeted by private anglers in Ugashik. However, in a survey conducted by the AFSC in 2011, community leaders reported that the following species are targeted by recreational fishermen that use boats based in Ugashik: Chinook, coho, and sockeye salmon. Community leaders also noted that recreational fishing in Ugashik takes place from private boats owned by local residents.

¹⁷⁴⁵ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁷⁴⁶ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportifshingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Ugashik: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Ugashik ²
2000	0	1	7	0
2001	0	1	10	0
2002	0	0	8	0
2003	0	0	6	0
2004	0	0	6	0
2005	0	0	4	0
2006	0	0	7	0
2007	0	0	4	0
2008	0	0	4	0
2009	0	0	4	0
2010	0	0	2	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	1,664	8,870	17,749	27,227
2001	1,760	3,939	16,840	14,350
2002	4,126	5,210	15,865	18,417
2003	1,603	4,333	16,557	11,878
2004	1,948	12,721	18,813	19,360
2005	3,585	5,129	14,130	12,038
2006	2,809	4,392	22,323	8,830
2007	2,588	9,356	20,371	15,870
2008	3,436	4,298	21,797	10,207
2009	3,488	3,815	18,996	16,020
2010	2,036	3,261	19,643	13,992

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Ugashik residents rely on subsistence activities to provide food sources, including salmon, trout, grayling, moose, caribou, and bear.¹⁷⁴⁷ In a survey conducted by the AFSC in 2011, community leaders reported that salmon is the most important subsistence marine or aquatic resource to the residents of Ugashik. Data are not reported on subsistence participation by household and species or per capita subsistence harvest in Ugashik between 2000 and 2010 (Table 12). However, data are provided as total harvests reported by species.

In years for which data were reported between 2000 and 2010, an average of eight subsistence salmon permits was issued to Ugashik households, with 100% of permits issued being returned in all years for which data were available. Sockeye salmon were the primary species harvested for subsistence (an average of 458 sockeye per year), along with coho, chinook, chum, and pink salmon (Table 13). Data were not reported on per capita subsistence harvest of marine invertebrates or non-salmon fish (not including halibut) during this period.

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Ugashik during this period: butter clams, cockles, razor clams, and Tanner crab. Non-salmon/non-halibut fish reported as harvested for subsistence use included: cod, Dolly Varden, flounder, grayling, herring, herring spawn on kelp, lake trout, pike, rainbow trout, smelt, and whitefish.¹⁷⁴⁸

Data were not reported on subsistence harvest of halibut in Ugashik between 2003 and 2010 (Table 14). Information about subsistence harvest of marine mammals was reported in 2002, during which one sea otter was reported as harvested for subsistence purposes. Further information regarding subsistence harvest of marine mammals is not available (Table 15), although data reported by ADF&G from a 1987 subsistence survey indicates that harbor seals have historically been harvested by residents of Ugashik.¹⁷⁴⁹

¹⁷⁴⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁴⁸ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁷⁴⁹ Ibid.

Table 12. Subsistence Participation by Household and Species, Ugashik: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Ugashik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	8	8	15	1	137	1	395	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	9	8	46	5	224	1	495	n/a	n/a
2005	9	9	25	1	166	n/a	482	n/a	n/a
2006	7	7	13	4	160	4	366	n/a	n/a
2007	7	7	21	n/a	155	n/a	306	n/a	n/a
2008	8	8	34	4	206	1	702	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Ugashik: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Ugashik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	1	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

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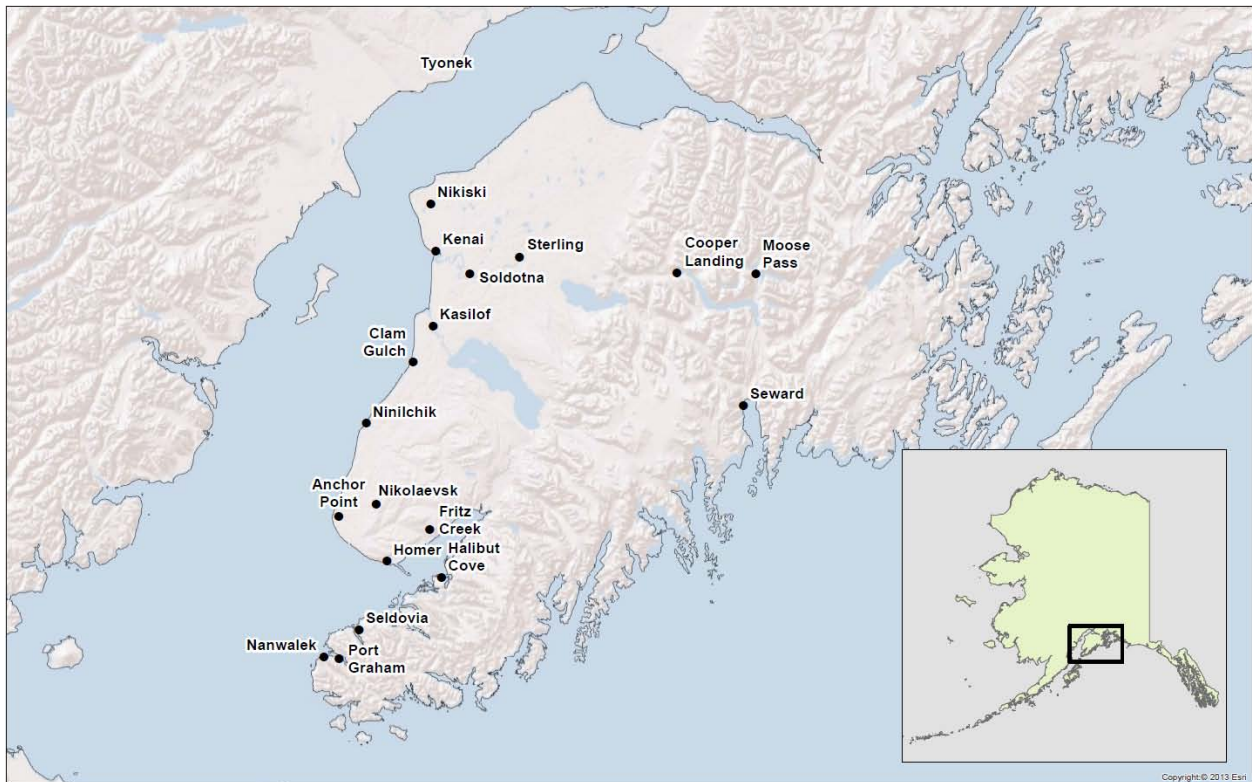
Regional Introduction: Kenai Peninsula and Cook Inlet

Communities

Anchor Point
Clam Gulch
Cooper Landing
Fritz Creek
Halibut Cove
Homer
Kasilof

Kenai
Moose Pass
Nanwalek
Nikiski
Nikolaevsk
Ninilchik
Port Graham

Seldovia
Seward
Soldotna
Sterling
Tyonek



People and Place

Location

Located along the Gulf Coast of Alaska, the Kenai Peninsula and Cook Inlet region encompasses 15,700 square miles of land and 9,900 square miles of water. The Kenai Peninsula extends approximately 150 miles southwest from Anchorage and the Chugach Mountains, and is bordered by the Gulf of Alaska and Prince William Sound to the east and Cook Inlet to the west.

Demographic Profile

The Kenai Peninsula Borough occupies the entirety of the Kenai Peninsula and Cook Inlet Region. A total of 19 communities met criteria for profiling, only 10 of which exceeded 500 residents in 2010. In that year, the total population for the region was 55,400, 12.8% of which lived in the region's largest city of Kenai.¹

In 2010, 84.6% of residents identified themselves as White, 11.6% identified themselves as at least part American Indian or Alaska Native, 2.1% identified themselves as at least part Asian, 1.0% identified themselves as at least part Black or African American, and 0.3% identified themselves as at least part Native Hawaiian or Other Pacific Islander. In addition, 3.0% of residents identified themselves as Hispanic or Latino.²

The region has a mixed economy dependent on key industries, including oil and gas, commercial fishing, tourism, and retail. Government, utilities, educational, and health services also make up a significant portion of the region's economy. Alaska's first viable oil field was discovered in 1957 in the Cook Inlet Basin, which led to the Kenai Peninsula being the first major producer of oil and gas products. While oil production has been declining within the region, gas production has been intensifying. Timber is another economically viable resource within the Kenai Peninsula Borough, although harvests have been declining due to widespread spruce bark beetle infestations. The Cook Inlet/Susitna lowland is the second largest source of coal in Alaska, and coal underlies much of the Kenai Peninsula. Commercial ranching of cattle, horses, buffalo, sheep, poultry, goats, and pigs is present within the Borough, however on a small scale. While in overall decline, the manufacturing sector still has a large presence, specifically in the seafood processing and marketing sectors.

The Kenai Peninsula's proximity to productive fisheries in the Cook Inlet, Prince William Sound, and Gulf of Alaska has allowed it to become one of the largest commercial fishing and seafood processing regions in the state. The region's renowned sportfishing is a major draw for many visitors, and the Kenai River supports the largest recreational coho salmon fishery in Alaska.³

Tourism is one of the region's fastest growing industries because of its close proximity to Anchorage, developed infrastructure, and position as embark/debark point for cruise ships. Both Seward and Whittier maintain cruise line transfer ports, and the Alaska Railroad terminus in

¹ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Ibid.

³ Kenai Peninsula Borough. (2005). *Kenai Peninsula Borough Comprehensive Plan*. Retrieved November 27, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KenaiPeninsulaBorough-CP-2005.pdf>.

Whittier provides a unique, high capacity transportation system linking the Borough with Anchorage and Fairbanks.

In 2010, the estimated per capita income for the region was \$29,127 and the estimated median household income was \$57,454. Of the 42,483 residents aged 16 and over, an estimated 64.1% were considered part of the civilian labor force. Of those employed, most (22.3%) were estimated to work in education services, health care, and social assistance sectors; followed by agriculture, forestry, fishing, hunting, and mining (12.1%) and retail trade (10.3%) sectors. Unemployment in 2010 was estimated at 5.5%.⁴

History

According to archaeological evidence, the oldest aboriginal inhabitants of the Cook Inlet region were Riverine Kachemak Eskimos from approximately 1000 B.C. to 1000 A.D. At that time, there appears to have been a shift to inhabitation by Dena'ina Athabascan Indians throughout most of the inlet. This shift may have resulted from changes in climate that altered salmon abundance patterns.⁵ When Russian fur traders arrived in the region in 1741, approximately 1,000 Dena'ina people lived in a village at the site of Kenai known as Shk'ituk't,⁶ and many small seasonal camps were located along the Kenai River and its tributaries.⁷ The Russians called the Dena'ina people 'Kenaitze,' which meant 'the people who live along the Kenai River', although the Kenaitze called themselves Kahthuht'ana, an Athabascan word meaning 'the people of the Kenai'.⁸ Early hostilities between the Russian settlers and the Native inhabitants led the Dena'ina to attack the Fort in 1797 in the Battle of Kenai, resulting in 100 deaths.⁹

The Dena'ina population was decimated by disease in the 1800s and 1900s, and after the flu epidemic of 1919, much of the remaining population consolidated in what was then the village of Kenai. Natives living in the village of Kenai maintained ties to historical village sites, camps, and traplines in the interior through the 1930s and 1940s. Many had summer residences in Kenai and during winter moved to homes along the upper Kenai River.¹⁰

In 1791, Russian fur traders built a fortified trading post at Kenai called Fort St. Nicholas. Soon after the United States purchased Alaska from Russia in 1867, the U.S. military took over the fort and renamed it Fort Kenay. A U.S. post office was established in Kenai in 1899. The commercial fishing industry provided an early economy in the region, and continued to be important as other industries grew. Opportunities for homesteading were opened in the 1940s,

⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵ Fall, J. A., R. T. Stanek, B. Davis, L. Williams and R. Walker. 2004. *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Final Report for Study No. FIS 03-045.

⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷ See footnote 5.

⁸ Halliday, Jan. 1998. *Native Peoples of Alaska: A Traveler's Guide to Land, Art, and Culture*. Sasquatch Books, Seattle.

⁹ Kenai Peninsula Economic Development District. 2010. *Kenai Peninsula Borough Comprehensive Economic Development Strategy*. Retrieved September 7, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/KPEDD%20CEDS%20&%20Gap%20Analysis%20Study%202010.pdf>.

¹⁰ See footnote 5.

and the population of the area began to grow. The first dirt road connecting Kenai to Anchorage was completed in 1951. The first oil strike took place in 1957 at the Swanson River, 20 miles northeast of Kenai, and the first discovery of offshore oil occurred in 1965.¹¹

Natural Resources and Environment

The Kenai Peninsula is in the maritime climate zone of Alaska. In this area, the Alaska Mountain Range, coupled with plentiful moisture, produces relatively moderate temperatures and a fair amount of rainfall. Winters on the Kenai Peninsula are relatively mild in comparison to other regions of Alaska, with temperatures ranging from 4 to 38° F. Summer temperatures range from 46 to 70° F. Rainfall totals vary quite widely on the Peninsula, from an annual average of 20 inches in Kenai to an average of 66 inches in Seward. Snowfall is common in the wintertime.¹²

The Kenai Peninsula is in southcentral Alaska and is geologically a relatively "young" or recently exposed area. Ice and glaciers, which once covered the entire peninsula, melted from most of the peninsula only 10,000-14,000 years ago. The remnant of this once widespread ice sheet can still be observed today as the Harding Ice Field high in the eastern Kenai mountains of the peninsula. At its greatest depth in the center, the Harding Ice Field is thousands of feet thick. Coastal areas on the west and southwest side of the Kenai Peninsula consist of mudflats, lowlands, sandy beaches, and steep bluffs.¹³

Protected areas include the Kenai National Wildlife Refuge, Chugach National Forest and State Park, Kenai Fjords National Park, Lake Clark National Park and Preserve, Kachemak Bay State Park and Wilderness and Critical Habitat Area, and Clam Gulch State Critical Habitat Area.

Most of the lower elevations on the Kenai Peninsula are covered by boreal forest and numerous lakes. The largest lake on the Kenai Peninsula is Tustumena Lake at nearly 74,000 acres. Boreal forests are the home of moose, wolves, black and brown bears, lynx, snowshoe hares and numerous species of neotropical birds such as olive-sided flycatchers, myrtle warblers and ruby-crowned kinglets.¹⁴

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields on and off shore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.¹⁵

There is limited timber value in the Kenai Peninsula and Cook Inlet area due to poor soil drainage.¹⁶ Some logging takes place to remove timber killed by spruce bark beetle.¹⁷ Tidelands

¹¹ Kevin Waring Associates. 2003. *City of Kenai Comprehensive Plan*. Retrieved September 4, 2012 from <http://www.ci.kenai.ak.us/City-approved%20Kenai%20Plan.pdf>.

¹² See footnote 6.

¹³ Alaska Department of Natural Resources. (2001). *Kenai Area Plan*. Retrieved February 7, 2012 from: http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/master_KAP.pdf.

¹⁴ Ibid.

¹⁵ Resource Development Council (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

¹⁶ Alaska Dept. of Natural Resources. 2001. *Kenai Area Plan*. Retrieved February 7, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/master_KAP.pdf.

in the area are valuable for commercial inshore fisheries. There are no active or proposed mineral development sites in the area, although coal beds exist throughout most of the western Kenai Peninsula.¹⁸

Governance

Of the communities profiled within the Kenai Peninsula Borough, five are incorporated. Kenai and Seward are both Home Rule cities; and Soldotna, Homer, and Seldovia are First-class cities. Communities with federally recognized Tribal councils include Nanwalek, Ninilchik, Port Graham, and Tyonek. These communities also have Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporations. The regional ANCSA chartered Native corporation is Cook Inlet Region, Incorporated. In 2010, the Kenai Peninsula Borough administered a 3% sales tax and 4.5 mills property tax. In that year, \$25.95 million in sales tax was collected, compared to \$12.69 million in 2000.¹⁹

Communities eligible for participation in the federal Community Quota Entity (CQE) program include Nanwalek, Port Graham, and Seldovia. CQE groups are eligible to purchase fishing quota share on behalf of residents of their respective communities.

Involvement in North Pacific Fisheries

Commercial fishing, recreational fishing, and seafood processing are important economic drivers on the Kenai Peninsula. Borough residents fish out of Bristol Bay, the Bering Sea, Prince William Sound, Cook Inlet, Kodiak, and Southeast Alaska.²⁰ Local fisheries are present in the Cook Inlet, Prince William Sound, and the Gulf of Alaska.

The Cook Inlet is divided into upper and lower management areas. All five species of Pacific salmon are targeted; however, sockeye and pink are the most abundant. Pacific cod, halibut, scallops, and razor clams are also targeted. Herring, shrimp, and crab harvests have occurred in the past, however fisheries are currently closed until stocks can rebuild. Historically, large razor clam, shrimp, scallop, king, Tanner, and Dungeness crab fisheries existed; however, as shellfish fisheries declined, Pacific cod, sablefish, and pollock fisheries grew. The State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.²¹

As of 2010, there were a total of 25 registered shoreside seafood processors located within the region.²² Communities which had shoreside processors that year included Homer, Kasilof, Kenai, Nikiski, Seward, and Soldotna. A total of 102.91 million pounds of seafood

¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸ Alaska Dept. of Commerce. (n.d.). *Mineral Resources of Alaska*. Retrieved February 8, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

¹⁹ Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

²⁰ Kenai Peninsula Borough. (2005). *Kenai Peninsula Borough Comprehensive Plan*. Retrieved November 27, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KenaiPeninsulaBorough-CP-2005.pdf>.

²¹ Alaska Department of Fish and Game. (n.d.). *Commercial Fisheries Overview*. Retrieved November 28, 2012 from: <http://www.adfg.alaska.gov/index.cfm?adfg=fishingcommercialbyarea.main>.

²² Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

valued at \$154.51 million was landed in 2010, over half of which was landed in Seward.²³ Also in that year, residents held 2,381 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC), of which 62.6% were actively fished. Most (46.7%) CFEC permits were held by residents of Homer. Salmon accounted for 56.2% of CFEC permits in 2010, as well as the majority of landings made by residents.²⁴ Residents held 39.37 million shares of halibut, 20.84 million shares of sablefish, at 57.87 million shares of crab quota in 2010. Of the communities that were profiled, Homer held the majority of each at 57.1% of halibut, 46.1% of sablefish, and 82.0% of crab quota shares.²⁵

The Kenai, Kasilof, Russian, Anchor, and Ninilchik rivers all support substantial Chinook and sockeye salmon runs which become the hallmark of the Kenai Peninsula's substantial sportfishing industry. To support the industry, both the State and local communities have invested in extensive infrastructure, ranging from visitor accommodations and amenities, to stocking 27 lakes throughout the Kenai Peninsula with rainbow trout and salmon.²⁶

The Northern Cook Inlet Management Area attracts approximately 160,000 residents and non-Alaskan resident anglers and approximately 20,000 personal use fishermen annually.²⁷ At an average of 275,000 annual angler days fished, the Kenai River is Alaska's most popular freshwater coho salmon sportfishing destination.²⁸ In addition, both the Kenai and Kasilof rivers support two personal use sockeye salmon dip net fisheries. Other popular sport fish within the region include Dolly Varden, rainbow trout, steelhead, pink and Chinook salmon, and smelt. Arctic grayling and Northern pike are also targeted, but to a lesser degree.²⁹

Many drainages within the Lower Cook Inlet Management Area support Chinook and coho salmon, steelhead, and Dolly Varden. With access to Kachemak Bay and Halibut Cove, Homer is a popular starting point for recreational anglers targeting Chinook salmon, halibut, and other groundfish. Ferry service to Seldovia provides access to stock Chinook salmon fisheries. Finally, opportunities for harvesting razor and hardshell clams are found along much of the Lower Cook Inlet.³⁰

Seward is located within the Resurrection Bay Sport Fishing Management Area, and is the site of a large and growing charter industry. Most recreational fishing effort is directed at halibut, rockfish, lingcod, and coho salmon. Other groundfish targeted or taken incidentally

²³ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁴ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁵ National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁶ See footnote 20.

²⁷ Kenai River Sportfishing Association. (2008). *Economic Values of Sport, Personal Use, and Commercial Salmon Fishing in the Upper Cook Inlet*. Retrieved November 29, 2012 from: http://www.kenairiversportfishing.com/documents_krsa/KRSA%20Economic%20Values%20Report.pdf.

²⁸ Alaska Department of Fish and Game. (n.d.). *The Kenai River*. Retrieved November 29, 2012 from: <http://www.adfg.alaska.gov/static/fishing/PDFs/sport/byarea/southcentral/northkenai2.pdf>.

²⁹ Alaska Department of Fish and Game. (n.d.). *Northern Kenai Peninsula Management Area*. Retrieved November 29, 2012 from: <http://www.adfg.alaska.gov/index.cfm?adfg=ByAreaSouthcentralUpperKenai.main>.

³⁰ Alaska Department of Fish and Game. (n.d.). *Lower Cook Inlet Management Area*. Retrieved November 29, 2012 from: <http://www.adfg.alaska.gov/index.cfm?adfg=ByAreaSouthcentralLowerCookInlet.main>.

include starry and arrowtooth flounder, Pacific cod, walleye pollock, sablefish, greenlings, skates, and spiny dogfish.³¹

In 2010, 81,232 sportfishing licenses were sold in the Kenai Peninsula and Cook Inlet region, 40.4% of which were sold in Soldotna. In addition, residents held 22,941 sportfishing licenses, again most of which were held in Soldotna. Finally, a total of 425 sport fish guide businesses were registered within the region in 2010. Communities with the most registered sport fish businesses that year included Soldotna (141), Homer (72), Kenai (47), and Ninilchik (38).³²

With the exception of Seldovia, Nanwalek, Port Graham, and Tyonek, communities within the Kenai Peninsula and Cook Inlet region fall within a non-subsistence area set by the Alaska Department of Fish and Game.³³ However, personal use fisheries are still allowed on the Kenai and Kasilof rivers. Within the Kenai Peninsula District, federal subsistence priority is currently afforded only to Ninilchik, Cooper Landing, and Hope. Communities including Tyonek, Port Graham, Seldovia, and Nanwalek hold federal rural status giving them subsistence priority on federal lands.³⁴

Eligible residents within the region harvest a diverse range of fish and marine mammals including all five species of Pacific salmon, halibut, Arctic char, rockfish, Steller sea lion, harbor seal, Dolly Varden, eulachon, grayling, herring, herring roe, lake trout, lingcod, Pacific cod, rainbow trout, northern pike, sablefish, sheefish, skates, steelhead, flounder, crab, clams, walleye pollock, and whitefish.³⁵ In 2008, residents reported harvesting 13,089 salmon using 414 subsistence salmon permits. In that year, sockeye salmon accounted for 72.4% of total reported salmon harvests. Most (42.0%) reported salmon harvests were made by residents of Nanwalek, followed by Homer (13.4%) and Tyonek (8.8%).³⁶ Finally, residents harvested an estimated 71,943 pounds of halibut using 244 Subsistence Halibut Registration Certificates. Most (34.3%) halibut by pound was harvested by Nanwalek residents, followed by Seldovia (32.8%) and Port Graham (12.6%).³⁷

³¹ Alaska Department of Fish and Game. (n.d.). *North Gulf Coast Management Area*. Retrieved November 29, 2012 from: <http://www.adfg.alaska.gov/index.cfm?adfg=ByAreaSouthcentralNorthGulfCoast.main>.

³² Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³³ Alaska Department of Fish and Game. (n.d.). *Nonsubsistence Use Areas in Alaska*. Retrieved November 29, 2012 from: <http://www.adfg.alaska.gov/index.cfm?adfg=subsistence.nonsubsistence>.

³⁴ National Subsistence Board. (2007). *Final Rule and Requests for Reconsideration of Decennial Review of Rural/Nonrural Determinations*. Retrieved November 29, 2012 from: <http://alaska.fws.gov/asm/pdf/rural/FinalRuleRFR2007.pdf>.

³⁵ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

³⁶ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³⁷ Fall, J.A. and D. Koster. (2011). *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Regional Challenges

Many issues affecting life in the region are compounded by the region's rapid population growth. The larger towns on the Kenai Peninsula have all seen a doubling or tripling of their populations in the last several decades. This has underscored the need to develop infrastructure and social services at a rapid pace.

In addition, dependence on salmon fishing, combined with falling salmon prices in recent years, has created economic hardship for some communities in the past. Over the years, total gross earnings for fish landed have dropped, although pounds landed have remained relatively constant. As of 2006, the value of commercial salmon permits were at a tenth of what they were during the late 1980s and early 1990s.³⁸ Seafood processing has suffered in recent years as well, and efforts have been made to improve product marketing and value.³⁹

The controversy over rights to subsistence has also been a sore point for many communities. In 2000, the Federal Subsistence Board designated the entire Kenai Peninsula a rural area, only to rescind that determination after backlash from many communities. Today, only a few communities have federal subsistence priority, and many recreational fishermen and hunters continue to be at odds with subsistence users.⁴⁰

³⁸ Kenai River Sportfishing Association. (2008). *Economic Values of Sport, Personal Use, and Commercial Salmon Fishing in the Upper Cook Inlet*. Retrieved November 29, 2012 from:

http://www.kenairiversportfishing.com/documents_krsa/KRSA%20Economic%20Values%20Report.pdf.

³⁹ Kenai Peninsula Borough. (2005). *Kenai Peninsula Borough Comprehensive Plan*. Retrieved November 27, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KenaiPeninsulaBorough-CP-2005.pdf>.

⁴⁰ Juneau Empire. (2000). *Kenai Subsistence Decision Hurts Alaska*. Retrieved November 29, 2012 from: http://juneauempire.com/stories/053000/Ope_editorial.html.



Anchor Point (AN-kur)

People and Place

*Location*⁴¹

Anchor Point is located on the Kenai Peninsula at the junction of the Anchor River and its north fork, 14 mi northwest of Homer and 112 mi southwest of Anchorage. The area occupies 90.8 square mi of land and 0.1 square mi of water. Anchor Point is located in unincorporated and under the jurisdiction of the Kenai Peninsula Borough.

*Demographic Profile*⁴²

In 2010 Anchor Point had 1,930 residents, ranking it 49th of 352 communities in terms of population size. Between 1990 and 2010, the population has grown by 122.9% (Table 1). Between 2000 and 2009, the population fell by 1.7% with an average annual population growth rate of -0.16%; which was less than the statewide average of 0.75% and indicative of relatively little overall population change following the steep growth during the 1990s.

The racial composition of Anchor Point was predominately White in 2010. In that year, 91.8% of residents identified themselves as White, compared to 90.2% in 2000; 3.4% identified themselves as American Indian or Alaska Native, compared to 3.8% in 2000; and 3.8% identified themselves as two or more races, compared to 4.4% in 2000 (Figure 1). All other races each made up less than one-percent of the population, respectively. In addition, 1.7% of residents identified themselves as Hispanic or Latino in 2010, compared to 2.2% in 2000.

The average household size in 2010 was 2.30, compared to 2.70 in 1990 and 2.59 in 2000. In that year, there were a total of 1,239 housing units, compared to 405 in 1990 and 979 in 2000. Of the households surveyed in 2010, 56% were owner-occupied, compared to 62% in 2000; 12% were renter-occupied, compared to 11% in 2000; 12% were vacant, compared to 8% in 2000; and 21% were occupied seasonally, compared to 19% in 2000. No residents were reported as living in group quarters between 1990 and 2010.

The gender distribution was somewhat skewed in 2010 at 53.1% male and 46.9% female. This was similar to both the statewide distribution that year (52.0% male, 48.0% female) and the distribution in 2000 (53.6% male, 46.4% female). The median age in 2010 was 47.1 years, which was significantly older than both the statewide median of 33.8 years and 2000 median of 39.0 years.

Compared with 2000, the population structure in 2010 was significantly more constricted. Older cohorts had age transitions consistent with a stable population meaning that as they aged, they maintained their overall structure. However, there was some attrition in younger cohorts

⁴¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

possibly indicating low youth retention within the community. In 2010, 22.2% of residents were under the age of 20, compared to 31.9% in 2000; 21.6% were over the age of 59, compared to 11.0% in 2000; 46.5% were between the ages of 30 and 59, compared to 49.0% in 2000; and 9.8% were between the ages of 20 and 29, compared to 8.0% in 2000.

Gender distribution by age cohort in 2010 was similar to 2000, consisting of mostly slight male or female biases (Figure 2). In that year, the greatest absolute gender difference occurred in the 60 to 69 range (8.3% male, 5.6% female), followed by the 40 to 49 (8.3% male, 6.0% female) and 10 to 19 (6.4% male, 4.8% female) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range.

According to the U.S. Census' 2006-2010 American Community Survey (ACS)⁴³ an estimated 92.2% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 2.1% had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 5.8% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 24.7% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 12.1% held an Associate's degree, compared to an estimated 8.0% of Alaska residents overall; an estimated 11.2% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 7.6% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

Table 1. Population in Anchor Point from 1990 to 2010 by source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	866	-
2000	1,802	-
2001	-	1,809
2002	-	1,780
2003	-	1,809
2004	-	1,831
2005	-	1,756
2006	-	1,794
2007	-	1,785
2008	-	1,808
2009	-	1,772
2010	1,930	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

⁴³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 1. Racial and Ethnic Composition, Anchor Point: 2000-2010 (U.S. Census).

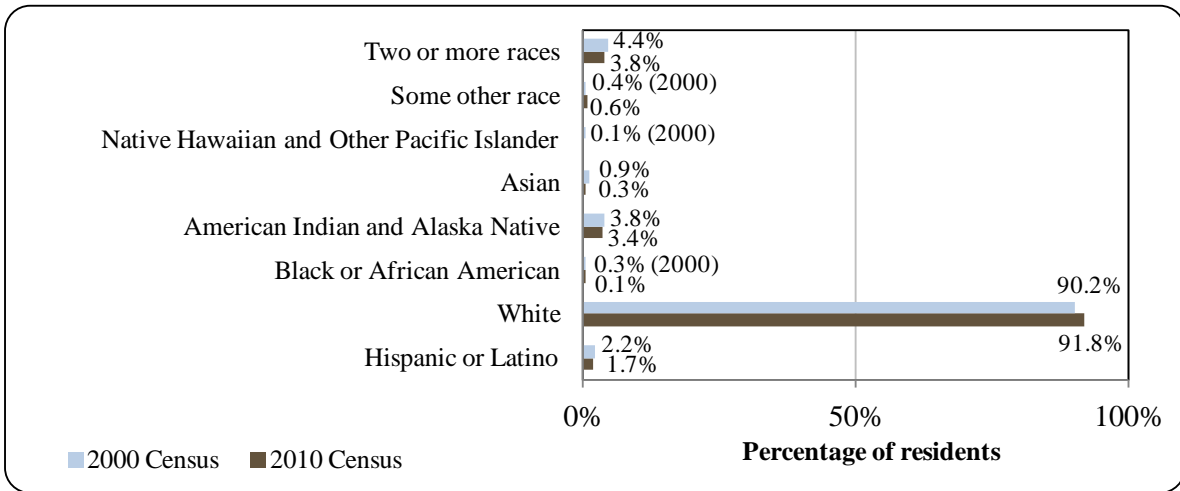
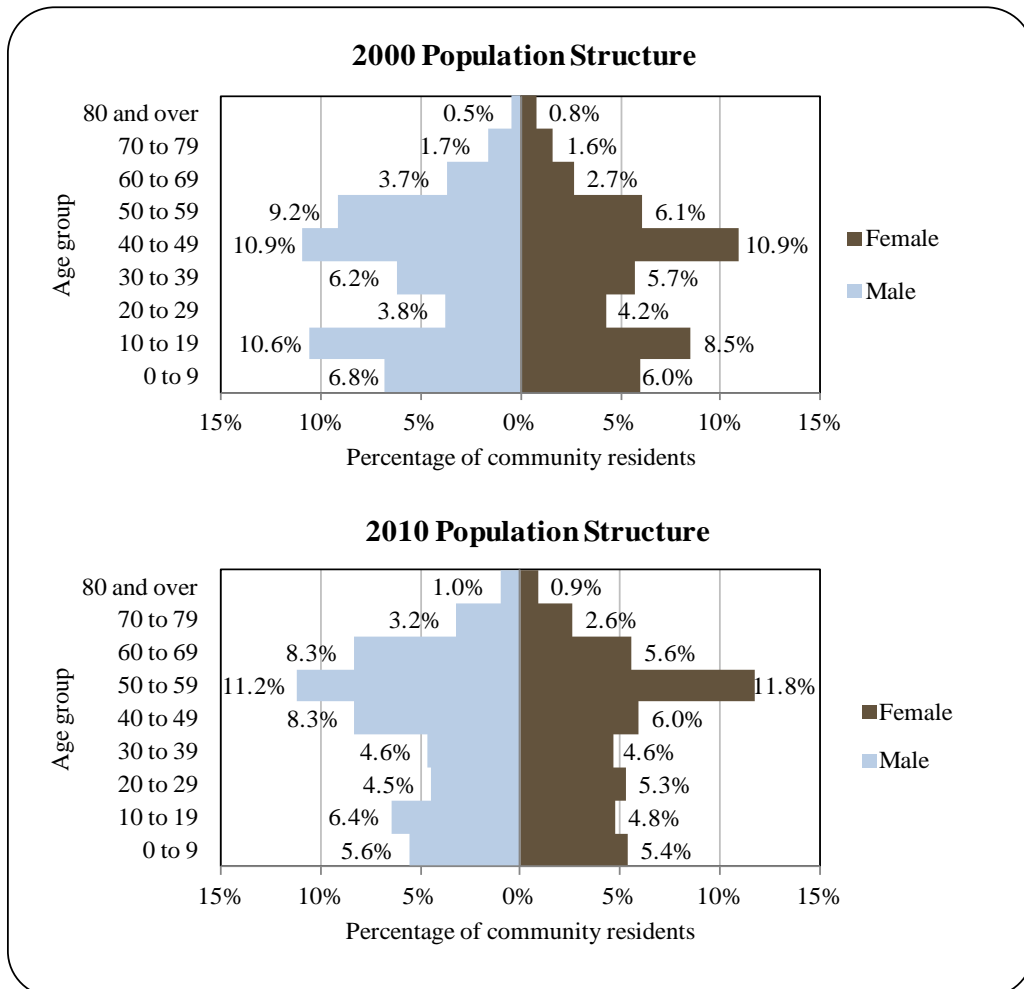


Figure 2. Population Age Structure in Anchor Point Based on the 2000 and 2010 U.S. Decennial Census.



History, Traditional Knowledge, and Culture

The Kachemak Bay area was originally settled by the Kachemak tradition of Tanaina Athabaskans at least 3000 years ago.⁴⁴ Written descriptions of the Kenai Peninsula and its people are found in the 1778 journals of Captain James Cook during his expedition to find a Northwest Passage. According to legend, he gave Anchor Point its name after losing an anchor to strong tidal currents in the area.⁴⁵ The goldrush of the late nineteenth century brought prospectors to pan and sluice the shoreline for gold.⁴⁶ By 1900, homesteaders arrived from Homer, Kenai, and Ninilchik and began farming, fishing, and hunting the area.⁴⁷ Today, Anchor Point is a community of homesteaders, fishermen, business owners, and retirees.⁴⁸

While there are no sites within Anchor Point registered on the National Register of Historic Places (NRHP), there are several historic sites nearby. Archaeological sites include the Yukon Island, Cottonwood Creek, and Chugachick Island sites located around Kachemak Bay. Historic buildings include the Holy Transfiguration of Our Lord Chapel in Ninilchik.⁴⁹

Natural Resources and Environment

Anchor point has a marine climate characterized by mild winters and summers. In January, temperatures range from 4 to 22 °F (-16 to -6 °C). July temperatures range from 46 to 65 °F (8 to 18 °C). Average annual precipitation is 20 inches.⁵⁰

Anchor Point is located on coastal outwash plains dominated by low-lying wetlands. Lowland areas are generally poorly drained and support patches of black spruce with surrounding muskeg. Coastal areas consist of mudflats, sandy beaches, and steep bluffs. The community occupies an area with an abundance of aquatic and terrestrial resources which facilitate many recreational, subsistence, and commercial opportunities. Aquatic species of economic and cultural importance within the Kenai Peninsula and Cook Inlet area include all five species of Pacific salmon, smelt, groundfish, rockfish, grayling, pike, burbot, char, rainbow trout, Dolly Varden char, steelhead trout, lingcod, pollock, halibut, herring, sablefish, Pacific cod, Tanner and Dungeness crab, clams, and scallops. In addition, the Cook Inlet supports a variety of seabirds and marine mammals including whale, porpoise, otter, harbor seal, and sea lion. Terrestrial species include moose, caribou, Dall sheep, mountain goat, brown bear, black bear, wolverine, mink, ermine, river otter, beaver, muskrat, snowshoe hare, wolf, coyote, and a variety of birds.⁵¹

⁴⁴ Workman, W. B., J.E. Lobdell., and K. Wood-Workman. 1980. Recent archeological work in Kachemak Bay, Gulf of Alaska. *Arctic*, 33(2), 385-399.

⁴⁵ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁶ Anchor Point Chamber of Commerce (n.d.). *Anchor Point History*. Retrieved November 29, 2011 from: <http://www.anchorpointchamber.org/history.htm>.

⁴⁷ Alaska Department of Natural Resources (n.d.). *Anchor Point History*. Retrieved November 29, 2011 from: <http://dnr.alaska.gov/parks/units/anchoriv.htm>.

⁴⁸ See footnote 46.

⁴⁹ National Park Service (n.d.). *National Register of Historic Places*. Retrieved November 29, 2012 from: <http://www.nps.gov/nr/research/>.

⁵⁰ See footnote 45.

⁵¹ U.S. Fish and Wildlife Service. (n.d.). *Kenai National Wildlife Refuge*. Retrieved November 29, 2011 from: <http://www.fws.gov/refuges/profiles/index.cfm?id=74525>.

There are no active mining projects in the area although the western side of the peninsula does possess large, undeveloped coal deposits.⁵² In addition, there are active oil and gas projects being undertaken within the Cook Inlet.

There are several types of natural hazards which potentially pose threats to Anchor Point. These include earthquakes, tsunamis, flooding, shore erosion, sea level rise, storm surges, and land subsidence.⁵³ There are several major faults in the area including the Castle Mountain fault to the north and the Aleutian Megathrust fault to the south. Historically, the lower Cook Inlet area has produced several earthquakes over magnitude 6. The Anchor River is prone to flood events during heavy rains, ice jams, or rapid snow melt. These flood events can potentially be damaging to local infrastructure and increase erosion of river banks. Coastal and bluff erosion resulting from storm surges is also a concern.⁵⁴

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active in Anchor Point in 2010.⁵⁵

Current Economy⁵⁶

Anchor Point's economy is largely based on the commercial fishing industry and tourism.⁵⁷ Many residents hold commercial fishing permits and the community's position on the Sterling highway and proximity to Homer increase its attractiveness as a travel destination. The community also caters to the sportfishing industry, and several lodges provide services.⁵⁸ Top employers in 2010⁵⁹ included South Peninsula Hospital Inc., Kenai Peninsula Borough School District, State of Alaska, Anchor River Inn Inc., SPBHS Inc., ASRC Energy Services O&M Inc., Safeway Inc., Lands End Resort, City of Homer, VECO Alaska Inc.

In 2010,⁶⁰ the estimated per capita income was \$26,967 and the estimated median household income was \$50,610, compared to \$18,668 and \$41,094 in 2000, respectively. However, after adjusting for inflation by converting 2000 values into 2010 dollars,⁶¹ the real per capita income (\$24,548) and real median household income (\$54,038) indicate that while individual earnings increased slightly, household earnings declined. In that year, Anchor Point ranked 86th of 305 communities from which per capita income was estimated, and 128th of 299 communities from which median household income was estimated. It should be noted that

⁵² Alaska Department of Natural Resources. (n.d.). *Minerals Resources of Alaska*. Retrieved November 30, 2011 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁵³ Alaska Department of Natural Resources. (n.d.). *Coastal Hazards*. Retrieved November 30, 2011 from: http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

⁵⁴ Kenai Peninsula Borough. (2011). *Hazard Mitigation Plan*. Retrieved November 30, 2011 from: http://www2.borough.kenai.ak.us/emergency/hazmit/2011/2.0_flood_0711.pdf

⁵⁵ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved March 28, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

⁵⁶ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁷ See footnote 46.

⁵⁸ See footnote 45.

⁵⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁰ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Anchor Point's small population size may have prevented the American Community Survey from accurately portraying economic conditions.⁶² A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, residents earned \$26.75 million in total wages in 2010.⁶³ When matched with the 2010 population, the per capita income equals \$13,859, suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census.⁶⁴

According to 2006-2010 ACS estimates,⁶⁵ 69.6% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 7.6%, compared to an estimated 5.9% statewide; and an estimated 9.9% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in 2010, an estimated 61.7% worked in the private sector, an estimated 17.9% worked in the public sector; and an estimated 20.4% were self-employed.

Anchor Point has a very diverse economy. By industry, most (29.3%) employed residents were estimated to work in education service, health care, and social assistance sectors in 2010; followed by construction sectors (11.7%); transportation, warehousing, and utilities sectors (10.6%); and retail trade sectors (10.5%) (Figure 3). Agriculture, forestry, fishing, hunting, and mining sectors made up 8.8% of sector employment that year. By occupation type, most (26.6%) employed residents were estimated to hold management or professional positions; followed by sales or office positions (21.1%); natural resources, construction, or maintenance positions (19.1%); service positions (17.9%); and production, transportation, or material moving positions (15.3%) (Figure 4). Between 2000 and 2010, there were increases in the proportion of education service, health care, social assistance, transportation, warehousing, and utilities sector employment; while most other sectors experienced declines. According to 2010 ALARI estimates,⁶⁶ most (22.6%) employed residents were estimated to be working in trade, transportation, and utilities sectors; local government sectors (17.1%); leisure and hospitality sectors (13.0%); and natural resources and mining sectors (10.1%).

⁶² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶³ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁶⁴ See footnote 59.

⁶⁵ See footnote 62.

⁶⁶ See footnote 59.

Figure 3. Local Employment by Industry in 2000-2010, Anchor Point.

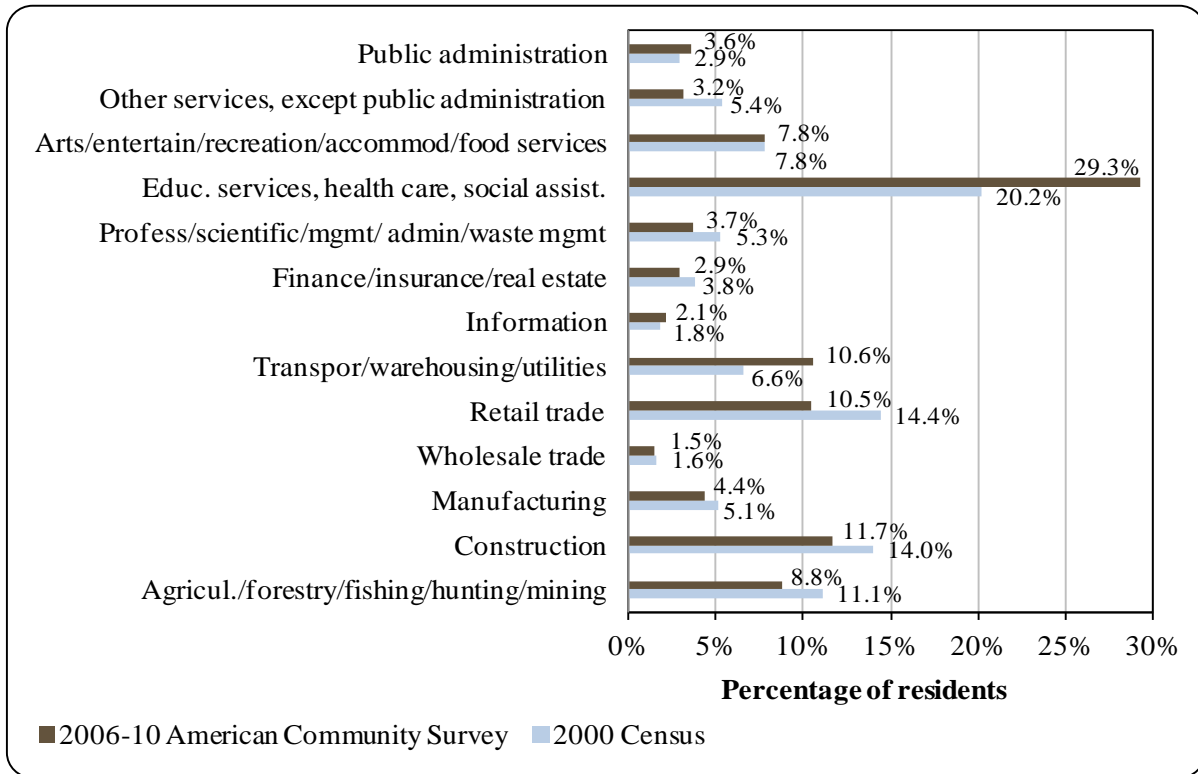
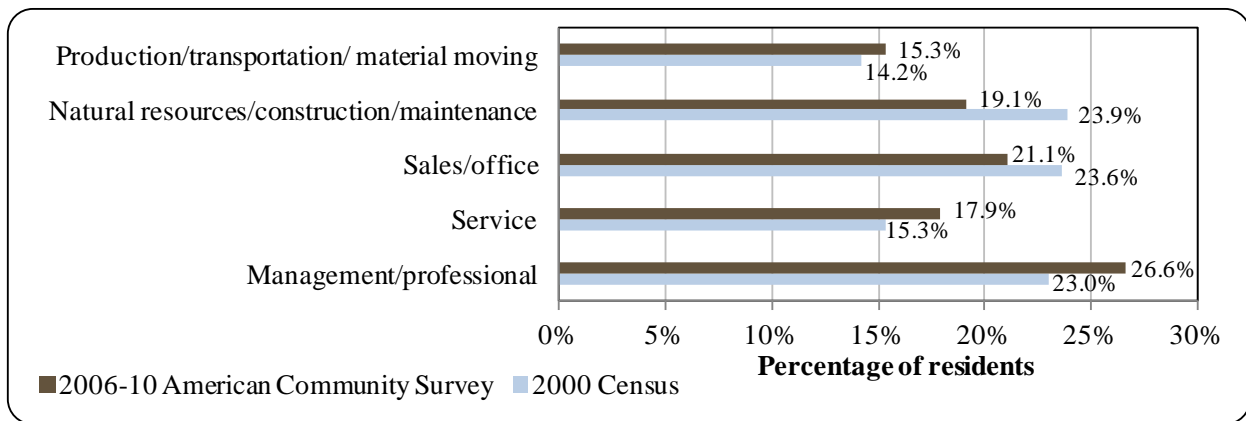


Figure 4. Local Employment by Occupation in 2000-2010, Anchor Point.



Governance

Anchor Point is unincorporated and under the jurisdiction of the Kenai Peninsula Borough. The community was not included in the Alaska Native Claims Settlement Act (ANCSA) and does not have a federally recognized Tribal government. The closest Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Service (NMFS) offices are located in Homer, 14 mi to the southeast. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage, 112 mi northeast. Local

organizations include the Anchor Point Chamber of Commerce, Anchor Point Senior Citizens, Friends of the Library, and a local Veterans of Foreign Wars post.

As of 2010, the Borough administered a 3% sales tax as well as a property tax. State and federal fisheries-related grants received by Anchor Point between 2000 and 2010 include \$750,000 for a harbor development project. Information regarding community finances can be found in Table 2.

Infrastructure

*Connectivity and Transportation*⁶⁷

Anchor Point's communication and transportation infrastructure is part of a developed regional system linking many communities on the Kenai Peninsula. Its connection to the Sterling Highway makes the community accessible by road. Air and ferry service are also provided in nearby Homer. In June 2012, roundtrip airfare between Homer and Anchorage was \$239.⁶⁸

*Facilities*⁶⁹

Water is provided through a network of individual and community wells. Five homes are currently using a centralized, treated water distribution system. For sewage disposal, residents use individual septic systems, outhouses, or are connected to a piped sewer system. Refuse is collected by Peninsula Sanitation. Electricity is provided by the Homer Electric Association which operates a hydroelectric plant at Bradley Lake and a gas turbine plant in Soldotna. The borough provides police services and the community has a volunteer fire department. Visitor accommodations include Anchor Point Roadhouse, Anchor River Inn, Grandma Alaska's Place, Our Front Porch B&B, Owl's Nest RV/Tent Park, Eagle Crest RV Park & Cabins, Kyllonen's RV Park, Grubstake Manor B&B, Iliamna Mountain View B&B, Whispering Winds B&B, and the Anchor River State Recreation Area. Senior services are provided by the Anchor Point Senior Center. Additional public facilities include a public library and two school libraries. Communications services include local and long distance telephone, local television, local radio, and broadband internet.

⁶⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁸ Airfare was averaged from prices found on travel websites, including <http://www.travelocity.com> (retrieved November, 2011)

⁶⁹ See footnote 67.

Table 2. Selected Municipal, State or Federal Revenue Streams for the Anchor Point Municipal Government from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ³	Fisheries-Related Grants (State and Federal) ⁴
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	\$750,000
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	-	n/a
2005	n/a	n/a	-	n/a
2006	n/a	n/a	-	n/a
2007	n/a	n/a	-	n/a
2008	n/a	n/a	-	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Medical Services⁷⁰

The Anchor Point Clinic is privately operated, and provides general and emergency care. The community is also part of the Southern Emergency Medical Service (EMS) region. Additional medical services in Homer include South Peninsula Hospital, which is a qualified Acute Care and Long-Term Care facility. Specialized services are provided by several mental and community health centers in Homer.

Educational Opportunities⁷¹

Anchor Point has one school providing a pre-school through 8th grade education. As of 2011, there were 100 students and nine teachers. There are two high schools found in Homer which provide a 9th through 12th grade education. As of 2011, Homer Flex School had 27 students and four teachers while Homer High School has 399 students and 29 teachers. In

⁷⁰ Ibid.

⁷¹ Alaska Department of Education and Early Development (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

addition, Razdolna School in Homer provides a kindergarten through 12th grade education. As of 2011, it had 63 students and seven teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Anchor Point is very dependent on both commercial and recreational fishing. The Lower Cook Inlet and Kachemak Bay provide fertile habitat to many fisheries. In addition the abundant freshwater drainages provide ample recreational opportunities for anglers. Commercial fisheries in the area include salmon, halibut, groundfish, scallop, sablefish, cod, pollock, and to a limited extent herring and Tanner crab. While in past the region has had a robust herring fishery, overfishing in the mid-twentieth century prompted many successive fishery closures to allow stocks to rebuild.⁷² The community itself lacks port infrastructure; however, numerous fisheries support services can be found in nearby Homer. A harbor project was provided funding in 2002, and there are several boat launches in the area.

Anchor Point is located within the Gulf of Alaska (GOA) Federal Reporting Area 630, International Pacific Halibut Commission (IPHC) regulatory area 3A, and Central GOA Sablefish Regulatory Area. Anchor Point is ineligible to participate in the Community Quota Entity (CQE) Program.

Processing Plants

According to the 2010 ADF&G Intent to Operate list, Anchor Point does not have a registered processing plant. However, there are many processors located in Homer including Auction Block Co., Coal Point Seafood Co., The Fish Factory LLC, Homer Fish Processing, and Kachemak Bay Seafoods. These companies process whitefish, halibut, lingcod, Pacific cod, rockfish, sablefish, crab, clams, scallops, shrimp, and salmon.⁷³ Additional processing facilities can be found in Kenai and Soldotna.

Fisheries-Related Revenue

Since Anchor Point is under the jurisdiction of the Kenai Peninsula Borough, no fisheries-related revenue specific to the community have been reported (Table 3).

Commercial Fishing

In 2010, 64 residents, or 3.3% of the population, held a total of 88 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 88 residents held 174 CFEC permits, representing a 49.4% decline in the number of permits between 2000 and 2010. Of the CFEC permits held in 2010, 50% were for salmon, compared to 32% in 2000; 13% were for groundfish, compared to 27% in 2000; 17% were for halibut, compared to 20% in 2000; 13% were for crab,

⁷² Alaska Department of Fish and Game (2010). *2010 Lower Cook Inlet Annual Finfish Management Report*. Retrieved November 30, 2011 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR11-26.pdf>.

⁷³ Alaska Seafood Marketing Institute (2011). Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

compared to 6% in 2000; 6% were for sablefish, compared to 10% in 2000; and 2% were for herring, compared to 5% in 2000. In addition, 12 residents held 12 Federal Fisheries Permits (FFP) and 15 residents held 19 License Limitation Program (LLP) groundfish permits. Residents held 1.19 million shares of halibut quota on 19 accounts in 2010, compared to 1.61 million held on 36 accounts in 2000. Residents also held 1.25 million shares of sablefish quota on six accounts that year, compared to 456,125 shares held on 10 accounts in 2000. No residents held crab quota between 2010 and when the program began.

Residents held 72 commercial crew licenses in 2010, compared to 129 in 2000. In addition, residents held majority ownership of 29 vessels, compared to 86 in 2000. Of the CFEC permits held in 2010, 53% were actively fished, compared to 63% in 2000. This varied by fishery from 80% of sablefish and halibut permits, to 55% of salmon and groundfish, 9% of crab, and 0% of herring permits. In addition, 42% of FFP and 26% of LLP groundfish permits were actively fished.

There were no landings reported in Anchor Point between 2000 and 2010. However, landings were reported by residents in those years. Salmon made up the majority of lbs landed by residents in 2010. In that year, residents landed 2.51 million lbs of salmon valued at \$1.60 million ex-vessel, compared to 2.13 million lbs valued at \$924,403 in 2000; an increase of \$0.04 per pound landed after adjusting for inflation⁷⁴ and without considering the species composition of landings. Residents also landed 1.06 million lbs of Pacific cod valued at \$292,799 ex-vessel in that year, compared to 1.23 million lbs valued at \$497,295 ex-vessel; a decrease of \$0.28 per pound after adjusting for inflation.⁷⁵ Finally, 594,141 lbs of halibut were landed valued at \$2.75 million, compared to 487,930 lbs valued at \$1.26 million in 2000; an increase of \$1.08 per pound after adjusting for inflation.⁷⁶ Other groundfish made up a relatively insignificant portion of landings in 2010 at 68,407 lbs valued at \$17,913. All other landings made that year are considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁷⁴ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

⁷⁵ Ibid.

⁷⁶ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Anchor Point: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal revenue⁵</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	30	24	24	23	23	23	26	25	23	21	19
	Active permits	11	6	6	6	4	3	6	6	7	6	5
	% of permits fished	36%	25%	25%	26%	17%	13%	23%	24%	30%	28%	26%
	Total permit holders	28	22	22	21	21	21	21	20	18	17	15
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	18	19	20	15	15	15	11	11	12	12	12
	Fished permits	0	0	0	4	4	4	5	5	5	5	5
	% of permits fished	0%	0%	0%	27%	27%	27%	45%	45%	42%	42%	42%
	Total permit holders	16	17	18	13	13	13	11	11	12	12	12
Crab (CFEC) ²	Total permits	10	11	8	8	9	10	9	9	11	11	11
	Fished permits	0	0	0	0	0	1	0	0	1	1	1
	% of permits fished	0%	0%	0%	0%	0%	10%	0%	0%	9%	9%	9%
	Total permit holders	9	10	7	7	8	9	8	8	10	10	10
Other shellfish (CFEC) ²	Total permits	2	2	2	2	0	0	0	0	0	0	0
	Fished permits	0	0	0	1	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	50%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	2	2	2	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	35	28	26	27	26	21	20	18	18	16	15
	Fished permits	25	23	22	25	22	17	17	16	15	13	12
	% of permits fished	71%	82%	85%	93%	85%	81%	85%	89%	83%	81%	80%
	Total permit holders	33	27	25	27	26	21	20	18	18	16	15
Herring (CFEC) ²	Total permits	8	7	4	4	4	5	4	4	4	5	2
	Fished permits	1	2	0	0	0	0	0	0	0	0	0
	% of permits fished	13%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	5	5	2	2	2	3	2	2	2	3	1

Table 4 cont'd. Permits and Permit Holders by Species: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	17	15	11	10	5	4	7	6	5	4	5
	Fished permits	9	11	10	7	4	3	6	3	3	4	4
	% of permits fished	53%	73%	91%	70%	80%	75%	86%	50%	60%	100%	80%
	Total permit holders	15	13	11	10	5	5	7	6	5	4	5
Groundfish (CFEC) ²	Total permits	47	38	21	21	17	15	8	9	9	11	11
	Fished permits	28	11	10	12	5	2	2	3	4	6	6
	% of permits fished	60%	29%	48%	57%	29%	13%	25%	33%	44%	55%	55%
	Total permit holders	29	25	15	15	13	11	7	8	8	10	11
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	55	52	46	46	48	38	40	45	47	44	44
	Fished permits	47	36	28	29	27	23	22	24	26	26	24
	% of permits fished	85%	69%	61%	63%	56%	61%	55%	53%	55%	59%	55%
	Total permit holders	59	55	48	48	48	39	40	42	44	44	45
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>174</i>	<i>153</i>	<i>118</i>	<i>118</i>	<i>109</i>	<i>93</i>	<i>88</i>	<i>91</i>	<i>94</i>	<i>91</i>	<i>88</i>
	<i>Fished permits</i>	<i>110</i>	<i>83</i>	<i>70</i>	<i>74</i>	<i>58</i>	<i>46</i>	<i>47</i>	<i>46</i>	<i>49</i>	<i>50</i>	<i>47</i>
	<i>% of permits fished</i>	<i>63%</i>	<i>54%</i>	<i>59%</i>	<i>63%</i>	<i>53%</i>	<i>49%</i>	<i>53%</i>	<i>51%</i>	<i>52%</i>	<i>55%</i>	<i>53%</i>
	<i>Permit holders</i>	<i>88</i>	<i>81</i>	<i>69</i>	<i>73</i>	<i>71</i>	<i>60</i>	<i>60</i>	<i>60</i>	<i>60</i>	<i>62</i>	<i>61</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics Of The Commercial Fishing Sector In Anchor Point: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Anchor Point ²	Total Net Pounds Landed In Anchor Point ²	Total Ex-Vessel Value Of Landings In Anchor Point ²
2000	129	0	2	86	48	0	0	\$0
2001	84	0	2	84	47	0	0	\$0
2002	75	0	2	72	42	0	0	\$0
2003	71	0	2	74	47	0	0	\$0
2004	71	0	1	68	39	0	0	\$0
2005	67	0	0	30	10	0	0	\$0
2006	48	0	0	26	8	0	0	\$0
2007	66	0	0	30	10	0	0	\$0
2008	56	0	0	32	7	0	0	\$0
2009	68	0	0	30	6	0	0	\$0
2010	72	0	0	29	6	0	0	\$0

¹Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation in Anchor Point: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	36	1,607,390	179,415
2001	35	1,458,739	193,143
2002	35	1,579,836	214,602
2003	31	1,589,993	237,738
2004	27	1,437,234	228,713
2005	23	1,586,841	235,908
2006	25	1,798,692	258,670
2007	24	1,654,789	240,487
2008	19	1,578,182	224,498
2009	19	1,578,539	206,490
2010	19	1,191,160	148,319

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Anchor Point: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	10	456,125	41,238
2001	7	400,875	37,816
2002	8	445,382	44,708
2003	5	362,445	43,371
2004	4	360,234	49,136
2005	4	360,234	43,872
2006	6	709,301	89,961
2007	4	706,071	83,331
2008	4	706,071	64,807
2009	4	706,071	56,516
2010	6	1,248,749	104,556

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Anchor Point: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Anchor Point: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Anchor Point Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	487,930	520,154	638,737	798,706	793,806	872,182	489,267	597,102	639,743	608,729	594,141
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	49,206	20,890	22,318	597,507	376,311	16,650	19,230	47,101	31,253	38,957	68,407
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	1,226,681	844,840	813,565	541,424	1,102,539	676,027	185,643	441,845	1,242,430	1,112,220	1,058,834
Pollock	--	1,847	1,929	--	--	--	--	--	--	--	--
Sablefish	95,695	103,377	124,666	159,975	119,088	134,233	--	--	--	19,298	--
Salmon	2,126,202	1,236,038	1,394,514	1,456,155	1,615,875	2,097,480	1,406,732	2,657,200	2,483,871	1,691,697	2,506,463
<i>Total²</i>	<i>3,985,714</i>	<i>2,727,146</i>	<i>2,995,729</i>	<i>3,553,767</i>	<i>4,007,619</i>	<i>3,796,572</i>	<i>2,100,872</i>	<i>3,743,248</i>	<i>4,397,297</i>	<i>3,470,901</i>	<i>4,227,845</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$1,261,373	\$1,038,126	\$1,432,022	\$2,332,120	\$2,423,455	\$2,670,863	\$1,869,170	\$2,669,041	\$2,876,181	\$1,871,653	\$2,749,494
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$33,364	\$9,886	\$13,562	\$142,856	\$61,513	\$6,164	\$4,572	\$9,355	\$10,498	\$12,673	\$17,913
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$497,295	\$299,830	\$247,861	\$191,378	\$340,249	\$213,693	\$79,940	\$229,702	\$766,425	\$334,837	\$292,799
Pollock	--	\$142	\$127	--	--	--	--	--	--	--	--
Sablefish	\$353,667	\$323,236	\$406,361	\$565,790	\$337,216	\$432,918	--	--	--	\$88,717	--
Salmon	\$924,403	\$448,617	\$438,866	\$410,942	\$682,138	\$777,796	\$650,790	\$1,043,536	\$1,759,622	\$1,182,194	\$1,599,245
<i>Total²</i>	<i>\$3,070,101</i>	<i>\$2,119,837</i>	<i>\$2,538,800</i>	<i>\$3,643,086</i>	<i>\$3,844,571</i>	<i>\$4,101,433</i>	<i>\$2,604,472</i>	<i>\$3,951,634</i>	<i>\$5,412,725</i>	<i>\$3,490,075</i>	<i>\$4,659,451</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is important to communities on the Kenai Peninsula and Anchor Point is no exception. Many lodges and tourism businesses throughout the area provide guided recreational fishing opportunities for tourists. The Anchor River and surrounding drainages and lakes provide excellent opportunities for fishing king, coho, and pink salmon, Dolly Varden char, steelhead, and rainbow trout, arctic grayling, and smelt;⁷⁷ while the Cook Inlet and Kachemak Bay attracts anglers on private boats who target Chinook, coho, pink, sockeye, and chum salmon, Dolly Varden char, rockfish, halibut, lingcod, Pacific cod, shark, smelt, steelhead, Dungeness and Tanner crab, razor clam, and hardshell clam.⁷⁸ In 2010, there were 16 sport fish guide businesses registered in the community, of which 12 were considered active. This represents an overall decline from 2000, when there was 31 registered sport fish guide businesses (22 active). In addition, residents held a total of 27 sport fish guide licenses in 2010, compared to 54 in 2000. In total, 1,758 sportfishing licenses were sold in the community in 2010, compared to 2,012 in 2000. In addition, local residents were sold 888 sportfishing licenses that year, compared to 975 in 2000. Sportfishing license sales in Anchor Point peaked in 2005 at 2,765.

Anchor Point is located in two ADF&G Harvest Survey Areas. The Kenai Peninsula Harvest Survey Area includes all main channels water of the Kenai River downstream of Kenai Lake to Cook Inlet, although it does not include Kenai Lake, Skilak Lake, or any saltwater. The Cook Inlet Harvest Survey Area includes all saltwater of the Kenai Peninsula and Cook Inlet bounded by the Turnagain Arm including Granite Creek Drainage, on the east by the Placer River Drainage, and all waters flowing into the Gulf of Alaska west of Gore Point. In 2010, there were a total of 67,948 saltwater and 99,849 freshwater angler days fished, compared to 109,107 and 181,894 in 2000, respectively. In that year, non-Alaska residents accounted for 70.1% of saltwater angler days fished and 28.3% of freshwater angler days fished, compared to 63.2% and 23.2% in 2000, respectively. In 2010, charter operators kept 159 Chinook salmon, 171 coho salmon, five sockeye salmon, 93 unidentified salmon, 16,055 halibut, 316 lingcod, and 398 rockfish.⁷⁹ Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

With the exception of several communities and residents qualifying for Native preference, federal subsistence regulations prohibit taking fish from federal waterways on the Kenai Peninsula. However, personal use fishing is still allowed on state owned waterways, including parts of the Anchor River. However, Anchor Point is not considered a subsistence based community in the traditional sense.

Information on subsistence activities in Anchor Point is limited, and data regarding subsistence participation by household and marine mammal harvests are unavailable. Of the species listed by ADF&G in Table 13, residents reported harvesting sockeye salmon the most

⁷⁷ Alaska Department of Natural Resources (n.d.). Retrieved November 30, 2011 from: <http://dnr.alaska.gov/parks/units/anchoriv.htm>.

⁷⁸ Alaska Department of Fish and Game (n.d.) *Lower Cook Inlet Management Area*. Retrieved November 30, 2011 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaSouthcentralLowerCookInlet.main>

⁷⁹ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

often, followed by Chinook and chum salmon. In 2008, residents reported harvesting 236 salmon, compared to 58 in 2000. Reported salmon harvests peaked in 2006 at 419 fish. In 2010, 12 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 11 in 2003. In that year, an estimated 150 lbs of halibut were harvested on one SHARC, compared to 155 lbs harvested on four SHARC cards in 2003. Halibut harvests peaked in 2004 at an estimated 1,888 lbs. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 11. Sport Fishing Trends, Anchor Point: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Anchor Point ²
2000	22	54	975	2,012
2001	17	44	957	2,302
2002	18	48	994	2,276
2003	19	48	990	2,376
2004	13	44	995	2,462
2005	24	42	1,143	2,765
2006	21	34	1,090	2,531
2007	19	37	1,059	2,588
2008	16	34	974	2,242
2009	12	28	994	1,893
2010	12	27	888	1,758

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Anchor Point: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Anchor Point: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	6	6	8	n/a	n/a	n/a	50	n/a	n/a
2001	2	4	n/a	n/a	n/a	n/a	80	n/a	n/a
2002	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	5	6	4	n/a	n/a	n/a	5	n/a	n/a
2004	5	5	23	n/a	n/a	n/a	170	n/a	n/a
2005	3	3	n/a	n/a	n/a	n/a	328	n/a	n/a
2006	6	6	30	n/a	n/a	n/a	389	n/a	n/a
2007	7	7	17	n/a	1	n/a	197	n/a	n/a
2008	5	4	13	n/a	n/a	n/a	223	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Anchor Point: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	11	4	155
2004	12	7	1,888
2005	11	n/a	942
2006	12	n/a	n/a
2007	15	n/a	n/a
2008	8	2	218
2009	9	2	529
2010	12	1	150

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Anchor Point: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Clam Gulch



People and Place

*Location*⁸⁰

Located on the Kenai Peninsula, Clam Gulch lies on the Sterling Highway 24 mi south of the City of Kenai and 85 mi southwest of Anchorage. The area encompasses 13.7 sq mi of land. Although Clam Gulch is not incorporated as a municipality, it is under the jurisdiction of the Kenai Peninsula Borough.

*Demographic Profile*⁸¹

In 2010, there were 176 residents, ranking Clam Gulch 208th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 122.8%, but has stayed relatively stable since 2000. Between 2000 and 2009, the population fell by 4.1% with an average annual growth rate of -0.74%, less than the statewide average of 0.75% and indicative of a variable population trend. Information regarding population trends can be found in Table 1.

Clam Gulch is predominately a White community, with 85.2% of residents identifying themselves as such in 2010, compared to 92.5% in 2000. Also in that year, 5.7% identified themselves as American Indian or Alaska Native, compared to 2.9% in 2000; 0.6% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.0% in 2000; 8.0% identified themselves as two or more races, compared to 3.5% in 2000; and 0.6% identified themselves as some other race, compared to 0.0% in 2000. In addition, 0.6% of residents identified themselves as Hispanic or Latino, compared to 0.0% in 2000. Information regarding Clam Gulch's racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 1.93, compared to 2.7 in 1990 and 2.58 in 2000. In that year, there were 160 total housing units, compared to 56 in 1990 and 115 in 2000. Of the households surveyed in 2010, 45% were owner-occupied, compared to 51% in 2000; 12% were renter-occupied, compared to 7% in 2000; 9% were vacant, compared to 6% in 2000; and 34% were occupied seasonally, compared to 36% in 2000. There were no residents living in group quarters between 1990 and 2010.

The gender distribution in 2010 was relatively skewed at 55.1% male and 44.9% female. This was less even than the statewide distribution (48% female, 52% male) and 2000 distribution (51.4% male, 48.6% female). The median age that year was 51.7 years, which was markedly older than the statewide median age of 33.8 years and 2000 median of 37.5 years and representative of an aging population.

⁸⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Compared with 2000, the population structure of Clam Gulch is notably more constricted with 18.7% of the population under the age of 20 in 2010, compared to 34.7%. In addition, 22.8% of residents were over the age of 59 in 2010, compared to 12.2%; 54.5% were between the ages of 30 and 59, compared to 46.7% in 2000¹ and 4.0% were between the ages of 20 and 29, compared to 6.4% in 2000. There was a notable amount of attrition within the 10 to 19 cohort between 2000 and 2010, possibly indicating lower youth retention (Figure 2).

Table 1. Population in Clam Gulch from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	79	-
2000	173	-
2001	-	168
2002	-	173
2003	-	176
2004	-	164
2005	-	171
2006	-	165
2007	-	177
2008	-	159
2009	-	166
2010	176	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Clam Gulch: 2000-2010 (U.S. Census).

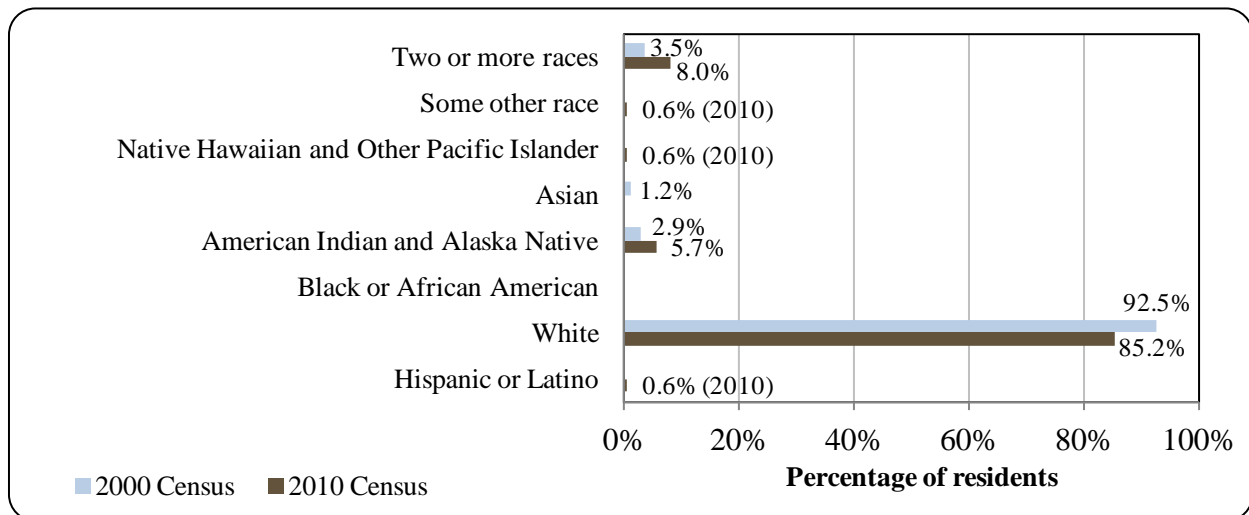
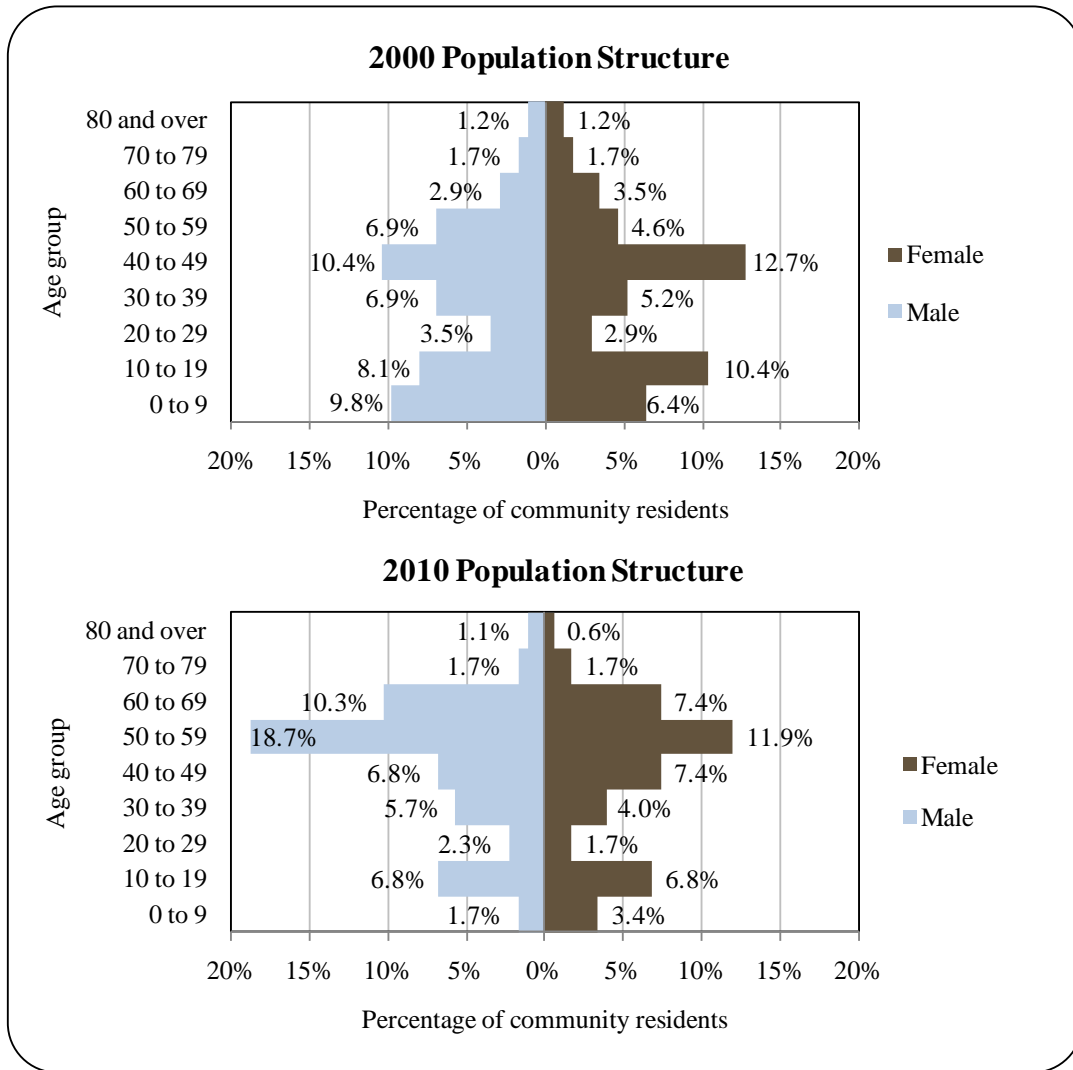


Figure 2. Population Age Structure in Clam Gulch Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁸² estimated that 84.7% of residents over the age of 25 held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 15.3% of residents had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; and an estimated 44.4% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall. No residents were estimated to have less than a 9th grade education or any post-secondary degrees in 2010.

⁸² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Although Athabascans have occupied the Kenai Peninsula for thousands of years, occupation of Clam Gulch did not occur until White homesteaders entered the area in the early to middle 20th century. Named after the Clam Gulch Ravine, the area surrounding what is now Clam Gulch was first reported in 1947 by Barnes and Cobb of the U.S. Geological Survey.⁸³ Occupation of the area was not officially reported until the 1970 Census, when the community's population was 47.⁸⁴ Since then, Clam Gulch has developed as a homestead community and tourism destination along the Sterling Highway, famous for clamming.⁸⁵

Natural Resources and Environment

Clam Gulch is located within a maritime climate zone, characterized by mild winters and cool summers. January temperatures range from 4 to 22° F (-16 to -6° C). July temperatures vary from 46 to 65° F (8 to 18° C). Average annual precipitation is 20 inches.⁸⁶

The community is located next to the Clam Gulch State Recreation Area (CGSRA) and Clam Gulch Critical Habitat Area (CGCHA). The CGSRA is famous for hosting one of eight known major concentrations of razor clams on the Pacific Coast.⁸⁷ The CGCHA extends along the eastern shores of the Cook Inlet from Cape Kasilof to Happy Valley and serves as important habitat for not only razor clams, but many migratory birds, waterfowl, and shorebirds as well. In addition, Deep Creek is a major spawning ground for all five species of Pacific salmon.⁸⁸

Clam Gulch is located on coastal outwash plains dominated by low-lying wetlands. Lowland areas are generally poorly drained and support patches of black spruce with surrounding muskeg. Coastal areas consist of mudflats, sandy beaches, and steep bluffs. Recreation resources are abundant in the area and include sportfishing, camping, and clam digging. Both the Kasilof River to the north and CGSRA are valuable recreational resource areas and demand for recreational use continues to grow. Commercial fishery resources are important on both a local and regional level, and salmon heading to the Kasilof River, Kenai River, and upper Cook Inlet can be intercepted locally. Tidelands along much of the coastlines in the area are lined with Shore Fishery Leases along with sportfishing and personal-use set netting and dip netting. Moose, caribou, ducks, geese, and trumpeter swans all provided hunting opportunities. Freshwater species include rainbow trout and Dolly Varden char.⁸⁹ There are no active or

⁸³ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁴ Camp, J. 2007. *Kenai Peninsula Borough Situations and Prospects: Economic Trends for Year Ending December 31, 2006*. Retrieved February 7, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KenaiPeninsulaBorough-EDP-2007.pdf>.

⁸⁵ Deb's Webs (2011). *Clam Gulch*, Retrieved February 7, 2012 from: <http://www.clamgulchalaska.com/index.htm>.

⁸⁶ See footnote 83.

⁸⁷ Alaska Division of Parks and Outdoor Recreation (n.d.). *Clam Gulch Recreation Area*. Retrieved February 7, 2012 from: <http://dnr.alaska.gov/parks/units/clamgulch.htm>.

⁸⁸ Alaska Department of Fish and Game (n.d.). *Clam Gulch Critical Wildlife Area*. Retrieved February 7, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=clamgulch.species>.

⁸⁹ Alaska Department of Natural Resources (2001). *Kenai Area Plan*. Retrieved February 7, 2012 from: http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/master_KAP.pdf.

proposed mineral development sites in the area, although coal beds exist throughout most of western Kenai Peninsula.⁹⁰

Clam Gulch's coastal position makes it susceptible to a range of natural hazards including tsunamis, coastal flooding, and coastal erosion. Bluffs and coastlines in the area are composed of poorly consolidated glacial and alluvial deposits making coastal regions susceptible to erosion. A study of bluff erosion within the area ranging from Homer to Nikiski concluded that between 1952 and 2004, coastal bluffs have eroded by one foot per year on average, although erosion is typically episodic and not gradual. Flood hazards have been increasing in the area due to development, soil erosion, and hydrologic and ecological changes resulting from spruce bark beetle infestations. This has in turn impacted runoff volumes and stream dynamics resulting in increased flood events south of Clam Gulch. In addition to flooding and erosion, Clam Gulch is situated between the Bruin Bay and Border Ranges faults. Secondary impacts from an earthquake event include tsunamis and soil destabilization.⁹¹

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active in Clam Gulch in 2010.⁹²

Current Economy⁹³

Much of Clam Gulch's economy is tied to the Kenai Peninsula region as a whole, and many residents work in nearby Kasilof. Locally, recreational services and commercial fishing provide most employment. Top employers in 2010⁹⁴ included Kenai Peninsula Borough School, Ed's Seafoods Inc., Central Peninsula General Hospital, KGB & Associates LLC, University of Alaska, Ice Services, Inc., State of Alaska, Access Alaska Inc., VECO Alaska Inc., and Home Depot USA Inc.

In 2010,⁹⁵ the estimated per capita income was \$38,944 and the estimated median household income was \$34,091, compared to \$17,983 and \$37,500 in 2000 respectively. After accounting for inflation by converting 2000 values to 2010 dollars,⁹⁶ the real per capita income (\$23,647) and real median household income (\$49,312) indicate that while individual earnings increased, overall household earnings decreased. In 2010, Clam Gulch ranked 14th of 305 communities from which per capita income was estimated and 221st of 299 communities from which median household income was estimated.

⁹⁰ Alaska Department of Commerce (n.d.). *Mineral Resources of Alaska*. Retrieved February 8, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁹¹ Kenai Peninsula Borough (2000). *All Hazards Mitigation Plan*. Retrieved February 8, 2012 from: <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>.

⁹² Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved April 2, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

⁹³ Unless otherwise noted, all monetary data are reported in nominal values.

⁹⁴ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹⁵ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁹⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Clam Gulch's small population size may have prevented the ACS from accurately portraying economic conditions.⁹⁷ Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$2.8 million in total wages in 2010.⁹⁸ When matched with the population in 2010, the per capita income equals \$15,932, which is significantly less than the ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.⁹⁹

According to 2006-2010 ACS estimates,¹⁰⁰ 46.3% of the population aged 16 and over were part of the civilian labor force in 2010. Unemployment that year was estimated at 6.3%, compared to an estimated 5.9% statewide; and an estimated 10.0% of residents were living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Of those employed in 2010, an estimated 100% worked in the private sector.

By industry, most (34.3%) employed residents were estimated to be working in agriculture, forestry, fishing, hunting, and mining sectors in 2010; followed by transportation, warehousing, and utilities sectors (34.4%); professional, scientific, management, administrative, and waste management sectors (15.5%); and education services, health care, and social assistance sectors (15.6%). in 2010. By occupation type, most (53.1%) employed residents were estimated to hold production, transportation, or material moving positions that year; followed by natural resources, construction, or maintenance positions (15.6%); sales or office positions (15.6%); and management or professional positions (15.6%). Employment by industry became less diverse between 2000 and 2010, with substantial proportional declines in many sectors. These changes may either be attributed to shifts in economic conditions and population structure, or ACS sampling error resulting from Clam Gulch's small population size. According to 2010 ALARI estimates, most (22.4%) employed residents worked in education and health service sectors; followed by trade, transportation, and utilities sectors (12.9%); natural resources and mining sectors (11.8%); and local government sectors (11.8%). Information regarding employment trends can be found in Figures 3 and 4.

⁹⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁹⁸ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁹⁹ See footnote 94.

¹⁰⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 3. Local Employment by Industry in 2000-2010, Clam Gulch (U.S. Census).

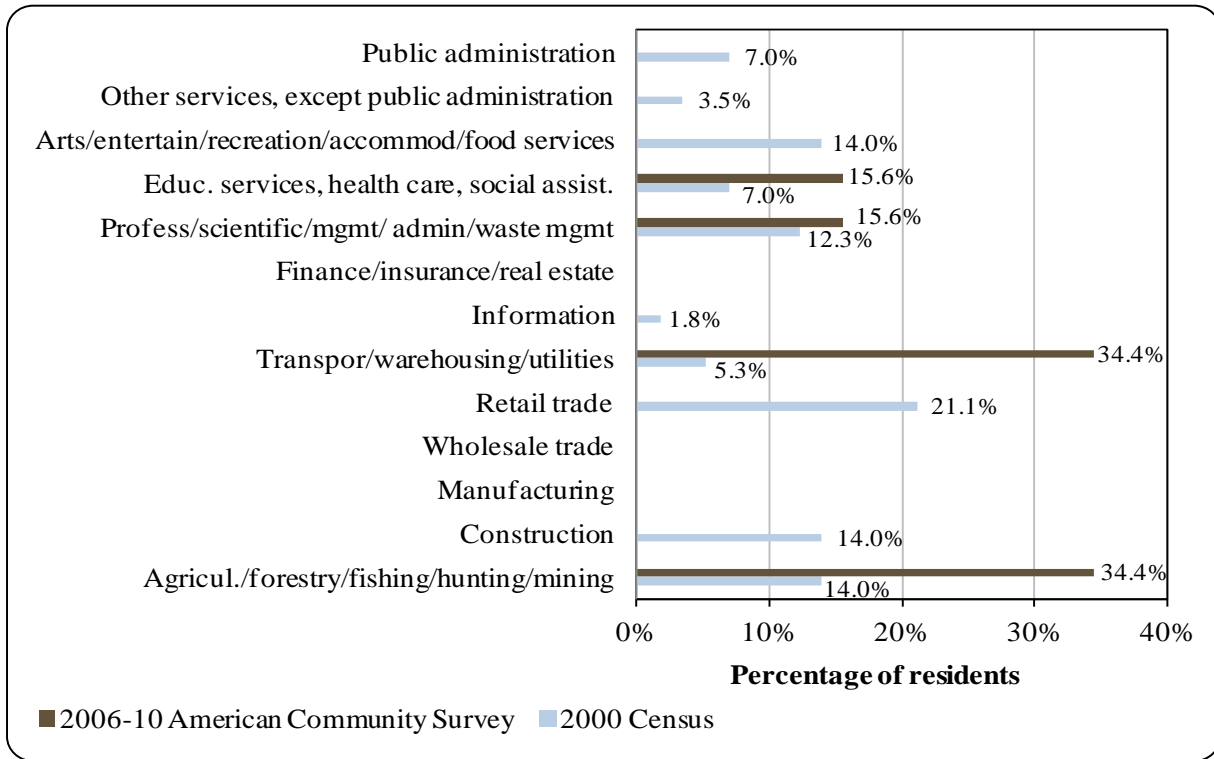
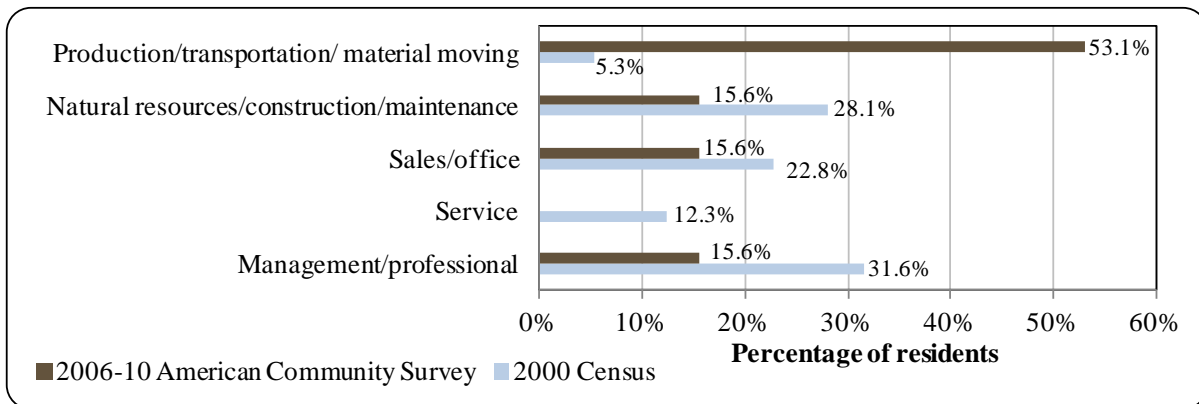


Figure 4. Local employment by occupation in 2000-2010, Clam Gulch (U.S. Census).



Governance

Clam Gulch is unincorporated and therefore unable to administer taxes (Table 2). However, the Kenai Peninsula Borough administers a 3% sales tax and a 4.5 mills property tax. The community was not included in the Alaska Native Claims Settlement Act (ANCSA) and does not possess a federally recognized Tribal government. The closest Alaska Department of Fish and Game (ADF&G) office is located in Kenai, 22 mi north. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage, 85 mi northeast.

Table 2. Selected Municipal, State or Federal Revenue Streams for the Community of Clam Gulch from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*¹⁰¹

The Sterling Highway provides access to Anchorage and beyond. Nearby Kenai (24 mi) offers an airport and docking facilities. The cost of roundtrip airfare between Anchorage and Kenai in June 2012 was \$171.¹⁰²

*Facilities*¹⁰³

Many homes use individual wells and septic systems. However, nearly one-third derive water from a central watering point or water delivery. Over half of all homes use privies, and more than half are fully plumbed. Borough refuse transfer sites are available in Ninilchik (15 mi) or in Kasilof (10 mi). Public safety services are provided by State Troopers in Soldotna and fire

¹⁰¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰² Airfare was calculated using lowest fare. Retrieved November 22, 2011 from <http://www.travelocity.com>.

¹⁰³ See footnote 101.

and rescue services are provided by the borough and Clam Gulch Volunteer Fire Department. Local visitor accommodations are provided by the Clamshell Lodge and Clam Gulch Lodge.¹⁰⁴ The community lacks dock and harbor infrastructure; however, port facilities can be accessed in Kasilof and Kenai.

*Medical Services*¹⁰⁵

Clam Gulch lacks local medical facilities. The community is served by Central Peninsula General Hospital in Soldotna. Limited Emergency Medical Services are provided by the Clam Gulch Volunteer Fire Department.

*Educational Opportunities*¹⁰⁶

There are no schools located directly in Clam Gulch. There is an elementary school located in Kasilof and additional educational opportunities located in Kenai.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial harvest of salmon in Cook Inlet began in 1882¹⁰⁷ with the development of a cannery at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890.¹⁰⁸ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹⁰⁹ In the 1920s, herring had become increasingly valued for oil and meal, and a number of reduction plants were built. Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, a sizable spawning biomass of herring was found in western Cook Inlet, and Lower Cook Inlet also supported commercial fisheries for Dungeness, king, and Tanner crab. However, crab and herring fisheries are currently closed due to low stock abundance.^{110,111}

¹⁰⁴ Clam Gulch Lodge (n.d.). *Clam Gulch Lodge*. Retrieved February 8, 2012 from: <http://www.clamgulch.com/>.

¹⁰⁵ Ibid.

¹⁰⁶ Alaska Department of Education and Early Development (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰⁷ Clark, J. H., A. McGregor, R. D. Mecum, P. Krasnowski, and A. M. Carroll. 2006. The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Department of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁰⁸ Cook, L., and F. Norris. 1998. *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

¹⁰⁹ Thompson, W. F. and N. L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹¹⁰ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹¹¹ Alaska Department of Fish and Game (2012). *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

Today, ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.¹¹²

Groundfish and crab fisheries that occur within 3 nmi of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch (TAC) set by NMFS applied to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.¹¹³

As a relatively young community, Clam Gulch has not had a long history participating in North Pacific Fisheries. Nevertheless, commercial fishing is important to the community. Many residents holding licenses participate in Cook Inlet salmon fisheries, and seafood processors in Kasilof and Kenai provide nearby markets for catch.¹¹⁴ Clam Gulch is located in Federal Reporting Area 630, International Pacific Halibut Commission (IPHC) Regulatory Area 3A, and the GOA Sablefish Regulatory District. The community is not eligible for participation in the Community Quota Entity program.

Processing Plants

According to the 2010 ADF&G Intent to Operate list, Clam Gulch does not have a registered processing plant. The closest seafood processor is located in Kasilof.

¹¹² See footnote 107.

¹¹³ See footnote 110.

¹¹⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Fisheries-Related Revenue

The community does not collect any fisheries-related taxes or fees (Table 3); however, fisheries-related revenue is collected at the borough level. Revenue raised through the Borough is distributed throughout unincorporated Borough communities.

Commercial Fishing

In 2010, most commercial permit holders participated in drift gillnet salmon fisheries in the Cook Inlet. The second most popular fishery in 2010 was the Cook Inlet herring roe gillnet fishery followed by the statewide halibut longline fishery.¹¹⁵ In 2010, 35 residents, or 20.3% of the population, held 46 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 37 residents held 54 CFEC permits. Of the CFEC permits held in 2010, 70% were for salmon, compared to 70% in 2000; 15% were for herring, compared to 11% in 2000; 9% were for halibut, compared to 13% in 2000; and 4% were for groundfish, compared to 6% in 2000. Two residents held Federal Fisheries Permits (FFP) and 3 residents held License Limitation Program (LLP) groundfish permits. In 2010, residents held 449,539 shares of halibut quota on nine accounts, compared to 604,582 shares held on 13 accounts in 2000. No residents held sablefish or crab quota between 2010 and when the programs began.

A total of 22 residents held commercial crew licenses in 2010, compared to 34 in 2000. In addition, 19 residents held majority ownership of commercial vessels, compared to 28 in 2000. Of the CFEC permits held in 2010, 74% were actively fished, compared to 69% in 2000. This varied by fishery from 88% of salmon permits, to 75% of halibut, 50% of groundfish, and 29% of herring permits. In addition, 100% of LLP and 50% of FFP were actively fished that year. Overall, permit activity remained relatively constant between 2000 and 2010, ranging from 56% (2003) and 74% (2010) of total permits. Salmon permits not only made up the majority of total permits held by residents, but were also fished at a relatively high rate; ranging from 63% (2003) to 91% (2009) of permits held. Halibut permits were also highly active between 2000 and 2010, although relatively few permits were held in the community. Both groundfish and herring permits experienced low activity during those years, never making it above 50% of permits held. However, it should be noted that relatively few groundfish and herring permits were held in the Clam Gulch between 2000 and 2010.

Between 2000 and 2010, no commercial landings were made in the community; however, landings were reported by residents during those years. In 2010, 204,221 lbs of salmon were landed by residents valued at \$217,313 ex-vessel, compared to 144,285 lbs valued at \$87,025 ex vessel in 2000; an increase of \$0.23 per pound landed after adjusting for inflation¹¹⁶ and without considering the species composition of landings. Non-confidential salmon landings by residents peaked in 2007 at 524,554 lbs. Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹¹⁵ Ibid.

¹¹⁶ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics,

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Clam Gulch: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Clam Gulch: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	2	2	2	2	2	3	3	3	3	3	3
	Active permits	1	0	0	0	0	1	1	1	1	3	3
	% of permits fished	50%	0%	0%	0%	0%	33%	33%	33%	33%	100%	100%
	Total permit holders	2	2	2	2	2	3	3	3	3	3	3
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	4	4	4	1	2	2	2	2	2	2	2
	Fished permits	0	0	0	0	1	1	2	1	1	1	1
	% of permits fished	0%	0%	0%	0%	50%	50%	100%	50%	50%	50%	50%
	Total permit holders	4	4	4	1	2	2	2	2	2	2	2
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	1	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	100%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	1	1
Halibut (CFEC) ²	Total permits	7	7	7	5	5	4	4	4	4	5	4
	Fished permits	6	4	5	5	3	3	3	4	4	3	3
	% of permits fished	86%	57%	71%	100%	60%	75%	75%	100%	100%	60%	75%
	Total permit holders	7	7	7	5	5	4	4	4	4	5	4
Herring (CFEC) ²	Total permits	6	5	11	11	9	9	11	8	8	9	7
	Fished permits	0	2	5	3	3	4	4	3	2	1	2
	% of permits fished	0%	40%	45%	27%	33%	44%	36%	38%	25%	11%	29%
	Total permit holders	5	4	10	10	8	8	9	7	7	8	6

Table 4. Cont. Permits and Permit Holders by Species, Clam Gulch: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	3	4	2	2	2	4	5	4	4	3	2
	Fished permits	1	0	0	0	0	0	1	1	1	1	1
	% of permits fished	33%	0%	0%	0%	0%	0%	20%	25%	25%	33%	50%
	Total permit holders	3	4	2	2	2	3	5	4	4	3	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	38	33	32	32	31	33	32	33	33	35	32
	Fished permits	30	27	27	20	27	29	24	25	28	32	28
	% of permits fished	79%	82%	84%	63%	87%	88%	75%	76%	85%	91%	88%
	Total permit holders	36	32	30	30	30	33	30	31	31	36	34
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>54</i>	<i>49</i>	<i>52</i>	<i>50</i>	<i>47</i>	<i>50</i>	<i>52</i>	<i>49</i>	<i>49</i>	<i>53</i>	<i>46</i>
	<i>Fished permits</i>	<i>37</i>	<i>33</i>	<i>37</i>	<i>28</i>	<i>33</i>	<i>36</i>	<i>32</i>	<i>33</i>	<i>35</i>	<i>38</i>	<i>34</i>
	<i>% of permits fished</i>	<i>69%</i>	<i>67%</i>	<i>71%</i>	<i>56%</i>	<i>70%</i>	<i>72%</i>	<i>62%</i>	<i>67%</i>	<i>71%</i>	<i>72%</i>	<i>74%</i>
	<i>Permit holders</i>	<i>37</i>	<i>33</i>	<i>36</i>	<i>37</i>	<i>33</i>	<i>36</i>	<i>31</i>	<i>33</i>	<i>35</i>	<i>40</i>	<i>35</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Clam Gulch: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Clam Gulch ²	Total Net Lbs Landed In Clam Gulch ²	Total Ex-Vessel Value Of Landings In Clam Gulch ²
2000	34	0	0	28	24	0	0	\$0
2001	23	0	0	25	18	0	0	\$0
2002	17	0	0	24	19	0	0	\$0
2003	22	0	0	22	19	0	0	\$0
2004	21	0	0	23	18	0	0	\$0
2005	14	0	0	19	14	0	0	\$0
2006	16	0	0	18	17	0	0	\$0
2007	20	0	0	21	17	0	0	\$0
2008	18	0	0	20	15	0	0	\$0
2009	14	0	0	22	17	0	0	\$0
2010	22	0	0	19	17	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation in Clam Gulch: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	13	604,582	59,863
2001	14	608,931	72,089
2002	14	593,536	72,653
2003	14	593,536	72,631
2004	13	517,065	70,067
2005	11	492,534	67,843
2006	11	492,534	67,122
2007	10	456,931	64,742
2008	9	449,539	58,881
2009	9	449,539	52,754
2010	9	449,539	48,597

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Clam Gulch: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Clam Gulch: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Clam Gulch: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Clam Gulch Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	58,452	61,386	--	--	--	--	--	--	--	--	--
Herring	--	--	14,489	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	144,285	183,049	244,374	208,005	--	--	--	524,554	439,745	681,963	204,221
<i>Total²</i>	<i>202,737</i>	<i>244,435</i>	<i>258,863</i>	<i>208,005</i>	--	--	--	<i>524,554</i>	<i>439,745</i>	<i>681,963</i>	<i>204,221</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$153,606	\$125,368	--	--	--	--	--	--	--	--	--
Herring	--	--	\$455	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$87,025	\$80,996	\$104,589	\$92,614	--	--	--	\$242,754	\$335,221	\$365,292	\$217,313
<i>Total²</i>	<i>\$240,630</i>	<i>\$206,364</i>	<i>\$105,044</i>	<i>\$92,614</i>	--	--	--	<i>\$242,754</i>	<i>\$335,221</i>	<i>\$365,292</i>	<i>\$217,313</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is an important part of Clam Gulch's local economy. The CGSRA, Kasilof River, and Kenai River provide opportunities for clam digging as well as dip/set netting for salmon. In 2010, there were a total of 4 active sportfishing guide businesses registered in the community, compared to 7 in 2000. The number of residents holding sportfishing licenses declined from 6 in 2000, to 4 in 2010. Overall, the number of active sportfishing guide businesses and resident sportfishing license holders remained relatively constant between those years. In addition, residents held 146 sportfishing licenses in 2010, compared to 147 in 2000. Sportfishing licenses held by residents peaked in 2003 at 168. No sportfishing licenses were sold in the community between 2000 and 2010. The community's location on the Sterling Highway makes it very accessible for non-resident tourists and residents from Anchorage and surrounding communities. The Kenai River is one of the most popular personal-use fisheries in Alaska, and attracts residents from all over the south-central area.

Clam Gulch is located in the Kenai Peninsula Freshwater and Cook Inlet Saltwater ADF&G Harvest Survey Areas which include all freshwater drainages on the Kenai Peninsula which drain into the Cook Inlet as well as saltwater within the Cook Inlet itself. According to ADF&G Harvest Survey data,¹¹⁷ total freshwater and saltwater angler days fished declined between 2000 and 2010. In 2010, there was a combined total of 67,948 saltwater angler days fished, compared to 109,107 in 2000. Of those, non-Alaska residents accounted for 70% of angler days fished, compared to 63% in 2000. In that same year, there was a combined total of 99,849 freshwater angler days fished, compared to 181,894 in 2000. Of those, non-Alaska residents accounted for 28% of angler days fished, compared to 23% in 2000. According to ADF&G harvest survey data,¹¹⁸ private anglers in Clam Gulch target Chinook, coho, sockeye, and pink salmon, halibut, shark, razor clams, and hardshell clams. There is no kept-released charter information available for Clam Gulch. Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Clam Gulch is not a federally designated rural area and therefore, ineligible for subsistence fishing in federal waters. This may explain why limited local subsistence harvesting has been reported. Reports by ADF&G on subsistence use are limited and no data are available on household participation in subsistence activities, subsistence halibut fishing, or subsistence harvest of marine mammal resources. One household was reported to have been issued a subsistence salmon permit in both 2005 and 2008; however, no information was available regarding harvest activity in those years. Information regarding subsistence fishing trends can be found in Tables 12 through 15.

¹¹⁷ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹¹⁸ Ibid.

Table 11. Sport Fishing Trends, Clam Gulch: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Clam Gulch ²
2000	7	7	147	0
2001	5	6	161	0
2002	5	6	140	0
2003	5	6	168	0
2004	6	5	158	0
2005	5	1	145	0
2006	4	1	138	0
2007	4	1	123	0
2008	3	0	127	0
2009	3	0	129	0
2010	4	0	146	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Clam Gulch: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates and Non-Salmon Fish, Clam Gulch: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Clam Gulch: 2003-2010.

Year	SHARC issued	SHARC fished	SHARC halibut lbs harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Clam Gulch: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Cooper Landing



People and Place

*Location*¹¹⁹

Cooper Landing lies at the west end of Kenai Lake on a stretch of the Sterling Highway, 30 mi northwest of Seward and 46 mi south of Anchorage. Located in the Chugach Mountains, it covers 66 sq mi of land and 3.9 sq mi of water. Cooper Landing is unincorporated and is under the jurisdiction of the Kenai Peninsula Borough.

*Demographic Profile*¹²⁰

In 2010, there were 289 residents living in Cooper Landing, ranking it 166th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 18.93%. Between 2000 and 2009, the population fell by 6.8% with an average annual growth rate of 0.38%, which was similar to the statewide average of 0.75% and reflective of the variable population growth following the peak in 2001. Information regarding population trends can be found in Table 1.

The racial composition of Cooper Landing was predominately White in 2010, with 95.5% of residents identifying themselves as such, compared to 91.6% in 2000. Also in that year, 1.4% of residents identified themselves as American Indian or Alaska Native, compared to 3.0% in 2000, 0.7% identified themselves as Asian, compared to 1.6% in 2000; and 2.4% identified themselves as two or more races, compared to 3.3% in 2000. Information regarding racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 1.8, compared to 2.4 in 1990 and 2.14 in 2000. In that year, there were a total of 395 housing units, compared to 281 in 1990 and 379 in 2000. Of the households surveyed in 2010, 30% were owner-occupied, compared to 31% in 2000; 11% were renter-occupied, compared to 11% in 2000; 7% were vacant, compared to 9% in 2000; and 52% were occupied seasonally, compared to 49% in 2000. There were no residents living in group quarters in 2010, compared to 22 residents in 2000.

Gender distribution in 2010 was somewhat skewed at 53.6% male and 46.4% female. This was slightly less even than the statewide distribution (52.0% male, 48.0% female) and similar to the 2000 distribution (53.9% male, 46.1% female). The median age that year was 55.6 years, which was significantly higher than both the statewide median of 33.8 years and 2000 median of 45.7 years.

When compared with 2000, the population structure in 2010 was significantly more constricted. In that year, 8.6% of residents were under the age of 20, compared to 20.5% in 2000;

¹¹⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

40.9% were over the age of 59, compared to 26.0% in 2000; 43.9% were between the ages of 30 and 59, compared to 41.9% in 2000; and 6.6% were between the ages of 20 and 29, compared to 11.6% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000, with male biases among most age ranges. In that year, the greatest absolute gender difference occurred within the 60 to 69 range (12.1% male, 9.7% female), followed by the 50 to 59 (12.1% male, 10.0% female) and 30 to 39 (6.6% male, 4.5% female) ranges. Of those three, the greatest relative gender difference occurred within the 30 to 39 range. Information regarding trends in Cooper Landing’s population structure can be found in Figure 2.

Table 1. Population in Cooper Landing from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	243	-
2000	369	-
2001	-	389
2002	-	370
2003	-	351
2004	-	345
2005	-	343
2006	-	356
2007	-	356
2008	-	357
2009	-	344
2010	289	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Cooper Landing: 2000-2010 (U.S. Census).

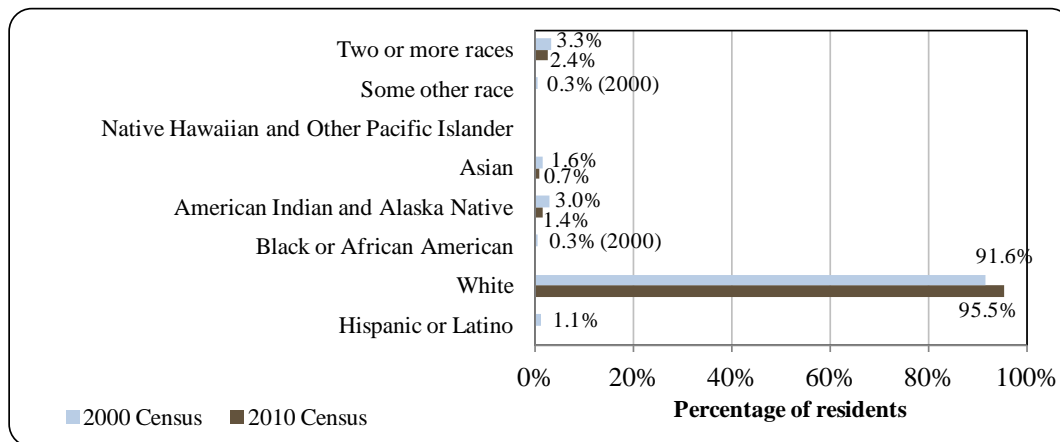
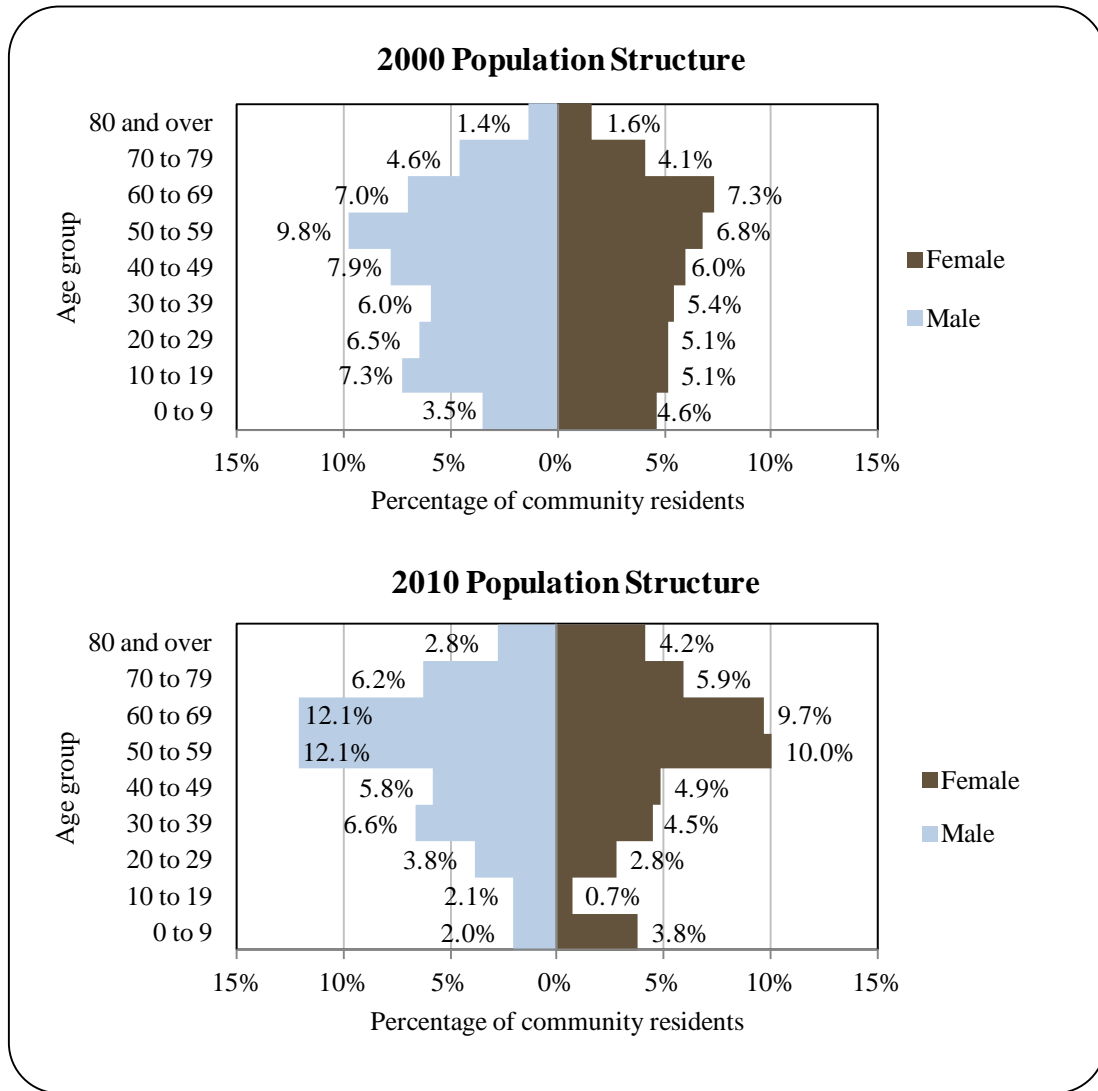


Figure 2. Population Age Structure in Cooper Landing Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹²¹ estimated that 100% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 41.8% of residents had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 4.2% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; and estimated 19.7% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 2.5% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

¹²¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

The Cooper Landing area was settled first between 1848 and 1851, when Russian engineer P. Doroshin found gold in the area. Later, Cooper Landing was named for Joseph Cooper, a miner who discovered gold in Cooper Landing in 1884. Cooper Creek was first recorded in 1898 by the U.S. Geological Survey. In 1900, the census found 21 miners and one wife living at Cooper Creek. The Riddiford Post Office began operations in 1924, and the Riddiford School opened in 1928. In 1938, a road was constructed to Seward. In 1948, a road to Kenai was opened, and by 1951 residents could drive to Anchorage. The Cooper Landing Community Club was first formed in 1949. The Cooper Lake Hydroelectric Facility was constructed in 1959-60.¹²²

Cooper Landing has two properties listed under the National Register of Historic Places (NRHP).¹²³ The Cooper Landing Historic District is a group of five structures covering 4.25 acres built between 1905 and 1927 and associated with the Kenai River transportation corridor, when many people used the river itself for transportation. The Cooper Landing Post Office, which was originally a dog-team mail runner's cabin, was built facing the now denuded Cooper Trading Post. The Trading Post was the first structure built in Cooper Landing in the 1880s. The cabin was built facing the now denuded Cooper Trading Post; the first structure built in Cooper Landing in the 1880s.

Natural Resources and Environment

January temperatures range from 4 to 22° F (-16 to -6° C). July temperatures vary from 46 to 65° F (8 to 18° C). Average annual precipitation is 20 in.¹²⁴ Cooper Landing is located in the Chugach State Park, which covers a half-million acres of the Chugach Mountains.

The landscape surrounding Cooper Landing was shaped by alpine glaciers and is dominated by large lakes, forested valleys, and high-relief mountain ridges. Soils on slopes are shallow, and often sparsely forested. Soils in valley basins consist of alluvial gravel terraces formed by the erosive Kenai River. Forests consist of mixed birch and spruce stands, with stunted growth in poorly drained or elevated areas.¹²⁵ Clearwater streams and tributaries host all five species of Pacific salmon, Dolly Varden char, whitefish, rainbow trout, and lake trout.¹²⁶ Terrestrial wildlife includes black and brown bear, moose, Dall sheep, mountain goat, lynx, snowshoe hare, wolverine, marten, porcupine, and beaver.¹²⁷

Natural resources in the area are associated with timber, mining, and recreation. Scenic views are abundant along the Sterling Highway as is wildlife viewing. Local high-value habitat includes eagle winter concentration areas, wildlife travel corridors, moose rutting and wintering areas, and bear viewing areas. The abundant wildlife also contributes to recreational hunting and

¹²² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²³ National Park Service (n.d.). *National Register of Historic Places*. Retrieved February 21, 2012 from: <http://nrhp.focus.nps.gov/>.

¹²⁴ See footnote 122.

¹²⁵ Alaska Department of Natural Resources (2001). *Kenai Area Plan*. Retrieved February 21, 2012 from: http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/master_KAP.pdf.

¹²⁶ U.S. Fish and Wildlife Service (n.d.). *Kenai National Wildlife Refuge*. Retrieved February 21, 2012 from: <http://www.fws.gov/refuges/profiles/index.cfm?id=74525>

¹²⁷ Ibid.

fishing resources in the area. The Kenai Lake and Kenai River support boating, fishing, camping, and hiking activities. State lands are also accessible via Snug Harbor Road, which attracts hikers, skiers, and snowmachiners. Small-scale placer mining occurs on scattered claims primarily along Quartz Creek and its tributaries. Much of the Kenai Lake is off-limits to mineral development and is instead reserved for recreation and wildlife. There have been several small-scale timber sales since the 1970s and personal use timber harvests are also prevalent in the area. However, spruce bark beetles have had a severe impact on timber health in the region.¹²⁸

Potential natural hazards in the area include wildfire, avalanche, and river flooding and erosion. Wildfires threatened the community in the past,¹²⁹ and an increase in spruce bark beetle infestations continues to raise the potential for wildfires in the area.¹³⁰ Seasonal rains, glacier melt, and glacier outburst flooding can produce elevated river levels, potentially leading to flooding and bank erosion. Finally, steep slopes in the vicinity of Cooper Landing can produce hazardous avalanches and landslides.

Currently there is one historic cleanup site identified by the Alaska Department of Environmental Conservation in Cooper Landing. Gasoline sourced from an underground fuel storage tank next to Mile 48.5 of the Sterling Highway contaminated groundwater adjacent to the Kenai River. As of 2008, the contaminants were contained and cleanup was reported as complete.¹³¹

Current Economy¹³²

Cooper Landing's economy is heavily dependent on tourism. The Sterling Highway provides a great deal of traffic through the community by Alaska residents and tourists traveling from Anchorage to the Kenai Peninsula. In addition, its location in the Chugach State Park makes the community an attractive destination for recreation enthusiasts. There are many tourism-based attractions and services located in the community, the largest of which is Princess Tours' Kenai Princess Wilderness Lodge; a 70-room resort style lodge.¹³³ There are also limited employment opportunities in construction, forestry, and natural resources. In 2010, top employers¹³⁴ included Alaska Hotel Properties LLC, Kenai Peninsula Borough School, State of Alaska, Quartz Creek Enterprises Inc., Jon James Construction LLC, Wildman TR Inc., VECO Alaska Inc., Hamilton's Place, Gwin Lodge Inc., and Kenai Cache Guides LLC.

In 2010,¹³⁵ the estimated per capita income was \$38,135 and the estimated median household income was \$111,343, compared to \$24,795 and \$34,844 in 2000, respectively. After

¹²⁸ See footnote 125.

¹²⁹ See footnote 123.

¹³⁰ Cooper Landing Chamber of Commerce (n.d.). *Homepage*. Retrieved February 22, 2012 from: <http://www.cooperlandingchamber.com/history.shtml>.

¹³¹ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved February 22, 2012 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

¹³² Unless otherwise noted, all monetary data are reported in nominal values.

¹³³ Princess Tours (n.d.). *Homepage*. Retrieved from <http://www.princesslodges.com/>

¹³⁴ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹³⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

accounting for inflation by converting 2000 values into 2010 dollars,¹³⁶ the real per capita income (\$32,605) and real median household income (\$45,819) indicate a significant increase in household earnings, and modest increase in individual earnings. In 2010, Cooper Landing ranked 16th of 305 communities from which per capita income was estimated, and 6th of 299 communities from which median household income was estimated.

Cooper Landing's small population size may have prevented the ACS from accurately portraying economic conditions, as evidenced by the dramatic increase in household earnings.¹³⁷ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$4.40 million in total wages in 2010.¹³⁸ When matched with the population in 2010, the per capita income equals \$15,211, which is significantly lower than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.¹³⁹

According to 2006-2010 ACS estimates,¹⁴⁰ 88.5% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 6.9%, compared to 5.9% statewide, and an estimated 0.0% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. It is possible that the 2010 ACS misrepresented unemployment in Cooper Landings because of the community's small population size. According to ALARI estimates, local unemployment was 17.9% based on unemployment insurance claimants.

Of those employed in 2010, an estimated 78.6% of residents worked in the private sector, an estimated 8.5% worked in the public sector, and an estimated 12.9% were self-employed. If accurate, the high proportion of self-employed residents estimated by the 2010 ACS may have impacted the accuracy of ALARI estimates, which do not account for self-employed workers.

By industry, Cooper Landing had a diversified economy in 2010, with most (21.9%) employed residents estimated to be working in arts, entertainment, accommodations, or food service sectors; followed by information sectors (23.7%); and retail trade sectors (25.9%). By occupation type, most (34.4%) of those employed were estimated to hold sales or office positions in that year; followed by management or professional positions (31.7%), natural resources, construction, or maintenance positions (17.4%); and service positions (16.5%). Overall, the 2006-10 ACS estimated large variations between 2000 and 2010, with significant declines or increases across most sectors. However, it should again be noted that ACS sampling techniques may not have captured the true scope of industry representation. According to 2010 ALARI estimates, most (43.2%) employed residents worked in leisure and hospitality sectors; followed by trade, transportation, and utilities sectors (10.8%); and natural resources and mining sectors (9.4%). Information regarding employment trends can be found in Figures 3 and 4.

¹³⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹³⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹³⁸ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹³⁹ See footnote 134.

¹⁴⁰ See footnote 137.

Figure 3. Local Employment by Industry in 2000-2010, Cooper Landing (U.S. Census).

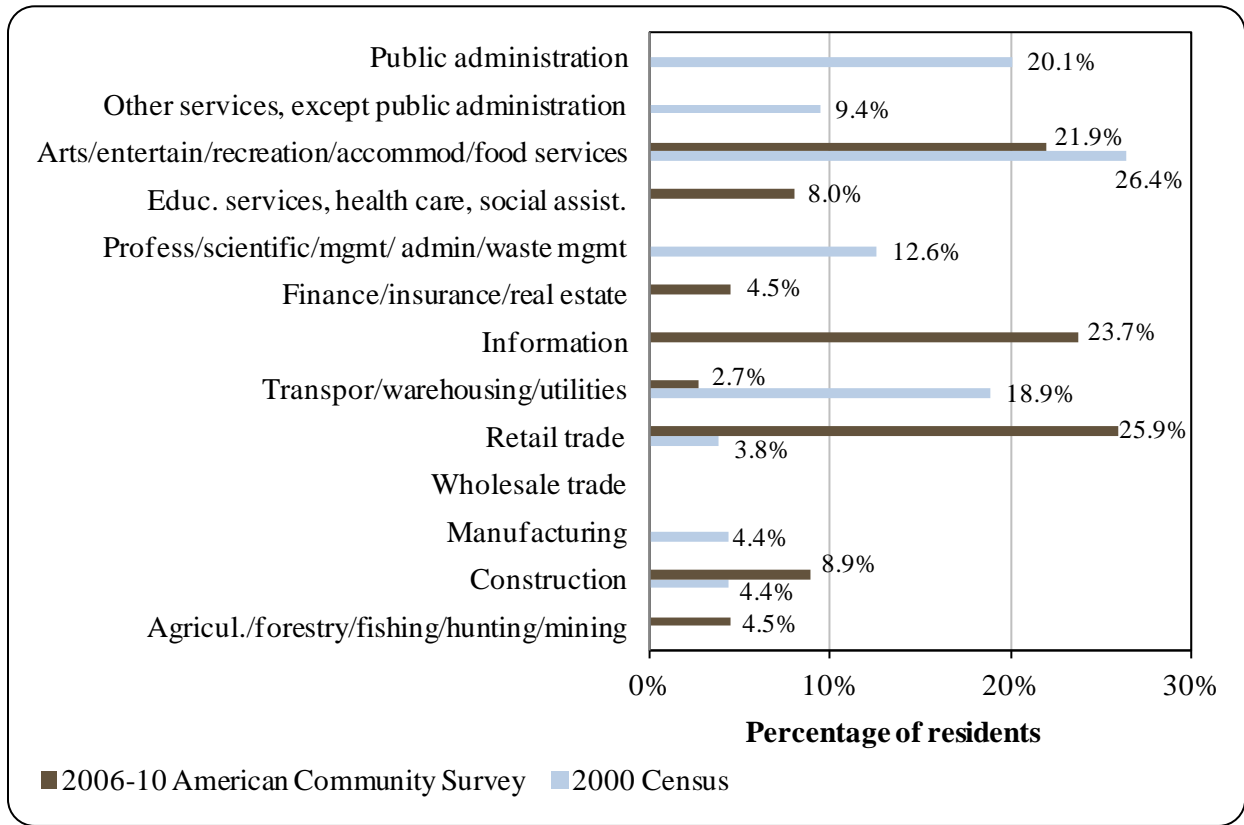
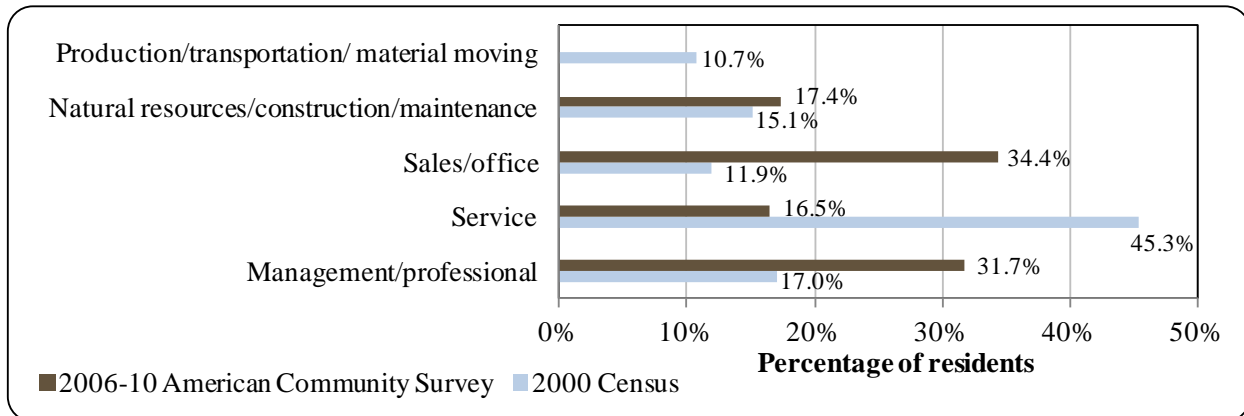


Figure 4. Local Employment by Occupation in 2000-2010, Cooper Landing (U.S. Census).



Governance

Cooper landing is unincorporated. In addition, the community was not included in the Alaska Native Claims Settlement Act and does not have a federally recognized tribal government. However, it is governed under the jurisdiction of the Kenai Peninsula Borough. The closest Alaska Department of Fish and Game (ADF&G) office is located in Seward, although it is only open seasonally. The closest permanent ADF&G office is located in Soldotna, 40 mi west. The closest National Marine Fisheries Service (NMFS) office is located in Seward and the closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage.

Since Cooper Landing is not a municipality, it is unable to collect tax revenue (Table 2). However, the Kenai Peninsula Borough did administer a 3% sales tax and 4.5 mills property tax in 2010.

Table 2. Selected Municipal, State or Federal Revenue Streams for the Community of Cooper Landing from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*¹⁴¹

The Sterling Highway provides access to Anchorage and beyond. Kenai offers air transportation and docking facilities. A privately-owned boat launch is available. The state-owned Quartz Creek Airport provides a 2,200-ft long by 60-ft wide gravel runway, and float planes may land at Cooper Lake.

*Facilities*¹⁴²

Two-thirds of homes use individual water wells and septic tank systems and are completely plumbed. The school has its own well water system. The remainders haul or have water delivered and use privies. The Borough provides a refuse transfer site at mile 44 on the Sterling Highway. There are many options for accommodations in the community. Public safety is provided by local State Troopers. Fire and rescue services are provided by Cooper Landing Volunteer Fire and Rescue, and Borough Emergency Services. Phone and internet services are available, as are a community hall and library. Cooper Landing's fisheries infrastructure is limited to public boat launch facilities,¹⁴³ tackle sales, limited processing and shipping services, charter services, and general outfitters.¹⁴⁴

*Medical Services*¹⁴⁵

There are no general health services provided in the Cooper Landing aside from emergency ambulance and medical. Central Peninsula General Hospital in Soldotna or Providence Seward Medical Center provide nearby healthcare.

*Educational Opportunities*¹⁴⁶

Cooper Landing School offers kindergarten through 8th grade instruction. As of 2011, there were 10 students enrolled and 4 teachers employed.

¹⁴¹ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴² Ibid.

¹⁴³ Alaska Department of Natural Resources (n.d.). Retrieved February 22, 2012 from: <http://dnr.alaska.gov/parks/aspunits/kenai/cooperlandingbl.htm>.

¹⁴⁴ Cooper Landing Chamber of Commerce (n.d.) *Homepage*. Retrieved February 22, 2012 from: <http://www.cooperlandingchamber.com/history.shtml>.

¹⁴⁵ See footnote 141.

¹⁴⁶ Alaska Department of Education and Early Development (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Little of Cooper Landing's history is associated with fisheries. While it was originally founded as a mining community, more recent development in local tourism has increased local involvement in recreational fisheries. In 2010, 4 residents held commercial fishing permits. Residents who hold commercial fishing permits base their operations in other communities.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Cooper Landing does not have a registered processing plant. The nearest shoreside processing plants are located in Seward and Kenai.

Fisheries-Related Revenue

There is no record of fisheries-related taxes or fees collected by the community between 2000 and 2010 (Table 3). However, the Kenai Peninsula Borough receives revenue through Shared Fisheries Business Taxes and Fisheries Resource Landings Taxes.

Commercial Fishing

In 2010, 4 residents, or 1.4% of the population, held 4 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2010, 5 residents held five CFEC permits. Of the CFEC permits held in 2010, 100% were for salmon, as was the case in 2000. One resident held a CFEC permit for herring from 2003 to 2006, although it was never actively fished. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. Between 2000 and 2007, 1 quota share account held 1,052 shares of halibut quota. No residents held sablefish or crab quota between 2010 and when the programs began.

There were 3 residents who held commercial crew licenses in 2010, compared to 3 in 2000. In addition, residents did not hold majority ownership in any vessels in that year, compared to 27 vessels in 2000. Of the CFEC salmon permits issued in 2010, 75% were actively fished, compared to 100% in 2000. The only fishery prosecuted by residents that year was the Bristol Bay set gillnet salmon fishery.¹⁴⁷

Between 2000 and 2010, no landings were reported in the community. In addition landings were only reported by Cooper Landing residents between 2000 and 2008. All landings reported by residents are considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹⁴⁷ Alaska Commercial Fisheries Entry Commission (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Cooper Landing: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Cooper Landing: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	1	1	1	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	0%	0%	0%	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	1	1	1	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Cooper Landing: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	5	4	5	5	6	7	5	4	4	4	4
	Fished permits	5	3	4	5	5	6	5	4	3	4	3
	% of permits fished	100%	75%	80%	100%	83%	86%	100%	100%	75%	100%	75%
	Total permit holders	5	4	5	5	6	6	5	4	4	4	4
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>5</i>	<i>4</i>	<i>5</i>	<i>5</i>	<i>7</i>	<i>8</i>	<i>6</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>
	<i>Fished permits</i>	<i>5</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>5</i>	<i>6</i>	<i>5</i>	<i>4</i>	<i>3</i>	<i>4</i>	<i>3</i>
	<i>% of permits fished</i>	<i>100%</i>	<i>75%</i>	<i>80%</i>	<i>100%</i>	<i>71%</i>	<i>75%</i>	<i>83%</i>	<i>100%</i>	<i>75%</i>	<i>100%</i>	<i>75%</i>
	<i>Permit holders</i>	<i>5</i>	<i>4</i>	<i>5</i>	<i>5</i>	<i>6</i>	<i>6</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Cooper Landing: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Cooper Landing ²	Total Net Lb Landed In Cooper Landing ²	Total Ex-Vessel Value Of Landings In Cooper Landing ²
2000	3	0	0	27	31	0	0	\$0
2001	1	0	0	29	28	0	0	\$0
2002	3	0	0	31	30	0	0	\$0
2003	6	0	0	29	31	0	0	\$0
2004	4	0	0	30	34	0	0	\$0
2005	3	0	0	1	1	0	0	\$0
2006	5	0	0	4	0	0	0	\$0
2007	5	0	0	2	0	0	0	\$0
2008	2	0	0	1	0	0	0	\$0
2009	3	0	0	0	0	0	0	\$0
2010	3	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation in Cooper Landing: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	1,052	104
2001	1	1,052	124
2002	1	1,052	128
2003	1	1,052	128
2004	1	1,052	142
2005	1	1,052	144
2006	1	1,052	143
2007	1	1,052	149
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Cooper Landing: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Cooper Landing: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Cooper Landing: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Cooper Landing Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	0	0
Finfish	--	--	--	--	--	--	--	--	--	0	0
Halibut	--	--	--	--	--	--	--	--	--	0	0
Herring	--	--	--	--	--	--	--	--	--	0	0
Other Groundfish	--	--	--	--	--	--	--	--	--	0	0
Other Shellfish	--	--	--	--	--	--	--	--	--	0	0
Pacific Cod	--	--	--	--	--	--	--	--	--	0	0
Pollock	--	--	--	--	--	--	--	--	--	0	0
Sablefish	--	--	--	--	--	--	--	--	--	0	0
Salmon	--	--	--	--	--	--	--	--	--	0	0
<i>Total²</i>	--	--	--	--	--	--	--	--	--	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	\$0	\$0
Halibut	--	--	--	--	--	--	--	--	--	\$0	\$0
Herring	--	--	--	--	--	--	--	--	--	\$0	\$0
Other Groundfish	--	--	--	--	--	--	--	--	--	\$0	\$0
Other Shellfish	--	--	--	--	--	--	--	--	--	\$0	\$0
Pacific Cod	--	--	--	--	--	--	--	--	--	\$0	\$0
Pollock	--	--	--	--	--	--	--	--	--	\$0	\$0
Sablefish	--	--	--	--	--	--	--	--	--	\$0	\$0
Salmon	--	--	--	--	--	--	--	--	--	\$0	\$0
<i>Total²</i>	--	--	--	--	--	--	--	--	--	\$0	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing is an immensely popular activity around Cooper Landing. Bolstered by its accessibility and extensive tourism infrastructure, the community receives a sizable influx of resident and non-resident recreationists annually. The number of registered sport fish businesses grew between 2000 and 2010 from 8 to 16, while the number of sport fish guide licenses peaked in 2004 at 40. However, the number of active sport fish guide businesses remained very low during those years (Table 11). In 2010, 5,551 sportfishing licenses were sold in the community, compared to 2,601 in 2000. In addition, residents were sold 195 sportfishing licenses that year, compared to 207 in 2000. Total sportfishing licenses sold in the community peaked in 2008 at 5,873. Total sportfishing licenses sold to residents peaked in 2005 at 243 (Table 11).

There are abundant sportfishing services available in Cooper Landing. Alaska River Adventures offers floatplane fly-outs for fly- and spin-fishing for trout and salmon. Alaska Wildland Adventures offers salmon and trout fishing excursions. Services include upper Kenai River fly fishing float trips and lower Kenai River powerboat trips. Angle 45 Adventures offers guided trips on the upper and middle Kenai River as well as its tributaries. Lodging and rafting trips are also available. Cooper Landing Fish Camp provides guide service and cabin rentals. Kenai River Float-n-Fish offers guided float fishing trips on the Kenai River. Alaska Rivers Company specialized in upper Kenai River sockeye, coho, Dolly Varden char, and rainbow trout fishing. Kenai River Fly Fishing offers guided trips on special Chugach National Forest and Kenai National Wildlife Refuge permits. Alaska Kenai Fishing For Fun provides guide services targeting salmon, trout, char, and grayling. Kenai Cache Outfitters is a full service outfitter providing tackle, processing, shipping, and guided trips. Charter booking services are also available. Finally, Alaska Troutfitters provides lodging, outfitting, and guiding services for trout and salmon.¹⁴⁸

Cooper Landing is located in the Kenai Peninsula Freshwater ADF&G Harvest Survey Area which includes all freshwater drainages on the Kenai Peninsula which drain into the Cook Inlet. According to ADF&G Harvest Survey data,¹⁴⁹ total freshwater angler days fished in the region declined between 2000 and 2010. In 2010, there was a combined total of 99,849 freshwater angler days fished, compared to 181,894 in 2000. Of those combined angler days fished, non-Alaska residents accounted for 28%, compared to 23% in 2000 (Table 11). According to ADF&G Harvest Survey data, species targeted by private anglers in Cooper Landing include king, coho, sockeye, and chum salmon, rainbow trout, Dolly Varden char, whitefish, Pacific halibut, rockfish, lingcod, Pacific cod, and razor clams. Records of charter activity in Cooper Landing are unavailable.¹⁵⁰

¹⁴⁸ Cooper Landing Chamber of Commerce (n.d.). *Homepage*. Retrieved February 22, 2012 from: <http://www.cooperlandingchamber.com/history.shtml>.

¹⁴⁹ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁵⁰ Ibid.

Table 11. Sport Fishing Trends, Cooper Landing: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Cooper Landing ²	Freshwater Angler Days Fished – Non-residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	1	23	207	2,601	42,157	139,737
2001	1	24	214	2,643	28,245	69,053
2002	0	26	205	3,087	26,479	83,335
2003	0	28	225	3,100	35,299	80,368
2004	0	36	231	3,582	39,009	83,478
2005	0	34	243	3,762	37,309	91,489
2006	0	40	234	4,354	33,988	76,100
2007	0	39	221	5,329	31,105	89,061
2008	0	37	195	5,873	28,780	70,285
2009	0	38	194	5,561	24,959	77,945
2010	1	39	195	5,551	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Cooper Landing is not designated as rural by the Federal Subsistence Board and therefore subsistence activities are only allowed on state-owned waterways in the area. Subsistence information is limited and ADF&G data on subsistence participation by household is unavailable. Of the reported harvests documented by ADF&G in Table 13, sockeye salmon were harvested most by residents, followed by coho and Chinook salmon. Reported salmon harvests peaked significantly in 2008 as did the number of subsistence salmon permits issued to residents. No residents were issued Subsistence Halibut Registration Certificates (SHARC) by NMFS between 2010 and when the program began. Data regarding marine mammal harvests are unavailable. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Cooper Landing: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Lb)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation For Salmon, Marine Invertebrates, And Non-Salmon Fish, Cooper Landing: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs Of Marine Inverts ²	Lbs Of Non-Salmon Fish ²
2000	4	4	13	n/a	1	n/a	306	n/a	n/a
2001	3	2	6	n/a	1	n/a	167	n/a	n/a
2002	3	3	1	n/a	n/a	n/a	241	n/a	n/a
2003	5	5	6	n/a	6	n/a	138	n/a	n/a
2004	4	4	5	n/a	10	n/a	205	n/a	n/a
2005	4	4	7	n/a	n/a	n/a	324	n/a	n/a
2006	1	1	4	n/a	n/a	n/a	202	n/a	n/a
2007	4	4	4	n/a	n/a	n/a	144	n/a	n/a
2008	87	80	2	n/a	7	n/a	1,141	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Cooper Landing: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Cooper Landing: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Fritz Creek



People and Place

*Location*¹⁵¹

Fritz Creek is situated on the Kenai Peninsula, 7 miles northeast of Homer off the Sterling Highway. It is located on the north shore of Kachemak Bay and lies at the foot of Bald Mountain. The Fritz Creek CDP (Census Designated Place) encompasses 54.4 square miles of land but does not include water area. Fritz Creek is located the Kenai Peninsula Borough and the Kenai Recording District.

*Demographic Profile*¹⁵²

In 2010, there were 1,932 inhabitants in Fritz Creek, making it the 48th largest of 352 total Alaskan communities with recorded populations that year. Overall, between 1990 and 2010, the population in Fritz Creek increased from 1,426 to 1,932 people. Between 2000 and 2009, the average annual growth rate was 0.81%, reflecting the slow steady increase through the decade.

A majority (89.9%) of Fritz Creek residents identified themselves as White in 2010, along with 5.1% that identified as two or more races (5.1%), American Indian and Alaska Native (2.9%), and the remaining groups (e.g., Native Hawaiian and Other Pacific Islander, Black or African American, Asian, and some other race) each made up less than one percent of the population. None of Fritz Creek's residents identified themselves as Hispanic in 2000 or 2010. The percentage of White residents in the population declined by 3.1% since 2000. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the estimated average household size in Fritz Creek was 2.28, a slight decline from 2.90 in 1990 and 2.43 in 2000. There has been an overall increase in occupied households, with 491 in 1990, 661 in 2000, and an estimated 848 in 2010. Of those occupied households surveyed in between 2006 and 2010, 76.4% were owner-occupied and 18.3% were renter-occupied. Of the 1,094 housing units reported in 2010, 22.4% were considered vacant, compared to 17.6% in 2000. There were no residents living in group quarters in 2000 and 2010.

¹⁵¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

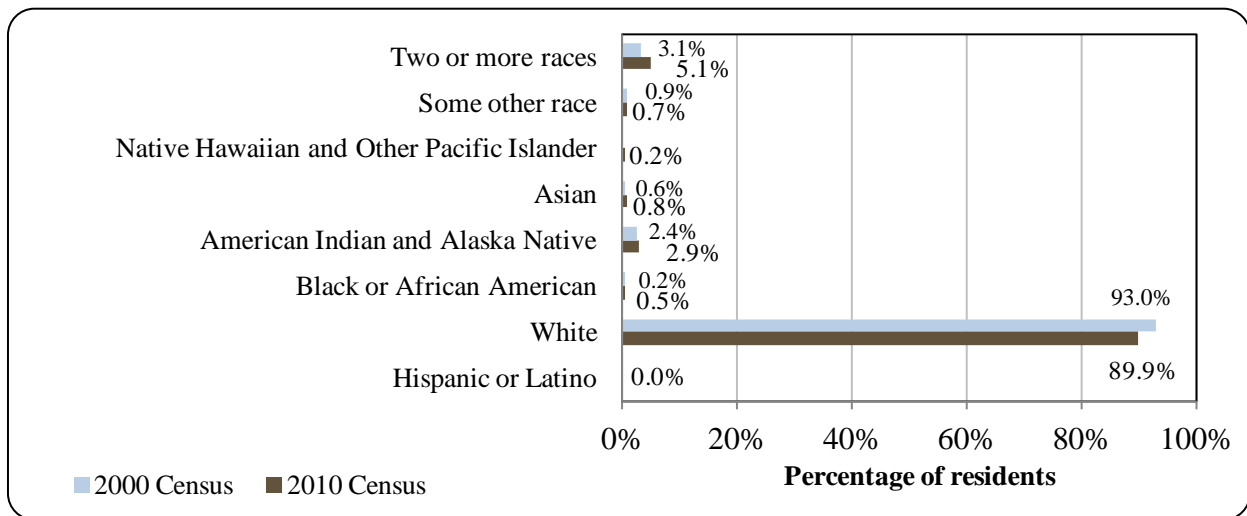
Table 1. Population in Fritz Creek from 1990 to 2010 By Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	1,426	-
2000	1,603	-
2001	-	1,663
2002	-	1,734
2003	-	1,743
2004	-	1,733
2005	-	1,764
2006	-	1,734
2007	-	1,777
2008	-	1,834
2009	-	1,818
2010	1,932	-

¹U.S. Census, 1990, 2000 and 2010 Decennial Census.

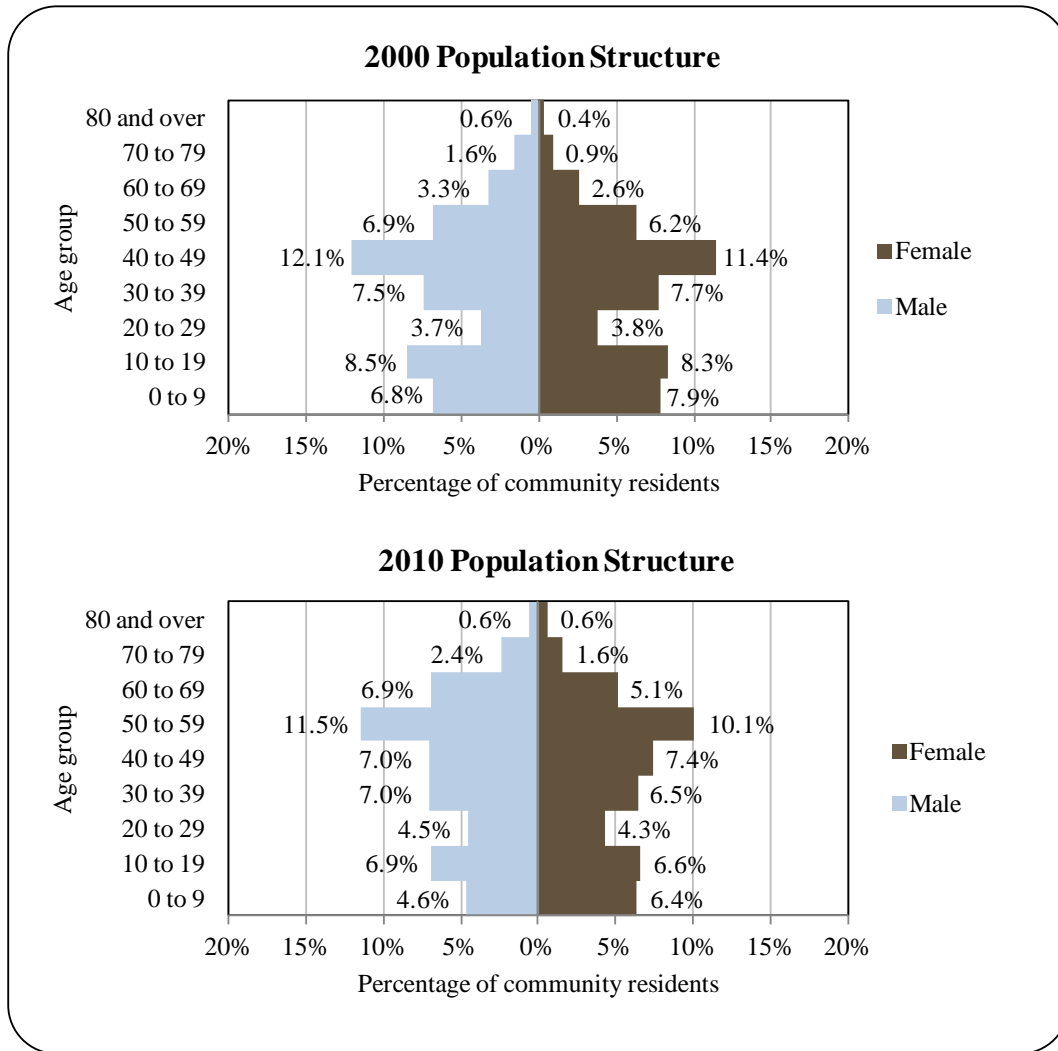
²Alaska Department of Labor. 2011. *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Fritz Creek: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Fritz Creek was 51.6% male and 48.4% female, similar to the gender makeup of the state as a whole (52% male, 48% female). Compared to 2000, the population of Fritz Creek appears to have aged. The median age of Fritz Creek residents in 2010 was 42.3 years (higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years). It also shows an increase from the median age in 2000 of 38.1 years. The percentage of the population under the age of 20 decreased from 31.4% in 2000 to 24.5% in 2010, while the percentage of the population over the age of 60 increased from 9.2% to 17.2%. Gender distribution was relatively even across age cohorts in both 2000 and 2010. Further information regarding trends in Fritz Creek’s population structure is displayed in Figure 2.

Figure 2. Population Age Structure in Fritz Creek Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-2010 American Community Survey (ACS),¹⁵³ in terms of educational attainment, an estimated 93% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to 91% of Alaska residents overall. Also in 2010, an estimated 5% of the population had less than a 9th grade education, compared to 4% of Alaska residents overall; an estimated 2% had a 9th to 12th grade education but no diploma, compared to 6% of Alaska residents overall; an estimated 29% had some college but no degree, compared to 28% of Alaska residents overall; an estimated 5% earned an Associate’s degree, compared to 8% of Alaska residents overall; an estimated 21% earned a Bachelor’s degree, compared to 17% of

¹⁵³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Alaska residents overall; and an estimated 11% earned a graduate or professional degree, compared to 10% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Due to its maritime climate and easy access, southcentral Alaska has long been a gathering place for Native Alaskans of diverse places. Human occupation of, and migration across, the Kenai Peninsula is known to date from some several thousand years ago at places such as Beluga Point along the Seward Highway. The area around Kachemak Bay is considered to have historically been Dena'ina Athabascan Indian territory, although archaeological sites also suggest the presence of Pacific Eskimo or Alutiiq people as early as 4,500 years ago.¹⁵⁴

The northeastern portion of Fritz Creek CDP borders the community of Voznesenka, a settlement of *Staroveri*, or “Russian Old Believers.”¹⁵⁵ Some Old Believer families also live interspersed with other families throughout the Fritz Creek CDP, known as “Fritz Creek East.”¹⁵⁶ The predecessors of the Alaskan *Staroveri* came to the Kenai Peninsula in the 1960s by way of Woodburn, Oregon, after many decades spent in China and Turkey and various other intermediary countries (see the *Additional Information* section for more history).¹⁵⁷ A group of Old Believer settlers received a grant from the Tolstoy Foundation in New York to purchase land at Nikolaevsk in 1967, and in 1968 the first families arrived.¹⁵⁸ Three additional communities of Old Believers were later founded on the Kenai Peninsula, including Voznesenka, Razdolna, and Kachemak Selo. A majority of residents of these communities are members of the Old Believers, and are careful to keep their traditions alive. Many children learn Russian as their first language, and learn English once they begin formal schooling. Many residents wear traditional clothing.^{159,160}

According to the Alaska Historical Commission, Fritz Creek itself was named by R.W. Stone of the U.S. Coast & Geodetic Survey in 1904. Russian, and subsequently American, attempts to exploit Kachemak Bay coal in the area in late 1800's proved to be unsuccessful. Fritz Creek is popularly known as the “End of The Road” and the “Cosmic Hamlet by the Sea.” It was popularized by Tom Bodett in his series of books about life at the “End of the Road.” The Fritz Creek area, like nearby Halibut Cove, is now a mecca for famous and aspiring artists, as well as those who enjoy wilderness and outdoor adventure.¹⁶¹

¹⁵⁴ Halliday, Jan. (1998). *Native Peoples of Alaska: A Traveler's Guide to Land, Art, and Culture*. Seattle: Sasquatch Books.

¹⁵⁵ Lee Silva, Amber (2009). *Unsettling Diaspora: The Old Believers of Alaska*. Masters Thesis, McGill University, Montreal. Retrieved January 26, 2012 from http://digitool.library.mcgill.ca/webclient/StreamGate?folder_id=0&dvs=1328564311584~157.

¹⁵⁶ Fall, J.A., V. Vanek, L. Brown, G. Jennings, R.J. Wolfe, and C. Utermohle. (2000). *Wild Resource Harvests and Uses by Residents of Selected Communities of the Kenai Peninsula Borough*. Alaska Dept. of Fish and Game Division of Subsistence, Technical Paper No. 253. Retrieved March 19, 2013 from <http://www.subsistence.adfg.state.ak.us/download/Technical%20Papers/tp253.pdf>.

¹⁵⁷ Johnson, Patricia White (1982). *Dress and Acculturation among Russian Old Believers in Oregon*. Masters Thesis, Oregon State University. Retrieved January 30, 2012 from <http://ir.library.oregonstate.edu/xmlui/handle/1957/7891>.

¹⁵⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁹ Homer News. (2013). “Russian Old Believer communities keep their traditions alive.” *2013 Visitor's Guide*. Retrieved March 20, 2013 from http://homer.alaska.com/stories/Russian_Villages.shtml.

¹⁶⁰ See footnote 156.

¹⁶¹ See footnote 158.

Natural Resources and Environment

Fritz Creek is located on the north shore of the mountainous and picturesque Kachemak Bay. Located at the base of Bald Mountain, Fritz Creek is an ideal destination for hiking and wilderness exploration. Winter temperatures range from 14 to 27 °F, and summer temperatures vary from 45 to 65 °F. Average annual precipitation is 24 inches.¹⁶²

Protected areas near Fritz Creek include Kachemak Bay State Park and Wilderness, the Kachemak Bay State Critical Habitat Area, and the Kenai Wilderness. The Kachemak Bay State Park and Wilderness is Alaska's first and only "wilderness park". A small unit of the State Park and Wilderness, known as Cottonwood and Eastland Creeks, is located on the northern shore of Kachemak Bay within the boundaries of Fritz Creek CDP, but a majority of the State Park's 400,000 acres are located on the southern side of Kachemak Bay. Its terrain includes mountains, glaciers, forests, and ocean. Visitors to the State Park enjoy fishing, boating, wildlife viewing, kayaking, hiking, camping, and mountain sports.^{163,164} Portions of Kachemak Bay State Park and Wilderness overlap with the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.¹⁶⁵

Kachemak Bay itself was designated as a State Critical Habitat Area (CHA) by the Alaska Legislature in 1974. In 1972, the Fox River Flats, at the mouth of the Bay, was also designated a CHA by the Legislature. The purpose of these CHAs is to "protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose." Eleven species of marine mammals utilize Kachemak Bay, including sea otters, Steller sea lions, harbor seals, beluga, minke, and orca whales, harbor porpoises, and Dall's porpoises, as well as a diversity of marine plants and invertebrates, birds, and fish and shellfish. The Fox River Flats and associated intertidal zone support at least 21 species of terrestrial mammals, including moose, black bear, brown bear, coyote, wolf, beaver, river otter, and small furbearers.¹⁶⁶ In addition to their status as CHAs, Kachemak Bay and the Fox River Flats were designated as part of the National Estuarine Research Reserve System (NERRS) in 1999, a network of 28 estuaries around the U.S. representing different biogeographic regions that are used for long-term research, water-quality monitoring, education, and coastal stewardship. It is the only Research Reserve located in Alaska.¹⁶⁷

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes—Fourpeaked, Augustine, Iliamna, Redoubt and Mount Spurr—are located within the Kenai Peninsula Borough, and are all situated on the west side of Cook Inlet. Major damage can also be caused by secondary earthquake hazards, including landslides,

¹⁶² See footnote 158.

¹⁶³ Alaska Dept. of Natural Resources (2009). *Kachemak Bay State Park and State Wilderness Park*. Retrieved January 27, 2012 from <http://dnr.alaska.gov/parks/units/kbay/kbay.htm>.

¹⁶⁴ Alaska Dept. of Natural Resources. (2013). *Map of Kachemak Bay State Park & Wilderness Park*. Retrieved March 20, 2013 from <http://dnr.alaska.gov/parks/units/kbay/kbaymap.htm>.

¹⁶⁵ Wilderness.net website (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

¹⁶⁶ Alaska Dept. of Fish and Game (1993). *Kachemak Bay and Fox River Flats Critical Habitat Areas Management Plan*. Retrieved June 14, 2012 from http://www.adfg.alaska.gov/static/lands/protectedareas/_management_plans/kachemak_bay.pdf.

¹⁶⁷ National Estuarine Research Reserve System (n.d.). *Kachemak Bay Research Reserve website*. Retrieved June 15, 2012 from <http://www.nerrs.noaa.gov/Reserve.aspx?ResID=KBA>.

floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures, and soil liquefaction.¹⁶⁸ Other natural hazards that have also been identified as threats in the Kenai Peninsula Borough include flooding, wildfires, snow and avalanches, seiches, severe weather, erosion, and drought.¹⁶⁹

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields onshore and offshore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.¹⁷⁰

According to the Alaska Department of Environmental Conservation, there are no notable active environmental remediation sites located in Fritz Creek as of May 2012.¹⁷¹

Current Economy¹⁷²

The economy of Fritz Creek is intimately linked with that of nearby Homer, which is relatively diverse though predominantly based on fishing and fish processing. The top employers in Fritz Creek in 2010 included the Kenai Peninsula Borough School, South Peninsula Hospital Inc., State of Alaska, South Peninsula Behavioral Health Services Inc., City of Homer, Safeway Inc., University of Alaska, Lands End Resort, Job Ready Inc., and the Arctic Slope Regional Corporation Energy Services O&M Inc.¹⁷³

Based on the 2006-2010 ACS,¹⁷⁴ in 2010, the estimated per capita income in Fritz Creek was \$24,937 and the estimated median household income was \$53,393, compared to \$18,937 and \$41,400 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,¹⁷⁵ the real per capita income (\$24,902) and real median household income (\$54,440) indicate that both individual and household earnings increased only slightly between 2000 and 2010. In 2010, Fritz Creek ranked 109th of 305 communities for which per capita income was estimated, and 111th of 299 communities for which median household income was estimated. However, Fritz Creek's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁷⁶ An alternative estimate of per capita income is

¹⁶⁸ Kenai Peninsula Borough (2010). *All-Hazard Mitigation Plan*. Retrieved July 31, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

¹⁶⁹ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved July 31, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

¹⁷⁰ Resource Development Council. (n.d.). *Alaska's Oil and Gas Industry*. Retrieved July 31, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

¹⁷¹ Alaska Dept. of Environmental Conservation (n.d.). *List of contaminated site summaries by region*. Retrieved July 31, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁷² Unless otherwise noted, all monetary data are reported in nominal values.

¹⁷³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved June 15, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁷⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁷⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁷⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not

provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Fritz Creek in 2010 is \$13,118.¹⁷⁷ This estimate is lower than both reported per capita income in 2000 and the 2006-2010 ACS estimate, suggesting that caution is warranted when referencing an increase in income over the decade. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Fritz Creek did not meet the Denali Commission's primary criteria as a "distressed community" in 2010. However, Fritz Creek did make a list of additional communities that meet the distressed classification when a plus/minus 3% formula is used.¹⁷⁸

Also based on the 2006-2010 ACS, in 2010, an estimated 70.1% of residents aged 16 and older were estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. That year, unemployment was estimated at 7.1%, compared to 5.9% statewide, and an estimated 9.7% of Fritz Creek residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in the civilian labor force in 2010, an estimated 55.2% worked in the private sector, along with 21.5% in the public sector and 23.3% estimated to be self-employed.

Estimates of employment by industry suggest that the largest number of Fritz Creek residents were employed in education services, health care, and social assistance sectors (26.1%), followed by arts, entertainment, recreation, accommodations, and food services (12.4%), and professional, scientific, and management (11.3%). Compared with data collected in the 2000 Decennial Census, significant proportional increases in employment occurred in professional, scientific, and management industries, information industries, and education services, health care, and social assistance. There was also a slight decline in the percentage of those estimated to be employed in trade, construction, and transportation, warehouse, and utilities sectors over the decade. Employment by industry is presented in Figure 3.

When viewing employment by occupation, 2006-2010 ACS estimates suggest that the greatest percentage of the workforce was employed in management/professional occupations in 2010 (38.8%), with the next greatest portion of the workforce in sales/office occupations (22.9%). Compared to 2000, an increase was observed in the percentage of workers employed in management/professional occupations, while a decline was observed in natural resource/construction/maintenance employment. Employment is broken down by occupation in Figure 4.

In 2010, 6.6% of the Fritz Creek workforce was estimated to be employed in agriculture, forestry, fishing, hunting or mining industries. Likewise, detailed occupation tables show 3.12% of the workforce employed in farming, fishing, and forestry occupations that year. It is important to note that the number of individuals employed in the fishing industry may be underestimated in census statistics as fishermen may hold another job and characterize their employment

collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷⁷ See footnotes 173 and 174.

¹⁷⁸ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

accordingly. As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Fritz Creek (U.S. Census).

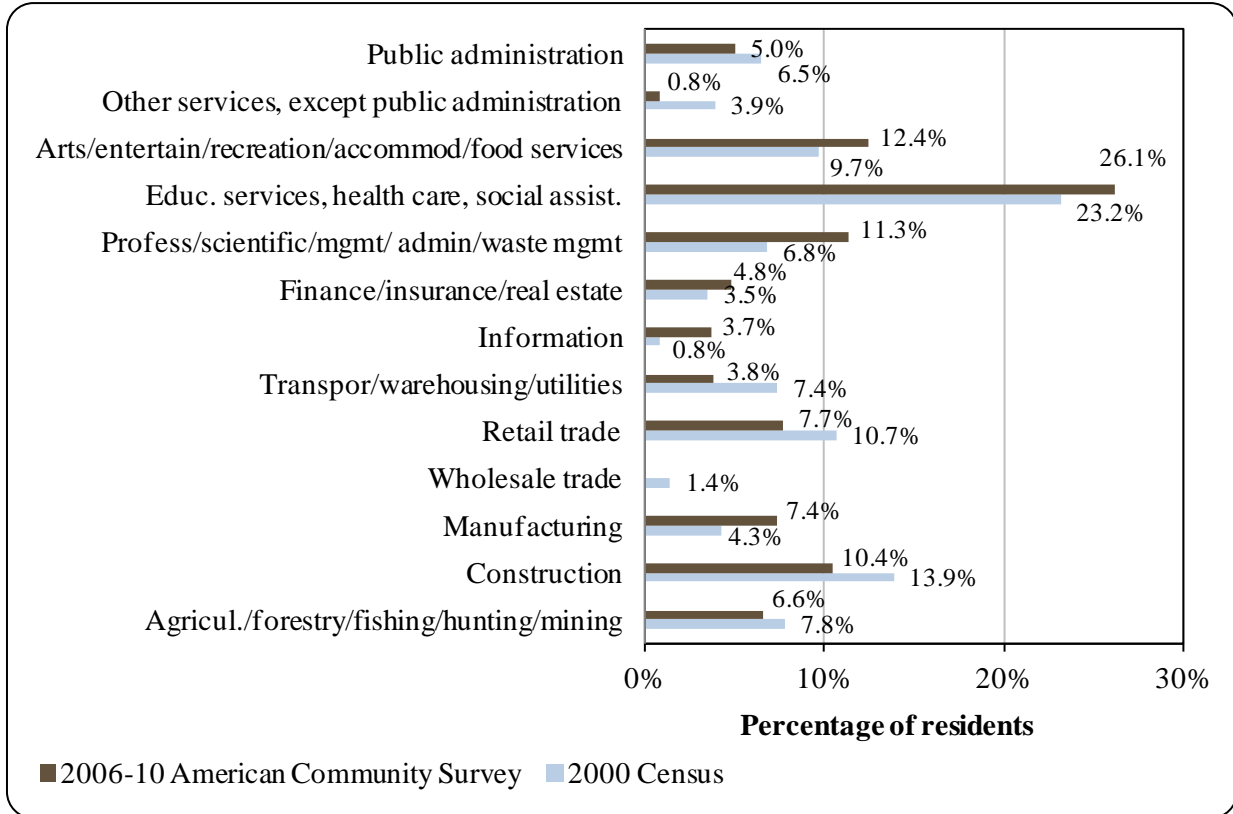
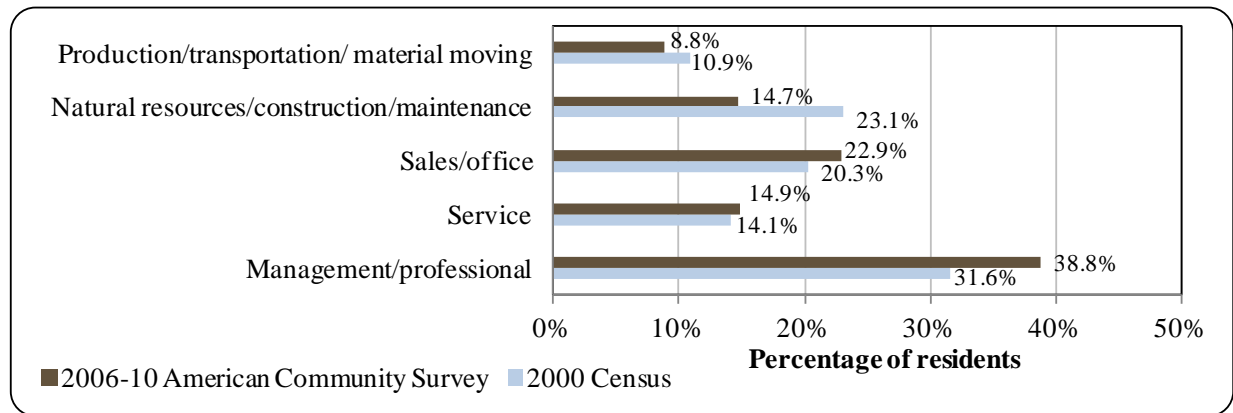


Figure 4. Local Employment by Occupation in 2000-2010, Fritz Creek (U.S. Census).



Governance

Fritz Creek is an unincorporated community located within the Kenai Peninsula Borough. Because of the community’s status as unincorporated, there are no municipal or borough finances dispersed to the community (Table 2). Fritz Creek was not included in the Alaska Native Claims Settlement Act (ANCSA) and therefore has no land allotment under the Act. Fritz Creek is not a federally recognized Native village nor does the community have a Native village corporation or belong to a regional Native corporation.

The closest offices of the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Natural Resources, and the National Marine Fisheries Service (NMFS) are located in Homer. The closest offices of the Alaska Department of Commerce, Community, and Economic Development and the U.S. Bureau of Citizenship and Immigration Services are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Fritz Creek from 2000 to 2010.

Year	Total municipal revenue ¹	Sales tax revenue ²	State/Community Revenue Sharing ³	Fisheries-related grants (state and federal) ⁴
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

*Connectivity and Transportation*¹⁷⁹

Fritz Creek is readily accessible by road along the Sterling Highway, which connects the community to Anchorage. Airport, harbor and docking facilities are available in nearby Homer, which has a deep-water dock capable of accommodating 340-ft-long vessels and a boat harbor with moorage for 920 vessels. The community receives year-round barge service. Ferry service is accessible to residents of Fritz Creek via the Alaska Marine Highway Terminal located in Homer. The city-owned airport in Homer is the nearest airport and has a 6,700-ft paved runway as well as a seaplane base. As of June 2012, roundtrip airfare from Anchorage to Homer costs \$255.¹⁸⁰

*Facilities*¹⁸¹

Electricity in Fritz Creek is provided by Homer Electric Association, Inc. Most households in Fritz Creek haul water, have water delivered, or use individual well water. Most have individual septic systems for sewage disposal, while the remainder use privies. Sixty to 70% of households are fully plumbed. The Kenai Peninsula Borough provides a refuse transfer station in Anchor Point, at mile 157 Sterling Highway, and residents also use Homer sanitation facilities. Any fishing-related infrastructure that residents rely on is accessible in Homer.

Safety services are provided by state troopers posted in nearby Homer. Residents of Fritz Creek also rely upon City of Homer and Borough officials for fire protection services. The community does not have its own post office nor does it have an internet service provider. Fritz Creek does have local and long-distance telephone services.

*Medical Services*¹⁸²

The nearest hospital to Fritz Creek is the South Peninsula Hospital in Homer. Emergency services have highway and coastal access and are within 30 minutes of the South Peninsula Hospital.

*Educational Opportunities*¹⁸³

In 2012, the Fritz Creek had one school, the Kachemak Selo School, which offers pre-school through 12th grade education, and has 6 teachers and 75 students. Fritz Creek is within the Kenai Peninsula School District.

¹⁷⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved May 17, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸⁰ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

¹⁸¹ See footnote 179.

¹⁸² Ibid.

¹⁸³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial harvest of salmon in Cook Inlet began in 1882,¹⁸⁴ with the development of a cannery at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890.¹⁸⁵ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after the development of diesel engines, which allowed fishing vessels to undertake longer trips.¹⁸⁶

Today, ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kachemak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gill net is the only gear allowed in the Northern District, while set and drift gill net and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gill nets are limited to the Kachemak Bay sub-district.¹⁸⁷

Groundfish and crab fisheries that occur within three nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond three nmi in the U.S. EEZ (Exclusive Economic Zone) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Kachemak Bay is considered to be one of Alaska's most popular destinations for chartered halibut fishing.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The TAC (Total Allowable Catch) set by NOAA Fisheries applied to both fisheries. Beginning in 1997, an additional "state-waters fishery" for Pacific cod was initiated in Cook Inlet. Management plans for fisheries in state waters are approved by the Alaska Board of Fish, and GHL (guideline harvest limits) are set by ADF&G. Typically, fisheries in state waters are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.¹⁸⁸

¹⁸⁴ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). *The Commercial Salmon Fishery in Alaska*. Alaska Fisheries Research Bulletin 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁸⁵ Cook, Linda, and Frank Norris (1998). *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved July 31, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

¹⁸⁶ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹⁸⁷ See footnote 184.

¹⁸⁸ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved July 31, 2012 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

Residents of Fritz Creek have long been involved in the fishing industry, especially given its close proximity to Homer, which offers access to fishing grounds and fish processing services. Fritz Creek is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area. Fritz Creek is not eligible to participate in either the CQE (Community Quota Entity) or the CDQ (Community Development Quota) program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Fritz Creek does not have a registered processing plant. Since there are no fish processing plants in the community, there were no fish landings reported in 2010. The nearest shore-side processing plants are located in Homer.

Fisheries-Related Revenue

Based on the best available data and reporting system, no fisheries-related revenue was received by the community of Fritz Creek between 2000 and 2010 (Table 3).

Commercial Fishing

Between 2000 and 2010, Fritz Creek residents participated in both state and federal fisheries as vessel owners, crew license holders, and permit and quota share account holders. In 2010, 12 Fritz Creek residents - or less than one percent of the total population - held a total of 23 state-issued Commercial Fisheries Entry Commission (CFEC) permits (Table 4). Of all the CFEC permits issued, 70% were actively fished in 2010. Between 2000 and 2010, the primary CFEC permits were held in salmon, groundfish, crab, and halibut fisheries. The number of salmon permit holders fluctuated between three and seven during the 2000-2010 period. Most recently, the majority of residents holding permits participated in the statewide halibut longline, Cook Inlet Dungeness crab, the Cook Inlet salmon drift gill net, and the statewide miscellaneous saltwater finfish fisheries. In addition, one local permit holder participated in each of the following fisheries: statewide sablefish longline, lingcod hand troll, miscellaneous saltwater finfish pot or mechanical jig fisheries, herring spawn in Prince William Sound, and Tanner crab pot gear fishery off Kodiak Island. Three Federal Fisheries Permits (FFP) and three federal License Limitation Program (LLP) permits were also held by Fritz Creek residents (Table 4).

There were 9 vessel owners in 2010, compared to 10 in 2000, and 17 crew license holders in 2010, compared to 23 in 2000. There were no vessels homeported between 2000 and 2006. There was one vessel homeported in 2007, and there were two vessels homeported from 2008 to 2010 (Table 5).

In 2000, five Fritz Creek residents held quota share accounts in the federal halibut catch share fishery. This number increased to six in 2001, declined to three in 2004, and increased to five again in 2010. Total halibut quota shares held increased from 296,479 in 2000 to 391,637 by 2010, and the maximum number of shares was held in 2008 and 2009. The annual halibut individual fishing quota (IFQ) allotment between 2000 and 2010 ranged from 32,750 lb to 81,051 lb. In 2000, two Fritz Creek residents held quota share accounts in the federal sablefish catch share fishery. Between 2000 and 2010, this number declined to one only in 2007. Total

sablefish shares held between 2000 and 2005 was the same each year, at 111,580. Total sablefish shares held declined to approximately 28,000 in 2006 and 2007, then increased to 629,498 in 2008 and 2009. Shares held in 2010 totaled 506,333. Between 2000 and 2010, annual sablefish IFQ allotments ranged from 3,189 to 58,458 lb. There was a 75.4% decline in allotments between 2005 and 2006, and a significant increase in allotments from 2007 (3,189) and to 2008 (58,458). No quota share accounts were held by Fritz Creek residents in federal crab catch share fisheries during the 2000-2010 period. Information about federal catch share participation is presented in Tables 6 through 8.

Between 2000 and 2010, no landings were made in Fritz Creek, due to the fact that no fish buyers or shore-side processing plants were located in the community during this time (Tables 5 and 9). However, local residents did land catch in other communities. Non-confidential landed pounds between 2000 and 2010 ranged from a low of 186,407 lb in 2002 and peaking at 1,614,562 lb in 2007, with an ex-vessel value of \$85,397 and \$650,814, respectively, and only included salmon between 2000 and 2009 (Table 10). In 2010, Fritz Creek residents landed a total of 495,410 lb of salmon, compared to 206,368 lb of salmon landed in 2000 (Table 10). Between 2000 and 2010, 2010 was the only year in which landings by residents of Pacific cod were not confidential, with a total of 50,084 lb landed with an ex-vessel value of \$44,221. Landings made by residents of other species during this time period are considered confidential due to the small number of participants.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community Of Fritz Creek: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species in Fritz Creek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	4	4	5	5	5	5	4	4	3	3	3
	Active permits	1	1	2	2	2	2	1	1	1	1	1
	% of permits fished	25%	25%	40%	40%	40%	40%	25%	25%	33%	33%	33%
	Total permit holders	3	3	4	4	4	4	3	3	3	3	3
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	3	3	3	3	3	3	2	2	3	2	3
	Fished permits	0	0	0	2	0	0	1	2	2	2	2
	% of permits fished	0%	0%	0%	67%	0%	0%	50%	100%	67%	100%	67%
	Total permit holders	3	3	3	2	2	2	2	2	2	2	3
Crab (CFEC) ²	Total permits	4	5	4	4	4	4	4	4	5	3	4
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	5	4	4	4	4	4	4	5	3	4
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	6	4	4	4	5	5	4	4	5	5	4
	Fished permits	3	4	3	4	4	5	4	3	5	5	3
	% of permits fished	50%	100%	75%	100%	80%	100%	100%	75%	100%	100%	75%
	Total permit holders	5	4	4	4	5	5	4	4	5	5	4
Herring (CFEC) ²	Total permits	2	2	2	2	2	2	2	2	2	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	2	2	2	1	1

Table 4 Cont. Permits and Permit Holders by Species in Fritz Creek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	2	2	2	2	2	2	1	2	2	1	1
	Fished permits	2	2	2	2	2	2	1	1	2	1	1
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	50%	100%	100%	100%
	Total permit holders	2	2	2	2	2	2	1	2	2	1	1
Groundfish (CFEC) ²	Total permits	9	5	4	3	3	3	1	1	1	2	6
	Fished permits	7	2	1	2	1	2	1	1	1	2	5
	% of permits fished	78%	40%	25%	67%	33%	67%	100%	100%	100%	100%	83%
	Total permit holders	5	3	2	2	2	2	1	1	1	2	4
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	8	4	5	3	5	5	6	8	8	7	7
	Fished permits	7	4	5	3	4	5	5	8	7	5	7
	% of permits fished	88%	100%	100%	100%	80%	100%	83%	100%	88%	71%	100%
	Total permit holders	7	4	6	3	5	5	5	7	7	6	6
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>31</i>	<i>22</i>	<i>21</i>	<i>18</i>	<i>21</i>	<i>21</i>	<i>18</i>	<i>21</i>	<i>23</i>	<i>19</i>	<i>23</i>
	<i>Fished permits</i>	<i>19</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>14</i>	<i>11</i>	<i>13</i>	<i>15</i>	<i>13</i>	<i>16</i>
	<i>% of permits fished</i>	<i>61%</i>	<i>55%</i>	<i>52%</i>	<i>61%</i>	<i>52%</i>	<i>67%</i>	<i>61%</i>	<i>62%</i>	<i>65%</i>	<i>68%</i>	<i>70%</i>
	<i>Permit holders</i>	<i>14</i>	<i>11</i>	<i>13</i>	<i>10</i>	<i>13</i>	<i>12</i>	<i>11</i>	<i>13</i>	<i>14</i>	<i>10</i>	<i>12</i>

Note: n/a indicates that no data were reported for that year.

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics Of The Commercial Fishing Sector In Fritz Creek: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Fritz Creek ²	Total Net Lb Landed In Fritz Creek ²	Total Ex-Vessel Value Of Landings In Fritz Creek ²
2000	23	0	0	10	0	0	0	\$0
2001	17	0	0	8	0	0	0	\$0
2002	13	0	0	8	0	0	0	\$0
2003	15	0	0	7	0	0	0	\$0
2004	13	0	0	8	0	0	0	\$0
2005	13	0	0	7	0	0	0	\$0
2006	13	0	0	8	0	0	0	\$0
2007	17	0	0	10	1	0	0	\$0
2008	12	0	0	11	2	0	0	\$0
2009	13	0	0	6	2	0	0	\$0
2010	17	0	0	9	2	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Fritz Creek: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lbs)
2000	5	296,479	32,750
2001	6	305,355	38,837
2002	5	353,569	44,471
2003	4	314,027	47,025
2004	3	313,777	50,757
2005	4	391,549	60,642
2006	4	391,549	58,301
2007	5	391,637	56,648
2008	6	544,763	81,051
2009	6	544,763	75,443
2010	5	391,637	43,161

Source: National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Fritz Creek: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lbs)
2000	2	111,580	10,860
2001	2	111,580	11,370
2002	2	111,580	12,164
2003	2	111,580	13,835
2004	2	111,580	15,500
2005	2	111,580	13,722
2006	2	28,773	3,370
2007	1	28,386	3,189
2008	2	629,498	58,458
2009	2	629,498	51,914
2010	2	506,333	37,098

Source: National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Fritz Creek: 2000-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (lbs)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Note: n/a indicates that no data were reported for that year. Source: National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Fritz Creek: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-Vessel Revenue, by Species, by Fritz Creek Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish											
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	150,084
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	206,368	186,407	208,618	--	--	194,183	1,614,562	1,435,867	791,476	924,011	495,410
<i>Total²</i>	<i>206,368</i>	<i>186,407</i>	<i>208,618</i>	--	--	<i>194,183</i>	<i>1,614,562</i>	<i>1,435,867</i>	<i>791,476</i>	<i>924,011</i>	<i>645,494</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish											
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	\$44,221
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$128,235	\$102,498	\$85,397	--	--	\$200,169	\$445,490	\$650,814	\$523,236	\$423,788	\$453,689
<i>Total²</i>	<i>\$128,235</i>	<i>\$102,498</i>	<i>\$85,397</i>	--	--	<i>\$200,169</i>	<i>\$445,490</i>	<i>\$650,814</i>	<i>\$523,236</i>	<i>\$423,788</i>	<i>\$497,910</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is important to communities on the Kenai Peninsula and Kachemak Bay is no exception. Kachemak Bay is considered to be one of Alaska's most popular destinations for recreational halibut fishing. While Fritz Creek itself has few active charter fishing companies, it does offer a less crowded sportfishing scene than nearby Homer, which is considered a major sportfishing destination. The number of active sport fish guide businesses increased slightly over the 2000-2010 period, from one in 2000 to three in 2010, while the number of licensed sport fish guides present in the community ranged between three and eight per year (Table 11). Statistics provided by charter logbook information indicate that all five species of salmon, halibut, lingcod, other rockfish, pelagic rockfish, shark, and yelloweye are caught by anglers fishing from charter vessels based in Fritz Creek.¹⁸⁹

No sportfishing licenses were sold in Fritz Creek between 2000 and 2006. Starting in 2007, limited licenses were sold each year, topping out at 19 licenses sold in 2010. The number of licenses issued to residents over time has increased only slightly. Residents held 212 sportfishing licenses that year, compared to 175 in 2000. Given that residents hold significant numbers of sportfishing licenses and few are actually sold in the community, residents are likely travelling to other communities to purchase their licenses. The Alaska Statewide Harvest Survey,¹⁹⁰ conducted by ADF&G between 2000 and 2010, noted harvesting of the following species by Fritz Creek sport fishermen: Chinook, coho, and sockeye salmon are harvested by recreational fishermen in both salt and freshwater, while Dolly Varden char are targeted in freshwater only. Other saltwater recreational species caught by Fritz Creek fishermen include Pacific halibut, rockfish, and Pacific cod. The survey also noted recreational harvest of hardshell and razor clams by Fritz Creek residents.

Fritz Creek is located within Alaska Sport Fishing Survey Area PF – Kenai Peninsula (Freshwater) – and PS – Cook Inlet (Saltwater). Information about saltwater and freshwater sportfishing activity is also available at these two regional scales. Between 2000 and 2010, Alaska residents fished more angler days in freshwater than non-Alaska residents each year, while non-residents fished more saltwater days. The percentage of total saltwater angler days fished by non-Alaska residents increased over the decade, from 63% in 2000 to 70% in 2010. The percentage of freshwater angler days fished by non-Alaska residents also increased, from 23% in 2000 to 28% in 2010 (Table 11).

¹⁸⁹ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁹⁰ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Fritz Creek: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Fritz Creek ²
2000	1	4	175	0
2001	1	4	169	0
2002	1	5	215	0
2003	2	7	192	0
2004	1	7	179	0
2005	1	3	195	0
2006	3	5	198	0
2007	3	8	193	15
2008	2	4	181	8
2009	2	5	198	15
2010	3	5	212	19

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest plays an essential role for households located within the Fritz Creek CDP. In 1998, the ADF&G Division of Subsistence conducted a subsistence survey of households in the Fritz Creek area. The survey found that 100% of households in both Voznesenka and Fritz Creek East utilized subsistence resources. The survey also found that a large majority of these households engaged in hunting, fishing, or gathering, and engaged in sharing of wild resources between households. However, trapping was not found to be a common activity among Fritz Creek residents. According to the survey, halibut was the most frequently used subsistence resource by area residents.¹⁹¹

Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of households in Fritz Creek East and Voznesenka using different marine resources, or per capita harvest of subsistence resources by area residents (Table 12). However, the earlier ADF&G subsistence survey provides information about species of marine invertebrates, non-salmon fish (not including halibut), and marine mammals harvested by Fritz Creek and Voznesenka households in 1998. The species of marine invertebrates harvested by the greatest percentage of households in the Fritz Creek CDP area overall included razor clams, mussels, butter clams, and Pacific littleneck clams. Species of non-salmon fish used for subsistence purposes by the greatest percentage of households included red and black rockfish, eulachon (hooligan candlefish), sablefish, Dolly Varden char, Pacific cod, and rainbow trout. The survey did not provide information about marine mammal harvest by households in this area. It is important to note that, while households in both Voznesenka and Fritz Creek East were recorded as utilizing marine invertebrates and non-salmon fish, rates of marine invertebrate harvest were highest in Fritz Creek East, and rates of non-salmon fish harvest were highest in Voznesenka.¹⁹²

Between 2000 and 2010, no information was available from management agencies regarding marine mammal harvest by Fritz Creek area residents (Table 15). However, limited data are available for the 2000-2010 period regarding salmon and halibut subsistence harvest. Subsistence salmon permit information was reported by ADF&G for the year 2005 only. That year, two Fritz Creek area households held subsistence salmon permits. Of these, one permit was returned, and 3 Chinook and 37 sockeye salmon were reported as harvested that year. Between 2003 and 2010, the number of Fritz Creek area residents that participated in the Subsistence Halibut Registration Certificate (SHARC) program declined from two to one. Information about total harvest was available for 2010 only, when 200 lb of halibut were harvested using one SHARC card by a Fritz Creek resident. Information about the subsistence salmon fishery is presented in Table 13, and information about subsistence halibut harvest is presented in Table 14.

Additional Information

The history of the Russian Old Believers movement began in the mid-1600s, when reforms introduced by Nikon, the Patriarch of the Russian Orthodox Church from 1652 to 1658,

¹⁹¹ Fall, J.A., V. Vanek, L. Brown, G. Jennings, R.J. Wolfe, and C. Utermohle. (2000). *Wild Resource Harvests and Uses by Residents of Selected Communities of the Kenai Peninsula Borough*. Alaska Dept. of Fish and Game Division of Subsistence, Technical Paper No. 253. Retrieved March 19, 2013 from <http://www.subsistence.adfg.state.ak.us/download/Technical%20Papers/tp253.pdf>.

¹⁹² Ibid.

were upheld by the Church Councils of 1666 to 1667. These reforms included the number of times “alleluia” is said during prayers, the number of fingers used to perform the sign of the cross, leading processions counter-clockwise rather than clockwise, and spelling the name of Jesus with two i’s instead of one (“Iisus”).¹⁹³ Those who disagreed with these reforms were anathematized by the Church. These dissenters, and those that have followed them, are collectively known as “Old Believers.”¹⁹⁴

Persecution followed for those who resisted the reforms. Many Old Believers were burned at the stake, or chose to burn themselves to escape capture by government troops. In addition to resisting church reforms, the Old Believers were in opposition to forms of Westernization that began to appear in Russia under Peter the Great in the late 1600s and early 1700s. Peter required women to participate in social activities, such as dances and parties, in the style of the West. He mandated use of Western clothing and required all male members of the ruling class to shave their beards. Those choosing to wear beards were forced to pay a tax of 100 rubles per year, and peasants entering town to sell produce had to pay a fee of one kopek for the right to wear their beard in town for one day. The Old Believers viewed Peter as the “Antichrist,” and many fled to northern Russia, Siberia, the Cossack lands and the Ural Mountains, far from the power of the central government, where they could practice their traditional customs and rituals undisturbed.¹⁹⁵

The Old Believers dispersed further through the ensuing centuries. The ancestors of those who founded Nikolaevsk initially settled in Turkey and several areas of China. In the 1900s, they were resettled to countries including Brazil, Australia, Argentina, New Zealand, Paraguay, Uruguay, Canada, and the United States. The first Old Believers in Woodburn, Oregon came by way of Brazil, moving from Brazil to Oregon starting in 1962. Other Old Believers who had come to United States joined them in Oregon in the years that followed. A group of Old Believers left Woodburn and traveled to the Kenai Peninsula and founded Nikolaevsk in 1968, to the north of Homer.¹⁹⁶ In later years, three additional communities were founded in the Homer area, including Voznesenka, Razdolna, and Kachemak Selo.¹⁹⁷

¹⁹³ Johnson, P.W. 1982. *Dress and Acculturation among Russian Old Believers in Oregon*. Masters Thesis, Oregon State University. Retrieved January 30, 2012 from <http://ir.library.oregonstate.edu/xmlui/handle/1957/7891>.

¹⁹⁴ Lee Silva, Amber. 2009. *Unsettling Diaspora: The Old Believers of Alaska*. Master’s Thesis, McGill University, Montreal. Retrieved January 26, 2012 from http://digitool.library.mcgill.ca/webclient/StreamGate?folder_id=0&dvs=1328564311584~157..

¹⁹⁵ See footnote 193.

¹⁹⁶ Ibid.

¹⁹⁷ Homer News. (2013). “Russian Old Believer communities keep their traditions alive.” *2013 Visitor’s Guide*. Retrieved March 20, 2013 from http://homer.alaska.com/stories/Russian_Villages.shtml.

Table 12. Subsistence Participation by Household and Species, Fritz Creek: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Fritz Creek: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	2	1	3	n/a	n/a	n/a	37	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Fritz Creek: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	2	n/a	n/a
2004	2	n/a	n/a
2005	2	n/a	n/a
2006	2	n/a	n/a
2007	2	n/a	n/a
2008	1	n/a	n/a
2009	1	n/a	n/a
2010	1	1	200

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Fritz Creek: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. "Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006." *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear.* Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008.* Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Halibut Cove



People and Place

*Location*¹⁹⁸

Halibut Cove is in the Kachemak Bay State Park on the Kenai Peninsula. It lies on the south shore of Kachemak Bay, 12 miles across the inlet from the Homer Spit. Halibut Cove is located in the Kenai Peninsula Borough and the Homer Recording District.

*Demographic Profile*¹⁹⁹

In 2010, there were 76 residents in Halibut Cove, ranking it as the 274th largest of 352 communities in Alaska with recorded populations that year. Halibut Cove first appeared in U.S. Census records in 1940 with 23 residents, increasing to a peak of 78 in 1990. U.S. Decennial Census population estimates show a population decline of 55.1% between 1990 and 2000, followed by a 46% rebound between 2000 and 2010. Decennial Census records conflict with Alaska Department of Labor estimates between 2000 and 2009, which suggest that the population of permanent residents decreased by 22.9% over the decade, with an average annual growth rate of -1.22% (Table 1). This discrepancy indicates that caution should be used when comparing the decennial and annual estimates.

In 2010, the majority of Halibut Cove residents identified themselves as White (86.8%), compared to 97.1% in 2000; 6.6% identified themselves as American Indian and Alaskan Native, compared to 0.0% in 2000; and 6.6% identified themselves as of two or more races, compared to 2.9% in 2000. In addition, 1.3% of the Halibut Cove population identified themselves as Hispanic or Latino, compared to 0.0% in 2000. As seen in Figure 1, the biggest changes were seen in the White and Alaska Native populations.

The increase in population over the last decade is reflected in an increase in the number of households in Halibut Cove, from 18 occupied housing units in 2000 to 34 in 2010. The average number of persons per household also increased, from 1.94 in 2000 to 2.42 in 2010. Housing estimates in the 1990 Decennial Census were based on a survey of 15.1% of households. According to these estimates, there were 23 occupied housing units in 1990, with an average of 1.7 persons per household. However, these housing estimates suggest a much lower population than the reported 76 residents that year (Table 1). This could be partially explained by the fact that 39 Halibut Cove residents were reported to be living in group quarters in 1990. No residents were reported to be living in group quarters in 2000 or 2010. Of the 161 total housing units surveyed in 2010, 15.5% were owner-occupied, 5.6% were rented, and a majority of

¹⁹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

residences (78.9%) were vacant. Of 127 vacant housing units in 2010, 99 (78%) were vacant due to seasonal use.

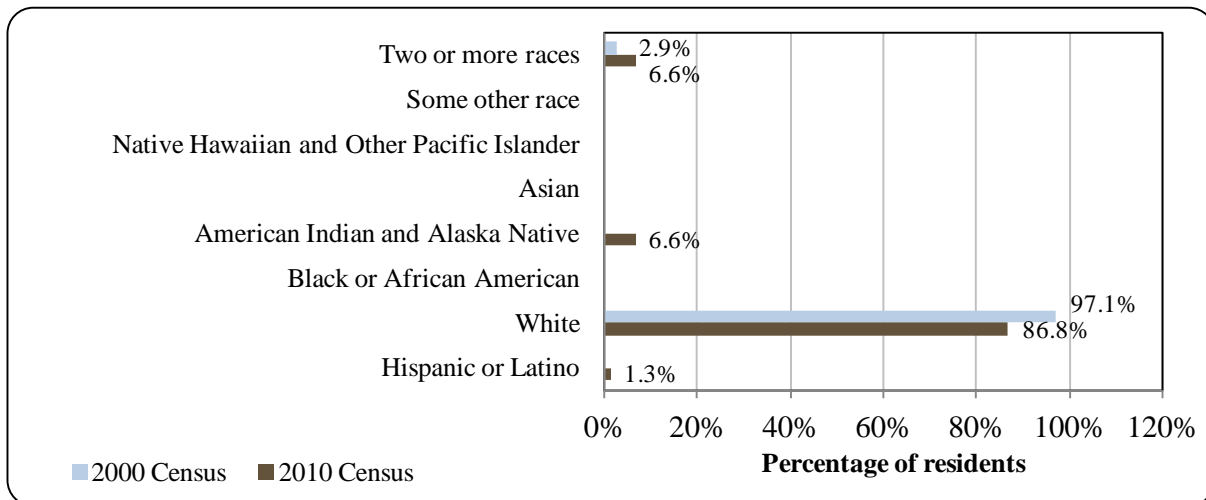
Table 1. Population in Halibut Cove from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	78	-
2000	35	-
2001	-	29
2002	-	28
2003	-	27
2004	-	26
2005	-	23
2006	-	24
2007	-	20
2008	-	23
2009	-	27
2010	76	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

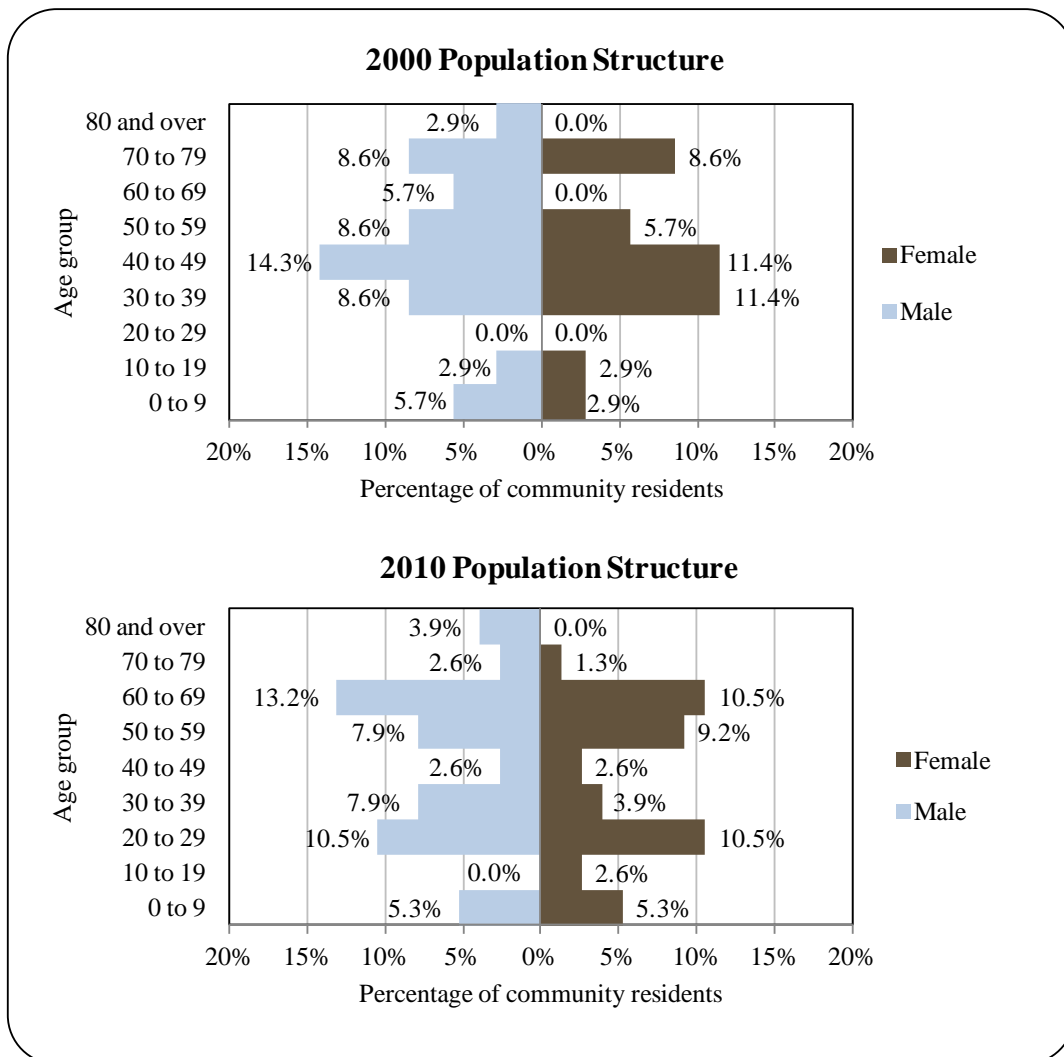
² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Halibut Cove: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Halibut Cove was 53.9% male and 46.1% female, slightly more weighted toward males than the population of the State as a whole that year (52% male, 48% female). The median age was estimated to be 47.5 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, females outnumbered males in the 10-19 and the 50-59 age groups, and males outnumbered females in all other age groups. Compared to 2000, the greatest population shifts were an increase in population in the 20-29 age group (from zero residents in this age group in 2000), and a overall slight aging of the population; in 2010, 31.6% of the population was age 60 or older, compared to 25.7% of the population in 2000 (Figure 2).

Figure 2. Population Age Structure in Halibut Cove Based on the 2000 and 2010 U.S. Decennial Census.



The 2006-2010 American Community Survey (ACS) did not provide any information regarding educational attainment in Halibut Cove in 2010. Although the U.S. Decennial Census recorded 76 permanent residents in Halibut Cove in 2010, the ACS estimated zero residents aged 16 and over in 2010.²⁰⁰ In 2000, Decennial Census sample data estimates indicate that there were 60 individuals aged 25 or older residing in Halibut Cove, all of which were held high school diplomas. In addition, 23 Halibut Cove residents had attended some college but held no degree, and 20 residents had a graduate or professional degree.

History, Traditional Knowledge, and Culture

The Halibut Cove area was historically home to the Kachemak Eskimo and Dena'ina Athabascan Indians. Archaeological sites suggest the presence of Pacific Eskimo or Alutiiq people as early as 4,500 years ago, with increasing occupation of the Kenai Peninsula by the Dena'ina around 1000 A.D.^{201,202} Midden sites at Halibut Cove provide evidence of a large settlement at the site during prehistoric times.²⁰³ Halibut Cove was named by W.H. Dall of the U.S. Coast and Geodetic Survey in 1880.²⁰⁴ In 1914, a herring fishery developed at Halibut Cove, and the industry boomed in 1918 as a result of a new curing method called scotch curing. That year, there were 36 herring plants in Alaska, of which 15 were located in Kachemak Bay. By 1926, there were 61 plants in Alaska, and 32 in Lower Cook Inlet. Most of these plants were located in Halibut Cove, along with facilities in Portlock, Port Graham, Seldovia, and elsewhere. However, overfishing led to a precipitous crash in the local herring industry after 1926, and by 1929, only one herring plant remained in Lower Cook Inlet.²⁰⁵

The contemporary community of Halibut Cove is primarily an artist colony, pioneered by Diana and Clem Tillion. Several artists live and work in Halibut Cove, attracting visitors and apprentices to their galleries and studios. The community's history as a booming center for herring processing inspired the name of a local restaurant, known as The Saltry.²⁰⁶

Natural Resources and Environment

Halibut Cove is located in a maritime climate zone, dominated by the moderating effects of a marine environment and characterized by high humidity, precipitation and fog cover as well

²⁰⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁰¹ Fall, James A., Ronald T. Stanek, Brian Davis, Liz Williams and Robert Walker. (2004). *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Final Report for Study No. FIS 03-045. Retrieved December 27, 2011 from <http://alaska.fws.gov/asm/index.cfml>.

²⁰² Halliday, Jan. (1998). *Native Peoples of Alaska: A Traveler's Guide to Land, Art, and Culture*. Seattle: Sasquatch Books.

²⁰³ Halibut-Cove-Alaska.com. (2011). *The History of Halibut Cove*. Retrieved October 30, 2012 from <http://www.halibut-cove-alaska.com/halibut-cove-history.htm>.

²⁰⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁵ Cook, Linda, and Frank Norris. (1998). *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

²⁰⁶ See footnote 203.

as warm winters and cool summers. Winter temperatures range from 14 to 27° F, and summer temperatures vary from 45 to 65° F. Average annual precipitation is 24 inches, with annual winter snowfall averaging 55 inches.²⁰⁷

Protected areas near Halibut Cove include Kachemak Bay State Park and Wilderness, the Kachemak Bay State Critical Habitat Area (CHA), and the Kenai Wilderness. Halibut Cove is one departure point to enter the trail network in Kachemak Bay State Park.²⁰⁸ The State Park is Alaska's first and only 'wilderness park.' A majority of the State Park's 400,000 acres are located on the southern side of Kachemak Bay, along with a small unit on the Bay's northern shore, and its terrain includes mountains, glaciers, forests, and ocean. Visitors to the State Park enjoy fishing, boating, wildlife viewing, kayaking, hiking, camping, and mountain sports.²⁰⁹ Portions of Kachemak Bay State Park and Wilderness overlap with the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.²¹⁰

Kachemak Bay itself was designated as a State CHA in 1974, and the Fox River Flats at the mouth of the Bay were also designated as a CHA in 1972. The purpose of these CHAs is to "protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose". Eleven species of marine mammals utilize Kachemak Bay, including sea otters, Steller sea lions, harbor seals, beluga, minke and orca whales, harbor porpoises, and Dall's porpoises, as well as a diversity of marine plants and invertebrates, birds, and fish and shellfish. The Fox River Flats and associated intertidal zone support at least 21 species of terrestrial mammals, including moose, black bear, brown bear, coyote, wolf, beaver, river otter, and small furbearers.²¹¹ In addition to their status as CHAs, Kachemak Bay and the Fox River Flats were designated as part of the National Estuarine Research Reserve System in 1999, a network of 28 estuaries around the U.S. representing different biogeographic regions that are used for long-term research, water-quality monitoring, education, and coastal stewardship. It is the only Research Reserve located in the State of Alaska.²¹²

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures and soil liquefaction.²¹³ Other natural hazards that have also been identified as threats in the Kenai Peninsula Borough

²⁰⁷ Ibid.

²⁰⁸ Alaska Dept. of Natural Resources. (2011). *Kachemak Bay State Park Trails Maps*. Retrieved October 31, 2012 from <http://dnr.alaska.gov/parks/units/kbay/kbaytrs.htm>.

²⁰⁹ Alaska Dept. of Natural Resources. (2009). *Kachemak Bay State Park and State Wilderness Park*. Retrieved January 27, 2012 from <http://dnr.alaska.gov/parks/units/kbay/kbay.htm>.

²¹⁰ Anonymous. (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

²¹¹ Alaska Dept. of Fish and Game. (1993). *Kachemak Bay and Fox River Flats Critical Habitat Areas Management Plan*. Retrieved June 14, 2012 from http://www.adfg.alaska.gov/static/lands/protectedareas/_management_plans/kachemak_bay.pdf.

²¹² National Estuarine Research Reserve System. (n.d.). *Kachemak Bay Research Reserve website*. Retrieved June 15, 2012 from <http://www.nerrs.noaa.gov/Reserve.aspx?ResID=KBA>.

²¹³ Kenai Peninsula Borough. (2010). *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

include flooding, wildfires, snow and avalanches, seiches, severe weather, erosion, and drought.²¹⁴

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields on and off shore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.²¹⁵ With respect to oil and gas development, it is important to note that the Kachemak Bay shoreline was impacted by the 1989 *Exxon Valdez* disaster.²¹⁶

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Halibut Cove as of October 2012.²¹⁷

Current Economy²¹⁸

Halibut Cove is largely an artist colony and it is a sightseeing spot for boaters from Homer. A local restaurant called The Saltry operates during the summer.²¹⁹ A high percentage of homes in Halibut Cove are used seasonally, reflecting the community's status as a vacation destination. In 2000, residents of Halibut Cove had both the highest per capita income and the highest median household income of any community in Alaska.²²⁰

Although the U.S. Decennial Census reported 68 residents age 16 or over in Halibut Cove in 2010, household surveys conducted for the 2006-2010 ACS did not collect data from local residents.²²¹ Given this, the civilian labor force was thus estimated to be zero and no earnings were reported in Halibut Cove through the 2006-2010 ACS.²²² However, income data are available for 2000. That year, the per capita income in Halibut Cove was \$89,895 and the median household income was \$127,010.²²³ Taking inflation into account by converting the 2000 values to 2010 dollars,²²⁴ the real per capita income in 2000 is shown to have been \$118,211, and the

²¹⁴ State of Alaska. (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

²¹⁵ Resource Development Council. (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

²¹⁶ City of Homer. (2008). *Comprehensive Plan 2008 (Adopted 2010)*. Retrieved October 8, 2012 from <http://www.cityofhomer-ak.gov/planning/comprehensive-plan-2008-adopted-2010>.

²¹⁷ Alaska Dept. of Environmental Conservation. (2012). *List of Contaminated Site Summaries By Region*. Retrieved October 31, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

²¹⁸ Unless otherwise noted, all monetary data are reported in nominal values.

²¹⁹ Anonymous. (2011). *The History of Halibut Cove*. and *The History of The Saltry*. Retrieved October 30, 2012 from <http://www.halibut-cove-alaska.com/>.

²²⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²²¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²²² See footnote 220.

²²³ Ibid.

²²⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

real median household income in 2000 was \$167,016. These figures are much higher than average for Alaskan communities. As noted above, Halibut Cove ranked 1st in both per capita and median household income of all communities in Alaska that reported income data that year (344 communities reported per capita income data and 341 reported household income data). In 2000, no Halibut Cove residents were below the poverty level, compared to 9.4% of Alaskan residents overall, and the local unemployment rate was 0%, compared to a statewide rate of 6.1%.

Sample data from the 2000 U.S. Census estimated that there were 60 residents aged 16 and older in Halibut Cove, of which 37 were estimated to be employed in the civilian labor force that year. Of these, a majority (31) were estimated to be self-employed, while the remaining 6 workers were estimated to be employed in the private sector. From the perspective of industry, 15 residents were estimated to be employed in arts, entertainment, recreation, accommodation, and food services (40.5%), 15 were estimated to be employed in agriculture, forestry, fishing, mining and hunting industries (40.5%), and 7 were estimated to be working in professional, scientific, management, administrative, and waste management services (18.9%). Information about employment by industry is presented in Figure 3. From the perspective of occupation, a majority of the civilian labor force (28 individuals) was estimated to work in management, professional, and related occupations (75.7%) and 9 worked in natural resources/construction/maintenance occupations (Figure 4).

Figure 3. Local Employment by Industry in 2000-2010, Halibut Cove (U.S. Census).

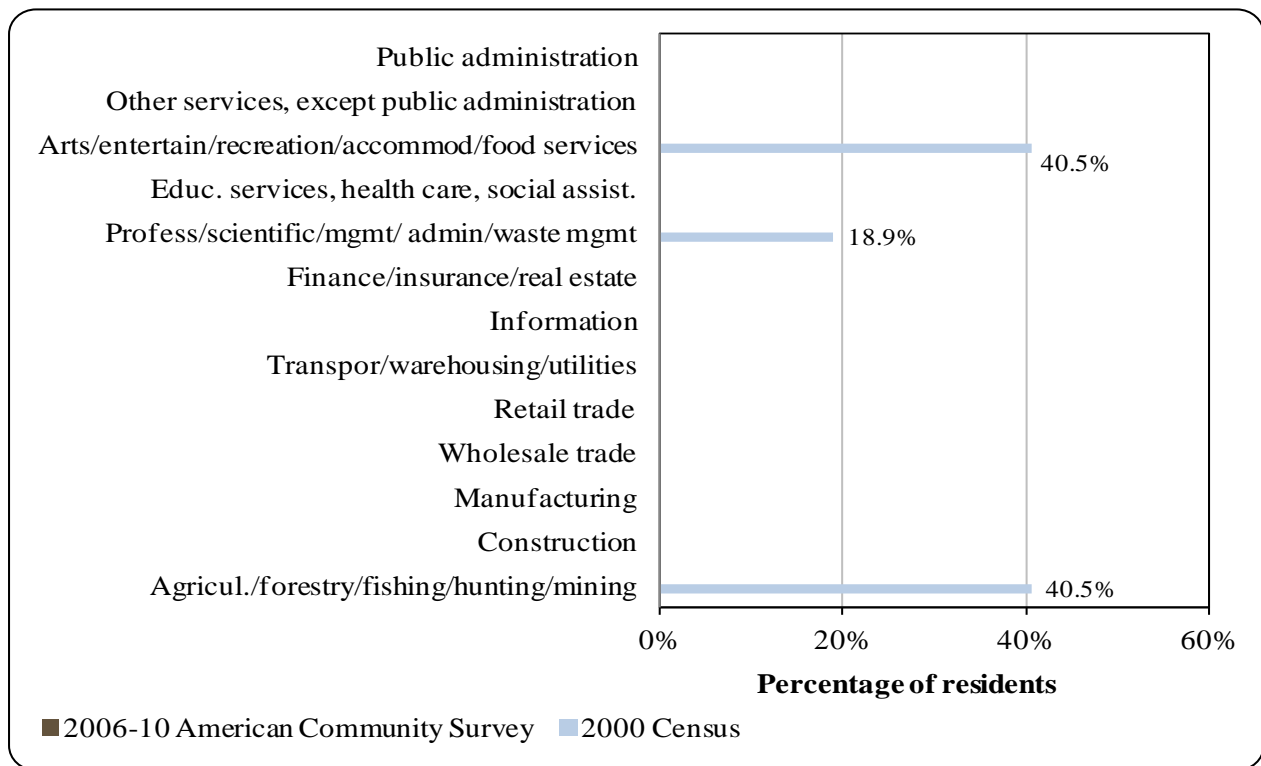
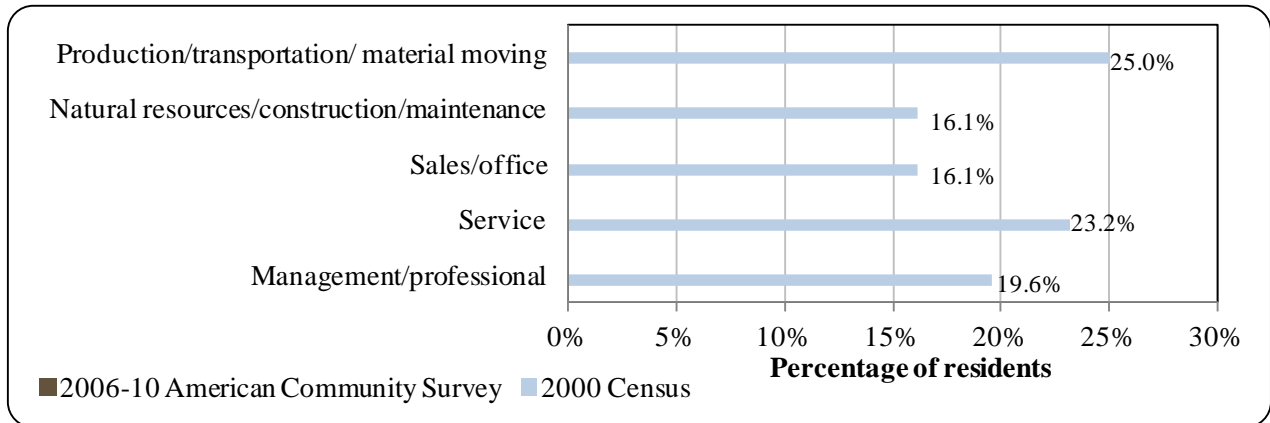


Figure 4. Local Employment by Occupation in 2000-2010, Halibut Cove (U.S. Census).



While no 2010 income or employment statistics are provided by the 2006-2010 ACS, employment by industry and an estimate of 2010 per capita income are available using economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). ALARI estimates suggest that there were 39 residents age 16 and over in the civilian labor force in 2010. Of these, eight residents were estimated to be employed that year, including two employed in construction, two in trade, transportation, and utilities, two in local government, one in leisure and hospitality, and one in professional and business services.²²⁵

Governance

Halibut Cove is an unincorporated community located in the Kenai Peninsula Borough. Because Halibut Cove is not incorporated as a municipality, there is no local taxing authority, and no information is available regarding municipal revenue (Table 2). However, the Borough does administer a 3% sales tax and a 4.5 mills property tax in the community. Halibut Cove was not included under the Alaska Native Claims Settlement Act, and is not federally recognized as a Native village. The community is represented by a local community organization.²²⁶

The nearest offices of the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Natural Resources, and the National Marine Fisheries Service (NMFS) are located across Kachemak Bay in Homer. The closest offices of the Alaska Department of Commerce, Community, and Economic Development and the U.S. Bureau of Citizenship and Immigration Services are located in Anchorage.

²²⁵ Alaska Dept. of Labor and Workforce Dev. (n.d.). *Alaska Local and Regional Information*. Retrieved May 22, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

²²⁶ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Halibut Cove from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Halibut Cove is accessible by water only, including by boat or float plane.²²⁷ Since 1966, a local resident has provided the Kachemak Bay Ferry Service between Homer and Halibut Cove on a fishing boat called the *Danny J*. The company also offers a daily sightseeing tour. The ferry departs Homer at 5:00 pm daily, with a return trip at 10:00 pm. There is also a 12:00 departure from Homer, which includes a tour of the Gull Island Bird Sanctuary and a stop in Halibut Cove before a 4:00 pm return departure to Homer. As of summer 2012, the noon tour cost \$57.50 per person, and the 5:00 pm dinner departure was \$34.50 per person.^{228,229}

The City of Homer is the closest community with connections to other communities in the state. Homer is connected to the Alaska road system, and has a State ferry terminal, deep-

²²⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²⁸ Anonymous. (2011). *Danny J Ferry*. Retrieved October 30, 2012 from <http://www.halibut-cove-alaska.com/ferry.htm>.

²²⁹ Lonely Planet. (2012). *Halibut Cove*. Retrieved October 30, 2012 from <http://www.lonelyplanet.com/usa/alaska/seldovia/sights/harbour-port/halibut-cove>.

water dock and harbor, and a state-owned and operated airport.²³⁰ As of June 2012, roundtrip airfare from Anchorage to Homer cost \$255.²³¹

Facilities

Halibut Cove residents derive water from a central water source or have water delivered. In addition, 20% of homes have individual wells. Half of the residences in Halibut Cove are fully plumbed and have individual septic systems, while the other half use outhouses. No public refuse collection services are provided in Halibut Cove, and no landfill is available. Electricity in Halibut Cove is provided from a hydroelectric facility operated by the Homer Electric Association. Police services are provided by state troopers posted in Homer, and fire and rescue services are provided by the Borough. Telephone service is available in the community, but no internet or cable providers offer service locally.²³²

Medical Services

The nearest healthcare services are in nearby Homer at the South Peninsula Hospital. Emergency Services have air and coastal access, and are provided by volunteers.²³³

Educational Opportunities

As of 2011, there were no schools located directly in Halibut Cove.²³⁴

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Halibut Cove is located in the traditional territory of the Kenaitze people, a branch of Athabascan Native Americans. Historically, the Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.²³⁵ Commercial fisheries began to develop in the Cook Inlet area soon after the United States purchased Alaska from Russia in 1867. Salmon and herring were two of the earliest commercial fisheries in Alaska, during the period when the product was salted for storing and shipment.²³⁶ The first Cook Inlet salmon cannery was built in 1882 at the mouth of the Kasilof River, in English Bay. An additional 17 salmon canneries were built in central Alaska by

²³⁰ See footnote 227.

²³¹ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

²³² See footnote 227.

²³³ Ibid.

²³⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²³⁵ Kenaitze Indian Tribe. (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

²³⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

1890.²³⁷ In 1914, a herring fishery developed at Halibut Cove, and the industry boomed in 1918 as a result of a new curing method called scotch curing. That year, there were 36 herring plants in Alaska, of which 15 were located in Kachemak Bay. By 1926, there were 61 plants in Alaska, and 32 in Lower Cook Inlet.²³⁸ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.²³⁹

Halibut Cove's fishing economy boomed between 1911 and 1928 during the height of the herring industry.²⁴⁰ Most of the Lower Cook Inlet herring plants were located in Halibut Cove, along with facilities in Portlock, Port Graham, Seldovia, and elsewhere. However, overfishing led to a precipitous crash in the local herring industry after 1926, and by 1929, only one herring plant remained in Lower Cook Inlet. A Lower Cook Inlet herring fishery briefly started again during the 1960s with increased demand for herring and herring roe in Japan. Harvests took place for several years in Halibut Cove, but results were disappointing.²⁴¹ Today, most Cook Inlet herring fisheries are closed due to low stock abundance.^{242,243} If a sufficient biomass of herring is present in the Kamishak District, on the western side of Cook Inlet across from Kachemak Bay, some sac roe harvest may be permitted there.²⁴⁴

Today, residents of Halibut Cove are engaged in fisheries for salmon, halibut, sablefish, and other groundfish. Halibut Cove is located within the Kachemak Bay sub-district of the Lower Cook Inlet salmon management area. ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.²⁴⁵

Cook Inlet is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area. Groundfish and crab fisheries that occur within 3 nmi of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction.

²³⁷ Clark, McGregor, Mecum, Krasnowski and Carroll. (2006). "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²³⁸ Cook, Linda, and Frank Norris. (1998). *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

²³⁹ Thompson, William F. and Norman L. Freeman. (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

²⁴⁰ Halibut-Cove-Alaska.com. (2011). *The History of Halibut Cove*. Retrieved October 30, 2012 from <http://www.halibut-cove-alaska.com/halibut-cove-history.htm>.

²⁴¹ See footnote 238.

²⁴² See footnote 236.

²⁴³ Alaska Dept. of Fish and Game. (2012). *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

²⁴⁴ Hollowell, G., T. Otis, and E. Ford. (2012). *2011 Lower Cook Inlet Finfish Management Report*. Retrieved September 7, 2012 from <http://www.sf.adfg.state.ak.us/FedAidPDFs/FMR12-30.pdf>.

²⁴⁵ See footnote 237.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch set by NMFS applied to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.²⁴⁶

Pacific halibut fisheries are managed under the International Pacific Halibut Commission, and federal sablefish fisheries are managed by NMFS. In 1995, management of Alaskan halibut and federal sablefish fisheries shifted from limited entry to a system of Individual Fishing Quotas (IFQ). Motivations for the shift included overcapitalization, short seasons, and the derby-style fishery that led to loss of product quality and safety concerns. As a result of program implementation, the number of shareholders and total vessels participating in the halibut and sablefish fisheries declined substantially, and product quality has improved. This shift to catch shares has been controversial, raising concerns about equity of catch share allocation, reduced crew employment needs, and loss of quota from coastal communities to outside investors.²⁴⁷

Halibut Cove is eligible to participate in the Community Quota Entity (CQE) program, and as of fall 2012 had established a CQE non-profit called Halibut Cove Fisheries and Mariculture Holding Company. As of Fall 2013, the non-profit had not yet purchased any commercial halibut quota shares, non-trawl groundfish License Limitation Program (LLP) permits, and/or halibut charter permits on behalf of residents of their respective communities.²⁴⁸ However, Halibut Cove Fisheries and Mariculture Holding Company had acquired seven halibut charter permits for lease to community members.^{249,250} Halibut Cove is not eligible to participate in the Community Development Quota program.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Halibut Cove does not have a registered processing plant. Several shore-side processing facilities are located across the Bay in Homer.

²⁴⁶ See footnote 242.

²⁴⁷ Fina, M. (2011). “Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific.” *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

²⁴⁸ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

²⁴⁹ NOAA Fisheries. (2013). Name and Contact Information of Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/daily/cqenamescontacts.pdf>.

²⁵⁰ NOAA National Marine Fisheries Service. (2013). *Permit Reports: Charter Halibut*. Retrieved October 24, 2013 from http://alaskafisheries.noaa.gov/ram/daily/chp_cqe_permits.xls.

Fisheries-Related Revenue

Between 2000 and 2010, no known fisheries-related revenue was received by the community of Halibut Cove (Table 3).

Commercial Fishing

Between 2000 and 2010, Halibut Cove residents participated in Alaskan commercial fisheries as state and federal permit holders, quota share account holders in federal catch share fisheries, vessel owners, and crew license holders. Activity levels remained relatively stable over the decade. The total number of state permit holders varied between 6 and 9, and the number of state permits held varied between 10 and 13 (Table 4). The number of vessels primarily owned by residents varied between 9 and 12, and the number of crew licenses held varied from 1 to 5. The only fisheries statistic that displayed a declining trend was the number of vessels homeported in Halibut Cove, which declined from 22 in 2000 to 14 in 2010. Characteristics of the Halibut Cove commercial fishing sector are presented in Table 5.

Of 13 state-issued Commercial Fisheries Entry Commission (CFEC) permits held in 2010, a majority (8) were held for Cook Inlet salmon fisheries, while 4 were held in the statewide halibut longline fishery and 1 was held in the statewide sablefish longline fishery (not including Southeast Alaska or Prince William Sound). Five of the salmon permits were associated with drift gillnet gear, two with purse seine gear, and one with set gillnet gear. In early years of the 2000–2010 period, salmon permits were also held in the Kodiak purse seine fishery (from 2000 to 2003). A Kodiak permit was actively fished in 2001 only. Overall, an average of 71% of salmon permits were actively fished between 2000 and 2010, with a smaller percentage actively fished in 2010, in part due to the acquisition of three additional salmon permits between 2009 and 2010. An average of 71% of salmon permits were actively fished between 2000 and 2010, with a smaller percentage actively fished in 2010. From 2007 to 2009, one CFEC permit was held in the statewide mechanical jig fishery for miscellaneous saltwater finfish (commonly targeting Pacific cod), but was not actively fished in any of these years. In addition, in 2008, one miscellaneous saltwater finfish permit was held associated with pot gear, and was actively fished that year. Further CFEC permit statistics are presented in Table 4.

In addition to CFEC permits, Halibut Cove residents held Federal Fisheries Permits (FFP) and federal License Limitation Program permits (LLP) during the 2000–2010 period. The number of FFP permit holders, and total FFPs held, increased from one to three in the middle of the decade, and then decreased to two in 2006–2010. FFPs were actively fished between 2005 and 2010. From 2003 to 2010, one groundfish LLP was held by one Halibut Cove permit holder. The groundfish LLP was actively fished in all years that it was held during this period (Table 4).

Between 2000 and 2010, Halibut Cove residents also held quota share accounts and quota shares in federal catch share fisheries for halibut and sablefish, with slightly higher participation in the halibut fishery. No Halibut Cove residents held quota share accounts in federal crab catch share fisheries between 2005 and 2010 (Table 8). The number of halibut quota share account holders in Halibut Cove increased from three in 2000 to five in 2010, which a high of six in 2003. Total quota shares held followed a similar pattern, rising from 565,660 in 2000 to 818,552 in 2010, with a high of 846,457 in 2003. The overall halibut IFQ allotment for account holders in Halibut Cove initially increased by 32% between 2000 and 2002, and then decreased to almost 30% below 2000 levels by 2010 (Table 6). During the same time period, there was one sablefish

quota share account holder in all years except 2001 and 2002, when zero Halibut Cove residents held accounts. Although the number of quota share account holders remained stable at one, the total number of quota shares held decreased dramatically, from 2,766,565 in 2000 to 707 shares held between 2003-2010 (Table 7).

No fish buyers or shore-side processors were present in Halibut Cove between 2000 and 2010, and no landings were delivered in the community during this period (Table 5). Given this, no information is reported regarding local landings or ex-vessel revenue generated in Halibut Cove (Table 9). However, some information can be reported regarding landings and revenue earned by Halibut Cove vessels owners, irrespective of delivery location. Information can only be reported regarding halibut landings from 2001 to 2003, and ‘other groundfish’ landings in 2003 only. On average between 2001 and 2003, 391,345 net pounds of halibut were landed for an average ex-vessel value of \$913,678. In 2003, 9,556 net pounds of ‘other groundfish’ were landed by Halibut Cove vessel owners, valued at \$5,433 in ex-vessel revenue. Data for other years in these fisheries, and for all years in other fisheries, is considered confidential due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Halibut Cove: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Halibut Cove: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	1	1	1	1	1	1	1	1
	Active permits	0	0	0	1	1	1	1	1	1	1	1
	% of permits fished	-	-	-	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	0	0	0	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	3	3	3	2	2	2	2	2
	Fished permits	0	0	0	0	0	1	2	2	2	2	2
	% of permits fished	0%	0%	0%	0%	0%	33%	100%	100%	100%	100%	100%
	Total permit holders	1	1	1	3	3	3	2	2	2	2	2
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	3	3	5	5	5	5	4	3	3	3	4
	Fished permits	2	3	5	5	5	4	4	3	3	3	4
	% of permits fished	67%	100%	100%	100%	100%	80%	100%	100%	100%	100%	100%
	Total permit holders	3	3	5	5	5	5	4	3	3	3	4
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Halibut Cove: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	2	1	0	1	1	1	1	1	1	1	1
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	50%	0%	-	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	1	0	1	1	1	1	1	1	1	1
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	1	2	1	0
	Fished permits	0	0	0	0	0	0	0	0	1	0	0
	% of permits fished	-	-	-	-	-	-	-	0%	50%	0%	-
	Total permit holders	0	0	0	0	0	0	0	1	1	1	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	6	6	6	6	5	5	5	5	5	5	8
	Fished permits	4	5	4	3	4	5	4	4	4	3	3
	% of permits fished	67%	83%	67%	50%	80%	100%	80%	80%	80%	60%	38%
	Total permit holders	6	6	6	6	5	5	5	5	5	5	7
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>11</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>10</i>	<i>10</i>	<i>11</i>	<i>10</i>	<i>13</i>
	<i>Fished permits</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>8</i>	<i>9</i>	<i>9</i>	<i>8</i>	<i>7</i>	<i>8</i>	<i>6</i>	<i>7</i>
	<i>% of permits fished</i>	<i>64%</i>	<i>80%</i>	<i>82%</i>	<i>67%</i>	<i>82%</i>	<i>82%</i>	<i>80%</i>	<i>70%</i>	<i>73%</i>	<i>60%</i>	<i>54%</i>
	<i>Permit holders</i>	<i>8</i>	<i>8</i>	<i>9</i>	<i>9</i>	<i>8</i>	<i>8</i>	<i>7</i>	<i>7</i>	<i>6</i>	<i>6</i>	<i>8</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Halibut Cove: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Halibut Cove ²	Total Net Pounds Landed In Halibut Cove ^{2,5}	Total Ex-Vessel Value Of Landings In Halibut Cove ^{2,5}
2000	1	0	0	10	22	0	0	\$0
2001	2	0	0	12	21	0	0	\$0
2002	3	0	1	11	20	0	0	\$0
2003	2	0	0	11	21	0	0	\$0
2004	1	0	0	10	20	0	0	\$0
2005	5	0	0	10	20	0	0	\$0
2006	3	0	0	10	18	0	0	\$0
2007	3	0	0	11	17	0	0	\$0
2008	5	0	0	9	15	0	0	\$0
2009	4	0	0	9	16	0	0	\$0
2010	2	0	0	12	14	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Halibut Cove: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	3	565,660	91,124
2001	4	567,402	103,939
2002	5	745,136	159,118
2003	6	846,457	142,957
2004	5	819,284	141,985
2005	4	735,734	122,609
2006	4	716,656	110,650
2007	3	701,568	105,181
2008	4	759,055	104,855
2009	4	759,055	95,567
2010	5	818,552	94,267

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Halibut Cove: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	2,766,565	251,087
2001	0	0	0
2002	0	0	0
2003	1	707	71
2004	1	707	81
2005	1	707	80
2006	1	707	71
2007	1	707	69
2008	1	707	61
2009	1	707	55
2010	1	707	50

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Halibut Cove: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Halibut Cove: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Halibut Cove Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	405,525	\$440,088	328,423	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	9,556	-	-	-	-	-	-	-
Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	405,525	440,088	337,979	-	-	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	\$797,609	\$983,484	\$959,942	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	\$5,433	-	-	-	-	-	-	-
Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	\$797,609	\$983,484	\$965,375	-	-	-	-	-	-	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Kachemak Bay is one of Alaska's most popular destinations for halibut fishing, with frequent catches purportedly weighing 100 to 200 pounds. The sport halibut fishery generally runs between June and September.²⁵¹ Although no active sport fish guide businesses were registered in Halibut Cove from 2000 to 2010, one or two licensed guides were present in the community in some years during this period. It is important to note that a high number of guide businesses are based in nearby Homer, providing sportfishing opportunities for visitors to the region generally. The number of Halibut Cove residents that purchased sport fish licenses, irrespective of point of sale, was consistent over the period, varying between 18 and 23 per year. No sport fish licenses were sold in Halibut Cove, providing additional evidence that local sportfishing activity is highly tied to the sportfishing infrastructure, businesses, and services in Homer (Table 11).

According to ADF&G Statewide Harvest Survey data,²⁵² species targeted by private anglers in Halibut Cove between 2000 and 2010 included Chinook, coho, pink, and sockeye salmon, rainbow trout, Pacific halibut, Pacific cod, Tanner crab, and hardshell clams. No kept/release log book data were reported for fishing charters out of Halibut Cove between 2000 and 2010.²⁵³

Halibut Cove is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, saltwater and freshwater sportfishing at this regional level was substantial. In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska residents logged 20,292 saltwater angler days and 71,555 freshwater angler days. Typically, Alaska residents took part in saltwater sportfishing at greater rates than non-Alaska resident anglers, and the opposite was true of freshwater sportfishing. For both Alaska resident and non-Alaska resident anglers in both freshwater and saltwater, the number of angler days fished per year decreased between 2000 and 2010. Further information about regional sportfishing activity in Halibut Cove is presented in Table 11.

²⁵¹ Halibut Cove, Alaska. (2011). *Fishing Information for Halibut Cove*. Retrieved October 31, 2012 from <http://www.halibutcove.com/fishing.htm>.

²⁵² Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²⁵³ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Halibut Cove: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to residents ²	Sport Fishing Licenses Sold in Halibut Cove ²
2000	0	1	22	0
2001	0	0	21	0
2002	0	0	20	0
2003	0	2	23	0
2004	0	1	18	0
2005	0	2	19	0
2006	0	0	19	0
2007	0	0	21	0
2008	0	0	18	0
2009	0	1	20	0
2010	0	1	19	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

There is very little archival evidence of, or information on, contemporary subsistence practices in Halibut Cove. Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of households using different marine resources, or per capita harvest of subsistence resources by Halibut Cove residents (Table 12). Likewise, no information was reported by management agencies regarding participation in the Subsistence Halibut Registration Certification program (Table 14) or subsistence harvest of marine invertebrates, other fish (Table 13) or marine mammals during this period (Table 15).

ADF&G did report limited participation in subsistence salmon fisheries in Halibut Cove between 2000 and 2010, with one subsistence salmon permit issued to a Halibut Cove household in 2001 and again in 2008. In both years, one permit was reported as returned, and in 2001, 21 sockeye were reportedly harvested.

Table 12. Subsistence Participation by Household and Species, Halibut Cove: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Halibut Cove: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	1	1	n/a	n/a	n/a	n/a	21	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Halibut Cove: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A., and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Halibut Cove: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Homer



People and Place

*Location*²⁵⁴

Homer is located on the north shore of Kachemak Bay on the southwestern edge of the Kenai Peninsula. The Homer Spit, a 4.5-mile long bar of gravel, extends from the Homer shoreline. It is 227 road miles south of Anchorage, at the southern-most point of the Sterling Highway. Homer is located in the Kenai Peninsula Borough and the Homer Recording District. The area encompasses 10.6 square miles of land and 14.9 square miles of water.

*Demographic Profile*²⁵⁵

In 2010, there were 5,003 residents in Homer, ranking it as the 22nd largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population increased by 13.6%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 12.6%. The average annual growth rate over the decade was 0.80%, which was slightly higher than the statewide average of 0.75%. According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that an additional 4,000 seasonal workers or transients are present in Homer each year between April and October. They also indicated that population fluctuations are mostly driven by employment in fishing sectors, with an annual population peak in the month of July.

In 2010, a majority of Homer residents identified themselves as White (89.3%), along with 4.5% identifying as two or more races, 4.1% as American Indian and Alaska Native, 1% as Asian, 0.4% as Black or African American, and 0.1% as Native Hawaiian and Other Pacific Islander. Also in 2010, 2.1% of Homer residents identified themselves as Hispanic or Latino. Compared to 2000, this distribution remained relatively consistent. Changes in population from 1990 to 2010 are shown in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are presented in Figure 1.

The increase in population in Homer between 1990 and 2010 is reflected in the rising number of households in the community, from 1,411 occupied housing units in 1990 to 1,599 in 2000, and 2,236 in 2010. A portion of this increase in total households is also due to a decrease in average household size, from 2.5 persons per households in 1990 to 2.4 in 2000, and 2.21 in 2010. Of the 2,692 housing units surveyed in 2010, 50.3% were owner-occupied, 32.7% were rented, and 17% were vacant or used only seasonally. In 2010, 71 residents lived in group quarters, compared to 106 in 2000 and 56 in 1990.

²⁵⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Homer from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	3,660	-
2000	3,946	-
2001	-	4,070
2002	-	5,076
2003	-	5,369
2004	-	5,355
2005	-	5,402
2006	-	5,442
2007	-	5,454
2008	-	5,385
2009	-	5,551
2010	5,003	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Homer: 2000-2010 (U.S. Census).

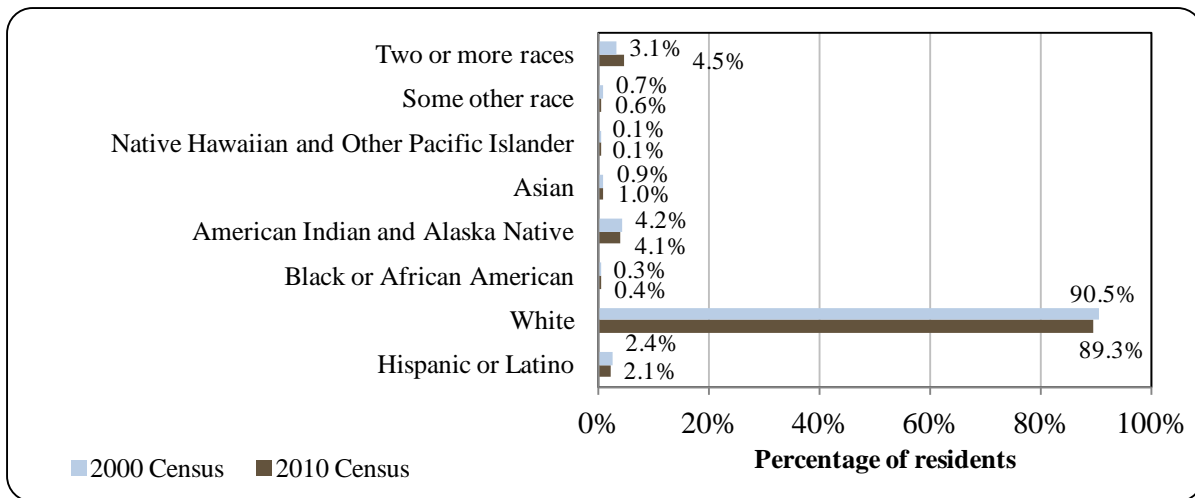
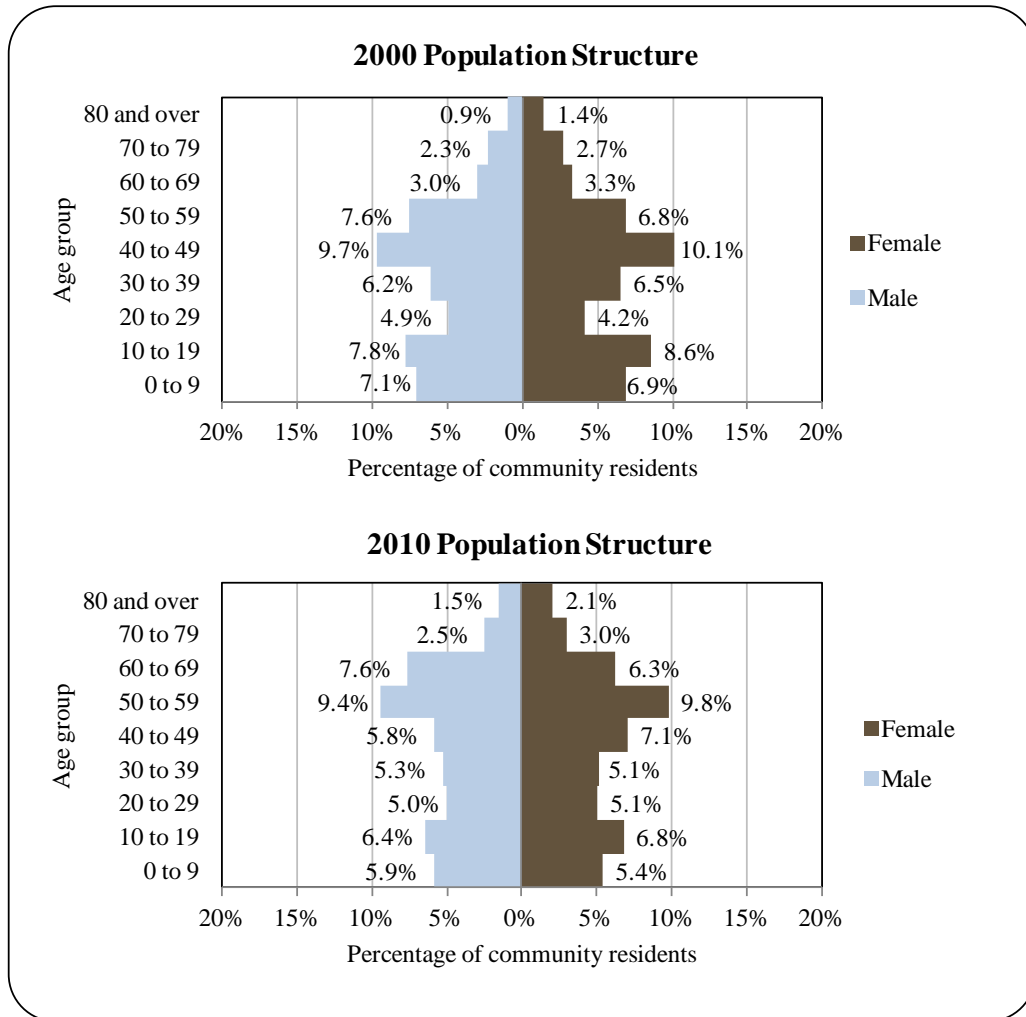


Figure 2. Population Age Structure in Homer Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup of Homer’s population was 49.4% male and 50.5% female. The greater percentage of females than males was unusual compared to the gender balance of the state as a whole, which was 52% male and 48% female that year. Also in 2010, the median age was estimated to be 44 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. This represents an increase from a median age of 38.8 in 2000. In 2010, 23% of the Homer population was age 60 or older, compared to 14.6% in 2000. This increase in median age of Homer’s population can be attributed to growth in the community’s popularity as a retirement community as well as the aging of Homer’s existing population.²⁵⁶ The overall population structure of Homer in 2000 and 2010 is shown in Figure 2.

²⁵⁶ City of Homer. 2008. *Comprehensive Plan 2008 (Adopted 2010)*. Retrieved October 8, 2012 from <http://www.cityofhomer-ak.gov/planning/comprehensive-plan-2008-adopted-2010>.

In terms of educational attainment, according to the U.S. Census' 2006-2010 American Community Survey (ACS),²⁵⁷ 96.1% of Homer residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 0.5% of residents had less than a 9th grade education, compared to 3.5% of Alaskan residents overall; an estimated 3.4% had a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; an estimated 30.9% had some college but no degree, compared to an 28.3% of Alaskan residents overall; an estimated 21.3% held a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and an estimated 12.4% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The Homer area was historically home to the Kachemak Eskimo and Dena'ina Athabascan Indians, with increasing occupation of the Kenai Peninsula by the Dena'ina around 1000 A.D.²⁵⁸ Shell middens on Homer Spit, including a particularly large site at Cottonwood Creek, provide evidence that the site has been inhabited for many centuries.^{259,260} In 1895, the U.S. Geological Society sent a party to the area to explore coal and gold potential in the region. In 1896, Homer Pennock arrived with a crew of 50 gold miners and started the first settlement. The City now bears his name.²⁶¹ In 1897, a post office was opened at the site of the new settlement, which was then called "Coal Bay". In 1899, the Cook Inlet Coal Fields Company made substantial investments in the town's infrastructure, including a dock and 28 buildings on the spit, as well as a 7-mile railroad. The railroad transported coal from mines at Homer's Bluff Point, Eastland Creek, and Fritz Creek to the dock at Homer Spit, where ships were loaded.^{262,263} Coal mining continued to be an important economic driver until World War I.²⁶⁴ Homer remained a small community through the early 1900s. A new wave of homesteaders began to settle in the Homer area in 1915, and a general store was opened in 1918. Fur farming was an important industry for early homesteaders, as well as subsistence farming and harvest of local wild foods.²⁶⁵ Fishing also developed as an important industry in the early 1900s, although a

²⁵⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁵⁸ Fall, J. A., R. T. Stanek, B. Davis, L. Williams and R. Walker. 2004. *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Final Report for Study No. FIS 03-045. Retrieved December 27, 2011 from <http://alaska.fws.gov/asm/index.cfml>.

²⁵⁹ Reed, C., E. 1985. *The Role of Wild Resource Use in Communities of the Central Kenai Peninsula and Kachemak Bay, Alaska*. Alaska Dept. of Fish and Game, Division of Subsistence. Technical Paper No. 106. Retrieved October 8, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp106.pdf>.

²⁶⁰ See footnote 256.

²⁶¹ Ibid.

²⁶² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶³ See footnote 259.

²⁶⁴ See footnote 256.

²⁶⁵ See footnote 259.

majority of fishing and seafood processing activity centered in nearby Seldovia. Some Homer settlers worked in Cook Inlet canneries.²⁶⁶

The Good Friday Earthquake struck in 1964, causing much of Homer to sink between 2 and 8 feet. The harbor incurred serious damage, but was rebuilt with federal funds.²⁶⁷ The quake hit nearby Seldovia even harder, destroying its waterfront. Following the loss of infrastructure in Seldovia, Homer began to fill the role of the local fishing center.²⁶⁸ The City of Homer was incorporated in March 1964. Today, commercial fishing remains an important foundation of Homer's economy, and tourism and sportfishing and hunting have become increasingly important. Homer is also a popular retirement community.²⁶⁹

Natural Resources and Environment

Homer is located in a maritime climactic zone, dominated by the moderating effects of a marine environment and characterized by high humidity, precipitation and fog cover as well as warm winters and cool summers. Winter temperatures range from 14 to 27 °F, and summer temperatures vary from 45 to 65 °F. Average annual precipitation is 24 inches, with annual winter snowfall averaging 55 inches.²⁷⁰ The landscape surrounding the City is characterized by high bluffs to the north and the gently sloping shoreline of Kachemak Bay to the south. The Kenai Mountains are visible in the distance.²⁷¹

Protected areas near Homer include Kachemak Bay State Park and Wilderness, the Kachemak Bay State Critical Habitat Area (CHA), and the Kenai Wilderness. Kachemak Bay State Park is Alaska's first and only "wilderness park". A majority of the State Park's 400,000 acres are located on the southern side of Kachemak Bay, along with a small unit on the Bay's northern shore, and its terrain includes mountains, glaciers, forests, and ocean. Visitors to the State Park enjoy fishing, boating, wildlife viewing, kayaking, hiking, camping, and mountain sports.²⁷² Portions of Kachemak Bay State Park and Wilderness overlap with the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.²⁷³

Kachemak Bay itself was designated as a State CHA in 1974, and the Fox River Flats at the mouth of the Bay were also designated as a CHA in 1972. The purpose of these CHAs is to "protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose." Eleven species of marine mammals utilize Kachemak Bay, including sea otters, Steller sea lions, harbor seals, beluga, minke and orca whales, harbor porpoises, and Dall's porpoises, as well as a diversity of marine plants and invertebrates, birds, and fish and shellfish. The Fox River Flats and associated intertidal zone support at least 21 species of terrestrial mammals, including moose, black bear,

²⁶⁶ See footnote 262.

²⁶⁷ City of Homer. (n.d.). *Facts & Figures*. Retrieved October 8, 2012 from <http://www.cityofhomer-ak.gov/economicdevelopment/facts-figures>.

²⁶⁸ City of Homer. 2008. *Comprehensive Plan 2008 (Adopted 2010)*. Retrieved October 8, 2012 from <http://www.cityofhomer-ak.gov/planning/comprehensive-plan-2008-adopted-2010>.

²⁶⁹ See footnote 262.

²⁷⁰ Ibid.

²⁷¹ See footnote 268.

²⁷² Alaska Dept. of Natural Resources. 2009. *Kachemak Bay State Park and State Wilderness Park*. Retrieved January 27, 2012 from <http://dnr.alaska.gov/parks/units/kbay/kbay.htm>.

²⁷³ Anonymous. (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

brown bear, coyote, wolf, beaver, river otter, and small furbearers.²⁷⁴ In addition to their status as CHAs, Kachemak Bay and the Fox River Flats were designated as part of the National Estuarine Research Reserve System in 1999, a network of 28 estuaries around the country representing different biogeographic regions that are used for long-term research, water-quality monitoring, education, and coastal stewardship. It is the only Research Reserve located in the State of Alaska.²⁷⁵

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures and soil liquefaction.²⁷⁶ Other natural hazards that have also been identified as threats in the Kenai Peninsula Borough include flooding, wildfires, snow and avalanches, seiches, severe weather, erosion, and drought.²⁷⁷

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields on and off shore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.²⁷⁸ With respect to oil and gas development, it is important to note that Homer's shoreline was impacted by the 1989 *Exxon Valdez* disaster.²⁷⁹

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Homer as of September 2012.²⁸⁰

Current Economy²⁸¹

In the 2011 AFSC survey, community leaders indicated that commercial fishing, ecotourism, and sport hunting and fishing are important economic drivers in Homer. Homer is also an important player in fish buying and processing in Alaska. In 2010, Homer ranked 17th in total fisheries landings and 6th in ex-vessel revenue generated from these landings, out of 67 Alaskan communities with landings that year. In the 2011 AFSC survey, community leaders estimated that 50 local Homer residents are employees of shore-side processing plants. In

²⁷⁴ Alaska Dept. of Fish and Game. 1993. *Kachemak Bay and Fox River Flats Critical Habitat Areas Management Plan*. Retrieved June 14, 2012 from

http://www.adfg.alaska.gov/static/lands/protectedareas/_management_plans/kachemak_bay.pdf.

²⁷⁵ National Estuarine Research Reserve System. (n.d.). *Kachemak Bay Research Reserve website*. Retrieved June 15, 2012 from <http://www.nerrs.noaa.gov/Reserve.aspx?ResID=KBA>.

²⁷⁶ Kenai Peninsula Borough. 2010. *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

²⁷⁷ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

²⁷⁸ Resource Development Council. (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

²⁷⁹ See footnote 268.

²⁸⁰ Alaska Department of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved October 9, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

²⁸¹ Unless otherwise noted, all monetary data are reported in nominal values.

addition, it is important to note that Homer has also become a popular retirement community. As mentioned above, in 2010, 23% of the Homer population was age 60 or older.

Based on household surveys conducted for the 2006-2010 ACS,²⁸² in 2010, the per capita income in Homer was estimated to be \$32,035, and the median household income was estimated to be \$52,057. This represents a significant increase from the per capita and median household incomes reported in 2000 (\$21,823 and \$42,823, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,²⁸³ the increase in per capita income remains slight even (real per capita income was \$28,697 in 2000), while median household income was shown to have decreased slightly (real median household income was \$56,309 in 2000). In 2010, Homer ranked 50th of 305 Alaskan communities with per capita income data, and 115th in median household income, out of 299 Alaskan communities with household income data that year.

However, Homer's small population size may have prevented the ACS from accurately portraying economic conditions.²⁸⁴ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Homer in 2010 is \$13,140.^{285,286} This estimate is much lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Homer between 2000 and 2010. Homer did not meet the Denali Commission's 2011 criteria as a "distressed" community.²⁸⁷ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly smaller percentage of Homer's population was estimated to be in the civilian labor force in 2010 (63.4%) than in the civilian labor force statewide (68.8%). In the same year, 7.9% of Homer residents were estimated to be living below the poverty line in 2010, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 5.4%, similar to the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Homer in 2010 was 9.9%, compared to a statewide unemployment rate estimate of 11.5%.²⁸⁸ Also based on the 2006-2010 ACS, the majority of Homer's workforce was estimated to be employed in the private sector (65.6%), along with 20.2% that

²⁸² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁸³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁸⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁸⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²⁸⁶ See footnote 282.

²⁸⁷ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

²⁸⁸ See footnote 285.

were estimated to be self-employed, 14% in the public sector, and 0.3% estimated to be unpaid family workers.

Of the 2,337 people aged 16 and over that were estimated to be employed in the civilian labor force in Homer, the greatest number of workers were estimated to be employed in educational services, health care, and social assistance industries (22.6%), arts, entertainment, accommodation and food services (12.8%), professional, scientific, management, administration, and waste management (10.4%), transportation, warehousing, and utilities industries (10.2%), retail trade (9.4%), and construction (9.3%). In addition, 6.5% of the civilian labor force was estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries in 2010. The distribution of employment by industry was fairly consistent between 2000 and 2010. The most notable shift was an increase in the percentage of the labor force employed in professional, scientific, management, administration, and waste management industries over the decade. This information about employment by industry is presented in Figure 3. It is important to note that the number of individuals employed in the fishing industry may be underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

From the perspective of occupation, in 2010, the greatest percentage of Homer’s civilian labor force was employed in the management and professional occupations (33.3%), along with 21.3% employed in service occupations, 18.9% employed in sales and office occupations, 15.5% in natural resource, construction, and maintenance, and 11% employed in production, transportation, and material moving occupations. These percentages remained quite stable between 2000 and 2010 (Figure 4).

Figure 3. Local Employment by Industry in 2000-2010, Homer (U.S. Census).

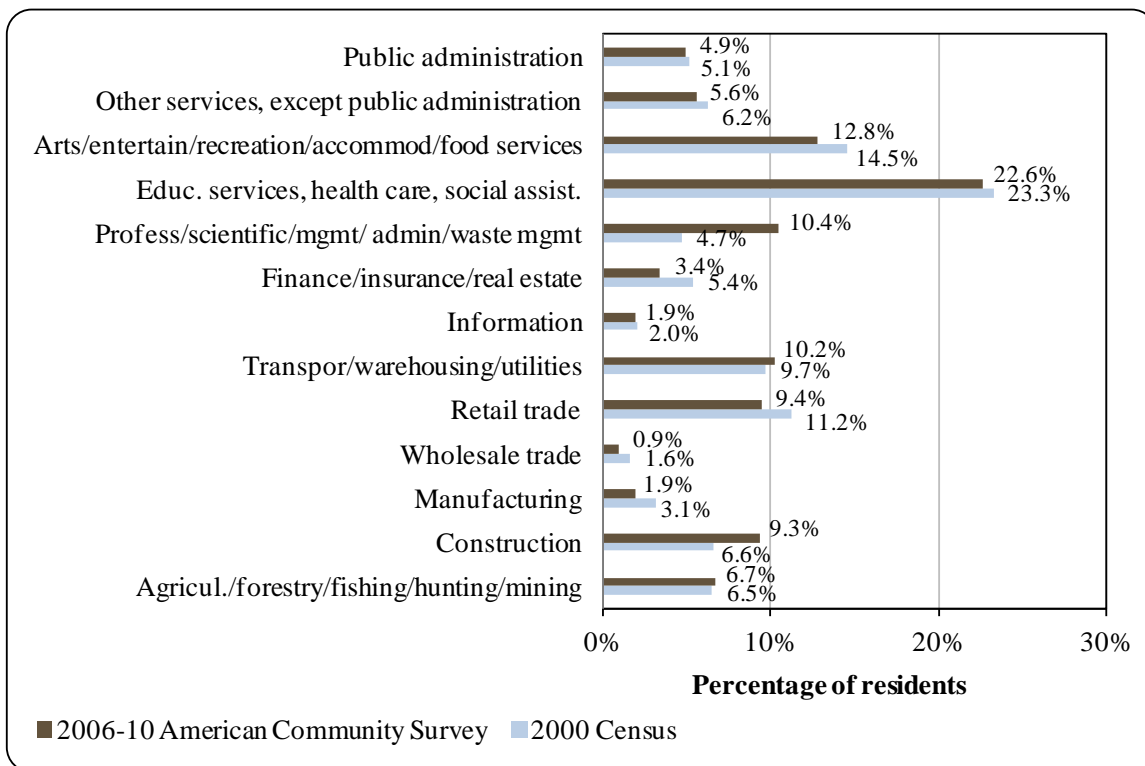
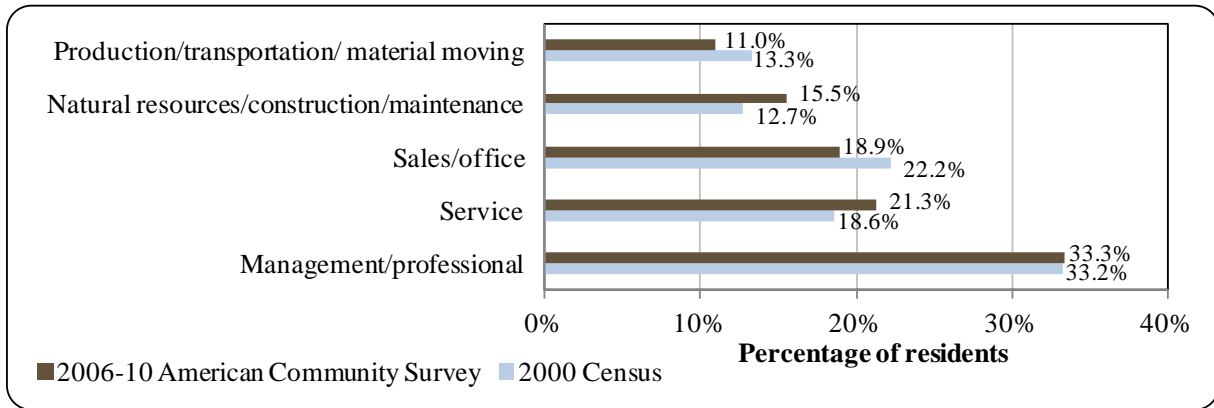


Figure 4. Local Employment by Occupation in 2000-2010, Homer (U.S. Census).



Governance

The City of Homer was incorporated in 1964 and is located within the Kenai Peninsula Borough. Homer is a 1st Class City with a Manager or “Strong Mayor” form of government, with a seven-person city council that includes the Mayor, a nine-person school board, a seven-person planning commission, and several municipal employees. The City collects a 4.5% sales tax and the Borough administers an additional 3% sales tax. Together, the City and Borough collect a combined 11.3 mills property tax.²⁸⁹

In addition to sales and property tax revenues, during the 2000-2010 period, governmental revenues came from licenses and permits, interest, fines and forfeitures, charges for services, and intergovernmental funding sources such as shared revenues and capital/special project grants. Annual municipal revenue in Homer followed an increasing trend over the last decade, rising from \$7,176,000 in 2000 to \$18,737,135 in 2010. Part of this increase can be attributed to an increase in total sales tax revenues over the period. Sources of shared funds included state funds from the State Revenue Sharing program (between \$50,000 and \$65,000 per year from 2000 to 2003) and the Community Revenue Sharing program (\$370,000 per year in 2009 and 2010), as well as shared funds from the SAFE Communities program (public safety, fire, utilities, and infrastructure projects) and the Utility cooperative. In addition, Homer received several fisheries-related grants during the 2000-2010 period. In 2000, the U.S. Economic Development Administration granted Homer \$1,300,000 toward dock demolition and new pilings, the Alaska Industrial Development and Export Authority granted \$200,000 for boat storage and warehouse, and the Alaska Department of Commerce, Community, and Economic Development’s Division of Community and Rural Affairs (DCRA) provided \$35,069 toward repair of the walking surfaces of harbor ramps 4 and 7. In 2003, \$219,375 was received from the U.S. Army Corps of Engineers for 2003-2004 maintenance harbor dredging. In 2007, the DCRA granted Homer \$10,000 for stocking of smolt in Nick Dudiak Fishing Lagoon. Finally, in 2010, the Alaska Department of Transportation and Public Facilities granted \$1,813,000 toward a feasibility study for an Intermodal Deep Water Dock facility in Homer. An overview of selected revenue streams for Homer from 2000 to 2010 is provided in Table 2.

²⁸⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Homer from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$7,176,000	\$1,975,109	\$62,477	\$1,535,069
2001	\$7,230,316	\$2,069,920	\$57,039	n/a
2002	\$9,129,077	\$3,243,410	\$53,700	n/a
2003	\$9,034,168	\$3,506,170	\$64,060	\$219,375
2004	\$10,138,928	\$3,737,944	n/a	n/a
2005	\$14,762,482	\$5,119,528	n/a	n/a
2006	\$13,577,487	\$5,670,638	n/a	n/a
2007	\$13,362,590	\$6,173,478	n/a	\$10,000
2008	\$14,449,673	\$6,334,758	n/a	n/a
2009	\$14,207,837	\$5,361,109	\$370,967	n/a
2010	\$18,737,135	\$6,613,640	\$374,392	\$1,813,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Homer was not included under the Alaska Native Claims Settlement Act (ANCSA) and is not federally recognized as a Native village.²⁹⁰ The closest offices of the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Natural Resources, and the National Marine Fisheries Service (NMFS) are located in Homer. The closest offices of the DCCED and the U.S. Bureau of Citizenship and Immigration Services are located in Anchorage.

Infrastructure

Connectivity and Transportation

Homer is accessible by road, air, and water. The City is often referred to as “The End of the Road” because it is the terminus of the Sterling Highway. Anchorage is located 222 road miles to the north. The state owns and operates the Homer Airport, with a 6,701 feet long by 150 feet wide asphalt runway, as well as a floatplane basin and seaplane base at adjacent Beluga Lake. The City is served by scheduled and chartered aircraft services.²⁹¹ As of early June 2012,

²⁹⁰ Ibid.

²⁹¹ Ibid.

roundtrip airfare between Homer and Anchorage was \$239.²⁹² There are also additional private landing strips in the vicinity.²⁹³

The Homer Spit hosts a variety of port facilities. The Pioneer Dock serves as Homer's Alaska Marine Highway ferry terminal, and also the Coast Guard dock.²⁹⁴ As of summer 2012, a one-way adult passenger fare on the Alaska State ferry from Homer to Juneau was \$380, and \$706 one-way to Bellingham.²⁹⁵ In addition to the ferry terminal, Homer's deep-water dock and harbor are located on the spit. The deep water dock can accommodate vessels with 30-foot draft of up to 340 feet in length, and the boat harbor hosts a marina with moorage for up to 920 vessels as well as a fish dock. Currently, the deep water dock is used as a disembarkation point for cruise ships. The City of Homer has identified expansion of the deep water dock and the harbor as priority development projects.²⁹⁶ Additional marine facilities on the spit include a 4-lane boat launch ramp.²⁹⁷

Facilities

Water in Homer is sourced from a dam and 35-acre reservoir at Bridge Creek. Water is filtered and chlorinated and stored in a 500,000-gallon tank before entering the City-operated piped water system. This system provides 2 million gallons of water per day to the City. Those households not connected to the piped water system use individual wells or have water delivered to home tanks. The City also operates a piped sewage system, which directs sewage to a deep shaft sewer treatment plant with a capacity of 880,000 gallons per day. Some individual septic tanks are also in use in Homer.²⁹⁸ According to the 2011 AFSC survey, community leaders indicated that improvements to water and sewer pipelines are currently in progress, and a sewage treatment plan upgrade is scheduled to be completed within the next 10 years. Peninsula Sanitation, a private firm, provides refuse collection services locally. Trash is hauled to the Borough-operated landfill and balefill located in Homer. The Homer Electric Association, Inc. provides electricity, which comes from several sources. Homer Electric operates the Bradley Lake Hydroelectric Plant, is part-owner of Alaska Electric Generation & Transmission Cooperative, which operates a gas turbine plant in Soldotna, and also purchased additional electricity from Chugach Electric.²⁹⁹ According to the 2011 AFSC survey, community leaders indicated that a natural gas pipeline was scheduled to be completed in 2012.

Police services are provided by the City Police Department and a state troopers post located in Homer. A State District Court and State Jail are also located there. Fire and rescue services are provided by the City Fire Department, the Homer Volunteer Fire Department, the Eastland Volunteer Fire Department, and the City Search and Rescue team.³⁰⁰ In the 2011 AFSC survey, community leaders reported that an additional satellite fire department is slated to be

²⁹² This price was calculated on November 21, 2011 using kayak.com.

²⁹³ See footnote 289.

²⁹⁴ City of Homer. 2011. *Homer Spit Comprehensive Plan*. Retrieved October 10, 2012 from <http://www.cityofhomer-ak.gov/planning/spit-comprehensive-plan-2011>

²⁹⁵ Prices retrieved March 7, 2012 from <http://www.dot.state.ak.us/amhs/doc/fares/XGTariffs.pdf>.

²⁹⁶ See footnote 294.

²⁹⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

²⁹⁸ Ibid.

²⁹⁹ Ibid.

³⁰⁰ Ibid.

built by 2013. Additional community facilities in Homer include a variety of libraries (one public, one academic, and five school libraries), a movie theater, the Pratt Museum, the Alaska Islands and Ocean Visitor Center, a fitness center and high school pool, and a boys and girls club. Telephone, internet, and cable services are all provided locally.³⁰¹

In the 2011 AFSC survey, community leaders reported that a variety of social services are provided locally, including a food bank, job placement services, publicly subsidized housing, mental/behavioral services, and a women's shelter. Senior services are provided by Homer Senior Center, the Friendship Center Adult Day Care, Friendship Terrace Assisted Living, Senior Housing, and Homer Senior Citizens, Inc.³⁰²

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that 29,228 feet of dock space is available for permanent vessel moorage, as well as 6,000 feet of dock space for transient vessel moorage. They indicated that vessels of up to 170 feet in length can use moorage within the Homer boat harbor, and that boats up to 800 feet in length can use outside docking facilities. They reported that the Port of Homer is capable of handling all types of regulated vessels, including the U.S. Coast Guard, cruise ships, ferries, fuel barges, and HAZMAT vessels. In the survey, community leaders indicated that new dock space was constructed in 2002, a fish cleaning station was added in 2006, and upgrades to roads serving dock space were completed in 2009. Current developments include improvements to electricity and water serving dock facilities and addition of new pilings. By 2014, they indicated that a new barge landing area will be finished. By 2017, a variety of projects are expected to be completed, including improvements to the existing dock structure, improvements to haul out facilities, and an Environmental Protection Agency-certified boat cleaning station.

Community leaders also reported that a full range of fisheries-related services are available in Homer. These include fish processing plants and cold storage facilities, fishing gear manufacture, sales, repair, and storage, boat repair services (electrical, welding, mechanical, machine shop, and hydraulics), marine refrigeration, sales of boat fuel, ice, bait, and tackle, haul-out facilities and tidal grids for small boats (less than 60 tons) and large boats (more than 60 tons), dry dock storage, commercial and recreational vessel moorage, fishing-related attorneys and bookkeeping, and fish lodges.

Medical Services

Medical services are provided at several facilities in Homer, including the Homer Medical Clinic, the Kachemak Bay Medical Clinic, the Seldovia Village Tribe Health Center, and the South Peninsula Hospital. The hospital is a qualified Acute Care facility.³⁰³ In addition to acute care, the South Peninsula Hospital offers long-term care, a birthing center, laboratory and imaging services, rehabilitation services, surgery, orthopedics, a sleep center, and other specialty services.³⁰⁴ Homer also has a mental health center. Emergency Services have highway, marine, airport, and floatplane access. Emergency service is provided by 911 Telephone Service and volunteers.³⁰⁵

³⁰¹ Ibid.

³⁰² Ibid.

³⁰³ Ibid.

³⁰⁴ South Peninsula Hospital. 2010. *Homepage*. Retrieved October 9, 2012 from <http://www.sphosp.com/joomla2/home>.

³⁰⁵ See footnote 297.

Educational Opportunities

There are eight schools in Homer, all of which are part of the Kenai Peninsula Borough School District. One school – the Razdolna School – provides a preschool through 12th grade education. As of 2011, the Razdolna School had 63 students and 10 teachers. Two additional schools provide high school education. As of 2011, Homer High School had 399 students and 29 teachers and Homer Flex School had 27 students and 4 teachers. Homer Middle School instructs 7th and 8th grade students, and had 227 students and 17 teachers in 2011. The remaining four schools offer some combination of elementary and intermediate education, including McNeil Canyon Elementary (Kindergarten through 6th grade, 119 students and 12 teachers in 2011), Paul Banks Elementary School (preschool through 2nd grade, 188 students and 17 teachers in 2011), Fireweed Academy (3rd through 6th grade, 116 students and 7 teachers in 2011), and West Homer Elementary School (3rd through 6th grade, 242 students and 20 teachers in 2011).³⁰⁶

In addition to K-12 education, the Kachemak Bay branch of Kenai Peninsula College, University of Alaska, Anchorage is located in Homer. The campus offers continuing and professional development, elder hostel and environmental education programs, adult basic education, family literacy and GED programs, youth job training, career planning and development services, and academic advising.³⁰⁷

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Homer is located in the traditional territory of the Kenaitze people, a branch of Athabaskan Native Americans. Historically, the Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.³⁰⁸ Commercial fisheries began to develop in the Cook Inlet area soon after the United States purchased Alaska from Russia in 1867. Salmon and herring were two of the earliest commercial fisheries in Alaska, during the period when the product was salted for storing and shipment.³⁰⁹ The first Cook Inlet salmon cannery was built in 1882 at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890.³¹⁰ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to

³⁰⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³⁰⁷ Partners on the Peninsula website. (n.d.). *Kachemak Bay Campus – Kenai Peninsula College – UAA*. Retrieved October 10, 2012 from <http://pop411.org/category-listings/educationtraining/kachemak-bay-campus-kenai-peninsula-college-uaa.html>.

³⁰⁸ Kenaitze Indian Tribe. (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

³⁰⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³¹⁰ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

undertake longer trips.³¹¹ Commercial crab fisheries began to develop in the GOA in the 1930s.³¹²

The community of Homer initially developed as a result of coal mining activity. Commercial fishing did not develop into a primary industry in the community until the late 1950s, when adequate docking facilities were constructed.³¹³ Prior to this time, small processing facilities had opened and closed on Homer Spit. The first year-round processing facility in Homer (Alaskan Seafoods) was built in 1954 by Gene Browning. Alaskan Seafoods specialized in frozen king crab and shrimp.³¹⁴ In 1964, several crab processors were active in Homer, including Homer Brand Seafoods, Inc., which processed Dungeness crab, and Pacific Alaska Seafoods, which processed both Dungeness and king crab.³¹⁵

Until the early 1960s, Seldovia had served as a regional center for seafood processing and fishing activity. However, after the Good Friday earthquake of 1964 destroyed Seldovia's waterfront, Homer began to take over this role.³¹⁶ In 1976, Icicle Seafoods, Inc. built its Homer processing plant, which processed crab, shrimp, halibut, sablefish, herring, and salmon. By the mid-1980s, the Icicle facility reduced operations to approximately six months per year, and focused on salmon and herring processing until the plant burned down in 1998. As of 2012, Icicle Seafoods, Inc. still maintained a fish buying station in Homer, and purchases a large portion of halibut and sablefish delivered to the Homer dock.³¹⁷ See the *Processing Plants* section of this profile for information about current processing facilities in Homer.

In recent decades, charter fishing has grown as an industry in Homer, with focus on halibut and salmon. As the charter industry grew in the late 1980s and early 1990s, conflicts arose between the charter halibut industry and commercial halibut interests regarding allocation of the halibut resource.³¹⁸ Due to these allocation concerns, as well as localized overfishing of the resource, the Alaska Board of Fish (BOF) and North Pacific Fishery Management Council (NPFMC) began discussing a moratorium on new charter licenses in Southeast and Southcentral Alaska in the 1990s.³¹⁹ In 2007, the NPFMC approved a motion to implement a limited entry program for halibut charter fleets in Areas 2C and 3A (Southeast and Southcentral Alaska) and a daily halibut bag limit for each charter vessel angler of two halibut of any size per day per

³¹¹ Thompson, W. F. and N. L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

³¹² See footnote 309.

³¹³ Reed, C., E. 1985. *The Role of Wild Resource Use in Communities of the Central Kenai Peninsula and Kachemak Bay, Alaska*. Alaska Dept. of Fish and Game, Division of Subsistence. Technical Paper No. 106. Retrieved October 8, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp106.pdf>.

³¹⁴ Klein, J. 2000. *Historical Perspectives: Commercial Fishing*. Alaska Dept. of Fish and Game. Retrieved October 9, 2012 from <http://svp.soic.indiana.edu/svp/4970813/FID1/html/human/histuse/histfish.htm>.

³¹⁵ State of Alaska, Dept. of Fish and Game. 1966. *1964 Alaska Commercial Fishery Operators. Statistical Leaflet No. 8*. Retrieved October 9, 2012 from <http://www.sf.adfg.state.ak.us/FedAidPDFs/CSL.08.pdf>.

³¹⁶ City of Homer. 2008. *Comprehensive Plan 2008 (Adopted 2010)*. Retrieved October 8, 2012 from <http://www.cityofhomer-ak.gov/planning/comprehensive-plan-2008-adopted-2010>.

³¹⁷ Icicle Seafoods, Inc. website. (n.d.). *Homer: About*. Retrieved October 8, 2012 from <http://www.icicleseafoods.com/locations/hom/about.aspx>.

³¹⁸ Meyer, S. October 2010. "Changes Coming for Alaska's Charter Halibut Fishery." Alaska Dept. of Fish and Game website. Retrieved October 8, 2012 from http://www.adfg.alaska.gov/index.cfm?ADFG=wildlifeneews.view_article&articles_id=482&issue_id=91.

³¹⁹ Dean, M. R. and A. L. Howe. 1999. *Alaska Dept. of Fish and Game Sportfishing Guide and Business Registration and Saltwater Sportfishing Charter Vessel Logbook Program, 1998*. ADF&G Special Publication No. 99-1. Retrieved May 2, 2012 from <http://www.sf.adfg.state.ak.us/fedaidpdfs/Sp99-01.pdf>.

person.^{320,321} Allocation decisions between the charter halibut industry and commercial halibut interests remain extremely controversial.³²²

Homer is located in the Lower Cook Inlet state fishery management area, Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area. ADF&G manages Cook Inlet salmon, herring, and Dungeness crab fisheries. The Lower Cook Inlet management area is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts. Upper Cook Inlet is divided into the Central and Northern fishing districts. With regard to salmon fisheries, set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, salmon seine gear use is limited to the Chinita Bay sub-district, which is open only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.³²³ Historically, a sizable spawning biomass of herring was found in western Cook Inlet, and Lower Cook Inlet also supported commercial fisheries for Dungeness, king, and Tanner crab. However, most Cook Inlet crab and herring fisheries are currently closed due to low stock abundance.^{324,325} Minor commercial fisheries for Tanner and Dungeness crab take place in several areas of western Cook Inlet,³²⁶ and if a sufficient biomass of herring is present in the Kamishak District, some sac roe harvest may be permitted.³²⁷

Groundfish and crab fisheries that occur more than 3 nautical miles (nm) off in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch (TAC) set by NMFS applied to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.³²⁸

³²⁰ North Pacific Fishery Management Council. April 2007. *News and Notes* Volume 2-07. Retrieved May 2, 2012 from <http://www.alaskafisheries.noaa.gov/npfmc/PDFdocuments/newsletters/NEWS407.pdf>.

³²¹ Federal Register. March 22, 2012. Dept. of Commerce, NOAA, 50 CFR Part 300, Pacific Halibut Fisheries; Catch Sharing Plan. Retrieved May 2, 2012 from <http://www.fakr.noaa.gov/frules/77fr16740.pdf>.

³²² See footnote 318.

³²³ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

³²⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³²⁵ Alaska Dept. of Fish and Game. 2012. *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

³²⁶ Alaska Dept. of Fish and Game. 2012. *Northern Cook Inlet Management Area*. Retrieved October 9, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaSouthcentralNorthCookInlet.main>.

³²⁷ Hollowell, G., T. Otis, and E. Ford. July 2012. *2011 Lower Cook Inlet Finfish Management Report*. Retrieved September 7, 2012 from <http://www.sf.adfg.state.ak.us/FedAidPDFs/FMR12-30.pdf>.

³²⁸ See footnote 324.

Pacific halibut fisheries are managed under the International Pacific Halibut Commission, and federal sablefish fisheries are managed by NMFS. In 1995, management of Alaskan halibut and federal sablefish fisheries shifted from limited entry to a system of Individual Fishing Quotas (IFQ). Motivations for the shift included overcapitalization, short seasons, and the derby-style fishery that led to loss of product quality and safety concerns. As a result of program implementation, the number of shareholders and total vessels participating in the halibut and sablefish fisheries declined substantially, and product quality has improved. This shift to catch shares has been controversial, raising concerns about equity of catch share allocation, reduced crew employment needs, and loss of quota from coastal communities to outside investors.³²⁹

According to a survey conducted by the AFSC in 2011, community leaders noted the following challenges facing the local fishing economy: 1) fuel prices that are causing high inflation, 2) state-run loan programs that drive up the price of permits, and 3) difficulty responding to shifts in fishery regulations such as the shift to catch share management, changing Individual Fishing Quota (IFQ) allotments, and changes to fishing area boundaries. For example, one community leader pointed to a 2010-2011 boundary change in the cod fishery that had a large impact on Homer's cod fleet coast-wide. When asked to describe the effect of fisheries policies or management actions on Homer, one community leader expressed the view that allocation of fishing rights to one group over another group creates a 'class system', disrupts the natural competitive balance of business, and leads to a dynamic of large corporation-owned business at odds with the small town businesses that support Alaskan communities. The same community leader indicated that potential future management actions of concern in Homer include further regulation of the halibut charter fleet in Kachemak Bay and changes in groundfish IFQ allotments.

Homer is not eligible to participate in the Community Quota Entity program or the Community Development Quota program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, a number of processing facilities were located in Homer that year, including Auction Block Company, Coal Point Seafood Company, Fish Factory LLC, Homer Fish Processing, Kachemak Bay Seafoods, and the Kachemak Shellfish Growers Coop, Inc. More information about each of these facilities is provided below. It is important to note that, based on data reported by NMFS in Alaska processors' Weekly Production Reports, the total number of shore-side processing facilities in Homer declined from 12 in 2000 to 5 in 2010 (Table 5).

The Auction Block Co. has been buying and selling seafood in Homer since 1997, and in 2010 opened a 5,600 square foot processing facility to offer additional value-added products to their wholesaler and distributor customers. Auction Block handles halibut, lingcod, yelloweye rockfish, sockeye and coho salmon, sablefish, king crab, sidestripe shrimp, Pacific cod, scallops, and more.³³⁰ According to a survey of plant managers conducted by the AFSC in 2011, the

³²⁹ Fina, M. 2011. "Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific." *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

³³⁰ The Auction Block Co. (n.d.). *Homepage and Processing Plant*. Retrieved October 9, 2012 from <http://www.auctionblockseafood.com/>.

Auction Block Co. plant employs a maximum of 28 workers each year, and has relied on J-1 workers from Ukraine during recent summer seasons.³³¹

Coal Point Seafood co. is located on the docks of the Homer Harbor. According to the 2011 AFSC survey of plant managers, Coal Point Seafoods began its Homer operations in 1992. The company buys directly from fishermen, and sells a wide variety of Alaskan seafood online, including salmon, halibut, rockfish, sablefish, razor clams, oysters, shrimp, and king, Tanner, and Dungeness crab. Coal Point also offers value-added products such as smoked fish and salmon burgers. The facility also offers custom processing for sport fishermen.³³² The 2011 AFSC plant manager survey found that the Coal Point Seafood plant employed a maximum of 80 workers and provided housing for a maximum of 10 workers from May to August. In addition, a maximum of 40 workers received company-provided meals from June through September.³³³

The Fish Factory LLC operates a seafood processing facility in Homer. This facility is located on the Homer spit.³³⁴ According to the 2011 AFSC survey of plant managers, the facility began operations in 2000, and in 2010 employed a maximum of 40 workers. In addition, the Fish Factory provided lunch to employees during busy workdays.³³⁵

According to the 2010 Intent to Operate list, two separate companies were registered under the name “Homer Fish Processing.” One company, with processor code F8488, is Wild Kenai Salmon. This company purchases sockeye salmon from a partner company in Naknek called Naknek Family Fisheries. The sockeye are caught using set gillnets, and are shipped to Homer for processing in the company’s Homer processing facility, known as “A Fisherman’s Resort”. The official port location code for this company was Anchorage, despite the use of a processing facility located in Homer.³³⁶

The second company registered under the name of Homer Fish Processing had processor code F8553, and a port location code of Homer. Homer Fish Processing also uses the processing facility at “A Fisherman’s Resort” to process halibut, salmon, scallops, king crab, and lingcod.³³⁷ According to the 2011 AFSC survey of plant managers, the company provides custom processing to the charter industry, and employs a maximum of 20 workers each year, especially from June through August. The survey also found that the company provides living accommodations to summer employees.³³⁸

Finally, according to the 2011 AFSC survey of plant managers, since 1992, Kachemak Bay Seafoods has operated a small seafood processing facility in Homer, with a maximum of 2-4 employees each year. In addition, results of the plant manager survey indicate that the Kachemak

³³¹ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

³³² Coal Point Seafood Company. 1999. *Home, Seafood Selection, and Custom Processing*. Retrieved October 9, 2012 from http://www.welovefish.com/alaska_seafood.htm.

³³³ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

³³⁴ The Fish Factory. (n.d.). *Address*. Retrieved October 9, 2012 from <http://www.thefishfactory.net/>.

³³⁵ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

³³⁶ Wild Kenai Red Salmon. 2009. *Home, Our Story, Our Fish, and Contact*. Retrieved October 9, 2012 from <http://wildkenaisalmon.com/>.

³³⁷ Homer Fish Processing. 2012. *Homepage*. Retrieved October 9, 2012 from <http://www.myalaskafish.com/>.

³³⁸ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

Shellfish Growers Coop Inc. began operations via the Kachemak Shellfish Mariculture Association (KSMA) in 1996, employing a maximum of six workers per year.³³⁹

Fisheries-Related Revenue

In 2010, the City of Homer received \$2,118,636 from fisheries-related taxes and fees. Revenue sources include the Shared Fisheries Business Tax, fees for harbor and port/dock usage, as well as leasing of public land to members of the fishing industry, and seafood, fuel, and other wharfage fees. Table 3 presents details of selected aspects of community finances between 2000 and 2010.³⁴⁰

In a survey conducted by the AFSC in 2011, community leaders indicated that harbor maintenance is at least partially funded by these fisheries-related revenue sources. They indicated that harbor fees support the Harbor Enterprise Fund, which in turn covers harbor operation costs.

Commercial Fishing

Homer residents are highly involved in a majority of state and federal commercial fisheries in Alaska, including salmon, halibut, crab, groundfish (lingcod, rockfish, Pacific cod, sablefish), herring, and “other shellfish”. They were active in these fisheries as permit and quota share account holders, crew license holders, and vessel owners. In addition, the community of Homer is one of the leading processing communities in Alaska, ranking 17th in landings and 6th in ex-vessel revenue out of 67 Alaskan ports that received landings in 2010. The higher ranking in terms of ex-vessel value compared to overall landings volume can be partly attributed to the high proportion of lucrative halibut landed in Homer relative to other species. Homer is one of the leading ports for halibut deliveries in Alaska, and the community has been called, “The Halibut Capital of the World”.³⁴¹ In 2010, 27 fish buyers were present locally, and 5 shore-side processing facilities were in operation. In total, 23,546,436 net pounds were landed by Homer fish buyers in 2010, generating a total of \$69,076,590 in ex-vessel revenue (Table 5).

In 2010, 647 commercial crew licenses were held and 505 vessels were primarily owned by Homer residents. Both of these numbers represent declines from the year 2000, when 751 crew licenses were held and 576 vessels were primarily owned by residents. Also in 2010, 483 vessels were listed as homeported in Homer, and 286 vessels delivered catches in town. This information about the commercial fishing sector in Homer is presented in Table 5. According to a survey conducted by the AFSC in 2011, community leaders reported that a wide range of fishing vessel sizes and types use Homer as a base of fishing operations. Fishing vessels range in size from under 35 feet to over 125 feet in length, and use longline, gillnet, purse seine, troll, pot, and jig gear. Community leaders did not note a substantial shift in the number of fishing vessels present in Homer over the past 5 years.

In 2010, 646 Homer residents held a total of 1,113 state Commercial Fisheries Entry Commission (CFEC) permits. Of these, 540 were held for salmon fisheries, 186 were held for

³³⁹ Ibid.

³⁴⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

³⁴¹ City of Homer. (n.d.). *Snapshot of Homer*. Retrieved October 10, 2012 from <http://www.cityofhomer-ak.gov/community/snapshot-homer>.

halibut, 123 were held for groundfish, 122 for herring, 63 for sablefish, 56 for crab, and 23 were held for “other shellfish”. Information about CFEC permits is presented in Table 4, and further details regarding these permits are presented below.

Of 540 salmon CFEC permits, 335 were held in drift gillnet fisheries (142 for Cook Inlet, 94 in Bristol Bay, 70 in Prince William Sound, and 29 in the Peninsula-Aleutian gillnet fishery), 58 were held in set gillnet fisheries (25 in Cook Inlet, 25 in Bristol Bay, 3 in Prince William Sound, 3 in Kodiak, and 2 in the Peninsula-Aleutian management area), 130 were held in purse seine fisheries (42 in Prince William Sound, 41 in Cook Inlet, 32 in Kodiak, 6 in Southeast, 5 in Chignik, and 4 in Peninsula-Aleutians), 6 permits were held in the statewide power gurdy troll fishery, 5 in the statewide hand troll fishery, 3 in the Lower Yukon gillnet fishery, 1 in the Kotzebue gillnet fishery, and 3 in the Kodiak beach seine fishery. Of all regions and permit types, the greatest percentages of actively fished permits were in the Prince William Sound set gillnet fishery (100% actively fished in 2010), Kodiak set gillnet (100%), Prince William Sound drift gillnet (98.6%), Peninsula-Aleutians drift gillnet (93.1%), Bristol Bay drift gillnet (81.2%), and Bristol Bay set gillnet (76%). Overall, 67% of salmon permits held in Homer were actively fished in 2010. The number of salmon permit holders and the total salmon permits held increased substantially between 2000 and 2010, while the overall percentage actively fished remained relatively stable over the period.

Of 186 halibut CFEC permits, a majority (166) was held in the statewide longline fishery using vessels under 60 feet in length, while 7 were held for the statewide longline fishery for vessels 60 feet or over, 7 were held in the statewide mechanical jig fishery, and 6 were held for statewide hand troll. Overall, 85% were actively fished in 2010. Both the number of halibut permits held and the number of permit holders decreased slightly between 2000 and 2010, while the percentage of permits actively fished remained relatively stable over the period.

The number of groundfish CFEC permits held by Homer residents decreased by over 50% between 2000 and 2010, and the total number of permit holders also decreased by 43% over this period. Of 123 groundfish CFEC permits held in 2010, a majority (109) were held in miscellaneous saltwater finfish fisheries (including Pacific cod and pollock). Most of these permits were associated with longline gear, while some were also associated with mechanical jig, pot gear, hand troll, and otter trawl gear types. In addition, 13 groundfish permits were held in statewide lingcod fisheries, including 7 associated with mechanical jig gear, 3 with hand troll, and 3 with longline gear. Finally one groundfish permit was held in the Southeast Alaska demersal shelf rockfish fishery, for use on a longline vessel under 60 feet in length. In 2010, 56% of all state groundfish permits held by Homer residents were actively fished, a slight increase from 41% of all permits held in 2000.

Of 122 total herring CFEC permits, the greatest numbers were held in purse seine fisheries, including 23 held in the Cook Inlet herring roe and bait fishery, 19 held in the Prince William Sound roe herring fishery, and 16 in the Peninsula-Aleutians roe herring fishery, as well as several each in the Bristol Bay and Southeastern roe herring purse seine fisheries. In addition, 15 permits were held in the Prince William Sound herring spawn on kelp hand-picking fishery and 12 were held in the Kodiak roe herring gillnet fishery, while one or more permits were held in each of the following herring fisheries: Bristol Bay spawn on kelp hand-picking fishery, Norton Sound, Nunivak Island, and Nelson Island herring gillnet fisheries, Security Cove and Bristol Bay roe herring gillnet fisheries, and the Peninsula-Aleutians herring for bait/food purse seine fishery. Of these, 100% of Bristol Bay and Southeast purse seine permits were actively fished in 2010, 100% of Bristol Bay roe herring gillnet permits were actively fished, and the

Peninsula-Aleutians herring for food/bait purse seine permit was actively fished. No herring permits were actively fished in Prince William Sound or Cook Inlet herring fisheries in 2010. The number of Homer residents holding herring permits decreased between 2000 and 2010, as did the total number of permits held. The overall percentage of permits that were actively fished remained relatively stable over the period.

Of the 63 sablefish CFEC permits held in 2010, a majority (53) were held for the statewide fishery (not including Prince William Sound or Southeast Alaska) using longline gear on vessels under 60 feet in length. In addition, one longline permit was held for the Northern Southeast sablefish fishery, one longline permit was held for use statewide, and eight permits were held for the Prince William Sound fixed gear sablefish fishery. Overall, 87% of sablefish permits were actively fished in 2010. The number of Homer permit holders decreased by 17% and the number of permits held decreased by 23% between 2000 and 2010, while the percentage of permits actively fished increased slightly over time.

Of 56 crab CFEC permits held in 2010, a majority were held in the Cook Inlet Dungeness crab fishery (37), although none of these permits were actively fished in 2010. Homer residents also held king crab permits in Bering Sea and Bristol Bay fisheries, Tanner crab permits in Kodiak, Bering Sea, and Peninsula-Aleutians management areas, and a Korean hair crab permit in the Bering Sea. In 2010, 100% of king crab permits were actively fished (4 held in the Bristol Bay fishery, 1 held in the Bering Sea fishery), 5 of 13 Tanner crab permits were actively fished, and the Korean hair crab permit was not active that year. Overall, 18% of state crab permits were actively fished by Homer residents in 2010. The number of crab permits holders remained relatively stable between 2000 and 2010, while the total number of permits held decreased by more than 25%. Between 2000 and 2010, all state crab permits held in Homer were associated with pot gear.

“Other shellfish” CFEC permits were held for shrimp, sea cucumber, and octopi/squid fisheries in 2010. The greatest number (16) was held for Prince William Sound shrimp pot gear fisheries. In addition, five permits were held for the Kodiak sea cucumber dive fishery, one for the Southeast sea cucumber dive fishery, and one for the statewide octopi/squid pot gear fishery. Only two of the shrimp permits were actively fished that year, while all of the sea cucumber and octopi/squid permits were actively fished. It is important to note that, earlier in the 2000-2010 period, “other shellfish” permits were also held in the statewide clam shovel fishery (held from 2000 to 2007), the statewide sea urchin dive fishery excluding southeast (2000 and 2001), the statewide scallop dredge fishery (2000 to 2009), and the weathervane scallop dredge fishery (2005 to 2009). Fluctuations in these diverse fisheries over the 2000-2010 period are reflected in inconsistent numbers of total “other shellfish” permits held by Homer residents between 2000 and 2010, with total permits held ranging between 6 and 28 per year.

In addition to CFEC permits, Homer residents also held federal License Limitation Program (LLP) permits and Federal Fisheries Permits (FFP). Between 2000 and 2010, the number of Homer residents holding groundfish LLPs varied between 141 and 157 per year, and the total number of groundfish LLPs held varied from 160 to 176. The percentage of groundfish LLP permits that were actively fished remained relatively stable over the period. During the same period, the number of crab LLP holders varied between 12 and 17 per year, total crab LLPs held varied between 13 and 18 per year, and the percentage actively fished appears to have declined slightly, from 44% in 2000 to 31% in 2010. In addition, a large number of Federal Fisheries Permits (FFP) was held by Homer residents. In 2010, 120 FFPs were held by a total of

114 residents, a slight decline from 166 FFPs held by 145 residents in 2000. Further information about federal permits is presented in Table 4.

Between 2000 and 2010, Homer residents also held quota share accounts and quota shares in federal fisheries for halibut, sablefish, and crab, with the highest level of participation in the halibut fishery. The number of halibut quota share account holders in Homer was 256 in the year 2000, falling to 199 by 2010, a decline of 22.3%. In comparison, the total number of quota shares held stayed relatively stable, declining by only 5% between 2000 and 2010. The overall halibut IFQ allotment for account holders in Homer decreased by approximately 20% between 2000 and 2010. Further information about halibut catch share participation is presented in Table 6.

The number of sablefish quota share account holders remained relatively stable between 2000 and 2010, with a high of 67 in 2000 and a low of 55 in 2003. In 2010, 60 Homer residents held sablefish quota share accounts, and a total of 9,611,888 quota shares were held that year. The overall halibut IFQ allotment for account holders in Homer increased to approximately 35% above 2000 levels in 2004, and then fell back to close to 2000 levels by 2010. Further information about federal sablefish quota is presented in Table 7.

Between 2005 and 2010, the number of Homer residents holding quota share accounts in the federal crab fishery increased slightly, from 8 quota share accounts in 2005 to 11 in 2010. The total number of quota shares also increased, from 28,276,099 in 2005 to 47,400,206 in 2010. The overall crab IFQ allotment increased by almost 38% by 2007, and remained higher than 2005 levels through 2010. Further information about federal crab catch share participation is presented in Table 8.

Of the landings that were reported between 2000 and 2010, the species landed in the greatest volume in Homer were halibut, salmon, Pacific cod, and sablefish. On average between 2000 and 2010, 11,375,836 net pounds of halibut were landed in Homer, valued on average at \$37,197,035 in ex-vessel revenue. Over the same period, an average of 5,376,463 net pounds of salmon were landed, valued on average at \$2,623,563 in ex-vessel revenue; almost 3.5 million net pounds of Pacific cod and were landed on average; over 1.3 million net pound of sablefish were landed on average. Smaller volumes of ‘other groundfish’, ‘other shellfish’, and pollock were also landed in Homer between 2000 and 2010. Information about pollock was only reported in one year during the period (2001), while data for all other years were considered confidential due to the small number of participants. Information about herring and finfish landings and revenue was also considered confidential for all years during the period. Further information about landings and ex-vessel revenue generated in Homer is presented in Table 9.

It is important to note that Homer ranked much higher compared to other Alaskan processing communities with regard to ex-vessel value of landings (6th) than total volume of landings (17th). This may be explained by the fact that halibut was the leading species landed by volume in Homer, while salmon makes up the bulk of landings in many top processing ports. Halibut was valued at over \$3 per pound on average over the 2000-2010 period, while salmon landed in Homer were valued at just under \$0.50 per pound overall during the period. Sablefish was also lucrative species, with an average price per pound of over \$3.50 for sablefish landings in Homer during the period.

In addition to the landings delivered in Homer by fishermen from many communities, landings and ex-vessel revenue earned by Homer vessel owners is of note. Homer vessel owners made deliveries in many locations around Alaska between 2000 and 2010. Information was reported regarding their landings in all fisheries, with the exception of finfish, in which

information was considered confidential in all years due to the small number of participants. Data regarding crab landings and ex-vessel revenue were also considered confidential in one year during the period (2008). The fisheries with the greatest landings volume by Homer vessel owners were for salmon, herring, Pacific cod, halibut, and crab. On average between 2000 and 2010, Homer vessel owners landed 48,763,166 net pounds of salmon, valued at \$19,539,450 in ex-vessel revenue on average over the period; herring landings averaged 16,157,112 net pounds per year, with average ex-vessel revenue of \$2,060,884; Pacific cod landings averaged 8,265,945 net pounds per year, with average ex-vessel revenue of \$3,044,888; halibut landings averaged 4,985,360 net pounds per year, with average ex-vessel revenue of \$16,494,307; and crab landings averaged 1,522,272 net pounds (for those years in which data were reported), with average ex-vessel revenue of \$3,711,026. Homer vessel owners also landed smaller volumes in fisheries for sablefish, pollock, ‘other groundfish’, and ‘other shellfish’. Further information is presented in Table 10. As in the case of landings delivered in Homer, sablefish and halibut were the most valuable species delivered by Homer vessel owners, as well as crab. On average, Homer vessel owners received just over \$4 per pound for sablefish, \$3.30 per pound for halibut, and \$2.40 per pound for crab.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Homer: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$21,615	\$27,269	\$3,989	\$50,171	\$92,368	\$162,825	\$70,793	\$93,067	\$92,490	\$103,185	\$97,190
Fisheries Resource Landing Tax ¹	n/a	\$87	\$5,271	\$390	\$59	\$351	\$120	\$91	\$138	\$66	\$735
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ^{2,3}	\$21,699,332 ²	\$2,409,482 ²	\$2,454,846 ²	\$2,968,606 ²	\$2,768,504 ²	\$2,905,274 ²	\$2,944,874 ²	\$3,121,160 ²	\$3,253,737 ²	\$2,960,550 ²	\$1,536,887 ³
Port/dock usage ^{2,3}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$100,730 ³
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$12,953
Seafood wharfage ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$49,300
Fuel wharfage ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$128,048
Other wharfage ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$78,359
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$21,720,947</i>	<i>\$2,436,838</i>	<i>\$2,464,106</i>	<i>\$3,019,167</i>	<i>\$2,860,931</i>	<i>\$3,068,450</i>	<i>\$3,015,788</i>	<i>\$3,214,319</i>	<i>\$3,346,365</i>	<i>\$3,063,801</i>	<i>\$2,118,636</i>
<i>Total municipal revenue⁵</i>	<i>\$7,176,000</i>	<i>\$7,230,316</i>	<i>\$9,129,077</i>	<i>\$9,034,168</i>	<i>\$10,138,928</i>	<i>\$14,762,482</i>	<i>\$13,577,487</i>	<i>\$13,362,590</i>	<i>\$14,449,673</i>	<i>\$14,207,837</i>	<i>\$18,737,135</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Homer: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	176	164	160	162	163	164	170	167	171	170	176
	Active permits	73	72	73	66	67	69	74	76	70	76	83
	% of permits fished	41%	43%	45%	40%	41%	42%	43%	45%	40%	44%	47%
	Total permit holders	157	144	142	142	141	142	147	144	145	143	149
Crab (LLP) ¹	Total permits	18	17	16	16	14	13	14	13	13	13	16
	Active permits	8	8	9	8	8	5	4	4	4	5	5
	% of permits fished	44%	47%	56%	50%	57%	38%	28%	30%	30%	38%	31%
	Total permit holders	17	17	16	16	14	13	14	12	12	13	14
Federal Fisheries Permits ¹	Total permits	166	170	172	140	145	147	111	118	126	114	120
	Fished permits	2	3	1	68	72	71	72	78	78	85	90
	% of permits fished	1%	2%	1%	49%	50%	48%	65%	66%	62%	75%	75%
	Total permit holders	145	147	149	133	138	139	109	115	122	109	114
Crab (CFEC) ²	Total permits	76	81	77	72	64	60	60	55	55	54	56
	Fished permits	27	32	29	29	19	15	10	9	8	8	10
	% of permits fished	36%	40%	38%	40%	30%	25%	17%	16%	15%	15%	18%
	Total permit holders	59	69	66	60	52	55	56	52	56	53	54
Other shellfish (CFEC) ²	Total permits	28	21	14	8	9	11	9	7	6	6	23
	Fished permits	11	8	7	4	5	6	6	3	3	4	9
	% of permits fished	39%	38%	50%	50%	55%	54%	66%	42%	50%	66%	39%
	Total permit holders	24	20	14	8	9	10	9	7	6	6	22
Halibut (CFEC) ²	Total permits	213	211	205	203	207	195	200	190	179	180	186
	Fished permits	171	169	176	175	182	171	177	168	157	161	159
	% of permits fished	80%	80%	86%	86%	88%	88%	89%	88%	88%	89%	85%
	Total permit holders	200	201	198	196	198	189	192	185	173	172	177
Herring (CFEC) ²	Total permits	143	126	114	118	111	115	115	107	110	119	122
	Fished permits	44	36	27	23	24	30	24	19	18	28	27
	% of permits fished	31%	29%	24%	19%	22%	26%	21%	18%	16%	24%	22%
	Total permit holders	89	81	73	77	77	76	75	72	72	74	72

Table 4. Cont. Permits and Permit Holders by Species, Homer: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	82	83	75	62	67	63	67	65	65	71	63
	Fished permits	58	62	64	54	56	57	56	60	56	64	55
	% of permits fished	71%	75%	85%	87%	84%	90%	84%	92%	86%	90%	87%
	Total permit holders	71	71	65	56	60	56	60	59	58	64	59
Groundfish (CFEC) ²	Total permits	269	208	150	135	154	132	110	119	134	139	123
	Fished permits	111	87	60	65	68	65	55	66	65	73	69
	% of permits fished	41%	42%	40%	48%	44%	49%	50%	55%	49%	53%	56%
	Total permit holders	179	148	114	104	111	101	89	101	108	111	102
Other Finfish (CFEC) ²	Total permits	1	1	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	-	-	-	-	-	-	-	-
	Total permit holders	1	1	1	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	392	369	369	385	403	410	414	441	489	507	540
	Fished permits	307	272	218	261	272	291	282	292	320	335	363
	% of permits fished	78%	74%	59%	68%	67%	71%	68%	66%	65%	66%	67%
	Total permit holders	390	375	368	372	398	400	394	405	461	477	507
<i>Total CFEC Permits</i> ²	<i>Permits</i>	<i>1,204</i>	<i>1,100</i>	<i>1,005</i>	<i>983</i>	<i>1,015</i>	<i>986</i>	<i>975</i>	<i>984</i>	<i>1,038</i>	<i>1,076</i>	<i>1,113</i>
	<i>Fished permits</i>	<i>729</i>	<i>666</i>	<i>581</i>	<i>611</i>	<i>626</i>	<i>635</i>	<i>610</i>	<i>617</i>	<i>627</i>	<i>673</i>	<i>692</i>
	<i>% of permits fished</i>	<i>61%</i>	<i>61%</i>	<i>58%</i>	<i>62%</i>	<i>62%</i>	<i>64%</i>	<i>63%</i>	<i>63%</i>	<i>60%</i>	<i>63%</i>	<i>62%</i>
	<i>Permit holders</i>	<i>577</i>	<i>553</i>	<i>537</i>	<i>538</i>	<i>559</i>	<i>547</i>	<i>555</i>	<i>560</i>	<i>601</i>	<i>611</i>	<i>646</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Homer: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Homer ²	Total Net Pounds Landed in Homer ^{2,5}	Total Ex-Vessel Value of Landings in Homer ^{2,5}
2000	751	37	12	576	598	356	20,728,861	\$32,999,514
2001	684	37	7	545	570	387	22,952,129	\$34,124,348
2002	574	41	6	503	512	373	30,271,052	\$41,072,239
2003	587	33	3	514	520	306	21,378,243	\$44,471,809
2004	609	34	3	521	520	287	26,327,290	\$40,284,107
2005	612	33	3	440	413	271	22,935,518	\$41,493,351
2006	591	34	3	439	407	244	16,584,764	\$45,277,403
2007	677	27	3	453	424	219	17,419,245	\$53,472,884
2008	648	22	3	464	427	235	16,481,280	\$52,013,369
2009	643	20	4	487	451	296	22,521,701	\$54,012,378
2010	647	27	5	505	483	286	23,546,436	\$69,076,590

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Homer: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	256	23,729,260	3,881,334
2001	242	23,023,092	4,278,682
2002	245	22,924,656	4,182,600
2003	238	22,364,255	4,070,244
2004	231	21,994,866	3,827,038
2005	218	21,333,328	3,570,888
2006	223	23,069,022	3,609,467
2007	211	21,351,007	3,245,908
2008	197	21,158,341	3,229,729
2009	195	21,510,003	3,018,851
2010	199	22,477,522	2,906,081

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Homer: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	67	14,348,725	1,303,948
2001	63	15,087,837	1,359,338
2002	56	13,584,077	1,275,608
2003	55	12,934,894	1,463,865
2004	57	12,389,208	1,527,406
2005	56	12,334,932	1,393,495
2006	60	12,951,338	1,468,729
2007	57	12,355,057	1,361,555
2008	57	7,756,784	757,015
2009	57	8,356,510	767,758
2010	60	9,611,888	917,114

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Homer: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	8	28,276,099	838,857
2006	8	36,953,670	937,202
2007	9	34,869,233	1,426,080
2008	9	34,869,233	1,331,000
2009	11	47,440,206	1,538,349
2010	11	47,440,206	1,641,051

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Homer: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	10,108,098	13,479,243	13,744,859	12,102,755	10,715,630	10,824,249	9,657,235	9,938,276	9,214,616	13,472,212	11,877,018
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	202,755	241,211	280,252	398,904	287,725	185,207	244,212	166,497	213,078	204,252	224,108
Groundfish											
Other Shellfish	49,794	50,503	62,652	43,073	49,975	61,118	54,782	54,621	37,027	41,341	38,575
Pacific Cod	5,412,567	3,381,294	3,113,115	1,977,215	2,807,256	2,852,454	3,197,366	4,122,477	3,244,509	3,603,361	4,555,203
Pollock	-	3,337	-	-	-	-	-	-	-	-	-
Sablefish	922,472	1,220,666	1,663,628	1,602,709	1,779,605	1,439,567	1,416,922	1,214,625	1,290,089	1,253,760	835,408
Salmon	4,012,651	4,555,778	11,385,489	5,237,773	10,680,807	7,534,692	2,006,174	1,905,197	2,481,961	3,945,492	5,395,080
<i>Total²</i>	<i>20,708,345</i>	<i>22,932,032</i>	<i>30,253,930</i>	<i>21,362,563</i>	<i>26,321,173</i>	<i>22,897,287</i>	<i>16,576,892</i>	<i>17,401,827</i>	<i>16,481,280</i>	<i>22,521,701</i>	<i>23,537,324</i>
	<i>Ex-vessel Value (Nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$26,182,806	\$26,892,821	\$31,085,677	\$35,467,013	\$32,783,244	\$34,310,087	\$37,814,594	\$45,307,587	\$42,001,027	\$42,224,192	\$55,098,333
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	\$115,873	\$126,194	\$183,419	\$162,832	\$157,669	\$102,501	\$111,180	\$92,831	\$105,398	\$98,176	\$105,357
Groundfish											
Other Shellfish	\$49,939	\$62,986	\$79,233	\$67,102	\$39,390	\$36,176	\$53,058	\$44,571	\$24,281	\$14,575	\$6,448
Pacific Cod	\$1,903,107	\$1,136,886	\$903,141	\$763,584	\$800,340	\$909,294	\$1,384,422	\$2,126,934	\$1,879,617	\$1,169,301	\$1,289,850
Pollock	-	\$219	-	-	-	-	-	-	-	-	-
Sablefish	\$3,355,103	\$3,811,617	\$5,309,473	\$5,747,403	\$5,354,724	\$4,515,057	\$4,933,522	\$4,506,971	\$5,413,045	\$5,889,967	\$4,218,699
Salmon	\$1,314,013	\$1,940,070	\$3,403,459	\$2,123,342	\$1,093,124	\$1,487,854	\$905,649	\$1,221,517	\$2,590,001	\$4,615,904	\$8,164,256
<i>Total²</i>	<i>\$32,920,843</i>	<i>\$33,970,793</i>	<i>\$40,964,592</i>	<i>\$44,331,276</i>	<i>\$40,228,491</i>	<i>\$41,360,969</i>	<i>\$45,202,427</i>	<i>\$53,300,437</i>	<i>\$52,013,369</i>	<i>\$54,012,377</i>	<i>\$68,989,434</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Homer Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	1,627,874	901,271	1,172,724	979,885	1,170,121	947,504	939,132	1,088,127	-	3,477,134	2,918,944
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	4,540,982	4,456,614	4,842,826	5,342,653	5,301,722	5,019,283	4,977,366	4,937,060	4,958,221	5,175,256	5,286,979
Herring	8,646,410	13,416,602	10,855,833	11,529,020	14,518,946	16,141,467	16,403,957	17,520,338	20,355,317	22,858,995	25,481,348
Other	279,937	441,555	191,977	1,229,755	716,575	753,686	786,252	453,839	500,535	880,441	803,470
Groundfish											
Other	27,348	38,594	42,226	25,449	26,032	31,193	42,419	36,503	35,521	33,335	27,202
Shellfish											
Pacific Cod	10,106,491	8,033,963	9,866,602	5,166,905	7,142,667	6,258,526	7,500,504	9,307,751	6,782,800	9,535,153	11,224,036
Pollock	1,373,561	1,785,524	966,515	988,255	16,376	524,016	1,436,464	141,691	100,057	129,392	73,955
Sablefish	708,232	829,038	820,443	919,942	1,102,549	916,217	905,777	992,652	1,058,420	737,129	826,426
Salmon	33,105,642	31,491,789	31,306,698	35,547,660	38,723,497	71,354,266	54,282,214	66,370,450	56,248,109	44,139,165	73,825,341
<i>Total²</i>	<i>60,416,477</i>	<i>61,394,950</i>	<i>60,065,844</i>	<i>61,729,524</i>	<i>68,718,485</i>	<i>101,946,158</i>	<i>87,274,085</i>	<i>100,848,412</i>	<i>90,038,980</i>	<i>86,966,000</i>	<i>120,467,701</i>
	<i>Ex-vessel Value (Nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$4,179,190	\$2,263,755	\$3,144,271	\$2,895,416	\$3,563,434	\$2,917,280	\$1,636,376	\$3,247,154	-	\$6,586,124	\$6,677,257
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$11,466,849	\$8,786,454	\$10,862,313	\$15,482,193	\$15,982,109	\$15,472,947	\$19,282,085	\$21,924,049	\$21,985,354	\$15,894,526	\$24,298,496
Herring	\$1,060,228	\$1,630,127	\$1,360,342	\$1,013,368	\$1,751,384	\$1,957,636	\$1,446,622	\$1,929,275	\$3,288,083	\$3,457,736	\$3,774,921
Other	\$182,473	\$202,892	\$147,331	\$396,342	\$245,358	\$203,022	\$251,639	\$193,269	\$271,228	\$312,584	\$278,322
Groundfish											
Other	\$18,376	\$36,388	\$28,268	\$22,949	\$19,734	\$15,391	\$41,495	\$35,363	\$14,859	\$15,306	\$7,891
Shellfish											
Pacific Cod	\$3,820,305	\$2,620,418	\$2,769,025	\$1,772,330	\$2,122,638	\$1,985,612	\$3,142,387	\$4,803,781	\$4,143,457	\$3,098,392	\$3,215,427
Pollock	\$171,721	\$216,073	\$99,927	\$105,821	\$982	\$54,185	\$173,020	\$11,536	\$10,706	\$14,139	\$6,779
Sablefish	\$3,108,753	\$3,069,142	\$3,235,723	\$3,829,846	\$3,961,262	\$3,523,132	\$3,679,222	\$3,774,832	\$4,415,428	\$3,175,538	\$4,092,485
Salmon	\$12,446,671	\$9,008,231	\$7,365,921	\$11,535,917	\$11,932,431	\$19,314,843	\$19,409,568	\$25,284,396	\$31,208,789	\$24,146,945	\$43,280,236
<i>Total²</i>	<i>\$36,454,565</i>	<i>\$27,833,479</i>	<i>\$29,013,121</i>	<i>\$37,054,181</i>	<i>\$39,579,332</i>	<i>\$45,444,048</i>	<i>\$49,062,414</i>	<i>\$61,203,655</i>	<i>\$65,337,904</i>	<i>\$56,701,290</i>	<i>\$85,631,812</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing is one of the primary activities that draw visitors to Homer.³⁴² Between 2000 and 2010, an average of 18,081 sportfishing licenses was sold per year in Homer. On average during this period, 3,884 Homer residents purchased sportfishing licenses (including purchases in Homer and other points of sale). The higher number of licenses sold locally compared to purchases by residents is evidence of the importance of the sportfishing industry as a visitor attraction. In 2010, there were 68 active sport fish guide businesses and 101 licensed sport fish guides located in Homer. The number of active guide businesses remained stable between 2000 and 2010, while the number of licensed guides decreased over time (Table 11).

The declining trend in sport fish guide numbers may be related to rule changes in the Southcentral Alaska halibut charter industry. Due to concerns related to allocation between the commercial and sport halibut fisheries as well as localized overfishing of the resource, the Alaska Board of Fish (BOF) and North Pacific Fishery Management Council (NPFMC) began discussing a moratorium on new charter licenses in Southeast and Southcentral Alaska in the 1990s.³⁴³ In 2007, the NPFMC approved a motion to implement a limited entry program for halibut charter fleets in Areas 2C and 3A (Southeast and Southcentral Alaska) and a daily halibut bag limit for each charter vessel angler of two halibut of any size per day per person.^{344,345} Allocation decisions between the charter halibut industry and commercial halibut interests remain extremely controversial.³⁴⁶

Kept/released statistics from charter logbook data reported by ADF&G³⁴⁷ show that halibut was by far the most important species caught by volume during fishing charter trips out of Homer between 2000 and 2010. For those years in which data were reported regarding charter halibut catch during the 2000-2010 period, an average of 86,680 halibut were kept per year. An even higher number were released (118,396 per year on average). Other important species targeted by Homer charters were coho and Chinook salmon, pelagic rockfish, and lingcod. On average, 6,330 coho, 5,895 pelagic rockfish, 2,384 lingcod, and 2,060 Chinook were kept per year during the 2000-2010 period. Lingcod and pelagic rockfish both had relatively high release rates, averaging 1,550 and 1,426 released per year. Other species caught in smaller numbers during Homer charter trips included yelloweye rockfish, pink, sockeye, and chum salmon, and shark, although a majority of the sharks caught were released. A small number of sablefish were also reportedly caught in 2010 only.

³⁴² City of Homer. 2011. *Homer Comprehensive Economic Development Strategy*. Retrieved October 8, 2012 from http://www.cityofhomer-ak.gov/sites/default/files/fileattachments/ceds_fed_2011_final.pdf.

³⁴³ Dean, M. R. and A. L. Howe. 1999. *Alaska Dept. of Fish and Game Sportfishing Guide and Business Registration and Saltwater Sportfishing Charter Vessel Logbook Program, 1998*. ADF&G Special Publication No. 99-1. Retrieved May 2, 2012 from <http://www.sf.adfg.state.ak.us/fedaidpdfs/Sp99-01.pdf>.

³⁴⁴ North Pacific Fishery Management Council. April 2007. *News and Notes* Volume 2-07. Retrieved May 2, 2012 from <http://www.alaskafisheries.noaa.gov/npfmc/PDFdocuments/newsletters/NEWS407.pdf>.

³⁴⁵ Federal Register. March 22, 2012. Dept. of Commerce, NOAA, 50 CFR Part 300, Pacific Halibut Fisheries; Catch Sharing Plan. Retrieved May 2, 2012 from <http://www.fakr.noaa.gov/frules/77fr16740.pdf>.

³⁴⁶ Meyer, S. October 2010. "Changes Coming for Alaska's Charter Halibut Fishery." Alaska Dept. of Fish and Game website. Retrieved October 8, 2012 from http://www.adfg.alaska.gov/index.cfm?ADFG=wildlifeneews.view_article&articles_id=482&issue_id=91.

³⁴⁷ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Homer: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Homer ²
2000	69	146	3,725	13,646
2001	62	146	3,692	14,194
2002	64	138	3,731	17,064
2003	61	143	3,880	17,455
2004	66	142	3,959	19,510
2005	70	114	4,037	20,117
2006	75	131	3,841	19,116
2007	78	124	3,999	20,569
2008	80	110	3,950	20,477
2009	72	108	4,015	17,528
2010	68	101	3,900	19,211

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

According to ADF&G Statewide Harvest Survey data,³⁴⁸ species targeted by private anglers in Homer between 2000 and 2010 included all five species of Pacific salmon, rainbow trout, Dolly Varden char, whitefish, Arctic grayling, northern pike, Pacific halibut, rockfish, lingcod, Pacific cod, shark, smelt, Dungeness crab, Tanner crab, razor clams, hardshell clams, and shrimp.

Homer is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, saltwater and freshwater sportfishing at this regional level was substantial. In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska residents logged 20,292 saltwater angler days and 71,555 freshwater angler days. Typically, Alaska residents took part in saltwater sportfishing at greater rates than non-Alaska resident anglers, and the opposite was true of freshwater sportfishing. For both Alaska resident and non-Alaska resident anglers in both freshwater and saltwater, the number of angler days fished per year decreased between 2000 and 2010. Further information about regional sportfishing activity in Homer is presented in Table 11.

Subsistence Fishing

According to a survey conducted by the AFSC in 2011, community leaders indicated that salmon, halibut, and crab are some of the most important subsistence resources utilized by Homer residents. Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of households using different marine resources, or per capita harvest of subsistence resources by Homer residents (Table 12). However, earlier information about household-level subsistence is available from a 1982 ADF&G study. The survey identified species of marine invertebrates, non-salmon fish (not including halibut), and marine mammals harvested by Homer households that year. The species of marine invertebrates harvested by the greatest percentage of Homer households in 1982 included clams (41% of households reported harvest), crab (20%), shrimp (10%), and mussels (8%). The species of non-salmon fish harvested by the greatest percentage of Homer households included steelhead (6% of households reported harvest), Arctic grayling (5%), herring (3%), smelt (3%), as well as trout and whitefish. In addition, a small percentage of Homer households participated in the harvest of seal in 1982.³⁴⁹ It is important to note that in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Homer.

Data are also available regarding salmon and halibut permits issued between 2000 and 2010. The number of subsistence salmon permits issued per year to Homer households increased between 2000 and 2008, from 40 in the year 2000 to 72 in 2008. Sockeye was the most heavily utilized salmon species during this period, averaging 1,017 harvested per year. Smaller numbers of coho, pink, chum, and Chinook salmon were also reported harvested in most years. This information about subsistence harvest of salmon is presented in Table 13. Between 2003 and

³⁴⁸ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁴⁹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

2010, the number of Homer residents that participated in the Subsistence Halibut Registration Certificate (SHARC) program varied between 25 and 33, and the number of SHARC cards returned each year varied between 7 and 20. The greatest subsistence harvest of halibut was reported in 2009, when 7,561 pounds of halibut were harvested on 19 SHARC cards. Further information about the subsistence halibut fishery is presented in Table 14.

Information is also available regarding marine mammal harvest by residents of Homer between 2000 and 2010. According to data reported by the U.S. Fish and Wildlife Service (FWS) and ADF&G, this harvest focused primarily on sea otter and harbor seal. In addition, harvest of one walrus was reported by the FWS in 2000. No information was reported by management agencies regarding harvest of beluga whale, Steller sea lion, or spotted seal between 2000 and 2010. Further information about subsistence harvest of marine mammals by Homer residents is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Homer: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Homer: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	40	37	25	60	98	61	1,519	n/a	n/a
2001	28	39	39	209	32	156	948	n/a	n/a
2002	10	32	11	1	n/a	n/a	430	n/a	n/a
2003	57	68	68	3	3	49	345	n/a	n/a
2004	76	73	68	26	30	22	1,069	n/a	n/a
2005	46	45	44	29	97	19	849	n/a	n/a
2006	40	36	51	34	14	32	1,024	n/a	n/a
2007	39	32	138	107	n/a	77	1,412	n/a	n/a
2008	72	68	58	50	21	71	1,555	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Homer: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	26	7	1,455
2004	28	10	1,512
2005	28	11	2,343
2006	27	15	820
2007	33	7	462
2008	25	20	1,948
2009	25	19	7,561
2010	25	7	1,922

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Homer: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	5	1	n/a	n/a	23	n/a
2001	n/a	5	n/a	n/a	n/a	21	n/a
2002	n/a	n/a	n/a	n/a	n/a	24	n/a
2003	n/a	12	n/a	n/a	n/a	11	n/a
2004	n/a	1	n/a	n/a	n/a	4	n/a
2005	n/a	4	n/a	n/a	n/a	6	n/a
2006	n/a	27	n/a	n/a	n/a	6	n/a
2007	n/a	6	n/a	n/a	n/a	n/a	n/a
2008	n/a	28	n/a	n/a	n/a	n/a	n/a
2009	n/a	8	n/a	n/a	n/a	n/a	n/a
2010	n/a	2	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kasilof (kuh-SEE-loff)



People and Place

*Location*³⁵⁰

Kasilof is located on the east shore of Cook Inlet on the Kenai Peninsula. It lies on the Sterling Highway, 15 miles (20 road miles) south of the City of Kenai, 13 miles (15 road miles) southwest of Soldotna, and approximately 70 miles (162 road miles) southwest of Anchorage. Kasilof is located in the Kenai Peninsula Borough and the Kenai Recording District.

*Demographic Profile*³⁵¹

In 2010, there were 549 residents in Kasilof, ranking it as the 111th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population increased by 43.3% (Table 1). According to Alaska Department of Labor estimates, between 2000 and 2009, the population increased by 13.8%. The average annual growth rate during this period was -0.42%, reflecting declines in some years despite an overall increasing trend.³⁵² In 2010, the majority of Kasilof residents identified themselves as White (87.8%), along with 6.2% identifying as two or more races, and 4.2% as American Indian and Alaska Native. In addition, 2.4% of Kasilof residents identified themselves as Hispanic or Latino in 2010 (Figure 1).

Based on household surveys conducted for the U.S. Census, in 2010, the average household size in Kasilof was 2.37, a decrease from 3 persons per household in 1990 and 2.62 persons per household in 2000. The opposite trend was observed in total number of occupied housing units, which increased from 125 in 1990 to 180 in 2000, and continued increasing to 232 households by 2010. Of the 271 housing units surveyed in 2010, 72% were owner-occupied, 13.7% were rented, and 14.4% were vacant. A majority of the unoccupied housing units were vacant due to seasonal use (61.5%). In 1990, two individuals were reported to be living in group quarters in Kasilof. No residents of group quarters were reported in 2000 or 2010.

In 2010, the gender makeup in Kasilof was 53.2% male and 46.8% female, more weighted toward males than the population of the state as a whole, which was 52% male and 48% female. That year, the median age was estimated to be 44.5 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. Also in 2010, 8.9% of the Kasilof population was age 60 or older. The overall population structure of Kasilof in 2000 and 2010 is shown in Figure 2.

³⁵⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁵² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³⁵³ estimated that 100% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, no resident had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; no resident had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 52% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 3.1% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 11.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

Table 1. Population in Kasilof from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	383	-
2000	471	-
2001	-	451
2002	-	501
2003	-	560
2004	-	474
2005	-	510
2006	-	533
2007	-	577
2008	-	504
2009	-	536
2010	549	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

³⁵³ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 1. Racial and Ethnic Composition, Kasilof: 2000-2010 (U.S. Census).

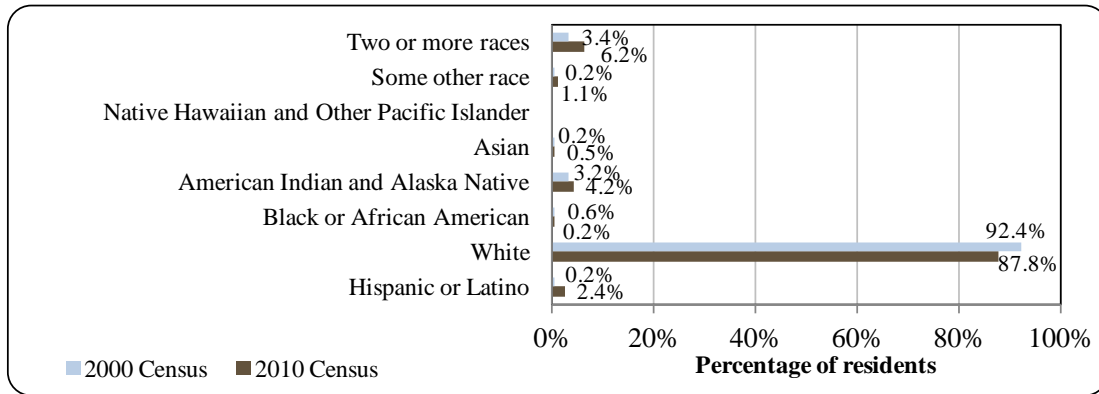
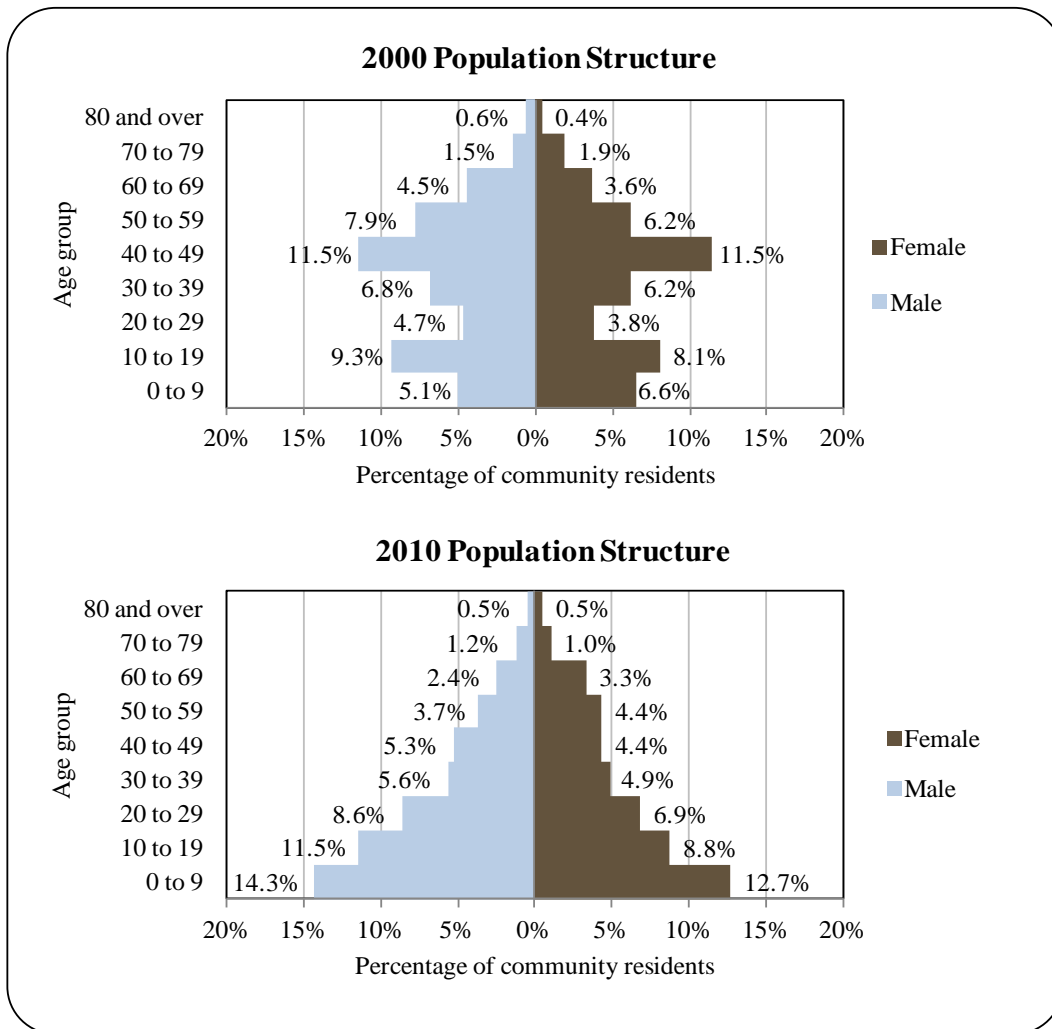


Figure 2. Population Age Structure in Kasilof Based on the 2000 and 2010 U.S. Decennial Census.



History, Traditional Knowledge, and Culture

According to archaeological evidence, the oldest aboriginal inhabitants of the Cook Inlet region were Riverine Kachemak Eskimos from approximately 1000 B.C. to 1000 A.D. At that time, there appears to have been a shift to inhabitation by Dena'ina Athabascan Indians throughout most of the inlet. This shift may have resulted from changes in climate that altered salmon abundance patterns. At the time of European contact, a Dena'ina settlement was located at Kasilof, and additional small seasonal camps were located along the Kasilof River and its tributaries.³⁵⁴ Kasilof itself is believed to have been an agricultural settlement of the Dena'ina. A partial excavation in 1937 found 31 well-preserved houses.³⁵⁵

Between 1786 and 1791, Russian fur traders came to the Kenai area and established settlements. The settlement at Kasilof grew after 1786, when a stockade was built at the mouth of the Kasilof River by one of the Russian trading companies, the Pavel S. Lebedev-Lastochkin Company.³⁵⁶ The fort was originally called Saint George after one of the ships in the company, and the area later came to be known as Kasilof after the name of the river.³⁵⁷ The Russians called the Dena'ina *Kenaitze*, which meant 'the people who live along the Kenai River', although the Kenaitze called themselves *Kahthuh'tana*, an Athabascan word meaning 'the people of the Kenai'.³⁵⁸

Commercial fisheries developed in the region after the 1867 purchase of Alaska by the U.S. Commercial harvest of salmon in Cook Inlet began in 1882,³⁵⁹ with the development of a cannery at the mouth of the Kasilof River.³⁶⁰ Around 1920 the fox farming industry arrived in Kasilof. Fashion and economic prosperity had created a great demand for fox fur and eight farms were built along the river. The river provided fish to feed the fox and transportation. During the dozen years of the fox farming boom the local families and bachelor farmers persuaded the Territorial government to help them build seven miles of road connecting their farms with the cannery. To go anywhere else required a boat ride in the warmer half of the year and a dogsled ride or long snowshoe hike in the winter. The fox farming industry waned with the onset of the Great Depression, and salmon fishing remained the foundation of the local economy. Homesteaders also relied on subsistence hunting, fishing, and gardening to supplement annual shipments of supplies from Seattle.³⁶¹

³⁵⁴ Fall, J.A., R.T. Stanek, B. Davis, L. Williams, and R. Walker. 2004. *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Final Report for Study No. FIS 03-045.

³⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵⁶ Cook, L., and F. Norris. 1998. *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

³⁵⁷ Kenai Peninsula Economic Development District. 2010. *Kenai Peninsula Borough Comprehensive Development Strategy*. Retrieved January 25, 2012 from <http://commerce.alaska.gov/ded/home.htm>.

³⁵⁸ Halliday, Jan. 1998. *Native Peoples of Alaska: A Traveler's Guide to Land, Art, and Culture*. Sasquatch Books, Seattle.

³⁵⁹ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

³⁶⁰ See footnote 354.

³⁶¹ Visit Kasilof Alaska. 2012. *Kasilof History*. Retrieved August 28, 2012 from http://www.visitkasilofalaska.com/kasilof/Articles_,038_Stories/Kasilof/.

The Native population of the Kasilof area was hard hit by a smallpox epidemic in 1838, when approximately 50% of Dena'ina people died from the disease. The Native population was hit again in the years 1918 and 1920 during the worldwide influenza epidemic.³⁶² Today, most Kasilof-area residents are non-Native.³⁶³

Natural Resources and Environment

Kasilof is located in a maritime climatic zone, dominated by the moderating effects of a marine environment and characterized by high humidity, precipitation and fog cover as well as warm winters and cool summers. Winter temperatures range from 14 to 27 °F and summer temperatures vary from 45 to 65 °F. Average annual precipitation is 24 inches.³⁶⁴

The Kasilof River drains 738 square miles of the Kenai Peninsula, from the steep Kenai Mountains and foothills through the lowlands past Tustumena Lake.³⁶⁵ Kasilof is located on coastal outwash plains dominated by low-lying wetlands. Lowland areas are generally poorly drained and support patches of black spruce and muskeg. Coastal areas consist of mudflats, sandy beaches, and steep bluffs.³⁶⁶

Recreation resources are abundant in the area and include sportfishing, camping, and clam digging. The Kasilof River, Crooked Creek, Johnson Lake, and Clam Gulch State Recreation Areas are valuable recreational resources. Fishermen use the Kasilof River and the adjacent shores of Cook Inlet intensively for sport and personal use. Much of the coastline in the area is lined with Shore Fishery Leases, along with sportfishing and personal-use setnetting and dipnetting. Salmon return to the Kasilof River and other area rivers, and additional freshwater fish species include rainbow trout and Dolly Varden. Razor clam digging is also popular along the coast. Moose, caribou, ducks, geese, and trumpeter swans all provide hunting opportunities. Demand for recreational use continues to grow, including a demand for more campgrounds and private lodging in the region.³⁶⁷ One boat launch near Kasilof, at the Kasilof River State Recreation Site, currently provides access to sportfishing in the Kasilof River. The Alaska Department of Natural Resources (DNR) Division of Parks and Outdoor Recreation, in cooperation with the Alaska Department of Fish and Game (ADF&G), is considering the addition of a second public boat launch ramp on the Lower Kasilof River to provide an exit point downriver and additional access to fishermen to fish the lower section of river.³⁶⁸ Also due to high demand for multiple uses of the Kasilof River corridor, state agencies are considering creation of a Kasilof River Special Use Area, which would provide protection for important natural resource values and enhance the opportunity for Alaskans to participate in available fishery programs and other forms of recreation.³⁶⁹

³⁶² See footnote 357.

³⁶³ See footnote 355.

³⁶⁴ Ibid.

³⁶⁵ HDR Alaska, Inc. 2008. *Lower Kasilof River Boat Launch Site Investigations. Final Report*. Prepared for Alaska Dept. of Natural Resources. Retrieved August 28, 2012 from <http://dnr.alaska.gov/parks/units/kasilof/lowerkasilofboatlaunchinvestigation.pdf>.

³⁶⁶ Alaska Dept. of Natural Resources. 2001. *Kenai Area Plan*. Retrieved February 7, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/master_KAP.pdf.

³⁶⁷ Ibid.

³⁶⁸ See footnote 365.

³⁶⁹ Alaska Dept. of Natural Resources. 2010. *Kasilof River Special Use Area, Draft Decision*. Retrieved August 30, 2012 from http://dnr.alaska.gov/mlw/kasilof/pdf/kas_sua_decision_draftm.pdf.

Protected areas near Kasilof currently include the Clam Gulch State Critical Habitat Area (CGSCHA), and Kenai National Wildlife Refuge (NWR). The mouth of the Kasilof River is located just north of the northern portion of the CGSCHA. The CGSCHA extends along the eastern shores of the Cook Inlet from Cape Kasilof to Happy Valley and is intended to protect the opportunity for the public to utilize the prolific razor clam beds along this section of coastline. In addition to razor clams, the area also serves as a critical habitat for many migratory waterfowl and shorebirds.³⁷⁰ The Kenai NWR covers 1.92 million acres of the Kenai Peninsula, half of which was designated as the Kenai Wilderness. The NWR was originally established by President Roosevelt in 1941 as the Kenai National Moose Range. In 1980, with the Alaska National Interest Lands Conservation Act (ANILCA), the name and purpose of the area were changed to manage all animal species as a NWR. All five salmon species return to rivers and lakes to spawn, and a full spectrum of sub-Arctic freshwater fish species are found in the NWR. In addition, terrestrial animals living in the NWR include moose, caribou, Dall sheep, mountain goat, black and brown bear, wolf, coyote, red fox, lynx, and many small mammals. The wood frog is the only amphibian found in the Kenai NWR.³⁷¹

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt, and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures, and soil liquefaction.³⁷² Other natural hazards that have also been identified as threats in the Kenai Peninsula Borough include flooding, wildfire, snow and avalanche, seiche, severe weather, erosion and drought.³⁷³

There are no active or proposed mineral development sites in the area, although coal beds exist throughout most of the western Kenai Peninsula.³⁷⁴ The oil and gas industry is active in the region, with a number of new wells being drilled each year both on the Kenai Peninsula and offshore in Cook Inlet. As of 2010, there were 28 producing oil and gas fields both on- and offshore. Cook Inlet oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.³⁷⁵

According to the Alaska Department of Environmental Conservation (DEC), no active environmental cleanup sites was located near Kasilof as of August 2012.³⁷⁶

³⁷⁰ Alaska Dept. of Fish and Game. 2012. *Clam Gulch – Critical Habitat Area*. Retrieved August 28, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=clamgulch.main>.

³⁷¹ U.S. Fish and Wildlife Service. 2011. *Kenai National Wildlife Refuge*. Retrieved January 26, 2012 from <http://kenai.fws.gov/>.

³⁷² Kenai Peninsula Borough. 2010. *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

³⁷³ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

³⁷⁴ Alaska Dept. of Commerce. (n.d.). *Mineral Resources of Alaska*. Retrieved February 8, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

³⁷⁵ Resource Development Council. (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

³⁷⁶ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy³⁷⁷

Top employers in Kasilof in 2010 included the school district, Central Peninsula Hospital (located 15 road miles away in Soldotna), and the State of Alaska.³⁷⁸ The surrounding Kenai area offers employment in diverse industries and services, including oil and gas processing, commercial and sportfishing, government, health care, retail business, and tourism.³⁷⁹

A large percentage of the local population is involved in commercial fishing activities. Between 2000 and 2010, the number of Kasilof residents with commercial crew licenses varied between 81 and 142 per year, equivalent to between 16% and 30% of the total local population. In 2000, 172 Kasilof residents held state Commercial Fisheries Entry Commission (CFEC) permits, equivalent to 36.5% of the total local population that year. The number of permit holders declined consistently during the 2000-2010 period, and by 2010 there were 137 permit holders, equivalent to 25% of the local population. A number of Kasilof residents also held federal permits and quota share accounts in the federal catch share halibut and sablefish fisheries (see *Commercial Fishing* section).

Based on household surveys conducted for the 2006-2010 ACS,³⁸⁰ in 2010, the per capita income in Kasilof was estimated to be \$40,307 and the median household income was estimated to be \$49,659. This high per capita income ranked Kasilof 10th of 305 Alaskan communities with per capita income data that year, while median household income ranked lower, at 133rd of 299 Alaskan communities with household income data. The 2010 per capita income estimate represents an increase from the per capita income reported in 2000 (\$21,211), with a smaller increase in median household income from the reported 2000 figure (\$43,929). If inflation is taken into account by converting the 2000 values to 2010 dollars,³⁸¹ a real increase in per capita income remains, from a real per capita income of \$27,892 in 2000. In contrast, a real decrease in median household income is revealed, from a real household income of \$57,766 in 2000.

However, Kasilof's small population size may have prevented the ACS from accurately portraying economic conditions.³⁸² An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Kasilof in 2010 is \$18,659.^{383,384}

³⁷⁷ Unless otherwise noted, all monetary data are reported in nominal values.

³⁷⁸ Kenai Peninsula Economic Development District. 2010. *Kenai Peninsula Borough Comprehensive Development Strategy*. Retrieved January 25, 2012 from <http://commerce.alaska.gov/ded/home.htm>.

³⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁸⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁸¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³⁸² While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁸³ See footnote 380.

This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Kasilof between 2000 and 2010. However, this per capita income estimate is confirmed given that as of 2010, the Denali Commission did not consider Kasilof a “distressed” community.³⁸⁵ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a larger percentage of Kasilof’s population (78.3%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). In the same year, 2.7% of Kasilof residents were estimated to be living below the poverty line in 2010, well below the percentage of Alaskan residents overall (9.5%). The unemployment rate was estimated to be 15.7% that year, over twice the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Kasilof in 2010 was 11.1%, close to a statewide unemployment rate estimate of 11.5%.³⁸⁶

Also based on the 2006-2010 ACS, a majority of the Kasilof workforce was estimated to work in the private sector (85.5%), along with 14.5% in the public sector. Of the 179 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in agriculture, forestry, fishing and hunting, and mining (31.8%), educational services, health care, and social assistance (22.9%), and construction (12.8%). Since 2000, the largest changes in employment were seen as increases in educational services/health care/social assistance (11.3% increase) and agriculture/forestry/fishing/hunting/mining (20.2%) increase. There was also a significant decrease in manufacturing jobs to zero and large decreases in arts/entertainment/recreation and retail trade. Further information about employment by industry and occupation is provided in Figures 3 and 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 248 employed residents in Kasilof in 2010, of which 20.2% were employed in trade, transportation, and utilities, 18.5% in natural resources and mining, 12.5% in education and health services, 10.1% in local government, 8.1% in construction, 6% in professional and business services, 5.6% in leisure and hospitality, 5.6% in state government, 4.4% in manufacturing, 4% in financial activities, 0.8% in information, 0.4% in unknown industries, and 3.6% in other industries.³⁸⁷ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

³⁸⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁸⁵ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

³⁸⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁸⁷ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Kasilof (U.S. Census).

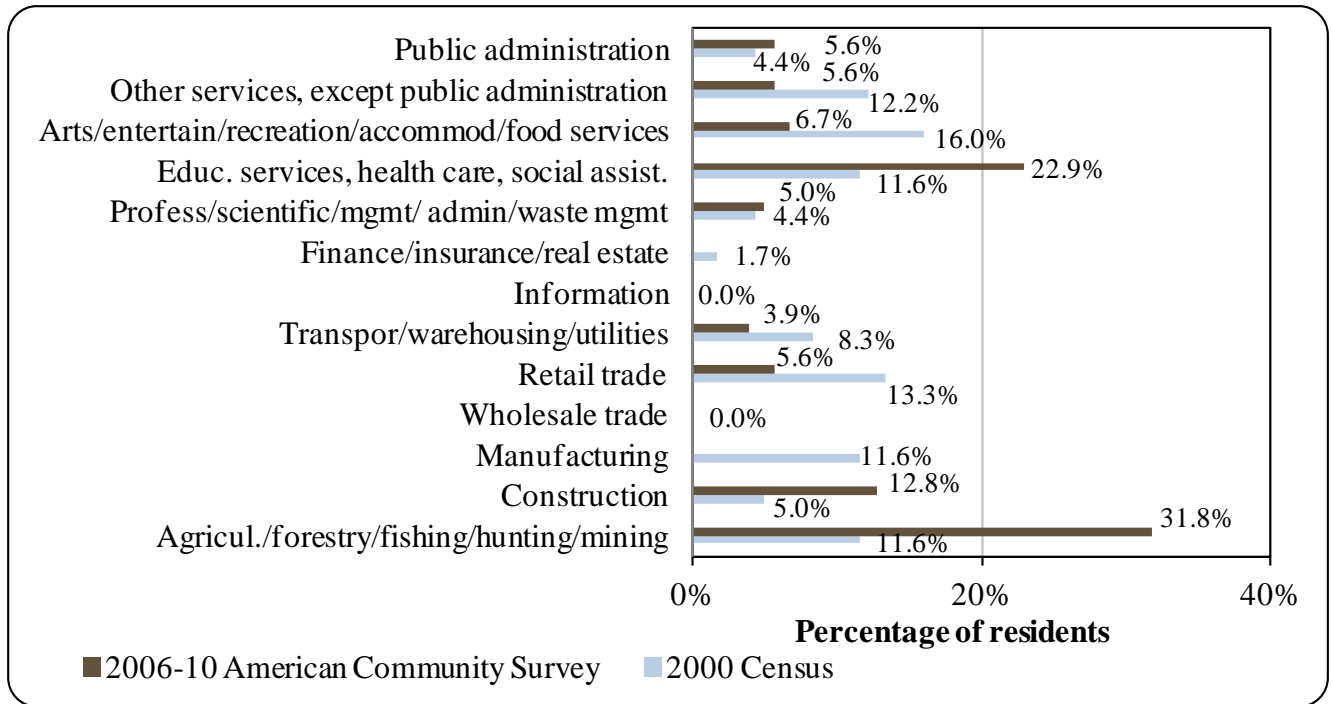
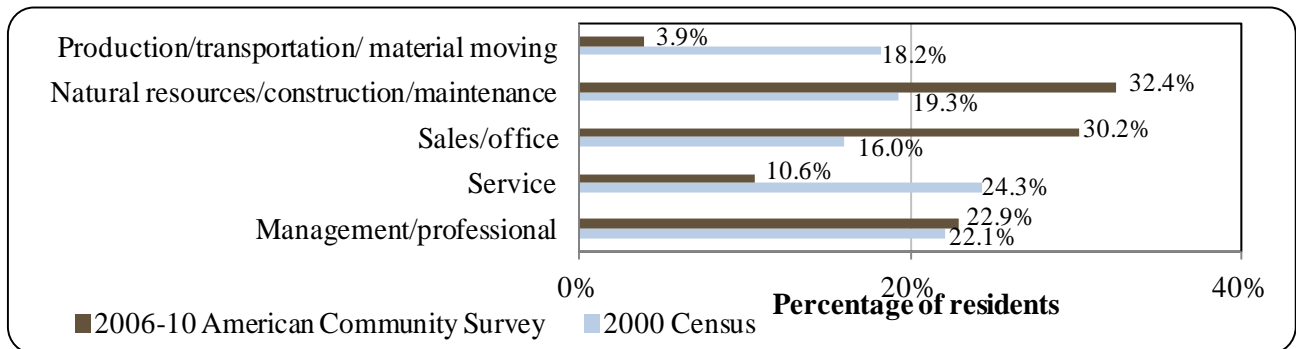


Figure 4. Local Employment by Occupation in 2000-2010, Kasilof (U.S. Census).



Governance

Kasilof is an unincorporated community located under the jurisdiction of the Kenai Peninsula Borough. The Borough administers a 3% sales tax and a 4.5 mills property tax locally.³⁸⁸ Given the lack of municipal government, no information is reported regarding municipal revenue sources (Table 2).

³⁸⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved January 24, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kasilof from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Kasilof was not included in the Alaska Native Claims Settlement Act and is not federally recognized as a Native village.³⁸⁹ The nearest offices of the ADF&G and DNR are located in Soldotna. The closest offices of the National Marine Fisheries Service (NMFS) are located in Homer and Anchorage. Anchorage also has the closest offices of the Alaska Department of Commerce, Community, and Economic Development and the U.S. Bureau of Citizenship and Immigration Services.

Infrastructure

Connectivity and Transportation

Kasilof lies on the Sterling Highway, which provides road access to Anchorage, 162 road miles to the north. The state owns and operates the 2,165 feet long by 40 feet wide gravel airstrip, and there are three additional private airstrips in the vicinity.³⁹⁰ The nearest airport with scheduled commercial service is approximately 20 road miles north in the City of Kenai. As of June 2012, roundtrip airfare from Anchorage to Kenai was \$171.³⁹¹ Kenai also offers docking

³⁸⁹ See footnote 388.

³⁹⁰ Ibid.

³⁹¹ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

facilities. At Kasilof, there is a boat launch on the Kasilof River,³⁹² and DNR is considering the addition of a second boat launch to facilitate sportfishing on the lower Kasilof River.³⁹³

Facilities

Centralized water and sewer services are not provided in Kasilof. A majority of homes use individual water wells and septic tanks and are fully plumbed. The school operates its own well water and treatment system. The community receives electricity from a hydroelectric facility operated by the Homer Electric Association, Incorporated. The Borough operates a refuse transfer site at mile 110.4 Sterling Highway near Kasilof, and a private company contracted by the Borough provides refuse collection services. Police services are provided by state troopers stationed in nearby Soldotna, and fire and rescue services are provided by Central Emergency Services, based in Soldotna.³⁹⁴ One of Central Emergency Services' six fire stations (Station 6) is located in Kasilof.³⁹⁵ Telephone service is available in Kasilof, but no internet or cable providers offered local service as of August 2012.³⁹⁶

With regard to sportfishing infrastructure, one public boat launch is located on the Kasilof River near the community of Kasilof, and the Alaska DNR is considering adding a second public ramp downriver to meet high demand for river access.³⁹⁷ Local commercial fisheries-related infrastructure consists of several seafood processing facilities are located in and near the community (see *Processing Plants* section).

Medical Services

The nearest medical facility is the Central Peninsula General Hospital, located 15 road miles from Kasilof in Soldotna. Emergency Services have highway and air access.³⁹⁸

Educational Opportunities

One elementary school (Kindergarten through 6th grade) is located in Kasilof. As of 2011, the Tustumena Elementary School had 163 students and 16 teachers.³⁹⁹

³⁹² See footnote 388.

³⁹³ HDR Alaska, Inc. October 2008. *Lower Kasilof River Boat Launch Site Investigations. Final Report*. Prepared for Alaska Dept. of Natural Resources. Retrieved August 28, 2012 from <http://dnr.alaska.gov/parks/units/kasilof/lowerkasilofboatlaunchinvestigation.pdf>.

³⁹⁴ See footnote 388.

³⁹⁵ Central Emergency Services website. 2011. *Fire Stations & Response Districts*. Retrieved August 29, 2012 from <http://www.cesfire.org/>.

³⁹⁶ See footnote 388.

³⁹⁷ See footnote 393.

³⁹⁸ See footnote 388.

³⁹⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Archaeological excavation at sites along the Kasilof River has provided evidence of salmon fishing by the Riverine Kachemak culture using a drift net technology used to harvest sockeye salmon runs. Closer to the time of the arrival of Europeans in Cook Inlet, the Dena'ina living along the River utilized a variety of subsistence foods from the land and the sea. Of these, salmon was the most critical resource, and all five species of Pacific salmon were used. In addition, freshwater species such as Dolly Varden were harvested using alder drag nets.⁴⁰⁰

Commercial fisheries developed in the region after the U.S. purchase of Alaska from Russia in 1867. Commercial harvest of salmon in Cook Inlet began in 1882,⁴⁰¹ with the development of a cannery at the mouth of the Kasilof River. An additional 17 canneries had been built in central Alaska by 1890.⁴⁰² Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁴⁰³ In the 1920s, herring had become increasingly valued for oil and meal, and a number of reduction plants were built. Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, a sizable spawning biomass of herring was found in western Cook Inlet, and Lower Cook Inlet also supported commercial fisheries for Dungeness, king, and Tanner crab. However, these local crab and a majority of herring fisheries are currently closed due to low stock abundance.^{404,405} If a sufficient biomass of herring is present in the Kamishak District of Cook Inlet, some sac roe harvest may be permitted.⁴⁰⁶

Today, ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, purse seine gear use is limited to the Chinita Bay sub-district, which is open

⁴⁰⁰ Fall, J.A., R.T. Stanek, B. Davis, L. Williams, and R. Walker. 2004. *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Final Report for Study No. FIS 03-045.

⁴⁰¹ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁴⁰² Cook, Linda, and Frank Norris. 1998. *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁴⁰³ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁴⁰⁴ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁴⁰⁵ Alaska Dept. of Fish and Game. 2012. *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

⁴⁰⁶ Hollowell, G., T. Otis, and E. Ford. July 2012. *2011 Lower Cook Inlet Finfish Management Report*. Retrieved September 7, 2012 from <http://www.sf.adfg.state.ak.us/FedAidPDFs/FMR12-30.pdf>.

only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.⁴⁰⁷

Groundfish and crab fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Cook Inlet is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch set by NMFS applied to both fisheries. Beginning in 1997, an additional “state-waters fishery” for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.⁴⁰⁸

The sandy beaches of lower Cook Inlet are one historical and current commercial clam harvest area. Littleneck and other hardshell clams (cockles and butter clams) are dug by hand shovel, and razor clams are dug with shovels and “guns”.⁴⁰⁹ Although Cook Inlet hosted shrimp fisheries in the past, beginning in 1997, commercial, sport and personal use fisheries for shrimp in Cook Inlet and adjacent coastal waters of the GOA were closed due to low abundance.⁴¹⁰ Shrimp permits held by Kasilof residents and actively fished in 2010 were held in the Prince William Sound pot fishery. The Prince William Sound spot shrimp (*Pandalus platyceros*) pot fisheries reopened that year after almost two decades of closure due to low abundance.⁴¹¹

Kasilof is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA Sablefish Regulatory District. The community is not eligible for the Community Quota Entity program. Kasilof is also not eligible to participate in the Community Development Quota program.

Processing Plants

According to ADF&G’s Intent to Operate list, between 2000 and 2010 a number of seafood processors were registered in Kasilof during at least some years of the period. These included a number of private fishing vessels and set net operations that marketed fish direct to consumers, and companies, including Ed’s Kasilof Seafoods, Inlet Fish Producers, Inc., and R&J Seafoods.

⁴⁰⁷ See footnote 401.

⁴⁰⁸ See footnote 404.

⁴⁰⁹ Ibid.

⁴¹⁰ Trowbridge, C. and K. Goldman. 2006. *2006 Review of Cook Inlet Area Commercial Fisheries for Dungeness Crab, Shrimp, and Misc. Shellfish Fisheries: Report to the Board of Fisheries*. Alaska Dept. of Fish and Game Special Pub. No. 06-09. Retrieved August 30, 2012 from www.adfg.alaska.gov/FedAidPDFs/sp06-09.pdf.

⁴¹¹ Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

Ed's Kasilof Seafoods is a family-owned and operated gourmet seafood company. The company purchases, processes and markets wild Alaska salmon, halibut, king crab, Dungeness crab, scallops, razor clams, and shrimp through the internet. In addition, the company offers custom processing.⁴¹²

Inlet Fish Producers, Inc. processes all five species of salmon in both its facilities (on the Kenai and Kasilof Rivers). The facilities operate from June to early September each year, with combined employment of 200 people each summer. Its Kasilof facility houses 60 fish processing workers.⁴¹³ According to a processor plant survey conducted by the AFSC in 2011, the plant on the Kasilof River began operations in 2003 and employed a maximum of 105 workers in 2010. From June through August a plant manager indicated that a large number of Inlet Fish Producer's employees are international students on J-1 visas.

Between 1979 and 2010, R&J Seafoods LLC was a small family run and operated fish processing company in Kasilof. It sold halibut, king crab, salmon (Chinook, sockeye, coho), prawns, and scallops on the internet. The company began in 1979 and assumed the name R&J Seafoods in 1983. As of 2012, the company is no longer in operation.⁴¹⁴

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by the community of Kasilof (Table 3).

Commercial Fishing

Commercial fishing is an important industry within Kasilof's diversified economy. In 2010, 105 Kasilof residents held commercial fishing crew permits, 90 fishing vessels were primarily owned by residents, 105 vessels were registered as homeported in Kasilof, and 56 vessels landed catch in the community. These numbers represent declines from the year 2000, when 142 residents held crew licenses, 132 vessels were primarily owned by residents, and 122 vessels were registered as homeported in Kasilof. The number of fish buyers present in the community fluctuated between 1 and 16 per year between 2000 and 2010, while the number of shore-side processors varied between 2 and 5. In 2010, fisheries landings totaled 1,475,562 net pounds for a total ex-vessel revenue of \$2,281,591, a sizeable increase from landings and revenues reported in earlier years during the 2000-2010 period. Total landings and ex-vessel revenue are considered confidential in some years due to the small number of fish buyers (Table 5). In 2010, Kasilof ranked 36th in total landings volume of 67 Alaskan ports that received commercial fisheries landings that year, and 34th in total ex-vessel revenue.

Between 2000 and 2010, the number of Kasilof residents holding state-issued CFEC permits declined from 172 to 137, and the total number of CFEC permits held fell from 223 to 186. In 2010, the greatest number of permits was held in fisheries for salmon (138 permits; 74%

⁴¹² Ed's Kasilof Seafoods. 2008. *Home and Seafood*. Retrieved August 29, 2012 from <http://www.kasilofseafoods.com/>.

⁴¹³ Inlet Fish Producers, Inc. 2008. *Home and Jobs*. Retrieved August 29, 2012 from <http://inletfish.com/>.

⁴¹⁴ According to a personal communication with an employee at Tanner's Fresh Fish Processing on August 29, 2012, R&J Seafoods operated until 2010. After that time, Tanner's Fresh Fish Processing, based in Ninilchik, AK, purchased the old R&J Seafoods website: <http://www.rjseafoods.com/profile.htm>. See Ninilchik's community profile for more information about Tanner's Fresh Fish Processing.

of total CFEC permits in 2010), herring (27 permits; 14.5%), and halibut (14 permits; 7.5%). CFEC permits were also held in fisheries for ‘other shellfish’ and groundfish in 2010, and permits were held in earlier years of the 2000-2010 period in sablefish and crab fisheries. Information about CFEC permits is presented in Table 4, and further details regarding these permits are included below.

Of the 138 salmon CFEC permits held in 2010, a majority were held for the Cook Inlet set gillnet fishery (85 permits; 60% of all salmon permits in 2010) and the Cook Inlet drift gillnet fishery (30 permits; 24.5%). In addition, 4 permits were held in the Bristol Bay set gillnet fishery, 3 in the Prince William Sound set gillnet fishery, and 1 or 2 permits each were held in purse seine fisheries in Cook Inlet, Kodiak, Prince William Sound, and Chignik, the beach seine fishery in Kodiak, the drift gillnet fishery in Bristol Bay, and the Kotzebue gillnet fishery. Of all salmon permits, 94 (68%) were actively fished in 2010. The number of salmon permit holders and total salmon permits held decreased between 2000 and 2010, while the percentage of salmon permits that were actively fished remained relatively stable over the period.

Of the 27 herring CFEC permits held in Kasilof in 2010, the greatest number (13) were held in the Cook Inlet roe herring gillnet fishery, while 5 were held in the Kodiak roe herring gillnet fishery, and 1 or 2 permits were each held in roe herring purse seine fisheries in Prince William Sound, Bristol Bay, Kodiak, and Southeast Alaska, as well as Norton Sound herring gillnet and the Cook Inlet herring roe and food/bait purse seine fishery. That year, the three herring fisheries in which at least one permit was actively fished included the Bristol Bay and Southeast Alaska roe herring purse seine fisheries (1 permit actively fished in each) and the Cook Inlet roe herring fishery (7 permits actively fished in 2010). The number of herring permit holders and total herring permits decreased slightly between 2000 and 2004, and then rebounded to close to 2000 levels by 2010. The percentage of herring permits that were actively fished each year followed a similar pattern.

Of the 14 halibut CFEC permits held in Kasilof in 2010, all but 1 were held in the statewide long line fishery, using vessels under 60 feet in length, and the additional permit was held in the statewide halibut hand troll fishery. The hand troll permit was not actively fished in 2010, while 10 of 13 longline permits were actively fished. The number of halibut permit holders and the total number of halibut permits held per year decreased by almost half between 2000 and 2010, while the percentage of halibut permits actively fished each year remained relatively stable, varying between 59% and 81% per year, and not following a consistent trend over time.

Other CFEC permits held in 2010 included five ‘other shellfish’ permits and two groundfish permits. Activity in ‘other shellfish’ fisheries increased over the 2000-2010 period and shifted in species focus. One clam shovel permit was held in 2000 only, and one shrimp beam trawl permit was held in 2002, 2003, and 2005. Southeast geoduck and sea cucumber permits were first held by a Kasilof resident in 2007, and in 2010 three Prince William Sound shrimp permits were acquired, for use with pot gear fisheries. The number of groundfish permits decreased substantially from 2000 to 2010. In 2000, nine permits were held in fisheries including lingcod longline and miscellaneous saltwater finfish using a variety of gear, such as gillnet, longline, mechanical jig, and pot gear. By 2010, the two remaining groundfish CFEC permits were held for miscellaneous saltwater finfish using mechanical jig gear.

Although no crab or sablefish CFEC permits were held by Kasilof residents in 2010, it is important to note that a permit was held for king crab in 2000, 2001, and 2002, and a Tanner crab permit was held in 2005 and 2006. The king crab permit was not fished in any of the three years, and the Tanner crab was actively fished in 2005 only. At least one sablefish permit was

held by a Kasilof resident in 2000, 2001, 2002, and 2006, and one sablefish permit was actively fished from 2000-2002.

In addition to CFEC permits, in 2010, Kasilof residents held 14 federal License Limitation Program (LLP) permits (12 held for groundfish and 2 held for crab) and 6 Federal Fisheries Permits (FFP). Two groundfish LLPs and one FFP were actively fished in 2010, and no crab LLPs were actively fished that year. Numbers of groundfish and crab LLP permits remained relatively stable between 2000 and 2010, while the number of FFPs declined substantially over the period. Interestingly however, a larger number of FFPs was actively fished later in the 2000-2010 period despite the smaller overall number of FFPs held. This information about federal permits is also presented in Table 4.

In 2000, there were 28 halibut quota share account holders residing in Kasilof, declining to 16 by 2010. Total quota shares held decreased from 1,117,228 to 865,694 over the same period. The annual halibut individual fishing quota (IFQ) allotment fluctuated from year to year, rising to a value 42% higher than the 2000 level in 2007, and falling to only 8% above the 2000 share value by 2010. In 2000, three sablefish quota share account holders resided in Kasilof, increasing to four per year between 2001 and 2010. The total quota shares held remained constant throughout the 2000-2010 period at 2,422. Sablefish IFQ allotment increased from 2000 to 2004 to 27.5% higher than the 2000 level, and then decreased to approximately 21% below 2000 levels by 2010. No quota share accounts or quota shares were held by Kasilof residents in federal crab catch share fisheries between 2005 and 2010. This information about federal catch share participation is presented in Tables 6 through 8.

Total landings and ex-vessel revenue generated in Kasilof are reported between 2000-2010 in Table 5. However, when considering landings in Kasilof in individual fisheries, much of the information is considered confidential due to the small number of participants. Salmon landings can be reported for 2001-2003, 2007-2008, and 2010 only. On average for these years in which landings were reported (not including 2003 and 2007 in which no salmon were delivered in Kasilof), 1,071,131 net pounds of salmon were landed, valued on average at \$1,109,939 per year (Table 9).

In addition to landings delivered in Kasilof, data are reported regarding total landings and revenue generated by Kasilof vessel owners, including all delivery locations. Again, much of the data is considered confidential due to the small number of participants in each individual fishery. Data can be reported in all years of the 2000-2010 period for salmon, and in some years for halibut, herring, 'other shellfish' and Pacific cod. Between 2000 and 2010, Kasilof vessel owners landed an average of 4,019,899 net pounds of salmon, valued at an average of \$1,547,398 in ex-vessel revenue. For those years in which data can be reported, Kasilof vessel owners also landed 1,408,948 net pounds of herring, 126,945 net pounds of halibut, 31,094 net pounds of Pacific cod, and 9,895 net pounds of groundfish, valued on average at \$192,951, \$343,236, \$7,688, and \$5,330, respectively. Landings and revenue by Kasilof vessel owners in 'other shellfish' fisheries were reported in 2010 only, when 47,367 net pounds were landed for an ex-vessel value of \$276,394. Information about landings and ex-vessel revenue generated by Kasilof vessel owners, irrespective of delivery location, is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kasilof: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kasilof: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	12	12	15	15	15	15	15	14	13	13	13
	Active permits	4	4	3	1	3	3	3	2	2	2	2
	% of permits fished	33%	33%	20%	6%	20%	20%	20%	14%	15%	15%	15%
	Total permit holders	11	11	14	14	14	14	14	13	12	12	12
Crab (LLP) ¹	Total permits	1	1	2	2	2	2	2	2	2	2	2
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	2	2	2	2	2	2	2	2	2
Federal Fisheries Permits ¹	Total permits	21	21	21	11	11	11	9	9	9	6	6
	Fished permits	0	0	0	1	0	0	2	2	2	1	1
	% of permits fished	0%	0%	0%	9	0%	0%	22	22	22	17	17
	Total permit holders	20	20	20	10	10	10	8	8	8	6	6
Crab (CFEC) ²	Total permits	1	1	1	0	0	1	1	0	0	0	0
	Fished permits	0	0	0	0	0	1	0	0	0	0	0
	% of permits fished	0%	0%	0%	-	-	100%	0%	-	-	-	-
	Total permit holders	1	1	1	0	0	1	1	0	0	0	0
Other shellfish (CFEC) ²	Total permits	1	0	1	1	0	1	1	2	2	2	5
	Fished permits	0	0	1	1	0	1	1	2	2	2	4
	% of permits fished	0%	0%	100%	100%	-	100%	100%	100%	100%	100%	80%
	Total permit holders	1	0	1	1	0	1	1	1	1	1	4
Halibut (CFEC) ²	Total permits	22	21	20	18	21	20	20	19	16	17	14
	Fished permits	14	12	12	13	16	12	16	14	13	10	10
	% of permits fished	64%	57%	60%	72%	76%	60%	80%	74%	81%	59%	71%
	Total permit holders	22	19	19	17	20	19	19	18	15	16	13
Herring (CFEC) ²	Total permits	31	26	30	23	20	21	23	26	26	24	27
	Fished permits	13	11	12	4	5	9	9	9	7	7	9
	% of permits fished	42%	42%	40%	17%	25%	43%	39%	35%	27%	29%	33%
	Total permit holders	25	22	24	18	16	17	19	21	20	18	21

Table 4 cont'd. Permits and Permit Holders by Species, Kasilof: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	2	0	0	0	1	0	0	0	0
	Fished permits	1	1	1	0	0	0	0	0	0	0	0
	% of permits fished	100%	100%	50%	-	-	-	0%	-	-	-	-
	Total permit holders	1	1	2	0	0	0	1	0	0	0	0
Groundfish (CFEC) ²	Total permits	9	9	8	5	4	8	4	4	4	2	2
	Fished permits	2	2	2	1	1	0	1	0	1	1	0
	% of permits fished	22%	22%	25%	20%	25%	0%	25%	0%	25%	50%	0%
	Total permit holders	9	9	7	5	4	8	4	4	4	2	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	163	162	162	155	162	155	144	141	132	128	138
	Fished permits	122	116	116	117	121	117	108	98	97	90	94
	% of permits fished	75%	72%	72%	75%	75%	75%	75%	70%	73%	70%	68%
	Total permit holders	162	167	165	153	159	147	139	137	129	123	130
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>228</i>	<i>220</i>	<i>224</i>	<i>202</i>	<i>207</i>	<i>206</i>	<i>194</i>	<i>192</i>	<i>180</i>	<i>173</i>	<i>186</i>
	<i>Fished permits</i>	<i>152</i>	<i>142</i>	<i>144</i>	<i>136</i>	<i>143</i>	<i>140</i>	<i>135</i>	<i>123</i>	<i>120</i>	<i>110</i>	<i>117</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>65%</i>	<i>64%</i>	<i>67%</i>	<i>69%</i>	<i>68%</i>	<i>70%</i>	<i>64%</i>	<i>67%</i>	<i>64%</i>	<i>63%</i>
	<i>Permit holders</i>	<i>172</i>	<i>178</i>	<i>174</i>	<i>161</i>	<i>168</i>	<i>160</i>	<i>148</i>	<i>148</i>	<i>140</i>	<i>131</i>	<i>137</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kasilof: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kasilof ²	Total Net Pounds Landed in Kasilof ^{2,5}	Total Ex-Vessel Value of Landings in Kasilof ^{2,5}
2000	142	3	4	132	122	26	-	-
2001	106	8	4	126	122	45	844,654	\$521,986
2002	81	16	3	122	113	23	1,050,463	\$519,280
2003	112	0	3	113	114	0	-	-
2004	122	6	5	110	114	17	264,636	\$192,838
2005	105	1	3	86	97	0	-	-
2006	110	1	3	88	100	0	-	-
2007	105	0	3	86	100	0	-	-
2008	113	13	3	85	101	70	960,990	\$1,130,941
2009	99	3	2	85	101	126	-	-
2010	105	14	2	90	105	56	1,475,562	\$2,281,591

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kasilof: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	28	1,117,288	111,407
2001	23	1,034,412	122,549
2002	22	1,034,839	126,734
2003	21	1,077,419	131,906
2004	23	983,038	133,337
2005	23	985,176	135,842
2006	23	959,048	130,800
2007	21	958,316	135,785
2008	18	1,027,739	134,550
2009	17	1,007,346	118,135
2010	16	865,694	93,504

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kasilof: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	3	2,422	219
2001	4	2,472	211
2002	4	2,472	212
2003	4	2,472	251
2004	4	2,472	285
2005	4	2,472	283
2006	4	2,472	248
2007	4	2,472	241
2008	4	2,472	214
2009	4	2,472	194
2010	4	2,472	176

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kasilof: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kasilof: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	823,774	1,024,388	-	-	-	-	-	960,799	-	1,475,562
<i>Total²</i>	-	823,774	1,024,388	-	264,636	-	-	-	960,799	-	1,475,562
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	\$509,061	\$518,178	-	-	-	-	-	\$1,130,927	-	\$2,281,591
<i>Total²</i>	-	\$509,061	\$518,178	-	\$192,838	-	-	-	\$1,130,927	-	\$2,281,591

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kasilof Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	140,660	116,176	165,152	135,443	108,125	-	96,114	-	-	-	-
Herring	573,005	1,526,601	865,387	-	-	1,333,874	-	1,556,738	1,848,174	1,962,657	1,605,151
Other Groundfish	3,117	2,567	27,769	6,127	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	46,367
Pacific Cod	10,284	65,668	46,565	-	1,860	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	2,641,616	2,886,700	3,758,694	3,933,029	3,726,063	5,851,913	3,308,504	6,916,108	3,784,205	2,220,262	5,191,795
<i>Total²</i>	<i>3,368,682</i>	<i>4,597,712</i>	<i>4,863,567</i>	<i>4,074,599</i>	<i>3,836,048</i>	<i>7,185,787</i>	<i>3,404,618</i>	<i>8,472,846</i>	<i>5,632,379</i>	<i>4,182,919</i>	<i>6,844,313</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$360,457	\$232,328	\$369,226	\$394,374	\$329,929	-	\$373,101	-	-	-	-
Herring	\$85,127	\$224,583	\$114,667	\$85,127	-	\$134,848	-	\$184,053	\$172,339	\$444,881	\$183,113
Other Groundfish	\$2,059	\$1,172	\$13,900	\$4,188	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	\$276,394
Pacific Cod	\$4,247	\$16,432	\$9,852	-	\$221	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$1,083,930	\$851,276	\$988,538	\$943,783	\$1,399,561	\$1,900,846	\$1,255,147	\$2,249,549	\$1,982,463	\$1,267,388	\$3,098,895
<i>Total²</i>	<i>\$1,535,820</i>	<i>\$1,325,791</i>	<i>\$1,496,184</i>	<i>\$1,342,345</i>	<i>\$1,729,710</i>	<i>\$2,035,694</i>	<i>\$1,628,248</i>	<i>\$2,433,602</i>	<i>\$2,154,802</i>	<i>\$1,712,268</i>	<i>\$3,558,402</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Kasilof River provides excellent sportfishing opportunities near Kasilof, as well as other area rivers such as the Kenai, Russian, and Ninilchik Rivers, and Crooked Creek. The tideland and lower units of the Kasilof River are heavily used for sportfishing. Razor clam digging is also popular along the coast. There is limited access for boats to launch along the Kasilof River, with only one public ramp near Kasilof. Increasing demand for additional access has led the Alaska DNR to consider addition of a second boat launch/take-out downriver.^{415,416,417}

A large number of licensed sport fish guides were present in Kasilof between 2000 and 2010, varying between 29 and 33 guides per year registered in the community. In addition, there were between 4 and 10 active guide businesses per year in Kasilof over the decade. Kasilof residents participated heavily in sportfishing activity, purchasing between 984 and 1,233 licenses per year (irrespective of point of sale). The number of sport fish licenses purchased in Kasilof was lower than the number sold to residents in some years and higher in others, varying between 692 and 2,078 per year. The fact that a greater number of licenses was sold in Kasilof than to Kasilof residents in some years supports the fact that sportfishing is a local tourism draw to the region.

Kasilof is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, saltwater and freshwater sportfishing at this regional level was substantial. In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska resident logged 20,292 saltwater angler days and 71,555 freshwater angler days.

The Alaska Statewide Harvest Survey,⁴¹⁸ conducted by ADF&G between 2000 and 2010, noted the species known to be targeted by private anglers in Kasilof. In freshwater, anglers targeted Chinook, coho, sockeye, and pink salmon, rainbow trout, Dolly Varden, Arctic grayling, and northern pike. In saltwater, anglers pursued the same salmon species listed above, as well as Dolly Varden, Pacific halibut, rockfish, lingcod, and Pacific cod. The survey also noted sport harvest of Tanner crab, razor clams, hardshell clams, and shrimp by Kasilof residents.⁴¹⁹

Despite the high number of sport fish guide businesses located in Kasilof, no kept/release log book data were reported for fishing charters out of Kasilof between 2000 and 2010.⁴²⁰

⁴¹⁵ Alaska Dept. of Natural Resources. Sept. 2010. *Kasilof River Special Use Area, Draft Decision*. Retrieved August 30, 2012 from http://dnr.alaska.gov/mlw/kasilof/pdf/kas_sua_decision_draftm.pdf.

⁴¹⁶ HDR Alaska, Inc. October 2008. *Lower Kasilof River Boat Launch Site Investigations. Final Report*. Prepared for Alaska Dept. of Natural Resources. Retrieved August 28, 2012 from <http://dnr.alaska.gov/parks/units/kasilof/lowerkasilofboatlaunchinvestigation.pdf>.

⁴¹⁷ Alaska Dept. of Natural Resources. 2001. *Kenai Area Plan*. Retrieved February 7, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/master_KAP.pdf.

⁴¹⁸ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴¹⁹ The Alaska Statewide Harvest Survey includes separate categories for Dungeness crab, Tanner crab, razor clams, hardshell clams and shrimp. Remaining species fall into the ‘other shellfish’ category.

⁴²⁰ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Kasilof: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kasilof ²
2000	4	31	1,000	692
2001	5	33	984	820
2002	4	31	1,038	802
2003	4	32	1,016	824
2004	3	30	1,036	848
2005	8	29	1,049	793
2006	6	30	1,118	1,988
2007	9	33	1,116	2,078
2008	10	31	1,148	2,009
2009	6	29	1,233	1,902
2010	6	31	1,134	1,746

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Kasilof is located in the historic territory of the Kenaitze people, a branch of Athabascan Dena'ina Indians. The Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.⁴²¹ Today, a majority of Kasilof residents are non-Native. Many residents participate in personal use set net and dip net fisheries at the mouth of the Kasilof River. These fisheries, managed by ADF&G, are only available to Alaskan residents and were initiated as an alternative to subsistence fishing and originally used as a management tool to harvest the surplus of salmon stocks not harvested by the commercial or sport fisheries. Sockeye salmon is the primary harvest for both of the personal use fisheries, with a limited number of Chinook salmon taken from the personal use set gillnet fishery.⁴²²

No information was reported by ADF&G regarding per capita subsistence harvest or the percentage of households in Kasilof utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, information was reported during the 2000-2010 period regarding subsistence harvest of salmon and halibut. Between 2000 and 2008, the number of subsistence salmon permits issued to Kasilof households varied between 3 and 11. Based on reported harvests, on average, sockeye was the most heavily harvested salmon species. Smaller harvest of other salmon species were also reported in some years. Information about subsistence salmon harvest is presented in Table 13.

Between 2003 and 2010, an average of 10 Subsistence Halibut Registration Certificates (SHARC) were issued to residents of Kasilof. Of these, an average of 5 SHARC cards were fished, with an average subsistence halibut harvest of 2,015 pounds per year. The highest reported harvest of halibut during the period occurred in 2004, when 5 SHARC cards were fished and a total of 4,140 pounds of halibut were harvested. Information about subsistence harvest of halibut is presented in Table 14.

No information was reported regarding total harvest of marine invertebrates and non-salmon fish in Kasilof between 2000 and 2010 (Table 13), and no information was reported about subsistence harvest of marine mammals during the period (Table 15).

⁴²¹ Kenaitze Indian Tribe. (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

⁴²² Alaska Dept. of Natural Resources. Sept. 2010. *Kasilof River Special Use Area, Draft Decision*. Retrieved August 30, 2012 from http://dnr.alaska.gov/mlw/kasilof/pdf/kas_sua_decision_draftm.pdf.

Table 12. Subsistence Participation by Household and Species, Kasilof: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kasilof: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	7	6	4	7	n/a	27	33	n/a	n/a
2001	3	6	6	n/a	n/a	n/a	24	n/a	n/a
2002	3	7	n/a	n/a	n/a	n/a	70	n/a	n/a
2003	3	3	n/a	n/a	n/a	n/a	25	n/a	n/a
2004	7	7	3	n/a	22	n/a	29	n/a	n/a
2005	5	5	n/a	n/a	10	n/a	26	n/a	n/a
2006	10	10	15	n/a	n/a	n/a	351	n/a	n/a
2007	11	11	11	n/a	n/a	n/a	387	n/a	n/a
2008	7	7	6	7	9	35	46	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kasilof: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	8	n/a	n/a
2004	9	5	4,140
2005	7	1	1,097
2006	9	2	605
2007	11	10	2,797
2008	12	9	2,772
2009	13	3	629
2010	13	6	2,065

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kasilof: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kenai (KEY-nigh)



People and Place

*Location*⁴²³

Kenai is located on the west coast of the Kenai Peninsula, on the eastern shore of Cook Inlet at the mouth of the Kenai River. It lies approximately 11 miles off the Sterling Highway on the Kenai Spur Highway, approximately 155 highway miles (65 air miles) southwest of Anchorage. The City is near the western boundary of the Kenai National Wildlife Refuge. It is located in the Kenai Peninsula Borough and the Kenai Recording District. The area encompasses 29.9 square miles of land and 5.6 square miles of water.

*Demographic Profile*⁴²⁴

In 2010, there were 7,100 residents in Kenai, ranking it as the 14th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population increased by 12.2%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 2.5%, with an average annual growth rate of -0.08%.⁴²⁵ The negative average annual growth rate indicates that, despite a slow overall increase in population, there were declines in population in some years during this period.

In 2010, a majority of Kenai residents identified themselves as White (79.9%), while 8.9% identified themselves as American Indian and Alaska Native, 7.9% identified as two or more races, and smaller percentages of residents identified as Black or African American, Asian, Native Hawaiian and Other Pacific Islander, and individuals of 'some other race'. In addition, 4.5% of Kenai residents identified themselves as Hispanic or Latino in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Kenai decreased very slightly between 1990 and 2010, from 2.7 in 1990 to 2.64 in 2000, to 2.51 by 2010. The opposite was true of total households, with 2,329 occupied housing units in 1990, increasing to 2,622 in 2000 and 2,809 in 2010. Of the 3,166 housing units surveyed for the 2010 U.S. Census, 53.2% were owner-occupied, 35.6% were rented, and 11.3% were vacant. Of these vacant housing units, 29.1% were vacant due to seasonal use. The population of individuals living in group quarters in Kenai increased from 25 in 1990 to 54 in 2010.

⁴²³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴²⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴²⁵ Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

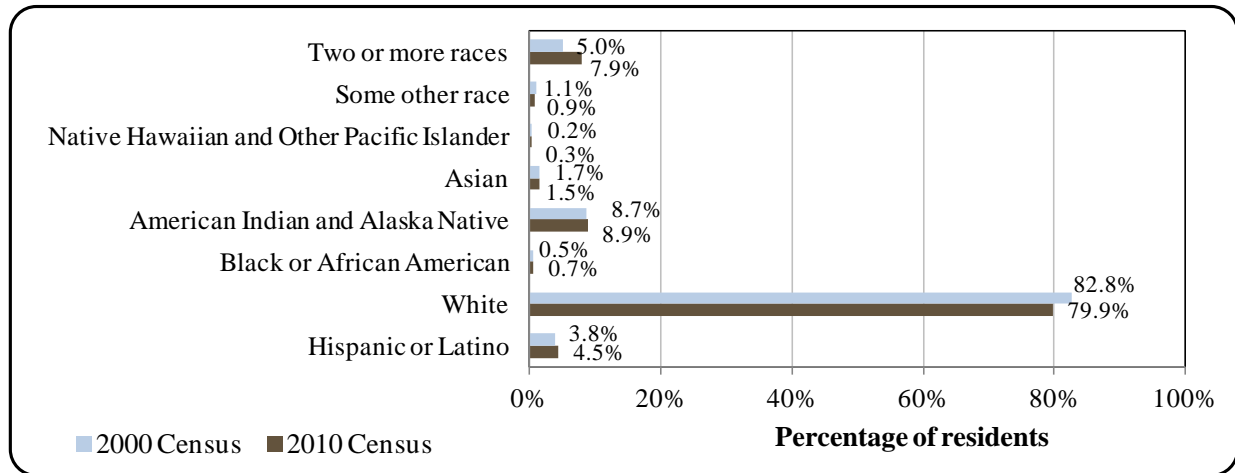
Table 1. Population in Kenai from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	6,327	-
2000	6,942	-
2001	-	6,888
2002	-	7,077
2003	-	7,130
2004	-	6,845
2005	-	6,779
2006	-	6,797
2007	-	6,913
2008	-	7,068
2009	-	7,115
2010	7,100	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

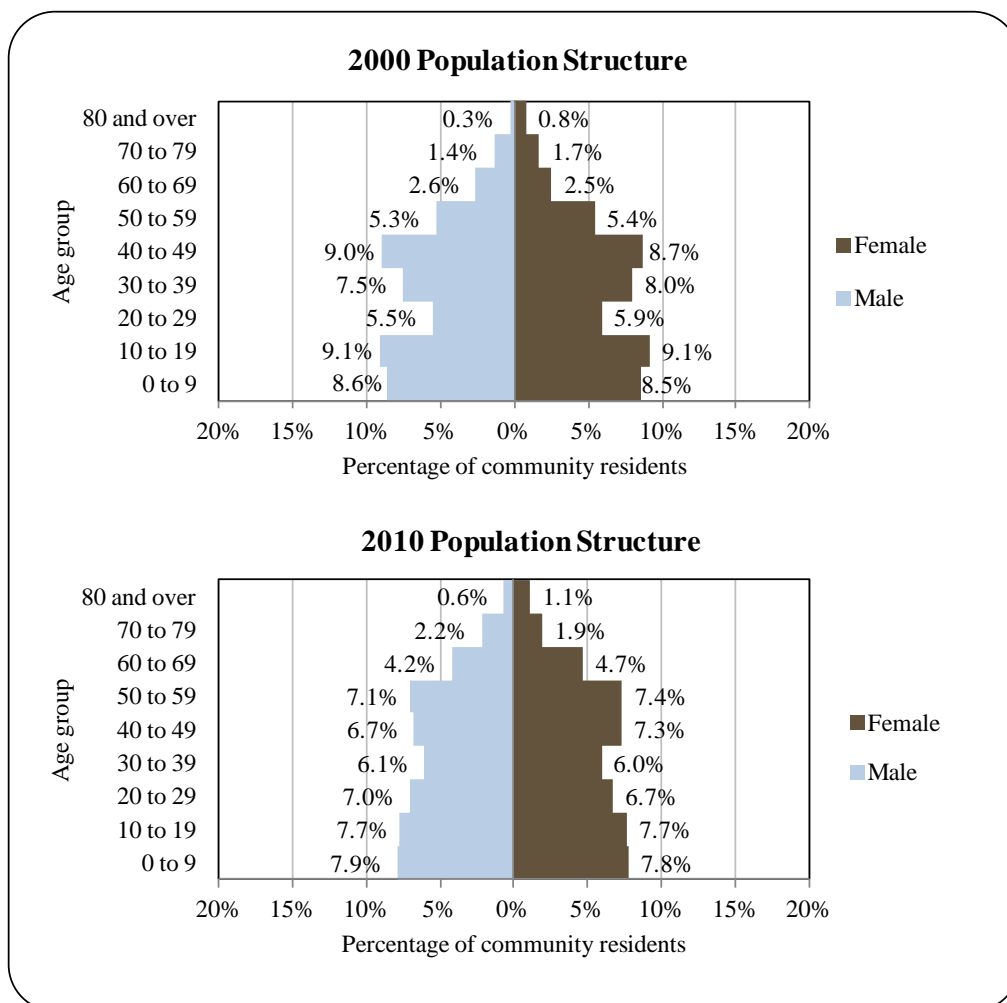
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kenai: 2000-2010 (U.S. Census).



In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)⁴²⁶ estimated that 91.6% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 1.3% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 7.1% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 28.1% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 11.9% of resident held a Bachelor’s degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 6.1% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

Figure 2. Population Age Structure in Kenai Based on the 2000 and 2010 U.S. Decennial Census.



⁴²⁶ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

According to archaeological evidence, the oldest aboriginal inhabitants of the Cook Inlet region were Riverine Kachemak Eskimos from approximately 1000 B.C. to 1000 A.D. At that time, there appears to have been a shift to inhabitation by Dena'ina Athabascan Indians throughout most of the inlet. This shift may have resulted from changes in climate that altered salmon abundance patterns.⁴²⁷ When Russian fur traders arrived in the region in 1741, approximately 1,000 Dena'ina people lived in a village at the site of Kenai known as Shk'ituk't,⁴²⁸ and many small seasonal camps were located along the Kenai River and its tributaries.⁴²⁹ The Russians called the Dena'ina *Kenaitze*, which meant 'the people who live along the Kenai River', although the Kenaitze called themselves *Kahthuht'ana*, an Athabascan word meaning 'the people of the Kenai'.⁴³⁰ Early hostilities between the Russian settlers and the Native inhabitants led the Dena'ina to attack the Fort in 1797 in the Battle of Kenai, resulting in 100 deaths.⁴³¹

The Dena'ina population was decimated by disease in the 1800s and 1900s, and after the flu epidemic of 1919, much of the remaining population consolidated in what was then the village of Kenai. Natives living in the village of Kenai maintained ties to historical village sites, camps, and traplines in the interior through the 1930s and 1940s. Many had summer residences in Kenai and during winter moved to homes along the upper Kenai River.⁴³²

In 1791, Russian fur traders built a fortified trading post at Kenai called Fort St. Nicholas. Soon after the U.S. purchased Alaska from Russia in 1867, the U.S. Military took over the fort, calling it Fort Kenay. A U.S. post office was established in Kenai in 1899. The commercial fishing industry provided an early economy in the region, and continued to be important as other industries grew. Opportunities for homesteading were opened in the 1940s, and the population of the area began to grow. The first dirt road connecting Kenai to Anchorage was completed in 1951. The first oil strike took place in 1957 at Swanson River, 20 miles northeast of Kenai, and the first discovery of offshore oil took place in 1965. The City of Kenai was incorporated in 1960.^{433,434}

Natural Resources and Environment

The City of Kenai is located at the mouth of the Kenai River, which empties into Cook Inlet. The Kenai River drains more than 2,000 square miles, from the glaciers and icefields of the

⁴²⁷ Fall, J.A., R.T. Stanek, B. Davis, L. Williams, and R. Walker. 2004. *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Final Report for Study No. FIS 03-045.

⁴²⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴²⁹ See footnote 427.

⁴³⁰ Halliday, Jan. 1998. *Native Peoples of Alaska: A Traveler's Guide to Land, Art, and Culture*. Sasquatch Books, Seattle.

⁴³¹ Kenai Peninsula Economic Development District. 2010. *Kenai Peninsula Borough Comprehensive Economic Development Strategy*. Retrieved September 7, 2012 from <http://commerce.alaska.gov/ded/dev/oedp/pubs/KPEDD%20CEDS%20&%20Gap%20Analysis%20Study%202010.pdf>.

⁴³² See footnote 427.

⁴³³ Kevin Waring Associates. 2003. *City of Kenai Comprehensive Plan*. Retrieved September 4, 2012 from <http://www.ci.kenai.ak.us/City-approved%20Kenai%20Plan.pdf>.

⁴³⁴ See footnote 428.

Kenai Mountains to the extensive lowlands of the Kenai Peninsula.⁴³⁵ Coastal bluffs overlooking Cook Inlet are subject to erosion, and Kenai settlement patterns have also been affected by the river floodplain. A majority of lowland area is made up of wetlands.⁴³⁶ Areas further from the river are characterized by boreal forest and numerous lakes.⁴³⁷ The Cook Inlet basin is located in a transitional climate zone, in the rain shadow of the Kenai Mountains. Temperatures are more extreme because the area is somewhat sheltered from the moderating effects of the Gulf of Alaska, and cold air occasionally pushes south from interior Alaska in winter months.⁴³⁸ Winter temperatures range from 4 to 22 °F, and summer temperatures vary from 46 to 65 °F. Average annual precipitation is 20 inches.⁴³⁹

In 1986, much of the Kenai River watershed was designated as the Kenai River Special Management Area. The area was identified for special attention in order to balance habitat and recreation values with residential and industrial needs in the area.^{440,441} Fish species found in the Kenai River watershed include all five species of Pacific salmon, lake trout, Arctic grayling,⁴⁴² round whitefish, Bering cisco, Alaska blackfish, northern pike, and burbot. Steelhead are not known to return to the Kenai River. In addition, as many as 200 species of birds and mammals are found in the Kenai River watershed, including bald eagles, trumpeter swans, variety of waterfowl and shorebirds, black and brown bears, moose, caribou, mountain goat, Dall sheep, wolves, wolverines, lynx, coyotes, beavers and other furbearers.⁴⁴³

The Kenai River hosts the largest freshwater sport fishery in Alaska, with emphasis on the large Chinook salmon, as well as large fisheries for coho and sockeye salmon. With the expansion of the recreational fishery in recent decades, rainbow trout and Dolly Varden have also increasing in importance as target species. To a lesser degree, Arctic grayling and northern pike are targeted by Kenai River sport fishermen. In addition to sportfishing, many other recreational opportunities exist near Kenai, including camping, hunting, and clam digging. The Kenai River Flats, Morgans Landing, Scout Lake, and Captain Cook State Recreation Areas are valuable recreational resources.⁴⁴⁴ The wood frog is the only known amphibian on the Kenai Peninsula.^{445,446}

It is important to note that 2012 saw unusually low returns of Chinook salmon to the Kenai River and other northern Cook Inlet river systems. This led to extensive closures of both commercial and sport fisheries in Cook Inlet. In the Kenai River, the in-river sport fishery for Chinook salmon was tightly constrained, along with the Eastside commercial set net fishery at

⁴³⁵ Alaska Dept. of Natural Resources. 1998. *Kenai River Comprehensive Management Plan*. Retrieved September 3, 2012 from <http://dnr.alaska.gov/parks/plans/krsmapl/krsmamp3.pdf>.

⁴³⁶ See footnote 433.

⁴³⁷ U.S. Fish and Wildlife Service. 2011. *Kenai National Wildlife Refuge*. Retrieved January 26, 2012 from <http://kenai.fws.gov/>.

⁴³⁸ Kenai Peninsula Borough Coastal Management Program. 1990. *Final Coastal Management Plan*. Retrieved September 7, 2012 from <http://www2.borough.kenai.ak.us/coastal/CMP-Final.htm>.

⁴³⁹ See footnote 428.

⁴⁴⁰ Alaska Dept. of Natural Resources. 2001. *Kenai Area Plan*. Retrieved February 7, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/master_KAP.pdf.

⁴⁴¹ See footnote 435.

⁴⁴² Arctic grayling were introduced to Crescent Lake in the Kenai River watershed in 1950 and have now become established in the upper Kenai River. (See footnote 435.)

⁴⁴³ See footnote 435.

⁴⁴⁴ See footnote 435.

⁴⁴⁵ Ibid.

⁴⁴⁶ See footnote 437.

the mouth of the River. These closures represent a significant impact on the local economy in Kenai and surrounding Peninsula communities. The Eastside set net fishery earned only 10% of the most recent 5-year average value of that fishery in 2012, while total in-river harvest of Chinook salmon was only 1% of the most recent 5-year average. In September 2012 the U.S. Secretary of Commerce declared a Chinook fishery disaster for Cook Inlet, along with the Yukon and Kuskokwim Rivers that year.⁴⁴⁷

In addition to local sportfishing activity, each summer the City of Kenai hosts a large personal use dip net fishery that is open to all Alaska residents. According to ADF&G, the annual harvest of sockeye salmon in this fishery is 100,000. The fishery is opened from late June or early July through the end of July to target sockeye salmon and avoid harvests of Northern District coho salmon, late-run Kenai River Chinook and Kenai River coho. The fishery is managed by ADF&G, and the City of Kenai provides access and support services to the tens of thousands of people who participate each year. Dipnetting takes place both along the shoreline and from boats. In order to protect water quality during periods of high traffic, the use of two-stroke motors on the Kenai River was prohibited starting in 2008.⁴⁴⁸ Local Kenai residents have mixed feelings about the growth of the dip net fishery. The high volume of people that participate each year creates concerns about river access, high costs to the City of Kenai, and problems with high volumes of fish waste along Kenai beaches. As of early 2013, the local community was in the process of exploring alternatives to address these concerns.⁴⁴⁹

Protected areas near Kenai currently include Kenai National Wildlife Refuge (NWR) and the Clam Gulch State Critical Habitat Area (CHA). The Kenai NWR covers 1.92 million acres of the Kenai Peninsula, half of which was designated as the Kenai Wilderness. The NWR was originally established by President Roosevelt in 1941 as the Kenai National Moose Range. In 1980, with the Alaska National Interest Lands Conservation Act (ANILCA), the name and purpose of the area were changed to manage all animal species as a NWR.⁴⁵⁰ South of the Kenai River mouth, the Clam Gulch State CHA extends along the eastern shores of the Cook Inlet from Cape Kasilof to Happy Valley. The Clam Gulch State CHA is intended to protect the opportunity for the public to utilize the prolific razor clam beds along this section of coastline. In addition to razor clams, the area also serves as important habitat for many migratory waterfowl and shorebirds.⁴⁵¹

There is limited timber value in the Kenai area due to poor soil drainage.⁴⁵² Some logging takes place to remove timber killed by spruce bark beetle.⁴⁵³ Tidelands in the area are valuable for commercial inshore fisheries. Wetlands north of Kenai provide valuable habitat for caribou as calving grounds. Moose and a variety of waterfowl utilize the wetland area as well.⁴⁵⁴ There are no active or proposed mineral development sites in the area, although coal beds exist throughout

⁴⁴⁷ Alaska Dept. of Fish and Game. (2012). *2012 Alaska Chinook Salmon Fishery Disaster FAQ*. Retrieved June 5, 2013 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalchinookdisaster>.

⁴⁴⁸ Alaska Dept. of Fish and Game. 2012. *Kenai River Salmon Fisheries*. Retrieved September 7, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=PersonalUsebyAreaSouthcentralkenaiSalmon.main>.

⁴⁴⁹ Shedlock, J. (2013). "Kenai City Council discusses dipnet fishery report." *Peninsula Clarion*. Retrieved June 5, 2013 from <http://peninsulaclarion.com/news/2013-01-08/annual-dipnet-fishery-report-discussed-by-council>.

⁴⁵⁰ Ibid.

⁴⁵¹ Alaska Dept. of Fish and Game. 2012. *Clam Gulch – Critical Habitat Area*. Retrieved August 28, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=clamgulch.main>.

⁴⁵² See footnote 440.

⁴⁵³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁵⁴ See footnote 440.

most of the western Kenai Peninsula.⁴⁵⁵ The oil and gas industry is active in the region, with a number of new wells being drilled each year both on the Kenai Peninsula and offshore in Cook Inlet. As of 2010, there were 28 producing oil and gas fields both on and off shore. Cook Inlet oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.⁴⁵⁶

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt, and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures, and soil liquefaction.⁴⁵⁷ Other natural hazards threats in the Kenai Peninsula Borough include flooding, wildfire, snow and avalanche, tsunami and seiche, severe weather, landslides, erosion, and drought.⁴⁵⁸

According to the Alaska Department of Environmental Conservation, no active environmental cleanup sites were located directly within the City of Kenai as of August 2012. However, several active sites were located at sites along the Kenai River, as well as just north at the Tesoro Alaska Refinery near Nikiski. Sites along the Kenai River included varying levels of soil and/or groundwater contamination at River Terrace (a mobile home park), the Alaska Department of Transportation and Public Facilities' maintenance station in Soldotna, the ZipMart store and Cook's Corner Tesoro gas station in Sterling, and Hamilton's Place Service Station in Cooper's Landing. At the Tesoro Alaska Refinery 11 miles north of Kenai, both soil and groundwater in the area is contaminated. The contamination plume has traveled through neighboring industrial properties and is approaching a bluff over Cook Inlet. Tesoro is currently engaged in groundwater monitoring and product recovery to prevent seepage into Cook Inlet. Following successful removal of product from groundwater, Tesoro will be required to develop a plan to address soil contamination.⁴⁵⁹

Current Economy⁴⁶⁰

Oil and gas is an important industry for Kenai residents. The City of Kenai, as well as nearby Nikiski, provides servicing and supplies for Cook Inlet's oil and gas drilling platforms. Tesoro Alaska's oil refinery is located 11 miles north of Kenai along North Kenai Road. Other important industries in Kenai include tourism and fishing, including recreational, commercial, and subsistence fishing, as well as fish processing. Additional economic sectors are timber and

⁴⁵⁵ Alaska Dept. of Commerce. (n.d.). *Mineral Resources of Alaska*. Retrieved February 8, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁴⁵⁶ Resource Development Council. (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

⁴⁵⁷ Kenai Peninsula Borough. 2010. *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

⁴⁵⁸ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁴⁵⁹ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁴⁶⁰ Unless otherwise noted, all monetary data are reported in nominal values.

lumber, agriculture, transportation services, construction, and retail trade. The largest employers in Kenai are the school district, Unocal, Peak Oilfield Services, the Kenai Peninsula Borough, and Central Peninsula General Hospital.⁴⁶¹ In 2010, the number of Kenai residents that owned state commercial fishing permits was equivalent to between 3.7% of the population, the number holding crew licenses was equivalent to 4.1%, and the number that were the primary owner of a fishing vessel was equivalent to 1.4% of the local population (see *Commercial Fishing* section).

Based on household surveys conducted for the 2006-2010 ACS,⁴⁶² in 2010, the per capita income in Kenai was estimated to be \$27,921 and the median household income was estimated to be \$52,701. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$20,789 and \$45,962, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,⁴⁶³ the increase in per capita income is shown to be very slight, from a real per capita income of \$27,337 in 2000. In the case of median household income, accounting for inflation shows a real decrease in income over the decade, from a real median household income of \$60,439 in 2000. In 2010, Kenai ranked 80th of 305 Alaskan communities with per capita income data that year, and 112th in median household income, out of 299 Alaskan communities with household income data.

However, Kenai's small population size may have prevented the ACS from accurately portraying economic conditions.⁴⁶⁴ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Kenai in 2010 is \$18,796.^{465,466} This estimate is slightly lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Kenai between 2000 and 2010. As of 2010, the Denali Commission did not consider Kenai a "distressed" community.⁴⁶⁷ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly higher percentage of Kenai's population (70.5%) was estimated to be in the civilian labor force than was estimated to be in the statewide civilian labor force that year (68.8%). Also in 2010, 10.3% of Kenai residents were

⁴⁶¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁶² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁶³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁶⁴ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁶⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

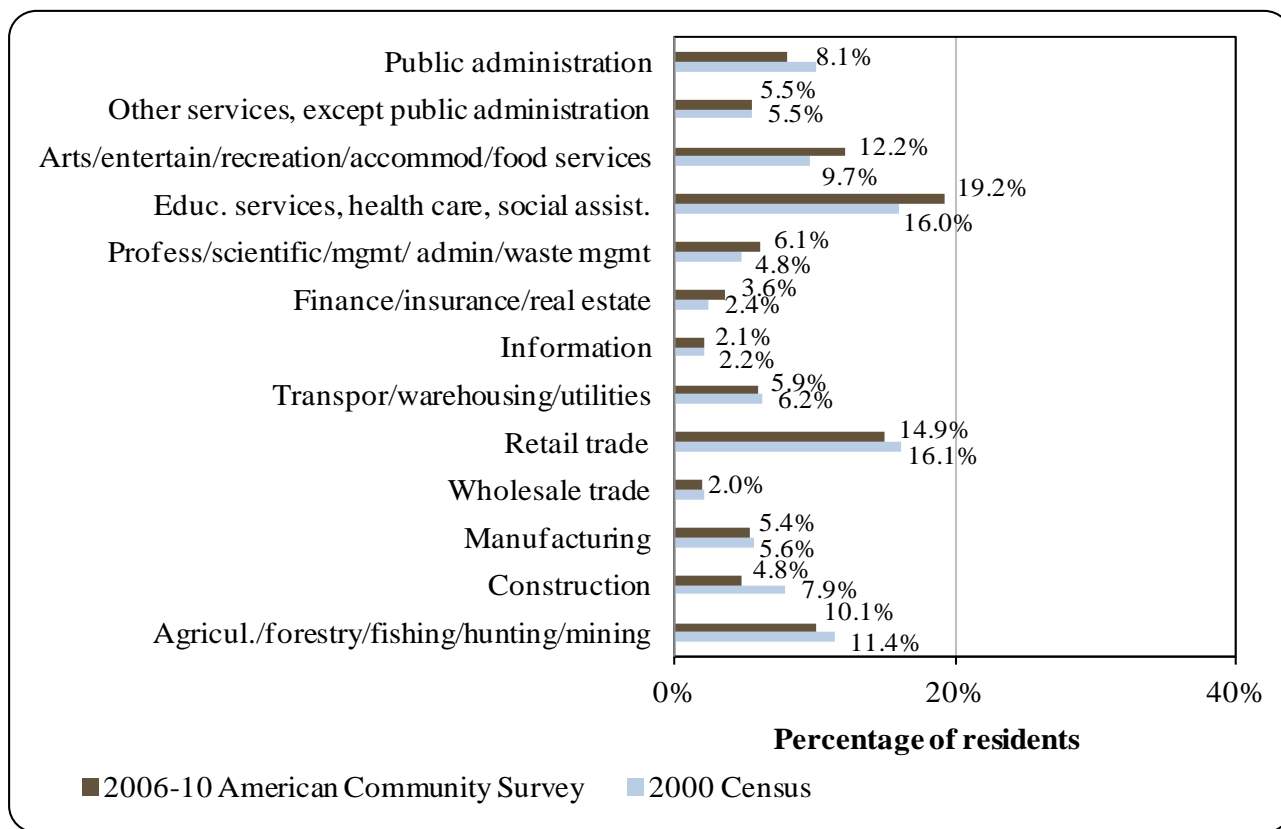
⁴⁶⁶ See footnote 462.

⁴⁶⁷ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 7.7%, compared to a statewide unemployment rate of 5.9%. This unemployment rate estimate is echoed by an alternative unemployment estimate based on the ALARI database, which indicates that the unemployment rate in Kenai in 2010 was 13.8%, slightly higher than a statewide rate estimate of 11.5%.⁴⁶⁸

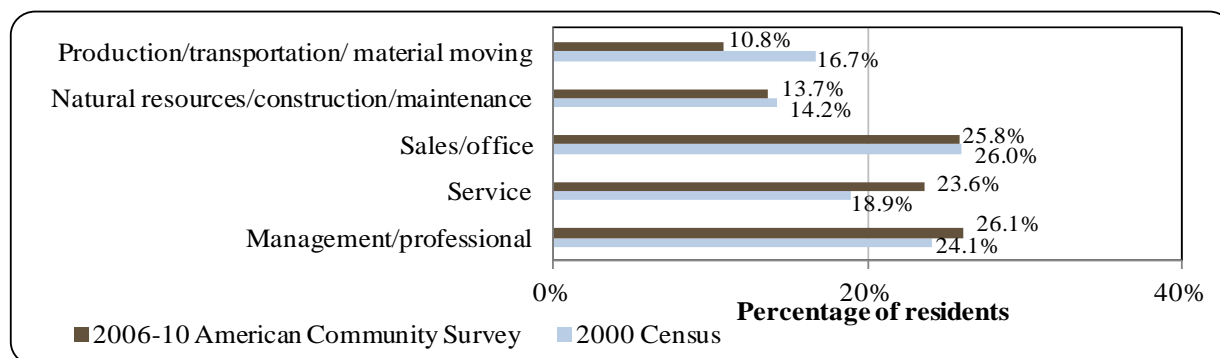
Also based on the 2006-2010 ACS, the majority of Kenai’s workforce was estimated to be employed in the private sector (73.3%), along with 18.2% in the public sector, 8.2% that was self-employed, and 0.3% estimated to be unpaid family workers. Of the 3,315 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in educational services, health care, and social assistance (19.2%), retail trade (14.9%), arts, entertainment, recreation, and accommodation and food services (12.2%), and agriculture, forestry, fishing, hunting, and mining (10.1%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Kenai (U.S. Census).



⁴⁶⁸ See footnote 465.

Figure 4. Local Employment by Occupation in 2000-2010, Kenai (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 3,479 employed residents in Kenai in 2010, of which 19.1% were employed in trade, transportation, and utilities, 15.2% in education and health services, 14.9% were employed in natural resources and mining, 11.9% in local government, 10.8% in leisure and hospitality, 5% in state government, 4.8% in construction, 4.8% in professional and business services, 4.6% in manufacturing, 3.2% in financial activities, 1.6% in information, 0.1% in unknown industries, and 3.9% in other industries.⁴⁶⁹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Governance

Kenai is a Home Rule City located in the Kenai Peninsula Borough. Incorporated in 1960, Kenai has a manager, or "Strong Mayor", form of government, with a seven-person city council including the Mayor, a nine-person school board, seven-person planning and zoning commission, and various municipal employees. The City collects a 3% sales tax; the Borough collects a 3% sales tax, and an 8.37 mills property tax is administered.⁴⁷⁰

Annual municipal revenue totals followed an increasing trend over the 2000-2010 period, driven in large part by an increase in total intergovernmental funding received by the City in the later years of the decade. State and federal grant funding were received for projects such as airport improvement, water and sewer upgrades, and library expansion. In addition, shared revenues were received from the state, including State Revenue Sharing contributions from 2000 to 2003 Community Revenue Sharing contributions in 2009 and 2010, tax refunds from the electric utility tax and raw fish tax, and other sources. Sales tax revenues made up an average of 26% of total municipal revenue during the 2000-2010 period. Several fisheries-related grants were received from the Alaska Department of Commerce, Community, and Economic Development in 2004, totaling \$197,171. These grants included \$63,400 to Salamatof Seafoods and \$69,833 to Pacific Star Seafoods for value-added fisheries equipment, and \$63,938 to Alaska Salmon Purchasers for totes, ice machines, packaging, and marketing. This information about selected municipal revenue sources is presented in Table 2.

⁴⁶⁹ Ibid.

⁴⁷⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kenai from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$12,455,040	\$3,700,743	\$111,142	n/a
2001	\$12,669,520	\$3,809,239	\$96,923	n/a
2002	\$15,210,856	\$4,180,190	\$97,483	n/a
2003	\$12,408,103	\$3,953,561	\$98,264	n/a
2004	\$12,086,654	\$3,790,644	n/a	\$197,171
2005	\$14,585,321	\$4,090,468	n/a	n/a
2006	\$16,434,531	\$4,404,148	n/a	n/a
2007	\$23,312,008	\$4,631,812	n/a	n/a
2008	\$30,178,714	\$5,196,046	n/a	n/a
2009	\$22,146,487	\$5,372,499	\$459,935	n/a
2010	\$28,514,571	\$5,561,970	\$452,828	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

The office of the Kenaize Indian Tribe is located in the City of Kenai, near the original village site in Old Kenai. The Salamatof Tribe, whose village is located just to the north between Kenai and Nikiski, also has its office in Kenai. Both the Kenaitze and Salamatof Tribes were included under the Alaska Native Claims Settlement Act (ANCSA), and are federally recognized as Native villages. Their authorized traditional entities, recognized by the Bureau of Indian Affairs (BIA), are the Kenaitze Indian Tribe and the Village of Salamatoff. The Native corporation of the Kenaitze Indian Tribe is Kenai Native Association, Inc., an Urban Corporation⁴⁷¹ which manages 23,040 acres of surface land.⁴⁷² The Native village corporation of the Salamatof Tribe is the Salamatof Native Association, Inc, which manages 109,571 acres of land. The regional Native corporation to which both tribes belong is Cook Inlet Regional, Inc. (CIRI).⁴⁷³

The Kenaitze and Salamatof Tribes are also members of the Cook Inlet Tribal Council (CITC), a tribal non-profit organization headquartered in Anchorage. CITC strives to work together with Native people of the Cook Inlet region, and all Natives living in Anchorage, to help

⁴⁷¹ 16 U.S.C. § 3102 (9): The term “Urban Corporation” means those Native entities which have incorporated pursuant to section 14(h)(3) of the Alaska Native Claims Settlement Act.

⁴⁷² ANCSA 43 U.S.C. § 1613 (h)(3): “The Secretary may withdraw and convey to the Natives residing in Sitka, Kenai, Juneau, and Kodiak, if they incorporate under the laws of Alaska, the surface estate of lands of a similar character in not more than 23,040 acres of land, which shall be located in reasonable proximity to the municipalities...”

⁴⁷³ See footnote 470.

them develop talents and strengths, and become successful and self-sufficient individuals, families, and communities, with the goal of advancing the overall economic, social and cultural development of the people of the Chugach Region.⁴⁷⁴ CITC is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁴⁷⁵ CITC offers educational programs, job training, business assistance, youth programs, drug and alcohol treatment, and other assistance to families and individuals.⁴⁷⁶

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and Alaska Department of Natural Resources (DNR) are located in Soldotna. The closest offices of the National Marine Fisheries Service (NMFS) are located in Homer and Anchorage. Anchorage also has the closest offices of the Alaska Department of Commerce, Community, and Economic Development and the U.S. Bureau of Citizenship and Immigration Services.

Infrastructure

Connectivity and Transportation

The Sterling Highway, the Kenai Spur Highway, and their network of secondary roads provide access to and within the region. There are also numerous trails in the region, and many of them follow old seismic lines, oil and gas exploration routes, and pipeline and transmission line rights of-way.⁴⁷⁷ The city-owned Kenai Municipal Airport provides a 7,830 foot by 150 foot asphalt runway, a 2,000 foot by 60 foot gravel strip, a float plane strip, and helicopter service. A flight service station is available. Float plane facilities are also available at Island Lake and Arness Lake. There are five additional privately-owned airstrips in the vicinity.⁴⁷⁸ As of June 2012, roundtrip airfare from Anchorage to Kenai costs \$171.⁴⁷⁹

The Kenai City Dock and boat ramp are located near the mouth of the Kenai River. Moorage is by buoys anchored in the Kenai River.⁴⁸⁰ Powerboats and float boats are in use on the Kenai River and many lakes and creeks in the region. A significant port facility is located in Nikiski associated with petroleum shipping and processing. Canneries also have docks along the lower Kenai River.⁴⁸¹

Facilities

Water and sewer systems in Kenai are operated by the City. Water is supplied by three deep wells. The water is chlorinated and distributed via a piped water system to approximately

⁴⁷⁴ Cook Inlet Tribal Council. (n.d.). *What We Do*. Retrieved February 23, 2012 from <http://www.citci.com/>.

⁴⁷⁵ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁴⁷⁶ See footnote 474.

⁴⁷⁷ Alaska Dept. of Natural Resources. 2001. *Kenai Area Plan*. Retrieved February 7, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/master_KAP.pdf.

⁴⁷⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁷⁹ This price was calculated on November 21, 2011 using kayak.com.

⁴⁸⁰ See footnote 478.

⁴⁸¹ See footnote 477.

75% of Kenai households. Construction of a fourth well is planned. A piped sewage system also serves 75% of households, and sewage is treated in a sewage lagoon. The remaining homes use individual water wells and septic systems. Refuse collection is provided by a private company contracted by the Borough. The Borough operates a transfer facility on Redoubt Avenue in Kenai, and the Borough landfill is located in nearby Soldotna, at mile 110.4 Sterling Highway. Natural gas from Enstar is primarily used for home heating purposes. Homer Electric Association operates the Bradley Lake Hydroelectric Project and is part owner of the Alaska Electric Generation & Transmission Cooperative. It also purchases electricity from Chugach Electric.⁴⁸²

Police services are provided by the City Police Department as well as a state trooper post in Kenai. A State Superior Court Magistrate is present in Kenai, along with the Wildwood Correctional Center and Wildwood Pretrial Facility. Fire and rescue services are provided by the Kenai Fire Department and the Civil Air Patrol Central Emergency Services. Additional community facilities include a recreation center, Boys and Girls Club, a senior center and independent living facility, a high school pool, movie theater, several museums, five school libraries, one community library, and one special library. Telephone, cable, and broadband internet services are all available in Kenai.⁴⁸³

With regard to fisheries-related infrastructure, the City of Kenai operates the Kenai Boating Facility with a dock and boat ramp. The facility is used by fish processors, commercial, recreational, and dip net fishermen, and the general public. The growing Kenai River dip net fishery has led to a need for additional boat ramps to accommodate traffic.⁴⁸⁴ In 2012, the City of Kenai planned to construct four additional boat ramps.⁴⁸⁵ A number of private commercial fish processing docks are also present along the lower Kenai River, and moorage is available using buoys anchored in the Kenai River.⁴⁸⁶ A variety of fisheries-related businesses and services are available in Kenai and nearby Central Kenai Peninsula communities.

Medical Services

The Kenai Health Center is a qualified Emergency Care Center.⁴⁸⁷ In partnership with the Central Peninsula Hospital, located nearby in Soldotna, the Kenai Health Center provides a variety of diagnostic imaging and lab services in addition to basic medical services.⁴⁸⁸ Mental health services are also available locally in Kenai. Emergency Services have highway, coastal, airport, and floatplane access. Emergency service is provided by 911 Telephone Service and paid Emergency Medical Service.⁴⁸⁹

⁴⁸² See footnote 478.

⁴⁸³ Ibid.

⁴⁸⁴ Kevin Waring Associates. 2003. *City of Kenai Comprehensive Plan*. Retrieved September 4, 2012 from <http://www.ci.kenai.ak.us/City-approved%20Kenai%20Plan.pdf>.

⁴⁸⁵ City of Kenai. 2012. *Advertisement for Bid: Kenai Boating Facility Launch Ramp Floats 2012*. Retrieved September 7, 2012 from <http://www.ci.kenai.ak.us/publicworks/Boating%20Facility%20Launch%20Ramp%20Floats%202012.pdf>.

⁴⁸⁶ See footnote 482.

⁴⁸⁷ Ibid.

⁴⁸⁸ Central Peninsula Hospital. (n.d.) *Kenai Health Center*. Retrieved September 5, 2012 from <http://www.cpg.org/body.cfm?id=65>.

⁴⁸⁹ See footnote 482.

Educational Opportunities

As of 2011, there were six schools in Kenai with active enrollment. That year, Mountain View Elementary School (preschool through 5th grade) had 470 students and 33 teachers; the Kaleidoscope School of Arts and Sciences (Kindergarten through 6th grade) had 246 students and 18 teachers; Kenai Middle School (6th through 8th grade) had 375 students and 22 teachers; Kenai Peninsula Youth Facility (6th through 12th grade) had 7 students and 1 teacher; Kenai Central High School (9th through 12th grade) had 524 students and 40 teachers; and Kenai Alternative High School (9th through 12th grade, and preschool) had 103 students and 6 teachers.⁴⁹⁰ In addition, Kenai hosts the Challenger Learning Center of Alaska, an educational center created to enhance education through simulation of space and earth science missions, workshops, and distance education.⁴⁹¹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Archaeological excavation at sites along the Kenai River has provided evidence of salmon fishing by the Riverine Kachemak culture using a drift net technology used to harvest sockeye salmon runs. Closer to the time of the arrival of Europeans in Cook Inlet, the Dena'ina living along the River utilized a variety of subsistence foods from the land and the sea. Of these, salmon was the most critical resource, and all five species of Pacific salmon were used. In addition, freshwater species such as Dolly Varden were harvested using alder drag nets.⁴⁹² Commercial fisheries began in the Cook Inlet region soon after the U.S. purchase of Alaska from Russia in 1867. Commercial salmon harvest began in Cook Inlet began in 1882⁴⁹³ with the development of a cannery at the mouth of the Kasilof River. An additional 17 canneries had been built in central Alaska by 1890.⁴⁹⁴ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁴⁹⁵ In the 1920s, herring had become increasingly valued for oil and meal, and a number of reduction plants were built. Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, a sizable spawning biomass of herring was found in western Cook Inlet, and Lower Cook Inlet also supported commercial fisheries for Dungeness, king, and Tanner crab. However, Cook Inlet crab and a

⁴⁹⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴⁹¹ Challenger Learning Center of Alaska. 2009. *About Us*. Retrieved September 7, 2012 from <http://akchallenger.org/AboutUs/CLCA/tabid/71/Default.aspx>.

⁴⁹² Fall, J.A., R.T. Stanek, B. Davis, L. Williams, and R. Walker. 2004. *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Final Report for Study No. FIS 03-045.

⁴⁹³ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁴⁹⁴ Cook, Linda, and Frank Norris. 1998. *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁴⁹⁵ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://ww.iphc.int/publications/scirep/Report0005.pdf>.

majority of Cook Inlet herring fisheries are currently closed due to low stock abundance.^{496,497} If a sufficient biomass of herring is present in the Kamishak District of Cook Inlet, some sac roe harvest may be permitted.⁴⁹⁸

Commercial fishing and seafood processing continue to be an important economic driver in Kenai.⁴⁹⁹ However, according to the City of Kenai's 2003 Comprehensive Plan, declining harvests, weak markets, depressed product prices, and seasonal labor shortages have contributed to a decline in profits and employment in this industry in recent decades.⁵⁰⁰ Nevertheless, Kenai residents' were highly involved in Alaskan fisheries between 2000 and 2010, with the highest levels of participation in fisheries for salmon and halibut. A number of residents were also involved in fisheries for herring, groundfish, sablefish, and various crab and other shellfish species, including king, Tanner, and Dungeness crab, shrimp, scallops, geoduck and other clams, sea cucumbers and sea urchins (see the *Commercial Fishing* section for more details).

ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.⁵⁰¹

Cook Inlet is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area. Groundfish and crab fisheries that occur within 3 nautical miles (nm) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch set by NMFS applied to both fisheries. Beginning in 1997, an additional 'state-waters fishery' for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL,

⁴⁹⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁴⁹⁷ Alaska Dept. of Fish and Game. 2012. *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

⁴⁹⁸ Hollowell, Glen, Otis, Todd, and Ethan Ford. July 2012. *2011 Lower Cook Inlet Finfish Management Report*. Retrieved September 7, 2012 from <http://www.sf.adfg.state.ak.us/FedAidPDFs/FMR12-30.pdf>.

⁴⁹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁰⁰ Kevin Waring Associates. 2003. *City of Kenai Comprehensive Plan*. Retrieved September 4, 2012 from <http://www.ci.kenai.ak.us/City-approved%20Kenai%20Plan.pdf>

⁵⁰¹ See footnote 493.

and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.⁵⁰²

The sandy beaches of lower Cook Inlet are one historical and current commercial clam harvest area. Littleneck and other hardshell clams (cockles and butter clams) are dug by hand shovel, and razor clams are dug with shovels and ‘guns’.⁵⁰³ Although Cook Inlet hosted shrimp fisheries in the past, beginning in 1997, commercial, sport and personal use fisheries for shrimp in Cook Inlet and adjacent coastal waters of the GOA were closed due to low abundance.⁵⁰⁴

In addition to Cook Inlet and Central GOA fisheries, Kenai residents hold permits in fisheries around the state (see *Commercial Fishing* section for details). Kenai is not eligible to participate in the Community Quota Entity program or the Community Development Quota program.

Processing Plants

ADF&G’s 2010 Intent to Operate list indicates that at least seven shoreside processing facilities were in operation in Kenai that year. Details about these processors are included below.

Inlet Fish Producers, Inc. processes all five species of salmon in both its facilities (on the Kenai and Kasilof Rivers). The facilities operate from June to early September each year, with combined employment of 200 people each summer. The Kenai facility provides living accommodations for up to 90 fish processing workers.⁵⁰⁵ According to a processor plant survey conducted by the AFSC in 2011, the plant manager indicated that, from June through August, a large number of Inlet Fish Producer’s employees are international students on J-1 visas.

Pacific Star Seafoods is owned by Double E Foods LLC. Pacific Star Seafoods purchased its present Kenai processing facility from Kenai Packers in 1994. The first cannery was built in 1946 at the present site. Pacific Star Seafood purchases all five salmon species from over 50 independently owned fishing vessels to be processed at the Kenai facility. Halibut and sablefish are also processed at the plant.⁵⁰⁶ According to the 2011 AFSC plant managers survey, Pacific Star Seafoods owns 3 docks in Kenai and in 2010 employed a maximum of 180 workers.

Snug Harbor Seafoods also owns a large processing facility in Kenai, as well as several satellite docks and buying stations in the area. Plant managers indicated that the Snug Harbor Seafoods plant began operations in 1983. The facility processes Chinook, sockeye, and coho salmon from June through September. Halibut and sablefish make up a large volume of the product processed during this time. The facility also processes razor clam, yelloweye rockfish, and lingcod.⁵⁰⁷ According to the 2011 AFSC survey of plant managers, the facility employs a maximum of 140 workers each year, with approximately 100 J-1 workers hired during the

⁵⁰² See footnote 496.

⁵⁰³ Ibid.

⁵⁰⁴ Trowbridge, C. and K. Goldman. 2006. *2006 Review of Cook Inlet Area Commercial Fisheries for Dungeness Crab, Shrimp, and Misc. Shellfish Fisheries: Report to the Board of Fisheries*. Alaska Dept. of Fish and Game Special Pub. No. 06-09. Retrieved August 30, 2012 from www.adfg.alaska.gov/FedAidPDFs/sp06-09.pdf.

⁵⁰⁵ Inlet Fish Producers, Inc. 2008. *Home and Jobs*. Retrieved August 29, 2012 from <http://inletfish.com/>.

⁵⁰⁶ Pacific Star Seafoods. 1998. *Welcome to Pacific Star Seafoods and About Pacific Star*. Retrieved September 6, 2012 from <http://www.pacificstarseafoods.com/index.htm>.

⁵⁰⁷ Snug Harbor Seafoods. 2010. *About, Products, and Employment* pages. Retrieved September 6, 2012 from <http://snugharborseafoods.com>.

summer season. The facility's overall employment period is approximately March until October.⁵⁰⁸

Alaska Salmon Purchasers Inc., Fishhawk Fisheries of Alaska, Inc., and Salamatof Seafoods also operate seafood processing facilities in Kenai. Alaska Salmon Purchasers Inc. processes all five species of salmon. Fishhawk Fisheries processes Dungeness crab, halibut, salmon (Chinook, chum, coho, and sockeye), shrimp, and prawns. Salamatof Seafoods, Inc. processes halibut and all five species of salmon.⁵⁰⁹ According to the 2011 AFSC survey of plant managers, the Salamatof Seafoods plant began operations in 1979 and in 2010 the plant employed a maximum of 65 workers.

In addition to the facilities described above, Sought Out Salmon is a family-owned business that has processed salmon in Kenai for five generations. The company focuses primarily on sockeye salmon, but also processes coho and Chinook.⁵¹⁰

Fisheries-Related Revenue

In 2010, known fisheries-related revenue received by the City of Kenai totaled \$388,198. The majority of revenue came from shared fisheries business tax collections, raw fish tax collections, and collections from port/dock usage. A smaller portion came from a Fisheries Resource Landing Tax. For more information on known fisheries-related revenues for Kenai between 2000 and 2010, see Table 3.⁵¹¹

Commercial Fishing

Kenai residents are highly involved in a number of Alaskan commercial fisheries, with the highest participation in fisheries for salmon and halibut, herring, and groundfish, as well as involvement in fisheries for sablefish and some crab and other shellfish species. Between 2000 and 2010, Kenai residents were active as permit and quota share account holders, crew license holders, and vessel owners. In addition, in 2010 the community of Kenai was within the top 20 cities in Alaska with regard to processing, ranking 19th in both landings and ex-vessel revenue out of 67 Alaskan ports that received landings that year. That year, 43 fish buyers were present locally, and 8 shore-side processing facilities were in operation. In total, 17,500,691 net pounds were landed at Kenai processing facilities in 2010, generating a total of \$18,988,645 in ex-vessel revenue (Table 5).

In 2010, 293 commercial crew licenses were held, 100 vessels were primarily owned by Kenai residents, and 161 vessels were reported as homeported in the community. Vessel ownership and the number of vessels homeported in Kenai both declined over the 2000-2010 period, from a high of 192 vessel owners and 334 homeported vessels in 2000. In contrast, the number of crew licenses held by Kenai residents varied from year to year without a consistent trend. The number of fish buyers, shore-side processing facilities, and vessels landing catch in

⁵⁰⁸ Ibid.

⁵⁰⁹ Alaska Seafood Marketing Institute. 2012. *Suppliers Directory*. Retrieved September 6, 2012 from <http://alaskaseafood.org/industry/suppliers/>.

⁵¹⁰ Sought Out Salmon. (n.d.). *Home and About Us*. Retrieved September 6, 2012 from <http://soughtoutsalmon.com/>.

⁵¹¹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Kenai also varied from year to year, but did not show declining trends. Further information about the commercial fishing sector in Kenai is presented in Table 5.

In 2010, 260 Kenai residents held a total of 311 state Commercial Fisheries Entry Commission (CFEC) permits. Of these, 246 were held for salmon fisheries, 32 were held for halibut, 21 were held for herring, 4 were held for groundfish, 4 for ‘other shellfish’ fisheries, 2 for sablefish, and 2 for crab fisheries. Additional information about CFEC permits is presented in Table 4, and further details regarding these permits are included below.

Of 246 salmon CFEC permits held in 2010, 129 were held in the Cook Inlet set gillnet fishery, 69 were held in the Cook Inlet drift gillnet fishery, 20 were held in the Bristol Bay drift gillnet fishery, 9 were held in the Bristol Bay set gillnet fishery, 5 were held in the Kodiak purse seine fishery, and a small number were held in various other salmon fisheries around the state (1 to 2 permits per fishery). These included Prince William Sound and Cook Inlet purse seine fisheries, Prince William Sound, Southeastern, and Peninsula-Aleutian drift gillnet fisheries, the Kodiak set gillnet fishery, the Lower Yukon gillnet fishery, the statewide hand troll fishery, the Upper Yukon fishweel fishery, and a permit in the Cook Inlet ‘special harvest area’ (hatchery) salmon fishery. Overall, 67% of salmon permits held in Kenai were actively fished in 2010. The number of salmon permit holders and the total salmon permits held increased slightly between 2000 and 2010, while the percentage actively fished remained relatively stable over the period.

Of 32 halibut CFEC permits, a majority (30) were held in the statewide longline fishery using vessels under 60 feet in length, while 1 was held for the statewide longline fishery for vessels 60 feet or over, and 1 was held for statewide hand troll. Overall, 88% were actively fished in 2010. Both the number of halibut permits held and the number of permit holders decreased by over one-third between 2000 and 2010, and the percentage of permits that were actively fished increased during this period.

Of 21 total herring CFEC permits, only 2 were actively fished (approximately 10%). Both of these active permits were held in the Cook Inlet roe herring gillnet fishery. A total of eight permits were held in this fishery in 2010, along with six permits held in the Kodiak roe herring gillnet fishery, three held in the Cook Inlet roe and food/bait purse seine fishery, and one permit each in the Prince William Sound and Kodiak roe herring purse seine, Norton Sound gillnet, and Bristol Bay spawn on kelp hand-picking fisheries. The number of Kenai residents holding herring permits remained relatively stable between 2000 and 2010, while the total number of permits held increased very slightly. The total number of permits actively fished was low throughout the 2000-2010 period, varying between one and five. At least one permit was actively fished in the Cook Inlet roe herring gillnet fishery from 2001 to 2010. Permits were actively fished in other herring fisheries in some years during the 2000-2010 period. In 2000, one Bristol Bay roe herring gillnet permit was actively fished. From 2001 to 2005, one Bristol Bay roe herring purse seine permit was actively fished. In 2006, one permit was actively fished in the Kodiak roe herring gillnet fishery.

With regard to state groundfish fisheries, it is important to note the substantial decline in permit holders and permits held in Kenai from 2000 to 2010. In 2000, 16 Kenai residents held a total of 21 groundfish CFEC permits, while there were only 2 permit holders and 4 total groundfish permits held in Kenai in 2010. All four groundfish CFEC permits held in 2010 were for ‘miscellaneous saltwater finfish’ fisheries, including one statewide permit associated with longline gear, one statewide permit associated with pot gear, one statewide permit associated with mechanical jig gear, and one GOA permit associated with mechanical jig gear. That year, only the statewide pot gear permit was actively fished. Earlier in the 2000-2010 period, permits

had also been held for lingcod (2000 to 2004), demersal shelf rockfish (2000 to 2002), and a wider variety of miscellaneous saltwater finfish fisheries. The percentage of groundfish permits actively fished by Kenai permit holders also decreased over the period.

In 2010, two Kenai residents held two sablefish CFEC permits for use statewide on vessels under 60 feet in length, not including Prince William Sound or Southeast Alaska. Both of the permits were actively fished that year. From 2000 to 2002, permits were also held in the statewide hand troll and mechanical jig sablefish fisheries. Also in 2010, two Kenai permit holders held two crab CFEC permits, one in the Cook Inlet Dungeness crab pot fishery, and the other in the Kodiak Tanner crab pot gear fishery. Neither of these two crab permits were actively fished that year. A permit was also held in the Bristol Bay king crab pot gear fishery from 2000 and 2002, and was actively fished in 2000 and 2001.

In 2010, ‘other shellfish’ CFEC permits were held in shrimp, sea urchin, scallop, and clam fisheries. The shrimp permit was held in the Prince William Sound pot gear fishery, the sea urchin permit was for the Southeast dive fishery, the scallop permit was statewide with dredge gear, and the clam permit was also statewide using shovel. None of these shellfish permits were actively fished by Kenai permit holders in 2010. In previous years of the 2000-2010 period, Kenai residents also held ‘other shellfish’ permits in Prince William Sound and ‘Westward’ shrimp beam trawl fisheries, the Westward and Southeast shrimp pot gear fisheries, Southeast geoduck and sea cucumber dive gear fisheries. The total number of ‘other shellfish’ permits held decreased between 2000 and 2010, and from 2006 to 2010, none of the permits were actively fished.

In addition to CFEC permits, Kenai residents also held federal License Limitation Program (LLP) permits and Federal Fisheries Permits (FFP). From 2000 to 2010, the number of Kenai residents holding FFPs and total FFPs held decreased from 24 to 12. Over the same period, the number of groundfish LLPs decreased from 12 to 9 per year, and the total number of groundfish LLPs held varied between 9 to 12, with 10 held in 2010. During the same period, the number of crab LLP holders and total crab LLPs held varied between zero and one per year. This information about federal permits is presented in Table 4 along with CFEC permit information.

Between 2000 and 2010, Kenai residents held quota share accounts and quota shares in federal fisheries for halibut, sablefish, and crab, with the highest level of participation in the halibut fishery. The number of halibut quota share account holders in Kenai was 58 in the year 2000, declining to 41 by 2010. However, the total number of quota shares held increased over the period, from 2,112,762 in 2000 to 3,167,541 in 2010. The overall halibut Individual Fishing Quota (IFQ) allotment for account holders in Kenai increased to 42% higher than 2000 levels in 2007, and by 2010 was still 19% higher than the allotment in 2000. Information about federal halibut catch share participation is presented in Table 6.

The number of sablefish quota share account holders varied between five and six during the 2000-2010 period. In 2010, 5 Kenai residents held sablefish quota share accounts, and a total of 1,298,274 quota shares were held that year. The overall sablefish IFQ allotment increased to 27% above 2000 levels in 2004, before decreasing to approximately 24% below 2000 levels in 2010. Information about federal sablefish catch share participation is presented in Table 7.

Between 2005 and 2010, the number of Kenai residents holding quota share accounts in the federal crab fisheries varied between one and two, and the total number of quota shares increased over time, from 192,218 in 2000 to 457,956 in 2010. Kenai quota share holders were issued crab IFQ allotments from 2005 to 2007, but from 2008 to 2010 no pounds were allotted to these quota share holders. This information is presented in Table 8.

Of the landings that can be reported between 2000 and 2010, the species with the greatest landed volume in Kenai were salmon and halibut, and landings were also reported in some years for herring and ‘other groundfish’. Landings and revenue information in some years for halibut, herring, and ‘other groundfish’ are considered confidential due to the small number of participants. On average between 2000 and 2010, 19,334,046 net pounds of salmon were landed in Kenai, valued on average at \$15,367,936 in ex-vessel revenue. For the 8 years in which halibut landings and revenue can be reported, landings averaged 147,539 net pounds, valued on average at \$421,241 in ex-vessel revenue. For the 4 years in which ‘other groundfish’ landings can be reported, an average of 58,566 net pounds were landed, valued on average at \$15,730. Finally, for the 3 years in which herring landings can be reported, an average of 19,855 net pounds were landed in Kenai, valued on average at \$18,155. Information about other species landed in Kenai is confidential in all years. Information about landings and ex-vessel revenue in Kenai is presented in Table 9.

In addition to the landings delivered in Kenai by fishermen from many communities, landings and ex-vessel revenue earned by Kenai vessel owners is of note. Kenai vessel owners made deliveries in many locations around Alaska between 2000 and 2010. Information can be reported for all years regarding their landings of salmon and halibut, for most years regarding ‘other groundfish’ and Pacific cod landings, and for one year regarding herring landings. Information about other years in these fisheries and fisheries for other species is considered confidential due to the small number of participants. Based on the information that can be reported, the fisheries with the greatest landings volume by Kenai vessel owners were for salmon, herring, and Pacific cod. On average between 2000 and 2010, Kenai vessel owners landed 3,387,994 net pounds of salmon, valued at \$1,954,679 in ex-vessel revenue on average over the period. The next greatest volume of deliveries was reported for herring in one year only (2005). That year, 498,592 net pounds of herring were landed by Kenai vessel owners, valued at \$39,599 in ex-vessel revenue. Pacific cod deliveries by Kenai vessel owners averaged 462,722 net pounds per year, with average ex-vessel revenue of \$6,786. This information is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kenai: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$111,369	\$96,839	\$79,134	\$90,117	\$58,132	\$130,950	\$103,929	\$42,634	\$132,050	\$110,000	\$110,000
Shared Fisheries Business Tax ¹	\$101,435	\$155,785	\$50,600	\$88,704	\$57,044	\$81,144	\$130,506	\$142,540	\$131,909	\$147,599	\$213,188
Fisheries Resource Landing Tax ¹	\$309	\$279	\$534	\$413	\$62	\$131	\$124	\$94	\$142	\$68	\$123
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	\$114,500	\$55,932	\$162,500	\$109,000	\$102,086	\$109,455	\$57,841	\$62,729	\$60,496	\$62,464	\$64,887
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$327,612</i>	<i>\$308,836</i>	<i>\$292,768</i>	<i>\$288,234</i>	<i>\$217,324</i>	<i>\$321,680</i>	<i>\$292,400</i>	<i>\$247,997</i>	<i>\$324,597</i>	<i>\$320,130</i>	<i>\$388,198</i>
<i>Total municipal revenue⁵</i>	<i>\$12,455,040</i>	<i>\$12,669,520</i>	<i>\$15,210,856</i>	<i>\$12,408,103</i>	<i>\$12,086,654</i>	<i>\$14,585,321</i>	<i>\$16,434,531</i>	<i>\$23,312,008</i>	<i>\$30,178,714</i>	<i>\$22,146,487</i>	<i>\$28,514,571</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kenai: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	12	12	11	10	10	9	9	9	9	10	10
	Active permits	2	1	3	3	3	1	1	2	2	2	2
	% of permits fished	16%	8%	27%	30%	30%	11%	11%	22%	22%	20%	20%
	Total permit holders	12	12	11	10	10	9	9	9	9	9	9
Crab (LLP) ¹	Total permits	1	1	1	0	0	0	0	0	0	1	1
	Active permits	1	1	1	0	0	0	0	0	0	1	1
	% of permits fished	100%	100%	100%	-	-	-	-	-	-	100%	100%
	Total permit holders	1	1	1	0	0	0	0	0	0	1	1
Federal Fisheries Permits ¹	Total permits	24	24	24	18	19	19	12	12	13	11	12
	Fished permits	0	0	0	2	1	0	4	2	3	5	4
	% of permits fished	0%	0%	0%	11%	5%	0%	33%	17%	23%	45%	33%
	Total permit holders	24	24	24	17	18	18	12	12	13	11	12
Crab (CFEC) ²	Total permits	4	4	4	1	3	2	2	1	2	2	2
	Fished permits	3	3	1	0	1	1	1	0	0	0	0
	% of permits fished	75%	75%	25%	0%	33%	50%	50%	0%	0%	0%	0%
	Total permit holders	3	3	3	1	2	3	2	1	2	2	2
Other shellfish (CFEC) ²	Total permits	9	9	9	7	6	6	1	2	2	3	4
	Fished permits	7	5	7	7	6	5	0	0	0	0	0
	% of permits fished	77%	55%	77%	100%	100%	83%	0%	0%	0%	0%	0%
	Total permit holders	4	4	4	4	2	3	1	2	2	3	4
Halibut (CFEC) ²	Total permits	55	48	42	40	35	31	30	37	37	35	32
	Fished permits	35	35	29	31	26	23	27	32	31	29	28
	% of permits fished	64%	73%	69%	78%	74%	74%	90%	86%	84%	83%	88%
	Total permit holders	52	45	39	38	33	30	30	36	36	35	32
Herring (CFEC) ²	Total permits	19	18	19	20	18	22	17	19	18	19	21
	Fished permits	1	3	2	3	2	5	3	1	1	1	2
	% of permits fished	5%	17%	11%	15%	11%	23%	18%	5%	6%	5%	10%
	Total permit holders	13	15	16	17	15	19	14	16	15	16	19

Table 4 cont'd. Permits and Permit Holders by Species, Kenai: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	4	5	4	0	0	0	0	0	1	2	2
	Fished permits	3	3	4	0	0	0	0	0	1	2	2
	% of permits fished	75%	60%	100%	-	-	-	-	-	100%	100%	100%
	Total permit holders	3	4	3	0	0	0	0	0	1	2	2
Groundfish (CFEC) ²	Total permits	21	19	19	13	12	10	8	7	8	8	4
	Fished permits	10	3	3	4	4	2	1	2	2	3	1
	% of permits fished	48%	16%	16%	31%	33%	20%	13%	29%	25%	38%	25%
	Total permit holders	16	14	14	10	7	8	7	6	5	4	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	228	237	236	235	239	252	235	240	237	229	246
	Fished permits	172	176	165	159	160	180	165	173	168	167	166
	% of permits fished	75%	74%	70%	68%	67%	71%	70%	72%	71%	73%	67%
	Total permit holders	237	245	240	239	244	259	239	247	247	231	244
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>340</i>	<i>340</i>	<i>333</i>	<i>316</i>	<i>313</i>	<i>323</i>	<i>293</i>	<i>306</i>	<i>305</i>	<i>298</i>	<i>311</i>
	<i>Fished permits</i>	<i>231</i>	<i>228</i>	<i>211</i>	<i>204</i>	<i>199</i>	<i>216</i>	<i>197</i>	<i>208</i>	<i>203</i>	<i>202</i>	<i>199</i>
	<i>% of permits fished</i>	<i>68%</i>	<i>67%</i>	<i>63%</i>	<i>65%</i>	<i>64%</i>	<i>67%</i>	<i>67%</i>	<i>68%</i>	<i>67%</i>	<i>68%</i>	<i>64%</i>
	<i>Permit holders</i>	<i>261</i>	<i>263</i>	<i>259</i>	<i>260</i>	<i>260</i>	<i>277</i>	<i>255</i>	<i>262</i>	<i>262</i>	<i>249</i>	<i>260</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kenai: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kenai ²	Total Net Pounds Landed in Kenai ^{2,5}	Total Ex-Vessel Value of Landings in Kenai ^{2,5}
2000	270	11	11	192	334	474	8,300,063	\$6,138,096
2001	244	29	9	185	321	494	11,354,417	\$6,048,288
2002	204	13	9	180	316	361	14,626,318	\$7,285,379
2003	271	56	7	170	301	529	24,637,003	\$15,140,322
2004	337	63	6	173	296	555	35,218,788	\$23,489,827
2005	343	63	8	113	208	549	37,297,744	\$31,859,946
2006	270	67	7	114	197	478	15,778,709	\$14,542,452
2007	277	76	8	109	193	430	24,192,541	\$23,373,362
2008	233	57	10	103	190	509	15,518,747	\$16,499,738
2009	265	51	9	111	179	526	10,998,537	\$10,923,764
2010	293	43	8	100	161	488	17,500,691	\$18,988,645

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kenai: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	58	2,112,762	209,692
2001	59	2,072,952	245,919
2002	61	2,216,193	271,797
2003	62	2,209,329	270,870
2004	55	2,144,047	290,971
2005	55	2,332,633	321,618
2006	55	2,342,345	319,260
2007	46	2,318,825	328,482
2008	45	2,342,291	306,705
2009	45	3,178,012	407,563
2010	41	3,167,541	373,229

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kenai: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	5	390,432	35,349
2001	6	390,432	33,331
2002	5	3,857	330
2003	5	3,857	392
2004	5	3,857	444
2005	6	4,025	460
2006	6	4,025	404
2007	5	2,935	286
2008	5	2,935	254
2009	6	1,498,362	120,683
2010	5	1,498,274	113,695

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kenai: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	2	192,218	6,112
2006	2	192,218	5,766
2007	2	192,218	9,401
2008	1	18,207	0
2009	2	457,956	0
2010	2	457,956	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kenai: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	142,945	164,563	184,728	241,160	269,534	-	-	63,148	70,822	43,413	-
Herring	-	-	-	7,423	-	-	-	25,209	26,932	-	-
Other Groundfish	-	-	-	-	2,731	9,955	93,865	-	127,712	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	8,152,472	11,188,370	14,439,475	24,383,729	34,943,450	37,100,769	15,467,072	23,694,192	14,900,164	10,953,203	17,451,609
<i>Total²</i>	<i>8,295,417</i>	<i>11,352,933</i>	<i>14,624,203</i>	<i>24,632,312</i>	<i>35,215,715</i>	<i>37,110,724</i>	<i>15,560,937</i>	<i>23,782,549</i>	<i>15,125,630</i>	<i>10,996,616</i>	<i>17,451,609</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$373,724	\$330,959	\$398,665	\$689,908	\$835,137	-	-	\$284,658	\$324,528	\$132,352	-
Herring	-	-	-	\$4,213	-	-	-	\$23,318	\$26,932	-	-
Other Groundfish	-	-	-	-	\$1,099	\$4,391	\$45,890	-	\$11,541	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$5,762,352	\$5,716,754	\$6,885,991	\$14,444,990	\$22,653,020	\$31,313,122	\$13,971,408	\$22,841,523	\$15,897,209	\$10,791,379	\$18,769,544
<i>Total²</i>	<i>\$6,136,076</i>	<i>\$6,047,713</i>	<i>\$7,284,656</i>	<i>\$15,139,112</i>	<i>\$23,489,255</i>	<i>\$31,317,513</i>	<i>\$14,017,298</i>	<i>\$23,149,499</i>	<i>\$16,260,210</i>	<i>\$10,923,731</i>	<i>\$18,769,544</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Alaska for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kenai Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	257,567	273,606	253,361	244,504	244,998	221,696	226,393	267,677	354,151	290,989	205,412
Herring	-	-	-	-	-	498,592	-	-	-	-	-
Other	20,177	9,960	10,920	6,978	6,633	7,761	9,225	7,647	14,869	-	-
Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific	497,878	12,025	73,964	28,944	100,499	13,557	1,753	11,383	1,918,055	1,969,165	-
Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	2,321,814	3,084,107	2,157,461	3,111,346	4,899,443	4,840,610	2,255,011	4,015,124	2,753,557	2,996,586	4,832,875
<i>Total²</i>	<i>3,097,436</i>	<i>3,379,698</i>	<i>2,495,706</i>	<i>3,391,772</i>	<i>5,251,573</i>	<i>5,582,216</i>	<i>2,492,382</i>	<i>4,301,831</i>	<i>5,040,632</i>	<i>5,256,740</i>	<i>5,038,287</i>
<i>Ex-vessel Value (Nominal U.S. Dollars)</i>											
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$676,512	\$523,310	\$554,119	\$723,929	\$756,886	\$677,144	\$842,331	\$1,157,284	\$1,576,697	\$900,727	\$961,453
Herring	-	-	-	-	-	\$39,599	-	-	-	-	-
Other	\$11,142	\$5,412	\$7,740	\$3,345	\$6,191	\$5,654	\$7,322	\$5,008	\$9,263	-	-
Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific	\$162,720	\$4,961	\$25,527	\$7,890	\$25,744	\$4,123	\$898	5,264	\$1,159,789	\$563,481	-
Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$1,198,676	\$1,059,535	\$952,589	\$1,439,482	\$2,406,652	\$2,618,459	\$1,346,555	\$2,421,642	\$2,041,870	\$1,992,128	\$4,023,885
<i>Total²</i>	<i>\$2,049,049</i>	<i>\$1,593,218</i>	<i>\$1,539,976</i>	<i>\$2,174,646</i>	<i>\$3,195,473</i>	<i>\$3,344,979</i>	<i>\$2,197,106</i>	<i>\$3,589,197</i>	<i>\$4,787,619</i>	<i>\$3,456,336</i>	<i>\$4,985,338</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Kenai River hosts world famous sport fisheries for Chinook salmon and other species. According to the City of Kenai Comprehensive Plan, sportfishing is one of the primary visitor activities in Kenai.⁵¹² The lower reach of the river, particularly between Cunningham Park and Eagle Rock, is heavily used by sport fishermen during the Chinook, sockeye, and coho salmon seasons. The Warren Ames Bridge just south of the City of Kenai is a primary access point in this stretch of the river. Upriver, closer to Soldotna, sportfishing from the bank is popular in several locations, and boat fishing is heavy throughout this stretch as well as upriver of the Soldotna Bridge. Razor clam digging is also popular along the coast near Kenai.⁵¹³

It is important to note that 2012 saw unusually low returns of Chinook salmon to the Kenai River and other northern Cook Inlet river systems. This led to extensive closures of both commercial and sport fisheries in Cook Inlet. In the Kenai River, the in-river sport fishery for Chinook salmon was tightly constrained, along with the Eastside commercial set net fishery at the mouth of the River. Total in-river harvest of Chinook salmon in the Kenai River sportfishing was only 1% of the most recent 5-year average.⁵¹⁴

Between 2000 and 2010, a large number of licensed sport fish guides were present in Kenai, varying between 47 and 69 registered in the community each year. In addition, there were between 7 and 14 active sport fish guide businesses in operation per year. During the same period, the number of sportfishing licenses sold to Kenai residents remained relatively stable, varying between 4,497 and 5,054 per year. The number of sport fish licenses sold in Kenai was lower than the number sold to residents in some years and higher in others, varying between 3,126 and 8,080 per year (Table 11). Given the number sold in Kenai was lower than the number sold to residents in some years suggests that residents may undertake their sportfishing activity in other communities, and the higher number of licenses sold to non-local residents in some years indicates that sportfishing draws visitors to Kenai.

Kenai is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, saltwater and freshwater sportfishing at this regional level was substantial (Table 11). In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska residents logged 20,292 saltwater and 71,555 freshwater angler days. Typically, Alaska residents took part in saltwater sportfishing at greater rates than non-Alaska resident anglers, and the opposite was true of freshwater sportfishing. For both Alaska resident and non-Alaska resident anglers in both freshwater and saltwater, the number of angler days fished per year decreased over the period.

⁵¹² Kevin Waring Associates. 2003. *City of Kenai Comprehensive Plan*. Retrieved September 4, 2012 from <http://www.ci.kenai.ak.us/City-approved%20Kenai%20Plan.pdf>.

⁵¹³ Alaska Dept. of Natural Resources. 1998. *Kenai River Comprehensive Management Plan*. Retrieved September 3, 2012 from <http://dnr.alaska.gov/parks/plans/krsmapl/krsmamp3.pdf>.

⁵¹⁴ Alaska Dept. of Fish and Game. (2012). *2012 Alaska Chinook Salmon Fishery Disaster FAQ*. Retrieved June 5, 2013 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalchinookdisaster>.

Table 11. Sport Fishing Trends, Kenai: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kenai ²
2000	11	50	4,497	3,126
2001	12	47	4,756	3,567
2002	8	56	4,612	3,320
2003	9	65	4,738	4,979
2004	7	67	4,759	6,610
2005	17	69	4,657	7,181
2006	11	64	4,511	7,030
2007	14	69	4,753	7,389
2008	14	67	4,760	8,080
2009	10	63	5,054	7,737
2010	11	59	5,043	7,278

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

The Alaska Statewide Harvest Survey,⁵¹⁵ conducted by ADF&G between 2000 and 2010, noted the species that are known to be targeted by private anglers in Kenai. In freshwater, anglers targeted all five species of Pacific salmon as well as landlocked salmon, steelhead, rainbow trout, Dolly Varden, northern pike, Arctic grayling, burbot, smelt, and whitefish. In saltwater, anglers pursued all five species of Pacific salmon, Dolly Varden, lingcod, Pacific halibut, rockfish, Pacific cod, smelt, and shark. The survey also noted sport harvest of razor clams, hardshell clams, Tanner crab, and shrimp by Kenai residents. No kept/release log book data were reported for fishing charters out of Kenai between 2000 and 2010.⁵¹⁶

Subsistence Fishing

Kenai is located in the traditional territory of the Kenaitze people, a branch of Athabascan Indians. Historically, the Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.⁵¹⁷

Today, a majority of Kenai residents are non-Native.⁵¹⁸ Many residents participate in the personal use dip net fishery at the mouth of the Kenai River. The fishery is managed by ADF&G to minimize harvest of coho salmon from the Northern District of the Cook Inlet salmon management area, as well as late-run Kenai River Chinook and coho. In order to avoid these runs, the fishery takes place from late June through July. According to ADF&G, Alaskans harvest 100,000 sockeye per year in the Kenai River dip net fishery.⁵¹⁹

The Kenaitze Indian Tribe has implemented an Educational Fishery Plan in Kenai. Each year, tribal members prepare nets and oversee harvests of sockeye and king salmon as well as eulachon (hooligan candlefish) at several set net sites along the Kenai River and Cook Inlet. Tribal members run educational programs for school groups and other cultural groups, and harvests are donated to Tribal Elders Program and Tribal Food Bank as well as other service organizations. Although not a subsistence fishery, the Educational Fishery allows tribal members to engage in traditional fishing practices and share this cultural heritage with tribal and non-tribal members alike.⁵²⁰

According to data reported by ADF&G, between 2000 and 2008, an average of 12 subsistence salmon permits per year was issued to Kenai households. Based on those permits that were returned, sockeye salmon constituted a majority of the salmon harvested, with an average of 291 sockeye harvested per year by Kenai households. A smaller number of Chinook were also

⁵¹⁵ ADF&G. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁵¹⁶ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵¹⁷ Kenaitze Indian Tribe. (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

⁵¹⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 1990 and 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵¹⁹ Alaska Dept. of Fish and Game. 2012. *Kenai River Salmon Fisheries*. Retrieved September 7, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=PersonalUsebyAreaSouthcentralkenaiSalmon.main>.

⁵²⁰ Kenaitze Indian Tribe. (2013). *Tribal Fisheries 2013 Brochure*.

harvested each year, averaging 41 per year, and some chum, coho, and pink salmon were also reported harvested in some years. This information about subsistence salmon permits is presented in Table 13.

In addition to salmon, Kenai residents participate in subsistence harvest of a variety of other aquatic species. No information was reported by ADF&G between 2000 and 2010 regarding per capita subsistence harvest or the percentage of households in Kenai participating in subsistence harvest activities (Table 12). However, information was available during the 2000-2010 period about subsistence harvest levels of halibut and some species of marine mammals.

Between 2003 and 2010, the number of Subsistence Halibut Registration Certificates (SHARC) issued to Kenai residents fluctuated between 50 and 108, while a much smaller number were returned each year (varying between 10 and 27 per year). In 2010, 108 cards were issued, 10 were returned, and a total of 5,453 pounds of halibut were reported harvested for subsistence purposes. Information about subsistence harvest of halibut is presented in Table 14. According to results of an interview with a Kenaitze tribal leader in May 2013, the small percentage of active SHARC cards can be explained in part by the long distance from the community of Kenai to subsistence halibut fishing grounds at the southern mouth of Cook Inlet.

Information was reported by several management agencies regarding marine mammal harvest by Kenai residents between 2000 and 2010. According to the U.S. Fish and Wildlife Service, from 2003 to 2010, the number of sea otters harvested for subsistence purposes varied from 2 to 11 per year, and several walrus were also reported as harvested in 2000 and 2002. Data from ADF&G show that a number of harbor seals were also harvested in Kenai between 2000 and 2006, varying from 6 to 20 per year. No information was reported by management agencies regarding harvest of beluga whale, Steller sea lion, or spotted seal. Information about marine mammal harvest during the 2000-2010 period is presented in Table 15.

No information was reported by ADF&G regarding total pounds of marine invertebrates or non-salmon fish harvested in Kenai between 2000 and 2010 (Table 13). However, a 1993 ADF&G study of subsistence harvest in Kenai provides information about species of marine invertebrates and non-salmon fish utilized by Kenai households, as well as additional information about marine mammal harvest. The survey indicated that Kenai households harvested the following species of marine invertebrates in 1993: butter, horse, Pacific littleneck, pinkneck, softshell, and razor clams, abalone, black and red chitons, cockles, mussels, oysters, scallops, limpets, snails, whelks, sea urchin, Dungeness and Tanner crab, octopus, and shrimp. Of these species, the greatest percentage of households reported harvesting razor clams (33%), Pacific littleneck clams (6%), and mussels (4%). The percentage of households using these resources was greater than the percentage harvesting, indicating the presence of sharing networks.⁵²¹

Species of non-salmon fish (not including halibut) harvested by Kenai residents in 1993 included Dolly Varden, Arctic char, steelhead, rainbow trout, lake trout, pike, whitefish, sturgeon, grayling, eulachon (hooligan candlefish), black and red rockfish, sea bass, lingcod, sablefish, Pacific cod, whiting, Pacific tomcod, sea bass, greenling, Irish lord, unknown sculpin, smelt, flounder, sole, wolf fish, skate, shark, and herring. The survey also noted harvest of

⁵²¹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

herring sac roe and herring spawn on kelp. Of these species, the greatest percentage of households reported harvest of rainbow trout (26%) and Dolly Varden (18%).⁵²²

In addition, the survey found that Kenai households harvested the following marine mammal species in 1993: harbor seal, Steller sea lion, and unknown whale.⁵²³

Table 12. Subsistence Participation by Household and Species, Kenai: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵²² Ibid.

⁵²³ Ibid.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kenai: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	8	8	3	n/a	n/a	n/a	146	n/a	n/a
2001	7	10	2	n/a	8	n/a	407	n/a	n/a
2002	6	15	2	n/a	n/a	n/a	82	n/a	n/a
2003	7	18	33	n/a	n/a	n/a	194	n/a	n/a
2004	25	21	66	n/a	3	n/a	350	n/a	n/a
2005	16	15	36	7	n/a	1	491	n/a	n/a
2006	7	6	34	2	17	6	186	n/a	n/a
2007	8	8	59	n/a	11	n/a	68	n/a	n/a
2008	20	19	131	5	11	1	695	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kenai: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	50	11	1,933
2004	57	12	3,660
2005	57	13	2,582
2006	72	12	2,166
2007	80	27	3,696
2008	76	19	5,150
2009	105	16	7,444
2010	108	10	5,453

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kenai: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	3	n/a	n/a	12	n/a
2001	n/a	n/a	n/a	n/a	n/a	24	n/a
2002	n/a	n/a	1	n/a	n/a	9	n/a
2003	n/a	11	n/a	n/a	n/a	20	n/a
2004	n/a	2	n/a	n/a	n/a	6	n/a
2005	n/a	2	n/a	n/a	n/a	6	n/a
2006	n/a	2	n/a	n/a	n/a	6	n/a
2007	n/a	2	n/a	n/a	n/a	n/a	n/a
2008	n/a	2	n/a	n/a	n/a	n/a	n/a
2009	n/a	2	n/a	n/a	n/a	n/a	n/a
2010	n/a	6	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Moose Pass

People and Place

*Location*⁵²⁴



Moose Pass is a Census Designated Place (CDP) located 26 miles north of Seward on the Kenai Peninsula. It is on the southwest shore of Upper Trail Lake, off the Seward Highway, at mile 29.3 of the Alaska Railroad. Moose Pass is located in the Kenai Peninsula Borough Census Area and the Seward Recording District.

The demographic and fisheries statistics presented in this profile are specific to Moose Pass CDP. However, it is important to note that residents of nearby Crown Point and Primrose CDPs are considered to be part of the Moose Pass community as well.⁵²⁵

*Demographic Profile*⁵²⁶

In 2010, there were 219 residents in Moose Pass, making it the 187th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Moose Pass increased by 170%. The majority of this growth occurred between 1990 and 2000, with a population increase from 81 to 206. According to estimates by the Alaska Department of Labor, the population of permanent residents in Moose Pass decreased by 8.3% between 2000 and 2009, with an average annual growth rate of -1.41%. The change in population from 1990 to 2010 is provided in Table 1. It is useful to note that the population of Primrose CDP declined from 93 in 2000 to 78 in 2010, while the population of Crown Point was 75 in 2000 and 74 in 2010.

In 2010, a majority of the population of Moose Pass identified themselves as White (94.1%), along with 1.4% that identified as American Indian and Alaska Native, 1.4% as Black or African American, 0.9% as Native Hawaiian and Other Pacific Islander, 0.5% as Asian, and 1.8% that identified with two or more races. In addition, 2.3% of Moose Pass's population identified themselves as Hispanic in 2010. The percentage of the population made up of individuals identifying as White increased slightly over time, from 88.9% in 1990 and 87.3% in 2000, to 94.1% in 2010. At the same time, the percentage of the population identifying as American Indian and Alaska Native decreased from 11.1% in 1990 and 10.7% in 2000, to 1.4% in 2010. Other than the decrease in Native residents, the population of Moose Pass appeared to be more diverse in 2010 than in previous years, with several new ethnic groups present in the community. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

⁵²⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵²⁵ Personal communication with a Moose Pass resident.

⁵²⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Moose Pass from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	81	-
2000	206	-
2001	-	206
2002	-	217
2003	-	219
2004	-	220
2005	-	218
2006	-	203
2007	-	199
2008	-	185
2009	-	189
2010	219	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

In 2010, the average household size in Moose Pass was 2.35, a slight decrease from the average household size in 2000 (2.45 persons per household) and 1990 (2.4 persons per household). The number of households in Moose Pass has increased over time, from 33 households in 1990 to 84 in 2000, and 93 in 2010. Of the 137 housing units surveyed for the 2010 Decennial Census, 47.4% were owner-occupied, 20.4% were rented, and 32.1% were vacant or used only seasonally. In 2010, no residents of Moose Pass lived in group quarters. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the population of Moose Pass reaches its peak during summer months, in June, July, and August, and approximately 100 seasonal workers are present in the town during these months. They indicated that population fluctuations are somewhat driven by employment in the commercial fishing sector.

In 2010, the gender makeup of Moose Pass's population (53.4% male and 47.3% female) was more weighted toward males than the population of the state as a whole, which was 52% male and 48% female. The median age of Moose Pass residents was 41.5 years, older than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the age group most heavily skewed toward males was 50 to 59 years, while there was a relatively even spread of males and females across other age categories in Moose Pass. In 2010, 17.9% of Moose Pass's population was age 60 or older. The overall population structure of Moose Pass in 2000 and 2010 is shown in Figure 2.

Figure 1. Racial and Ethnic Composition, Moose Pass: 2000-2010 (U.S. Census).

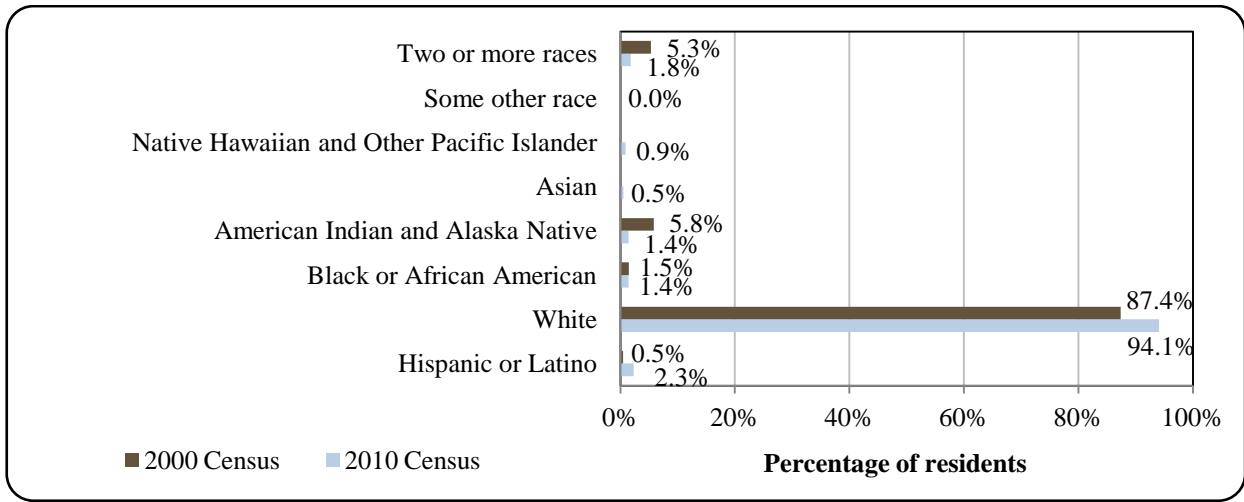
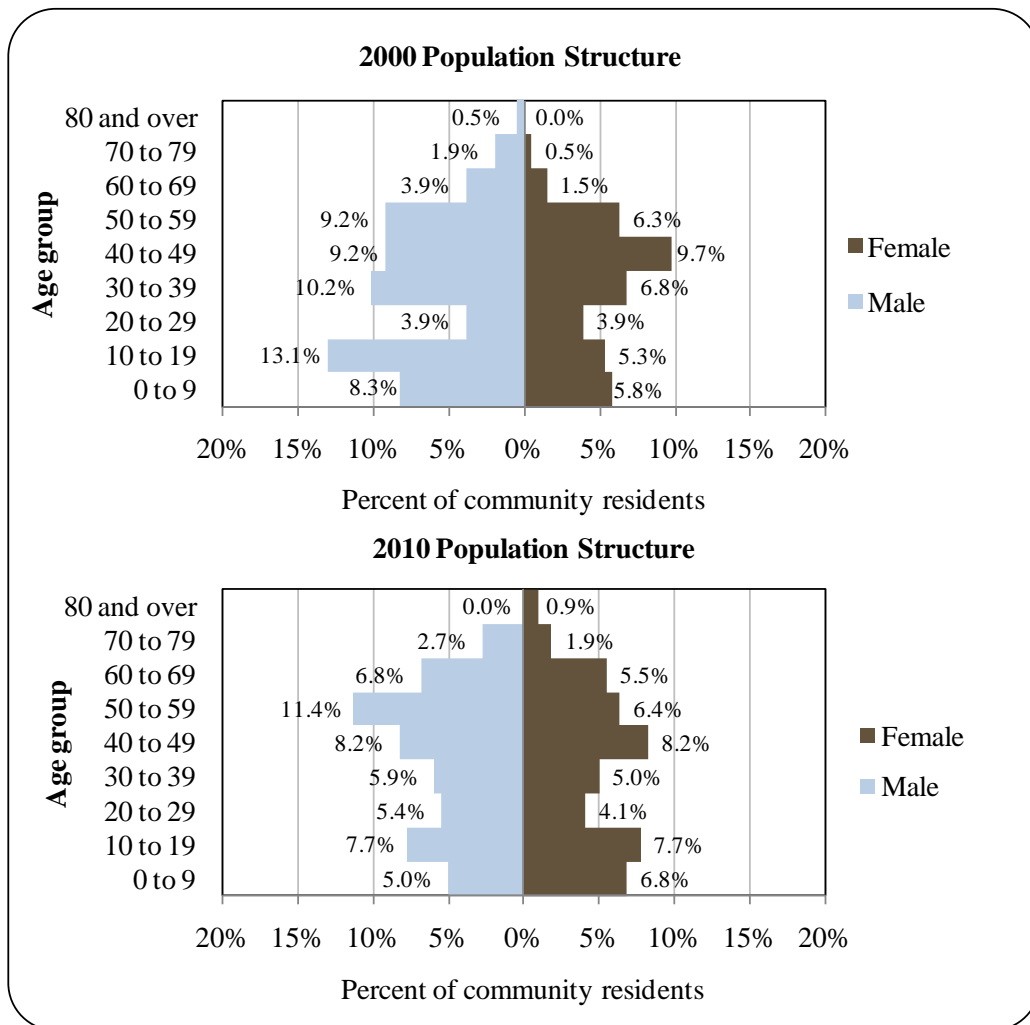


Figure 2. Population Age Structure in Moose Pass Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁵²⁷ 95.3% of Moose Pass residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 0% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 4.7% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 16.7% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 22.6% were estimated to have an Associate's degree, compared to 7.9% of Alaska residents overall; 42.3% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 6.5% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

The history of the name “Moose Pass” began prior to the town's settlement. A mail carrier and his dog team reportedly had difficulty gaining the right-of-way from a moose in 1903.⁵²⁸ That same year, the Alaska Railroad Company constructed its first 50 miles of railroad from Seward north, passing close to Moose Pass.⁵²⁹ The site gained importance as a crossroads on the Iditarod Trail, a dogsled route between Seward and Nome that was blazed in 1908 to service mining camps in Nome and the Yukon-Kuskokwim Delta. By 1910, after a series of gold rushes starting in the late 1800s, the non-Native population of Alaska had swelled to over 30,000, and the Iditarod and several other dogsled routes were the only form of winter communication with isolated communities.⁵³⁰

The first residents of Moose Pass, Oscar Christensen and Mickey Natt, arrived by horse and dogsled in 1909 and built a log cabin at the crossroads. They soon built a log roadhouse, providing lodging and supplies to miners en route to mining camps further north. In 1927, the Alaska Railroad Company built a small freight shed and receiving platform for heavy equipment at the Moose Pass station. Mail service involved sacks of mail being tossed off the train as it passed. Desire for a more efficient mail system prompted establishment of a post office in 1928.⁵³¹

Leora Roycroft, the first postmaster of Moose Pass, also started a school in the town in 1928. For the first few years school took place in a tent, until a schoolhouse was built in 1930. A small hydroelectric plant was installed in 1927 and provided electricity to the roadhouse, school, local stores, and homes until Chugach Electric Company began provided electric service to Moose Pass in 1956. Today, Moose Pass remains a small, quiet community situated along the

⁵²⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵²⁸ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵²⁹ Alaska Railroad Corporation website (n.d.). *Alaska Railroad History*. Retrieved December 14, 2011 from <http://alaskarailroad.com>.

⁵³⁰ Iditarod Historic Trail Alliance (n.d.). *Historic Overview*. Retrieved December 14, 2011 from <http://www.iditarodnationalhistorictail.org/>.

⁵³¹ Moose Pass, Alaska website (n.d.). *History*. Retrieved December 14, 2011 from <http://www.moosepass.net>.

Alaska Railroad. A Solstice Festival each summer attracts visitors and raises funds to maintain the community hall and support the fire department and library.⁵³²

In 2009, legislation was passed to create the Kenai Mountains-Turnagain Arm (KMTA) National Heritage Area. The purpose of the designation is to encourage preservation and conservation of the region's nationally important story about the many different people who traveled through, settled, and developed the rugged mountain valleys of the KMTA region.⁵³³

Natural Resources and Environment

Moose Pass is located in a maritime climate zone, with temperatures moderated by the ocean. Average winter temperatures in Moose Pass range from 6 to 44 °F, and average summer temperatures vary from 41 to 67 °F. The average annual precipitation is 28 inches, and average annual snowfall is 81 inches.⁵³⁴

Moose Pass is located in a lower elevation portion of the Kenai Peninsula that is covered by boreal forest and lakes.⁵³⁵ The community is within the boundary of the Chugach National Forest, the western and northern-most National Forest, comprising 5.5 million acres. The eastern portion of the Kenai Peninsula makes up 21% of the total area of this National Forest. Of the 5,000 moose living on the Kenai Peninsula, 1,000 live within the National Forest's boundary. The Russian River, located just west of Moose Pass along the Chugach National Forest border, attracts approximately 150,000 sport fishermen each year.⁵³⁶ The Kenai National Wildlife Refuge (NWR) begins approximately 40 miles southwest of Moose Pass. The NWR was established to conserve moose, bears, mountain goats, Dall sheep, wolves and other furbearers, salmonids and other fish, and waterfowl and other migratory and non-migratory birds.⁵³⁷

Natural hazards present in the Kenai Peninsula Borough include high risk of earthquake and volcanic activity, and medium risk of flooding events, wildfire, tsunami, and seiche. The area is also rated at risk of snow and avalanche, landslides, erosion, and drought.⁵³⁸ In January and February of 2000, a series of avalanches closed the Seward Highway. Moose Pass and several other communities were cut off from road, rail, and air access, and faced supply shortages. Frequent and often devastating earthquakes and volcanic activity occur in the area as a result of nearby fault lines and subduction of the Pacific plate under the North American plate. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt, and Mount Spurr.⁵³⁹

⁵³² Ibid.

⁵³³ Kenai Mountains-Turnagain Arm National Heritage Area (2011). *Draft Management Plan*. Retrieved December 14, 2011 from http://www.kmtacorridor.org/files/KMTA_plan_low_res.pdf.

⁵³⁴ Temperature, precipitation and snowfall information retrieved December 14, 2011 from www.weatherbase.com.

⁵³⁵ U.S. Fish and Wildlife Service (n.d.). *Kenai National Wildlife Refuge*. Retrieved December 14, 2011 from <http://kenai.fws.gov/>.

⁵³⁶ Chugach National Forest website (n.d.). *Forest Facts*. Retrieved December 14, 2011 from <http://www.fs.usda.gov/chugach/>.

⁵³⁷ See footnote 535.

⁵³⁸ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁵³⁹ Kenai Peninsula Borough (2010). *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Moose Pass as of July 2012.⁵⁴⁰

Current Economy⁵⁴¹

The economy of Moose Pass is tied to forest resources. The U.S. Forest Service's Kenai Work Station is an important employer in the community, providing approximately 40 to 45 full time positions and 35 to 40 seasonal positions. As of April 2012, approximately 25 Moose Pass residents held full time employment at the Kenai Work Station. Additional employers in the community include the Department of Transportation, U.S. Postal Service, Alaska Railroad, state troopers, and the Kenai Peninsula School District. Many local residents also work as craftsmen.^{542,543,544} According to a survey conducted by the AFSC in 2011, community leaders reported that timber harvest and management is the natural resource-based industry on which the local economy is most dependent. The community is not located along the coast, and although a number of individual residents participate in commercial fishing (see *Commercial Fishing* section of this profile), employment within the community of Moose Pass itself is not based on this fishing activity. It is important to note that two active sport fish guide businesses were registered in Moose Pass in 2010, providing some local employment opportunity (see the *Recreational Fishing* section of this profile).

Based on household surveys conducted for the 2006-2010 ACS,⁵⁴⁵ in 2010, the per capita income in Moose Pass was estimated to be \$39,543 and the median household income was estimated to be \$68,571. This represents a sizeable increase in per capita income from \$28,147 in the year 2000. In contrast, median household income declined substantially from \$87,147 in 2000. If inflation is taken into account by converting the 2000 values to 2010 dollars,⁵⁴⁶ the increase in per capita income is less substantial (real per capita income in 2000 was \$37,013), and the decline in median household income is even greater (real median household income in 2000 was \$114,786). In 2010, Moose Pass ranked 12th of 305 Alaskan communities with per capita income data that year, and 50th in median household income, out of 299 Alaskan communities with household income data. It is possible that household income estimates may be inflated, as one or more Moose Pass residents may have over-reported personal income levels.⁵⁴⁷

⁵⁴⁰ Alaska Dept. of Environmental Conservation (n.d.). *List of contaminated sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁵⁴¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁴² Moose Pass Sportsman's Club. (2012). *Moose Pass Community Facilities Development Plan*. Parts I, II, III, IV, and V.

⁵⁴³ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴⁴ Personal communication with a Moose Pass resident.

⁵⁴⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵⁴⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵⁴⁷ See footnote 544.

The small population size in Moose Pass may have prevented the 2006-2010 ACS from accurately portraying economic conditions.⁵⁴⁸ An alternative estimate of per capita income is obtained from economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Moose Pass in 2010 is \$15,070.^{549, 550} This alternative estimate is lower than the 2006-2010 ACS per capita income estimate, and suggests that caution is warranted when citing a large increase in per capita income in Moose Pass between 2000 and 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, a larger percentage of the Moose Pass population, aged 16 and older, was estimated to be in the civilian labor force (81.3%) than in the civilian labor force statewide (68.8%). No local residents were estimated to be living below the poverty line in 2010, compared to a 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 7.1%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 13.8%, compared to a statewide unemployment rate estimate of 11.5%.⁵⁵¹

Also based on the 2006-2010 ACS, a majority of the Moose Pass workforce was estimated to be employed in the private sector (61.5%). Of the 179 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers was employed in agriculture, forestry, fishing and hunting, and mining (22.9%), transportation, warehousing, and utilities (22.3%), educational services, health care, and social assistance (17.3%), and construction industries (14.5%). When viewing employment in terms of occupation, the greatest numbers of workers were estimated to be employed in management/professional (49.2%) and service occupations (28.5%). Compared to 2000, there was a significant decline in census reported employment in natural resource/construction/maintenance occupations, from 40.5% in 2000 to 0% in 2010. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

⁵⁴⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁴⁹ Alaska Dept. of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information*. Retrieved May 22, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

⁵⁵⁰ See footnote 545.

⁵⁵¹ See footnote 549.

Figure 3. Local Employment by Industry in 2000-2010, Moose Pass (U.S. Census).

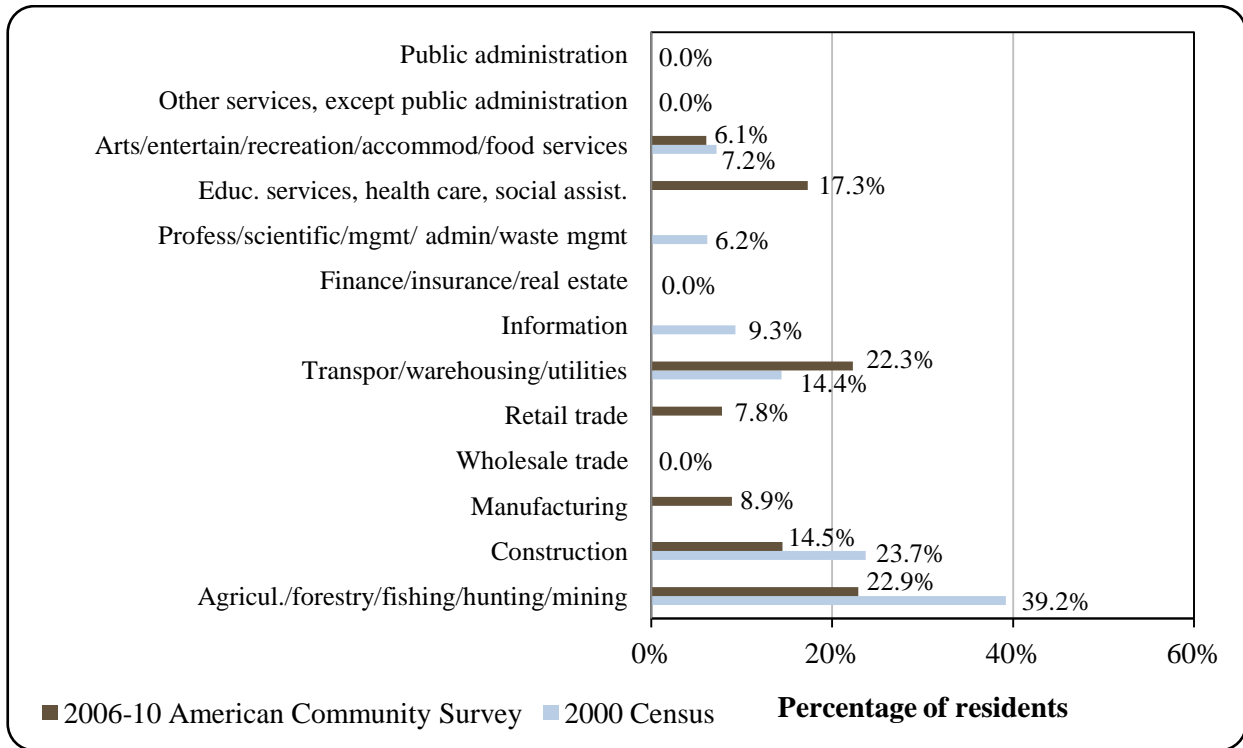
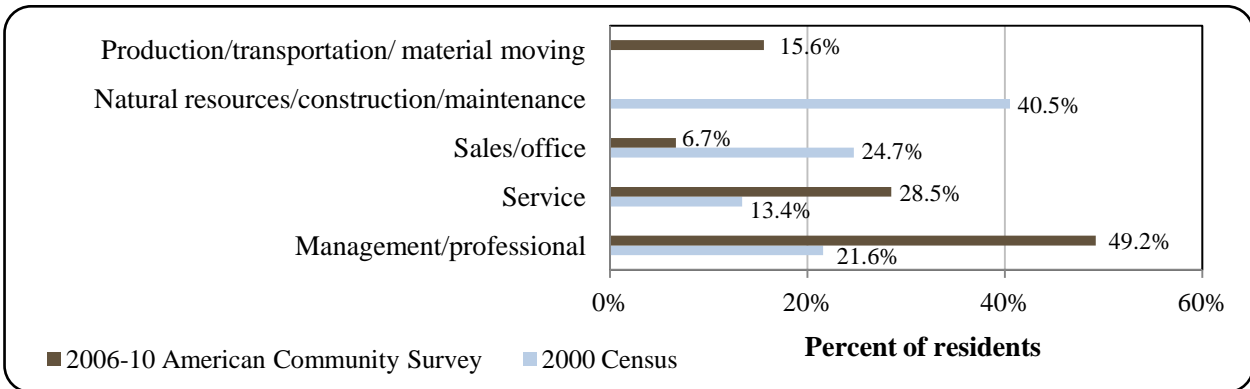


Figure 4. Local employment by occupation in 2000-2010, Moose Pass (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 83 employed residents in Moose Pass in 2010, of which 19.3% were employed in state government, 15.7% in trade, transportation, and utilities, 15.7% in leisure and hospitality, 13.3% in local government, 12% in natural resources and mining, 8.4% in construction, 6% in manufacturing, 4.8% in professional and business services, 2.4% in education and health services, and 2.4% in other industries.⁵⁵² As with income and poverty statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the personal use and subsistence economy.

⁵⁵² Ibid.

Governance

Moose Pass is an unincorporated community in the Kenai Peninsula Borough. The community does not administer any local taxes, although the Borough does administer a 3% sales tax and 4.5 mills property tax.⁵⁵³ Given that Moose Pass is not incorporated, there was no municipal revenue reported between 2000 and 2010. The Moose Pass Sportsman’s Club (MPSC) serves as the local representative body for Moose Pass. Organizational leadership includes a President, Vice President, Treasurer, and Secretary. The MPSC owns and manages the community hall and manages community functions. It also funds civic activities, and represents the community with other government agencies.⁵⁵⁴ In 2011, the MPSC received \$50,000 from the State of Alaska toward development of a comprehensive community land use plan.⁵⁵⁵ No fisheries-related grants were reported received by the community between 2000 and 2010. Information about selected local revenue sources in Moose Pass is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Moose Pass From 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵⁵³ Alaska Dept. of Comm. And Rural Affairs (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

⁵⁵⁴ Moose Pass Sportsman’s Club. (2012). *Moose Pass Community Facilities Development Plan*. Parts I, II, III, IV, and V.

⁵⁵⁵ Alaska Office of Management and Budget. (2011). *Total Project Snapshot Report: Moose Pass Sportsman’s Club – Community Development*. Retrieved August 8, 2013 from http://omb.alaska.gov/ombfiles/12_budget/CapBackup/proj55326.pdf.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). Community Funding Database. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Moose Pass was not included under the Alaska Native Claims Settlement Act, and is not federally recognized as a Native village.⁵⁵⁶ Offices of the Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources (DNR), Alaska Department of Commerce, Community, and Economic Development, the National Marine Fisheries Service (NMFS), and the U.S. Bureau of Citizenship and Immigration Services are all located in Anchorage, a 100 mile drive north from Moose Pass. Several DNR offices (Division of Forestry and a Division of Parks and Recreation office) are also located in Soldotna, a 65 mile drive west from the community. An office of ADF&G is also located in Kenai, 75 miles west of Moose Pass, and a NMFS enforcement office is located in Seward, 30 miles to the south.

Infrastructure

Connectivity and Transportation

The Seward Highway connects to Alaska's road system, with access to Anchorage located 100 miles north by road, as well as other cities on the Kenai Peninsula. Seward, 30 miles south of Moose Pass, offers access to the Alaska Railroad, harbor/dock facilities, and the Alaska State Ferry.⁵⁵⁷ Seward has a state-maintained 4533-ft-long by 100-ft-wide runway. No commercial scheduled flights service Seward, but the runway is open for air taxis and general aviation. Commercial flights serve the Kenai Municipal Airport, located 75 miles west of Moose Pass.⁵⁵⁸ The approximate cost to travel by air roundtrip to Anchorage from Kenai in early June 2012 was \$179.⁵⁵⁹ Air access to Moose Pass is also available by seaplane, with a landing site at Summit Lake, located 16 miles north of the community along the Seward Highway.⁵⁶⁰

Facilities

In Moose Pass, a majority of homes retrieve water from individual wells, and the school operates its own water system. Septic tanks and outhouses are used to manage wastewater and sewage; over 50% of households are fully plumbed. Many homes in this area are used only seasonally. A landfill is operated by the Borough. Borough refuse transfer containers are located at mile 24 on the Seward Highway. Electricity is provided to the community by Chugach Electric Association, and is generated using hydro and natural gas. Public safety services are provided by state troopers stationed in Soldotna and the Moose Pass Volunteer Fire/Emergency Medical Services.⁵⁶¹ The Moose Pass Sportsman's Club operates a community hall, a public library, and

⁵⁵⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁵⁷ Ibid.

⁵⁵⁸ Airport information retrieved December 14, 2011 from <http://www.airnav.com/>.

⁵⁵⁹ This price was calculated on November 21, 2011 using [kayak.com](http://www.kayak.com).

⁵⁶⁰ See footnote 556.

⁵⁶¹ Ibid.

volunteer fire department.⁵⁶² A school library is also available. Telephone and internet service providers offer service in Moose Pass, but no cable service provider is reported.^{563, 564}

According to an AFSC survey conducted in 2011, community leaders reported that no fishing-related infrastructure was present in Moose Pass. They also said that residents travel to Seward, Cooper Landing, and Soldotna to access fishing support businesses not available in Moose Pass.

Medical Services

Health care for Moose Pass residents is available in Soldotna at Central Peninsula General Hospital (65 miles west) and in Seward at Providence Seward Medical Center (30 miles south). Emergency Services have highway and helicopter access and are within 30 minutes of a higher-level satellite health care facility. Emergency service is provided by 911 Telephone Service and volunteers.⁵⁶⁵

Educational Opportunities

There is one school in the community, which offers a Kindergarten through 12th grade education. The Moose Pass School had a total of 17 students and 1 teacher in 2011.⁵⁶⁶

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The community of Moose Pass has historically been more connected to the mining and timber industries than the commercial fishing industry (see the *History, Traditional Knowledge, and Culture* section of this profile). Nevertheless, individual residents actively participate in commercial, sport, and subsistence fisheries.

Although Moose Pass is not located directly on the coast, it is worth noting that the marine areas surrounding the Kenai Peninsula are encompassed by Pacific Halibut Fishery Regulatory Area 3A, the Central Gulf of Alaska Sablefish Regulatory Area, and Federal Statistical and Reporting Area 630. Moose Pass is not eligible to participate in either the Community Development Quota (CDQ) program or the Community Quota Entity (CQE) program.

According to a survey conducted by the AFSC in 2011, community leaders reported that Moose Pass participates in fisheries management processes in Alaska. They indicated that the primary way in which the community is engaged is by sending a representative to sit on regional fisheries advisory and/or working groups run by ADF&G.

⁵⁶² Alaska Office of Management and Budget. (2011). *Total Project Snapshot Report: Moose Pass Sportsman's Club – Community Development*. Retrieved August 8, 2013 from http://omb.alaska.gov/ombfiles/12_budget/CapBackup/proj55326.pdf.

⁵⁶³ See footnote 556.

⁵⁶⁴ Personal communication with a Moose Pass resident.

⁵⁶⁵ See footnote 556.

⁵⁶⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Processing Plants

ADF&G's 2010 Intent to Operate list did not list a registered processing plant in Moose Pass. Processing facilities were registered in Seward, 30 miles south of Moose Pass, as well as other communities on the Kenai Peninsula.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Moose Pass (Table 3).

Commercial Fishing

Between 2000 and 2010, several Moose Pass residents were involved in commercial fishing activity as crew members, vessel owners, and permit and quota share account holders. In 2010, five residents held commercial crew licenses and one fishing vessel was primarily owned by a Moose Pass resident. Information about the commercial fishing sector in Moose Pass is presented in Table 5.

In 2010, two residents of Moose Pass held Bristol Bay salmon set gill net permits issued by the Commercial Fisheries Entry Commission (CFEC), and both were actively fished. One halibut CFEC permit was held between 2003 and 2006, but was actively fished only in 2003. Likewise, one sablefish permit was held between 2003 and 2006, but was only actively fished during 2003. Moose Pass residents did not hold any Federal Fisheries Permits (FFPs) or License Limitation Program permits (LLPs) during the 2000-2010 period. State and federal permit holdings in Moose Pass are displayed in Table 4.

Also in 2010, two Moose Pass residents held quota share accounts in the federal halibut catch share fishery, holding a total of 18,083 quota shares (Table 6). The annual halibut individual fishing quota (IFQ) allotment increased between 2000 and 2005, then declined again in the second half of the decade. In the same year, one resident held a quota share account in the federal sablefish catch share fishery, holding a total of 5,194 quota shares (Table 7). Sablefish allotment also declined in the second half of the decade. There were no quota share account holders in federal crab catch share fisheries in Moose Pass between 2005 and 2010 (Table 8).

Given the lack of fish buyers in Meyers Chuck (Table 5), no landings or ex-vessel revenue were generated locally between 2000 and 2010 (Table 9). Information about landings and ex-vessel revenue generated by vessel owners residing in Moose Pass is considered confidential between 2000 and 2010 due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Moose Pass: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Moose Pass: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	1	0	0	0	0	0	0	0
	% of permits fished	-	-	-	100%	0%	0%	-	-	-	-	-
	Total permit holders	0	0	0	1	1	1	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Moose Pass: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	1	0	0	0	0	0	0	0
	% of permits fished	-	-	-	100%	0%	0%	-	-	-	-	-
	Total permit holders	0	0	0	1	1	1	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	2	1	1	1	3	2	3	2	2
	Fished permits	2	1	1	1	1	1	2	2	3	2	2
	% of permits fished	100%	50%	50%	100%	100%	100%	67%	100%	100%	100%	100%
	Total permit holders	2	2	2	1	1	1	3	2	3	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	2	2	2	3	3	3	3	2	3	2	2
	<i>Fished permits</i>	2	1	1	3	1	1	2	2	3	2	2
	<i>% of permits fished</i>	100%	50%	100%	33%	33%	67%	100%	100%	100%	100%	
	<i>Permit holders</i>	2	2	2	2	2	2	3	2	3	2	2

Note: n/a indicates that no data were reported for that year.

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Moose Pass: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Moose Pass ²	Total Net Lb Landed In Moose Pass ^{2,5}	Total Ex-Vessel Value Of Landings In Moose Pass ^{2,5}
2000	2	0	0	1	0	0	0	\$0
2001	5	0	0	1	0	0	0	\$0
2002	2	0	0	1	0	0	0	\$0
2003	5	0	0	1	0	0	0	\$0
2004	4	0	0	1	0	0	0	\$0
2005	5	0	0	1	0	0	0	\$0
2006	4	0	0	1	0	0	0	\$0
2007	5	0	0	1	0	0	0	\$0
2008	4	0	0	1	0	0	0	\$0
2009	5	0	0	1	0	0	0	\$0
2010	5	0	0	1	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Moose Pass: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	374	37
2001	1	374	44
2002	1	374	45
2003	1	374	45
2004	1	374	50
2005	1	374	51
2006	1	374	50
2007	2	18,083	2,562
2008	2	18,083	2,368
2009	2	18,083	2,122
2010	2	18,083	1,954

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Moose Pass: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	1	5,194	507
2008	1	5,194	451
2009	1	5,194	409
2010	1	5,194	369

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Moose Pass: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Moose Pass: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Moose Pass Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Starting in 2005, at least one active sport fish guide businesses was present per year in Moose Pass through 2010, and the number of licensed sport fish guides present in the community increased from one in 2000 to six by 2010. No sportfishing licenses were sold in the community, but residents purchased between 100 and 159 (irrespective of point of sale) each year during the 2000-2010 period. Information related to sportfishing businesses is presented in Table 11.

In a survey conducted by the AFSC in 2011, community leaders reported that freshwater sportfishing is accessed near Moose Pass by hiking or flying in to area lakes and streams. Nearby Russian River, a tributary of the Kenai River, draws approximately 150,000 sport fishermen per year.⁵⁶⁷ The Alaska Statewide Harvest Survey,⁵⁶⁸ conducted by ADF&G between 2000 and 2010, recorded the following species targeted by private anglers in Moose Pass between 2000 and 2010: Chinook, coho, sockeye, and pink salmon, rainbow trout, Dolly Varden char, Arctic grayling, Pacific halibut, rockfish, and lingcod. The survey also noted the harvest of razor clams Moose Pass sport fishermen. No kept/release log book data were reported for fishing charters out of Moose Pass between 2000 and 2010.⁵⁶⁹

Table 11. Sport Fishing Trends, Moose Pass: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Moose Pass²
2000	0	1	100	0
2001	0	1	106	0
2002	0	1	113	0
2003	0	1	119	0
2004	0	2	137	0
2005	1	2	159	0
2006	1	4	131	0
2007	1	3	127	0
2008	1	3	128	0
2009	1	3	137	0
2010	2	6	119	0

⁵⁶⁷ Chugach National Forest website (n.d.). *Forest Facts*. Retrieved December 14, 2011 from <http://www.fs.usda.gov/chugach/>.

⁵⁶⁸ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁵⁶⁹ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Moose Pass: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Moose Pass is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, both saltwater and freshwater sportfishing at this regional level were substantial. In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska residents logged 20,292 saltwater angler days and 71,555 freshwater angler days. Typically, Alaska residents took part in saltwater sportfishing at greater rates than non-Alaska resident anglers, and the opposite was true of freshwater sportfishing. For both Alaska resident and non-Alaska resident anglers in both freshwater and saltwater, the number of angler days fished per year decreased between 2000 and 2010. This information about regional sportfishing activity is presented in Table 11.

Subsistence Fishing

According to a survey conducted by the AFSC in 2011, community leaders indicated that residents of Moose Pass do not participate in subsistence activities. Data presented about subsistence harvest in Table 12 echoes this, with no information reported regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). In addition, no information was reported by management agencies regarding subsistence harvest of marine invertebrates, non-

salmon fish, halibut, or marine mammals (Table 13 through 15). However, several Moose Pass households were reported to have participated in the subsistence salmon fishery between 2000 and 2008. In 2008, the last year for which data were reported, one Moose Pass household was issued a subsistence salmon permit. No information was available about the number of salmon harvested with the permit that year. For years in which information was reported, sockeye was the primary species harvested using subsistence salmon permits in Moose Pass (Table 13).

Additional Information

According to information compiled about Moose Pass for the Kenai Mountains-Turnagain Arm National Heritage Area, the community has a resident ghost:

“The counter at the present day grocery store was at one time part of the original roadhouse bar. In *Alaska’s Kenai Peninsula: The Road We’ve Traveled*, historian Ann C. Whitmore-Painter writes, “Locals say an old-timer died at a barstool there and haunts the store today.” ‘Al’ is friendly ghost, however.”⁵⁷⁰

Table 12. Subsistence Participation by Household and Species, Moose Pass: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵⁷⁰ Kenai Mountains-Turnagain Arm National Heritage Area website. (n.d.) *Communities within the Heritage Area*. Retrieved December 14, 2011 from <http://www.kmtacorridor.org/communities.php>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Moose Pass: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	1	n/a	n/a	8	n/a	1	n/a	n/a
2001	3	3	n/a	n/a	n/a	n/a	30	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	1	2	n/a	n/a	n/a	n/a	30	n/a	n/a
2004	2	2	n/a	n/a	n/a	n/a	15	n/a	n/a
2005	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	2	n/a	n/a	n/a	n/a	55	n/a	n/a
2007	2	2	n/a	n/a	n/a	n/a	100	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Moose Pass: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Moose Pass: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nanwalek (*nan-WAH-leck; Formerly English Bay*)



People and Place

*Location*⁵⁷¹

Nanwalek is located at the southern tip of the Kenai Peninsula, at the mouth of Cook Inlet. The community lies 10 miles southwest of Seldovia, and 3 miles east of Port Graham. The community encompasses 8.5 square miles of land and 0 square miles of water. Nanwalek is located in the Seldovia Recording District and the Kenai Peninsula Borough Census Area.

*Demographic Profile*⁵⁷²

In 2010, there were 254 residents in Nanwalek, ranking it as the 176th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Nanwalek increased by 60.8%. According to Alaska Department of Labor population estimates, the population of permanent residents increased by 27.7% between 2000 and 2009. The average annual growth during this period was 0.97%, reflecting an overall positive population trend with small decreases in population in some years. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, a majority of the population of Nanwalek identified themselves as American Indian and Alaska Native (80.3%), while 10.6% identified as White, and 9.1% identified with two or more races. In addition, 2.0% of Nanwalek's population identified themselves as Hispanic in 2010. The percentage of residents that identified as White decreased from 8.9% in 1990 to 6.8% in 2000, then increased to 10.6% by 2010. At the same time, the percentage of the population that identified as American Indians and Alaska Natives increased slightly, from 91.1% in 1990 to 93.2% in 2000, and then decreased to 89.4% by 2010. The percentage of individuals identifying with two or more races increased from 4% in 2000 to 9.1% in 2010. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

Based on the U.S. Census, in 2010, the average household size Nanwalek was 4.62 persons per household, an increase from 3.7 in 1990 and 3.93 in 2000. The number of households in Nanwalek also increased over time, from 42 households in 1990 and 45 in 2000, to 55 in 2010. Of the 73 housing units surveyed for the 2010 U.S. Census, 42.5% were owner-occupied, 32.9% were rented, and 24.7% were vacant or used only seasonally. From 1990 to 2010, no residents of Nanwalek were living in group quarters. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the population of Nanwalek reaches its peak during the months of June, July, and August, and

⁵⁷¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁷² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

approximately 25 seasonal workers or transients are present in the town between May and September. They indicated that population fluctuations are mostly driven by employment in the commercial fishing sector.

In 2010, the gender makeup of Nanwalek’s population (51.2% male and 48.8% female) was more gender balanced than the state population as a whole, which had 52% males and 48% females. The median age of Nanwalek residents was 23.3 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the age group most heavily skewed toward males was 40 to 49, while there was a relatively even spread of males and females across other age categories. In 2010, only 3.1% of Nanwalek’s population was age 60 or older. The overall population structure of Nanwalek in 2000 and 2010 is shown in Figure 2.

Table 1. Population in Nanwalek from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	158	-
2000	177	-
2001	-	184
2002	-	219
2003	-	214
2004	-	204
2005	-	220
2006	-	228
2007	-	216
2008	-	228
2009	-	226
2010	254	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nanwalek: 2000-2010 (U.S. Census).

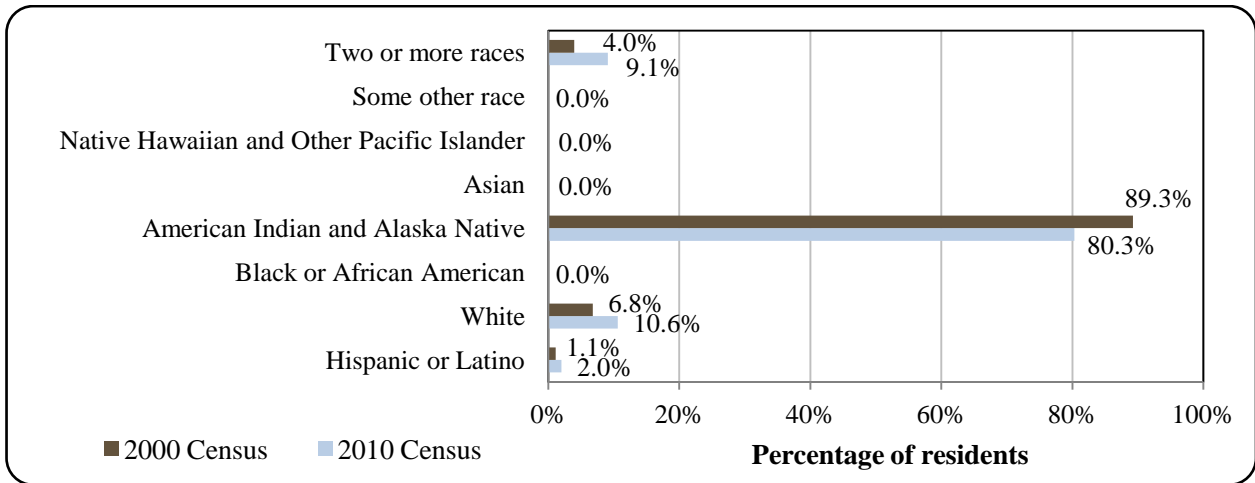
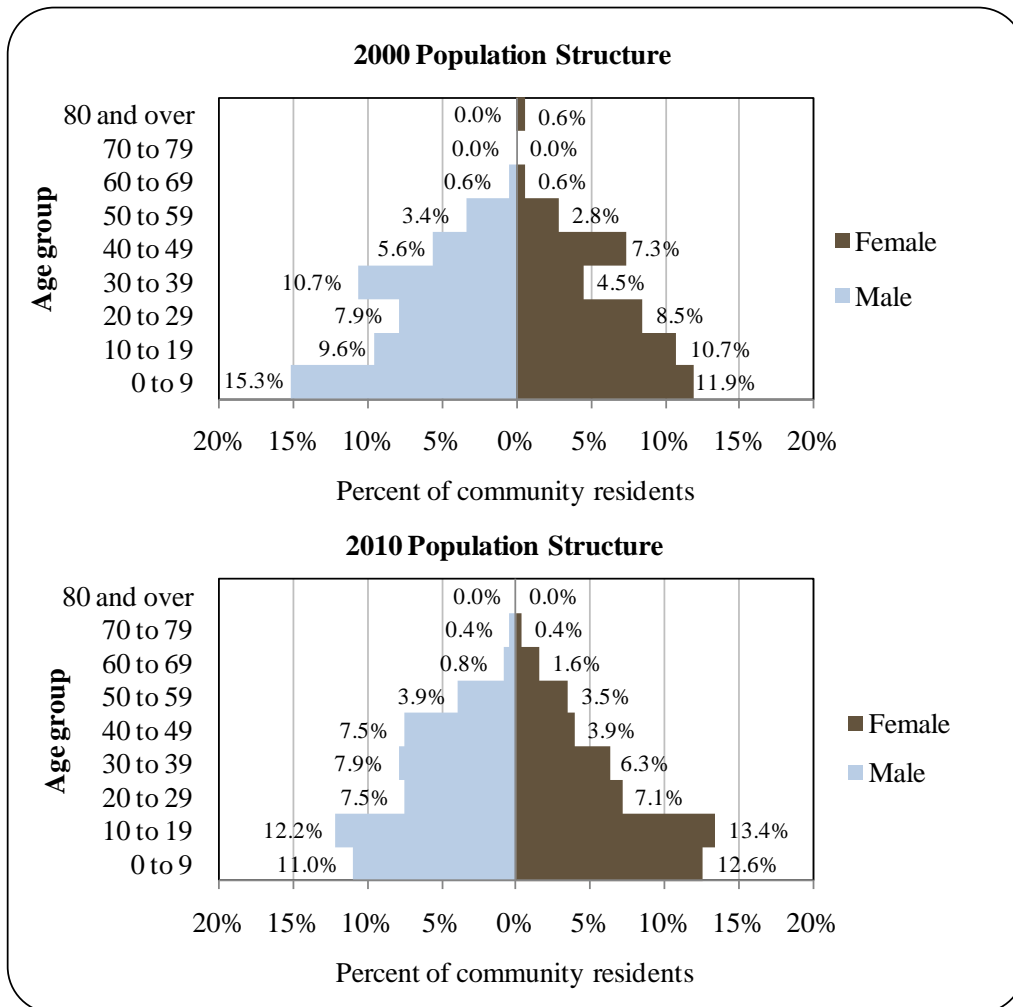


Figure 2. Population age structure in Nanwalek based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-2010 American Community Survey (ACS),⁵⁷³ 86.2% of Nanwalek residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 6.4% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 7.4% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 21.3% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 0% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 0% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Nanwalek is an Alutiiq village. Villagers speak Sugtestun, a dialect of Eskimo similar to Yup'ik.⁵⁷⁴ The subgroup of Alutiiq who occupied the outer Kenai coast are called the *Unegkurmiut* in ethnographic literature, meaning “down that way.” This name may have been used by the Alutiiq of Prince William Sound to refer to those other Alutiiq who lived along the outer Kenai Peninsula coast.⁵⁷⁵ The people of Nanwalek call themselves *Sugpiaq* meaning “real people.” Their heritage is strongly based in their language, subsistence lifestyle, cultural traditions, and self-government.⁵⁷⁶ Many residents of Nanwalek also have Russian, Euro-American, Asian, American Indian, and Aleut ancestry.⁵⁷⁷

Nanwalek is the site of one of the oldest villages in the North Pacific rim area, and was also used as a summer fish camp by prehistoric coastal peoples from other villages on the Kenai Peninsula and from Prince William Sound,⁵⁷⁸ including the coast of what is now Kenai Fjords National Park.⁵⁷⁹ An occupied village at the site was noted by Russian explorers in 1741. In 1781, Gregory Shelikov established a fort and trading post of the American Northeastern Fur Company at the site.⁵⁸⁰ The Russians maintained a presence at the site until the sale of Alaska to the United States in 1867. The village was initially called Alexandrovsk, and was later called Odinochka, meaning “a person living in solitude.”⁵⁸¹ In 1909, a U.S. Geological Survey (USGS) survey and mapping party called the village English Bay. The name of the village was changed to Nanwalek in 1991, an Alutiiq name meaning “place by a lagoon.” A Russian Orthodox church

⁵⁷³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁷⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁷⁵ Stanek, R. T. (1999). *Ethnographic Overview and Assessment for Nanwalek and Port Graham*. Draft. Division of Subsistence, Alaska Department of Fish and Game. Retrieved December 27, 2011 from <http://www.alaska.boemre.gov/>.

⁵⁷⁶ Chugachmiut (2011). *Tribes: Nanwalek Village IRA*. Retrieved December 26, 2011 from <http://www.chugachmiut.org/tribes/nanwalek.html>.

⁵⁷⁷ See footnote 575.

⁵⁷⁸ ASCG Inc. (2006). *Chugachmiut Facilitated Integrated Resources Management Plan for Nanwalek and Port Graham*. Retrieved December 26, 2011 from <ftp://200-10-178-69.static.gci.net/>.

⁵⁷⁹ See footnote 575.

⁵⁸⁰ See footnote 578.

⁵⁸¹ See footnote 574.

was built in Nanwalek in 1870. After the church burned down in 1890 it was reconstructed. Today the original church is listed on the National Register of Historic Places, and is not usable due to its unsafe condition. A second church was built in 1930 to serve the community.⁵⁸² The sale of alcohol is banned in the community.⁵⁸³

Natural Resources and Environment

Nanwalek is located in a maritime climactic zone, dominated by the moderating effects of a marine environment and characterized by high humidity, precipitation, and fog cover as well as warm winters and cool summers. In addition, Nanwalek experiences frequent winds from the inlet. Winter temperatures range from 14 to 27 °F, and summer temperatures vary from 45 to 60 °F.⁵⁸⁴ Average annual precipitation is 27 inches and average annual snowfall is 103 inches.⁵⁸⁵

The Kenai Mountains provide a dramatic backdrop to the Village of Nanwalek. The mountains rise to 3,000 ft above sea level within 1.5 miles of the coast. Lowlands are covered in a mixed forest of Sitka spruce and cottonwood with an understory of riparian willow. This area is used by moose, black bear, hawk, and bald eagle, and smaller mammals such as beaver, river otter, and mink.⁵⁸⁶ Alpine tundra meadows are found at higher elevations.⁵⁸⁷ The shoreline is rugged, abrupt, and fringed with many small islands. One of the most prominent features of the landscape is the massive glaciers, both landlocked and tidewater, and the Harding Ice Field in the central and northeastern portions of nearby Kenai Fjords National Park.⁵⁸⁸

Protected areas near Nanwalek include Kachemak Bay State Park and State Wilderness Park, Kenai Fjords National Park, and the Kenai Wilderness. Nanwalek is located less than 20 miles from the western boundary of Kachemak Bay State Park and State Wilderness Park, which are Alaska's first State Park, and only Wilderness Park, respectively. Together, they are made up of approximately 400,000 acres of mountains, glaciers, forests, and ocean. Adjacent to these land-based protections, Kachemak Bay and Fox River Flats have both been designated as Critical Habitat Areas under Alaska Statutes, Title 16,⁵⁸⁹ protecting habitat for sea otters, seals, porpoises, and whales. Visitors to the State Park and Wilderness Park enjoy fishing, boating, wildlife viewing, kayaking, hiking, camping, and mountain sports.⁵⁹⁰

The western border of Kenai Fjords National Park lies less than 35 miles east of Nanwalek. This National Park was established in 1980 to “maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers, and coastal fjords and islands.” Fifty-six percent of the park is covered by ice. Animals living in the mountains, the shores, and the fjords of the National Park include black bear, brown bear, moose, mountain

⁵⁸² See footnotes 574 and 578.

⁵⁸³ Alaska Dept. of Public Safety (2011). *Local Option Restrictions*. Retrieved May 31, 2012 from <http://dps.alaska.gov/abc/restrictions.aspx>.

⁵⁸⁴ See footnote 578.

⁵⁸⁵ Precipitation and snowfall information retrieved December 27, 2011 from <http://www.weatherbase.com/>.

⁵⁸⁶ See footnote 578.

⁵⁸⁷ U.S. Environmental Protection Agency (2000). *Tribal Wetland Program Highlights*. EPA 843-R-99-002. Retrieved December 26, 2011 from <http://water.epa.gov/>.

⁵⁸⁸ See footnote 579.

⁵⁸⁹ Alaska Statutes, Title 16. *AS 16.20.590* and *AS 16.20.580*. Retrieved February 8, 2012 from <http://touchngo.com/lglcntr/akstats/Statutes/Title16/Chapter20.htm>.

⁵⁹⁰ Alaska Dept. of Natural Resources (2009). *Kachemak Bay State Park and State Wilderness Park*. Retrieved January 27, 2012 from <http://dnr.alaska.gov/parks/units/kbay/kbay.htm>.

goat, sea otter, Steller sea lion, harbor seal, Dall’s porpoise, Pacific white-sided dolphin, orca, minke whale, humpback whale, fin whale, and birds including bald eagles, puffins, murrees, Steller’s jay, black-billed magpie, peregrine falcon, and marbled murrelet.⁵⁹¹ Portions of both Kenai Fjords National Park and the Kachemak Bay State Park and State Wilderness Park are included in the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.⁵⁹²

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt, and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures, and soil liquefaction.⁵⁹³

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields on and off shore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.⁵⁹⁴

Nanwalek is one of seven Chugach Region tribes that joined to establish the Chugach Regional Resources Commission (CRRC) in 1984. CRRC was formed to “collectively address issues of mutual concern regarding stewardship of the natural resources, subsistence, the environment, and to develop culturally appropriate economic projects that promote the sustainable development of the natural resources.”⁵⁹⁵

The Port Graham/Nanwalek Watershed Council was formed in the 1990s to protect and preserve the two adjacent watersheds of English Bay River and Port Graham River and their tributaries. Because the ecosystems are largely healthy, the management approach of the Watershed Council is to prevent degradation as both communities experience growth in transportation systems, housing, and commercial resource harvests of timber and fish. The Watershed Council was formed as a result of meetings convened by the Chugachmiut Environmental Health Program to examine where funding for wetlands protection was most needed in the region.⁵⁹⁶

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Nanwalek as of May 2012.⁵⁹⁷

⁵⁹¹ Kenai Fjords National Park website (2010). Retrieved December 27, 2011 from <http://www.nps.gov/kefj/>.

⁵⁹² Wilderness.net (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

⁵⁹³ Kenai Peninsula Borough (2010). *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

⁵⁹⁴ Resource Development Council (n.d.). *Alaska’s Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

⁵⁹⁵ Chugachmiut (2009). *Chugach Region Comprehensive Economic Development Strategy, Draft Version 5*. Retrieved December 26, 2011 from <http://www.chugachmiut.org/>.

⁵⁹⁶ See footnote 587.

⁵⁹⁷ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy⁵⁹⁸

The economy of Nanwalek is heavily tied to subsistence activities. According to a survey conducted by the AFSC in 2011, Nanwalek community leaders reported that commercial fishing is the most important natural resource-based industry in Nanwalek. In 2010, eight residents held commercial fishing permits (Table 4). As of 2010, additional employment was also provided by the school, the office of the Village of Nanwalek, the village Native corporation, the regional Native non-profit organization, the North Pacific Rim Housing Authority, and a private construction company.⁵⁹⁹ A cannery in nearby Port Graham has also been an important source of local employment in recent decades.⁶⁰⁰ However, in the 2011 AFSC survey, Port Graham community leaders indicated that the processing plant is not currently operating.

Based on household surveys conducted for the 2006-2010 ACS,⁶⁰¹ in 2010, the per capita income in Nanwalek was estimated to be \$7,540 and the median household income was estimated to be \$28,846. This represents a sizeable decrease in income from the per capita and median household incomes reported in 2000 (\$10,577 and \$42,500, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,⁶⁰² the decrease is even greater, from a real per capita income of \$13,909 and real median household income of \$55,887 in 2000. In 2010, Nanwalek ranked 301st of 305 Alaskan communities with per capita income data that year, and 251st in median household income, out of 299 Alaskan communities with household income data.

Although Nanwalek's small population size may have prevented the ACS from accurately portraying economic conditions,⁶⁰³ the 2010 ACS per capita income estimate is supported by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Mountain Village in 2010 is \$5,387.⁶⁰⁴ This is slightly lower than the 2006-2010 ACS estimate, and provides additional evidence that per capita income declined in Nanwalek from 2000 to 2010. This decline is reflected in the fact that the community was recognized as "distressed" by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than

⁵⁹⁸ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁹⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁰⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁰¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁰² Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁰³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁰⁴ See footnotes 599 and 601.

\$16,120 in 2010.⁶⁰⁵ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Nanwalek's population was estimated to be in the labor force (55%) compared to the percentage of Alaskans in the labor force statewide (68.8%). That year, 31.4% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 25%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Nanwalek in 2010 was 22.1%, compared to a statewide unemployment rate estimate of 11.5%.⁶⁰⁶

Also based on the 2006-2010 ACS, a majority of Nanwalek's workforce was estimated to be employed in the public sector (80.6%), and the remaining 19.4% were estimated to be employed in the private sector. The 36 people aged 16 and over that were estimated to be employed in the civilian labor force were estimated to be employed in the following industries: public administration (50%), educational services, health care, and social assistance (25%), retail trade (13.9%), and finance/real estate (11.1%). Occupations in which the greatest percentages of the workforce were estimated to be employed in 2010 were management/professional (38.9%) and service occupations (38.9%). Compared to 2000, employment estimates in Nanwalek appear to have become highly concentrated in some industries and occupations, while employment in other industries appears to have entirely ceased. These changes may be partly a result of the shift to a new sampling system with the ACS.⁶⁰⁷ In 2010, no Newhalen residents were estimated to be employed in fishing-related industries or occupations. It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 136 employed residents in Nanwalek in 2010, of which 55.6% were employed in local government, 7.8% in trade, transportation, and utilities, 5.6% in financial activities, 4.4% in construction, 1.1% in natural resources and mining, 1.1% in professional and business services, 1.1% in education and health services, and 23.3% in other industries.⁶⁰⁸ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

⁶⁰⁵ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁶⁰⁶ See footnote 599.

⁶⁰⁷ See footnote 603.

⁶⁰⁸ *Ibid.*

Figure 3. Local Employment by Industry in 2000-2010, Nanwalek (U.S. Census).

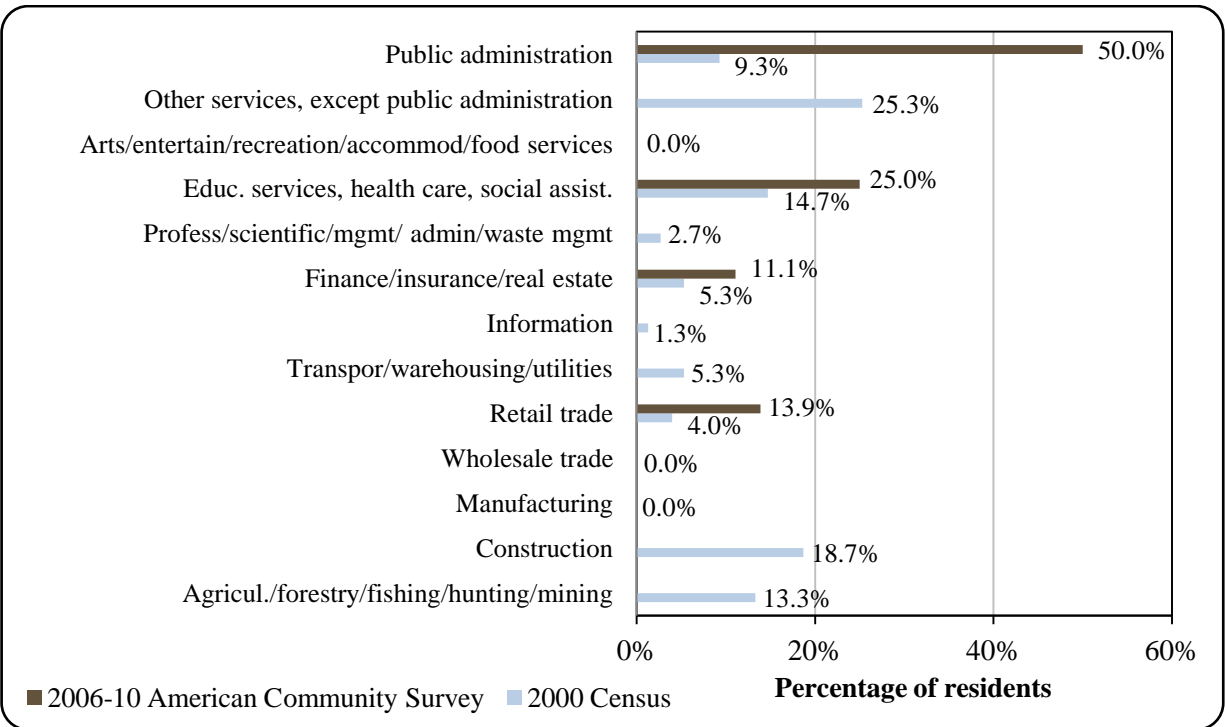
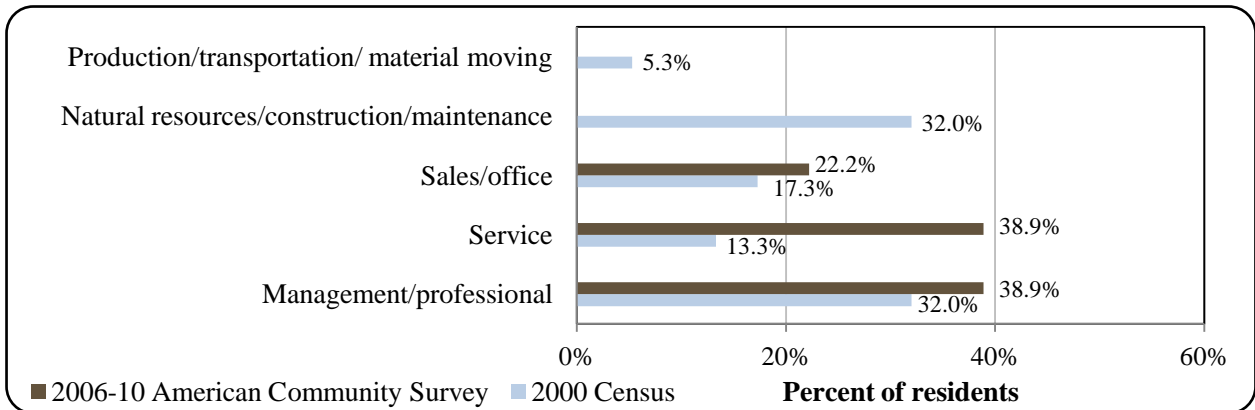


Figure 4. Local Employment by Occupation in 2000-2010, Nanwalek (U.S. Census).



Governance

Nanwalek is an unincorporated community in the Kenai Peninsula Borough. The community does not administer any local taxes, although the Borough does administer a 3% sales tax and 4.5 mills property tax.⁶⁰⁹ Given that Nanwalek is not incorporated, there was no municipal revenue or municipal sales tax revenue between 2000 and 2010. No information was reported regarding State or Community Revenue Sharing contributions or fisheries related grants received by the community between 2000 and 2010 (Table 2).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nanwalek from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Nanwalek was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Nanwalek.⁶¹⁰ The Village is governed by the Nanwalek Indian Reorganization Act Council, consisting of an elected seven-member body. The

⁶⁰⁹ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

⁶¹⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Council consists of a First Chief, Second Chief, Secretary, Treasurer, and three Council Members.⁶¹¹ The local Native village corporation is the English Bay Corporation, which manages 76,400 acres of land. The regional Native corporation to which Nanwalek belongs is the Chugach Alaska Corporation.⁶¹²

Nanwalek is also a member of Chugachmiut, a tribal 501(c)(3) non-profit organization with the goal of advancing the overall economic, social, and cultural development of the people of the Chugach Region.⁶¹³ Chugachmiut is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁶¹⁴ Chugachmiut offers education, training, and community organizing opportunities, and runs programs including Community Health Aides and Practitioners, Contract Health Care, Community Health Representatives, substance abuse treatment and prevention, Cardiovascular Disease and Diabetes prevention and case management, maternal health, forestry, child care, Head Start, Elders, Indian Child Welfare Act, housing, tribal law, and more.⁶¹⁵

The office of the English Bay Corporation, along with the closest offices of ADF&G, the Alaska Department of Natural Resources, and an enforcement office of the National Marine Fisheries Service (NMFS), are located in Homer, approximately 17 air miles and 35 water miles away from Nanwalek. The office of Chugachmiut is located in Anchorage, along with the closest offices of the Alaska Department of Commerce, Community, and Economic Development and the U.S. Bureau of Citizenship and Immigration Services.

Infrastructure

Connectivity and Transportation

Nanwalek is not accessible by road. Boats are the primary means of transportation locally.⁶¹⁶ A state-owned, 1,850-ft-long by 50-ft-wide gravel airstrip is available for air taxis and general aviation. No scheduled commercial flights serve Nanwalek.⁶¹⁷ The nearest commercial airport is in Homer, 35 miles away by water. The price of a roundtrip ticket by plane from Homer to Anchorage in early June of 2012 was \$239.⁶¹⁸ The state ferry provides service from nearby Seldovia to Kodiak, Homer, Whittier, and Chenega Bay, as well as ports in Southeast Alaska, British Columbia, and Washington State. The summer 2012 passenger fare for a roundtrip ferry ticket between Seldovia and Homer was \$66, a ticket between Seldovia and Juneau was \$768, and a ticket between Seldovia and Bellingham, Washington, was \$1420.⁶¹⁹

⁶¹¹ Chugachmiut (2011). *Tribes: Nanwalek Village IRA*. Retrieved December 26, 2011 from <http://www.chugachmiut.org/tribes/nanwalek.html>.

⁶¹² See footnote 610.

⁶¹³ Chugachmiut (2011). *About Us*. Retrieved December 26, 2011 from <http://www.chugachmiut.org/about.html>.

⁶¹⁴ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁶¹⁵ Cook Inlet Tribal Council. (n.d.). *What We Do*. Retrieved February 23, 2012 from <http://www.citci.com/>.

⁶¹⁶ See footnote 610.

⁶¹⁷ Airport information retrieved December 14, 2011 from <http://www.airnav.com/>.

⁶¹⁸ Fare calculated on November 21, 2011 using kayak.com.

⁶¹⁹ Fare information retrieved December 26, 2011 from <http://www.dot.state.ak.us/amhs/>.

Facilities

The Village of Nanwalek operates a piped water and sewer system that serves the village. Most homes are completely plumbed.⁶²⁰ Nanwalek's water source is a small dam located northeast of the Village. In periods of low precipitation this source is variable, and the community identified Switchback Creek as an option to supplement water supply.⁶²¹ Water in Nanwalek is filtered, but not chlorinated.⁶²² There is a community septic tank, and some outhouses are also in use. The Kenai Peninsula Borough operates a landfill, but does not provide refuse collection services.⁶²³ According to the Chugach Region Comprehensive Economic Development Strategy, Nanwalek is in need of a larger water storage tank, water treatment, new water and sewer mains, new fire hydrants, and a landfill expansion.⁶²⁴

Electricity is provided to the Village by the Homer Electric Association using hydroelectric and natural gas.⁶²⁵ According to a survey conducted by the AFSC in 2011, community leaders reported that a diesel powerhouse is also present in the community. There is no VPSO (Village Public Safety Officer) stationed in Nanwalek.⁶²⁶ The nearest state trooper post is in Homer.⁶²⁷ In the 2011 AFSC survey, community leaders reported that a food bank and a fire department are present in Nanwalek, and that additional public safety and emergency response services are in process. Community facilities in Nanwalek include a U.S. post office, school library, and a community building. Several guest accommodations are available in town, and broadband and telephone service are available.⁶²⁸ The English Bay Corporation runs a grocery store in the Village.⁶²⁹

With respect to fishing-related facilities, community leaders reported in the 2011 AFSC survey that no dock space is available for permanent or transient vessel moorage in Nanwalek, although there is public moorage space available for vessels up to 30 ft in length. They reported that a barge landing area and haul-out facilities are under development in the Village. They also said that residents travel to Homer to access fisheries-related businesses and services not available in Nanwalek.

Medical Services

Medical services are available from the Nanwalek Clinic, owned by the Village Council and operated by Chugachmiut, a regional non-profit organization serving Native communities in the Chugach region. The Nanwalek Clinic is a Community Health Aid Program site. Alternative health care is provided by Nanwalek First Responders. Emergency services have coastal,

⁶²⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

⁶²¹ Chugachmiut (2009). *Chugach Region Comprehensive Economic Development Strategy, Draft Version 5*. Retrieved December 26, 2011 from <http://www.chugachmiut.org/>.

⁶²² See footnote 620.

⁶²³ Ibid.

⁶²⁴ See footnote 621.

⁶²⁵ See footnote 620.

⁶²⁶ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁶²⁷ See footnote 620.

⁶²⁸ Ibid.

⁶²⁹ See footnote 621.

floatplane, and air access. Emergency service is provided by volunteers and the local health aide.⁶³⁰ The nearest hospital is located in Homer.

Educational Opportunities

One school is present in Nanwalek. The Nanwalek School serves Kindergarten through 12th grade. As of 2011, 81 students attended Nanwalek School, and 8 teachers were employed.⁶³¹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Nanwalek has been the site of subsistence harvest of marine resources for thousands of years. The site was used as a fish camp by prehistoric peoples from villages on the Kenai Peninsula and in Prince Williams Sound.⁶³² Archaeological evidence reveals that marine mammals were a primary food source for early Eskimo residents of the area, and that finfish and shellfish increased in importance over time.⁶³³

With the purchase of Alaska by the United States in 1867, the commercial fishing industry began to grow in the Cook Inlet region. In 1883, a salmon saltery was opened by the Alaska Commercial Company in Port Graham Bay. In 1911, a cannery was established at Seldovia, and the community of Port Graham was founded when a cannery was built there in 1912. The Port Graham Cannery drew Nanwalek residents for seasonal work. Salmon was the primary focus of fishing and processing effort in early years of the fishing industry, and herring was also an important early product. A cannery was built at English Bay in 1920 which was the first to can king crab, known at that time as “spider crab.”⁶³⁴

In the early years of commercial fishing, Native residents of the Cook Inlet area typically lacked the resources to purchase expensive fishing vessels. Instead, they participated in commercial fishing as cannery workers, salmon trap attendants, and setnet fishers. Native residents were also unable to work a full summer season at the cannery, since they also needed to put up subsistence resources for their winter food supply. By the 1950s, villagers were able to afford to lease or purchase commercial fishing vessels and gear.⁶³⁵

Nanwalek is located at English Bay, within the Southern district of the ADF&G-managed Lower Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts. Purse seine gear is used throughout the Lower Cook Inlet

⁶³⁰ See footnote 620.

⁶³¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶³² ASCG Inc. (2006). *Chugachmiut Facilitated Integrated Resources Management Plan for Nanwalek and Port Graham*. Retrieved December 26, 2011 from <ftp://200-10-178-69.static.gci.net/>.

⁶³³ Stanek, R. T. (1999). *Ethnographic Overview and Assessment for Nanwalek and Port Graham*. Draft. Division of Subsistence, Alaska Department of Fish and Game. Retrieved December 27, 2011 from <http://www.alaska.boemre.gov/>.

⁶³⁴ Ibid.

⁶³⁵ Ibid.

management area, while set gill nets are limited to the Kachemak Bay sub-district.⁶³⁶ Between 2000 and 2010, all actively fished salmon permits held by Nanwalek residents were fished in the Lower Cook Inlet set gill net fishery (see *Commercial Fishing* section). Sockeye salmon escapement in the English Bay River system reached a low of 5,000 adults in 1985, from a historical high of 40,000 fish. ADF&G closed the fishing season to allow the stock to recover. To meet the needs for a local salmon resource, the Nanwalek Salmon Enhancement Project began operations in 1990 at the Port Graham hatchery facility.⁶³⁷ In 2011, the Cook Inlet Aquaculture Association coordinated cost recovery harvest of Port Graham Bay and other Cook Inlet hatchery returns.⁶³⁸

Nanwalek is also located in Pacific Halibut Fishery Regulatory Area 3A, the Central Gulf of Alaska Sablefish Regulatory Area, and Federal Statistical and Reporting Area 630. Nanwalek is eligible to participate in the Community Quota Entity (CQE) program. The community governing body that recommended CQE membership is the Village of Nanwalek, and the CQE entity is Nanwalek Natural Resources/Fisheries Board, Inc. As of Fall 2013, the Nanwalek Natural Resources/Fisheries Board had not yet purchased commercial halibut quota shares or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the non-profit had acquired seven halibut charter permits for lease to community members.⁶³⁹ Nanwalek is not eligible to participate in the Community Development Quota (CDQ) program. According to a survey conducted by the AFSC in 2011, community leaders reported that the community of Nanwalek actively participates in fisheries management processes in Alaska.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Nanwalek. A number of plants are registered in the nearby City of Homer. In addition, a cannery in nearby Port Graham has been an important source of local employment since the early 1900s.^{640,641} However, in the 2011 AFSC survey, Port Graham community leaders indicated that the processing plant is not currently operating.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Nanwalek (Table 3).

⁶³⁶ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶³⁷ Ibid.

⁶³⁸ Cook Inlet Aquaculture Association (2011). *2011 Prospective Fish Sales*. Retrieved December 27, 2011 from <http://www.ciaa.net.org/>.

⁶³⁹ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

⁶⁴⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁴¹ See footnote 633.

Commercial Fishing

In addition to high involvement in subsistence hunting and fishing (see the *Subsistence* section of this profile), Nanwalek residents are engaged in commercial fishing as vessel owners, permit holders, and crew license holders. Between 2000 and 2010, the number of Nanwalek residents holding commercial crew licenses declined from a high of 11 in 2003 to 1 crew license held in 2010. The number of vessel owners residing in Nanwalek declined from three in 2000 to one in 2010, while the number of vessels homeported in Nanwalek declined from three to zero. According to a survey conducted by the AFSC in 2011, community leaders reported that fishing boats using Nanwalek as their base of fishing operations are typically longline, gill net, and troll vessels under 35 ft in length. There were no processing facilities or fish buyers located in Nanwalek between 2000 and 2010. These characteristics of the Nanwalek commercial fishing sector are presented in Table 5.

In 2010, eight state Commercial Fisheries Entry Commission (CFEC) permits were held by a total of nine Nanwalek permit holders. All of the permits were for the Cook Inlet purse seine and set gill net salmon fisheries. Of these, the only salmon permits that were actively fished between 2000 and 2010 were set gill net permits. The number of salmon permits held stayed quite consistent between 2000 and 2010, although the percentage of permits that were actively fished varied, with 0% fished in 2001, 63% fished in 2002 and 2003, and 25% fished in 2010 (two out of eight total permits held). Between 2000 and 2010, no federal License Limitation Program permits (LLP) or Federal Fisheries Permits (FFP) were held by Nanwalek residents, and no quota shares accounts were held in the federal halibut, sablefish, or crab fisheries. Information about permits is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

No landings or ex-vessel revenue were recorded in Nanwalek during the 2000-2010 period (Table 9), given the lack of fish buyers in the community (Table 5). Information about landings and ex-vessel revenue generated by vessels owned by Nanwalek residents, including all delivery locations, is considered confidential between 2000 and 2010 due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nanwalek: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Nanwalek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Nanwalek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	8	7	8	8	8	8	8	8	8	8	8
	Fished permits	3	0	5	5	2	0	3	2	2	2	2
	% of permits fished	38%	0%	63%	63%	25%	0%	38%	25%	25%	25%	25%
	Total permit holders	8	7	8	8	9	8	9	8	8	8	9
<i>Total CFEC Permits²</i>	<i>Permits</i>	8	7	8	8	8	8	8	8	8	8	8
	<i>Fished permits</i>	3	0	5	5	2	0	3	2	2	2	2
	<i>% of permits fished</i>	38%	0%	63%	63%	25%	0%	38%	25%	25%	25%	25%
	<i>Permit holders</i>	8	7	8	8	9	8	9	8	8	8	9

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nanwalek: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Nanwalek ²	Total Net Lb Landed In Nanwalek ^{2,5}	Total Ex-Vessel Value Of Landings In Nanwalek ^{2,5}
2000	3	0	0	3	3	0	0	\$0
2001	4	0	0	3	3	0	0	\$0
2002	2	0	0	2	2	0	0	\$0
2003	11	0	0	2	2	0	0	\$0
2004	2	0	0	1	1	0	0	\$0
2005	6	0	0	0	0	0	0	\$0
2006	4	0	0	1	1	0	0	\$0
2007	2	0	0	2	2	0	0	\$0
2008	3	0	0	1	1	0	0	\$0
2009	5	0	0	1	1	0	0	\$0
2010	1	0	0	1	1	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Nanwalek: 2000-2010.

Year	Number Of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle.

Table 7. Sablefish Catch Share Program Participation by Residents of Nanwalek: 2000-2010.

Year	Number Of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle.

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nanwalek: 2000-2010.

Year	Number Of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle.

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nanwalek: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nanwalek Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	0	-	-	-	-	-
Finfish	-	-	-	-	-	0	-	-	-	-	-
Halibut	-	-	-	-	-	0	-	-	-	-	-
Herring	-	-	-	-	-	0	-	-	-	-	-
Other Groundfish	-	-	-	-	-	0	-	-	-	-	-
Other Shellfish	-	-	-	-	-	0	-	-	-	-	-
Pacific Cod	-	-	-	-	-	0	-	-	-	-	-
Pollock	-	-	-	-	-	0	-	-	-	-	-
Sablefish	-	-	-	-	-	0	-	-	-	-	-
Salmon	-	-	-	-	-	0	-	-	-	-	-
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	\$0	-	-	-	-	-
Finfish	-	-	-	-	-	\$0	-	-	-	-	-
Halibut	-	-	-	-	-	\$0	-	-	-	-	-
Herring	-	-	-	-	-	\$0	-	-	-	-	-
Other Groundfish	-	-	-	-	-	\$0	-	-	-	-	-
Other Shellfish	-	-	-	-	-	\$0	-	-	-	-	-
Pacific Cod	-	-	-	-	-	\$0	-	-	-	-	-
Pollock	-	-	-	-	-	\$0	-	-	-	-	-
Sablefish	-	-	-	-	-	\$0	-	-	-	-	-
Salmon	-	-	-	-	-	\$0	-	-	-	-	-
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Residents of Nanwalek participated in recreational fishing activities through purchase of sportfishing licenses and through the presence of licensed sport fish guides in some years between 2000 and 2010. Although there were no active sport fish guide businesses registered in Nanwalek from 2000 to 2010, one or two licensed sport fish guide were present from 2001 to 2004. Between 2000 and 2010, the number of Nanwalek residents that purchased sportfishing licenses varied between 11 and 42 per year (24 on average). No licenses were sold in Nanwalek itself. Information about sportfishing activity in Nanwalek is presented in Table 11.

In a survey conducted by the AFSC in 2011, community leaders reported that sportfishing activity in the Nanwalek area is primarily done by residents using private boats. They noted Chinook salmon, Pacific halibut, and rockfish as three target species of sportfishing activity in the area. The Alaska Statewide Harvest Survey,⁶⁴² conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Nanwalek: Chinook, coho, and sockeye salmon, Dolly Varden char, and Pacific halibut. The survey also noted sport harvest of “other shellfish”⁶⁴³ by Nanwalek residents. No kept/released log book data were reported for fishing charters out of Nanwalek between 2000 and 2010.⁶⁴⁴

Nanwalek is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, saltwater and freshwater sportfishing at this regional level was substantial. In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska residents logged 20,292 saltwater angler days and 71,555 freshwater angler days. Typically, Alaska residents took part in saltwater sportfishing at greater rates than non-Alaska resident anglers, and the opposite was true of freshwater sportfishing. For both resident and non-resident anglers in both freshwater and saltwater, the number of angler days fished per year decreased between 2000 and 2010. This information about regional sportfishing activity is presented in Table 11.

⁶⁴² Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. Retrieved from <http://www.adfg.alaska.gov/sf/sportfishingsurvey/>. (Accessed September 2011).

⁶⁴³ The Alaska Statewide Harvest Survey includes separate categories for Dungeness crab, Tanner crab, razor clams, hardshell clams, and shrimp. Remaining species fall into the ‘other shellfish’ category.

⁶⁴⁴ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Nanwalek: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nanwalek ²
2000	0	0	11	0
2001	0	1	42	0
2002	0	2	25	0
2003	0	2	19	0
2004	0	2	20	0
2005	0	0	14	0
2006	0	0	16	0
2007	0	0	28	0
2008	0	0	26	0
2009	0	0	32	0
2010	0	0	27	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010.

ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Nanwalek has been the site of subsistence harvest of marine resources for thousands of years. The site was used as a fish camp by prehistoric peoples from villages on the Kenai Peninsula and in Prince Williams Sound.⁶⁴⁵ Historically, Native people living in Nanwalek also utilized sites along the coast of the present day Kenai Fjords National Park, but under the Alaska National Interest Lands Conservation Act of 1980, the National Park was closed to all subsistence hunting and fishing.⁶⁴⁶ Archaeological evidence reveals that early Eskimo residents of the area had a highly developed technology for hunting marine mammals including seals, sea lions, sea otters, and whales. In more recent sites, there is increased evidence of use of finfish and shellfish, but marine mammals appear to have remained the primary food source for residents of the area.⁶⁴⁷

Today, subsistence harvest remains a primary focus of Nanwalek's economy and culture.⁶⁴⁸ In 2003, the only year that a subsistence survey was conducted by ADF&G in Nanwalek between 2000 and 2010, 93% of households were reported participating in salmon subsistence, 91% participated in halibut subsistence, 35% in marine mammal subsistence, 72% in marine invertebrate subsistence, and 64% in non-salmon fish subsistence (other than halibut). That year residents of Nanwalek were estimated to harvest 394 lb of land and sea-based subsistence resources per capita. Information about household participation and per capita use of subsistence resources is presented in Table 12.

For years in which data were reported, an average of 25 subsistence salmon permits were issued to Nanwalek households per year. Based on reported harvests, sockeye salmon were the most heavily harvested salmon species in all years (3,146 harvested per year on average), followed by pink (1,229 harvested on average) and coho salmon (959 harvested on average). An average of 235 chum and 36 Chinook salmon were also reported as harvested using subsistence salmon permits per year. Information about subsistence salmon harvest is presented in Table 13. In 2003, 3,580 lb of marine invertebrates and 8,655 lb of non-salmon fish (not including halibut) were also harvested for subsistence purposes (Table 13).

Between 2003 and 2010, an average of 44 Subsistence Halibut Registration Certificates (SHARC) was issued to residents of Nanwalek. Of these, an average of almost 30 cards were fished, with an average subsistence halibut harvest of 12,739 lb per year. The highest harvest of halibut during the period occurred in 2008, when 42 SHARC cards were fished and a total of 24,755 lb of halibut were harvested. Information about subsistence harvest of halibut is presented in Table 14.

Information about subsistence harvest of several species of marine mammals was reported between 2000 and 2010. According to data reported by ADF&G, between 1 and 6 Steller sea lions were harvested per year between 2000 and 2008, and harbor seal harvests varied

⁶⁴⁵ ASCG Inc. (2006). *Chugachmiut Facilitated Integrated Resources Management Plan for Nanwalek and Port Graham*. Retrieved December 26, 2011 from <ftp://200-10-178-69.static.gci.net/>.

⁶⁴⁶ Fall, James A., Ronald T. Stanek, Brian Davis, Liz Williams and Robert Walker (2004). *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Final Report for Study No. FIS 03-045. Retrieved December 27, 2011 from <http://alaska.fws.gov/asm/index.cfml>.

⁶⁴⁷ Stanek, R. T. (1999). *Ethnographic Overview and Assessment for Nanwalek and Port Graham*. Draft. Division of Subsistence, Alaska Department of Fish and Game. Retrieved December 27, 2011 from <http://www.alaska.boemre.gov/>.

⁶⁴⁸ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

between 20 and 53 animals per year during the same period. No information was reported by management agencies regarding harvest of beluga whale, sea otter, walrus, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals in Nanwalek is presented in Table 15.

Additional Information

Several decades after the Russians abandoned Alexandrovsk, the Native population was also forced to temporarily evacuate when Mount Augustine erupted in 1883. The following summary account from George Davidson of the U.S. Coast and Geodetic Survey (USCGS) and Captains Sands and Cullie of the Alaska Commercial Company, was published by geographer William Dall in 1884:

“Smoke first arose from the peak in August. On the morning of Oct. 6 the inhabitants heard a heavy report, and saw smoke and flames issuing from the summit of the island. The sky became obscured, and a few hours later there was a shower of pumice-dust. About half-past eight o’clock the same day an earthquake wave, estimated at thirty feet height, rolled in upon the shore, deluging the houses on the lowland, and washing the boats and canoes from the beach. It was followed by others of less height. The ash fell to a depth of several inches, and darkness required lamps to be lighted. At night flames were seen issuing from the summit. After the first disturbances were over, it was found that the northern slope of the summit had fallen to the level of the . . . shore, and the mountain appeared as if split in two. . . . The cleft . . . crosses the island from east to west.”⁶⁴⁹

Table 12. Subsistence Participation by Household and Species, Nanwalek: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	93%	91%	35%	72%	64%	394
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁶⁴⁹ Alaska Volcano Observatory (n.d.). *Augustine Reported Activity: Augustine – 1883*. Retrieved December 27, 2011 from <http://avo.alaska.edu/volcanoes/>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nanwalek: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb Of Marine Inverts ²	Lb Of Non-Salmon Fish ²
2000	n/a	32	18	470	1,579	1,251	3,880	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	56	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	35	n/a	n/a	n/a	n/a	n/a	1,179	8,655
2004	25	25	52	95	842	1,277	2,968	n/a	n/a
2005	22	22	27	128	1,142	1,259	1,934	n/a	n/a
2006	n/a	39	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	29	29	47	247	274	1,128	3,802	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nanwalek: 2003-2010.

Year	SHARC issued	SHARC cards fished	SHARC halibut lb harvested
2003	37	31	8,080
2004	37	28	15,928
2005	37	32	9,215
2006	31	17	6,146
2007	58	38	11,872
2008	51	42	24,701
2009	51	21	13,234
2010	48	20	12,865

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nanwalek: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nikiski (nih-KISS-kee)



People and Place

*Location*⁶⁵⁰

The community of Nikiski is located on the Kenai Peninsula, nine miles north of the City of Kenai, off of the Sterling Highway. Nikiski is also known as Port Nikiski and Nikishka. Nikiski is located in the Kenai Peninsula Borough Census Area and the Kenai Recording District. The community encompasses 69.6 square miles of land and 6.6 square miles of water.

*Demographic Profile*⁶⁵¹

In 2010, there were 4,493 residents in Nikiski, ranking it as the 25th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Nikiski increased by 63.8%. Most of this growth occurred between 1990 and 2000, although the population continued to grow more slowly through 2010. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 3.2% with an average annual growth of 0.35%, reflecting an overall positive population trend with small decreases in population in some years.

In 2010, the majority of the population of Nikiski identified themselves as White (85.6%), along with 7.7% that identified as American Indian or Alaska Native, 1.1% as Asian, 0.4% as Native Hawaiian and Other Pacific Islander, 0.1% as Black or African American, 0.5% as ‘some other race’, and 4.6% identified with two or more races. In addition, 2.6% of Nikiski’s population identified themselves as Hispanic in 2010. The percentage of the population made up of individuals identifying as White decreased from 93% in 1990 to 87.2% in 2000, and then to 85.6% by 2010. At the same time the percentage identifying as American Indians and Alaska Natives increased from 6.1% in 1990 to 7.6% in 2000, and remained relatively stable through 2010 (7.7%). The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

Based on the U.S. Census, in 2010 the average household size in Nikiski was 2.65 persons per household, a decrease from 3.0 in 1990 and 3.31 in 2000. The number of households in Nikiski increased over time, from 1,045 households in 1990 and 1,514 in 2000, to 1,689 in 2010. Of the 1,998 housing units surveyed for the 2010 U.S. Census, 68.4% were owner-occupied, 16.1% were rented, and 15.5% were vacant or used only seasonally. In 1990, 13 Nikiski residents lived in group quarters. This number declined to zero by 2000, but rose again to 11 residents living in group quarters in 2010.

⁶⁵⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁵¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

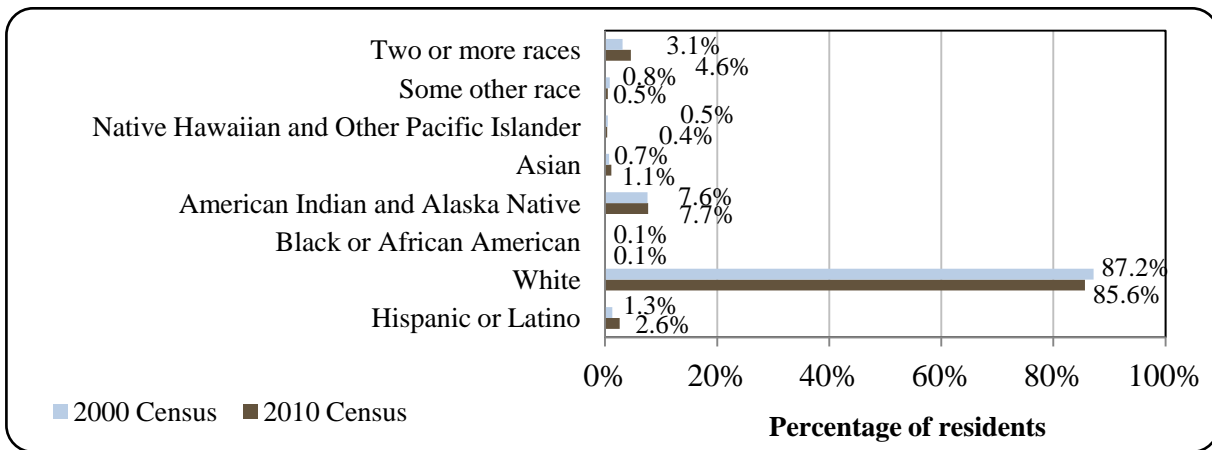
Table 1. Population in Nikiski from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	2,743	-
2000	4,327	-
2001	-	4,363
2002	-	4,362
2003	-	4,352
2004	-	4,293
2005	-	4,196
2006	-	4,212
2007	-	4,333
2008	-	4,413
2009	-	4,465
2010	4,493	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

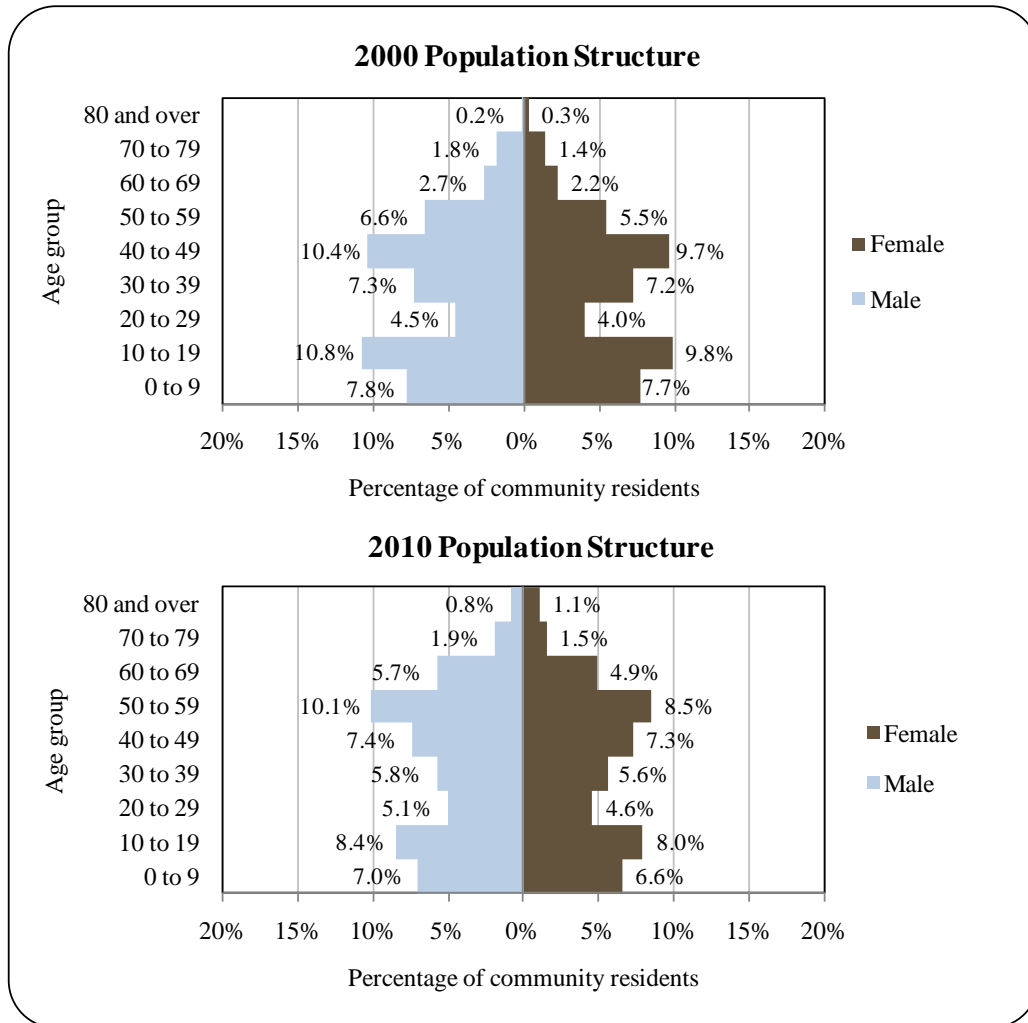
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nikiski: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Nikiski’s population (52.1% male and 47.9% female) was almost the same as the gender balance of the state as a whole, which was made up of 52% males and 48% females. The median age of Nikiski residents was 39.4 years, slightly older than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the age group most heavily skewed toward males was 50-59 years, while there was a relatively even spread of males and females across other age categories in Nikiski. There were relatively few people in the 20 to 39 age cohorts compared to the younger and older cohorts in both 2000 and 2010. In 2010, 15.9% of Nikiski’s population was 60 or older. The overall population structure of Nikiski in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Nikiski Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁶⁵² 93% of Nikiski residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 0.6% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 6.4% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 35.7% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 6.8% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 7.6% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 6.7% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

⁶⁵² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Nikiski is located in traditional Kenaitze Indian territory. Around 1000 A.D. these Dena'ina Athabascan people arrived in the area and replaced the Kachemak Eskimos who had occupied the region starting around 1000 B.C. This cultural shift may have been driven by climatic changes influencing salmon abundance in the North Pacific Ocean.⁶⁵³ The Native people of the area were called Kenaitze by the Russians which meant 'the people who live along the Kenai River', although "the Kenaitze, however, called themselves *Kahthuht'ana*, an Athabascan word meaning 'the people of the Kenai'."⁶⁵⁴ Between 1786 and 1791, Russian fur traders came to the Kenai area and established settlements. Around 1795 Russian Orthodoxy was introduced into the area by Father Juvenaly.⁶⁵⁵ In the year 1838 there was a smallpox epidemic and approximately fifty percent of the Dena'ina people died from the disease. The Native population was hit again in the years 1918 to 1920 during the worldwide influenza epidemic.⁶⁵⁶

The first cannery in Kenai was built in 1888 by the Northern Packing Company. Alaska Railroad upgrades in the region were completed in 1923.⁶⁵⁷ The area of Nikiski was homesteaded in the 1940s. The region grew with the discovery of oil on the Kenai Peninsula in 1957. Oil-related industries had located to the area by 1964, including Tesoro, Chevron, Phillips 66, and Unocal. Nikiski is located close to the City of Kenai, where many residents travel to purchase goods and services.⁶⁵⁸

Natural Resources and Environment

The Cook Inlet basin is located in a transitional climate zone, in the rain shadow of the Kenai Mountains. Temperatures are more extreme because the area is somewhat sheltered from the moderating effects of the Gulf of Alaska, and cold air occasionally pushes south from interior Alaska in winter months.⁶⁵⁹ Winter temperatures in Nikiski range from 14 to 27 °F, and summer temperatures vary from 45 to 65 °F. Average annual precipitation is 24 inches.⁶⁶⁰ The landscape in and around Nikiski is characterized by boreal forest and numerous lakes. Moving inland, the Kenai Mountains rise to mountains rise to 3,000-5,000 feet above sea level, hosting the Harding Ice Field.⁶⁶¹

⁶⁵³ Fall, J.A., R.T. Stanek, B. Davis, L. Williams and R. Walker (2004). *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Final Report for Study No. FIS 03-045.

⁶⁵⁴ Halliday, Jan. 1998. *Native Peoples of Alaska: A Traveler's Guide to Land, Art, and Culture*. Sasquatch Books, Seattle.

⁶⁵⁵ Oleksa, Father Michael (2005). *Another Culture / Another World*. Association of Alaska School Boards.

⁶⁵⁶ Kenai Peninsula Economic Development District (2010). *Kenai Peninsula Borough Comprehensive Development Strategy*. Retrieved January 25, 2012 from <http://commerce.alaska.gov/ded/home.htm>.

⁶⁵⁷ Cook, L., and F. Norris (1998). *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁶⁵⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁵⁹ Kenai Peninsula Borough Coastal Management Program (1990). Final Coastal Management Plan. Retrieved September 7, 2012 from <http://www2.borough.kenai.ak.us/coastal/CMP-Final.htm>.

⁶⁶⁰ See footnote 658.

⁶⁶¹ U.S. Fish and Wildlife Service (2011). *Kenai National Wildlife Refuge*. Retrieved January 26, 2012 from <http://kenai.fws.gov/>.

Nikiski is located near the western border of the Kenai National Wildlife Refuge (NWR), and only a few miles southwest of the Captain Cook State Recreational area. The NWR covers 1.92 million acres, half of which was designated as the Kenai Wilderness. The NWR was originally established by President Roosevelt in 1941 as the Kenai National Moose Range. In 1980, with the Alaska National Interest Lands Conservation Act (ANILCA), the name and purpose of the area were changed to manage all animal species as a NWR. All five salmon species return to rivers and lakes to spawn, and a full spectrum of sub-Arctic freshwater fish species are found in the NWR. In addition, terrestrial animals living in the NWR include moose, caribou, Dall sheep, mountain goat, black and brown bear, wolf, coyote, red fox, lynx, and many small mammals. The wood frog is the only amphibian found in the Kenai NWR.⁶⁶²

The Captain Cook State Recreation Area offers visitors opportunities for beachcombing, canoeing and boating, recreational fishing (including ice fishing), and wildlife viewing. Visitors to the park are cautioned to pay attention to tides when walking on the mudflats, as they move very quickly and can be dangerous.⁶⁶³

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt, and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures, and soil liquefaction.⁶⁶⁴ Other natural hazards that have also been identified as threats in the Kenai Peninsula Borough include flooding, wildfire, snow and avalanche, tsunami and seiche, severe weather, landslides, erosion and drought.⁶⁶⁵

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields on and off shore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.⁶⁶⁶

According to the Alaska Department of Environmental Conservation (DEC), one active environmental cleanup sites was located near Nikiski as of May 2012. The Tesoro Alaska Refinery is located approximately 15 miles northeast of Nikiski along North Kenai Road. The facility has been in operation since 1970, and refines crude oil to produce fuel oil, diesel, jet fuel, gasoline, and propane. In 1980, a study found that wastes from crude oil storage tanks and separators had been buried in three pits on the Tesoro property. Both soil and groundwater in the area is contaminated. The contamination plume has traveled through neighboring industrial properties and is approaching a bluff over Cook Inlet. Tesoro is currently engaged in groundwater monitoring and product recovery to prevent seepage into Cook Inlet. Following

⁶⁶² Ibid.

⁶⁶³ Alaska Department of Natural Resources (n.d.). *Captain Cook State Recreation Area*. Retrieved January 26, 2012 from <http://dnr.alaska.gov/parks/units/captcook.htm>.

⁶⁶⁴ Kenai Peninsula Borough (2010). *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

⁶⁶⁵ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁶⁶⁶ Resource Development Council (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

successful removal of product from groundwater, Tesoro will be required to develop a plan to address soil contamination.⁶⁶⁷

Current Economy⁶⁶⁸

The economy of Nikiski is heavily tied to the oil industry. A Tesoro Alaska oil refinery is located just north of the community, where Cook Inlet and some North Slope crude oil is processed into jet fuel, gasoline, and diesel. British Petroleum has a natural-gas-to-liquid-fuel pilot plant in Port Nikiski. Alaska Petroleum Contractors and Natchiq, Inc. are building portable modules that will be shipped to the Alpine oil field on the North Slope. In addition, several hundred Nikiski residents work in a fertilizer plant at Port Nikiski, owned by Agrium, Inc., that produces urea and ammonia.⁶⁶⁹

In addition to the oil industry, top employers in Nikiski in 2010 included the Kenai Peninsula School District, state and borough government, Wal-Mart, and the Central Peninsula General Hospital in Soldotna,⁶⁷⁰ as well as retail businesses and tourism-related services.⁶⁷¹ In addition, some local residents were involved in the commercial fishing industry between 2000 and 2010. In 2000, the number of Nikiski residents holding state Commercial Fisheries Entry Commission (CFEC) permits was equivalent to 1.4% of the total local population.

Based on household surveys conducted for the 2006-2010 ACS,⁶⁷² in 2010, the per capita income in Nikiski was estimated to be \$28,347 and the median household income was estimated to be \$66,208. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$20,128 and \$51,176, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,⁶⁷³ the increase is revealed to be very slight, from a real per capita income of \$26,468 and real median household income of \$67,296 in 2000. In 2010, Nikiski ranked 75th of 305 Alaskan communities with per capita income data that year, and 57th in median household income, out of 299 Alaskan communities with household income data.

However, Nikiski's small population size may have prevented the ACS from accurately portraying economic conditions.⁶⁷⁴ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database

⁶⁶⁷ Alaska Dept. of Environmental Conservation (2012). *List of Contaminated Site Summaries By Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁶⁶⁸ Unless otherwise noted, all monetary data are reported in nominal values.

⁶⁶⁹ World Port Source website (2012). *Port of Nikiski*. Retrieved January 24, 2012 from http://www.worldportsource.com/ports/USA_AK_Port_of_Nikiski_4141.php.

⁶⁷⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁷¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁷² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁷³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁷⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nikiski in 2010 is \$17,979.⁶⁷⁵ This estimate is slightly lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Nikiski between 2000 and 2010. As of 2010, the Denali Commission did not consider Nikiski a “distressed” community.⁶⁷⁶ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Nikiski’s population (62.8%) was estimated to be in the civilian labor force than was estimated to be in the statewide civilian labor force that year (68.8%). Also in 2010, 10.2% of Nikiski residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 5.6%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Nikiski in 2010 was 13.2%, compared to a statewide unemployment rate estimate of 11.5%.⁶⁷⁷

Also based on the 2006-2010 ACS, the majority of Nikiski’s workforce was estimated to be employed in the private sector (69.2%), along with 20.6% in the public sector, and 10.4% that was self-employed. Of the 2,144 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in educational services, health care, and social assistance (23.5%) and agriculture, forestry, fishing, hunting, and mining (21.8%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 1,930 employed residents in Nikiski in 2010, of which 19.6% were employed in natural resources and mining, 18.5% in trade, transportation, and utilities, 13.1% in local government, 11.1% in education and health services, 9.1% in leisure and hospitality, 6.1% in construction, 6.1% in manufacturing, 6% in professional and business services, 3.8% in state government, 2.1% in financial activities, 1.1% in information, and 3.4% in other industries.⁶⁷⁸ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

⁶⁷⁵ See footnotes 670 and 672.

⁶⁷⁶ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁶⁷⁷ See footnote 670.

⁶⁷⁸ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Nikiski (U.S. Census).

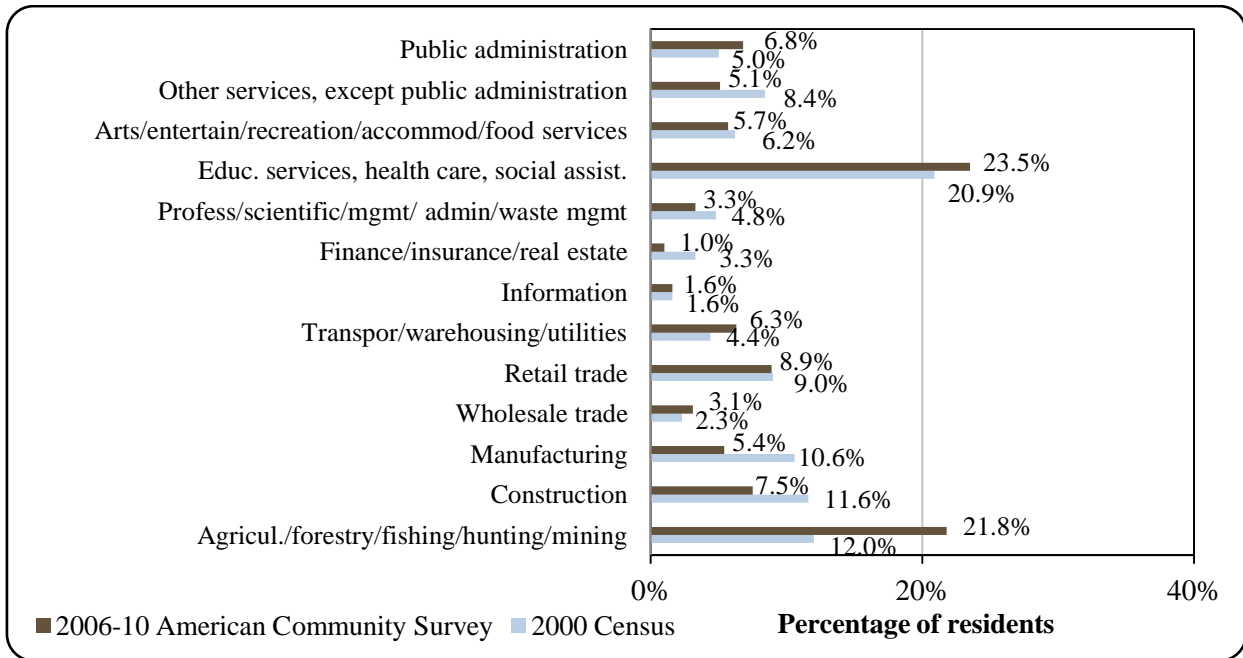
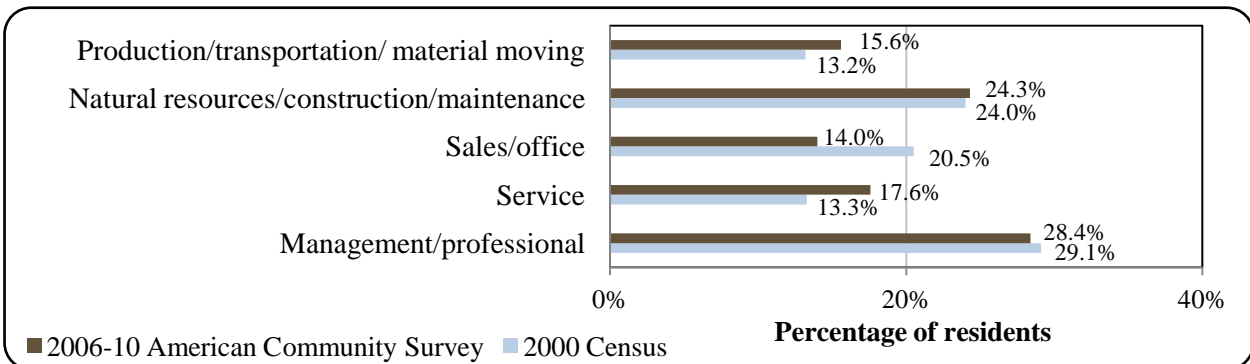


Figure 4. Local Employment by Occupation in 2000-2010, Nikiski (U.S. Census).



Governance

Nikiski is an unincorporated community in the Kenai Peninsula Borough. The community does not administer any local taxes, although the Borough does administer a 3% sales tax and 4.5 mills property tax.⁶⁷⁹ Given that Nikiski is not incorporated, there was no municipal revenue or municipal sales tax revenue between 2000 and 2010. No information was reported regarding State or Community Revenue Sharing contributions or fisheries-related grants received by the community between 2000 and 2010. This information about selected aspects of community revenue is presented in Table 2.

⁶⁷⁹ Alaska Dept. of Comm. And Rural Affairs (n.d.). *Community Information Summaries*. Retrieved January 24, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

Nikiski was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.⁶⁸⁰ The nearest offices of the Alaska Department of Fish and Game (ADF&G) and Alaska Department of Natural Resources are located in Soldotna. The closest offices of the National Marine Fisheries Service (NMFS) are located in Homer and Anchorage. Anchorage also has the closest offices of the Alaska Department of Commerce, Community, and Economic Development and the U.S. Bureau of Citizenship and Immigration Services.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nikiski from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.
² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.
³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.
⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.
⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Nikiski is connected to the Sterling Highway, which provides road access to Anchorage. The nearest commercial airport is located in the City of Kenai, 15 miles away by road. The price of a roundtrip ticket by plane from Kenai to Anchorage in early June of 2012 was \$179.⁶⁸¹ There are also two private airstrips in the vicinity of Nikiski,⁶⁸² one of which is owned by Shell Oil.⁶⁸³

⁶⁸⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁸¹ This price was calculated on November 21, 2011 using kayak.com.

⁶⁸² See footnote 680.

Facilities

Water in Nikiski is derived from wells. A majority of homes use individual wells, and a community well is also in use. Those homes without wells haul or have water delivered. Most homes are fully plumbed and use individual septic tank systems, and the remaining residences use outhouses. The Kenai Peninsula Borough operates a transfer facility on Poolside Avenue, and refuse collection services are provided by Peninsula Sanitation. Alaska Electric G&T Homer Electric Association provides electricity in Nikiski using natural gas.⁶⁸⁴

Safety services are provided by state troopers stationed in Kenai. Fire and rescue services are provided by the Nikiski Fire Department / Emergency Medical Services (EMS) and the Borough Central Emergency Services (CES) Fire / Rescue / Emergency Medical Technicians (EMT). Community facilities in Nikiski include a Boys and Girls Club, senior services, the Nikiski pool, and two school libraries. Phone, internet, and cable are available in Nikiski.⁶⁸⁵

Regarding fisheries related infrastructure, docks at Port Nikiski are privately-owned and utilized for servicing offshore drilling platforms only.⁶⁸⁶ The nearby City of Kenai has a city dock and boat ramp, as well as a number of private commercial fish processing docks. Moorage is also available using buoys anchored in the Kenai River.⁶⁸⁷

Medical Services

A full range of medical services are provided at the Central Peninsula General Hospital, located 25 miles away by road in Soldotna. A smaller range of services, including diagnostic imaging and lab services, are available at the Kenai Health Center, located 15 miles south of Nikiski in the City of Kenai.⁶⁸⁸ Alternative health care in Nikiski is provided by the Nikiski Fire Department. Emergency services have highway, coastal, and helicopter access, and are provided by 911 Telephone service and paid EMS service.⁶⁸⁹

Educational Opportunities

Two schools are present in Nikiski. The Nikiski North Star Elementary School serves pre-school through 6th grade. As of 2011, North Star Elementary had 421 students and 29 teachers. The Nikiski Middle/Senior High School serves grades 7 through 12. As of 2011, 393 students were in attendance and the school had 25 teachers.⁶⁹⁰

⁶⁸³ World Port Source website (2012). *Port of Nikiski*. Retrieved January 24, 2012 from http://www.worldportsource.com/ports/USA_AK_Port_of_Nikiski_4141.php.

⁶⁸⁴ See footnote 680.

⁶⁸⁵ Ibid.

⁶⁸⁶ World Port Source website (2012). *Port of Nikiski*. Retrieved January 24, 2012 from http://www.worldportsource.com/ports/USA_AK_Port_of_Nikiski_4141.php.

⁶⁸⁷ See footnote 680.

⁶⁸⁸ Central Peninsula Hospital (n.d.). *Kenai Health Center*. Retrieved June 14, 2012 from <http://www.cphg.org/body.cfm?id=65>.

⁶⁸⁹ See footnote 680.

⁶⁹⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Nikiski is located in the traditional territory of the Kenaitze people, a branch of Athabascan Native Americans. Historically, the Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.⁶⁹¹ The Nikiski area was homesteaded in the 1940s and grew along with the oil industry, which continues to be the primary economic driver in the community.⁶⁹² In addition, some Nikiski residents became involved in commercial fisheries that had developed in the region following the purchase of Alaska by the U.S. in 1867. Today a significant number of Nikiski residents are engaged in the commercial and sportfishing industries, and several also participate in subsistence activities (see the *Commercial Fishing*, *Recreational Fishing*, and *Subsistence Fishing* sections of this profile below).

Commercial harvest of salmon in Cook Inlet began in 1882⁶⁹³ with the development of a cannery at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890.⁶⁹⁴ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁶⁹⁵ In the 1920s, herring had become increasingly valued for oil and meal, and a number of reduction plants were built. Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, a sizable spawning biomass of herring was found in western Cook Inlet, and Lower Cook Inlet also supported commercial fisheries for Dungeness, king, and Tanner crab. However, crab and herring fisheries are currently closed due to low stock abundance.^{696,697}

Today, ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only

⁶⁹¹ Kenaitze Indian Tribe (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

⁶⁹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁹³ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶⁹⁴ Cook, Linda, and Frank Norris (1998). *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁶⁹⁵ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁶⁹⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁶⁹⁷ Alaska Dept. of Fish and Game (2012). *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.⁶⁹⁸

Groundfish and crab fisheries that occur within 3 nautical miles (nm) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Cook Inlet is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch (TAC) set by NMFS applied to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.⁶⁹⁹

Nikiski is not eligible to participate in either the Community Development Quota program or the Community Quota Entity program.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, two processing facilities were in operation in Nikiski. Information about and the history of these facilities is presented below.

Ocean Beauty Seafoods LLC was founded in 1910 as Washington Fish & Oyster in Seattle, and it began its operations in Alaska in 1930. Ocean Beauty has a freezer plant located on the Kenai Peninsula about 15 miles north of the town of Nikiski. The Nikiski plant processes fresh and frozen coho, chum, pink, sockeye, and Chinook salmon, salmon roe, halibut, and cod. Operating seasons typically run from the beginning of April thru the end of October, during which time the plant employs approximately 150 people. Ocean Beauty provides work-related clothing such as gloves, aprons, and rain gear to its seafood processing workforce.⁷⁰⁰

Pacific Alaska Shellfish originated in Portland, Oregon in 1941. Today Pacific Alaska is the “largest vertically-integrated, independently-owned seafood company in North America.” Its Nikiski facility focuses solely on processing of Alaskan razor clams, with a season that runs from May through August.⁷⁰¹ According to a survey of plant managers conducted by the AFSC in 2011, the plant began operations in 1985 and employs up to 30 workers from May through August.

⁶⁹⁸ See footnote 693.

⁶⁹⁹ See footnote 696.

⁷⁰⁰ Ocean Beauty Seafood, LLC. (n.d.). *Employment Information – Nikiski Facility*. Retrieved January 25, 2012 from http://www.oceanbeauty.com/employment/info_CIP.htm.

⁷⁰¹ Pacific Seafood (2011). *Pacific Alaska Shellfish*. Retrieved January 25, 2012 from <http://www.pacseafood.com/default.aspx?page=1>.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received in Nikiski (Table 3).

Commercial Fishing

Although the oil industry dominates Nikiski's economy, the community is located in close proximity to abundant fishing grounds, and the commercial fishing industry has a strong presence. Between 2000 and 2010, Nikiski residents participated in state and federal fisheries as crew members, vessel owners, and permit and quota share holders. Several fish buyers and fish processors were also active in the community between 2000 and 2010.

In 2010, 51 Nikiski residents held commercial fishing crew licenses and 23 fishing vessels were primarily owned by residents (Table 5). Also in 2010, 46 Nikiski residents held a total of 49 CFEC permits. A majority of the CFEC permits (43) were held for salmon drift and set gillnet fisheries in both Cook Inlet and Bristol Bay. Of these, 77% were actively fished in 2010. The number of salmon permit holders and total salmon permits decreased by approximately 20% between 2000 and 2010, from 56 permit holders and 56 permits in 2000 to 45 permit holders and 43 permits held in 2010, while the percentage of salmon permits that were actively fished did not change substantially over this period.

Other CFEC permits held in 2010 included three herring permits held by three individuals in three different herring fisheries (Cook Inlet herring roe gillnet, Kodiak herring roe gillnet, and Norton Sound herring roe and food/bait gillnet fisheries), and three halibut permits held by three permit holders, all in the statewide halibut longline fishery using vessels under 60 feet. In 2010, the Cook Inlet herring permit and two halibut permits were actively fished. The number of halibut permits declined steadily between 2000 and 2010, from 11 to 3. The number of herring permits increased from five in 2000 to eight in 2005, and then declined again to three by 2010. Nikiski residents also held permits in federal fisheries, including three groundfish License Limitation Permits (LLP), one crab LLP, and two Federal Fisheries Permits (FFP). None of these LLPs or FFPs were actively fished in 2010. Information about CFEC, LLP, and FFP permits is presented in Table 4.

In 2000, there were 12 quota share account holders in the federal halibut catch share fishery, declining to 5 by 2010. Total quota shares held remained relatively stable between 2000 and 2010, however, increasing from 353,146 total shares in 2000 to 394,609 shares held in 2004 and 2005, then declining slightly to 325,174 shares held in 2010. The annual halibut individual fishing quota (IFQ) allotment increased by 43% between 2000 and 2007, and then declined by 2010 to a level only 9% higher than the 2000 allotment. In addition, between 2000 and 2010, one quota share account was held each year in the federal sablefish catch share fishery. The total number of sablefish quota shares held remained constant over the period (1,643). Sablefish IFQ allotment fluctuated somewhat, increasing by 28% between 2000 and 2004, and eventually declining to 21% less than the 2000 allotment by 2010. No quota share accounts or quota shares were held by Nikiski residents in federal crab catch share fisheries during this period. Information about federal catch share participation is presented in Tables 6 through 8.

It is important to note that, in the earlier and middle years of the 2000-2010 period, several Nikiski residents also held groundfish and sablefish CFEC permits. Between 2002 and 2005, one sablefish permit was held in the Prince William Sound fixed gear fishery (maximum

vessel length of 50 feet). Between 2000 and 2005, a varying number of permits were held each year in groundfish fisheries, including permits for the statewide lingcod mechanical jig fishery, and miscellaneous statewide saltwater finfish fisheries using hand troll, pot gear on vessels under 60 feet, and mechanical jig. The last year during the decade in which a groundfish CFEC permit was actively fished was 2000, and the last year a sablefish CFEC permit was actively fished was 2005. In the early years of the decade, Nikiski residents also held salmon permits for Prince William Sound purse seine and drift gillnet and Kodiak set gillnet fisheries. In 2000 and 2001, halibut permits were also held for statewide fisheries using mechanical jig and longline vessels over 60 feet. Finally, between 2004 and 2006, several herring permits were held by Nikiski in the Bristol Bay herring roe fishery (Table 4).

Nikiski ranked 27th out of 67 Alaskan ports that received commercial fisheries landings in 2010. That year, nine fish buyers operated in Nikiski. A total of 5,082,990 net pounds of salmon were landed, generating \$7,825,859 in ex-vessel revenue. In most other years there were fewer fish buyers in operation, and landings and ex-vessel revenue information in Nikiski is considered confidential due to the small number of buyers, with the exception of 2005. That year, nine fish buyers were present in Nikiski, and vessels delivered 34,629 net pounds of herring for an ex-vessel value of \$22,320. Information about landings and ex-vessel revenue generated in Nikiski is presented in Table 9, and the number of fish buyers and shore-side processors operating in the community each year is presented in Table 5.

Information about salmon harvest by Nikiski vessel owners, including all delivery locations, was reported for all years between 2000 and 2010, while halibut and ‘other groundfish’ landings were only reported for some years. Nikiski vessel owners landed an average of 580,625 net pounds of salmon per year, valued at \$424,140 in ex-vessel revenue on average. In 2000, 90,774 net pounds of halibut and 1,596 net pounds of groundfish were landed, for ex-vessel values of \$233,938 and \$843, respectively. In 2001, 100,364 net pounds of halibut were landed by Nikiski vessel owners, valued at \$206,419, reflecting a decrease in value per pound of halibut between 2000 and 2001. Finally, in 2003, 1,197 net pounds of groundfish were reported as landed by Nikiski vessel owners, for an ex-vessel revenue of \$629. Information about landings and ex-vessel revenue for other years is considered confidential due to the small number of participants. See Table 10 for landings and ex-vessel revenue generated by Nikiski vessel owners between 2000 and 2010.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nikiski: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Nikiski: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	4	4	4	4	4	4	3	3	3	3	3
	Active permits	1	0	1	1	1	1	1	1	1	1	0
	% of permits fished	25%	0%	25%	25%	25%	25%	33%	33%	33%	33%	0
	Total permit holders	4	4	4	4	4	4	3	3	3	3	3
Crab (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	3	3	3	2	2	2	2	2	3	2	2
	Fished permits	0	0	0	0	0	1	2	2	1	1	0
	% of permits fished	0%	0%	0%	0%	0%	50%	100%	100%	33%	50%	0%
	Total permit holders	3	3	3	2	2	2	2	2	3	2	2
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	11	9	7	6	7	5	5	5	4	4	3
	Fished permits	6	5	5	4	5	4	4	4	3	3	2
	% of permits fished	55%	56%	71%	67%	71%	80%	80%	80%	75%	75%	67%
	Total permit holders	9	8	7	6	7	5	5	5	4	4	3
Herring (CFEC) ²	Total permits	5	5	4	4	6	8	7	5	5	4	3
	Fished permits	0	0	0	0	0	1	1	1	1	1	1
	% of permits fished	0%	0%	0%	0%	0%	13%	14%	20%	20%	25%	33%
	Total permit holders	5	5	4	4	6	8	7	5	5	4	3

Table 4 cont'd. Permits and Permit Holders by Species, Nikiski: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	1	1	0	1	0	0	0	0	0
	% of permits fished	-	-	100%	100%	0%	100%	-	-	-	-	-
	Total permit holders	0	0	1	1	1	1	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	5	4	1	1	2	1	0	0	0	0	0
	Fished permits	2	0	0	0	0	0	0	0	0	0	0
	% of permits fished	40%	0%	0%	0%	0%	0%	-	-	-	-	-
	Total permit holders	4	3	1	1	2	1	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	56	57	58	52	55	53	55	52	51	44	43
	Fished permits	45	44	48	41	43	45	42	41	39	34	33
	% of permits fished	80%	77%	83%	79%	78%	85%	76%	79%	76%	77%	77%
	Total permit holders	56	60	61	53	57	55	54	53	50	46	45
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>77</i>	<i>75</i>	<i>71</i>	<i>64</i>	<i>71</i>	<i>68</i>	<i>67</i>	<i>62</i>	<i>60</i>	<i>52</i>	<i>49</i>
	<i>Fished permits</i>	<i>53</i>	<i>49</i>	<i>54</i>	<i>46</i>	<i>48</i>	<i>51</i>	<i>47</i>	<i>46</i>	<i>43</i>	<i>38</i>	<i>36</i>
	<i>% of permits fished</i>	<i>69%</i>	<i>65%</i>	<i>76%</i>	<i>72%</i>	<i>68%</i>	<i>75%</i>	<i>70%</i>	<i>74%</i>	<i>72%</i>	<i>73%</i>	<i>73%</i>
	<i>Permit holders</i>	<i>62</i>	<i>64</i>	<i>64</i>	<i>56</i>	<i>63</i>	<i>60</i>	<i>57</i>	<i>55</i>	<i>52</i>	<i>47</i>	<i>46</i>

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nikiski: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Nikiski ²	Total Net Pounds Landed In Nikiski ^{2,5}	Total Ex-Vessel Value Of Landings In Nikiski ^{2,5}
2000	92	1	1	37	14	0	-	-
2001	63	2	1	40	15	84	-	-
2002	56	3	2	44	23	79	-	-
2003	59	1	2	46	24	0	-	-
2004	59	3	2	48	23	74	-	-
2005	60	9	2	28	8	13	406,024	\$250,668
2006	55	2	2	29	11	0	-	-
2007	59	0	3	27	9	0	0	\$0
2008	53	0	2	28	13	0	0	\$0
2009	55	3	2	25	14	148	-	-
2010	51	9	2	23	13	231	5,164,599	\$7,876,457

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Nikiski: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	12	353,146	34,967
2001	11	335,301	39,695
2002	11	316,424	38,732
2003	10	387,080	47,367
2004	10	394,609	53,473
2005	10	394,609	54,354
2006	9	375,121	51,121
2007	8	367,592	52,083
2008	8	375,346	49,163
2009	6	367,168	43,088
2010	5	325,174	35,153

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nikiski: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	1,643	148
2001	1	1,643	140
2002	1	1,643	140
2003	1	1,643	167
2004	1	1,643	189
2005	1	1,643	188
2006	1	1,643	165
2007	1	1,643	160
2008	1	1,643	142
2009	1	1,643	129
2010	1	1,643	117

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nikiski: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nikiski: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	0	0	-	0
Finfish	-	-	-	-	-	-	-	0	0	-	-
Halibut	-	-	-	-	-	-	-	0	0	-	-
Herring	-	-	-	-	-	34,629	-	0	0	-	-
Other Groundfish	-	-	-	-	-	-	-	0	0	-	-
Other Shellfish	-	-	-	-	-	-	-	0	0	-	-
Pacific Cod	-	-	-	-	-	-	-	0	0	-	-
Pollock	-	-	-	-	-	-	-	0	0	-	-
Sablefish	-	-	-	-	-	-	-	0	0	-	-
Salmon	-	-	-	-	-	-	-	0	0	-	5,082,990
<i>Total²</i>	-	-	-	-	-	34,629	-	0	0	-	5,082,990
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	\$0	-	\$0	\$0	-	\$0
Finfish	-	-	-	-	-	-	-	\$0	\$0	-	-
Halibut	-	-	-	-	-	-	-	\$0	\$0	-	-
Herring	-	-	-	-	-	\$22,320	-	\$0	\$0	-	-
Other Groundfish	-	-	-	-	-	-	-	\$0	\$0	-	-
Other Shellfish	-	-	-	-	-	-	-	\$0	\$0	-	-
Pacific Cod	-	-	-	-	-	-	-	\$0	\$0	-	-
Pollock	-	-	-	-	-	-	-	\$0	\$0	-	-
Sablefish	-	-	-	-	-	-	-	\$0	\$0	-	-
Salmon	-	-	-	-	-	-	-	\$0	\$0	-	\$7,825,859
<i>Total²</i>	-	-	-	-	-	\$22,320	-	\$0	\$0	-	\$7,825,859

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nikiski Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	90,774	100,364	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	1,596	-	-	1,197	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	352,514	501,967	750,465	507,363	907,972	916,775	583,951	633,586	429,454	473,452	329,376
<i>Total²</i>	<i>444,884</i>	<i>602,331</i>	<i>750,465</i>	<i>508,560</i>	<i>907,972</i>	<i>916,775</i>	<i>583,951</i>	<i>633,586</i>	<i>429,454</i>	<i>473,452</i>	<i>329,376</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$233,938	\$206,419	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$843	-	-	\$629	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$242,646	\$303,165	\$360,468	\$338,738	\$572,369	\$725,220	\$395,972	\$526,936	\$359,440	\$430,779	\$409,802
<i>Total²</i>	<i>\$477,427</i>	<i>\$509,584</i>	<i>\$360,468</i>	<i>\$339,367</i>	<i>\$572,369</i>	<i>\$725,220</i>	<i>\$395,972</i>	<i>\$526,936</i>	<i>\$359,440</i>	<i>\$430,779</i>	<i>\$409,802</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

There is a high level of recreational fishing activity on the Kenai Peninsula overall. The recreational fishing industry is a large employer in Nikiski, along with tourism-related services in general.⁷⁰² Although few sport fish guide businesses were active in Nikiski during the 2000-2010 period, there were between 4 and 11 licensed sport fish guides present in the community each year from 2000 to 2008. Between 2000 and 2010, the number of Nikiski residents that purchased sportfishing licenses (irrespective of point of sale) varied between 732 and 922 per year. The number of fishing licenses sold in Nikiski was much smaller, varying between 100 and 302 per year. Many residents likely travel to nearby Kenai and other larger communities in the area to purchase licenses and fishing gear. Information about sportfishing activity in Nikiski is presented in Table 11.

The Alaska Statewide Harvest Survey,⁷⁰³ conducted by ADF&G between 2000 and 2010, noted the species that are known to be targeted by private anglers in Nikiski. In freshwater, anglers targeted Chinook, coho, sockeye, pink, and chum salmon, rainbow trout, Dolly Varden, and northern pike. In saltwater, anglers pursued Chinook, coho, and sockeye salmon, Pacific halibut, rockfish, lingcod, Pacific cod, and sablefish. The survey also noted sport harvest of razor clams, hardshell clams, and shrimp by Nikiski residents. No kept/release log book data were reported for fishing charters out of Nikiski in 2010.⁷⁰⁴

Nikiski is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, saltwater and freshwater sportfishing at this regional level was substantial. In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska residents logged 20,292 saltwater angler days and 71,555 freshwater angler days. Typically, Alaska residents took part in saltwater sportfishing at greater rates than non-Alaska resident anglers, and the opposite was true of freshwater sportfishing. For both Alaska resident and non-Alaska resident anglers in both freshwater and saltwater, the number of angler days fished per year decreased between 2000 and 2010. This information about regional sportfishing activity in Nikiski is presented in Table 11.

⁷⁰² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁰³ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁷⁰⁴ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Nikiski: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nikiski ²
2000	0	4	932	302
2001	0	7	976	218
2002	0	9	964	183
2003	0	11	922	169
2004	0	11	869	252
2005	1	10	770	150
2006	1	6	763	100
2007	1	9	793	100
2008	0	4	732	177
2009	0	0	791	107
2010	0	0	756	139

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Nikiski is located in the traditional territory of the Kenaitze people, a branch of Athabascan Indians. Historically, the Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.⁷⁰⁵ Today, the economy of Nikiski is driven by the oil industry. Subsistence activity is not a primary economic driver, although a number of Nikiski residents engage in subsistence harvest.⁷⁰⁶

No information was reported by ADF&G between 2000 and 2010 regarding per capita subsistence harvest or the percentage of households in Nikiski participating in subsistence harvest activities (Table 12). However, information was available about subsistence harvest levels of salmon and halibut. Between 2000 and 2008, the number of subsistence salmon permits issued to Nikiski households varied between one and eight. In some years, several hundred sockeye and coho salmon were harvested for subsistence purposes by Nikiski households (Table 13). Between 2003 and 2009, the number of Subsistence Halibut Registration Certificates (SHARC) issued to Nikiski residents fluctuated between 3 and 12. In 2009, 10 SHARC cards were issued, 5 were returned, and a total of 2,007 pounds of halibut were reported harvested for subsistence purposes. Nine SHARC cards were issued in 2010, but no information was reported regarding the number returned or pounds harvested. Information about subsistence harvest of halibut is presented in Table 14.

No information was reported by ADF&G regarding total pounds of marine invertebrates or non-salmon fish harvested in Nikiski between 2000 and 2010 (Table 13). In addition, no information was reported by management agencies regarding subsistence harvest of marine mammals by residents of Nikiski during this period (Table 15).

⁷⁰⁵ Kenaitze Indian Tribe (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

⁷⁰⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 12. Subsistence Participation by Household and Species, Nikiski: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nikiski: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	1	n/a	n/a	12	n/a	26	n/a	n/a
2001	4	4	n/a	n/a	n/a	n/a	1	n/a	n/a
2002	1	4	1	n/a	n/a	n/a	20	n/a	n/a
2003	1	5	5	n/a	n/a	n/a	5	n/a	n/a
2004	8	6	6	4	12	n/a	161	n/a	n/a
2005	6	6	6	1	22	1	135	n/a	n/a
2006	4	4	3	3	100	6	67	n/a	n/a
2007	7	7	62	15	55	2	399	n/a	n/a
2008	4	4	n/a	2	28	n/a	93	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nikiski: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	3	n/a	n/a
2004	7	5	499
2005	7	1	464
2006	8	4	1,556
2007	10	5	2,290
2008	12	5	1,401
2009	10	5	2,007
2010	9	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nikiski: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nikolaevsk (NICK-oh-lyvsk)



People and Place

Location

Nikolaevsk is located on the Kenai Peninsula, several miles inland from Anchor Point. It lies several miles from the Sterling Highway.⁷⁰⁷ The unincorporated area covers 40.7 square miles of land.⁷⁰⁸ The town is approximately 115 miles southwest of Anchorage and 10 miles north of Homer. Nikolaevsk is located in the Homer Recording District and the Kenai Peninsula Borough Census Area.

*Demographic Profile*⁷⁰⁹

In 2010, there were 318 residents in Nikolaevsk, ranking it as the 159th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Nikolaevsk decreased by 14.3%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents declined by 8.7%. Despite the overall decline, the average annual growth rate was close to zero during this period (0.05%). This is explained by a dip in population to 297 in 2006, followed by a rebound to 315 residents by 2009.

In 2010, the majority of the population of Nikolaevsk identified themselves as White (95.2%), along with 3.5% who identified as American Indian or Alaska Native, 0.3% as Asian, 0.3% as “some other race,” and 3.5% who identified with two or more races. In addition, 4.4% of Nikolaevsk’s population identified themselves as Hispanic in 2010. The percentage of the population that identified as White increased between 2000 and 2010, from 81.7% to 92.5%, although this was an overall decrease from the percentage of the population that identified as White in 1990 (96.8%). The percentage of the population that identified as American Indians and Alaska Natives increased from 1.3% in 1990 to 1.7% in 2000, and 3.5% in 2010. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In a survey conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that approximately 120 people come to Nikolaevsk as seasonal workers between May and August each year, and the community’s population peaks in July. They indicated that these population fluctuations are mostly driven by employment in fishing sectors. In addition to seasonal workers, community leaders noted that approximately 20 year-round residents of Nikolaevsk work for local shore-side processors.

⁷⁰⁷ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁰⁸ Nikolaevsk Community Council (1999). *Community Action Plan for Nikolaevsk, Alaska*. Retrieved January 27, 2012 from <http://www.commerce.state.ak.us/dca/plans/Nikolaevsk-GCP-1999.pdf>.

⁷⁰⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

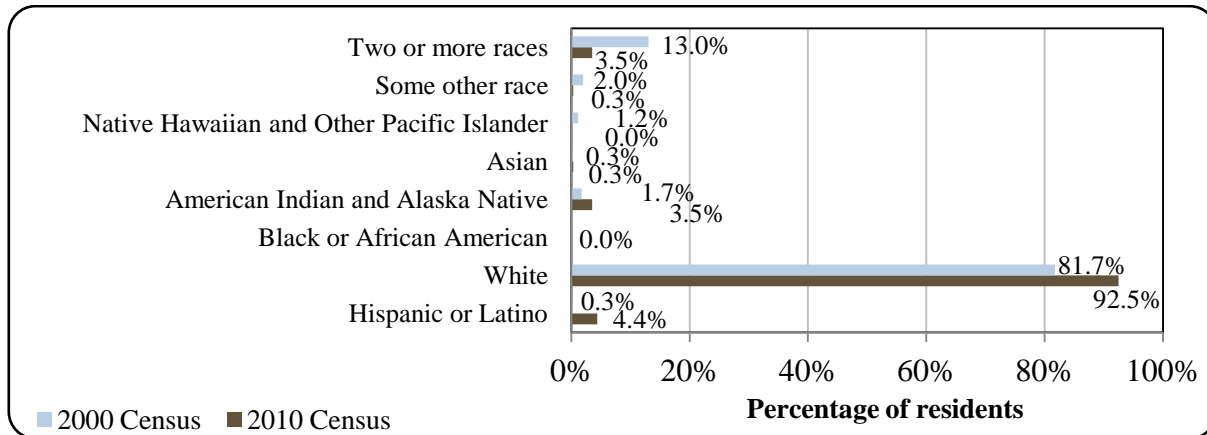
Table 1. Population in Nikolaevsk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	371	-
2000	345	-
2001	-	345
2002	-	335
2003	-	315
2004	-	309
2005	-	306
2006	-	297
2007	-	304
2008	-	295
2009	-	315
2010	318	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nikolaevsk: 2000-2010 (U.S. Census).

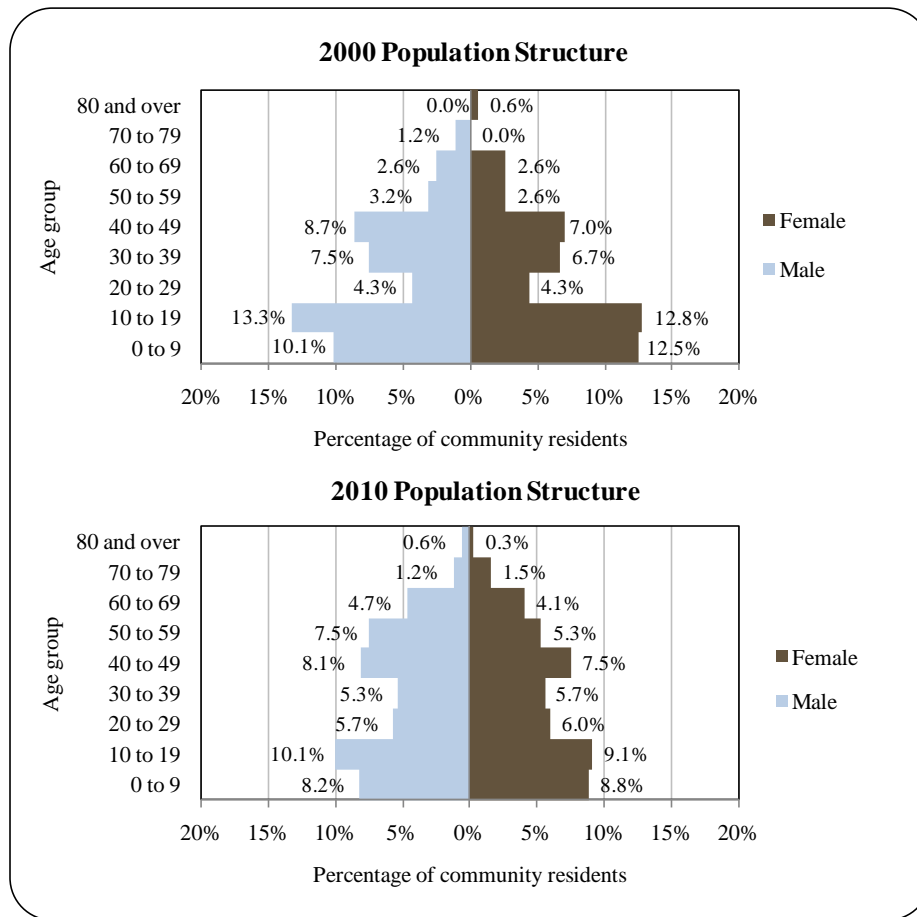


In 2010, the average household size in Nikolaevsk was 2.97, a decrease from 4.6 in 1990 and 3.59 in 2000. The number of households in Nikolaevsk has increased over the same period, from 80 households in 1990 and 96 in 2000, to 107 in 2010. Of the 150 housing units surveyed for the 2010 U.S. Census, 57.3% were owner-occupied, 14% were rented, and 28.7% were vacant or used only seasonally. Between 1990 and 2010, no Nikolaevsk residents were recorded as living in group quarters.

In 2010, the gender makeup of Nikolaevsk's population (51.6% male and 48.4% female) was slightly more gender balanced than the state population as a whole, which was made up of

52% males and 48% females. The median age of Nikolaevsk residents was 32.3 years, slightly younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. There were disproportionately fewer people in the 20 to 39 age cohorts in both 2000 and 2010. In 2010, there was a relatively even spread of males and females across age categories in Nikolaevsk. That same year, 12.5% of the population was 60 or older. The overall population structure of Nikolaevsk in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Nikolaevsk Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁷¹⁰ 79.1% of Nikolaevsk residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 16.3% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 4.7% were estimated to have a 9th to 12th grade education

⁷¹⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

but no diploma, compared to 5.8% of Alaskan residents overall; 34.1% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 10.1% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 6.2% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 3.1% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Nikolaevsk is the location of a settlement of *Staroveri*, or “Russian Old Believers.”⁷¹¹ The predecessors of current Nikolaevsk residents came to the Kenai Peninsula in the 1960s by way of Woodburn, Oregon, after time spent in China and Turkey and various other intermediary countries (see the *Additional Information* section for more history).⁷¹² The first Old Believer settlers on the Kenai Peninsula received a grant from the Tolstoy Foundation in New York and purchased land there in 1967.⁷¹³ In 1968, 5 Old Believer families settled in Nikolaevsk, and by 1970 there were 70 residences and 20 families there. In addition to the main village, several areas located in the hills to the east were also settled as satellite communities.⁷¹⁴ The first school opened in an 8-by-20-foot trailer in 1972. Until 1980, students attended classes through the 9th grade, and then began their adult lives. The town was named to honor St. Nicholas, the patron saint of the town's church. Nikolaevsk did not appear in U.S. Census records until 1990.⁷¹⁵

Today, the population of Nikolaevsk continues to be made up primarily of Russian Old Believers, along with some non-Russians, living in three distinct settlements within the land purchase area. The Old Believers in this area lead a family-oriented, self-sufficient lifestyle. Their primary food sources are from gardening, small livestock, fishing, and hunting. They use modern utilities. Families are typically very large (8 to 12 children). Traditional clothing is worn, Russian is the first language, and the church dictates that males do not shave. Residents typically marry at a young age.⁷¹⁶

Natural Resources and Environment

Nikolaevsk is located in a maritime climactic zone, dominated by the moderating effects of a marine environment and characterized by high humidity, precipitation and fog cover as well as warm winters and cool summers. Winter temperatures range from 14 to 27 °F, and summer temperatures vary from 45 to 65 °F. Average annual precipitation is 24 inches.⁷¹⁷ Average annual precipitation is 27 inches and average annual snowfall is 103 inches.⁷¹⁸

⁷¹¹ Lee Silva, A. (2009). *Unsettling Diaspora: The Old Believers of Alaska*. Masters Thesis, McGill University, Montreal. Retrieved January 26, 2012 from http://digitool.library.mcgill.ca/webclient/StreamGate?folder_id=0&dvs=1328564311584~157.

⁷¹² Johnson, P. W. (1982). *Dress and Acculturation among Russian Old Believers in Oregon*. Masters Thesis, Oregon State University. Retrieved January 30, 2012 from <http://ir.library.oregonstate.edu/xmlui/handle/1957/7891>.

⁷¹³ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷¹⁴ See footnote 711.

⁷¹⁵ See footnote 713.

⁷¹⁶ Ibid.

⁷¹⁷ Ibid.

⁷¹⁸ Precipitation and snowfall information retrieved December 27, 2011 from <http://www.weatherbase.com/>.

Protected areas near Nikolaevsk include Kachemak Bay State Park and Wilderness, the Kachemak Bay State Critical Habitat Area, and the Kenai Wilderness. Nikolaevsk is located approximately 15 miles from a northern segment of Kachemak Bay State Park and Wilderness, located along the northern shore of Kachemak Bay. This State Park is Alaska's first and only 'wilderness park.' A majority of the State Park's 400,000 acres are located on the southern side of Kachemak Bay, and its terrain includes mountains, glaciers, forests, and ocean. Visitors to the State Park enjoy fishing, boating, wildlife viewing, kayaking, hiking, camping, and mountain sports.⁷¹⁹ Portions of Kachemak Bay State Park and Wilderness overlap with the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.⁷²⁰

Kachemak Bay itself was designated as a State Critical Habitat Area (CHA) in 1974, and the Fox River Flats at the mouth of the Bay were also designated as a CHA in 1972. The purpose of these CHAs is to "protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose." Eleven species of marine mammals utilize Kachemak Bay, including sea otter, Steller sea lion, harbor seal, beluga, minke, and orca whale, harbor porpoise, and Dall's porpoise, as well as a diversity of marine plants and invertebrates, birds, and fish and shellfish. The Fox River Flats and associated intertidal zone support at least 21 species of terrestrial mammals, including moose, black bear, brown bear, coyote, wolf, beaver, river otter, and small furbearers.⁷²¹ In addition to their status as CHAs, Kachemak Bay and the Fox River Flats were designated as part of the National Estuarine Research Reserve System in 1999, a network of 28 estuaries around the U.S. representing different biogeographic regions that are used for long-term research, water-quality monitoring, education, and coastal stewardship. It is the only Research Reserve located in the State of Alaska.⁷²²

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures and soil liquefaction.⁷²³ Other natural hazards that have also been identified as threats in the Kenai Peninsula Borough include flooding, wildfires, snow and avalanches, seiches, severe weather, erosion, and drought.⁷²⁴

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields on and off shore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day.

⁷¹⁹ Alaska Dept. of Natural Resources (2009). *Kachemak Bay State Park and State Wilderness Park*. Retrieved January 27, 2012 from <http://dnr.alaska.gov/parks/units/kbay/kbay.htm>.

⁷²⁰ Wilderness.net website (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

⁷²¹ Alaska Dept. of Fish and Game (1993). *Kachemak Bay and Fox River Flats Critical Habitat Areas Management Plan*. Retrieved June 14, 2012 from http://www.adfg.alaska.gov/static/lands/protectedareas/_management_plans/kachemak_bay.pdf.

⁷²² National Estuarine Research Reserve System (n.d.). *Kachemak Bay Research Reserve website*. Retrieved June 15, 2012 from <http://www.nerrs.noaa.gov/Reserve.aspx?ResID=KBA>.

⁷²³ Kenai Peninsula Borough (2010). *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

⁷²⁴ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.⁷²⁵

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Nikolaevsk as of May 2012.⁷²⁶

Current Economy⁷²⁷

Although Old Believers strive to attain village self-sufficiency,⁷²⁸ emphasizing food production from subsistence fishing, hunting, and gardening,⁷²⁹ complete independence is difficult to achieve in the harsh Alaskan climate. Many Nikolaevsk residents travel to the Anchor Point and Homer areas for employment.⁷³⁰ Men find employment primarily in the fishing industry, as well as on construction crews. Women often work in fish processing plants, and cleaning, and health care services.⁷³¹ The Fefelov Mercantile, a general store and post office, is the only year-round business in Nikolaevsk, and provides groceries, fabric, and other items in town. Some boat building activity also takes place in Nikolaevsk.⁷³² Other top employers of Nikolaevsk residents in 2010 included the Kenai Peninsula Borough School, Aleutian Housing Authority, and private companies focused on auto repair and machinery and hardware sales.⁷³³

In 2000, the number of Nikolaevsk residents with commercial crew licenses was equivalent to 12.5% of the total local population, and the number of state Commercial Fisheries Entry Commission (CFEC) permit holders was equal to 5.8% of the total population. The number of Crew License Holders decreased to the equivalent of 10.4% of the population by 2010, while the percentage of residents holding CFEC permits increased to 6.6%. A number of Nikolaevsk residents also held federal permits and quota share accounts in the federal catch share halibut fishery (see *Commercial Fishing* section).

Based on household surveys conducted for the 2006-2010 ACS,⁷³⁴ in 2010, the per capita income in Nikolaevsk was estimated to be \$19,049 and the median household income was estimated to be \$43,194. This represents a significant increase from the per capita and median household incomes reported in 2000 (\$10,390 and \$37,500, respectively). The increase in per capita income remains substantial even if inflation is taken into account by converting the 2000

⁷²⁵ Resource Development Council (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

⁷²⁶ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁷²⁷ Unless otherwise noted, all monetary data are reported in nominal values.

⁷²⁸ Lee Silva, A. (2009). *Unsettling Diaspora: The Old Believers of Alaska*. Masters Thesis, McGill University, Montreal. Retrieved January 26, 2012 from http://digitool.library.mcgill.ca/webclient/StreamGate?folder_id=0&dvs=1328564311584~157.

⁷²⁹ Nikolaevsk Community Council (1999). *Community Action Plan for Nikolaevsk, Alaska*. Retrieved January 27, 2012 from <http://www.commerce.state.ak.us/dca/plans/Nikolaevsk-GCP-1999.pdf>.

⁷³⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷³¹ See footnote 728.

⁷³² See footnote 730.

⁷³³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁷³⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

values to 2010 dollars,⁷³⁵ revealing a real per capita income of \$13,663 in 2000. In contrast, median household income in 2010 is shown to have decreased slightly when compared to the real median household income in 2000 of \$49,312. In 2010, Nikolaevsk ranked 162nd of 305 Alaskan communities with per capita income data, and 173rd in median household income, out of 299 Alaskan communities with household income data that year.

However, Nikolaevsk's small population size may have prevented the ACS from accurately portraying economic conditions.⁷³⁶ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nikolaevsk in 2010 is \$7,724.⁷³⁷ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Nikolaevsk between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,⁷³⁸ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Nikolaevsk's population (56.9%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). In the same year, 12.3% of Nikolaevsk residents were estimated to be living below the poverty line in 2010, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 10.6%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Nikolaevsk in 2010 was 10.8%, compared to a statewide unemployment rate estimate of 11.5%.⁷³⁹

Also based on the 2006-2010 ACS, the majority of Nikolaevsk's workforce was estimated to be employed in the private sector (69%), along with 19.5% that were estimated to be self-employed, 5.7% in the public sector, and 5.7% estimated to be unpaid family workers. Of the 87 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in agriculture, forestry, fishing, hunting, and mining (25.3%), retail trade (20.7%), educational services, health care, and social assistance (14.9%), transportation, warehousing, and utilities (14.9%), and arts, entertainment, and accommodation and food services (11.5%). The number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. This

⁷³⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁷³⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷³⁷ See footnotes 733 and 734.

⁷³⁸ Denali Commission (2011) *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁷³⁹ See footnote 733.

information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 378 employed residents in Nikolaevsk in 2010, of which 20.2% were employed in educational and health services, 18.2% in local government, 17.2% in trade, transportation, and utilities, 16.2% in leisure and hospitality, 9.1% in construction, 5.1% in financial activities, 5.1% in professional and business services, 3% in natural resources and mining, 1% in manufacturing, 1% in information, 1% in state government, and 3% in other industries.⁷⁴⁰ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Nikolaevsk (U.S. Census).

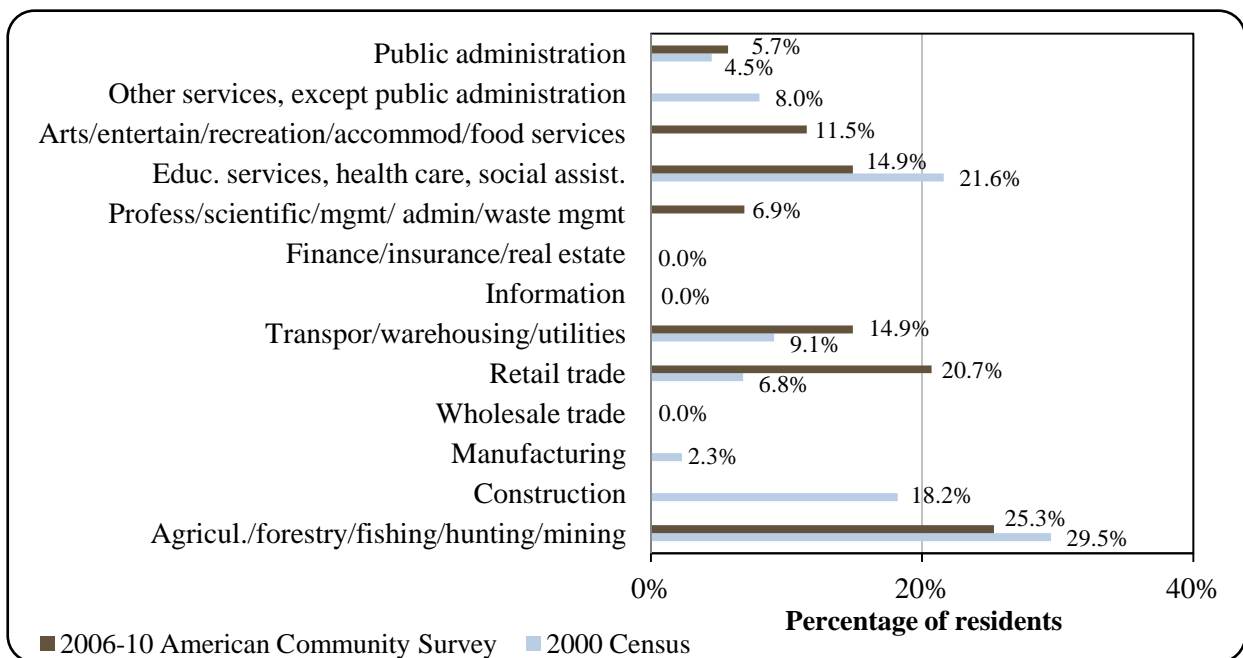
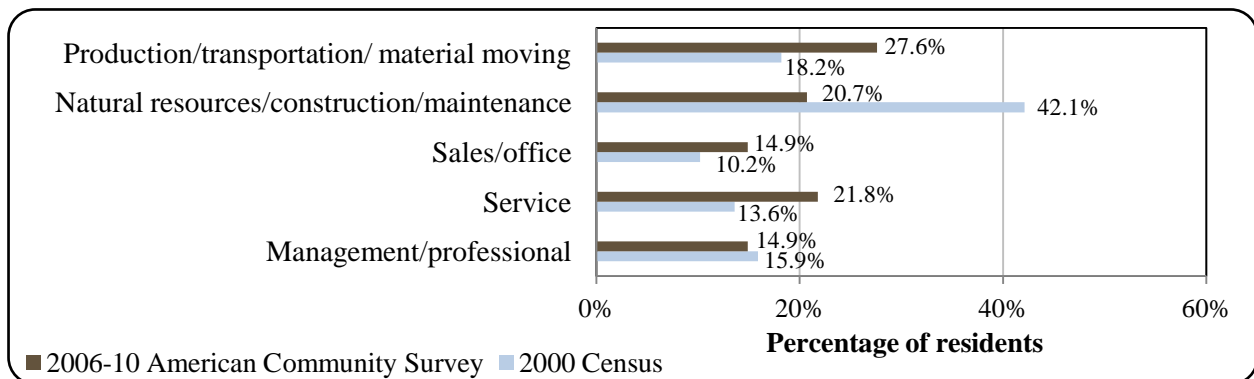


Figure 4. Local Employment by Occupation in 2000-2010, Nikolaevsk (U.S. Census).



⁷⁴⁰ Ibid.

Governance

Nikolaevsk is an unincorporated community in the Kenai Peninsula Borough. The community does not administer any local taxes, although the Borough does administer a 3% sales tax and 4.5 mills property tax.⁷⁴¹ Given that Nikolaevsk is not incorporated, there was no municipal revenue or municipal sales tax revenue between 2000 and 2010. Additionally, no information was reported regarding State and Community Revenue Sharing contributions or fisheries-related grants received by the community between 2000 and 2010. Information about selected aspects of community revenue is presented in Table 2.

Nikolaevsk was not included under the Alaska Native Claims Settlement Act (ANCSA) and is not federally recognized as a Native village. The Nikolaevsk Community Council Inc. has an office in the town.⁷⁴² The closest offices of the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Natural Resources (DNR), and the National Marine Fisheries Service (NMFS) are located in Homer and Anchorage. The closest offices of the Alaska Department of Commerce, Community, and Economic Development (DCCED) and the U.S. Bureau of Citizenship and Immigration Services (BCIS) are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nikolaevsk from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁷⁴¹ Alaska Dept. of Comm. And Rural Affairs (n.d.). *Community Information Summaries*. Retrieved January 24, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

⁷⁴² Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Infrastructure

Connectivity and Transportation

The Sterling Highway provides access to Anchorage, 220 miles away by road. Nearby Homer offers an airport, harbor, and docking facilities, as well as a state ferry landing.⁷⁴³ As of early June 2012, roundtrip airfare between Homer and Anchorage was \$239.⁷⁴⁴ As of summer 2012, a one-way adult passenger fare on the Alaska State ferry from Homer to Juneau was \$380, and \$706 to Bellingham.⁷⁴⁵

Facilities

Water in Nikolaevsk is derived from spring-fed creeks and drainages east of the community. Water is provided to homes and facilities through a piped water system. A water treatment facility, storage tank, water mains, service lines, and fire hydrants are available. Water is filtered and chlorinated. Some individual wells exist, but the quality of their water is poor and they are currently not used as a household water source. There is no piped sewer system. Both individual septic tanks and outhouses are used in the community. Nikolaevsk does not operate its own landfill. A Borough-operated refuse transfer site is located in Anchor Point at mile 157 Sterling Highway. Electricity is provided through the Homer Electric Association using hydroelectric and natural gas power sources. Telephone and internet service is available in the community, but no cable provider offers service locally.⁷⁴⁶

Public safety services are provided by the state troopers stationed in Homer. Fire fighting and rescue services are provided by Certified Community Volunteers and Fire Truck Borough Rescue / Emergency Medical Technicians based in Anchor Point. Community facilities include a community building.⁷⁴⁷ According to a survey conducted by the AFSC in 2011, community leaders reported that Nikolaevsk has a post office. They also indicated that improvements in broadband internet access are expected to be in place in the next few years, and construction of a community center and library is slated to be completed in the next 10 years.

Since Nikolaevsk is not located directly on the coast, limited fisheries-related infrastructure is available in town. As stated above, harbor and docking facilities are located in Homer, approximately 20 miles away by road.⁷⁴⁸ However, according to the 2011 AFSC survey, fishing-related services available in Nikolaevsk include boat repair (welding), fishing gear repair, and fishing gear storage. Community leaders noted in the survey that residents travel primarily to Homer to access fisheries-related businesses and services not available in Nikolaevsk.

⁷⁴³ Ibid.

⁷⁴⁴ This price was calculated on November 21, 2011 using kayak.com.

⁷⁴⁵ Prices retrieved March 7, 2012 from <http://www.dot.state.ak.us/amhs/doc/fares/XGTariffs.pdf>.

⁷⁴⁶ See footnote 742.

⁷⁴⁷ Ibid.

⁷⁴⁸ Ibid.

Medical Services

Medical services are provided in Homer, located 20 miles away by road, at the South Peninsula Hospital. Alternative health care is provided by Anchor Point Fire / Emergency Medical Services. Emergency services have highway and helicopter access.⁷⁴⁹

Educational Opportunities

One school is present in Nikolaevsk. The Nikolaevsk School serves Kindergarten through 12th grade. As of 2011, the school had 73 students and 8 teachers.⁷⁵⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Nikolaevsk is located in the traditional territory of the Kenaitze people, a branch of Athabascan Native Americans. Historically, the Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.⁷⁵¹ The community of Nikolaevsk did not exist prior to its settlement by Russian Old Believers in 1968. After their arrival, these new residents soon became involved in commercial fisheries that had developed in the region following the purchase of Alaska by the U.S. in 1867, in addition to subsistence fishing, hunting, and gardening activities.⁷⁵²

Commercial harvest of salmon in Cook Inlet began in 1882,⁷⁵³ with the development of a cannery at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890.⁷⁵⁴ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁷⁵⁵

Today, ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only

⁷⁴⁹ Ibid.

⁷⁵⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁷⁵¹ Kenaitze Indian Tribe (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

⁷⁵² Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁵³ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁷⁵⁴ Cook, Linda, and Frank Norris (1998). *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁷⁵⁵ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://ww.iphc.int/publications/scirep/Report0005.pdf>.

sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.⁷⁵⁶

Groundfish and crab fisheries that occur within 3 nautical miles (nm) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Cook Inlet is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch (TAC) set by NMFS applied to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.⁷⁵⁷

Nikolaevsk is not eligible to participate in either the Community Development Quota (CDQ) program or the Community Quota Entity (CQE) program. According to a survey conducted by the AFSC in 2011, the community of Nikolaevsk participates actively in fisheries management processes in Alaska. They indicated that a representative from Nikolaevsk participates in North Pacific Fishery Management Council committees or advisory groups.

Processing Plants

ADF&G’s 2010 Intent to Operate list does not list a registered processing plant in Nikolaevsk. However, it did list several processing facilities located in nearby communities on the Kenai Peninsula, including Homer, Kasilof, Kenai, Nikiski, and Soldotna.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Nikolaevsk (Table 3).

Commercial Fishing

According to a survey conducted by the AFSC in 2011, community leaders stated that fishing is the natural resource-based industries upon which the Nikolaevsk economy most depends. Between 2000 and 2010, Nikolaevsk residents participated in both state and federal fisheries as vessel owners, crew license holders, and permit and quota share account holders. In

⁷⁵⁶ See footnote 753.

⁷⁵⁷ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

the 2011 AFSC survey, community leaders indicated that the two primary fisheries operating out of Nikolaevsk each year are fisheries for halibut and salmon. The halibut season runs between May and November, while the salmon season runs between June and August. ADF&G permit data indicate that Nikolaevsk residents were also active in fisheries for groundfish and sablefish between 2000 and 2010 (Table 4).

In 2010, 33 Nikolaevsk residents held commercial fishing crew permits and 12 fishing vessels were primarily owned by residents. The number of vessel owners residing in Nikolaevsk stayed relatively stable between 2000 and 2010, fluctuating between 9 and 13. Between 2001 and 2010, one vessel was reported as homeported in Nikolaevsk. According to the 2011 AFSC survey, community leaders reported that, although Nikolaevsk does not have port facilities, fishing vessel owners using the community as their base of fishing operations are typically longline and gillnet vessels. No processing facilities or fish buyers were present in Nikolaevsk between 2000 and 2010. These characteristics of the Nikolaevsk commercial fishing sector are presented in Table 5.

In 2010, 21 Nikolaevsk residents held a total of 30 state-issued Commercial Fisheries Entry Commission (CFEC) permits. Ten Federal Fisheries Permits (FFP) and 25 federal License Limitation Program (LLP) permits were also held by Nikolaevsk residents. Over half of the CFEC permits (16) were held in salmon fisheries, including Prince William Sound purse seine, Cook Inlet drift gillnet, and Alaska Peninsula drift gillnet fisheries. Of these, 81% were actively fished in 2010. The number of salmon permit holders fluctuated between 8 and 17 during the 2000-2010 period. Other CFEC permits held in 2010 included eight halibut permits held by eight individuals (statewide longline; vessels under 60 feet), four groundfish permits held by four individuals (miscellaneous saltwater finfish, statewide longline vessels under 60 feet, statewide mechanical jig, and Gulf of Alaska longline vessels under 60 feet), and two sablefish permits held by two permit holders (statewide longline vessels under 60 feet). Also in 2010, 5 out of 24 groundfish LLP permits and 6 out of 10 FFPs were actively fished by Nikolaevsk residents. One federal crab LLP permit was also held, but was not fished in any year between 2000 and 2010. CFEC and federal permit information is presented in Table 4.

In 2000, 13 Nikolaevsk residents held quota share accounts in the federal halibut catch share fishery. This number increased to 16 in 2005, then declined to 12 by 2010. Total quota shares held followed a similar pattern, increasing from 1,374,667 in 2000 to 1,750,742 held in 2005, then declining to 865,447 by 2010. The annual halibut individual fishing quota (IFQ) allotment increased by 21% between 2000 and 2005, and then declined by 2010 to a level 15% lower than the 2000 allotment. In 2000, seven Nikolaevsk residents held quota share accounts in the federal sablefish catch share fishery. This number declined to two by 2010, while total shares held declined from 271,934 in 2000 to 48,923 in 2010. Annual sablefish IFQ allotment fluctuated over the period, increasing by 51% between 2000 and 2004, and eventually declining to 14% lower value than the 2000 allotment by 2010. No quota share accounts were held by Nikolaevsk residents in federal crab catch share fisheries during the 2000-2010 period. Information about federal catch share participation is presented in Tables 6 through 8.

No landings or ex-vessel revenue were recorded in Nikolaevsk (Table 9), given the lack of fish buyers in the community (Table 5). However, Nikolaevsk vessel owners made deliveries in other ports. In 2010, they landed 1,397,324 net pounds of salmon, valued at \$931,496 in ex-vessel revenue. Other landings and ex-vessel revenue are considered confidential for that year due to the small number of participants. Information about salmon harvest by Nikolaevsk residents was reported for all years, while Pacific halibut, Pacific cod, and sablefish landings

were only reported for some years. In 2000, 2001, 2002, 2003, and 2006, Nikolaevsk vessel owners landed an average of 356,528 net pounds of halibut, earning an average of \$1,042,953 in ex-vessel revenue. In 2000, 2001, 2002, and 2006, Nikolaevsk vessel owners landed an average of 509,375 net pounds of Pacific cod, earning \$182,680 in ex-vessel revenue. In 2001, the only year for which sablefish information is not considered confidential during the period, Nikolaevsk vessel owners landed 10,893 net pounds of sablefish, valued at \$34,000. Landings and ex-vessel revenue earned by Nikolaevsk vessel owners are presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nikolaevsk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Nikolaevsk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	22	23	24	26	28	27	23	24	23	24	24
	Active permits	8	7	6	8	10	10	6	6	5	5	5
	% of permits fished	36%	30%	25%	30%	35%	37%	26%	25%	21%	20%	20%
	Total permit holders	16	17	18	19	19	19	18	19	18	19	19
Crab (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	10	10	10	8	9	9	10	10	10	10	10
	Fished permits	0	0	0	5	6	5	4	4	5	6	6
	% of permits fished	0%	0%	0%	63%	67%	56%	40%	40%	50%	60%	60%
	Total permit holders	10	10	10	8	9	9	9	9	9	10	10
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	10	11	9	9	9	10	11	11	11	8	8
	Fished permits	8	10	9	9	8	10	10	11	11	8	8
	% of permits fished	80%	91%	100%	100%	89%	100%	91%	100%	100%	100%	100%
	Total permit holders	10	11	9	9	9	10	11	11	11	8	8
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Nikolaevsk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	5	7	6	4	3	4	4	4	4	4	2
	Fished permits	4	7	4	4	3	4	4	4	4	4	2
	% of permits fished	80%	100%	67%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	5	7	6	4	3	4	4	4	4	3	2
Groundfish (CFEC) ²	Total permits	7	10	9	10	10	6	5	5	6	7	4
	Fished permits	4	4	3	6	3	3	1	2	3	4	2
	% of permits fished	57%	40%	33%	60%	30%	50%	20%	40%	50%	57%	50%
	Total permit holders	6	8	7	9	8	6	5	5	5	5	4
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	15	12	13	13	11	11	8	12	13	15	16
	Fished permits	12	11	11	9	9	9	7	9	8	13	13
	% of permits fished	80%	92%	85%	69%	82%	82%	88%	75%	62%	87%	81%
	Total permit holders	14	14	14	12	11	11	8	11	11	14	17
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>37</i>	<i>40</i>	<i>37</i>	<i>36</i>	<i>33</i>	<i>31</i>	<i>28</i>	<i>32</i>	<i>34</i>	<i>34</i>	<i>30</i>
	<i>Fished permits</i>	<i>28</i>	<i>32</i>	<i>27</i>	<i>28</i>	<i>23</i>	<i>26</i>	<i>22</i>	<i>26</i>	<i>26</i>	<i>29</i>	<i>25</i>
	<i>% of permits fished</i>	<i>76%</i>	<i>80%</i>	<i>73%</i>	<i>78%</i>	<i>70%</i>	<i>84%</i>	<i>79%</i>	<i>81%</i>	<i>76%</i>	<i>85%</i>	<i>83%</i>
	<i>Permit holders</i>	<i>20</i>	<i>20</i>	<i>21</i>	<i>19</i>	<i>18</i>	<i>17</i>	<i>14</i>	<i>20</i>	<i>20</i>	<i>20</i>	<i>21</i>

¹National Marine Fisheries Service (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nikolaevsk: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Nikolaevsk ²	Total Net Pounds Landed In Nikolaevsk ^{2,5}	Total Ex-Vessel Value Of Landings In Nikolaevsk ^{2,5}
2000	43	0	0	10	0	0	0	\$0
2001	30	0	0	11	1	0	0	\$0
2002	18	0	0	11	1	0	0	\$0
2003	20	0	0	13	1	0	0	\$0
2004	22	0	0	9	1	0	0	\$0
2005	25	0	0	9	1	0	0	\$0
2006	18	0	0	10	1	0	0	\$0
2007	24	0	0	11	1	0	0	\$0
2008	24	0	0	10	1	0	0	\$0
2009	30	0	0	12	1	0	0	\$0
2010	33	0	0	12	1	0	0	\$0

¹ Alaska Department of Fish and Game (2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission (2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ National Marine Fisheries Service (2011. Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission (2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Nikolaevsk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	13	1,374,667	194,597
2001	13	1,084,448	159,786
2002	12	1,102,852	171,518
2003	13	1,283,577	219,543
2004	14	1,362,647	225,299
2005	16	1,750,742	288,877
2006	14	1,146,954	176,561
2007	13	1,032,506	152,014
2008	13	884,995	125,996
2009	12	865,447	113,601
2010	12	865,447	104,275

Source: National Marine Fisheries Service (2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nikolaevsk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	7	271,934	23,563
2001	6	172,215	14,403
2002	6	279,995	24,903
2003	5	215,562	27,257
2004	5	215,562	28,293
2005	6	437,729	53,350
2006	3	115,641	13,529
2007	2	94,357	9,574
2008	3	94,357	8,280
2009	2	94,357	7,457
2010	2	48,923	3,636

Source: National Marine Fisheries Service (2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nikolaevsk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service (2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nikolaevsk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nikolaevsk Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	259,161	261,364	335,209	274,483	-	-	652,425	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	204,391	750,291	583,463	-	-	-	499,356	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	10,893	-	-	-	-	-	-	-	-	-
Salmon	381,203	223,842	304,940	226,646	568,536	445,589	342,325	578,192	372,210	344,323	1,397,324
<i>Total²</i>	<i>844,755</i>	<i>1,246,390</i>	<i>1,223,612</i>	<i>501,129</i>	<i>568,536</i>	<i>445,589</i>	<i>1,494,106</i>	<i>578,192</i>	<i>372,210</i>	<i>344,323</i>	<i>1,397,324</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$663,024	\$519,288	\$752,088	\$790,524	-	-	\$2,489,841	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	\$83,373	\$249,422	\$177,000	-	-	-	\$220,923	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	\$34,000	-	-	-	-	-	-	-	-	-
Salmon	\$289,018	\$109,876	\$133,874	\$116,879	\$314,266	\$319,334	\$230,902	\$436,037	\$308,060	\$295,412	\$931,496
<i>Total²</i>	<i>\$1,035,415</i>	<i>\$912,586</i>	<i>\$1,062,962</i>	<i>\$907,403</i>	<i>\$314,266</i>	<i>\$319,334</i>	<i>\$2,941,666</i>	<i>\$436,037</i>	<i>\$308,060</i>	<i>\$295,412</i>	<i>\$931,496</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that sport hunting and fishing, along with commercial fishing, was one of the natural resource-based industries upon which the economy Nikolaevsk most depends. They also indicated that a majority of recreational fishing activity in Nikolaevsk is done by local residents, using their own private boats, and that recreational fishermen in and near Nikolaevsk primarily target Chinook salmon, Pacific halibut, and rockfish. According to ADF&G, between 2000 and 2010, no sport fish guide businesses or licensed sport fish guides were present in Nikolaevsk. Sportfishing licenses were not sold in the community, but Nikolaevsk residents purchased a total of 65 sportfishing licenses (irrespective of point of sale). This information about the sportfishing sector in Nikolaevsk is presented in Table 11.

The Alaska Statewide Harvest Survey,⁷⁵⁸ conducted by ADF&G between 2000 and 2010, noted the species known to be targeted by private anglers in Nikiski. In freshwater, anglers targeted sockeye salmon, rainbow trout, Dolly Varden, and smelt. In saltwater, private anglers targeted Chinook, Pacific halibut, lingcod, and Pacific cod. The survey also noted sport harvest of Tanner crab and razor clams by Nikolaevsk residents.⁷⁵⁹ No kept/release log book data were reported for fishing charters out of Nikolaevsk in 2010.⁷⁶⁰

Nikolaevsk is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, saltwater and freshwater sportfishing at this regional level was substantial. In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska residents logged 20,292 saltwater angler days and 71,555 freshwater angler days. Typically, Alaska residents took part in saltwater sportfishing at greater rates than non-Alaska resident anglers, and the opposite was true of freshwater sportfishing. For both Alaska resident and non-Alaska resident anglers in both freshwater and saltwater, the number of angler days fished per year decreased between 2000 and 2010. This information about regional sportfishing activity in Nikolaevsk is presented in Table 11.

⁷⁵⁸ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁷⁵⁹ The Alaska Statewide Harvest Survey includes separate categories for Dungeness crab, Tanner crab, razor clams, hardshell clams, and shrimp. Remaining species fall into the ‘other shellfish’ category.

⁷⁶⁰ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Nikolaevsk: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nikolaevsk ²
2000	0	0	57	0
2001	0	0	61	0
2002	0	0	51	0
2003	0	0	47	0
2004	0	0	56	0
2005	0	0	70	0
2006	0	0	64	0
2007	0	0	55	0
2008	0	0	56	0
2009	0	0	65	0
2010	0	0	65	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Nikolaevsk is located in the historic territory of the Kenaitze people, a branch of Athabascan Indians. The Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.⁷⁶¹ Although residents of Nikolaevsk come from a different cultural tradition, they also pursue a self-sufficient lifestyle. They focus on subsistence fishing, hunting and gardening activities, in combination with employment in commercial fishing and other industries in nearby cities.⁷⁶² According to a survey conducted by the AFSC in 2011, community leaders reported that salmon are the most important subsistence resource utilized by residents of Nikolaevsk.

No information was reported by ADF&G between 2000 and 2010 regarding per capita subsistence harvest or the percentage of households in Nikolaevsk utilizing various marine resources for subsistence purposes (Table 12). In addition, no information was reported by management agencies between 2000 and 2010 regarding subsistence harvest of halibut or marine mammals by residents of Nikolaevsk (Tables 14, and 15). However, a 1998 subsistence survey conducted by ADF&G provides information about subsistence harvest of marine invertebrates, non-salmon fish (not including halibut), and marine mammals in the community.

According to this survey, species of marine invertebrates harvested by Nikolaevsk residents in 1998 included butter, horse, Pacific littleneck, pinkneck, razor, and unknown clams, cockles, mussels, oyster, scallops, black and red chitons, limpets, unknown sea urchin, whelk, Dungeness, Tanner crab, snow crab, king crab, octopus, and shrimp. Of these species, the highest percentage of households harvested Tanner crab (22%), razor clams (5%), Dungeness crab (5%), king crab (3%), mussels (3%), and octopus (3%). In the case of Dungeness crab, razor clams, Tanner Bairdi crab, and king crab, a greater percentage of households used these subsistence resources than harvested them, indicating that these resources were distributed through sharing networks. Species of non-salmon fish (not including halibut) harvested by Nikolaevsk residents in 1998 included cutthroat, rainbow and lake trout, steelhead, Arctic char, Dolly Varden, grayling, whitefish, sheefish, sturgeon, pike, Irish lord, greenling, black and red rockfish, lingcod, Pacific cod, sablefish, sea bass, flounder, sole, Pacific tom cod, sculpin, smelt, eel, skates, shark, wolfish, euchalon (hooligan candlefish), and herring. The survey also noted subsistence harvest of herring sac roe. Of these species, the greatest percentage of households harvested euchalon (43%), red rockfish (35%), sablefish (22%), Dolly Varden (16%), and black rockfish (14%). The percentage of households using black rockfish, Dolly Varden, euchalon, herring, herring sac roe, lingcod, Pacific cod, red rockfish, and sablefish were higher than the percentage engaged in harvesting, suggesting that these species are also distributed through sharing networks in Nikolaevsk. In addition, the survey found that Nikolaevsk residents harvested the following marine mammal species in 1998: bowhead whale, Steller sea lion, and unknown whale.⁷⁶³

Information was available from ADF&G for the 2000-2010 period regarding subsistence salmon permits. The number of subsistence salmon permits issued to Nikolaevsk households

⁷⁶¹ Kenaitze Indian Tribe (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

⁷⁶² Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁶³ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

varied between one and four during this period. Reported subsistence harvest was relatively low, with generally fewer than 100 salmon reported harvested per year. An exception was 2002, when 177 sockeye salmon were harvested. No information was reported regarding subsistence harvest of marine invertebrates or non-salmon fish between 2000 and 2010 (Table 13).

Additional Information

The history of the Russian Old Believers movement began in the mid-1600s, when reforms introduced by Nikon, the Patriarch of the Russian Orthodox Church from 1652-1658, were upheld by the Church Councils of 1666-1667. These reforms included the number of times “alleluia” is said during prayers, the number of fingers used to perform the sign of the cross, leading processions counter-clockwise rather than clockwise, and spelling the name of Jesus with two i's instead of one (“Iisus”).⁷⁶⁴ Those who disagreed with these reforms were anathematized by the Church. These dissenters, and those that have followed them, are collectively known as “Old Believers.”⁷⁶⁵

Persecution followed for those who resisted the reforms. Many Old Believers were burned at the stake, or chose to burn themselves to escape capture by government troops. In addition to resisting church reforms, the Old Believers were in opposition to forms of Westernization that began to appear in Russia under Peter the Great in the late 1600s and early 1700s. Peter required women to participate in social activities, such as dances and parties, in the style of the West. He mandated use of Western clothing and required all male members of the ruling class to shave their beards. Those choosing to wear beards were forced to pay a tax of 100 rubles per year, and peasants entering town to sell produce had to pay a fee of one kopek for the right to wear their beard in town for one day. The Old Believers viewed Peter as the “Antichrist,” and many fled to northern Russia, Siberia, the Cossack lands and the Ural Mountains, far from the power of the central government, where they could practice their traditional customs and rituals undisturbed.⁷⁶⁶

The Old Believers dispersed further through the ensuing centuries. The ancestors of those who founded Nikolaevsk initially settled in Turkey and several areas of China. In the 1900s, they were resettled to countries including Brazil, Australia, Argentina, New Zealand, Paraguay, Uruguay, Canada, and the U.S. The first Old Believers in Woodburn, Oregon, came by way of Brazil, moving from Brazil to Oregon starting in 1962. Other Old Believers who had come to U.S. joined them in Oregon in the years that followed. A group of Old Believers left Woodburn and traveled to the Kenai Peninsula to become the original settlers of Nikolaevsk in 1968.⁷⁶⁷

⁷⁶⁴ Johnson, P.W. 1982. *Dress and Acculturation among Russian Old Believers in Oregon*. Masters Thesis, Oregon State University. Retrieved January 30, 2012 from <http://ir.library.oregonstate.edu/xmlui/handle/1957/7891>.

⁷⁶⁵ Lee Silva, A. 2009. *Unsettling Diaspora: The Old Believers of Alaska*. Masters Thesis, McGill University, Montreal. Retrieved January 26, 2012 from http://digitool.library.mcgill.ca/webclient/StreamGate?folder_id=0&dvs=1328564311584~157.

⁷⁶⁶ See footnote 764.

⁷⁶⁷ Ibid.

Table 12. Subsistence Participation by Household and Species, Nikolaevsk: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nikolaevsk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1	1	1	n/a	n/a	n/a	24	n/a	n/a
2001	1	1	1	n/a	n/a	n/a	14	n/a	n/a
2002	1	1	n/a	n/a	3	n/a	177	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	1	1	1	n/a	n/a	n/a	13	n/a	n/a
2007	4	3	2	n/a	n/a	n/a	63	n/a	n/a
2008	2	2	n/a	n/a	n/a	n/a	41	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg (2011, revised). Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nikolaevsk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A., and D. Koster (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nikolaevsk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Ninilchik (nuh-NIL-chick)



People and Place

*Location*⁷⁶⁸

Ninilchik is located on the west coast of the Kenai Peninsula, 38 miles southwest of the City of Kenai and 188 road miles from Anchorage. The community lies between mileposts 199 and 144 of the Sterling Highway. Ninilchik is located in the Homer Recording District and the Kenai Peninsula Borough Census Area.

*Demographic Profile*⁷⁶⁹

In 2010, there were 883 residents in Ninilchik, ranking it as the 72nd largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Ninilchik increased by 93.6%. Most of this growth occurred between 1990 and 2000, although the population continued to increase until 2010. According to Alaska Department of Labor estimates, between 2000 and 2009, the population increased by 14.4%. The average annual growth rate during this period was 0.51%, reflecting slow, consistent growth over the decade with small decreases in several years.

In 2010, the majority of the population of Ninilchik identified themselves as White (78.1%), along with 15.4% that identified as American Indian or Alaska Native, 0.3% as Asian, 0.2% as Black or African American, 0.1% as Native Hawaiian and Other Pacific Islander, 0.5% as “some other race,” and 5.3% that identified with two or more races. In addition, 2.6% of Ninilchik’s population identified themselves as Hispanic in 2010. The percentage of the population identifying as White increased slightly between 1990 and 2000, from 80.5% to 82.3%, before declining again to 78.1% in 2010. At the same time the percentage of the population identifying as American Indians and Alaska Natives decreased from 19.5% in 1990 to 14% in 2000, and then rebounded slightly to 15.4% in 2010. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

Based on household surveys conducted for the U.S. Census, in 2010, the average household size Ninilchik was 2.14, a decrease from 2.4 in 1990 and 2.87 in 2000. The number of households in Ninilchik increased over time, from 185 in 1990 to 265 in 2000, and 412 in 2010. Of the 967 housing units surveyed for the 2010 U.S. Census, 34.6% were owner-occupied, 8% were rented, and 57.4% were vacant. A majority of the unoccupied housing units were vacant due to seasonal use (91%). Between 1990 and 2010, no residents of Ninilchik were reported to be living in group quarters.

⁷⁶⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁶⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

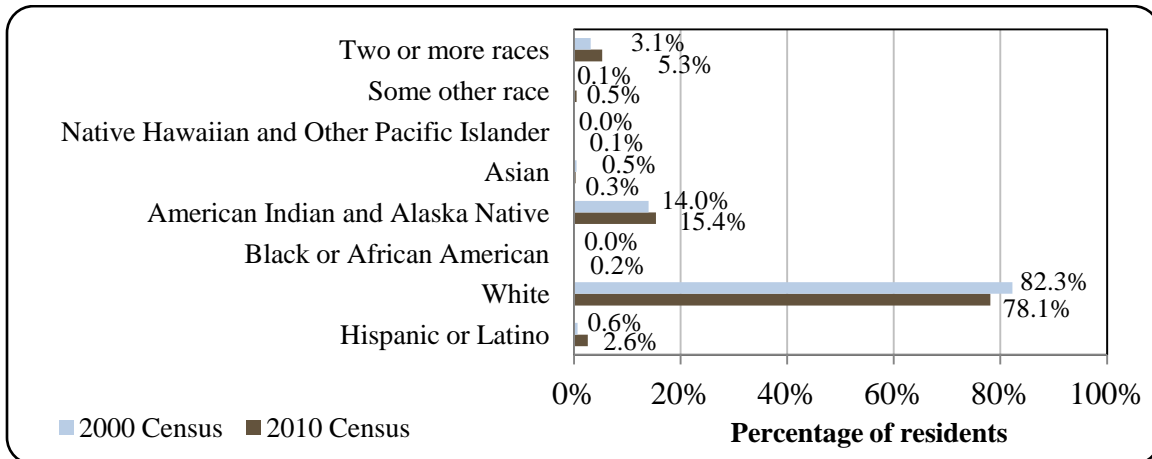
Table 1. Population in Ninilchik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	456	-
2000	772	-
2001	-	760
2002	-	762
2003	-	774
2004	-	787
2005	-	788
2006	-	772
2007	-	769
2008	-	836
2009	-	824
2010	883	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Ninilchik: 2000-2010 (U.S. Census).

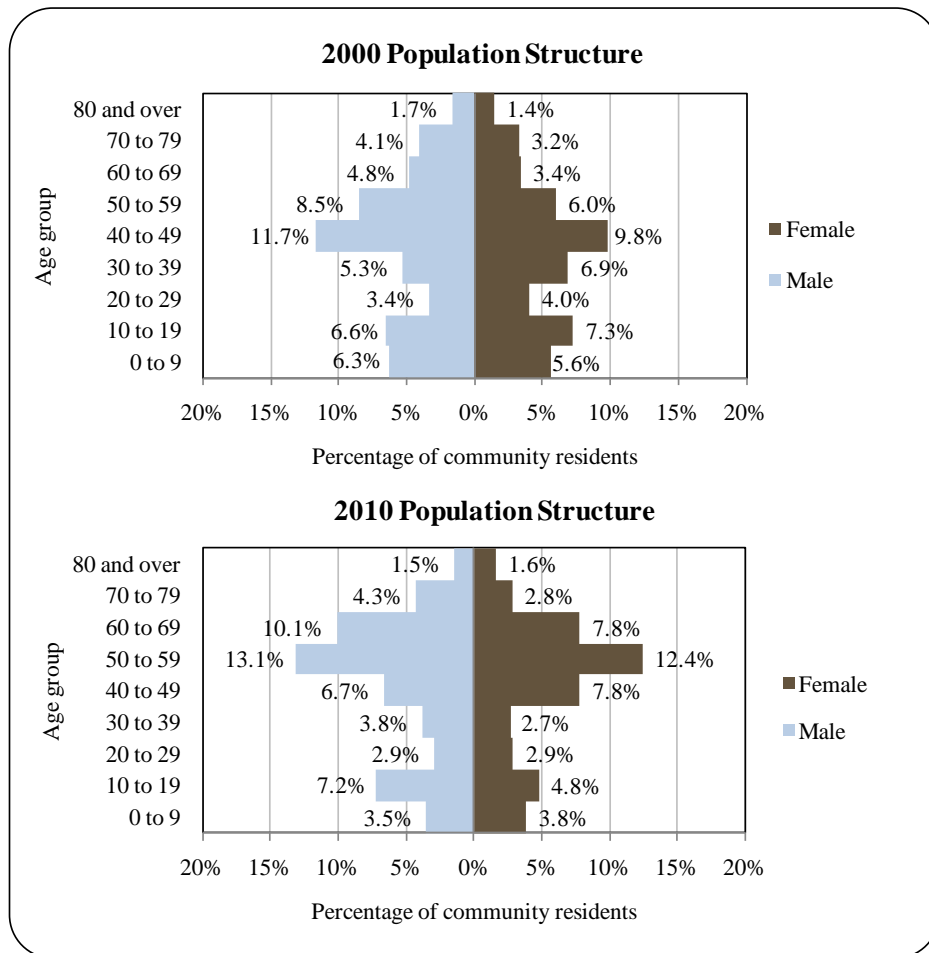


In 2010, the gender makeup of Ninilchik’s population (53.2% male and 46.8% female) was slightly less gender balanced compared to the population of the state as a whole, which was made up of 52% males and 48% females. That year, the median age of Ninilchik residents was 52.2 years, significantly older than both the national average of 36.8 years and the median age for Alaska, 33.8 years. Further, 28.1% of the Ninilchik population was age 60 or older in 2010, a higher percentage than in most other Alaskan communities. In 2010, the age groups most heavily skewed toward males were the 10-19, 50-59, and 60-69 age cohorts, while there was a relatively

even spread of males and females across other age categories in Ninilchik. The overall population structure of Ninilchik in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁷⁷⁰ 94% of Ninilchik residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 2.3% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 3.6% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 31% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 13.5% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 6.5% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 3.1% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

Figure 2. Population Age Structure in Ninilchik Based on the 2000 and 2010 U.S. Decennial Census.



⁷⁷⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

The Ninilchik area was historically used for fur-farming and fishing by the Kenaitze, the local group of Dena'ina people, a branch of Athabascan Indians.^{771,772} The word “Niqnilchint” means “lodge by the river.” Ninilchik was established in the 1840s as a retirement community for pensioners of the Russian American Company. A number of elderly, disabled, and sick employees of the Russian American Company preferred to remain in Alaska or could not travel safely home to Russia. Five families initially moved to Ninilchik.^{773,774}

The Kvasnikoffs and the Oskoloffs were early Ninilchik settlers. Grigorii and Mavra Kvasnikoff moved their large family from Kodiak to Ninilchik in 1847. Grigorii was a Russian Orthodox missionary from Moscow, and Mavra was a Russian-Sugpiaq from Kodiak. All nine of the original Native founding families of Ninilchik are descended from the Kvasnikoffs. Iakov and Anna Oskolkoff were two other Russian settlers who moved to Ninilchik in the early years. These settlers lived a subsistence lifestyle based on fishing, hunting, trapping, and gardening.⁷⁷⁵

The population of Ninilchik grew quickly. By 1880, the U.S. Census counted 53 “Creoles” living in Ninilchik, and the population had grown to 81 by 1890. At that time, and until the first decades of the 1900s, Ninilchik was apparently still a fully Russian-speaking community.⁷⁷⁶ In 1896, a Russian village school was built, and in 1901 the Russian Orthodox Church was constructed and dedicated at its current site. A post office was established in 1925.⁷⁷⁷ By the 1930s, a greater number of Americans had begun to settle in the area, and an English-language school was opened in Ninilchik. Use of the Russian language was not welcome at the school, and children in the community no longer received Russian as their first language.⁷⁷⁸ The Berman Packing Company began canning operations in Ninilchik in 1949, and the Sterling Highway was completed through Ninilchik by 1950. The current Ninilchik School was also built in 1950.⁷⁷⁹

Natural Resources and Environment

Ninilchik is located in a maritime climatic zone, dominated by the moderating effects of a marine environment and characterized by high humidity, precipitation and fog cover as well as warm winters and cool summers. Winter temperatures in Ninilchik range from 14 to 27 °F, and summer temperatures vary from 45 to 65 °F. Average annual precipitation is 24 inches.⁷⁸⁰

⁷⁷¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁷² Kenaitze Indian Tribe (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

⁷⁷³ See footnote 771.

⁷⁷⁴ Bergelson, M.B., and A.A. Kibrik (2010). The Ninilchik Variety of Russian: Linguistic Heritage of Alaska. In *Sociolinguistic Approaches to Non-Standard Russian*. Eds. Mustajoki, A., Protassova, N. and Vakhtin. Helsinki. Retrieved February 1, 2012 from <http://www.helsinki.fi/slavicahelsingiensia/preview/sh40/pdf/20-sh40.pdf>.

⁷⁷⁵ See footnotes 771 and 774.

⁷⁷⁶ Ibid.

⁷⁷⁷ See footnote 771.

⁷⁷⁸ See footnote 774.

⁷⁷⁹ See footnote 771.

⁷⁸⁰ Ibid.

Protected areas near Ninilchik include Kachemak Bay State Wilderness Park, the Kachemak Bay State Critical Habitat Area, Kenai Fjords National Park, and the Kenai Wilderness. To the south of Ninilchik, the Kachemak Bay State Wilderness Park was Alaska's first and only 'wilderness park.' A majority of the State Park's 400,000 acres are located on the southern side of Kachemak Bay, along with a small unit north of the Bay, and its terrain includes mountains, glaciers, forests, and ocean. Visitors to the State Park enjoy fishing, boating, wildlife viewing, kayaking, hiking, camping, and mountain sports.⁷⁸¹

Kachemak Bay itself was designated as a State Critical Habitat Area (CHA) in 1974, and the Fox River Flats at the mouth of the Bay were also designated as a CHA in 1972. The purpose of these CHAs is to "protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose." Eleven species of marine mammals utilize Kachemak Bay, including sea otter, Steller sea lion, harbor seal, beluga, minke, and orca whale, harbor porpoise, and Dall's porpoise, as well as a diversity of marine plants and invertebrates, birds, and fish and shellfish. The Fox River Flats and associated intertidal zone support at least 21 species of terrestrial mammals, including moose, black bear, brown bear, coyote, wolf, beaver, river otter, and small furbearers.⁷⁸² In addition to their status as CHAs, Kachemak Bay and the Fox River Flats were designated as part of the National Estuarine Research Reserve System (NERRS) in 1999, a network of 28 estuaries around the U.S. representing different biogeographic regions that are used for long-term research, water-quality monitoring, education, and coastal stewardship. It is the only Research Reserve located in the State of Alaska.⁷⁸³

Kenai Fjords National Park is located along the southeastern edge of the Kenai Peninsula, to the east of Ninilchik. This National Park was established in 1980 to "maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers and coastal fjords and islands." Fifty-six percent of the park is covered by ice.⁷⁸⁴ Portions of both the Kachemak Bay State Wilderness Park and Kenai Fjords National Park are included in the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.⁷⁸⁵

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt, and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures, and soil liquefaction.⁷⁸⁶ Other natural hazards that have also been identified as threats in the Kenai Peninsula Borough

⁷⁸¹ Alaska Dept. of Natural Resources (2009). *Kachemak Bay State Park and State Wilderness Park*. Retrieved January 27, 2012 from <http://dnr.alaska.gov/parks/units/kbay/kbay.htm>.

⁷⁸² Alaska Dept. of Fish and Game (1993). *Kachemak Bay and Fox River Flats Critical Habitat Areas Management Plan*. Retrieved June 14, 2012 from http://www.adfg.alaska.gov/static/lands/protectedareas/_management_plans/kachemak_bay.pdf.

⁷⁸³ National Estuarine Research Reserve System (n.d.). *Kachemak Bay Research Reserve website*. Retrieved June 15, 2012 from <http://www.nerrs.noaa.gov/Reserve.aspx?ResID=KBA>.

⁷⁸⁴ Kenai Fjords National Park website (2010). Retrieved December 27, 2011 from <http://www.nps.gov/kefj/>.

⁷⁸⁵ Wilderness.net website (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

⁷⁸⁶ Kenai Peninsula Borough (2010). *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

include flooding, wildfires, snow and avalanches, seiches, severe weather, erosion, and drought.⁷⁸⁷

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields on and off shore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.⁷⁸⁸

According to the Alaska Department of Environmental Conservation (DEC), there are no notable active environmental cleanup sites located in Ninilchik as of May 2012.⁷⁸⁹

Current Economy⁷⁹⁰

The private sector in Ninilchik is based primarily on fishing, retail businesses, and tourism. The surrounding Kenai area offers employment in diverse industries and services, including oil and gas processing, commercial and sportfishing, government, health care, retail business and tourism.⁷⁹¹ In 2010, top employers of local Ninilchik residents included the Kenai Peninsula Borough school, the Ninilchik Traditional Council, the State of Alaska, the Central Peninsula General Hospital, and various private businesses, including a grocery, restaurant and bar, dentist office, construction company, seafood processor, and an oil development company.⁷⁹²

Based on household surveys conducted for the 2006-2010 ACS,⁷⁹³ in 2010, the per capita income in Ninilchik was estimated to be \$25,271 and the median household income was estimated to be \$48,958. Compared to 2000, this represents an increase in income, from a per capita income of \$18,463 and median household income of \$36,250 in the year 2000. If inflation is taken into account by converting the 2000 values to 2010 dollars,⁷⁹⁴ the increase is revealed to be very slight, from a real per capita income of \$24,279 and real median household income of \$47,668 in 2000. In 2010, Ninilchik ranked 104th of 305 Alaskan communities with per capita income data that year, and 138th in median household income, out of 299 Alaskan communities with household income data.

⁷⁸⁷ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁷⁸⁸ Resource Development Council (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

⁷⁸⁹ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁷⁹⁰ Unless otherwise noted, all monetary data are reported in nominal values.

⁷⁹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁹² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁷⁹³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁷⁹⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

However, Ninilchik’s small population size may have prevented the ACS from accurately portraying economic conditions.⁷⁹⁵ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Ninilchik in 2010 is \$12,335.⁷⁹⁶ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Ninilchik between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as “distressed” by the Denali Commission in 2011,⁷⁹⁷ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Ninilchik’s population (59.8%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). In the same year, 18.6% of Ninilchik residents were estimated to be living below the poverty line in 2010, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 4.3%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Ninilchik in 2010 was 12.3%, compared to a statewide unemployment rate estimate of 11.5%.⁷⁹⁸

Also based on the 2006-2010 ACS, Ninilchik’s workforce was split relatively evenly across sectors, with 37.8% of workers estimated to be self-employed, 31.2% estimated to be employed in the private sector, and 29.4% in the public sector. In addition, 2.3% of the workforce was estimated to be unpaid family workers. Of the 221 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in construction (20.4%), educational services, health care, and social assistance (19.5%), public administration (17.2%), and agriculture, forestry, fishing and hunting, and mining (14.5%). The number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 332 employed residents in Ninilchik in 2010, of which 20.2% were employed in local government, 16.6% in trade, transportation, and utilities, 12.3% in education and health services, 12% in natural resources and mining, 10.8% in leisure and hospitality, 9% in construction, 5.1% in state government, 4.8% in manufacturing, 3.6% in professional and business services, 2.1% in financial activities, 1.5% in information, and 1.8% in

⁷⁹⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷⁹⁶ See footnotes 792 and 793.

⁷⁹⁷ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁷⁹⁸ See footnote 792.

other industries.⁷⁹⁹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

⁷⁹⁹ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Ninilchik (U.S. Census).

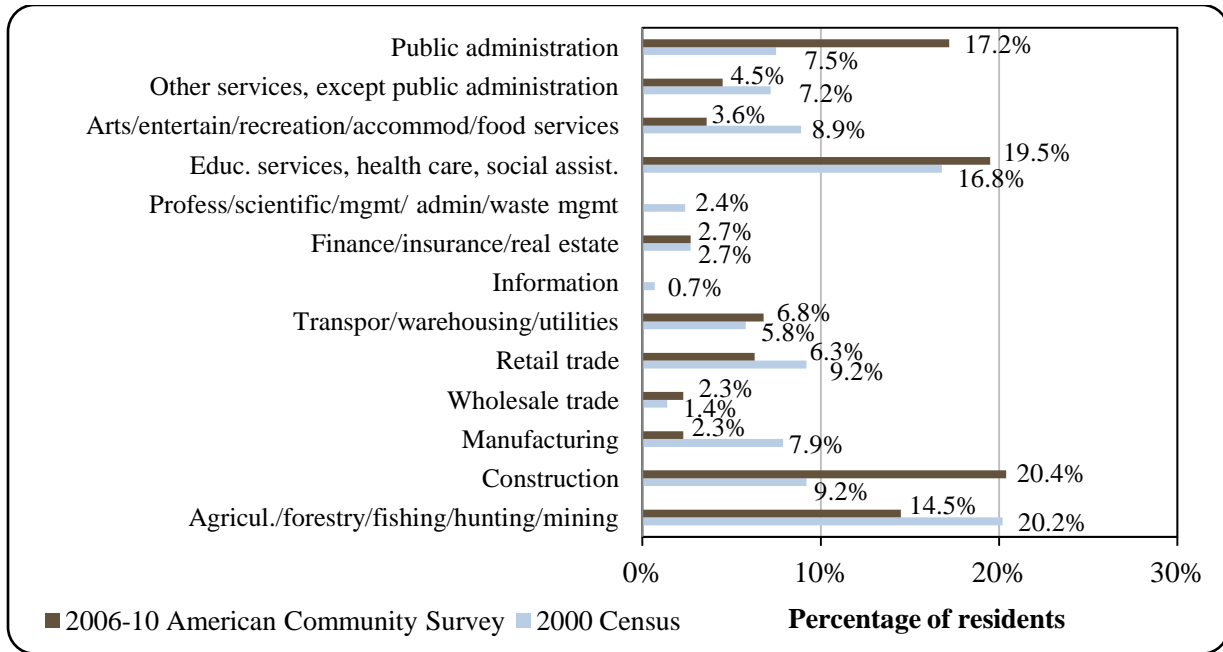
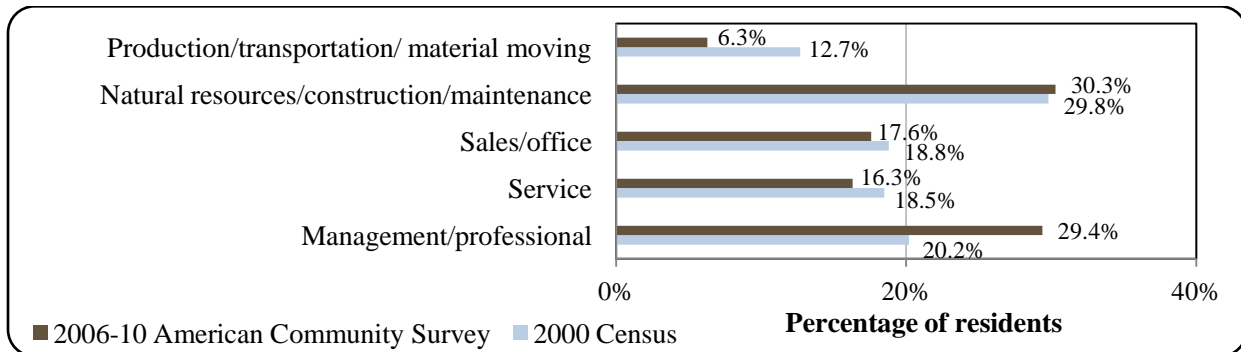


Figure 4. Local Employment by Occupation in 2000-2010, Ninilchik (U.S. Census).



Governance

Ninilchik is an unincorporated community in the Kenai Peninsula Borough. The community does not administer any local taxes, although the Borough does administer a 3% sales tax and 4.5 mills property tax.⁸⁰⁰ Given that Ninilchik is not incorporated, there was no municipal revenue or municipal sales tax revenue between 2000 and 2010. No information was reported regarding State or Community Revenue Sharing contributions or fisheries-related grants received by the community between 2000 and 2010. Information about selected aspects of community revenue is presented in Table 2.

⁸⁰⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Information Summaries*. Retrieved January 24, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

Ninilchik was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Ninilchik Traditional Council. The local village Native corporation is Ninilchik Native Association, Inc., which manages 168,802 acres of land. The regional Native corporation to which Ninilchik belongs is Cook Inlet Regional, Inc.⁸⁰¹

Ninilchik is also a member of the Cook Inlet Tribal Council (CITI), a tribal non-profit organization headquartered in Anchorage. CITI strives to work together with Native people of the Cook Inlet region, and all Natives living in Anchorage, to help them develop talents and strengths, and become successful and self-sufficient individuals, families, and communities, with the goal of advancing the overall economic, social and cultural development of the people of the Chugach Region.⁸⁰² CITI is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁸⁰³ CITI offers educational programs, job training, business assistance, youth programs, drug and alcohol treatment, and other assistance to families and individuals.⁸⁰⁴

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Ninilchik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁸⁰¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁰² Cook Inlet Tribal Council (n.d.). *Homepage*. Retrieved February 23, 2012 from <http://www.citci.com/>.

⁸⁰³ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁸⁰⁴ Cook Inlet Tribal Council. (n.d.). *What We Do*. Retrieved February 23, 2012 from <http://www.citci.com/>.

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⁵Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

The closest offices of the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Natural Resources (DNR), and the National Marine Fisheries Service (NMFS) are located in Homer and Anchorage. The closest offices of the Alaska Department of Commerce, Community, and Economic Development (DCCED) and the U.S. Bureau of Citizenship and Immigration Services (BCIS) are located in Anchorage.

Infrastructure

Connectivity and Transportation

Ninilchik is easily accessible via the Sterling Highway.⁸⁰⁵ A state-owned 2,400-foot by 60-foot airstrip is present in the community, but is not served by schedule commercial flights. The nearest commercial flights to Anchorage leave from airports in Homer (39 miles away by road) and the City of Kenai (48 road miles away).⁸⁰⁶ The price of a roundtrip ticket by plane from Kenai to Anchorage in early June of 2012 was \$179, and from Homer to Anchorage was \$239.⁸⁰⁷ A small boat harbor is available in Ninilchik, serving charter and recreational boats. Larger harbor and docking facilities are available in Homer, along with access to the Alaska State Ferry system.⁸⁰⁸

Facilities

Water in Ninilchik is derived from individual wells or delivered to homes. A community well and central hauling point are maintained by the Village Council. Two-thirds of residences in Ninilchik have individual septic tanks, and others use outhouses. The school operates its own well and water treatment facility. A Borough refuse transfer site is available in Ninilchik, located at mile 138.5 on the Sterling Highway. Peninsula Sanitation provides refuse collection services. The Homer Electric Association provides electricity in Ninilchik using both hydro power and natural gas.⁸⁰⁹

Police services are provided by state troopers stationed in Ninilchik. Emergency services are provided by Ninilchik Emergency Services. Community facilities in Ninilchik include a washeteria, operated by a private company, as well as a senior center, high school swimming pool, and two libraries, one public and one operated by the school. Phone and internet are available in Ninilchik, but no cable providers offers service locally.⁸¹⁰

Regarding fisheries-related infrastructure, the harbor in Ninilchik is oriented to small boats, including charter and recreational vessels. Harbor and dock infrastructure sufficient for larger vessels are located in Homer.⁸¹¹

⁸⁰⁵ See footnote 801.

⁸⁰⁶ Airport information retrieved January 31, 2012 from www.airnav.com.

⁸⁰⁷ This price was calculated on November 21, 2011 using kayak.com.

⁸⁰⁸ See footnote 801.

⁸⁰⁹ Ibid.

⁸¹⁰ Ibid.

⁸¹¹ Ibid.

Medical Services

Medical services are provided by the Ninilchik Community Clinic, owned and operated by the Village Council. Ninilchik is a Community Health Aid Program site. Alternative health care is provided by Ninilchik Emergency Services. Emergency services have highway, coastal, and helicopter access, and are provided by 911 Telephone service and a health aide.⁸¹² The nearest hospitals are located in Soldotna and Homer.

Educational Opportunities

One school is present in Ninilchik. The Ninilchik School serves preschool through 12th grade. As of 2011, the school had 185 students and 14 teachers.⁸¹³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Ninilchik is located in the traditional territory of the Kenaitze people, a branch of Athabascan Indians. Historically, the Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.⁸¹⁴ Russian settlers living in the area in the mid-1800s also maintained a subsistence lifestyle, including fishing, hunting, trapping, and gardening.⁸¹⁵ Today, the economy of Ninilchik is diverse, and includes a significant number of residents engaged in the commercial and sportfishing industries. Between 2000 and 2010, Ninilchik residents held the greatest number of fishing permits in fisheries for salmon, halibut, and groundfish, as well as some permits in fisheries for herring and crab.

Commercial fisheries developed in the region after the 1867 purchase of Alaska by the U.S. Commercial harvest of salmon in Cook Inlet began in 1882,⁸¹⁶ with the development of a cannery at the mouth of the Kasilof River. An additional 17 canneries had been built in central Alaska by 1890.⁸¹⁷ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁸¹⁸ In the 1920s, herring had become increasingly valued for oil

⁸¹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸¹³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁸¹⁴ Kenaitze Indian Tribe (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

⁸¹⁵ See footnote 812.

⁸¹⁶ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁸¹⁷ Cook, Linda, and Frank Norris (1998). *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁸¹⁸ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

and meal, and a number of reduction plants were built. Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, a sizable spawning biomass of herring was found in western Cook Inlet, and Lower Cook Inlet also supported commercial fisheries for Dungeness, king, and Tanner crab. However, crab and herring fisheries are currently closed due to low stock abundance.^{819,820}

Today, ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.⁸²¹

Groundfish and crab fisheries that occur within 3 nautical miles (nm) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Cook Inlet is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch (TAC) set by NMFS applied to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.⁸²²

Ninilchik is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska (GOA) Sablefish Regulatory District. Ninilchik is not eligible to participate in either the Community Development Quota (CDQ) program or the Community Quota Entity (CQE) program.

Processing Plants

Between 2000 and 2010, ADF&G’s Intent to Operate list noted two processing plants in Ninilchik, although neither was listed as registered in 2010. Data reported by NMFS also indicates that several shore-side processing facilities were in operation in Ninilchik between

⁸¹⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁸²⁰ Alaska Dept. of Fish and Game (2012). *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

⁸²¹ See footnote 816.

⁸²² See footnote 819.

2000 and 2009.⁸²³ These facilities included Deep Creek Custom Processing and Anchor Point Seafoods, Inc. In addition, Tanner’s Fresh Fish Processing began processing seafood in Ninilchik in 2006.⁸²⁴

Deep Creek Custom Packing Inc. has been producing gourmet seafood products since 1961. The company processes Chinook, coho, and sockeye salmon, producing smoked, fresh, and canned offerings. In addition, Deep Creek Custom Packing offers fresh frozen and smoked halibut as well as fresh king crab, scallops, and black tiger shrimp.⁸²⁵ Deep Creek Custom Packing has downsized considerably in recent years and now primarily caters to the sportfishing community. As of the 2012 season, the processor employed approximately five individuals year-round.⁸²⁶

Anchor Point Seafoods was listed on ADF&G’s Intent to Operate list between 2005 and 2008. The company offered Chinook, coho, and sockeye salmon products, including fresh, frozen, and smoked options. Anchor Point also offered smoked halibut, fresh, frozen, or smoked scallops, and fresh or frozen king crab.⁸²⁷ In May 2012, the business was sold to Tanner’s Fresh Fish Processing.⁸²⁸ As of the 2012 season, the business was still operated under the name Anchor Point Seafood, but the new owners planned to transition the business name to Tanner’s Incorporated beginning in 2013.⁸²⁹

Tanner’s Fresh Fish Processing has been processing seafood in Ninilchik since 2006. The company specializes in fresh and smoked salmon and king crab, and also offers halibut, cod, yelloweye rockfish, scallops, razor clams, and spotted shrimp. The company primarily caters to sport fishermen.^{830,831}

In addition, ADF&G’s 2010 Intent to Operate List noted a number of registered processing facilities in nearby communities of Homer, Kenai, and Nikiski.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Ninilchik (Table 3).

Commercial Fishing

Commercial fishing is an important industry within Ninilchik’s diversified economy. Between 2000 and 2010, residents participated in state and federal fisheries as crew members, vessel owners, and permit and quota share account holders. A number of fish buyers and fish processors were also active in the community during some years in the 2000-2010 period.

⁸²³ National Marine Fisheries Service (2011). Alaska processors’ Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁸²⁴ Personal communication, Tanner’s Fresh Fish Processing employee, June 27, 2012.

⁸²⁵ Deep Creek Custom Packing, Inc. (n.d.). *Homepage*. Retrieved June 19, 2012 from <http://www.deepcreekcustompacking.com/>.

⁸²⁶ Personal communication, Deep Creek Custom Packing, Inc. employee, June 19, 2012.

⁸²⁷ Anchor Point Seafood (n.d.). *Homepage*. Retrieved June 19, 2012 from <http://www.anchorpointseafood.com/>.

⁸²⁸ Personal communication with Paul Warner, previous owner of Anchor Point Seafoods, June 20, 2012.

⁸²⁹ See footnote 824.

⁸³⁰ *Ibid*.

⁸³¹ Tanner’s Fresh Fish Processing (n.d.). *Homepage*. Retrieved June 27, 2012 from <http://www.tannersfish.com/>.

In 2010, 42 Ninilchik residents held commercial fishing crew permits and 26 fishing vessels were primarily owned by residents (Table 5). Also in 2010, 56 Ninilchik residents held a total of 67 state-issued Commercial Fisheries Entry Commission (CFEC) permits. Six federal License Limitation Program (LLP) permits and three Federal Fisheries Permits (FFP) were also held by Ninilchik residents that year (Table 4).

A majority of the CFEC permits (46) were held in salmon fishery. Of these, 28 (61%) were held in the Cook Inlet set gillnet fishery, 7 (15%) in the Cook Inlet drift gillnet fishery, and 1 or 2 permits each were held in purse seine fisheries in Cook Inlet, Kodiak, and Prince William Sound, drift gillnet fisheries in Prince William Sound and Bristol Bay, the set gillnet fishery in Bristol Bay, and the statewide power troll fishery. Of all salmon permits, 26 (59%) were actively fished in 2010. The number of salmon permit holders and total salmon permits increased between 2000 and 2005, before falling to just under 2000 levels by 2010. The percentage of salmon permits fished decreased slightly over the period (Table 4).

Other CFEC permits held in 2010 included seven herring permits, held by six individuals, for Cook Inlet and Kodiak herring roe fisheries, six groundfish permits/permit holders in the statewide miscellaneous saltwater finfish fishery, five halibut permits/permit holders in statewide hand troll and longline fisheries, two crab permits/permit holders in Cook Inlet Dungeness crab pot gear fishery, and one ‘other shellfish’ permit/permit holder in the Prince Williams Sound shrimp fishery using pot gear. Of these additional CFEC permits, only halibut and groundfish permits were actively fished in 2010. The last year between 2000 and 2010 in which a herring permit was actively fished was 2006, and crab CFEC permits were not actively fished at any time during this period. In the case of halibut, the number of permits and permit holders decreased by approximately half between 2000 and 2010. In the case of groundfish, the number of permit holders remained stable over the period, but the total number of permits held decreased by 40%. Information about CFEC permits held by Ninilchik residents is presented in Table 4.

Federal fishery permits held by Ninilchik residents in 2010 included five groundfish License Limitation Permits (LLP), one crab LLP, and three Federal Fisheries Permits (FFP). One FFP was actively fished in 2010, while none of the LLP permits were active that year. The most recent year in which a federal groundfish LLP was actively fished by a Ninilchik resident was 2004, while federal crab LLPs were not active in any year between 2000 and 2010. Federal permit information is also presented in Table 4.

In 2000, there were 18 halibut quota share account holders residing in Ninilchik, declining to 8 by 2010. Total quota shares held decreased from 653,000 to 427,983 over the same period. The annual halibut individual fishing quota (IFQ) allotment fluctuated from year to year, rising to a value 38% higher than the 2000 level in 2006, and falling to 36% lower than the 2000 level by 2010. Between 2000 and 2004, one sablefish quota share account holder was present in Ninilchik, and 1,103 sablefish quota shares were held. Sablefish IFQ allotment increased over this 5-year period, rising to a level 28% higher than 2000 by 2004. No quota share accounts or quota shares were held by Ninilchik residents in the federal crab fisheries between 2000 and 2010. Further information about federal catch share participation is presented in Tables 6 through 8.

In 2010, Ninilchik ranked 50th out of 67 Alaskan ports that received commercial fisheries landings. That year, there were 12 fish buyers operating in Ninilchik, while no shoreside processors were registered as operating in the community that year (see the *Processing Plants* section). Landings and ex-vessel revenue information about individual fisheries is largely considered confidential between 2000 and 2010 due to the small number of participants,

although net pounds of salmon and herring landed were each reported during 2 years (Table 9). Total landings and revenue, including all fisheries, are reported for 5 years during the period. In 2010, a total of 95,742 net pounds of fish were purchased by fish buyers in Ninilchik, generating \$224,348 in ex-vessel revenue. Of those years in which total landings and ex-vessel revenue were reported, 2010 had the lowest numbers, despite the presence of a greater number of fish buyers than in any other year between 2000 and 2010 (Table 5).

Ninilchik vessel owners delivered landings in many locations throughout the 2000-2010 period. Information about salmon harvest by Ninilchik residents was reported for all years between 2000 and 2010. During this period, Ninilchik vessel owners landed an average of 658,544 net pounds of salmon per year, valued at \$395,842 in ex-vessel revenue on average. The highest volume of salmon was landed by Ninilchik residents in 2010 (1,396,938), valued at \$801,621. Halibut and Pacific cod landings are only reported for some years, while landings in other years are considered confidential due to the small number of participants. In 2003, Ninilchik vessel owners landed 75,387 net pounds of halibut for total ex-vessel revenue of \$228,981. In 2001, Ninilchik vessel owners landed 12,138 net pounds of Pacific cod, valued at \$4,146 in ex-vessel revenue. Landings of all other species are considered confidential for all years between 2000 and 2010. Information about landings and ex-vessel revenue generated by Ninilchik vessel owners, irrespective of delivery location, is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Ninilchik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Ninilchik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	6	6	6	6	6	5	5	5	5	5	5
	Active permits	3	1	1	2	1	0	0	0	0	0	0
	% of permits fished	50%	16%	16%	33%	16%	-	-	-	-	-	-
	Total permit holders	5	5	5	5	5	5	5	5	5	5	5
Crab (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	8	8	8	7	7	7	6	6	6	3	3
	Fished permits	0	0	0	3	3	2	2	3	2	1	1
	% of permits fished	-	-	-	43%	43%	29%	33%	50%	33%	33%	33%
	Total permit holders	8	8	8	6	6	6	5	5	5	2	2
Crab (CFEC) ²	Total permits	2	2	2	2	2	2	2	2	2	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	2	2	2	2	2	2	2	2	2	2	2
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	1
Halibut (CFEC) ²	Total permits	10	9	10	12	10	8	7	4	4	5	5
	Fished permits	8	6	8	11	9	7	7	4	4	5	4
	% of permits fished	80%	67%	80%	92%	90%	88%	100%	100%	100%	100%	80%
	Total permit holders	9	8	9	11	10	8	7	4	4	5	5
Herring (CFEC) ²	Total permits	7	3	2	2	1	4	6	4	4	5	7
	Fished permits	2	1	0	0	0	2	1	0	0	0	0
	% of permits fished	29%	33%	-	-	-	50%	17%	-	-	-	-
	Total permit holders	7	3	2	2	1	3	5	4	3	4	6

Table 4 cont'd. Permits and Permit Holders by Species, Ninilchik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	10	8	5	4	3	1	4	5	5	6	6
	Fished permits	3	1	2	1	2	1	3	4	4	5	2
	% of permits fished	30%	13%	40%	25%	67%	100%	75%	80%	80%	83%	33%
	Total permit holders	6	5	3	3	2	1	3	5	5	6	6
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	48	48	52	59	63	65	58	56	53	50	46
	Fished permits	36	38	33	41	40	36	32	31	30	29	27
	% of permits fished	75%	79%	63%	69%	63%	55%	55%	55%	57%	58%	59%
	Total permit holders	50	47	50	56	57	57	58	58	52	48	47
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>77</i>	<i>70</i>	<i>71</i>	<i>79</i>	<i>79</i>	<i>80</i>	<i>77</i>	<i>71</i>	<i>68</i>	<i>68</i>	<i>67</i>
	<i>Fished permits</i>	<i>49</i>	<i>46</i>	<i>43</i>	<i>53</i>	<i>51</i>	<i>46</i>	<i>43</i>	<i>39</i>	<i>38</i>	<i>39</i>	<i>33</i>
	<i>% of permits fished</i>	<i>64%</i>	<i>66%</i>	<i>61%</i>	<i>67%</i>	<i>65%</i>	<i>58%</i>	<i>56%</i>	<i>55%</i>	<i>56%</i>	<i>57%</i>	<i>49%</i>
	<i>Permit holders</i>	<i>57</i>	<i>54</i>	<i>54</i>	<i>63</i>	<i>62</i>	<i>60</i>	<i>61</i>	<i>64</i>	<i>57</i>	<i>56</i>	<i>56</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Ninilchik: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Ninilchik ²	Total Net Pounds Landed In Ninilchik ^{2,5}	Total Ex-Vessel Value Of Landings In Ninilchik ^{2,5}
2000	58	1	1	77	102	15	-	-
2001	62	4	1	80	101	37	618,682	\$539,286
2002	40	6	2	77	96	37	811,572	\$513,815
2003	36	1	1	85	99	4	-	-
2004	53	5	1	82	95	7	156,849	\$224,004
2005	46	1	2	36	23	4	-	-
2006	39	1	3	29	22	6	-	-
2007	39	1	2	24	26	2	-	-
2008	43	2	1	24	26	50	-	-
2009	37	9	2	26	29	12	150,902	\$201,036
2010	42	12	0	26	27	15	95,742	\$224,348

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Ninilchik: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	18	653,000	72,377
2001	18	625,856	74,134
2002	19	644,733	78,959
2003	19	571,370	69,956
2004	15	461,620	62,573
2005	14	446,200	61,466
2006	15	640,420	99,671
2007	8	622,173	93,622
2008	8	427,983	56,011
2009	8	427,983	50,183
2010	8	427,983	46,229

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Ninilchik: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	1,103	99
2001	1	1,103	94
2002	1	1,103	94
2003	1	1,103	112
2004	1	1,103	127
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Ninilchik: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Ninilchik: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	18,480	33,177
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	718,687	-	108,111	-	-	-	-	-	-
<i>Total²</i>	-	-	718,687	-	108,111	-	-	-	-	18,480	33,177
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	\$18,480	\$32,957
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	\$339,583	-	\$78,576	-	-	-	-	-	-
<i>Total²</i>	-	-	\$339,583	-	\$78,576	-	-	-	-	\$18,480	\$32,957

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Ninilchik Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	64,123	72,852	-	75,387	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	8,462	12,138	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	698,466	414,970	612,437	557,845	733,103	715,697	552,499	550,748	587,813	423,464	1,396,938
<i>Total²</i>	<i>771,051</i>	<i>499,960</i>	<i>612,437</i>	<i>633,232</i>	<i>733,103</i>	<i>715,697</i>	<i>552,499</i>	<i>550,748</i>	<i>587,813</i>	<i>423,464</i>	<i>1,396,938</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$166,619	\$145,101	-	\$228,981	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	\$3,412	\$4,146	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$317,792	\$214,857	\$260,802	\$302,464	\$413,863	\$526,568	\$382,662	\$435,909	\$421,619	\$276,110	\$801,621
<i>Total²</i>	<i>\$487,823</i>	<i>\$364,104</i>	<i>\$260,802</i>	<i>\$531,445</i>	<i>\$413,863</i>	<i>\$526,568</i>	<i>\$382,662</i>	<i>\$435,909</i>	<i>\$421,619</i>	<i>\$276,110</i>	<i>\$801,621</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The recreational fishing industry has a large presence in Ninilchik, providing significant employment in the community.⁸³² From 2000 and 2010, the number of active sport fish guide businesses located in Ninilchik varied between 25 and 38 per year and the number of licensed sport fish guides residing in the community varied between 46 and 59 per year. Between 2000 and 2010, the number of Ninilchik residents that purchased sportfishing licenses (irrespective of point of sale) varied between 473 and 629 per year. The number of fishing licenses sold in Ninilchik was much larger, varying between 934 and 4,964 per year. The greater number of licenses sold in Ninilchik than licenses sold to residents indicates that sportfishing is a large tourism draw in Ninilchik. Information about sportfishing activity is presented in Table 11.

The Alaska Statewide Harvest Survey,⁸³³ conducted by ADF&G between 2000 and 2010, noted the species known to be targeted by private anglers in Ninilchik. In freshwater, anglers targeted Chinook, coho, sockeye, and pink salmon, rainbow trout, Dolly Varden, smelt, Arctic grayling, and northern pike. In saltwater, anglers pursued the same salmon species listed above, as well as Dolly Varden, Pacific halibut, rockfish, lingcod, Pacific cod, and shark. The survey also noted sport harvest of Tanner crab, razor clams, hardshell clams, and shrimp by Ninilchik residents.⁸³⁴

Kept/released statistics from charter logbook data reported by ADF&G⁸³⁵ show that Pacific halibut was by far the most important species targeted by fishing charters out of Ninilchik between 2000 and 2010, with 41,705 halibut kept and 54,425 released in 2010. Chinook salmon were the next most numerous species caught by sport charters, although numbers of Chinook caught decreased significantly in 2009 and 2010. In 2000, 1,977 large Chinook salmon were kept and 171 released, compared to only 361 kept and 15 released in 2010. Coho salmon and pelagic rockfish were the next most numerous species reported in charter logbooks. The greatest number of coho were reported in 2002 (1,229 kept), and the lowest number was reported in 2010 (195 kept). The greatest number of pelagic rockfish were reported caught in 2004 (2,349 kept), and the lowest number was reported in 2006 (41 kept). Other species that were also caught during charters out of Ninilchik between 2000 and 2010 include sockeye, chum, and pink salmon, lingcod, yelloweye rockfish, ‘other rockfish’, sablefish, and shark.

Ninilchik is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, saltwater and freshwater sportfishing at this regional level was substantial. In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska resident logged 20,292 saltwater angler days and 71,555 freshwater angler days. Typically, Alaska residents took part in saltwater sportfishing at greater rates than non-Alaska

⁸³² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸³³ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁸³⁴ The Alaska Statewide Harvest Survey includes separate categories for Dungeness crab, Tanner crab, razor clams, hardshell clams and shrimp. Remaining species fall into the ‘other shellfish’ category.

⁸³⁵ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

resident anglers, and the opposite was true of freshwater sportfishing. For both Alaska resident and non-Alaska resident anglers in both freshwater and saltwater, the number of angler days fished per year decreased between 2000 and 2010 (Table 11).

Table 11. Sport Fishing Trends, Ninilchik: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Ninilchik ²
2000	28	46	493	934
2001	25	48	514	978
2002	28	52	473	1,149
2003	26	51	598	1,065
2004	30	54	601	1,111
2005	33	51	602	1,467
2006	37	54	600	1,687
2007	35	57	625	1,295
2008	38	59	606	4,964
2009	36	54	646	4,906
2010	36	56	629	4,207

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Ninilchik is located in the historic territory of the Kenaitze people, a branch of Athabascan Indians. The Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.⁸³⁶ Russian settlers living in the area in the mid 1800s also survived from subsistence fishing, as well as hunting, trapping, and gardening.⁸³⁷ Today, many residents of Ninilchik continue to harvest marine resources for subsistence purposes.

No information was reported by ADF&G regarding per capita subsistence harvest or the percentage of households in Ninilchik utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, an ADF&G survey of subsistence activities in 1998 provides information regarding subsistence use of marine mammals, marine invertebrates, and non-salmon fish (not including halibut) in Ninilchik. The survey indicated that Ninilchik residents harvested the following species of marine invertebrates in 1998: butter, horse, Pacific littleneck, pinkneck, and razor clams, black and red chitons, cockles, mussels, oysters, scallops, limpets, snails, sea urchin, sea cucumber, whelk, Dungeness, Tanner, snow, and king crab, octopus, and shrimp. Of these species, the greatest percentage of households reported harvesting razor clams (54%), Pacific littleneck clams (12%), and mussels (10%). The percentage of households using these resources was greater than the percentage harvesting, indicating the presence of sharing networks.⁸³⁸

Species of non-salmon fish (not including halibut) harvested by Ninilchik residents in 1998 included Dolly Varden, Arctic char, steelhead, cutthroat, lake, and rainbow trout, pike, whitefish, sheefish, sturgeon, grayling, eel, euchalon (hooligan candlefish), black and red rockfish, lingcod, sablefish, Pacific cod, walleye pollock, Pacific tom cod, sea bass, greenling, Irish lord, unknown sculpin, smelt, flounder, sole, wolf fish, skate, shark, and herring. The survey also noted harvest of herring sac roe and herring spawn on kelp. Of these species, the greatest percentage of households reported harvest of Dolly Varden (14%), while 20% of households reported using Dolly Varden for subsistence purposes.⁸³⁹

In addition, the survey found that Ninilchik households harvested the following marine mammal species in 1998: bowhead and unknown whale, harbor seal, and Steller sea lion.⁸⁴⁰

Information was reported during the 2000-2010 period regarding subsistence harvest of salmon, halibut, and marine mammals. Between 2000 and 2007, the number of subsistence salmon permits issued to Ninilchik households varied between two and eight. In 2008, the number rose dramatically, to a reported 65 total permits issued. Based on reported harvests, on average, sockeye was the most heavily harvested salmon species. Harvest of some Chinook, chum, and pink salmon was also reported in some years. Information about subsistence salmon harvest is presented in Table 13.

⁸³⁶ Kenaitze Indian Tribe (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

⁸³⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸³⁸ Ibid.

⁸³⁹ Ibid.

⁸⁴⁰ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Between 2003 and 2010, an average of 54 Subsistence Halibut Registration Certificates (SHARC) were issued to residents of Ninilchik. Of these, an average of 14 SHARC cards were fished, with an average subsistence halibut harvest of 4,675 pounds per year. The highest reported harvest of halibut during the 2000-2010 period occurred in 2004, when 26 SHARC cards were fished and a total of 7,627 pounds of halibut were harvested. Information about subsistence harvest of halibut is presented in Table 14.

Some information was reported about subsistence harvest of marine mammals by residents of Ninilchik. According to data reported by the U.S. Fish and Wildlife Service data, several sea otters were harvested each year between 2008 and 2010. A total of 13 were reported harvested in 2008, while only 2 were reported in 2009, and 3 in 2010. No information was available from management agencies regarding harvest of beluga whale, walrus, polar bear, Steller sea lion, harbor seal, or spotted seal by Ninilchik residents between 2000 and 2010. This information about marine mammal harvest is presented in Table 15.

Additional Information

According to a linguistic study, “Ninilchik Russian” is a distinct and unique variety of the Russian language. In 2010, there were no speakers of Ninilchik Russian under the age of 70, and the language is expected to die out in coming years. The language incorporates characteristics of various Russian dialects and neighboring Slavic languages, and is also influenced by Eskimo-Aleut and Athabascan languages. Nevertheless, it is the Russian language, and the remaining speakers of Ninilchik Russian are able to communicate fully with speakers of standard Russian.⁸⁴¹

⁸⁴¹ Bergelson, M.B., and A.A. Kibrik (2010). The Ninilchik Variety of Russian: Linguistic Heritage of Alaska. In *Sociolinguistic Approaches to Non-Standard Russian*. Eds. Mustajoki, A., Protassova, N. and Vakhtin. Helsinki. Retrieved February 1, 2012 from <http://www.helsinki.fi/slavicahelsingiensia/preview/sh40/pdf/20-sh40.pdf>.

Table 12. Subsistence Participation by Household and Species, Ninilchik: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Ninilchik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	8	8	3	1	n/a	n/a	192	n/a	n/a
2001	7	8	2	n/a	5	n/a	137	n/a	n/a
2002	3	3	n/a	n/a	n/a	n/a	83	n/a	n/a
2003	5	6	2	n/a	n/a	n/a	49	n/a	n/a
2004	3	3	n/a	n/a	15	n/a	10	n/a	n/a
2005	8	7	n/a	n/a	n/a	n/a	60	n/a	n/a
2006	2	2	n/a	n/a	n/a	n/a	44	n/a	n/a
2007	8	7	89	n/a	n/a	n/a	451	n/a	n/a
2008	65	62	5	n/a	5	n/a	557	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Ninilchik: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	51	18	3,538
2004	61	26	7,627
2005	62	21	7,509
2006	64	16	3,735
2007	67	14	7,218
2008	44	7	1,661
2009	41	7	3,135
2010	38	3	2,974

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Ninilchik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	13	n/a	n/a	n/a	n/a	n/a
2009	n/a	2	n/a	n/a	n/a	n/a	n/a
2010	n/a	3	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Port Graham

People and Place

*Location*⁸⁴²



Port Graham is located at the southern end of the Kenai Peninsula on the shore of Port Graham. Also known as Paluwik in the Alutiiq language, it is adjacent to Nanwalek, 7.5 miles southwest of Seldovia, and 28 air miles from Homer. The community encompasses 5.9 square miles of land. Port Graham is unincorporated, is part of the Kenai Peninsula Census area, and is under the jurisdiction of the Kenai Peninsula Borough.

*Demographic Profile*⁸⁴³

In 2010, there were 177 residents in Port Graham, making it the 207th largest city out of 352 total Alaskan communities with recorded populations in that year. Overall between 1990 and 2010, the population has increased by 6.2%. Between 2000 and 2009, Alaska Department of Labor population estimates indicate that the population of permanent residents fell by 19.88%, though the U.S. Census shows that the population remained the same between 2000 and 2010. The Port Graham average annual growth rate between 2000 and 2009 was -1.26%, indicating a slow rate of decline. The change in population from 1990 to 2010 is provided in Table 1.

The majority of residents in Port Graham in 2010 identified themselves as American Indian and Alaska Native (71.2%), with the remaining racial composition as follows: White (8.5%), African-American (1.1%), and two or more races (19.2%). There were no residents of Port Graham that identified themselves as Hispanic in 2010. The percentage of the population identifying themselves as American Indian and Alaska Natives decreased by 13.6% from 2000 to 2010, with corresponding increases in the percentage of the population identifying themselves as two or more races and African-American. The change in racial and ethnic composition from 2000 to 2010 is provided in Figure 1 below.

In 2010 the average household size was 2.24, a slight decrease from 2.7 in 1990 and 2.44 in 2000. However, there has been an increase in the number of households from 60 in 1990 to 70 in 2000 to 79 in 2010. Of those households surveyed in 2010, 49 were owner-occupied and 29 were vacant, with 30 households being rented in 2010. None of the population of Port Graham was living in group quarters in 2010.

⁸⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁴³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

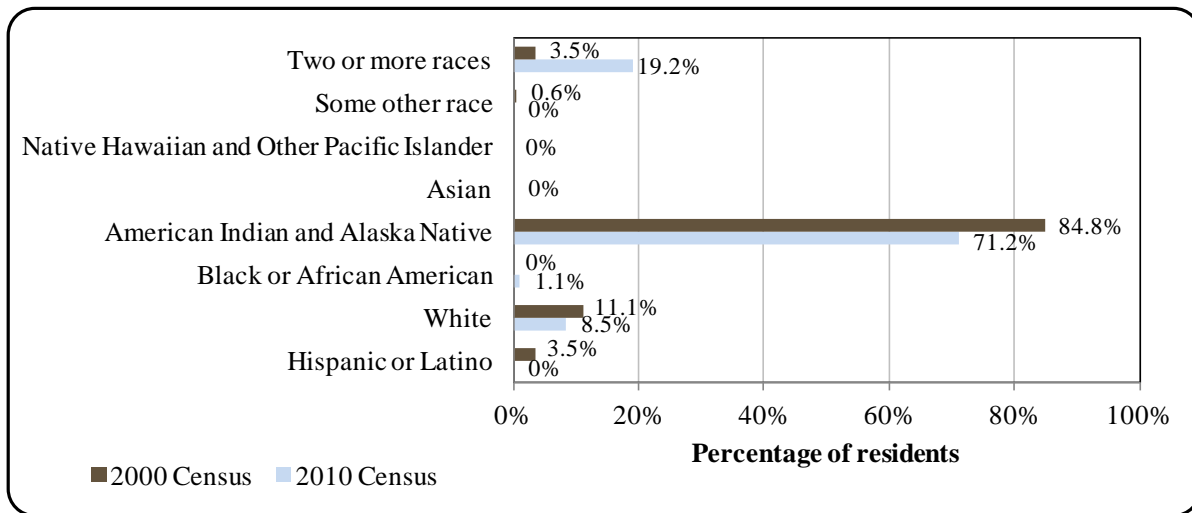
Table 1. Population in Port Graham from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	166	-
2000	176	-
2001	-	178
2002	-	174
2003	-	165
2004	-	153
2005	-	129
2006	-	136
2007	-	137
2008	-	136
2009	-	137
2010	177	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

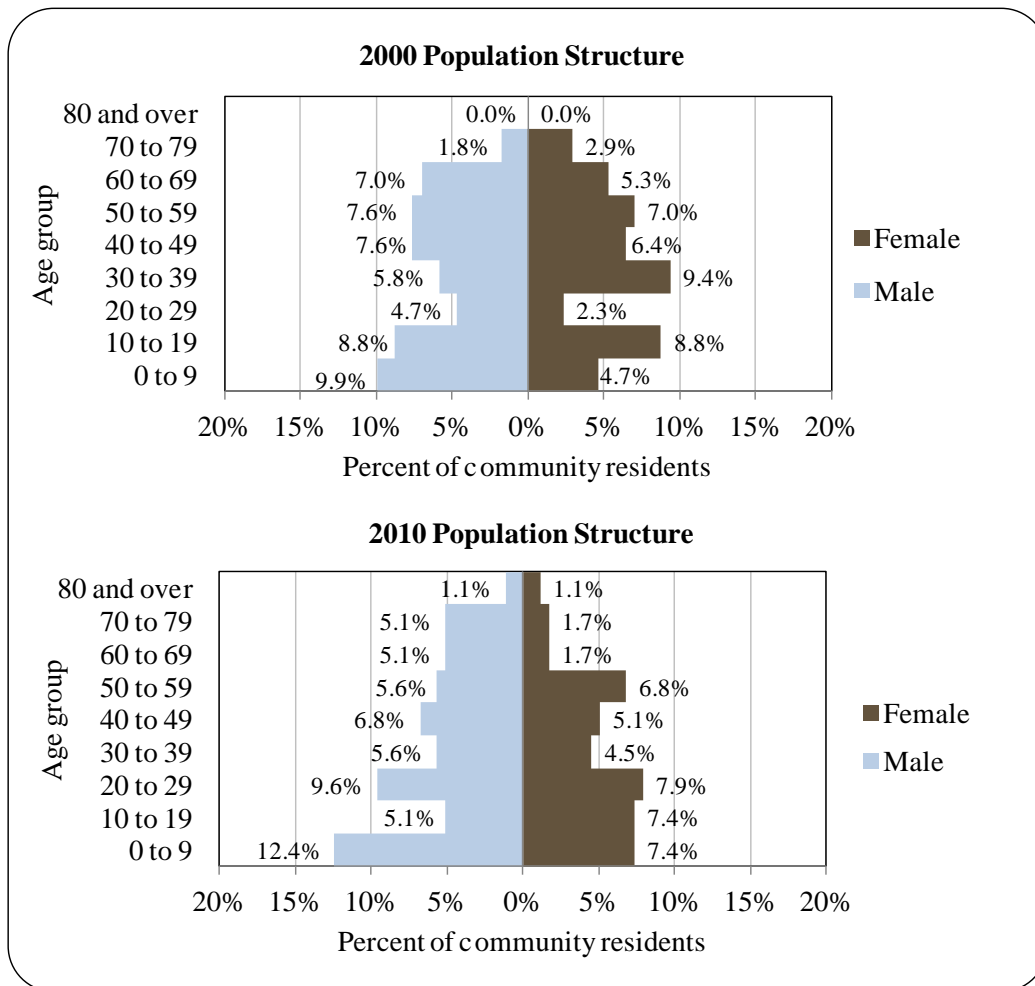
Figure 1. Racial and Ethnic Composition, Port Graham: 2000-2010 (U.S. Census).



In a survey conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Port Graham’s population is composed entirely of year-round residents.

In 2010, the gender makeup was slightly skewed, at 56.5% male and 43.5% female, and slightly more skewed toward males than the state as a whole (52% male, 48% female). The median age in Port Graham was 30.3 years, lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 0-29 years old, with the next largest percentage for the age category 40-59 years old. Relatively few people were 60 or older. The overall population structure of Port Graham in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Port Graham Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁸⁴⁴ 80.9% of residents aged 25 and over held a high school diploma or higher degree in 2009, compared to 90.7% of Alaskan residents overall. Also in 2009, 11.8% of the population had less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 7.4% had a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 36.8% held a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 36.8% had some college but no degree, compared to 28.3% of Alaskan residents overall; 2.9% had earned an Associate's degree, compared to 8% of Alaskan residents overall; 0% earned a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 4.4% earned a graduate or professional degree, compared to 9.6% of Alaskan residents overall.⁸⁴⁵

*History, Traditional Knowledge, and Culture*⁸⁴⁶

Port Graham is a traditional Alutiiq, or Sugpiaq, village with a fishing and subsistence lifestyle. The earliest known settlers were Russians from the nearby trading post at Nanwalek. In 1850, the Russian-American Company established a coal mine at Port Graham, but it was not economical and lasted only a few years. Port Graham became the site of a cannery and wharf in 1909, according to the U.S. Geological Survey. In 1911, the Fidalgo Island Packing Company established a cannery, and Aleuts from Nanwalek moved to the community. A post office operated between 1938 and 1961. The cannery burned in 1960. It was rebuilt in 1968 by Whitney/Fidalgo and sold to the village corporation in 1983. A pink salmon hatchery began operations in 1991, but in January 1998, the hatchery and salmon processing plant were destroyed by fire. The hatchery and processing plant were rebuilt and re-opened in June 1999. The cannery continued to be the main economic activity in the community, employing residents of Nanwalek as well. However, in a survey conducted by the AFSC in 2011, community leaders indicated that the processing plant is not currently operating.

Natural Resources and Environment

Port Graham experiences cool winters and moderate summers: temperatures range from 14 – 27°F in the winter (-10 to -3°C) and 45 – 65°F in the summer (7 to 18°C). Port Graham receives an average of 24 inches of precipitation per year.⁸⁴⁷

Port Graham's economy depends on the area's natural resources, especially fish. In a survey conducted by NOAA's AFSC in 2011, community leaders reported local reliance on fishing, ecotourism, and sport hunting and fishing.

⁸⁴⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸⁴⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸⁴⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁴⁷ Ibid.

Port Graham is located near the Kachemak Bay State Park and State Wilderness Park. Alaska's first state park, and only wilderness park, contains roughly 400,000 acres of mountains, glaciers, forests and ocean. The bay's twisted rock formations are evidence of the movement of the earth's crust. Highlighted by constantly changing weather patterns, the park's outstanding scenery is a backdrop for high quality recreation. Park visitors will find opportunities for fishing, boating, kayaking, hiking, camping and mountain sports. Kachemak Bay is a critical habitat area, supporting many species of marine life. Visitors frequently observe sea otters, seals, porpoise and whales. Land mammals include moose, black bear, mountain goats, coyotes and wolves. The many species of birds that inhabit the bay, including eagles, gyrfalcons and puffins, make it a popular area for bird watching.⁸⁴⁸

Port Graham also lies near the western border of Kenai Fjords National Park. This National Park was established in 1980 to "maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers and coastal fjords and islands." Fifty-six percent of the park is covered by ice. Animals living in the mountains, the shores and the fjords of the National Park include black bear, brown bear, moose, mountain goat, sea otter, Steller sea lion, harbor seal, Dall's porpoise, Pacific white-sided dolphin, orca, minke whale, humpback whale, fin whale, and birds including bald eagles, puffins, murrets, Steller's jay, black-billed magpie, peregrine falcon, and marbled murrelet.⁸⁴⁹ Portions of both Kenai Fjords National Park and the Kachemak Bay State Park and State Wilderness Park are included in the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.⁸⁵⁰

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures and soil liquefaction.⁸⁵¹

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields on and off shore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.⁸⁵²

The Port Graham/Nanwalek Watershed Council was formed in the 1990s to protect and preserve the two adjacent watersheds of English Bay River and Port Graham River and their tributaries. Because the ecosystems are largely healthy, the management approach of the Watershed Council is to prevent degradation as both communities experience growth in transportation systems, housing, and commercial resource harvests of timber and fish. The

⁸⁴⁸ Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation. *Kachemak Bay State Park and State Wilderness Park*. Retrieved February 17, 2012 from <http://dnr.alaska.gov/parks/units/kbay/kbay.htm>.

⁸⁴⁸ Unless otherwise noted, all monetary data are reported in nominal values.

⁸⁴⁹ National Park Service (2010). Kenai Fjords National Park Retrieved December 27, 2011 from <http://www.nps.gov/kefj/>.

⁸⁵⁰ Wilderness.net website. (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

⁸⁵¹ Kenai Peninsula Borough. 2010. *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

⁸⁵² Resource Development Council. (n.d.). *Alaska's Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

Council was formed as a result of meetings convened by the Chugachmiut Environmental Health Program to examine where funding for wetlands protection was most needed in the region.⁸⁵³

According to the Alaska Department of Environmental Conservation (DEC), there are no notable active environmental cleanup sites located in Port Graham as of October 2012.⁸⁵⁴

Current Economy⁸⁵⁵

The economy of Port Graham is somewhat influenced by commercial fishing. Although only a small number of local residents are directly engaged in commercial fishing activities themselves, a new \$4.5 million fish cannery⁸⁵⁶ and hatchery was completed in June 1999. However in a survey conducted by NOAA's AFSC in 2011, community leaders report that the cannery is currently not operational. In addition to the formal economy, residents of Port Graham participate in subsistence fishing and hunting to supplement their incomes.

Based on the 2006-2010 ACS,⁸⁵⁷ the per capita income in Port Graham in 2010 was \$9,368, and the median household income in 2010 was \$18,942, compared to \$13,666 and \$40,250 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁸⁵⁸ the real per capita income (\$17,971) and the real median household income in 2000 (\$52,928) indicate a substantial decrease between 2000 and 2010. In 2010, Port Graham ranked 282nd out of 305 communities with per capita income that year, and 280th out of 299 Alaskan communities with household income data. Port Graham's small population size may have prevented the ACS from accurately portraying economic conditions.⁸⁵⁹ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database, maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Port Graham in 2010 was \$7,739, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁸⁶⁰ This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁸⁶¹ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

⁸⁵³ U.S. Environmental Protection Agency. March 2000. *Tribal Wetland Program Highlights*. EPA 843-R-99-002. Retrieved December 26, 2011 from <http://water.epa.gov/>.

⁸⁵⁴ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁸⁵⁵ Unless otherwise noted, all monetary data is reported in nominal values.

⁸⁵⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁵⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸⁵⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸⁵⁹ See footnote 857.

⁸⁶⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸⁶¹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Based on the 2006-2010 ACS, 2010, 55.4% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 12.2%, compared to the statewide unemployment rate of 5.9%. Approximately 54.9% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Port Graham are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given Port Graham’s small population of Port Graham. Another estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 12.9%.

Based on the household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the public sector (65.6%), while the remaining 34.4% were employed in the private sector. Out of 32 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in public administration (48.9%), finance, insurance, and real estate (19.1%), and education services, health care, and social assistance (12.8%), and arts, entertainment, recreation, accommodations, and food services (8.5%). Only 6.4% of the workforce was estimated to be employed in agriculture, forestry, fishing, hunting, and mining, with the remaining 4.3% estimated to be employed in construction. The number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Port Graham (U.S. Census).

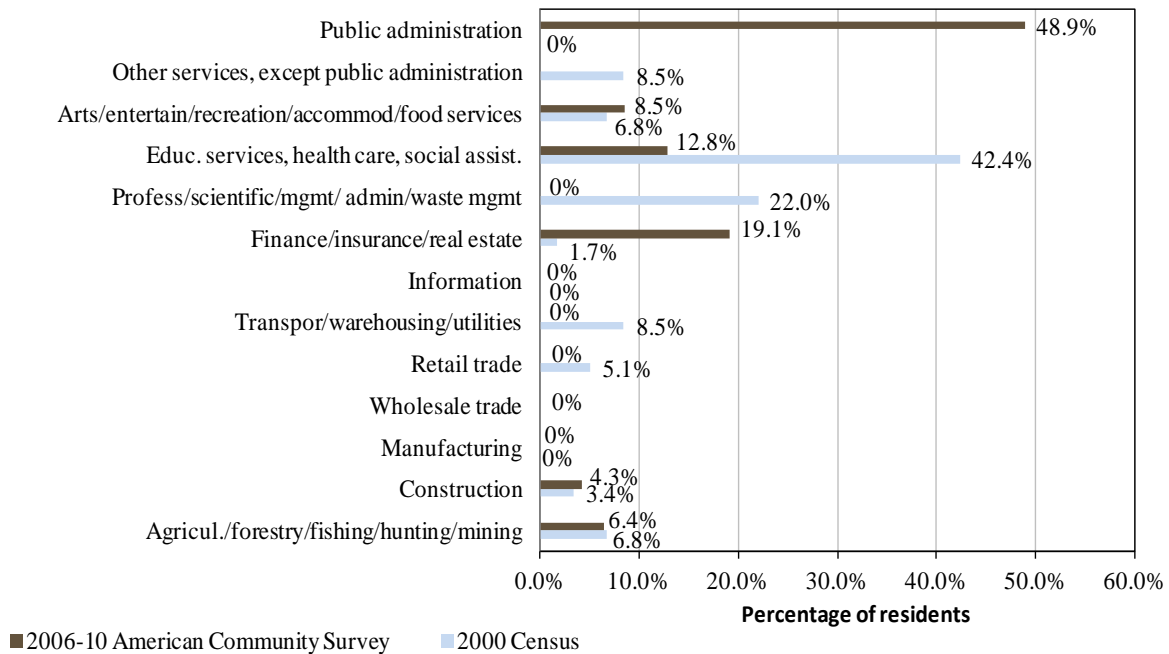
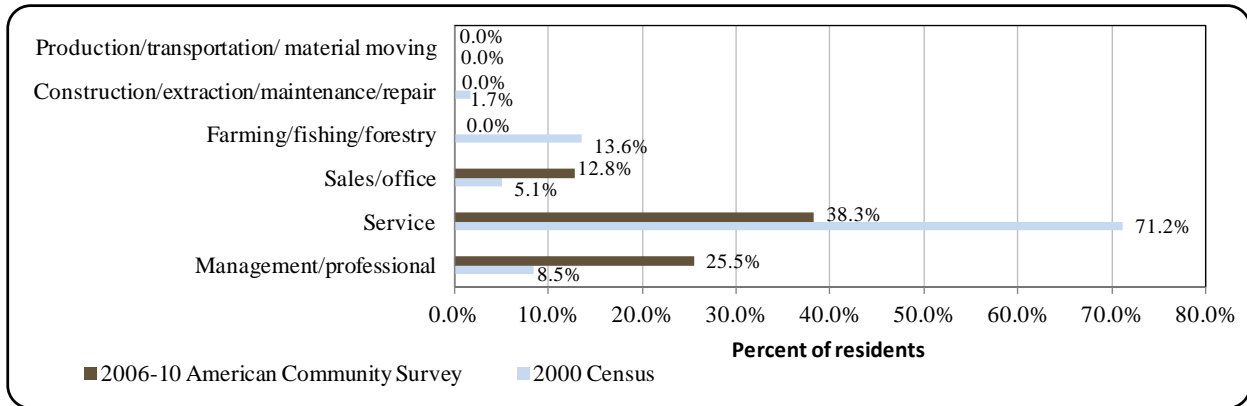


Figure 4. Local Employment by Occupation in 2000-2010, Port Graham (U.S. Census).



Governance

Port Graham is an unincorporated community governed by a traditional village council and is located within the Kenai Peninsula Borough. The Native Village of Port Graham is federally recognized by the U.S. Bureau of Indian Affairs (BIA). The Port Graham Corporation also holds a land entitlement under the Alaska Native Claims Settlement Act (ANCSA). Port Graham is a member of a regional Native corporation, the Chugach Alaska Corporation.⁸⁶² The nearest Alaska Department of Fish and Game (ADF&G), Department of Natural Resources, and National Marine Fisheries Service (NMFS) offices are located in Homer. The nearest Alaska Department of Commerce, Community, and Economic Development office is in Anchorage, as are the nearest offices for U.S. Immigration and Customs Enforcement and the Bureau of Citizenship and Immigration Services.

As of 2010, the Kenai Peninsula Borough administers a 3% sales tax.⁸⁶³ Port Graham itself does not administer its own sales tax. In addition, since it is unincorporated, Port Graham does not maintain a municipal budget with community revenue and expenditures. Data are not available for community revenues from 2000-2010, with the exception of a grant received by Port Graham in 2008 in the amount of \$80,000 for a floating skiff dock. Information on municipal revenue received by Port Graham between 2000 and 2010 is presented in Table 2.

⁸⁶² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁶³ Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

Table 2. Selected Municipal, State or Federal Revenue Streams for the Community of Port Graham from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	\$80,000
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Port Graham is not accessible by road. A state-owned 1,975-foot airstrip is available for local charter flights. There are no roads in the community, but a trail connects Port Graham with the nearby village of Nanwalek.⁸⁶⁴ There is no scheduled water taxi or ferry service however non-scheduled barge service for delivery of fuel and supplies is available from Homer.⁸⁶⁵ Roundtrip airfare to Anchorage, after a short charter flight to Homer, was \$239.⁸⁶⁶

*Facilities*⁸⁶⁷

Water is derived from a surface source and is treated and stored in a 50,000-gallon redwood tank. Port Graham has a piped water and sewer system operated by the village council, sewage disposal in a community septic tank, and a sludge lagoon. Nearly 90% of households are

⁸⁶⁴ See footnote 862.

⁸⁶⁵ Port Graham Corporation (n.d.). *Our Heritage*. Retrieved November 23, 20110 from <http://www.portgrahamcorp.com/our-heritage.html>.

⁸⁶⁶ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on November 16, 2011.

⁸⁶⁷ See footnote 862.

fully plumbed, and all households have some level of indoor plumbing. Electricity is provided by the Homer Electric Association and is produced by a hydroelectric facility and natural gas generator. Police services are provided by local Village Public Safety Officers and state troopers stationed in Homer. Fire and rescue services are provided by the Port Graham Emergency Medical Services and local ambulance service.

In a survey conducted by the AFSC in 2011, community leaders reported that docking facilities in Port Graham are served by electricity and water and that there are roads serving the dock space. However, there is currently no dock space available for permanent or transient vessels to moor in Port Graham. Vessels up to 80 feet long can use the moorage in Port Graham. Community leaders noted that a new landfill/solid waste site for Port Graham is in progress, and that noted that fishermen in Port Graham are seeking improvements to the public dock and harbor facilities. In the same survey, community leaders reported that, for fisheries-related businesses not available in Port Graham, community members travel to Homer.

*Medical Services*⁸⁶⁸

There is a local health clinic, the Anesia Anahonak Moonin Clinic, which is operated by the village council. The clinic is a Community Health Aid Program site. The village council also operates the South Kachemak Alcohol Program. Emergency Services have coastal and air access, and emergency service is provided by volunteers and a health aide. The nearest hospital is in Homer.

*Educational Opportunities*⁸⁶⁹

The Port Graham School provides instruction to students from kindergarten through 12th grade. In fiscal year 2011, the school had two teachers and 20 students.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Port Graham has been the site of subsistence harvest of marine resources for thousands of years. It was probably a seasonal hunting and food gathering site when it was first recorded in 1786 by Captain Portlock of the Cook party.⁸⁷⁰ Archaeological evidence reveals that marine mammals were a primary food source for early Eskimo residents of the area, and that finfish and shellfish increased in importance over time.⁸⁷¹

With the purchase of Alaska by the U.S. in 1867, the commercial fishing industry began to grow in the Cook Inlet region. In 1883, a salmon saltery was opened by the Alaska Commercial Company (ACC) in Port Graham Bay. In 1911, a cannery was established at

⁸⁶⁸ Ibid.

⁸⁶⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁸⁷⁰ ASCG Incorporated. September 2006. *Chugachmiut Facilitated Integrated Resources Management Plan for Nanwalek and Port Graham*. Retrieved December 26, 2011 from <ftp://200-10-178-69.static.gci.net/>.

⁸⁷¹ Stanek, R. T. 1999. *Ethnographic Overview and Assessment for Nanwalek and Port Graham*. Draft. Division of Subsistence, Alaska Department of Fish and Game. Retrieved December 27, 2011 from <http://www.alaska.boemre.gov/>.

Seldovia, and the community of Port Graham was founded when a cannery was built there in 1912. Salmon was the primary focus of fishing and processing effort in early years of the fishing industry, and herring was also an important early product. A cannery was also built nearby at English Bay in 1920, which was the first to can king crab, known at that time as ‘spider crab.’⁸⁷²

In the early years of commercial fishing, Native residents of the Cook Inlet area typically lacked the resources to purchase expensive fishing vessels. Instead, they participated in commercial fishing as cannery workers, salmon trap attendants, and setnet fishers. Native residents were also unable to work a full summer season at the cannery, since they also needed to put up subsistence resources for their winter food supply. By the 1950s, villagers were able to afford to lease or purchase commercial fishing vessels and gear.⁸⁷³

Port Graham is located within Port Graham Bay, within the Southern district of the ADF&G-managed Lower Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts. Purse seine gear is used throughout the Lower Cook Inlet management area, while set gillnets are limited to the Kachemak Bay sub-district.⁸⁷⁴ In some years during the 2000-2010 period, one Cook Inlet ‘special harvest area’ (hatchery) permit was also held in Port Graham. Sockeye salmon escapement in the English Bay Lakes system reached a low of 5,000 adults in 1985, from a historical high of 40,000 fish. ADF&G closed the fishing season to allow the stock to recover. To meet the need, the Port Graham Salmon Enhancement Project began operations in 1990 at the Port Graham hatchery facility. Currently, eggs are taken from the English Bay Lakes system, incubated and reared at the Port Graham hatchery, and fry are released into Port Graham Bay.⁸⁷⁵ In 2011, the Cook Inlet Aquaculture Association coordinated cost recovery harvest of Port Graham Bay and other Cook Inlet hatchery returns.⁸⁷⁶

Port Graham is also located in Pacific Halibut Fishery Regulatory Area 3A, the Central Gulf of Alaska Sablefish Regulatory Area, and Federal Statistical and Reporting Area 630. Port Graham is eligible to participate in the Community Quota Entity Program and has set up the Port Graham CQE, Inc. in order to be able to purchase quota. As of Fall 2013, the Port Graham CQE, Inc. had not yet purchased any commercial halibut IFQ or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the non-profit had acquired seven halibut charter permits for lease to community members.⁸⁷⁷ The community is not eligible to participate in the Community Development Quota program.

In a survey conducted by the AFSC in 2011, community leaders reported that Port Graham’s annual population is “somewhat” driven by employment in the fishing sectors (e.g., processing plants, commercial fishing, subsistence fishing, recreation and sportfishing, and charter fishing). Community leaders also reported that “limited entry of all fisheries has had [a] negative impact on Port Graham’s economy.” They indicated that Port Graham participates in

⁸⁷² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁷³ Ibid.

⁸⁷⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁸⁷⁵ Ibid.

⁸⁷⁶ Cook Inlet Aquaculture Association. April 2011. *2011 Prospective Fish Sales*. Retrieved December 27, 2011 from <http://www.ciaa.net.org/>.

⁸⁷⁷ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

the fisheries management process in Alaska through a paid staff member that attends North Pacific Fisheries Management Council meetings and/or Board of Fisheries meetings, through a Port Graham representative that sits on regional fisheries advisory and/or working groups run by the ADF&G, and by relying on regional organizations (such as the Gulf of Alaska Coastal Communities Coalition, Southeast Conference, or Southwest Alaska Municipal Conference) to provide information on fisheries management issues.

*Processing Plants*⁸⁷⁸

Port Graham became the site of a cannery and wharf in 1909, according to the U.S. Geological Survey. In 1911, the Fidalgo Island Packing Company established a cannery, and Aleuts from Nanwalek moved to the community. The cannery burned in 1960. It was rebuilt in 1968 by Whitney/Fidalgo and sold to the village corporation in 1983. A pink salmon hatchery began operations in 1991. In January 1998, the hatchery and salmon processing plant were destroyed by fire. The hatchery and processing plant were rebuilt and re-opened in June 1999. The cannery continued to be the main economic activity in the community, employing residents of Nanwalek, as well. However, in a survey conducted by the AFSC in 2011, community leaders indicated that the processing plant is not currently operating.

Fisheries-Related Revenue

Given that Port Graham has no taxing authority and does not manage a community budget, no data were available regarding revenue received by Port Graham from fisheries-related taxes and fees (Table 3). However, in 2008, Port Graham received a grant in the amount of \$80,000 for work on a floating skiff dock.⁸⁷⁹

Commercial Fishing

Between 2000 and 2010, data regarding total pounds landed and ex-vessel value of 2010 landings were considered confidential due to the small number of participants. While the single halibut Commercial Fisheries Entry Commission (CFEC) permit held by a Port Graham resident was fished between 2000 and 2010, neither the Federal Fisheries Permits or salmon CFEC permits issued in Port Graham were recorded as fished. The halibut CFEC permit was issued for the statewide longline fishery using vessels under 60 feet. No other commercial fishing permits were held by local residents in 2010 (Table 4).

In 2010, four Port Graham residents held a combined 95,884 halibut quota shares and were allotted 10,365 pounds of halibut. While the number of quota shares allotted to participants remained the same between 2001 and 2010, the total poundage allotted has decreased slightly during that same time period (Table 6). Also in 2010, one Port Graham resident held 380 sablefish quota shares, with a 27 pound allotment. While the number of quota shares allotted to participants remained the same between 2001 and 2010, the pounds allotted have decreased slightly during that same time period (Table 7). There were no residents of Port Graham holding crab quota shares between 2005 and 2010 (Table 8).

⁸⁷⁸ See footnote 872.

⁸⁷⁹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Table 3. Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Port Graham: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue ⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total municipal revenue ⁵	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Port Graham: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0	0	0	0	0	0	0	0	0	0	0
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	1	1	1	1	1	1	1	1
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	0	0	1	1	1	1	1	1	1
	Fished permits	1	1	0	0	1	1	1	1	1	1	1
	% of permits fished	100%	100%	-	-	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	1	1	0	0	1	1	1	1	1	1	1
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Port Graham: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	15	11	11	11	12	11	9	9	8	8	6
	Fished permits	4	2	1	3	4	3	1	1	1	1	0
	% of permits fished	27%	18%	9%	27%	33%	27%	11%	11%	13%	13%	0%
	Total permit holders	15	11	12	13	15	13	9	9	8	8	6
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>18</i>	<i>14</i>	<i>11</i>	<i>11</i>	<i>13</i>	<i>12</i>	<i>10</i>	<i>10</i>	<i>9</i>	<i>9</i>	<i>7</i>
	<i>Fished permits</i>	<i>5</i>	<i>3</i>	<i>1</i>	<i>3</i>	<i>5</i>	<i>4</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>1</i>
	<i>% of permits fished</i>	<i>28%</i>	<i>21%</i>	<i>9%</i>	<i>27%</i>	<i>38%</i>	<i>33%</i>	<i>20%</i>	<i>20%</i>	<i>22%</i>	<i>22%</i>	<i>14%</i>
	<i>Permit holders</i>	<i>15</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>15</i>	<i>13</i>	<i>9</i>	<i>9</i>	<i>8</i>	<i>8</i>	<i>6</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Port Graham: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Port Graham ²	Total Net Pounds Landed In Port Graham ^{2,5}	Total Ex-Vessel Value Of Landings In Port Graham ^{2,5}
2000	12	1	0	11	5	1	--	--
2001	11	1	0	11	6	4	--	--
2002	6	0	1	7	3	0	0	\$0
2003	9	0	0	10	7	0	0	\$0
2004	10	0	1	12	9	0	0	\$0
2005	3	2	1	9	7	2	--	--
2006	1	0	0	8	5	0	0	\$0
2007	0	0	0	7	5	0	0	\$0
2008	5	0	0	7	6	0	0	\$0
2009	7	0	0	8	7	0	0	\$0
2010	2	0	0	8	6	0	0	\$0

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Port Graham: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	3	22,965	2,273
2001	4	95,884	11,351
2002	4	95,884	11,736
2003	4	95,884	11,733
2004	4	95,884	12,993
2005	4	95,884	13,207
2006	4	95,884	13,067
2007	4	95,884	13,585
2008	4	95,884	12,558
2009	4	95,884	11,252
2010	4	95,884	10,365

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Port Graham: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	1	380	32
2002	1	380	32
2003	1	380	38
2004	1	380	43
2005	1	380	43
2006	1	380	38
2007	1	380	37
2008	1	380	33
2009	1	380	29
2010	1	380	27

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Port Graham: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Port Graham: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	0	0	0	--	0	0	0	0	0
Finfish	--	--	0	0	0	--	0	0	0	0	0
Halibut	--	--	0	0	0	--	0	0	0	0	0
Herring	--	--	0	0	0	--	0	0	0	0	0
Other Groundfish	--	--	0	0	0	--	0	0	0	0	0
Other Shellfish	--	--	0	0	0	--	0	0	0	0	0
Pacific Cod	--	--	0	0	0	--	0	0	0	0	0
Pollock	--	--	0	0	0	--	0	0	0	0	0
Sablefish	--	--	0	0	0	--	0	0	0	0	0
Salmon	--	--	0	0	0	--	0	0	0	0	0
<i>Total²</i>	--	--	0	0	0	--	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
Halibut	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
Herring	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
Other Groundfish	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
Other Shellfish	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
Pacific Cod	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
Pollock	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
Sablefish	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
Salmon	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	--	--	\$0	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Confidential data are not included in annual totals.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Port Graham Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	145,338	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>145,338</i>	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$131,853	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$131,853</i>	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Confidential data are not included in annual totals.

Recreational Fishing

According to the ADF&G’s Statewide Harvest Survey, coho salmon, pink salmon, rockfish, Pacific cod, Pacific halibut, Dolly Varden, and chum salmon are caught by private anglers in Port Graham. According to a survey conducted by the AFSC in 2011, community leaders indicated that the following saltwater species are targeted by recreational fishermen that use boats based in Port Graham: pink salmon, chum salmon, Chinook/king salmon, coho/silver salmon, sockeye/red salmon, halibut, rockfish, crab, shrimp, and clams.

Port Graham lies along the outskirts of Kachemak Bay; a very popular area for marine sportfishing. Despite this, sportfishing activity within the community is relatively low. There are very few active sport fish guide businesses, and relatively few sportfishing licenses sold within the community. This may be attributed to a lack of visitor infrastructure and high travel costs.

In 2010, there was one locally registered sport fish guide business in operation, and three locally held sport fish guide licenses. A total of 44 sportfishing licenses were sold to residents of Port Graham (irrespective of the location of the point of sale). In comparison, a total of 61 sport fish licenses were sold in Port Graham, indicating the potential that visitors to Port Graham are participating in recreational fishing activities. Between 2000 and 2010, the ratio of saltwater angler days fished in the Kenai Peninsula region by private anglers that are non-Alaska residents has increased slightly. In 2000, approximately 23% of the total saltwater angler days fished in this region were fished by non-Alaska residents, while in 2010 non-Alaska residents accounted for 28% of the total saltwater angler days fished. Between 2000 and 2010, the number of freshwater angler days fished by both Alaska residents and non-Alaska residents in the Kenai Peninsula region decreased, though the proportion of angler days fished by non-Alaska residents increased during this time. In 2000, approximately 42% of the total freshwater angler days fished in this region were fished by non-Alaska residents, while in 2010 non-Alaska residents accounted for 47% of the total freshwater angler days fished (Table 11).

Table 11. Sport Fishing Trends, Port Graham: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Port Graham²
2000	0	0	36	45
2001	0	0	54	57
2002	0	0	56	63
2003	0	0	31	37
2004	0	0	30	40
2005	0	0	37	42
2006	0	1	32	31
2007	0	0	42	55
2008	0	0	36	51
2009	0	3	36	58
2010	1	3	44	61

Table 11 cont'd. Sport Fishing Trends, Port Graham: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	42,157	139,737	242,224	333,118
2001	28,245	69,053	202,305	269,047
2002	26,479	83,335	199,512	299,839
2003	35,299	80,368	205,810	273,743
2004	39,009	83,478	251,002	297,877
2005	37,309	91,489	281,942	270,164
2006	33,988	76,100	229,520	268,434
2007	31,105	89,061	281,832	313,012
2008	28,780	70,285	234,826	295,184
2009	24,959	77,945	203,584	299,194
2010	28,294	71,555	222,375	247,239

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Many residents of Port Graham supplement their incomes and diet with subsistence resources.⁸⁸⁰ According to a survey conducted by the AFSC in 2011, community leaders indicated that king salmon, halibut, and seals/sea lions are the three most important subsistence marine or aquatic resources to the residents of Port Graham. There is considerable harvest of halibut for subsistence by residents in Port Graham that hold a valid Subsistence Halibut Registration Certificate (SHARC) card issued by NMFS (Table 14). Of the marine species documented by the ADF&G Division of Subsistence, salmon, marine mammals, marine invertebrates, halibut, and non-salmon fish make up the majority of targeted subsistence species for residents of Port Graham involved in subsistence fishing.

In 2008, the last year for which data are available, the total subsistence harvest of salmon appeared to decrease by 47% from the previous year after a few years of relatively stable harvest levels. The number of subsistence salmon permits issued to Port Graham households fell dramatically from 2005 to 2006 (Table 13). From 2003 to 2010, the pounds of halibut harvested for subsistence also decreased by nearly half. In 2010, an estimated 5,271 pounds of halibut was harvested on 18 SHARC, compared to an estimated 11,454 pounds harvested on 35 in 2003. The number of SHARC held in the community remained relatively stable, at an average of 52 in any

⁸⁸⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

given year between 2003 and 2010. However, the number of SHARC fished declined significantly between 2009 and 2010 from 35 to 18, despite a yearly average of 31 active permits (Table 14). Port Graham residents harvested a variety of marine mammal species for subsistence purposes between 2000 and 2010. According to data reported by the U.S. Fish and Wildlife Service, sea otter harvest varied from one to six animals harvested per year (for year in which data were reported). According to data reported by ADF&G, an average of three sea lions and 39 harbor seals were harvested per year (for those years in which data were reported) (Table 15).

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Port Graham during this period: black (small) chitons, butter clams, limpets, octopus, oyster, Pacific littleneck clams (steamers), red (large) chitons, sea urchin, shrimp, snails, unknown cockles, unknown mussels, and whelk. Marine mammals reported as harvested for subsistence use included harbor seal and Steller sea lion. Non-salmon fish reported as harvested for subsistence use included: black rockfish, Dolly Varden, eel, eulachon (hooligan candlefish), herring, herring roe/unspecified, herring sac roe, lingcod, Pacific cod (gray), Pacific tom cod, rainbow trout, red rockfish, sablefish (black cod), sea bass, starry flounder, steelhead, unknown greenling, unknown Irish lord, unknown shark, and unknown sole.⁸⁸¹

Additional Information

The Port Graham region has some of the most unique tourism areas in the state. High mountain vistas, tidewater and massive glaciers, deep fjords, protected bays and inlets, abundance of wildlife and access from major population centers make this region ideally suited for the tourism industry.⁸⁸²

⁸⁸¹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁸⁸² Port Graham Corporation (n.d.). *Our Lands*. Retrieved November 23, 2011 from <http://www.portgrahamcorp.com/our-lands.html>.

Table 12. Subsistence Participation by Household and Species, Port Graham: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	85%	95%	34%	100%	37%	466.35
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Port Graham: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	35	241	483	252	355	784	n/a	n/a
2001	n/a	15	104	32	57	20	176	n/a	n/a
2002	n/a	23	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	16	n/a	n/a	n/a	n/a	n/a	1,873	7576
2004	55	55	260	118	461	323	557	n/a	n/a
2005	48	48	267	52	51	349	202	n/a	n/a
2006	14	14	164	89	21	93	344	n/a	n/a
2007	14	14	164	89	21	93	344	n/a	n/a
2008	18	18	77	22	n/a	36	550	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Port Graham: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	52	35	11,454
2004	57	42	12,241
2005	52	18	16,358
2006	50	30	6,194
2007	59	36	8,493
2008	48	30	9,097
2009	47	35	6,426
2010	47	18	5,271

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Port Graham: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	4	n/a	n/a	2	40	n/a
2001	n/a	6	n/a	n/a	n/a	39	n/a
2002	n/a	n/a	n/a	n/a	n/a	39	n/a
2003	n/a	3	n/a	n/a	1	45	n/a
2004	n/a	n/a	n/a	n/a	7	44	n/a
2005	n/a	n/a	n/a	n/a	n/a	63	n/a
2006	n/a	n/a	n/a	n/a	n/a	51	n/a
2007	n/a	1	n/a	n/a	n/a	8	n/a
2008	n/a	6	n/a	n/a	3	17	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Seldovia (*sell-DOAV-ee-uh*)

People and Place

*Location*⁸⁸³



Seldovia and Seldovia Village are both discussed in this profile, given their close proximity to one another. The communities are located on the Kenai Peninsula on the south shore of Kachemak Bay, a 15-minute flight across the Bay from Homer. Seldovia Village is located just northeast of the City of Seldovia. Both are in the Seldovia Recording District, the Kenai Peninsula Census Area, and the Kenai Peninsula Borough. The City of Seldovia encompasses 0.4 square miles of land and 0.2 square miles of water.

*Demographic Profile*⁸⁸⁴

In 2010, there were a total of 420 residents in Seldovia and Seldovia Village combined. Seldovia, with 255 residents, ranked 175th of 352 total Alaskan communities with recorded populations that year, while Seldovia Village (165 residents) ranked 214th. According to Alaska Department of Labor population estimates, between 2000 and 2009, the combined population of permanent residents in Seldovia and Seldovia Village decreased by 5.35%. The average annual growth rate during this period was -0.39%, indicating a slow decline. However, the combined population of the two communities increased overall between 1990 and 2010. The change in population from 1990 to 2010 is provided in Table 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that the annual, year-round population of Seldovia is less than 300 people, while estimating that more than 120 people come to Seldovia each year as seasonal workers or transients from May through September.

In 2010, the majority of residents of Seldovia and Seldovia Village identified themselves as White (72.5%). Other ethnic groups present in Seldovia and Seldovia Village that year include American Indian and Alaska Native (13.7%), two or more races (11.4%), Hispanic or Latino (3.9%), Asian (1.2%), and Black or African American (1.2%). The percentage of the population identifying themselves as White decreased slightly between 2000 and 2010, as did the percentages of the population identifying themselves as American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, and some other race. In contrast, the percentage of the population identifying themselves as two or more races, Asian, Black or African American, and Hispanic or Latino increased slightly between 2000 and 2010. Changes in racial and ethnic composition between 2000 and 2010 are shown in Figure 1.

⁸⁸³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

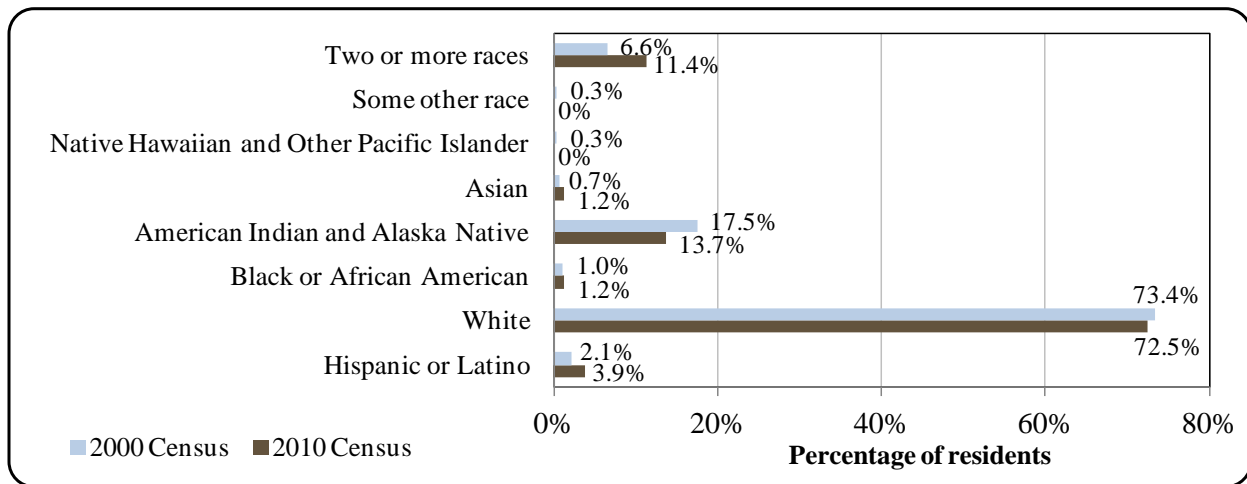
⁸⁸⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Seldovia and Seldovia Village from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	316	-
2000	430	-
2001	-	435
2002	-	449
2003	-	430
2004	-	423
2005	-	391
2006	-	413
2007	-	423
2008	-	420
2009	-	407
2010	420	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Seldovia and Seldovia Village: 2000-2010 (U.S. Census).

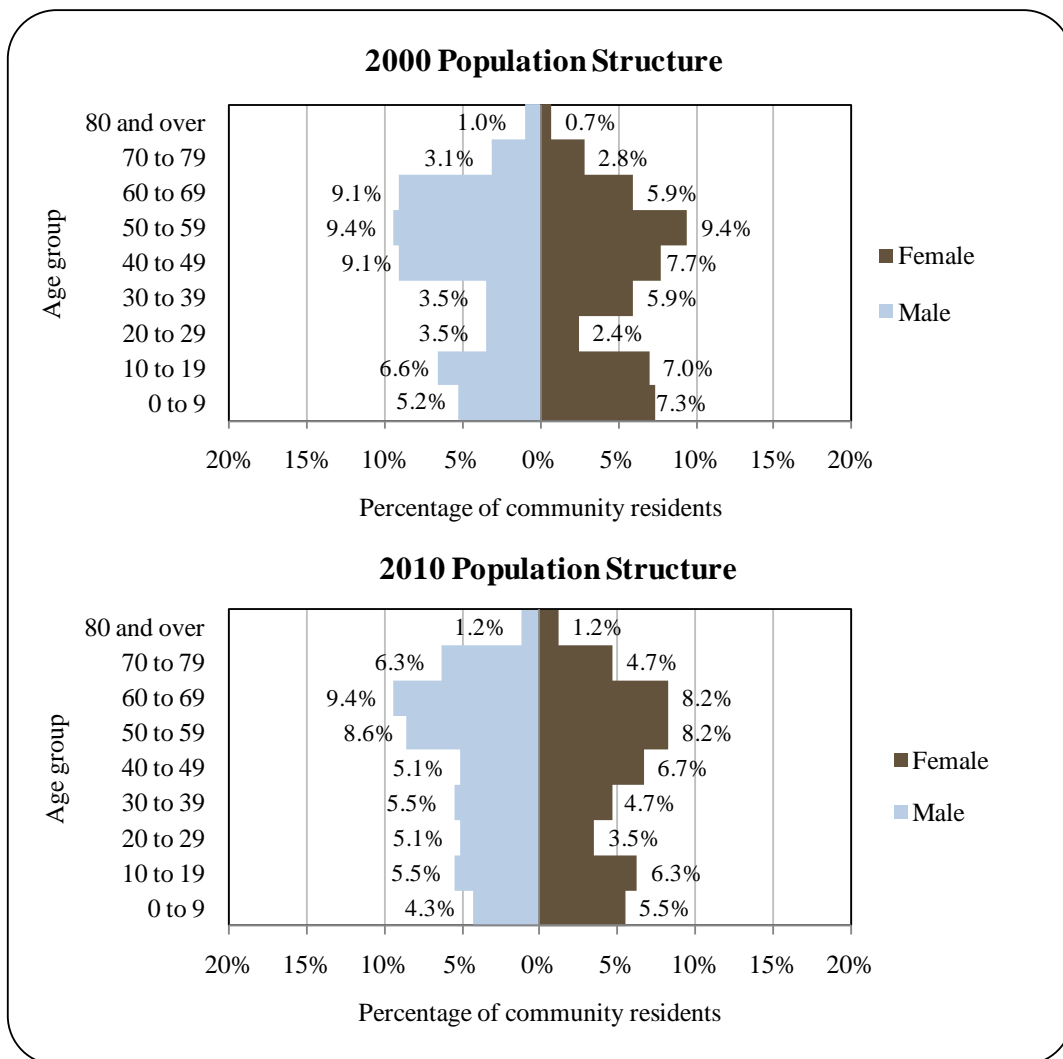


In 2010, the average household size in Seldovia was 2.11, a decrease from 2.40 in 1990 and 2.13 in 2000. In Seldovia Village in 2010, the average household size was 2.76, an increase from 2.32 in 2000 (data on household size were not available for 1990 for Seldovia Village). The combined total number of households in Seldovia and Seldovia Village decreased from 196 in 2000 to 158 in 2010. Of the total 377 housing units surveyed in Seldovia and Seldovia Village for the 2010 Decennial Census, 117 were owner-occupied, 41 were renter-occupied, and 219

were vacant. Throughout this period no residents of Seldovia or Seldovia Village were reported to be living in group quarters.

In 2010, the combined gender makeup in Seldovia and Seldovia Village was 53% male and 47% female, similar to the state as a whole (52% male, 48% female). The median age was estimated to be 48.2 years for Seldovia and 48.5 years for Seldovia Village, both higher than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010 the greatest fell within the age group 50-69 years old, with the next largest percentage in the age group 30-49 years old. Relatively few residents were age 80 and over in 2010. The overall combined population age structure of Seldovia and Seldovia Village is shown in Figure 2.

Figure 2. Population Age Structure in Seldovia Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁸⁸⁵ 89.3% of residents aged 25 and over in Seldovia and Seldovia Village were estimated to hold a high school diploma or higher, compared to 90.7% of Alaskan residents overall. Also in 2010, for Seldovia and Seldovia Village combined, 6.2% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 4.4% of residents were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 45.3% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 21.3% of residents were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 5% were estimated to hold an Associate's degree, compared to 8% of Alaskan residents overall; 14.5% were estimated to hold a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 3.3% were estimated to hold a graduate or professional degree, compared to 9.5% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*⁸⁸⁶

The Seldovia area was historically a meeting and trading place for a mix of native peoples, including the Koniags from Kodiak Island, Aleuts from the Aleutian Islands and Alaska Peninsula, the Chugach from Prince William Sound, and the Tanaina Kenaitze people of Cook Inlet.⁸⁸⁷ The Kenaitze who lived at Seldovia called it Chesloknu. The community's modern name is derived from the Russian phrase "Zaliv Seldevoy," meaning 'herring bay'. Russian settlers began to arrive in the late 1700s, following discovery of a coal mine eight miles south of the village. The mine was an important source of coal for the Russian fleet and settlements.⁸⁸⁸

In 1869, shortly after the sale of Alaska to the United States, a trading post was established in Seldovia which operated until 1882. Leading up to the turn of the century, the local economy was largely based on fur trapping, timber, and fish processing. In the early 1900s, Seldovia became an important gold rush transportation point. The port was ice-free throughout the year, providing access to steamers loaded with prospectors arriving from the "lower 48." From Seldovia, the prospectors boarded smaller steamers which transported them to the gold fields. A larger dock was constructed in 1926, providing improved moorage for large ocean-going steamers.⁸⁸⁹ A post office had been established in 1898, and the City would be incorporated in 1945.⁸⁹⁰

Seldovia also emerged as an early hub of the Cook Inlet seafood processing industry.⁸⁹¹ The first salmon cannery was built in 1911, followed by several herring processing salteries.⁸⁹²

⁸⁸⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸⁸⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁸⁷ Seldovia Village Tribe. (n.d.). *Our Story*. Retrieved March 21, 2013 from http://svt.org/our_story.html.

⁸⁸⁸ City of Seldovia. (2005). *Seldovia Comprehensive Plan*. Retrieved March 14, 2013 from <http://www.commerce.state.ak.us/dca/plans/Seldovia-CP-2005.pdf>.

⁸⁸⁹ Ibid.

⁸⁹⁰ See footnote 886.

⁸⁹¹ Ibid.

⁸⁹² See footnotes 887 and 888.

Seldovia fishermen also experimented with harvest and processing of king, Dungeness, and Tanner crab in the 1920s and 1930s, and Seldovia was the center of the shrimp processing industry in the region until 1964.⁸⁹³

The City of Seldovia was devastated by the Good Friday Earthquake of 1964, which destroyed three fish-processing plants and other business infrastructure, and caused the land to drop four-six vertical feet.⁸⁹⁴ This change in elevation allowed the ocean to inundate the boardwalk and flood waterfront buildings at high tide. The town had to be rebuilt.⁸⁹⁵ This loss of infrastructure crippled Seldovia's seafood processing industry, and Homer emerged to fill the role of the local fishing center.⁸⁹⁶ Homer also gained importance as a transportation hub in the region, following completion of a road linking Homer to Anchorage.⁸⁹⁷

Today, a majority of the residents of Seldovia and Seldovia Village are White, along with a vibrant native community. Native residents are a mix of Dena'ina Indian and Aleut and Sugpiaq Eskimo (also known as Alutiiq). Commercial fishing and subsistence harvest of wild resources are integral aspects of the local culture.⁸⁹⁸ Seldovia has an active commercial fishing fleet, as well as a well-developed charter fishing fleet.⁸⁹⁹

Natural Resources and Environment⁹⁰⁰

Seldovia is located in a maritime climate zone, dominated by the moderating effects of a marine environment and characterized by high humidity, precipitation and fog cover as well as warm winters and cool summers. Winter temperatures range from 12 to 21 °F, and summer temperatures vary from 48 to 65 °F.⁹⁰¹ Average annual precipitation is 34.5 inches.⁹⁰² The Kenai Mountains provide a dramatic backdrop to the community, with mountains rising to 3,000 feet above sea level within several miles of the coastline. Lowlands are covered in a forest of Sitka spruce, with alder and brush at middle elevations and alpine tundra along high ridgelines.⁹⁰³

Protected areas near Seldovia include Kachemak Bay State Park and State Wilderness Park, Kenai Fjords National Park, and the Kenai Wilderness. Seldovia is located approximately 7 miles from the western boundary of Kachemak Bay State Park and State Wilderness Park, which are Alaska's first State Park, and only Wilderness Park, respectively. Together, they are made up of approximately 400,000 acres of mountains, glaciers, and forests. Adjacent to these land-based protections, Kachemak Bay and Fox River Flats have both been designated as Critical Habitat

⁸⁹³ Field, C. and C. Walker. (2003). *A Site Profile of the Kachemak Bay Research Reserve: A Unit of the National Estuarine Research Reserve System*. Published by the Kachemak Bay Research Reserve. Retrieved March 21, 2013 from http://nerrs.noaa.gov/doc/pdf/reserve/kba_siteprofile.pdf.

⁸⁹⁴ See footnotes 888 and 893.

⁸⁹⁵ Ibid.

⁸⁹⁶ City of Homer. 2008. *Comprehensive Plan 2008 (Adopted 2010)*. Retrieved October 8, 2012 from <http://www.cityofhomer-ak.gov/planning/comprehensive-plan-2008-adopted-2010>.

⁸⁹⁷ See footnote 887.

⁸⁹⁸ See footnote 886.

⁸⁹⁹ See footnote 888.

⁹⁰⁰ Ibid.

⁹⁰¹ See footnote 886.

⁹⁰² Precipitation and snowfall information retrieved December 27, 2011 from <http://www.weatherbase.com/>.

⁹⁰³ Alaska Dept. of Natural Resources. (2001). *Kenai Area Plan: South Side Kachemak Bay and Chugach Islands*. Retrieved March 21, 2013 from http://dnr.alaska.gov/mlw/planning/areaplans/kenai/pdfs/chap_3_region_9.pdf.

Areas (CHAs) under Alaska Statutes, Title 16,⁹⁰⁴ protecting habitat for sea otters, seals, porpoises, and whales. Visitors to the park enjoy fishing, boating, wildlife viewing, kayaking, hiking, camping, and mountain sports.⁹⁰⁵ In addition to their status as CHAs, Kachemak Bay and the Fox River Flats were designated as part of the National Estuarine Research Reserve System in 1999, a network of 28 estuaries around the U.S. representing different biogeographic regions that are used for long-term research, water-quality monitoring, education, and coastal stewardship. It is the only Research Reserve located in the State of Alaska.⁹⁰⁶

Approximately 25 miles east of Seldovia lies the western border of Kenai Fjords National Park. This National Park was established in 1980 to “maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers and coastal fjords and islands.” Fifty-six percent of the park is covered by ice. Animals living in the mountains, the shores, and the fjords of the National Park include black bear, brown bear, moose, mountain goat, sea otter, Steller sea lion, harbor seal, Dall’s porpoise, Pacific white-sided dolphin, orca, minke whale, humpback whale, fin whale, and birds including bald eagles, puffins, murre, steller’s jay, black-billed magpie, peregrine falcon, and marbled murrelet.⁹⁰⁷ Portions of both Kenai Fjords National Park and the Kachemak Bay State Park and State Wilderness Park are included in the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.⁹⁰⁸

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt, and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures, and soil liquefaction.⁹⁰⁹

The Kenai Peninsula and Cook Inlet oil and gas industry is very active, with a number of new wells being drilled each year. As of 2010, there were 28 producing oil and gas fields on and off shore in the area. Oil production has declined from a peak in 1970 of 230,000 barrels per day. In 2010, only 12,000 barrels were produced per day. Cook Inlet natural gas production has also been declining in recent years.⁹¹⁰

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in the Seldovia area as of March 2013.⁹¹¹

⁹⁰⁴ Alaska Statutes, Title 16. *AS 16.20.590* and *AS 16.20.580*. Retrieved February 8, 2012 from <http://touchngo.com/lglcntr/akstats/Statutes/Title16/Chapter20.htm>.

⁹⁰⁵ Alaska Dept. of Natural Resources (2009). *Kachemak Bay State Park and State Wilderness Park*. Retrieved January 27, 2012 from <http://dnr.alaska.gov/parks/units/kbay/kbay.htm>.

⁹⁰⁶ National Estuarine Research Reserve System. (n.d.). *Kachemak Bay Research Reserve website*. Retrieved June 15, 2012 from <http://www.nerrs.noaa.gov/Reserve.aspx?ResID=KBA>.

⁹⁰⁷ Kenai Fjords National Park website (2010). Retrieved December 27, 2011 from <http://www.nps.gov/kefj/>.

⁹⁰⁸ Wilderness.net (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

⁹⁰⁹ Kenai Peninsula Borough (2010). *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

⁹¹⁰ Resource Development Council (n.d.). *Alaska’s Oil and Gas Industry*. Retrieved January 26, 2012 from <http://www.akrdc.org/issues/oilgas/overview.html>.

⁹¹¹ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 5, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy⁹¹²

In a survey conducted by the AFSC in 2011, community leaders reported that Seldovia's economy relies on natural resource-based industries, specifically, fishing, ecotourism, and sport hunting and fishing. Commercial fishing is an important driver of the economy, and the shellfish farming industry is also active.⁹¹³

Based on the 2006-2010 ACS,⁹¹⁴ in 2010, the median per capita income in Seldovia was estimated to be \$28,892 and the median household income was estimated to be \$48,750, compared to \$23,669 and \$45,313 in 2000, respectively. However, when inflation is taken into account by converting the 2000 values to 2010 dollars,⁹¹⁵ the real median per capita income in 2000 was \$31,124 and the real median household income was \$59,586, indicating an actual decrease in both values between 2000 and 2010. In 2010, Seldovia ranked 68th out of 305 Alaskan communities with per capita income that year, and 106th out of 299 Alaskan communities with household income data.

For Seldovia Village, per capita income in 2010 was estimated to be \$25,311 and the median household income was estimated to be \$48,750, compared to \$21,396 and \$31,250 in 2000, respectively. However, again taking inflation into account by converting the 2000 values to 2010 dollars,⁹¹⁶ the real per capita income in 2000 was \$28,135 and the real median household income in 2000 was \$41,903. Therefore, while per capita income decreased between 2000 and 2010 for Seldovia Village, the median household income increased during this period. In 2010, Seldovia Village ranked 103rd out of 305 Alaskan communities with per capita income that year, and 140th out of 299 Alaskan communities with household income data.

The small population size of Seldovia and Seldovia Village may have prevented the ACS from accurately portraying economic conditions.⁹¹⁷ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Seldovia in 2010 is \$12,140 and the estimate for Seldovia Village in 2010 is \$12,264. Both of these values provide support for an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁹¹⁸ This is reflected in the fact that Seldovia met the Denali Commissions criteria as a “distressed community” in 2010, and Seldovia Village was also recognized as a distressed community (using a plus/minus 3%

⁹¹² Unless otherwise noted, all monetary data are reported in nominal values.

⁹¹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹¹⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁹¹⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁹¹⁶ Ibid.

⁹¹⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁹¹⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

formula). These listings prioritize the communities for economic assistance.⁹¹⁹ It should be noted that both ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers in Seldovia and Seldovia Village combined in 2010 was estimated to be employed in the private sector (54.6%), along with 28.4% in the public sector, 13.5% estimated to be self-employed, and 2.1% estimated to be unpaid family workers. Based on the ACS, in the same year, 67.1% of the population aged 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 1.4%, compared to the statewide unemployment rate of 5.9%. Approximately 10.8% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Seldovia and Seldovia Village are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Seldovia and Seldovia Village. A more accurate estimate is based on the ALARI database, which indicates that the combined unemployment rate for Seldovia and Seldovia Village in 2010 was 10.3%.

Out of 278 people aged 16 and over that were estimated to be employed in the combined civilian labor force for both communities in 2010, the greatest percentages worked in arts, entertainment, recreational, accommodation and food services (19.8%), professional scientific, management, administration, and waste management (18%), retail trade (12.6%), and agriculture, forestry, fishing, hunting, and mining (12.2%) industries. Compared to 2000, the a greater percentage of the workforce was estimated to work in public administration and arts, entertainment, recreation, accommodation and food service industries in 2010, and there were declines in the percentages estimated to work in education, health care and social assistance as well as construction, manufacturing and transportation, warehousing and utilities industries. Information about employment by industry is broken down in Figure 3. It is important to note that the number of individuals employed in the fishing industry may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

From the perspective of occupation, the greatest percentage of the Seldovia and Seldovia Village combined workforce was estimated to be employed in service occupations in 2010 (36.7% of the workforce). This represents a significant shift from 2000, when service occupations made up the smallest percentage of the workforce, and the greatest percentages of workers were estimated to be employed in management/professional, sales/office, and natural resource/construction/maintenance occupations. From among the 49 individuals estimated to be employed in natural resource, construction, and maintenance occupations in 2010 (17%), 17 were specifically estimated to be employed in farming, fishing, and forestry occupations, accounting for 6.1% of the total workforce that year. Figure 3 shows employment by industry and Figure 4 breaks employment down by occupation.

⁹¹⁹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Figure 3. Local Employment by Industry in 2000-2010, Seldovia and Seldovia Village (U.S. Census).

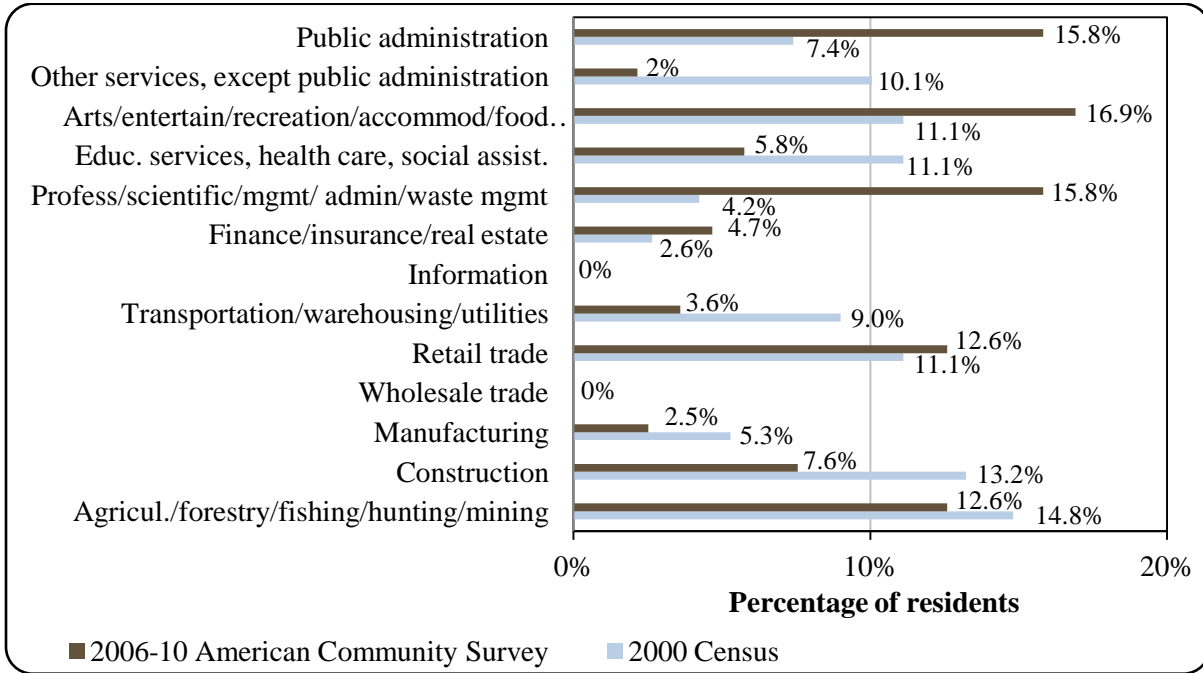
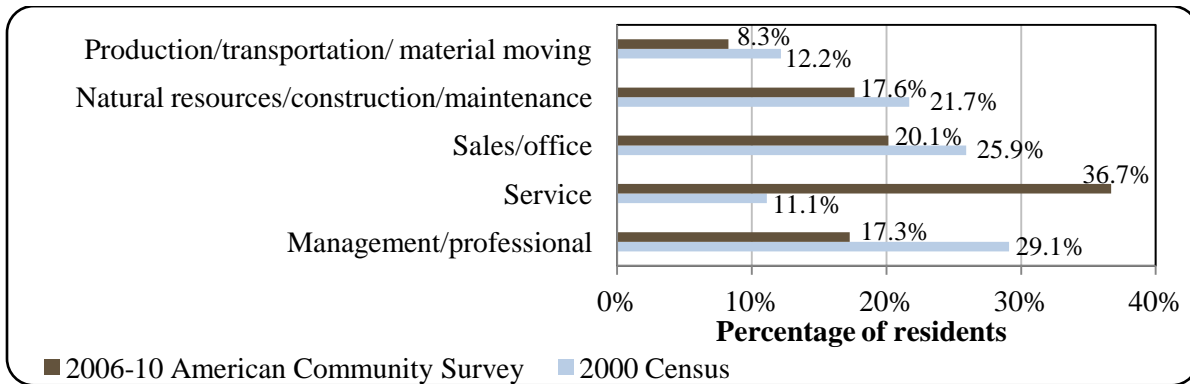


Figure 4. Local Employment by Occupation in 2000-2010, Seldovia and Seldovia Village (U.S. Census).



Governance

Seldovia is a 1st Class City located in the Kenai Peninsula Borough. The City has a Strong Mayor form of government, with a seven-person city council including the mayor, a nine-person school board, five-person planning commission, and various municipal employees. The City of Seldovia administers a varying 2% - 4.5% sales tax, and the Borough administers an additional 3% sales tax.⁹²⁰

⁹²⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Seldovia from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$965,213	\$87,493	\$22,803	n/a
2001	\$927,529	\$109,775	\$22,000	n/a
2002	\$921,712	\$106,740	\$21,995	\$2,000,000
2003	\$1,318,162	\$119,192	\$22,091	n/a
2004	\$1,160,612	\$112,690	n/a	n/a
2005	\$892,097	\$114,487	n/a	n/a
2006	\$1,600,220	\$111,231	n/a	n/a
2007	\$3,409,906	\$144,445	n/a	\$1,555,000
2008	\$1,071,383	\$174,460	n/a	n/a
2009	\$1,267,702	\$137,767	\$110,488	\$70,000
2010	\$1,462,486	\$110,389	\$109,290	\$1,000,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Seldovia Village is also located in the Kenai Peninsula Borough, but is an unincorporated community. As a result, Seldovia Village does not maintain a municipal budget with community revenue and expenditures. Therefore, revenue information presented in Table 2 relates to revenue streams associated with the City of Seldovia only.

In addition to municipal tax revenues, locally-generated income sources in Seldovia during the 2000-2010 period included lease and rental fees, permits and fines. In addition, special revenue sources came from charges for services including water, wastewater, the fire department, and fees for use of the dock, small boat harbor, and boat haul out facility. Outside revenue sources included shared funds and grants from state and federal source. Shared revenue sources included the State Revenue Sharing program (over \$20,000 per year from 2000 to 2003), the Community Revenue Sharing program (over \$100,000 each year in 2009 and 2010), the SAFE Communities program (public safety, utilities, infrastructure, etc.), the electric and telephone revenue share, and a fisheries business tax (see the *Fisheries-Related Revenue* section for more information).

State capital project grants were received throughout the decade for projects including water and sewer improvements, city office improvement, harbor improvements, equipment purchase, road and trail maintenance, and state grants were also received for municipal energy assistance, among others. Federal funding was received in some years from the COPS program (Community-Oriented Policing Services). Federal capital project grants were also received for water and sewer improvements and for road and trail maintenance. Fisheries-related grants received by the City of Seldovia during the 2000-2010 period included grants for development of

a commercial/visitor/dock, Kachemak Bay Ferry and docking facilities, a port economic development study, smolt stocking for Seldovia slough, purchase of a boat haul-out trailer, and harbor design and construction. It is important to note that the higher than average total municipal revenue reported by the City of Seldovia in 2007 can be largely be attributed to the \$2,276,093 total funds received toward harbor improvements that year.

The community of Seldovia was included under the Alaska Native Claims Settlement Act (ANCSA), and a federally recognized Native tribe is present. The authorized traditional authority, recognized by the Bureau of Indian Affairs (BIA), is the Seldovia Village Tribe. The local Native village corporation is the Seldovia Native Association, Inc., which manages 181,109 acres of land. The regional Native corporation to which the Tribe belongs is the Cook Inlet Region, Inc. (CIRI).⁹²¹

The Seldovia Village Tribe is also a member of the Cook Inlet Tribal Council (CITC), a tribal non-profit organization headquartered in Anchorage. CITC strives to work together with Native people of the Cook Inlet region, and all Natives living in Anchorage, to help them develop talents and strengths, and become successful and self-sufficient individuals, families, and communities, with the goal of advancing the overall economic, social and cultural development of the people of the Chugach Region.⁹²² CITC is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁹²³ CITC offers educational programs, job training, business assistance, youth programs, drug and alcohol treatment, and other assistance to families and individuals.⁹²⁴

The closest regional offices of the Alaska Department of Natural Resources (DNR), the Alaska Department of Fish and Game (ADF&G), and the National Marine Fisheries Service (NMFS) are located in Homer. The nearest offices of the Alaska Department of Commerce, Community, and Economic Development, the Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

A state-owned 1,845 ft long by 60 ft wide gravel airstrip and a seaplane base are available in Seldovia. Direct flights are provided to Homer. The state ferry system connects Seldovia to Homer, where the Sterling Highway provides road access northward towards Anchorage. Water taxis from Homer also service the community. A harbor, boat washdown, and boat haul-out facility are available. Round-trip air service is available from Homer, which is a 15-minute flight from Seldovia. Jakolof Bay road connects Seldovia Village to the City of Seldovia. Residents of Seldovia Village use the airport, seaplane base, and harbor located in

⁹²¹ Ibid.

⁹²² Cook Inlet Tribal Council. (n.d.). *What We Do*. Retrieved February 23, 2012 from <http://www.citci.com/>.

⁹²³ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁹²⁴ See footnote 922.

Seldovia.⁹²⁵ Air service from Seldovia to Homer is available for a set rate of \$105 round-trip,⁹²⁶ and round-trip airfare from Homer to Anchorage in June 2012 was \$255.⁹²⁷

*Facilities*⁹²⁸

Water is derived from the Fish Creek Reservoir and is then treated, stored in a tank, and distributed via water mains. Sewage is piped to a community septic tank for primary treatment, then discharged to an ocean outfall. One-hundred-seventy-five (175) homes and facilities are served by the system; all homes are completely plumbed. Individual wells have been unable to produce potable water. A borough-operated landfill is available. Individual wells and on-site septic tanks serve households in Seldovia Village.

Law enforcement is provided by the City Police Department and by state troopers in Homer. Fire and rescue services are provided by Seldovia Volunteer Fire and Rescue and the Kasitna Bay Area Fire. Seldovia has a court and a city jail, and the Boys and Girls Club operates a youth center. The City also operates a community hall, and Seldovia has public and school libraries.

In a survey conducted by the AFSC in 2011, community leaders reported that Seldovia has 5000 ft of dock space available for permanent vessels to moor, as well as 576 ft of dock space available for transient vessels. According to the same survey, Seldovia is capable of handling vessels up to 150 ft in length, including rescue vessels and ferries. Community leaders also indicated that Seldovia has a fish cleaning station, haul-out facilities, a U.S. Environmental Protection Agency-certified boat cleaning station, broadband internet access, a diesel powerhouse, and a landfill/solid waste site. Community leaders noted that projects planned for the next 10 years include improvements to existing dock structure, electricity and water serving the dock, and water and sewer pipelines.

*Medical Services*⁹²⁹

Medical services are provided by the Seldovia Medical Clinic, which is owned by the City and is privately operated. Alternate health care is provided by Seldovia Volunteer Fire and Rescue. The nearest hospital is located in Homer.

*Educational Opportunities*⁹³⁰

The Susan B. English School in Seldovia provides instruction to students from Seldovia and Seldovia Village in grades kindergarten through 12th grade. In 2011, the school had 54 students and 5 teachers.

⁹²⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹²⁶ Airfare was obtained from the travel website <http://www.homerair.com/Rates>. Retrieved on February 16, 2012.

⁹²⁷ Airfare was obtained from the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

⁹²⁸ See footnote 925.

⁹²⁹ Ibid.

⁹³⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Cook Inlet region was historically occupied by two distinct groups, the Kachemak tradition Eskimos and the Dena'ina Athabaskan Indians. In addition, portions of lower Cook Inlet below Seldovia were (and still are) occupied by Alutiiq, or Aleut, people. At the time of European contact in the late 1700s, the Dena'ina living in Kachemak Bay and other areas of Cook Inlet relied on subsistence harvest of a wide variety of marine and terrestrial resources. With the exception of Chinook salmon, which were not readily available to the Kachemak Bay Dena'ina, all five species were used throughout Cook Inlet. In addition, freshwater species including Dolly Varden were taken by alder drag nets.⁹³¹

Today, Seldovia is a commercial fishing village. Shellfish farming also occurs, and subsistence harvest of marine resources is an important aspect of the local culture.⁹³² Between 2000 and 2010, Seldovia residents were active in a wide range of commercial fisheries, with the greatest participation in fisheries for salmon, groundfish, and halibut. A number of residents also participated in commercial fisheries for sablefish, herring, and crab during the period.

Commercial fisheries developed in the Cook Inlet region after the 1867 purchase of Alaska by the United States. Commercial harvest of salmon in Cook Inlet began in 1882,⁹³³ with the development of a cannery at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890.⁹³⁴ The first salmon cannery was established at Seldovia in 1911,⁹³⁵ and the community continued to develop around commercial fishing and fish processing.⁹³⁶ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁹³⁷ Around the same time, herring had become increasingly valued for oil and meal. Two salteries had been built in Seldovia by 1920.⁹³⁸ Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, a sizable spawning biomass of herring was found in western Cook Inlet, and Lower Cook Inlet also supported commercial

⁹³¹ Fall, J.A., R.T. Stanek, B. Davis, L. Williams, and R. Walker. (2004). *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment*. Alaska Dept. of Fish and Game. Final Report for Study No. FIS 03-045.

⁹³² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹³³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹³⁴ Cook, Linda, and Frank Norris. 1998. *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁹³⁵ Stanek, Ronald T. 1999. *Ethnographic Overview and Assessment for Nanwalek and Port Graham*. Draft. Division of Subsistence, Alaska Department of Fish and Game. Retrieved December 27, 2011 from <http://www.alaska.boemre.gov/>.

⁹³⁶ See footnote 932.

⁹³⁷ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁹³⁸ City of Seldovia. (2005). *Seldovia Comprehensive Plan*. Retrieved March 14, 2013 from <http://www.commerce.state.ak.us/dca/plans/Seldovia-CP-2005.pdf>.

fisheries for Dungeness, king, and Tanner crab. However, crab and herring fisheries are currently closed due to low stock abundance.^{939,940}

Today, ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.⁹⁴¹

Groundfish and crab fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Cook Inlet is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA Sablefish Regulatory Area. In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch (TAC) set by NMFS applied to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, Cook Inlet fisheries managed by ADF&G include an open access sablefish fishery under a GHL and directed mechanical jig fisheries for lingcod and rockfish.⁹⁴²

Seldovia is eligible to participate in the Community Quota Entity (CQE) program. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors led to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit

⁹³⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹⁴⁰ Alaska Dept. of Fish and Game. 2012. *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

⁹⁴¹ See footnote 933.

⁹⁴² See footnote 939.

corporation to purchase and manage quota shares on their behalf.⁹⁴³ Seldovia has established a CQE non-profit known as the City of Seldovia Community Holding Corporation. As of Fall 2013, the non-profit had not yet purchased commercial halibut IFQ or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the corporation began offering halibut charter permits for lease to local captains in 2011. As of October 2013, the City of Seldovia Community Holding Corporation held seven halibut charter permits for lease to community members.^{944,945} Neither Seldovia nor Seldovia Village is eligible to participate in the Community Development Quota program.

According to a survey conducted by the AFSC in 2011, community leaders reported that Seldovia participates in the fisheries management process in Alaska through a representative that sits on regional fisheries advisory and/or working groups run by ADF&G. Community leaders also indicated that current challenges for the portion of Seldovia's economy that is based on fishing include a growing number of regulations and requirements that are being placed on smaller fishing boats, as well as the lack of a cannery in Seldovia which forces fishing vessels to deliver elsewhere and keeps money and jobs out of the community.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, neither Seldovia nor Seldovia Village has a registered processing plant. A number of plants are registered in nearby Homer.

Fisheries-Related Revenue

Between 2000 and 2010, Seldovia received fisheries-related revenue from a raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, harbor usage fees, and port/dock usage fees. The amount of revenue received from the raw fish tax varied from year to year, for years in which data were available. The amount of revenue received from the Shared Fisheries Business Tax was also quite variable from year to year between 2000 and 2010. Revenue received from the Fisheries Resource Landing Tax decreased overall between 2000 and 2010. Revenue received from harbor usage fees increased overall between 2000 and 2010, as did revenue received from port/dock usage fees. Overall the amount of revenue received from fisheries-related sources increased gradually between 2000 and 2010. Information about known fisheries-related revenue received by Seldovia from 2000 to 2010 is presented in Table 3.⁹⁴⁶

In a survey conducted by the AFSC in 2011, community leaders reported that harbor maintenance, water and wastewater systems, and roads are at least partially supported by revenue from fisheries-related sources. In addition, community leaders indicated that Seldovia administers local fishing-related fee programs (cleaning table fees, harbor fees, haul-out fees, and storage fees) that specifically support public services and infrastructure.

⁹⁴³ North Pacific Fishery Management Council. (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

⁹⁴⁴ Jackinsky, M. (2011). "Seldovia corporation offers halibut charter permits." *Homer News*. Retrieved March 14, 2013 from http://homernews.com/stories/032311/news_scohcp.shtml.

⁹⁴⁵ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

⁹⁴⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, a combined 50 individuals from Seldovia and Seldovia Village held a total of 75 state-issued Commercial Fisheries Entry Commission (CFEC) commercial fishing permits, 46 of which were reported as actively fished that year. A majority of these permits were held in salmon (35) and halibut (14) fisheries. Other species for which community residents held CFEC permits in 2010 include crab, ‘other shellfish’, herring, sablefish, and groundfish. The number of halibut permits and permit holders decreased between 2000 and 2010, though the percentage of permits reported as actively fished remained stable during this period. The number of salmon permits and permit holders also decreased between 2000 and 2010, as did the percentage of permits reported as fished. The number of crab permits held decreased between 2000 and 2010, though the number of permits reported as actively fished remained stable during this period. The first year in which a permit for commercial harvest of ‘other shellfish’ was held was 2009, though the single permit was not reported as actively fished until 2010. The number of herring permits held decreased from 2000 to 2010, and no herring CFEC permits were reported as fished during this period. The number of sablefish permits held between 2000 and 2010, as well as the number of permits reported as fished, remained relatively stable. The number of groundfish permits held decreased between 2000 and 2010, while the number of permits reported as fished remained relatively stable.

Of 14 halibut CFEC permits held in 2010, the majority (11) were for the statewide long line halibut fishery using vessels under 60 ft, and 3 were for the statewide long line fishery using vessels over 60 ft. Of five sablefish CFEC permits, two were for the statewide long line sablefish fishery using vessels under 60 ft, and three were for the statewide long line sablefish fishery using vessels over 60 ft. In 2010, three CFEC permits were issued for the Dungeness crab pot fishery in Cook Inlet, three were issued for the roe herring purse seine fishery in Prince William Sound, two were for the herring roe purse seine fishery in Cook Inlet, one was for the statewide lingcod mechanical jig fishery, and one was issued for the Bristol Bay king crab pot fishery using vessels 60 ft in length or over.

Of the 35 salmon CFEC permits issued in 2010, 1 was issued for the salmon purse seine fishery in Cook Inlet, and the majority (19) was issued for the salmon set gill net fishery in Cook Inlet. Of the remaining salmon CFEC permits, two were issued for the salmon purse seine fishery in Kodiak, two for the purse seine fishery in Chignik, two for the salmon drift gillnet fishery in Prince William Sound, three for the drift gill net fishery in Cook Inlet, one for the drift gill net fishery in Bristol Bay, two for the set gill net fishery in Bristol Bay, two for the gill net fishery in Kotzebue, and one for the statewide power gurdy troll fishery.

Of the nine groundfish CFEC permits issued in 2010, two were for the miscellaneous saltwater finfish pot gear fishery for vessels under 60 ft, three were for the statewide miscellaneous saltwater finfish mechanical jig fishery, one was for the miscellaneous saltwater finfish longline fishery using vessels between 60 and 90 ft in the Gulf of Alaska, two were for the statewide miscellaneous saltwater finfish pot fishery using vessels 60 ft or over, and one was for the miscellaneous saltwater finfish pot fishery using vessels 60 ft or over in the Gulf of Alaska.

Also in 2010, one CFEC permit was issued for the shrimp pot fishery using vessels under 60 ft in Prince William Sound, and one was issued for the Tanner crab pot fishery using vessels 60 ft or over in the Bering sea.

There were also 10 community residents holding 10 federal groundfish License Limitation Program (LLP) permits in 2010, 2 residents holding 2 crab LLP permits in 2010, and 6 residents holding 6 Federal Fisheries Permits (FFP) in 2010. While the number of groundfish and crab permits held and reported as actively fished remained relatively stable between 2000 and 2010, the number of FFPs held decreased during this period. However, the number of FFPs reported as actively fished remained stable between 2000 and 2010. Information detailing permits and permit holders by species from 2000 to 2010 is detailed in Table 4.

In a survey conducted by the AFSC in 2011, community leaders reported that the predominant gear types used by commercial fishing boats that use Seldovia as their base of operations during the fishing season include pots, longline, gillnet, purse seine, troll, and set nets.

In 2010, there were 30 community residents holding crew licenses. This represents a decrease from 2000, when 44 crew licenses were held. There were no fish buyers in Seldovia between 2006 and 2010, and there were no shore-side processors based in Seldovia between 2002 and 2010. In 2010, there were 23 vessels owned primarily by community residents and 21 vessels homeported in Seldovia. Both of these numbers represent decreases from 2000, when 47 vessels were primarily owned by residents and 45 were homeported in Seldovia. Given the lack of fish buyers or processing plants, no vessels landed catch in Seldovia between 2005 and 2010, and for previous years in which landings were recorded in Seldovia, the amount and ex-vessel value of those landings is considered confidential due to the small number of participants. Information regarding characteristics of the commercial fishing sector in Seldovia is presented in Table 5.

In 2010, there were 13 individuals in Seldovia holding quota share accounts in the federal halibut catch share fishery, representing a decrease from 2000, when 21 individuals held halibut quota share accounts. Despite the decrease in quota share account holders during this period, the number of quota shares held remained relatively stable. The annual halibut individual fishing quota (IFQ) allotment decreased slightly during this period (Table 6). Six individuals held sablefish quota share accounts in 2010 in Seldovia, representing a decrease from nine account holders in 2000. The number of quota shares held decreased substantially between 2000 and 2010, as did the annual sablefish IFQ allotment during this period (Table 7). There has been one individual holding crab quota share accounts in Seldovia from 2005 to 2010, and the number of crab quota shares held remained stable between 2006 and 2010. Between 2005 and 2010, the annual crab IFQ allotment increased (Table 8).

Fish buyers in Seldovia recorded landings in five years during the 2000-2010 period (2000, 2001, and from 2003-2005). However the amount and ex-vessel value of those landings is considered confidential due to the small number of participants (Table 9). When landings are examined by vessel owner residence, landings and ex-vessel value are only reportable for halibut from 2000 to 2010, 'other groundfish' from 2004 to 2010, Pacific cod from 2000 to 2004 and 2008 to 2010, and salmon from 2000 to 2010. The rest of the landings and ex-vessel value for vessels whose owners resided in Seldovia are considered confidential due to the small number of participants. While landings for halibut and Pacific cod (for years in which data are reportable) remained relatively stable between 2000 and 2010, landings for other groundfish and salmon decreased during the same period. Ex-vessel value for halibut increased between 2000 and 2010, despite the relative stability in the amount of halibut landed during this period. Information regarding landings and ex-vessel value for vessels owned primarily by Seldovia residents is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Seldovia: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$4,491	\$5,722	\$3,391	\$3,544	\$6,932	\$3,672	\$3,417	\$3,960	n/a	n/a	n/a
Shared Fisheries											
Business Tax ¹	\$4,221	\$5,478	\$2,923	\$3,183	\$3,054	\$3,559	\$3,309	\$3,878	\$2,558	\$7,172	\$4,490
Fisheries Resource											
Landing Tax ¹	\$270	\$244	\$468	\$362	\$54	\$113	\$108	\$82	\$124	\$59	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$115,159	\$121,269	n/a	\$126,016	\$119,975	\$134,381	\$118,025	\$146,571	\$122,800	\$137,009	\$146,350
Port/dock usage ²	\$54,423	\$60,423	n/a	\$49,008	\$50,600	\$56,850	\$55,833	\$80,936	\$65,596	\$65,618	\$64,486
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$178,564</i>	<i>\$193,136</i>	<i>\$6,781</i>	<i>\$182,112</i>	<i>\$180,615</i>	<i>\$198,574</i>	<i>\$180,692</i>	<i>\$235,428</i>	<i>\$191,078</i>	<i>\$209,859</i>	<i>\$215,326</i>
<i>Total municipal revenue⁵</i>	<i>\$965,213</i>	<i>\$927,529</i>	<i>\$921,712</i>	<i>\$1,318,162</i>	<i>\$1,160,612</i>	<i>\$892,097</i>	<i>\$1,600,220</i>	<i>\$3,409,906</i>	<i>\$1,071,383</i>	<i>\$1,267,702</i>	<i>\$1,462,486</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at

http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.)

Financial Documents Delivery System. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Seldovia: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	10	10	9	9	9	10	10	10	10	10	10
	Active permits	4	3	3	4	5	4	5	4	4	5	5
	% of permits fished	40%	30%	33%	44%	55%	40%	50%	40%	40%	50%	50%
	Total permit holders	10	10	9	9	9	10	10	10	10	10	10
Crab (LLP) ¹	Total permits	1	1	1	1	1	2	2	2	2	2	2
	Active permits	1	1	1	1	1	1	1	1	1	1	1
	% of permits fished	100%	100%	100%	100%	100%	50%	50%	50%	50%	50%	50%
	Total permit holders	1	1	1	1	1	2	2	2	2	2	2
Federal Fisheries Permits ¹	Total permits	12	12	13	6	6	6	7	7	7	6	6
	Fished permits	0	0	0	4	5	2	5	4	5	4	4
	% of permits fished	-	-	-	67%	83%	33%	71%	57%	71%	67%	67%
	Total permit holders	10	10	11	5	5	5	6	6	6	6	6
Crab (CFEC) ²	Total permits	9	9	9	9	6	4	3	3	6	5	5
	Fished permits	2	2	2	2	2	0	0	0	2	1	2
	% of permits fished	22%	22%	22%	22%	33%	-	-	-	33%	20%	40%
	Total permit holders	5	5	5	5	4	4	3	3	5	4	4
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	1
	% of permits fished	-	-	-	-	-	-	-	-	-	-	100%
	Total permit holders	0	0	0	0	0	0	0	0	0	1	1
Halibut (CFEC) ²	Total permits	18	18	15	15	17	16	15	14	13	13	14
	Fished permits	16	15	13	13	14	12	10	11	12	11	12
	% of permits fished	89%	83%	87%	87%	82%	75%	67%	79%	92%	85%	86%
	Total permit holders	18	18	15	14	16	15	14	14	13	13	14
Herring (CFEC) ²	Total permits	11	11	8	7	7	7	7	7	7	7	5
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	6	6	5	4	4	4	4	4	4	4	3

Table 4 Cont. Permits and Permit Holders by Species, Seldovia: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	5	5	4	4	4	4	4	4	4	4	5
	Fished permits	5	5	2	3	3	3	3	3	3	3	3
	% of permits fished	100%	100%	50%	75%	75%	75%	75%	75%	75%	75%	60%
	Total permit holders	5	5	4	4	4	4	4	4	4	4	5
Groundfish (CFEC) ²	Total permits	25	18	15	14	15	13	7	6	7	11	10
	Fished permits	8	5	2	4	4	2	2	2	3	5	4
	% of permits fished	32%	28%	13%	29%	27%	15%	29%	33%	43%	45%	40%
	Total permit holders	18	13	11	9	9	8	6	6	7	10	9
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	40	42	36	34	36	36	35	32	35	34	35
	Fished permits	32	32	19	19	24	26	25	18	26	20	24
	% of permits fished	80%	76%	53%	56%	67%	72%	71%	56%	74%	59%	69%
	Total permit holders	42	43	37	35	37	36	35	32	35	35	36
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>108</i>	<i>103</i>	<i>87</i>	<i>83</i>	<i>85</i>	<i>80</i>	<i>71</i>	<i>66</i>	<i>72</i>	<i>75</i>	<i>75</i>
	<i>Fished permits</i>	<i>63</i>	<i>59</i>	<i>38</i>	<i>41</i>	<i>47</i>	<i>43</i>	<i>40</i>	<i>34</i>	<i>46</i>	<i>40</i>	<i>46</i>
	<i>% of permits fished</i>	<i>58%</i>	<i>57%</i>	<i>44%</i>	<i>49%</i>	<i>55%</i>	<i>54%</i>	<i>56%</i>	<i>52%</i>	<i>64%</i>	<i>53%</i>	<i>61%</i>
	<i>Permit holders</i>	<i>62</i>	<i>61</i>	<i>53</i>	<i>53</i>	<i>52</i>	<i>51</i>	<i>48</i>	<i>46</i>	<i>50</i>	<i>50</i>	<i>50</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Seldovia: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ⁴	Vessels Primarily Owned by Residents ⁵	Vessels Homeported ⁵	Vessels Landing Catch in Seldovia ²	Total Net Lbs Landed in Seldovia ^{2,3}	Total Ex-Vessel Value of Landings in Seldovia ^{2,3}
2000	44	2	2	47	45	2	--	--
2001	43	1	2	40	42	2	--	--
2002	24	0	1	34	38	0	0	\$0
2003	33	3	0	33	35	2	--	--
2004	34	1	0	28	31	1	--	--
2005	36	2	0	30	26	2	--	--
2006	37	0	0	24	20	0	0	\$0
2007	34	0	0	24	19	0	0	\$0
2008	34	0	0	24	20	0	0	\$0
2009	33	0	0	25	22	0	0	\$0
2010	30	0	0	23	21	0	0	\$0

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Totals only represent non-confidential data.

⁴ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Seldovia: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	21	2,533,894	355,899
2001	19	2,231,415	364,983
2002	19	2,256,991	380,740
2003	18	2,265,356	380,775
2004	17	2,246,096	384,959
2005	16	2,276,634	369,282
2006	14	2,255,678	341,815
2007	13	2,312,167	343,100
2008	13	2,385,600	349,991
2009	12	2,436,728	330,285
2010	13	2,538,480	313,887

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Seldovia: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	9	2,228,031	198,803
2001	8	2,227,981	188,626
2002	8	1,583,598	136,184
2003	8	1,386,966	142,695
2004	8	1,386,966	160,944
2005	8	1,205,810	138,056
2006	8	1,205,810	122,825
2007	7	1,204,369	119,683
2008	6	1,204,197	106,691
2009	6	1,204,197	97,023
2010	6	1,201,865	88,445

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Seldovia: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	1	6,654,936	190,769
2006	1	7,549,411	185,633
2007	1	7,549,411	305,627
2008	1	7,549,411	283,866
2009	1	7,549,411	222,303
2010	1	7,549,411	236,868

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Seldovia: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	0	--	--	--	0	0	0	0	0
Finfish	--	--	0	--	--	--	0	0	0	0	0
Halibut	--	--	0	--	--	--	0	0	0	0	0
Herring	--	--	0	--	--	--	0	0	0	0	0
Other Groundfish	--	--	0	--	--	--	0	0	0	0	0
Other Shellfish	--	--	0	--	--	--	0	0	0	0	0
Pacific Cod	--	--	0	--	--	--	0	0	0	0	0
Pollock	--	--	0	--	--	--	0	0	0	0	0
Sablefish	--	--	0	--	--	--	0	0	0	0	0
Salmon	--	--	0	--	--	--	0	0	0	0	0
<i>Total²</i>	--	--	0	--	--	--	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
Halibut	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
Herring	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Groundfish	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Shellfish	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
Pacific Cod	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
Pollock	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
Sablefish	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
Salmon	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	--	--	\$0	--	--	--	\$0	\$0	\$0	\$0	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Seldovia Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	308,114	331,518	217,593	416,233	429,951	391,394	308,596	309,750	315,964	327,561	304,036
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	7,202	3,049	3,869	2,778	6,702	5,504	5,761
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	1,659,673	916,377	813,760	512,278	635,091	--	--	--	1,527,256	1,527,256	1,527,256
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	796,263	636,955	684,668	619,823	923,306	752,373	373,162	550,986	772,747	576,987	415,826
<i>Total²</i>	<i>2,764,050</i>	<i>1,884,850</i>	<i>1,716,021</i>	<i>1,548,334</i>	<i>1,995,550</i>	<i>1,146,816</i>	<i>685,627</i>	<i>863,514</i>	<i>2,622,669</i>	<i>2,437,308</i>	<i>2,252,879</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$806,960	\$664,930	\$492,336	\$1,214,878	\$1,317,613	\$1,229,482	\$1,195,662	\$1,411,544	\$1,441,515	\$1,027,302	\$1,410,965
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	\$3,167	\$1,383	\$1,607	\$965	\$2,827	\$2,176	\$2,169
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$563,867	\$294,044	\$233,146	\$201,079	\$173,990	--	--	--	\$706,693	\$389,176	\$449,806
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$557,334	\$341,010	\$449,187	\$487,410	\$458,564	\$682,253	\$359,881	\$372,156	\$566,976	\$475,468	\$488,726
<i>Total²</i>	<i>\$1,928,161</i>	<i>\$1,299,984</i>	<i>\$1,174,668</i>	<i>\$1,903,367</i>	<i>\$1,953,335</i>	<i>\$1,913,117</i>	<i>\$1,557,150</i>	<i>\$1,784,664</i>	<i>\$2,718,011</i>	<i>\$1,894,124</i>	<i>\$2,351,666</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

From 2000 to 2010, the number of active sport fish guide businesses in Seldovia generally remained between three and five, with a peak of eight in 2007. The number of licensed sport fish guides registered in the community each year varied between 7 and 11. In 2010, 156 sportfishing licenses were sold to community residents (irrespective of the location of the point of sale), representing a slight decrease in total purchases from earlier in the decade. Local licenses sales were much higher, with an average of just under 600 licenses sold in Seldovia per year between 2000 and 2010. The fact that a greater number of licenses are sold locally than are purchased by local residents indicates that visitors to the community pursue sportfishing activities (Table 11).

Seldovia is located within Alaska Sport Fishing Survey Area P, including saltwater fishing in Cook Inlet and freshwater fishing on the Kenai Peninsula. Between 2000 and 2010, saltwater and freshwater sportfishing at this regional level was substantial. In 2010, Alaska residents logged 47,656 saltwater angler days and 28,294 freshwater angler days, while non-Alaska residents logged 20,292 saltwater angler days and 71,555 freshwater angler days. Typically, Alaska residents took part in saltwater sportfishing at greater rates than non-Alaska resident anglers, and the opposite was true of freshwater sportfishing. For both resident and non-resident anglers in both freshwater and saltwater, the number of angler days fished per year decreased between 2000 and 2010. This information about regional sportfishing activity is also presented in Table 11.

Statistics provided by charter logbook information indicate that Chinook salmon, chum salmon, coho salmon, halibut, lingcod, other rockfish, other salmon, pink salmon, pelagic rockfish, shark, sockeye salmon, and yelloweye are caught by anglers fishing from charter vessels based in Seldovia.⁹⁴⁷ The ADF&G Statewide Harvest Survey⁹⁴⁸ indicates that the following species are targeted by anglers with sportfishing licenses in the Cook Inlet region: Chinook salmon, coho salmon, sockeye salmon, pink salmon, chum salmon, Dolly Varden, Pacific halibut, rockfish, lingcod, Pacific cod, Tanner crab, razor clam, and hardshell clam.

In a survey conducted by the AFSC in 2011, community leaders reported that sportfishing in Seldovia takes place on charter boats/party boats, on private boats owned by local residents, on private boats owned by non-residents, as shore-based or dock fishing by local residents, and as shore-based or dock fishing by non-residents. Community leaders also noted that recreational fishermen using boats based in Seldovia target pink salmon, chum salmon, Chinook/king salmon, coho/silver salmon, sockeye/red salmon, halibut, rockfish, crab, and clams.

⁹⁴⁷ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁹⁴⁸ Alaska Department of Fish and Game(2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sportfishing trends, Seldovia: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Seldovia ²
2000	3	7	173	499
2001	4	9	180	513
2002	3	11	150	512
2003	3	8	150	496
2004	3	9	148	543
2005	5	8	154	700
2006	4	7	150	643
2007	8	10	163	779
2008	5	9	162	707
2009	5	8	159	564
2010	4	6	156	526

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	68,928	40,179	42,157	139,737
2001	62,340	22,585	28,245	69,053
2002	53,537	22,745	26,479	83,335
2003	49,366	24,522	35,299	80,368
2004	57,167	24,224	39,009	83,478
2005	65,997	27,827	37,309	91,489
2006	67,259	23,225	33,988	76,100
2007	67,556	24,465	31,105	89,061
2008	54,136	21,762	28,780	70,285
2009	41,925	21,446	24,959	77,945
2010	47,656	20,292	28,294	71,555

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that halibut, sockeye salmon, and crab are the most important subsistence marine or aquatic resources to the residents of Seldovia. Although data are not available regarding subsistence participation by household and species from 2000 to 2010 (Table 12), data are available regarding subsistence harvest levels of salmon, halibut, seals, sea lions and sea otters. The number of subsistence salmon permits issued and permits reported as fished both declined between 2000 and 2010. The

amount of salmon harvested for subsistence use varied substantially by species between 2000 and 2010 for years in which data were available and included Chinook salmon, chum salmon, coho salmon, pink salmon, and sockeye salmon (Table 13). However, residents appear to be targeting sockeye salmon significantly more than other species.

Between 2003 and 2010, the number of Subsistence Halibut Registration Certificates (SHARC) issued and reported as fished, as well as the number of lbs of halibut harvested, generally increased, with small declines in the final years of the period (Table 14). In 2010, 152 SHARC cards were issued, and 42.7% of them were actively fished. That year, 18,746 lbs of halibut were harvested.

While data are limited regarding subsistence harvest of marine mammals in Seldovia between 2000 and 2010, the U.S. Fish and Wildlife Service reported harvest of sea otters in some years during the period and ADF&G reported harvest of a small number of harbor seals each year. Information was not reported by management agencies regarding harvest of beluga whale, walrus, polar bear, Steller sea lion, or spotted seal during the 2000-2010 period. This information is presented in Table 15.

Although no data were reported between 2000 and 2010 regarding harvest of marine invertebrates and non-salmon fish in Seldovia (Tables 12 and 13), an earlier subsistence survey conducted by ADF&G in the early 1990s provides insight into the species utilized by local residents. In 1993, the following species of marine invertebrates were reported used for subsistence by Seldovia residents: abalone, black (small) chitons, butter clams, cockles, Dungeness crab, horse clams (gaper), limpets, mussels, octopus, oyster, Pacific littleneck clams (steamers), pinkneck clams, razor clams, red (large) chitons, scallops, sea urchin, shrimp, snails, softshell clams, unknown clams, unknown crab, unknown king crab, unknown Tanner crab, and whelk. Non-salmon fish reported harvested for subsistence use in 1993 included: Arctic char, black rockfish, Dolly Varden char, eulachon (hooligan candlefish), grayling, herring, herring roe/unspecified, herring sac roe, herring spawn on kelp, Irish lord, kelp greenling, lake trout, lingcod, Pacific cod (gray), Pacific tom cod, pike, rainbow trout, red rockfish, sablefish (black cod), sea bass, shark, sheefish, skates, steelhead, sturgeon, unknown cod, unknown flounder, unknown greenling, unknown rockfish, unknown sculpin, unknown smelt, unknown sole, unknown trout, unknown whitefish, walleye pollock, and wolf fish. The same survey also noted harvest of several marine mammal species in 1993: harbor seal, Steller sea lion, unknown seal, and unknown whale.⁹⁴⁹

Additional Information

Seldovia is home to an annual Chainsaw Carving Contest, the Seldovia Music Festival, and a Fourth of July Festival.⁹⁵⁰

⁹⁴⁹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁹⁵⁰ Seldovia, Alaska website. Retrieved February 17, 2012 from <http://seldovia.com/>.

Table 12. Subsistence Participation by Household and Species, Seldovia: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Seldovia: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	23	22	179	16	n/a	n/a	252	n/a	n/a
2001	20	16	148	n/a	n/a	n/a	142	n/a	n/a
2002	24	21	124	11	13	31	234	n/a	n/a
2003	18	16	117	66	2	22	290	n/a	n/a
2004	17	14	97	18	16	65	69	n/a	n/a
2005	20	18	60	9	11	71	310	n/a	n/a
2006	18	11	23	n/a	n/a	31	12	n/a	n/a
2007	19	14	24	35	12	103	66	n/a	n/a
2008	16	14	16	6	54	81	279	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Seldovia: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	103	54	17,344
2004	113	78	27,499
2005	123	68	19,876
2006	123	80	17,406
2007	140	102	23,768
2008	150	101	23,577
2009	165	93	21,708
2010	152	65	18,746

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Seldovia: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	2	n/a
2001	n/a	n/a	n/a	n/a	n/a	3	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	1	n/a
2005	n/a	n/a	n/a	n/a	n/a	1	n/a
2006	n/a	15	n/a	n/a	n/a	3	n/a
2007	n/a	n/a	n/a	n/a	n/a	2	n/a
2008	n/a	n/a	n/a	n/a	n/a	1	n/a
2009	n/a	1	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Seward (SOO-word)

People and Place

*Location*⁹⁵¹



Seward is situated on Resurrection Bay on the east coast of the Kenai Peninsula, 125 highway miles south of Anchorage. It lies at the foot of Mount Marathon and is the gateway to the Kenai Fjords National Park. Bear Creek and Lowell Point are adjacent to Seward. Seward is located in the Seward Recording District, the Kenai Peninsula Census Area, and the Kenai Peninsula Borough. The city boundaries encompass 14.4 square miles of land and 7.1 square miles of water.

*Demographic Profile*⁹⁵²

In 2010, there were 2,693 residents in Seward, making it the 36th largest of 352 total Alaskan communities with recorded populations that year. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 7.81%. The average annual growth rate during this period was -0.72%, indicating a slow population decline. The change in population from 1990 to 2010 is provided in Table 1. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Seward has approximately 1,500 seasonal workers or transients each year, primarily between February and October.

In 2010, the majority of Seward residents identified themselves as White (68.5%). Other ethnic groups present in Seward that year included American Indian and Alaska Native (16.7%), two or more races (8.1%), Hispanic or Latino (3.6%), Black or African American (3.1%), Asian (2.4%), Native Hawaiian and Other Pacific Islander (0.6%), and some other race (0.6%). Between 2000 and 2010, the percentage of the population identifying themselves as White decreased by 3.6%, with corresponding increases in the percentages of the population identifying themselves as two or more races, Asian, Black or African American, Hispanic or Latino, Native Hawaiian and Other Pacific Islander, and some other race. The percentage of the population identifying themselves as American Indian and Alaska Native did not change between 2000 and 2010. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Seward was 2.14, a decrease from 2.4 persons per household in both 1990 and 2000. The total number of households in Seward increased during this same period, from 886 in 1990 to 917 in 2000 to 1,097 in 2010. Of the 1,288 housing units surveyed for the 2010 Decennial Census, 600 were owner-occupied, 497 were renter-occupied, and 191 were vacant. In 2010, 709 Seward residents were reported to be living in group quarters.

⁹⁵¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁵² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Seward from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	2,699	-
2000	2,830	-
2001	-	2,758
2002	-	2,755
2003	-	2,744
2004	-	2,544
2005	-	2,598
2006	-	2,593
2007	-	2,649
2008	-	2,561
2009	-	2,609
2010	2,693	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Seward: 2000-2010 (U.S. Census).

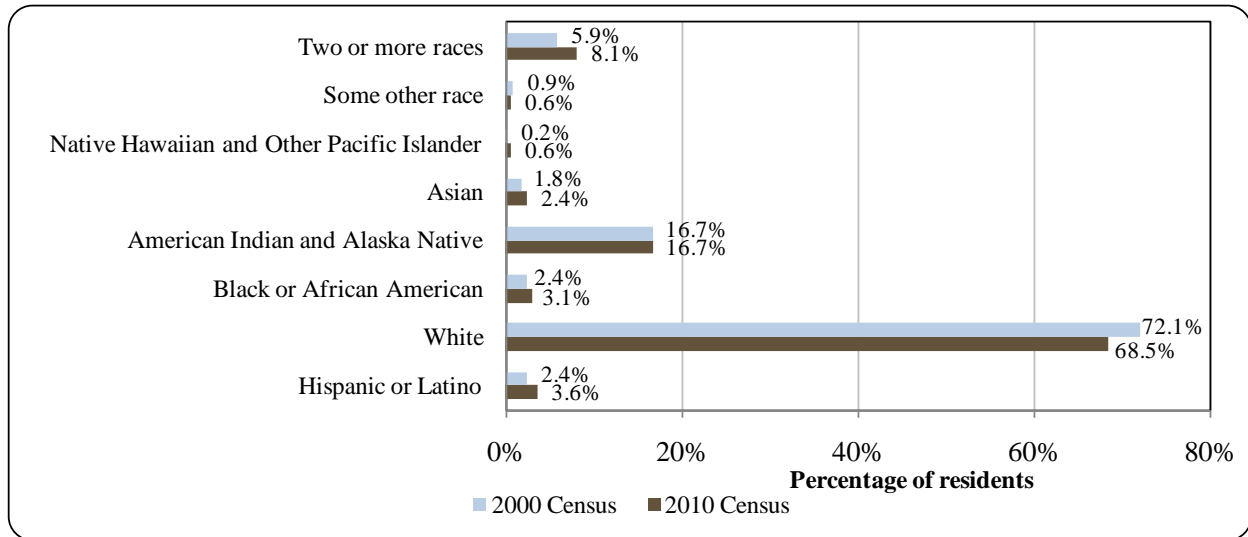
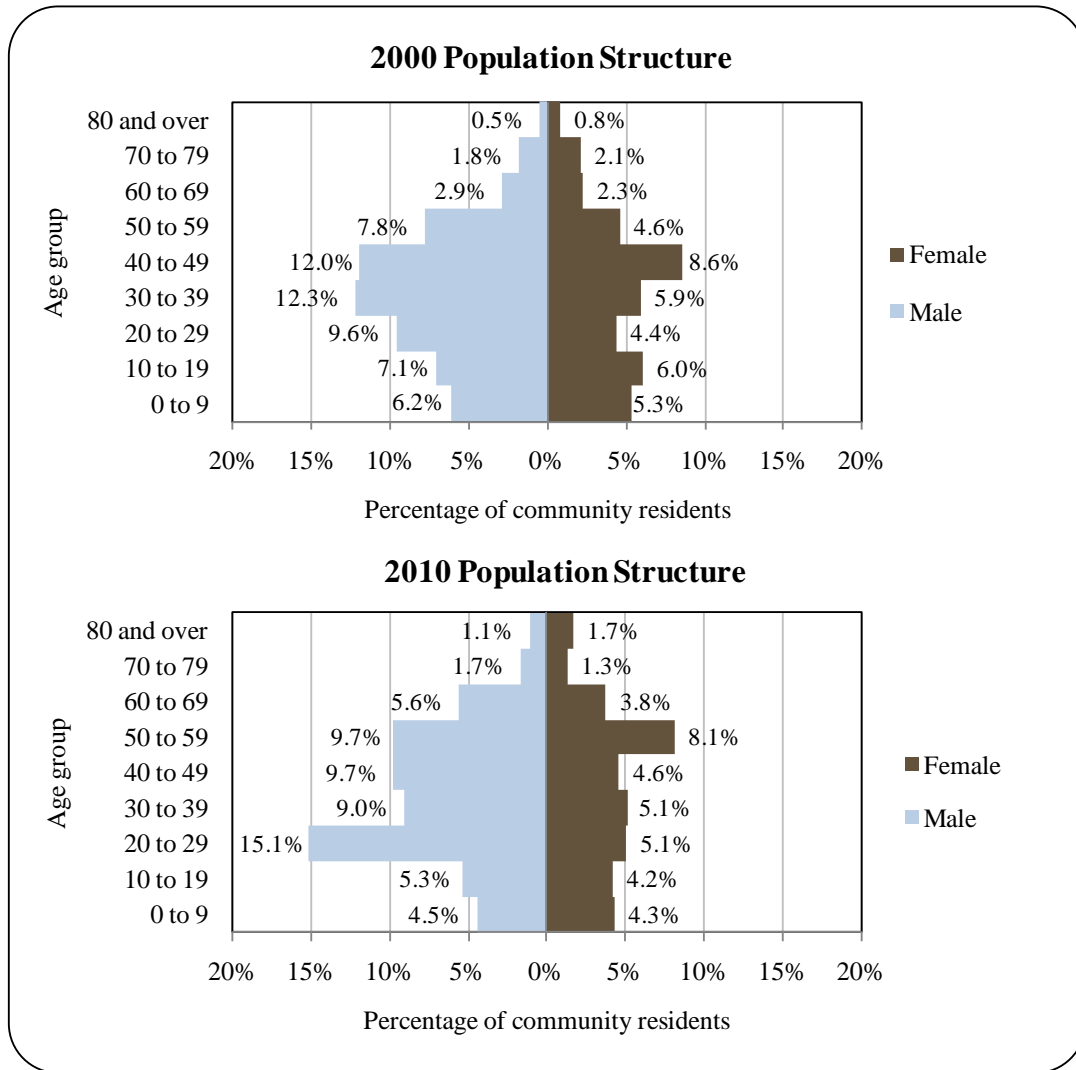


Figure 2. Population Age Structure in Seward Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup of Seward was 62% male and 38% female, more skewed than the state as a whole (52% male, 48% female). The age groups between 20 and 59 years of age were especially skewed towards males. The median age was estimated to be 38.3 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest age group was 20-39 years old, with the next largest percentage of residents falling within the age group 40-59 years old. The overall population structure of Seward in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁹⁵³ 89.7% Seward residents aged 25 and over were estimated to hold a high school

⁹⁵³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not

diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 1.7% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 8.6% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 37.6% were estimated to hold a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 24.1% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 3.4% were estimated to hold an Associate's degree, compared to 8% of Alaskan residents overall; 13.4% were estimated to hold a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 11.3% were estimated to hold a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The earliest inhabitants of Resurrection Bay were the Unegkurmiut, a subgroup of the Alutiiq Chugach that lived along the outer coast of the Kenai Peninsula. Anthropologists disagree about whether the Unegkurmiut were closely affiliated with the Koniag people of Kodiak Island, or whether they had previously inhabited Cook Inlet and were pushed back into a smaller territory by the Koniag.⁹⁵⁴

Resurrection Bay received its modern name in 1792 when Russian explorer and fur trader Alexander Baranof found unexpected shelter in the bay en route from Kodiak to Yakutat. He gave it this name because the day he arrived was the Russian "Sunday of Resurrection."⁹⁵⁵ The Russians never built a permanent settlement in Resurrection Bay, although Baranof did establish a camp near Tonsina Point, close to the current City of Seward. The Russians built a ship called the Phoenix at the site, which is believed to have been the first western ship to be constructed on the west coast of North America.⁹⁵⁶

In the late 1800s, following the discovery of gold and coal in Alaska, private investors in Seattle were in search of a port to serve as a transportation link for a railroad to the interior. A real-estate developer and journalist named John Ballaine ordered a survey of mineral, timber, and farming potential of the Kenai Peninsula. Resurrection Bay was chosen as the site for a railroad terminus, based on positive reports regarding the natural resources in the area, and the fact that it offered an ice-free harbor throughout the year. John and his brother Frank, along with a group of settlers, arrived in 1903 to found the town of Seward. They laid the townsite and built a wharf.^{957,958} They had formed a railroad company – Alaska Central Railway (ACR), and by 1905 they had already laid 50 miles of railroad track. ACR went bankrupt by 1907, and a second group, the Alaska Northern Railway (ANR), purchased the railroad and constructed an

collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁹⁵⁴ Cook, Linda, and Frank Norris. (1998). *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁹⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁵⁶ Alaska State Housing Authority. (1963). *Seward Comprehensive Plan*. Retrieved March 14, 2013 from <http://www.commerce.state.ak.us/dca/plans/Seward-CP-1968.pdf>.

⁹⁵⁷ Ibid.

⁹⁵⁸ Alaska History and Cultural Studies. (2013). *Southcentral Alaska: 1900-1915 Fight for a Railroad*. Retrieved March 15, 2013 from <http://www.akhistorycourse.org/articles/article.php?artID=87>.

additional 21 miles of track by 1910.⁹⁵⁹ However, private construction was halted due to challenges in the construction and financing of the project, as well as a withdrawal of all coal lands by the federal government. Nevertheless, by 1910, 534 people were recorded as living in Seward, and the City was incorporated in 1912. Seward was named after U.S. Secretary of State William Seward, 1861-1869, who is best known for having negotiated the purchase of Alaska from Russia in 1867, often referred to at that time as “Seward’s Folly.”⁹⁶⁰

Railroad construction began again in 1915, after U.S. Congress agreed to fund, construct and operate the railway. The Alaska Railroad was completed in 1923.⁹⁶¹ Seward continued to grow as a supply center and ocean link to the interior. The Seward-Anchorage Highway was completed in 1950. Seward was heavily impacted by the Good Friday Earthquake of 1964. As much as 90% of the Seward’s industry, including docks, fishing boats, railway yards, warehouses, seafood processing plants, and oil tank farms, was destroyed by submarine landslides and the resulting sea waves, as well as by fire.⁹⁶²

Today, Seward remains a primarily non-Native community, although the Qutekcak Tribe is very active in the community.⁹⁶³

Natural Resources and Environment

Seward is located in a maritime climate zone. Winter temperatures average from 17 to 38 °F (-8.3 to 3.3 °C), and summer temperatures average 49 to 63 °F (9.4 to 17.2 °C). Annual precipitation averages 66 inches of rain and 80 inches of snowfall.⁹⁶⁴ Strong winds occasionally funnel up Resurrection Bay or down valleys from the north. The landscape surrounding Seward is typical of eroded glacial valleys, with steep mountain slopes rising to between 2,000 and 5,000 ft interspersed by low river valleys. The area is heavily forested up to tree line at about 1,000 ft, with stands of spruce, hemlock, birch, and cottonwood, along with underbrush of alder and devil’s club.⁹⁶⁵

Seward is located several miles from the eastern boundary of Kenai Fjords National Park, and hosts the primary information center for visitors preparing to enter the Park. This National Park was established in 1980 to “maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers and coastal fjords and islands.” Fifty-six percent of the park is covered by ice. Animals living in the mountains, the shores, and the fjords of the National Park include black bear, brown bear, moose, mountain goat, sea otter, Steller sea lion, harbor seal, Dall’s porpoise, Pacific white-sided dolphin, orca, minke whale, humpback whale, fin whale, and birds including bald eagles, puffins, murre, steller’s jay, black-billed magpie, peregrine falcon, and marbled murrelet.⁹⁶⁶ A portion of Kenai Fjords National Park is included in the Kenai Wilderness, which covers a total of 1,354,247 acres on the Kenai Peninsula.⁹⁶⁷

⁹⁵⁹ Alaska Railroad Corporation. (n.d.). *Timber Trestle Bridges in Alaska Railroad History*. Retrieved March 15, 2013 from <http://alaskarailroad.com/Portals/6/pdf/projects/Timber%20bridge%20history%20booklet.pdf>.

⁹⁶⁰ See footnotes 955 and 956.

⁹⁶¹ See footnote 959.

⁹⁶² See footnote 956.

⁹⁶³ See footnote 955.

⁹⁶⁴ Ibid.

⁹⁶⁵ See footnote 956.

⁹⁶⁶ National Park Service. (2010). *Kenai Fjords National Park*. Retrieved December 27, 2011 from <http://www.nps.gov/kefj/>.

⁹⁶⁷ Wilderness.net (n.d.). *Kenai Wilderness*. Retrieved January 26, 2012 from <http://www.wilderness.net>.

Seward is also adjacent to the south-western boundary of the Chugach National Forest, the western and northern-most National Forest in the U.S., comprising 5.5 million acres. Of this area, 21% of the National Forest is located on the Kenai Peninsula.⁹⁶⁸

Natural hazards with the potential to occur in Seward include flooding, earthquake, wildfire, ash fall, snow avalanche, tsunami, severe weather, landslides, and erosion. All of these hazards have occurred historically in Seward. The hazards with the highest probability of occurring were identified to be flooding and earthquake, and hazards with the greatest extent include earthquake, ash fall, severe weather, and erosion.⁹⁶⁹

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in the Seward area as of March 2013.⁹⁷⁰

Current Economy⁹⁷¹

The local economy has long been based on Seward's strategic location as a transportation center, serving as the southern terminus for the Alaska Railroad and a road link to Anchorage and the Interior. Today the economy has diversified to include commercial fishing and fish processing, ship services and repairs, a coal export facility, educational and research facilities, a state prison, and tourism fueled by attractions such as Kenai Fjords National Park and the Alaska SeaLife Center. Seward is the location of the primary information center for Kenai Fjords National Park. Seward is a primary port of call for cruise ships during the summer season.⁹⁷² In addition, in a survey conducted by the AFSC in 2011, community leaders indicated that Seward's economy also relies on mining, oil and natural gas exploration or drilling, and sport hunting and fishing.

According to the 2006-2010 ACS,⁹⁷³ in 2010, the per capita income in Seward was estimated to be \$28,613, and the median household income was estimated to be \$43,188, compared to \$20,360 and \$44,306 in 2000, respectively. However, after taking inflation into account by converting the 2000 values to 2010 dollars,⁹⁷⁴ the real per capita income in 2000 was \$26,773 and the median household income in 2000 was \$58,262. This shows that per capita income in Seward increased slightly between 2000 and 2010, while household income decreased during that same period. However, Seward's small population size may have prevented the ACS from accurately portraying economic conditions.⁹⁷⁵ A potentially more accurate understanding of

⁹⁶⁸ National Park Service (n.d.). *Chugach National Forest: Forest Facts*. Retrieved December 14, 2011 from <http://www.fs.usda.gov/detail/chugach/about-forest/?cid=STELPRDB5053239>.

⁹⁶⁹ Kenai Borough. (2010). *City of Seward All Hazard Mitigation Plan*. Retrieved March 15, 2013 from <http://www2.borough.kenai.ak.us/emergency/hazmit/Final%20Drafts/Annexes/Annex%20E%20City%20of%20Seward.pdf>.

⁹⁷⁰ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 15, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁹⁷¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁹⁷² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁷³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁹⁷⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁹⁷⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not

per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Seward in 2010 is \$11,901.^{976,977} This alternative 2010 per capita estimate is lower than the 2000 Census per capita income estimate, suggesting that caution is warranted when citing an increase in per capita income in Seward between 2000 and 2010.

Based on household surveys conducted for the 2006-2010 ACS, in 2010, Seward ranked 72nd of 305 Alaskan communities with per capita income that year, and 174th of 299 Alaskan communities with household income data. In that same year, 62.3% of the population age 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 6.7%, compared to the statewide unemployment rate of 5.9%. Approximately 14.5% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskan residents overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Seward are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the population of Seward. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 17.3%.

Also based on the 2006-2010 ACS, the greatest number of workers was estimated to be employed in the private sector (61.2%), along with 30.4% in the public sector and 8.4% self-employed. Out of 1,231 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage were employed in education services, health care, and social assistance (32.2%), arts, entertainment, recreation, accommodation and food services (17.9%), and public administration (13.4%) industries. Compared to 2000, there was a 55.6% increase in the percentage of the workforce estimated to be employed in educational services, health care, and social assistance. There were declines of more than 50% in the percentage of the workforce employed in several industries, including retail trade, manufacturing, wholesale trade, information, and ‘other services except public administration’. When viewing employment in terms of occupation, an increase can be observed in the percentage of the workforce employed in management/professional occupations between 2000 and 2010. Small decreases were observed in other occupational categories. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

With regard to commercial fishing employment, 8.1% of the workforce was estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries in 2010, and 4.2% was estimated to be employed in farming, fishing, and forestry occupations (out of a total of 9.1% estimated to be employed overall in the combined category of “natural resource, construction, or maintenance occupations”). It is important to note that the number of individuals employed in the fishing industry may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁹⁷⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹⁷⁷ See footnote 973.

Figure 3. Local Employment by Industry in 2000-2010, Seward (U.S. Census).

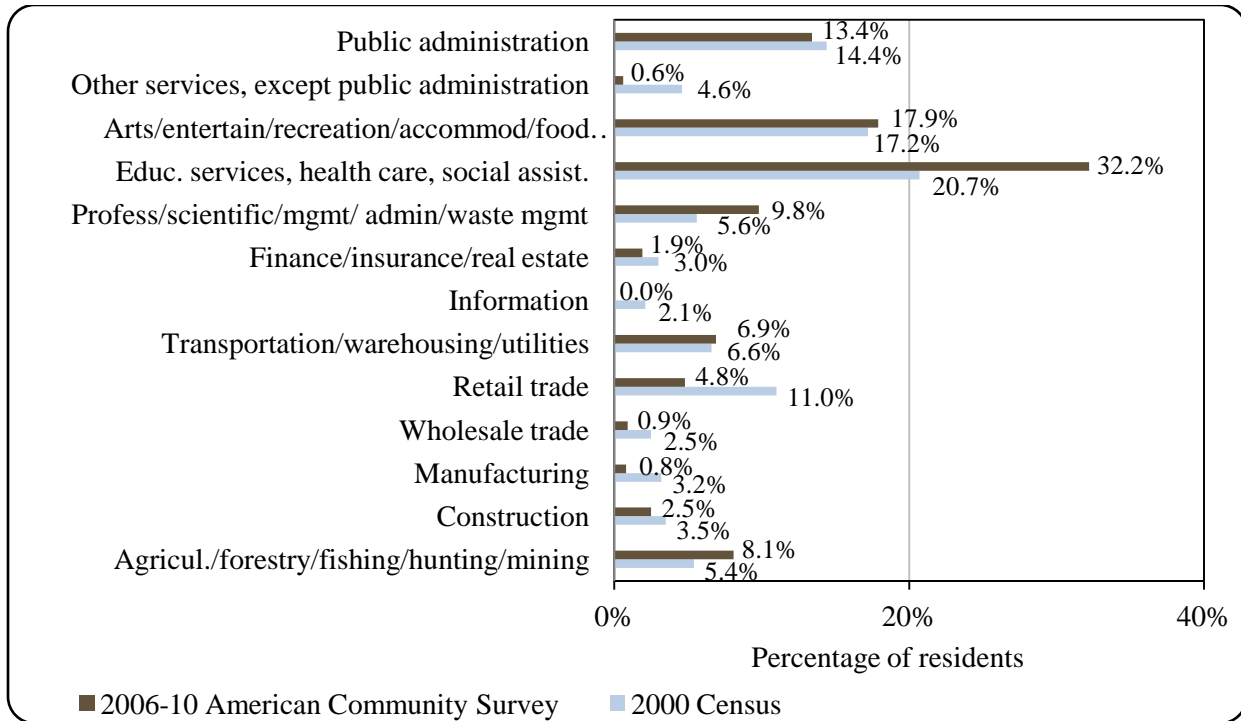
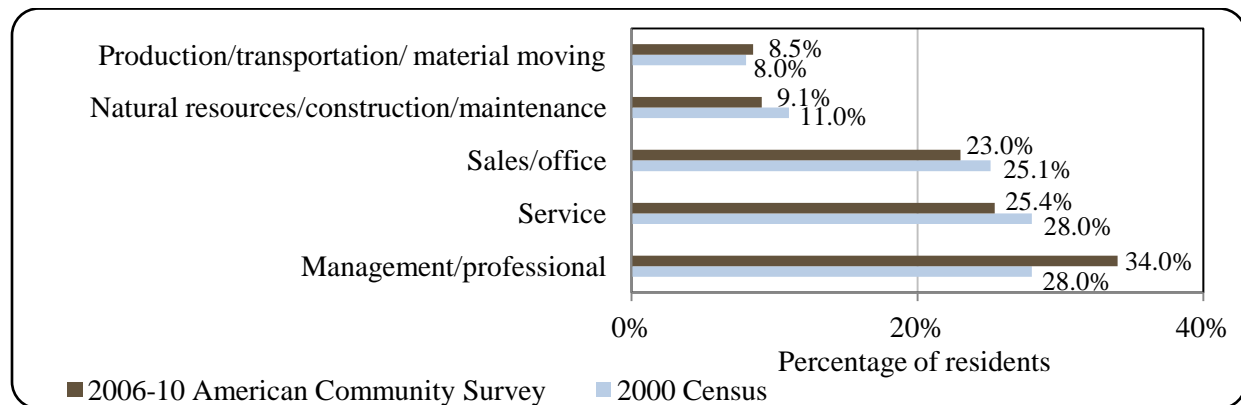


Figure 4. Local Employment by Occupation in 2000-2010, Seward (U.S. Census).



Governance

Seward is a Home Rule City located in the Kenai Peninsula Borough and is governed by a mayor and city council. The City of Seward administers a 4% sales tax and a 4% bed tax. The Borough administers an additional 3% sales tax, and together, the City and Borough levy a combined 8.12 mills property tax.⁹⁷⁸ Total annual municipal revenues received by the City followed an increasing trend between 2000 and 2010, in part due to increasing sales tax revenues. In addition to local tax revenue, other locally-generated income sources in Seward

⁹⁷⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

during the decade included license and permit fees, fines and bails, and charges for city services. Intergovernmental revenue sources included shared revenues, capital and special projects grants, and Exxon Valdez settlement funds. Sources of shared revenues included the State Revenue Sharing program from 2000 to 2003 (between \$83,647 and \$100,000 per year) and the Community Revenue Sharing program (almost \$230,000 each year in 2009 and 2010) (Table 2).

In 2001-2004 and 2006-2010, Seward received a number of fisheries-related grants for purposes such as harbor expansion, harbor/construction, the Seward Shipyard portable workstation, an algae rearing system, upgrades to the Portage Distributing processing plant, funds for marketing of smoked salmon sausage, construction of a floating oyster smokehouse, a T-dock and bulkhead, the Alutiiq Pride Shellfish Hatchery, a shellfish enhancement project, East Harbor reconstruction, fish ditch restoration, and dredging of cruise ship berthing basins and approaches. The total amount received in fisheries-related grants varied from year to year from 2001 to 2010, though in most years total funds received were in excess of \$1 million. Grants were received for purposes including dredging cruise ship berthing basins and approaches, fish ditch restoration, shellfish enhancement, East harbor reconstruction, T-dock and bulkhead construction, the Alutiiq Pride Shellfish Hatchery, an algae rearing system, upgrades to the Portage Distributing processing plant, marketing of smoked salmon sausage, floating oyster smokehouse construction for Pristine Products, harbor construction (Phases I and II), a Seward Shipyard portable work station, harbor expansion, and improvements to the small boat harbor. Information on selected revenue streams for Seward from 2000 to 2010 is provided in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Seward from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$9,035,747	\$2,197,561	\$102,439	n/a
2001	\$9,091,665	\$2,165,586	\$90,570	\$4,225,000
2002	\$8,300,675	\$2,250,081	\$89,187	\$3,500,000
2003	\$8,198,766 ⁶	\$2,671,613	\$83,647	\$8,468,050
2004	\$8,538,656	\$3,123,314	n/a	\$601,799
2005	\$8,910,517	\$3,411,283	n/a	n/a
2006	\$10,862,496	\$3,518,435	n/a	\$2,000,000
2007	\$10,396,325	\$4,068,600	n/a	\$2,350,000
2008	\$12,032,612	\$4,137,758	n/a	\$1,250,000
2009	\$14,186,121	\$3,585,304	\$229,606	\$61,250
2010	\$14,987,430	\$3,742,751	\$226,846	\$4,500,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁶ This number reflects the 2003 budget projection rather than the total reported in the 2003 comprehensive annual financial report.

The office of the Qutekcak Native Tribe is located in Seward. The Tribe is governed by a seven-person Tribal Council, including the President. Tribal members are a mix of Alaska Native people from around the State. The Tribe offers a variety of cultural activities and services for members, including elder and youth programs, cultural education, jobs, and scholarships. The Tribe was not included in the Alaska Native Claims Settlement Act (ANCSA), and is not currently federally recognized as a Native village. However, the Qutekcak Native Tribe is seeking federal recognition.⁹⁷⁹

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and the National Marine Fisheries Service (NMFS) are located in Seward. The Alaska Department of Natural Resources, Department of Commerce, Community, and Economic Development, the Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement all have offices in Anchorage.

Infrastructure

*Connectivity and Transportation*⁹⁸⁰

Seward is connected to the Alaska Highway system by the Seward Highway. Bus and commercial trucking services to and from Anchorage are available daily. The port serves cruise ships, cargo barges, and ocean freighters from Seattle and overseas. The small boat harbor has moorage for 650 boats and two boat launch ramps. Seward is a major transit site for the Alaska Railroad. Seasonal passenger transportation is available by rail. Air services and charters are available at the state-owned airport. Two paved runways are utilized; one is 4,240 feet long by 100 feet wide, and the other is 2,279 feet long by 75 feet wide. Regular commercial air service between Seward and Anchorage is not available.

*Facilities*⁹⁸¹

Water is supplied by nine wells and is treated and distributed throughout Seward. Sewage is collected via pipes and sent to a secondary treatment lagoon. Almost all homes are fully plumbed. Refuse collection is provided by the City under contract; the borough provides solid waste disposal. The borough operates a refuse transfer facility in the community. Seward Electric System purchases power from Chugach Electric and owns six standby diesel generators. Police services are provided the City Police Department and the local state troopers post.

In a survey conducted by the AFSC in 2011, community leaders reported that a number of infrastructure projects have been completed in Seward within the past 10 years, including a fish cleaning station, barge landing area, construction of new dock space, improvements to existing dock structure, electricity and water serving the dock, roads serving the dock, pilings, fuel tanks at the dock, a breakwater and jetty, harbor dredging, drydock space, haulout facilities, broadband internet access, roads, airport/seaplane base, water and sewer pipelines, a diesel powerhouse, sewage treatment, water treatment, a new landfill/solid waste site, public

⁹⁷⁹ Qutekcak Native Tribe. (n.d.). *Qutekcak Native Tribe, Seward's Native Pride*. Retrieved September 9, 2013 from <http://sewardaknatives.com/index.php>.

⁹⁸⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁸¹ Ibid.

safety/police department, emergency response, fire department, school, telephone service, post office, and fire/safety. In addition, community leaders indicated that an Environmental Protection Agency-certified boat cleaning station and a community center/library are currently in progress and that infrastructure for wind energy is planned to be completed within the next 10 years. In the same survey, community leaders noted that Seward has 25,465 feet of dock space available for permanent vessels and 2,300 feet of dock space available for transient vessels, and that vessels up to 800-900 feet long can use moorage in Seward. Community leaders also indicated that Seward is capable of handling a number of different types of vessels, including rescue vessels, cruise ships, ferries, fuel barges, and hazardous materials.

*Medical Services*⁹⁸²

Medical services in Seward are provided by the Providence Seward Medical Center North Star health Clinic, which is privately owned and operated. The hospital is a Community Health Aid Program site and a qualified Acute Care facility. Long-term care is available at the Wesley Rehabilitation and Care facility. Specialized care is available at the Seward Life Action Council Counseling Facility. Emergency Services have highway and limited marine and airport access and are provided by 911 telephone service and volunteers. Alternate health care is provided by the Seward Volunteer Ambulance Corporation and the Bear Creek Fire/Emergency Medical Services Department.

*Educational Opportunities*⁹⁸³

Instruction is provided to students in Seward by one of four schools. The William H. Seward Elementary school provides instruction to students in pre-school through sixth grade, and in 2011, the school had 275 students and 20 teachers. The Seward Middle School provides instruction to students in 7th and 8th grades, and in 2011, the school had 93 students and 6 teachers. The Seward High School provides instruction to students in grades 9 through 12, and in 2011 the school had 168 students and 13 teachers. The Spring Creek School also provides instruction to students in grades 9 through 12, and in 2011, the school had 17 students and 4 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Seward is located within Resurrection Bay, an inlet from the Gulf of Alaska (GOA). In addition to fisheries that take place in the GOA, Seward fishermen have access to productive fisheries located on either side of the Kenai Peninsula, in Cook Inlet and Prince William Sound (PWS). Fisheries that occur within 3 nautical miles (nmi) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nmi in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

⁹⁸² Ibid.

⁹⁸³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Seward is located immediately within the Eastern district of the Lower Cook Inlet commercial salmon fishery, and the Southwestern district of the Prince William Sound commercial salmon fishery is located approximately 25 miles east of Resurrection Bay. The marine waters at the outlet of Resurrection Bay are included within Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA Sablefish Regulatory Area.

Commercial fisheries developed in Alaska after the 1867 purchase of Alaska from Russia by the United States. Commercial harvest of salmon in Cook Inlet began in 1882,⁹⁸⁴ with the development of a cannery at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890. The first commercial salmon fishery in PWS developed along the Copper River Delta around 1900.⁹⁸⁵ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁹⁸⁶ In the 1920s, herring had become increasingly valued for oil and meal, and a number of reduction plants were built. Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, commercial fisheries for herring took place in both Cook Inlet and PWS. Currently, the Cook Inlet herring fishery is closed due to low stock abundance.⁹⁸⁷ In PWS, the herring stock collapsed in 1993 in conjunction with an outbreak of hemorrhagic septicemia virus, and since 1998 the fishery has been closed. The relationships between the *Exxon Valdez* Oil Spill of 1989, the virus, and the stock collapse remain unclear, and the population has shown little sign of recovery since that time.^{988,989}

Historically, both Cook Inlet and PWS also supported commercial fisheries for Dungeness, king, and Tanner crab. However, crab fisheries are currently closed in these areas due to low stock abundance.^{990,991} Between 2000 and 2010, Seward residents participated in Tanner crab fisheries in other areas of Alaska (see *Commercial Fishing* section). In contrast to the closures of herring and crab fisheries, spot shrimp (*Pandalus platyceros*) pot fisheries reopened in PWS in 2010 after almost two decades of closure due to low abundance.⁹⁹²

In addition to federal groundfish fisheries that take place in the Central and Eastern GOA, state groundfish fisheries take place in the inland waters of Cook Inlet and PWS for rockfish,

⁹⁸⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹⁸⁵ Cook, Linda, and Frank Norris. 1998. *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

⁹⁸⁶ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁹⁸⁷ Alaska Dept. of Fish and Game. 2012. *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

⁹⁸⁸ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹⁸⁹ Alaska Dept. of Fish and Game. 2012. *Pacific Herring Species Profile: Status, Trends, and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=herring.main>.

⁹⁹⁰ See footnote 988.

⁹⁹¹ See footnote 987.

⁹⁹² Alaska Dept. of Fish and Game. 2012. *Spot Shrimp Species Profile: Status, Trends and Threats*. Retrieved April 30, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=spotshrimp.main>.

lingcod, pollock, sablefish, and Pacific cod. The Cook Inlet and PWS Pacific cod fisheries are managed as parallel fisheries, which take place at the same time as the federal cod fishery. The Total Allowable Catch (TAC) set by NMFS applies to both federal and state fisheries. Beginning in 1997, additional ‘state-waters fisheries’ for Pacific cod were initiated in Cook Inlet and PWS. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet. In PWS, a pelagic trawl fishery for pollock began in 1995. The PWS limited entry sablefish fishery is also managed separately under a GHL.⁹⁹³

Seward is not eligible for the Community Development Quota or Community Quota Entity programs. In a survey conducted by the AFSC in 2011, community leaders reported that the annual peak in population each summer is “mostly” driven by employment in the fishing sectors, such as processing plants, commercial fishing, subsistence fishing, recreational/sportfishing, and charter fishing. Community leaders also indicated that Seward participates in the fisheries management process in Alaska through a representative that sits on regional fisheries advisory and/or working groups run by the ADF&G, a reliance on regional organizations to provide information on fisheries management issues, financially supporting research organizations, industry coalitions, and trade organizations such as the Alaska SeaLife Center, and by helping obtain funding for hatchery and other research programs.

Processing Plants

ADF&G’s 2010 Intent to Operate list indicates that six shore-based processing plants were operating in Seward in 2010. Detailed information is available about three of the plants. Captain Jack’s Seafood Locker is a seafood market and small processing facility located in Seward. They sell halibut, king crab, black cod, white fish, shrimp, scallops, and Chinook and sockeye salmon. Captain Jacks Seafood Locker also provides custom processing for sport fishermen. Their facility contains a blast freezer and a vacuum packing machine.⁹⁹⁴

Since 1978, Icicle Seafoods has owned a seafood processing facility in the small harbor of the town of Seward. This facility was originally established in 1968 as Seward Fisheries.⁹⁹⁵ Icicle processes halibut and black cod beginning in March until November. The facility also cans and freezes various species of salmon from June until the end of August. July and August are peak salmon seasons for the plant. During this time over 300 people are employed to work at the Seward facility. In 2010, the workforce in July and August totaled 350.⁹⁹⁶ Icicle’s Seward facility has a bunkhouse (with laundry facilities, showers, and a recreation room with satellite TV and DVD/VHS player) for its fish processing workforce and can accommodate 50 workers. April through May its galley serves one meal a day to workers Monday through Friday. June through August the galley serves three meals a day. Icicle also has a campground with laundry

⁹⁹³ See footnote 988.

⁹⁹⁴ Captain Jack’s Seafood Locker. 2012. *Homepage*. Retrieved on May 7, 2012 from <http://www.captainjacksalaska.com/default.asp>.

⁹⁹⁵ This information is based on the results of a survey of processing plant managers conducted by AFSC in 2011.

⁹⁹⁶ *Ibid*.

facilities, showers, restrooms, and canvas tents. The company provides its workers rain gear, gloves, boots, ear protection and other required safety gear for free.⁹⁹⁷

Sea Level Seafoods LLC processes halibut, Pacific cod, rockfish, and sablefish from March through November in its Seward facility. The plant began operations in 1975 and employs up to 30 workers each year.⁹⁹⁸ The facility offers services to local fishermen including ice, laundry facilities, showers, bait and Internet access.⁹⁹⁹

According to ADF&G's 2010 Intent to Operate list, Polar Seafoods, T-n-T Custom Smoke & Processing LLC, and Pure Pacific Seafood Inc. also operate seafood processing facilities in Seward.

Fisheries-Related Revenue

Between 2000 and 2010, Seward received fisheries-related revenue from the Shared Fisheries Business Tax, the Fisheries Resources Landing Tax, and harbor usage fees. Amounts received from the Shared Fisheries Business Tax and harbor usage fees increased between 2000 and 2010, however, revenue received from the Fisheries Resource Landing Tax decreased substantially during the same period. The revenue received from fisheries-related sources varied from 2000 to 2009, from a low of \$421,190 in 2010 to a high of \$3.1 million in 2009 (Table 3).¹⁰⁰⁰

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing vessels of all sizes use Seward as their base of operations during the fishing season and that there are more commercial fishing boats in Seward now as compared to 5 years ago. Community leaders also noted that commercial fishing boats that use Seward as their base of operations during the fishing season use the following gear types: trawl, pots, longline, gillnet, purse seine, and troll. In 2010, Seward ranked 12th of 67 communities in Alaska with commercial landings data for that year, and the ex-vessel value of catch landed in Seward ranked 8th of 67 communities with ex-vessel value information. In 2010, there were 25 Seward residents holding 30 groundfish License Limitation Program (LLP) permits, and 20% of those permits were reported as fished. Overall between 2000 and 2010, the number of groundfish LLP permits, permit holders, and permits reported as fished has decreased slightly. While there were four individuals holding four crap LLP permits in 2010 (both of which decreased between 2000 and 2010), none of the crab LLP permits were reported as fished between 2003 and 2010. For Federal Fisheries Permits, there were 15 individuals holding 18 permits in 2010, and 67% of those permits were reported as fished. While the number of Federal Fisheries Permits and permit holders decreased between 2000 and 2010, the number of permits reported as fished increased during that same period.

⁹⁹⁷ Icicle Seafoods, Inc. 2012. *Homepage*. Retrieved on May 7, 2012 from <http://www.americangoldseafoods.com/locations/swd/>.

⁹⁹⁸ See footnote 995.

⁹⁹⁹ Pacific Seafood Group. 2012. *Homepage*. Retrieved on May 7, 2012 from <http://www.pacseafood.com/default.aspx?page=1>.

¹⁰⁰⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Also in 2010, there were 66 Seward residents holding 126 Commercial Fisheries Entry Commission (CFEC) permits for the following fisheries: crab, other shellfish, halibut, herring, sablefish, groundfish, and salmon. In that same year, 64% of CFEC permits held by Seward residents were reported as fished. For crab CFEC permits, the number of permit holders and permits held decreased between 2000 and 2010, though the number of permits actively fished varied between one and three per year. While permits for other shellfish have been held in each year between 2000 and 2010, permits were only reported as actively fished in 2005 and 2010. The number of permit holders and permits held exhibited a sharp increase between 2009 and 2010 for other shellfish CFEC permits. While the number of halibut CFEC permit holders and permits held both decreased between 2000 and 2010, the number of permits reported as actively fished in each of those years was relatively stable. Both number of permit holder and number of permits held decreased between 2000 and 2010 for the herring CFEC fishery, and no permits were reported as actively fished in that fishery between 2006 and 2010. For sablefish CFEC permits, the number of permits held and permit holders have both decreased between 2000 and 2010, however, the number of permits reported as actively fished remained relatively stable from year to year. The number of groundfish CFEC permit holders and permits held both decreased sharply between 2000 and 2010, though the number of permits actively fished in each year was variable during that period. While there have been other finfish CFEC permits held between 2000 and 2010, none of those permits were reported as fished during that period and there were no other finfish CFEC permits held in 2009 or 2010. The number of salmon CFEC permits held remained relatively stable between 2000 and 2010, though the number of permit holders decreased during that same period. The number of salmon CFEC permits reported as actively fished varied between 2000 and 2010, first experiencing a decrease and then an increase. Further information about commercial fishing permits and permit holders by species is presented in Table 4.

Of the 24 halibut CFEC permits issued in 2010, the majority (19) was issued for the statewide longline fishery using vessels under 60 feet, with 4 issued for the statewide longline fishery using vessels 60 feet or over and 1 issued for the statewide hand troll fishery.

Of the 17 sablefish CFEC permits issued in 2010, 7 were issued for the statewide longline fishery using vessels under 60 feet. Two were issued for the fixed gear sablefish fishery using vessels under 60 feet in length in Prince William Sound, one was issued for the fixed gear sablefish fishery using vessels under 35 feet in length in Prince William Sound, three were issued for the longline fishery in the northern southeast, three for the statewide longline fishery using vessels 60 feet or over, and one for the longline fishery in the southern southeast.

Of the eight herring CFEC permits issued in 2010, three were issued for the roe herring purse seine fishery in Prince William sound, two were issued for the herring roe purse seine fishery in Cook Inlet, two were issued for the herring gill net fishery in Norton Sound, and one was issued for the herring spawn on kelp pound fishery in Prince William Sound.

Of the 48 salmon CFEC permits issued in 2010, 12 were issued for the purse seine fishery in Prince William Sound, 10 were issued for the drift gill net fishery in Prince William Sound, 6 were issued for the purse seine fishery in Cook Inlet, 6 for the purse seine fishery in Kodiak, 5 for the purse seine fishery in Chignik, and 2 for the purse seine fishery in the Peninsula/Aleutians. Two salmon CFEC permits were issued for the drift gill net fishery in Cook Inlet, three for the drift gill net fishery in the Peninsula/Aleutians, one for the set gill net fishery in Bristol Bay, and one for the statewide power gurdy troll fishery.

Other shellfish CFEC permits were held in 2010 for the shrimp pot fishery in Prince William Sound using vessels under 60 feet, sea cucumber using diving gear in the southeast, the statewide clam mechanical digger fishery, the Tanner crab pot fishery using vessels under 60 feet in Kodiak, the Tanner crab pot fishery using vessels under 60 feet in the Peninsula/Aleutians, and the Tanner crab pot fishery using vessels under 60 feet in Kodiak.

Other CFEC permits issued in Seward in 2010 include the statewide lingcod hand troll and mechanical jig fisheries, the statewide and Gulf of Alaska miscellaneous saltwater finfish hand troll fisheries, the statewide and Gulf of Alaska miscellaneous saltwater finfish longline fisheries using vessels under 60 feet, the statewide and Gulf of Alaska saltwater finfish mechanical jig fisheries, and the southeast demersal shelf rockfish mechanical jig fishery.

In 2010, there were 119 crew license holders in Seward. While this number varied from year to year between 2000 and 2010, overall there has been a decrease in crew license holders during this period. Also in 2010, there were 13 fish buyers in Seward, which represents an overall decrease between 2000 and 2010, but a slight increase from a time-series low of 10 fish buyers in 2008. The number of shore-side processing facilities in Seward remained relatively stable between 2000 and 2010, varying between four and six facilities. Both the number of vessels owned primarily by Seward residents in the number of vessels homeported in Seward decreased substantially during this period, with the number of vessels owned primarily by Seward residents decreasing from 128 to 61 and the number of vessels homeported in Seward decreasing from 185 to 85. The number of vessels landing catch in Seward varied during this period, with the highest number of vessels landing catch in the year 2000 (327 vessels) and 227 vessels landing catch in Seward in 2010. Both total net pounds landed and the ex-vessel value of landings in Seward increased between 2000 and 2010. Additional information about characteristics of the commercial fishing sector in Seward between 2000 and 2010 is presented in Table 5.

The number of individuals holding halibut quota share accounts in Seward decreased between 2000 and 2010, though the number of halibut quota shares held remained stable during this same period. The overall halibut Individual Fishing Quota (IFQ) allotment for account holders in Seward increased steadily from 2000 to 2007, but decreased again from 2008 to 2010 (Table 6). While the number of sablefish quota share accounts decreased from 2000 to 2010, the number of sablefish quota shares held increased during this same period. However, after a slight increase in sablefish IFQ allotment, the 2010 allotment was similar to the 2000 allotment (Table 7). There were no residents of Seward holding crab quota share shareholder accounts, crab quota shares, or crab IFQ allotment between 2000 and 2010 (Table 8).

Information on landings and ex-vessel value for finfish, herring, other shellfish, and pollock landed in Seward were considered confidential between 2000 and 2010 due to the small number of participants. However, landings and ex-vessel value for catch of halibut, other groundfish, Pacific cod, sablefish, and salmon landed in Seward during this period are reportable. Overall, the total number of pounds landed in Seward increased between 2000 and 2010, though there was some variability between years during this period. The ex-vessel value of landings in Seward also increased overall between 2000 and 2010, though, like landings, the ex-vessel value was variable from year to year. The most notable trends in landings during this period are the sharp decrease in landings (and ex-vessel value) of Pacific cod between 2000 and 2010 as well as the sharp increase in landings (and ex-vessel value) of salmon during this same period. Information regarding landings and ex-vessel value for catch landed in Seward between 2000 and 2010 is presented in Table 9.

For catch landed by Seward residents, landings and ex-vessel value for crab, finfish, herring, other shellfish, and pollock are considered confidential between 2000 and 2010 due to the small number of participants. Landings and ex-vessel value for catch of halibut, other groundfish, Pacific cod, sablefish, and salmon landed by Seward residents are available for this time period. Overall, landings by Seward residents and ex-vessel value of those landings increased between 2000 and 2010, though both landings and value were variable from year to year during this period. While landings for halibut remained relatively stable during this period, the ex-vessel value of those landings increased. Landings of other groundfish and ex-vessel value of those landings both decreased between 2000 and 2010. Landings of Pacific cod and ex-vessel value of those landings increased during this period. While landings and ex-vessel value of landings of sablefish remained relatively stable during this period, the landings and ex-vessel value of salmon increased substantially between 2000 and 2010. Information regarding landed pounds and ex-vessel revenue by species for Seward residents is provided in Table 10.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Seward: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$198,284	\$265,068	\$354,644	\$243,100	\$242,763	\$514,336	\$317,786	\$371,609	\$314,796	\$407,558	\$421,190
Fisheries Resource Landing Tax ¹	\$11,132	\$9,053	\$18,591	\$28,654	\$7,795	\$5,994	\$5,856	\$230	\$4,663	\$236	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$1,518,452	\$1,569,560	\$1,590,082	\$1,830,301	\$1,818,674	\$1,900,090	\$2,366,568	\$1,632,213	\$2,743,521	\$2,756,993	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$1,727,867</i>	<i>\$1,843,681</i>	<i>\$1,963,317</i>	<i>\$2,102,055</i>	<i>\$2,069,232</i>	<i>\$2,420,420</i>	<i>\$2,690,209</i>	<i>\$2,004,052</i>	<i>\$3,062,980</i>	<i>\$3,164,787</i>	<i>\$421,190</i>
<i>Total municipal revenue⁵</i>	<i>\$9 Million</i>	<i>Million</i>	<i>Million</i>	<i>Million</i>	<i>Million</i>	<i>Million</i>	<i>Million</i>	<i>Million</i>	<i>Million</i>	<i>Million</i>	<i>\$15 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Seward: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	38	36	32	32	32	31	31	31	30	30	30
	Active permits	10	11	10	9	9	8	8	9	8	9	6
	% of permits fished	26%	30%	31%	28%	28%	25%	25%	29%	26%	30%	20%
	Total permit holders	31	30	27	27	27	26	26	27	25	25	25
Crab (LLP) ¹	Total permits	9	9	5	5	4	4	4	4	4	4	4
	Active permits	3	4	1	1	0	0	0	0	0	0	0
	% of permits fished	33%	44%	20%	20%	-	-	-	-	-	-	-
	Total permit holders	8	8	5	5	4	4	4	4	4	4	4
Federal Fisheries Permits ¹	Total permits	24	24	25	17	18	18	18	19	22	17	18
	Fished permits	1	1	1	11	13	10	10	10	12	12	12
	% of permits fished	4%	4%	4%	65%	72%	56%	56%	53%	55%	71%	67%
	Total permit holders	22	22	23	16	17	17	16	16	19	14	15
Crab (CFEC) ²	Total permits	7	7	5	3	5	6	4	4	1	1	3
	Fished permits	3	2	1	1	3	3	2	2	1	1	1
	% of permits fished	43%	29%	20%	33%	60%	50%	50%	50%	100%	100%	33%
	Total permit holders	5	6	4	3	5	5	4	4	1	1	2
Other shellfish (CFEC) ²	Total permits	2	2	4	1	1	4	5	2	2	1	8
	Fished permits	0	0	0	0	0	1	0	0	0	0	6
	% of permits fished	-	-	-	-	-	25%	-	-	-	-	75%
	Total permit holders	2	2	3	1	1	4	3	2	2	1	8
Halibut (CFEC) ²	Total permits	31	32	29	27	25	28	30	30	27	27	24
	Fished permits	29	25	24	24	25	23	23	23	23	22	23
	% of permits fished	94%	78%	83%	89%	100%	82%	77%	77%	85%	81%	96%
	Total permit holders	31	32	29	26	24	25	27	27	26	26	24
Herring (CFEC) ²	Total permits	14	11	10	9	7	7	8	8	7	7	8
	Fished permits	2	2	1	1	1	1	1	0	0	0	0
	% of permits fished	14%	18%	10%	11%	14%	14%	13%	-	-	-	-
	Total permit holders	9	7	6	5	4	4	4	4	4	4	5

Table 4 Cont. Permits and Permit Holders by Species, Seward: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	21	26	21	17	19	22	24	22	20	17	17
	Fished permits	15	21	18	16	17	21	19	19	17	15	15
	% of permits fished	71%	81%	86%	94%	89%	95%	79%	86%	85%	88%	88%
	Total permit holders	18	22	17	13	14	17	19	16	14	11	12
Groundfish (CFEC) ²	Total permits	42	36	23	22	24	26	20	22	14	18	18
	Fished permits	12	9	4	2	1	4	3	5	8	4	6
	% of permits fished	29%	25%	17%	9%	4%	15%	15%	23%	57%	22%	33%
	Total permit holders	28	23	17	15	15	14	14	15	13	15	14
Other Finfish (CFEC) ²	Total permits	3	3	1	1	0	0	0	1	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	1	1	1	0	0	0	1	1	0	0
Salmon (CFEC) ²	Total permits	49	47	46	42	42	42	48	46	51	45	48
	Fished permits	32	22	21	15	17	25	23	26	30	29	30
	% of permits fished	65%	47%	46%	36%	40%	60%	48%	57%	59%	64%	63%
	Total permit holders	46	43	44	40	42	42	42	40	43	39	38
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>169</i>	<i>164</i>	<i>139</i>	<i>122</i>	<i>123</i>	<i>135</i>	<i>139</i>	<i>135</i>	<i>123</i>	<i>116</i>	<i>126</i>
	<i>Fished permits</i>	<i>93</i>	<i>81</i>	<i>69</i>	<i>59</i>	<i>64</i>	<i>78</i>	<i>71</i>	<i>75</i>	<i>79</i>	<i>71</i>	<i>81</i>
	<i>% of permits fished</i>	<i>55%</i>	<i>49%</i>	<i>50%</i>	<i>48%</i>	<i>52%</i>	<i>58%</i>	<i>51%</i>	<i>56%</i>	<i>64%</i>	<i>61%</i>	<i>64%</i>
	<i>Permit holders</i>	<i>86</i>	<i>82</i>	<i>77</i>	<i>70</i>	<i>71</i>	<i>74</i>	<i>73</i>	<i>69</i>	<i>69</i>	<i>63</i>	<i>66</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Seward: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ⁴	Vessels Primarily Owned by Residents ⁵	Vessels Homeported ⁵	Vessels Landing Catch in Seward ²	Total Net Pounds Landed in Seward ^{2,3}	Total Ex-Vessel Value of Landings in Seward ^{2,3}
2000	198	18	5	128	185	327	22,146,235	\$37,227,769
2001	150	17	4	114	172	255	43,924,453	\$31,270,657
2002	120	16	5	108	158	222	39,129,371	\$31,915,162
2003	115	20	4	116	159	224	36,877,097	\$41,628,850
2004	118	18	4	116	159	194	25,415,929	\$39,613,583
2005	120	16	5	61	79	166	33,975,508	\$34,685,445
2006	142	13	5	58	73	168	24,854,047	\$42,126,154
2007	129	14	5	57	75	160	58,915,998	\$48,529,903
2008	146	10	4	54	82	201	44,476,820	\$52,580,345
2009	124	12	5	58	86	187	29,537,765	\$35,194,431
2010	119	13	6	61	85	227	55,124,215	\$56,060,412

Note: Cells showing “–” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Totals only represent non-confidential data.

⁴ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Seward: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	45	3,506,372	442,390
2001	41	3,587,741	541,081
2002	39	3,343,434	524,355
2003	35	3,349,245	520,408
2004	38	3,760,404	605,923
2005	38	3,880,807	616,559
2006	38	3,739,847	565,319
2007	36	3,974,978	610,928
2008	33	3,644,822	506,988
2009	32	3,690,919	473,000
2010	31	3,598,299	424,203

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Seward: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	19	5,348,346	481,446
2001	19	5,408,767	461,975
2002	18	5,012,574	420,204
2003	17	5,173,394	513,571
2004	20	5,726,463	642,698
2005	18	5,724,345	630,657
2006	16	5,079,591	504,183
2007	16	5,973,059	583,000
2008	15	6,957,195	620,731
2009	16	7,299,663	580,137
2010	15	6,659,312	480,714

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Seward: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Seward: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	6,240,238	6,259,705	7,742,997	7,487,167	7,250,654	5,933,412	6,122,494	5,634,393	5,446,739	4,904,301	5,168,213
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	882,122	438,635	226,865	289,046	228,422	251,893	289,648	326,962	321,003	376,400	776,079
Groundfish											
Other	--	--	--	--	--	--	--	--	--	--	--
Shellfish											
Pacific Cod	2,132,461	1,022,955	1,107,134	889,572	153,150	32,202	152,398	874,205	1,206,364	1,122,688	893,616
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	4,373,076	3,434,248	3,401,426	4,248,284	5,006,334	4,102,749	4,522,260	4,506,013	3,973,421	3,340,217	3,091,138
Salmon	8,194,207	32,628,086	26,647,898	23,953,507	11,267,371	23,083,174	13,767,247	46,997,323	33,520,285	18,648,728	45,095,884
<i>Total²</i>	<i>21,822,104</i>	<i>43,783,629</i>	<i>39,126,320</i>	<i>36,867,576</i>	<i>23,905,931</i>	<i>33,403,430</i>	<i>24,854,047</i>	<i>58,338,896</i>	<i>44,467,812</i>	<i>28,392,334</i>	<i>55,024,930</i>
<i>Ex-vessel Value (nominal U.S. dollars)</i>											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$16,073,372	\$13,025,565	\$17,046,697	\$21,773,187	\$22,252,947	\$18,235,976	\$23,082,219	\$24,812,004	\$23,597,370	\$14,978,754	\$24,031,030
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	\$312,546	\$155,180	\$140,481	\$109,243	\$113,115	\$155,069	\$192,858	\$187,718	\$159,829	\$186,847	\$235,998
Groundfish											
Other	--	--	--	--	--	--	--	--	--	--	--
Shellfish											
Pacific Cod	\$855,862	\$353,995	\$296,888	\$300,946	\$37,331	\$7,264	\$69,360	\$491,465	\$734,783	\$384,201	\$253,436
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$16,129,222	\$10,774,509	\$10,688,918	\$15,380,217	\$15,489,666	\$13,275,785	\$15,650,528	\$13,553,843	\$13,567,445	\$12,062,346	\$13,196,011
Salmon	\$3,025,427	\$6,380,240	\$3,742,076	\$4,065,257	\$1,489,389	\$2,864,531	\$3,131,189	\$9,396,979	\$14,520,184	\$7,390,544	\$18,330,541
<i>Total²</i>	<i>\$36,396,428</i>	<i>\$30,689,488</i>	<i>\$31,915,061</i>	<i>\$41,628,850</i>	<i>\$39,382,448</i>	<i>\$34,538,625</i>	<i>\$42,126,154</i>	<i>\$48,442,010</i>	<i>\$52,579,610</i>	<i>\$35,002,692</i>	<i>\$56,047,017</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Seward Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	911,739	1,126,178	1,156,667	1,225,545	1,350,607	1,127,755	1,064,476	1,190,762	1,096,331	1,070,704	986,908
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	165,745	90,051	72,902	52,856	62,437	80,759	66,091	82,090	96,752	63,436	96,022
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	170,652	135,608	139,905	100,336	9,530	62,029	46,509	169,038	643,457	1,008,026	593,986
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	709,647	553,916	709,897	809,802	987,157	906,253	917,729	1,009,464	923,154	809,789	757,685
Salmon	4,965,549	4,713,359	3,251,802	1,893,972	897,871	2,151,596	3,000,495	10,331,657	7,458,274	3,219,207	11,062,524
<i>Total²</i>	<i>6,923,331</i>	<i>6,619,112</i>	<i>5,331,173</i>	<i>4,082,511</i>	<i>3,307,602</i>	<i>4,328,392</i>	<i>5,095,300</i>	<i>12,783,011</i>	<i>10,217,967</i>	<i>6,171,162</i>	<i>13,497,126</i>
<i>Ex-vessel Value (nominal U.S. dollars)</i>											
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$2,299,913	\$2,246,127	\$2,519,459	\$3,446,295	\$4,012,325	\$3,403,564	\$3,924,556	\$5,135,470	\$4,725,209	\$3,242,129	\$4,527,407
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	\$154,463	\$67,573	\$56,901	\$48,435	\$57,951	\$67,821	\$63,033	\$74,760	\$60,524	\$52,179	\$64,830
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$64,416	\$46,465	\$39,819	\$34,872	\$2,574	\$22,226	\$21,052	\$86,835	\$385,980	\$264,903	\$185,587
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$2,955,728	\$2,004,843	\$2,614,132	\$3,274,966	\$3,305,226	\$3,204,989	\$3,371,660	\$3,356,557	\$3,470,668	\$3,274,852	\$3,412,354
Salmon	\$1,860,592	\$1,215,321	\$847,731	\$647,164	\$711,495	\$1,059,682	\$1,447,201	\$3,237,465	\$3,965,264	\$1,677,089	\$5,278,885
<i>Total²</i>	<i>\$7,335,111</i>	<i>\$5,580,329</i>	<i>\$6,078,043</i>	<i>\$7,451,732</i>	<i>\$8,089,572</i>	<i>\$7,758,281</i>	<i>\$8,827,503</i>	<i>\$11,891,088</i>	<i>\$12,607,645</i>	<i>\$8,511,152</i>	<i>\$13,469,063</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Seward is a popular destination for recreational fishermen, with 28 active sport fish guide businesses and 73 local community members holding sport fish guide licenses in 2010.

Compared to 2000, these numbers show relatively stability in the recreational fishing industry in Seward. In some years in the 2000-2010 period, guide activity increased, with a peak of 38 active guide businesses in Seward in 2008, and a peak 87 sport fish guide licenses in 2006. In 2010, 1,723 sportfishing licenses were sold to Seward residents (irrespective of the location of sale), while 6,789 sportfishing licenses were sold in Seward. This indicates the potential that many visitors to Seward are pursuing sportfishing activities. While the number of sportfishing licenses sold to community residents increased moderately between 2000 and 2010, the number of sportfishing licenses sold in Seward more than doubled during the same period.

Seward is located in North Gulf Coast/Prince William Sound Statewide Harvest Survey Area which includes all drainages from east of Cape Suckling, through Prince William Sound to Gore Point. In 2010, there were a total of 212,793 saltwater angler days fished in the region, compared to 122,459 in 2000, representing a 74% increase. Non-Alaska residents made up 30.4% of total saltwater angler days fished in 2010 in the region, compared to 32.3% in 2000. Regional saltwater angler days fished peaked at 300,205 in 2007. Total freshwater angler days fished was 22,979 in 2010, compared to 12,108 in 2000; an increase of 90%. Non-Alaska residents made up 57% of freshwater angler days fished in 2010 in the region, compared to 26% in 2000. Total freshwater angler days fished in the region peaked in 2010. Information regarding these regional sportfishing trends can also be found in Table 11.

The Alaska Statewide Harvest Survey,¹⁰⁰¹ conducted by ADF&G between 2000 and 2010, noted numerous species targeted by private anglers in Seward, including all five species of salmon, rainbow trout, Dolly Varden, whitefish, burbot, Arctic grayling, Pacific halibut, rockfish, lingcod, Pacific cod, shark, smelt, razor clam, hardshell clam, shrimp, other fish, and other shellfish. In addition, logbook data for fishing charter trips out of Seward between 2000 and 2010 indicated that the following species were caught by anglers on charter vessels: all five species of salmon, halibut, lingcod, other rockfish, pelagic rockfish, sablefish, shark, and yelloweye rockfish.¹⁰⁰²

In a survey conducted by the AFSC in 2011, community leaders reported that recreational/sportfishing in Seward takes place aboard charter boats or party boats, private boats owned by local residents, private boats owned by non-local residents, and by shore-based or dock fishing by local residents and by non-local residents. Community leaders also indicated that the following species are targeted by recreational fishermen that use boats based in Seward: pink, Chinook, coho and sockeye salmon, halibut, rockfish, crab, sablefish, and shrimp.

¹⁰⁰¹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁰⁰² Alaska Department of Fish and Game. 2011. *Alaska sport fish charger logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Seward: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Seward ²
2000	25	79	1,679	3,190
2001	28	84	1,679	3,385
2002	26	72	1,664	3,644
2003	29	75	1,806	4,073
2004	32	86	1,767	4,789
2005	34	72	1,831	6,098
2006	36	87	1,698	5,788
2007	34	83	1,790	5,611
2008	38	85	1,612	6,612
2009	29	74	1,784	6,819
2010	28	73	1,723	6,789

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	39,551	82,908	3,168	8,940
2001	66,450	135,248	8,587	8,610
2002	67,698	133,508	5,132	8,126
2003	70,549	150,086	10,657	10,235
2004	76,173	184,492	9,199	10,349
2005	87,033	165,559	6,894	6,187
2006	79,313	157,194	8,886	5,655
2007	90,002	210,203	8,446	9,944
2008	67,410	181,381	8,056	5,489
2009	59,505	189,563	8,730	10,938
2010	64,776	148,017	13,118	9,861

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Information regarding subsistence participation by household and species in Seward between 2000 and 2010 was not available (Table 12). However, in a survey conducted by the AFSC in 2011, community leaders reported that salmon, halibut, and rockfish are the three most important subsistence marine resources to the residents of Seward. In addition, ADF&G provides total harvest level reported for salmon and halibut, and some information is provided by management agencies regarding subsistence marine mammal harvest. The number of permits issued for the subsistence harvest of salmon in Seward increased between 2000 and 2010, with an associated increase in the number of those permits reported as fished and the number of salmon harvested for subsistence purposes. Available data indicate that sockeye are the most heavily harvested salmon species in Seward for subsistence use; however, harvest levels are relatively low compared to other communities in Alaska. Both Chinook and coho salmon were also harvested in low numbers by Seward residents between 2000 and 2010 (Table 13).

Data for Subsistence Halibut Registration Certificate (SHARC) cards issued between 2003 and 2010 indicate an overall increase in SHARC cards issued and reported as actively fished during this period, though the number of pounds of halibut harvested for subsistence each year decreased from 1,126 pounds in 2005 to 200 pounds in 2010 (Table 14).

Data for subsistence harvest of marine mammals in Seward are extremely limited between 2000 and 2010. Data reported by the U.S. Fish and Wildlife Service indicate that a small amount of subsistence harvest of sea otters took place in 2000 and 2002. Data were not reported by ADF&G between 2000 and 2008 for subsistence harvest of Steller sea lions or spotted seals. However, in both 2000 and 2002, ADF&G reported harvest of four harbor seals for subsistence purposes. No data were available from management agencies regarding subsistence harvest of beluga whale or walrus by Seward residents during the 2000-2010 period. Information about marine mammal subsistence harvest is presented in Table 15.

Additional Information

Seward was named All-American City in 1963, 1965, and 2005 and is also home to Mile 0 of the Iditarod Trail.¹⁰⁰³

¹⁰⁰³ City of Seward (n.d.). *City Profile*. Retrieved from <http://www.cityofseward.us> on February 27, 2012.

Table 12. Subsistence Participation by Household and Species, Seward: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Seward: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	13	11	7	n/a	n/a	n/a	218	n/a	n/a
2001	10	13	2	n/a	n/a	n/a	120	n/a	n/a
2002	12	11	5	n/a	n/a	n/a	112	n/a	n/a
2003	7	10	4	n/a	7	n/a	118	n/a	n/a
2004	16	14	4	n/a	n/a	n/a	110	n/a	n/a
2005	15	14	5	n/a	n/a	n/a	180	n/a	n/a
2006	14	11	4	n/a	3	n/a	195	n/a	n/a
2007	15	15	18	n/a	n/a	n/a	280	n/a	n/a
2008	29	28	12	n/a	n/a	n/a	129	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Seward: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	10	n/a	n/a
2004	9	n/a	n/a
2005	10	1	1,126
2006	12	2	n/a
2007	14	2	560
2008	17	6	635
2009	15	6	376
2010	12	1	200

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Seward: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	4	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	1	n/a	n/a	n/a	4	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Soldotna (soul-DAHT-nuh)



People and Place

*Location*¹⁰⁰⁴

Soldotna is on the Kenai Peninsula, 150 highway mi south of Anchorage, at the junction of the Sterling and Kenai Spur Highways. It lies 10 mi inland from Cook Inlet and borders the Kenai River. Soldotna is located in the Kenai Recording District, the Kenai Peninsula Census Area, and the Kenai Peninsula Borough. The community encompasses 6.9 sq mi of land and 0.5 sq mi of water.

*Demographic Profile*¹⁰⁰⁵

In 2010, there were 4,163 residents in Soldotna, ranking it the 28th largest of 352 total Alaskan communities with recorded populations that year. Between 1990 and 2010, the population grew by 19.56%. Overall between 2000 and 2009, the population of Soldotna grew by 6.97%, with an average annual growth rate of 0.17%, indicating a slow rate of growth. Information regarding changes in Soldotna's population can be found in Table 1.

In 2010, a majority of Soldotna residents identified themselves as White (85.9%). Other ethnic groups present in Soldotna that year included two or more races (6.8%), some other race (0.8%), Native Hawaiian and Other Pacific Islander (0.3%), Asian (1.6%), American Indian and Alaska Native (4.3%), Black or African American (0.3%), and Hispanic or Latino (3.9%). The percentages of the population identifying themselves as White, American Indian and Alaska Native, and some other race decreased between 2000 and 2010, with corresponding increases in the percentages of the population identifying themselves as two or more races and Hispanic or Latino. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Soldotna in 2010 was 2.38, a decrease from 2.6 persons per household in 1990 and 2.53 in 2000. In that year, there were a total of 1,968 housing units, compared to 1,460 in 1990 and 1,670 in 2000. Of the households surveyed in 2010, 52% were owner-occupied, compared to 55% in 2000; 35% were renter-occupied, compared to 33% in 2000; and 13% were vacant or occupied seasonally, compared to 12% in 2000.

¹⁰⁰⁴ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁰⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

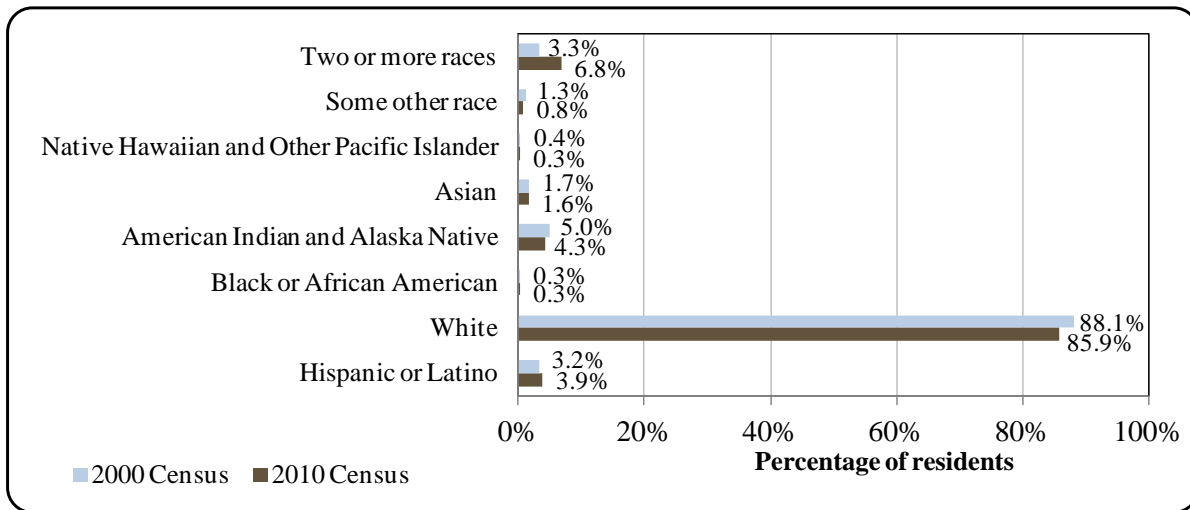
Table 1. Population in Soldotna from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	3,482	-
2000	3,759	-
2001	-	3,792
2002	-	3,851
2003	-	4,001
2004	-	3,778
2005	-	3,800
2006	-	3,762
2007	-	3,898
2008	-	3,926
2009	-	4,021
2010	4,163	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Soldotna: 2000-2010 (U.S. Census).

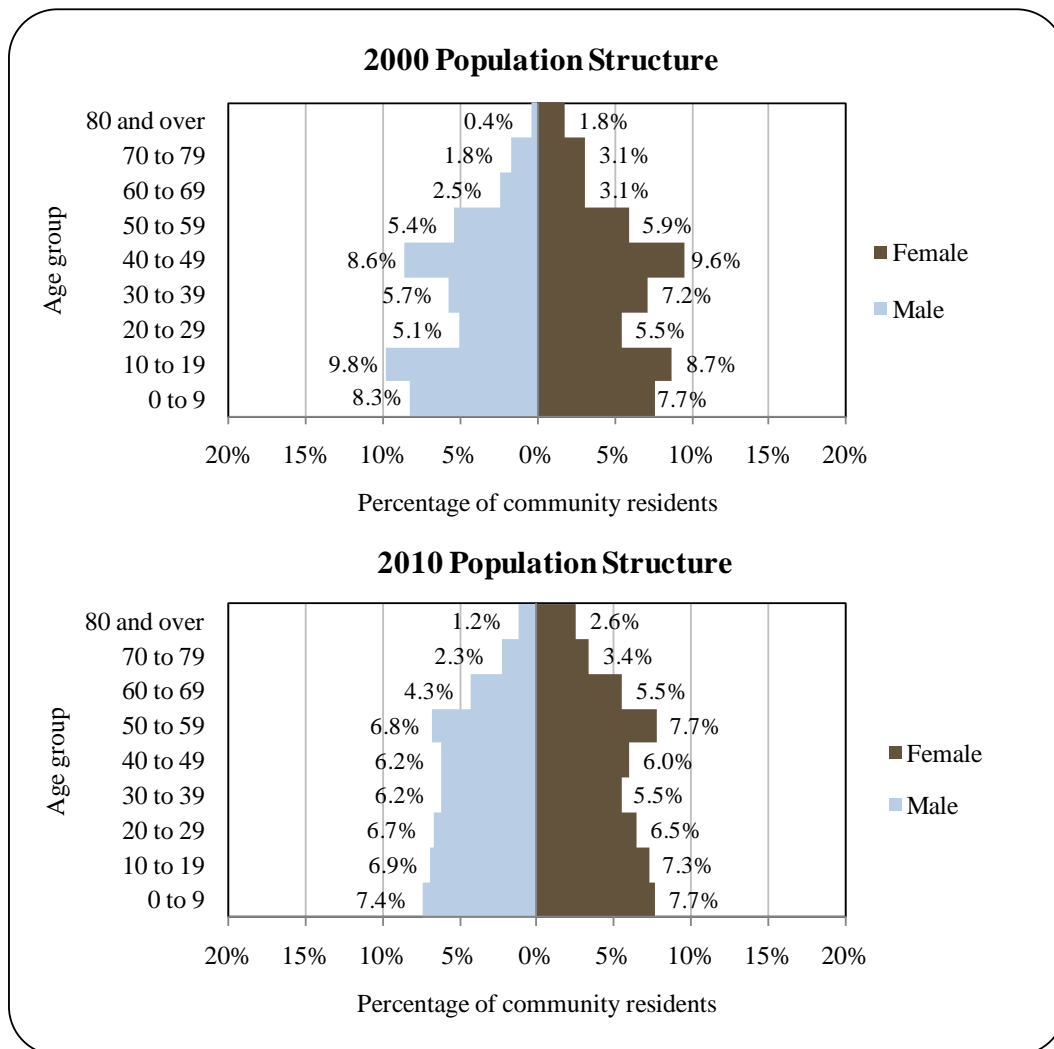


In 2010, the gender distribution in Soldotna was 47.8% male and 52.2% female, which was biased more towards females than the statewide distribution (52.0% male, 48.0% female), and similar to the distribution in 2000 (52.4% female, 47.6% male). In that year, the median age was 37 years, which was slightly older than both the statewide median of 34 and 2000 median of 35 years.

Compared with 2000, the population structure was more stationary in 2010. In that year, 29.3% of residents were under the age of 20, compared to 34.5% in 2000; 19.3% were over the age of 59, compared to 12.7% in 2000; 38.4% were between the ages of 30 and 59, compared to 42.4% in 2000; and 13.2% were between the ages of 20 and 29, compared to 10.6% in 2000.

Gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 80 and over range (2.6% female, 1.3% male), followed by the 60 to 69 (5.5% female, 4.3% male) and 70 to 79 (3.4% male, 2.3% female) ranges. Of those three, the greatest relative gender difference occurred in the 80 and over range.

Figure 2. Population Age Structure in Soldotna Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment,¹⁰⁰⁶ 90.5% of Soldotna residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 3.5% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; 6.1% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 32% were estimated to hold a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; 31.9% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 5.1% were estimated to hold an Associate's degree, compared to 8% of Alaska residents overall; 11.3% were estimated to hold a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 9.4% were estimated to hold a graduate or professional degree, compared to 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹⁰⁰⁷

The Kenai Peninsula has historically been the home of Kenaitze Indians and was developed by non-Natives for its rich resources, including fish, timber, and oil. Soldotna was named for a nearby stream. The name comes either from the Russian word for "soldier" or a Native word meaning "stream fork." The first homesteaders were World War II veterans who were given a 90-day preference over non-veterans in selecting and filing for property in 1947. That same year, the Sterling Highway right-of-way was constructed from Cooper Landing to Kenai. Soldotna was the site of the bridge crossing the Kenai River. A post office opened in 1949, with stores and a community center shortly thereafter. Soldotna continued to develop because of its strategic location at the Sterling-Kenai Spur Highway junction. In 1957, oil was discovered in the Swanson River region, bringing new growth and development. Soldotna was incorporated as a city in 1960.

The Kenai River offers top trophy king salmon fishing during June and July. A 97 pound 4 ounce world-record king salmon was taken from these waters in 1985, and catching king salmon of over 60 lbs is not uncommon here.

Natural Resources and Environment

Winter temperatures in Soldotna range from 6 to 24 °F (-14.4 to -4.4 °C); summers range from 45 to 66 °F (7.2 to 18.9 °C). Average annual precipitation is 17 inches.¹⁰⁰⁸

Soldotna is located near the Kenai National Wildlife Refuge (Refuge), and the U.S. Fish and Wildlife Service (FWS) Refuge Manager is located in Soldotna. The following information is from the FWS informational website on the Refuge.¹⁰⁰⁹ The Kenai Peninsula in southcentral Alaska is a relatively "young" or recently exposed area in geologic terms. Ice and glaciers, which once covered the entire peninsula, melted from most of the peninsula only 10,000-14,000 yrs

¹⁰⁰⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁰⁷ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁰⁸ Ibid.

¹⁰⁰⁹ U.S. Fish and Wildlife Service (n.d.). *Kenai National Wildlife Refuge*. Retrieved March 19, 2012 from <http://kenai.fws.gov/>.

ago. The remnant of this once widespread ice sheet can still be observed today as the Harding Icefield at high elevation in the eastern Kenai Mountains of the peninsula. At its greatest depth in the center, the Harding Icefield is thousands of feet thick.

As one leaves the ice and snow of the Harding Ice Field and descends to lower elevations, the first major habitats encountered are the treeless alpine and subalpine zones. These open, rocky, and windy habitats are the home of mountain goats, Dall sheep, caribou, wolverine, marmots, and ptarmigan. Just below the more shrubby subalpine habitat one begins to encounter trees of the boreal forest. Timberline averages about 1,800 ft above sea level on the Kenai National Wildlife Refuge.

Most of the lower elevations on the Kenai Peninsula and the Refuge are covered by boreal forest and numerous lakes. The largest lake on the Kenai Peninsula is Tustumena Lake at nearly 74,000 acres. Boreal forests are the home of moose, wolves, black and brown bears, lynx, snowshoe hares and numerous species of neotropical birds such as olive-sided flycatchers, myrtle warblers and ruby-crowned kinglets.

Continuing down to lowest elevation at sea level, the refuge includes the last remaining, pristine major salt water estuary - the Chickaloon River Flats - on the Kenai Peninsula. It provides a major migratory staging area for thousands of shorebirds and waterfowl in the spring and fall and nesting habitat for waterfowl and shorebirds in the summer. The area is also used as a haul-out area by harbor seals and is used by beluga whales. Thousands of salmon migrate up the Chickaloon River system each year to spawn.

The subarctic stream and lake habitats and associated populations of salmon, trout, char, and other species are highly important resources of the Kenai NWR. Most of the aquatic habitats are in near-pristine condition and many of the fish species have significant recreational and commercial value. Several fish species are also important food resources for a variety of wildlife including loons, bald eagles, river otters, and black and brown bears. Welfare of the fish populations is dependent upon maintaining genetic variability, water quality, protection of critical rearing and spawning habitats, and escapement of sufficient spawning stocks. The national importance of these resources is particularly evident when they are compared to habitats and fish populations elsewhere in the nation, where many resources have been severely impacted by human expansion and development.

The shoreline of the Kenai Peninsula along Cook Inlet is located at the edge of the North American Plate, leading to frequent and often devastating earthquakes and volcanic activity in the area. Five active volcanoes are located within the Kenai Peninsula Borough, all situated on the west side of Cook Inlet. They are Fourpeaked, Augustine, Iliamna, Redoubt, and Mount Spurr. Major damage can also be caused by secondary earthquake hazards, including landslides, floods, avalanches, tsunamis, uplift, subsidence, infrastructure failures, and soil liquefaction.¹⁰¹⁰ Other natural hazards threats in the Kenai Peninsula Borough include flooding, wildfire, snow and avalanche, seiche, severe weather, erosion, and drought.¹⁰¹¹

According to the Alaska Department of Environmental Conservation, there is one active environmental remediation site located in Soldotna. A drycleaning facility located at the River Terrace RV Park exposed local groundwater and soils to hydrocarbon and perchloroethylene

¹⁰¹⁰ Kenai Peninsula Borough (2010). *All-Hazard Mitigation Plan*. Retrieved January 26, 2012 from <http://www2.borough.kenai.ak.us/emergency/hazmit/plan.htm>

¹⁰¹¹ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

(PCE) contaminates in the early 1990s. Soil excavations and treatment began in 1997, and groundwater treatment began in 2000. Two contaminant groundwater plums exist in the area, one of which flows into the Kenai River. Between 2000 and 2004, efforts were made to treat plums prior to reaching the Kenai, and monitoring between 2005 and 2010 indicated that treatment processes had mostly broken down PCE contaminates, although the area is still considered a public health threat.¹⁰¹²

Current Economy¹⁰¹³

The area's economy is diversified. Kenai and Soldotna residents are employed in natural gas drilling and exploration and other oil industry services for Cook Inlet oil. Other important economic sectors include sport, subsistence, and commercial fishing, fish processing, government, agriculture, transportation, construction, services, and retail trade. In 2010, 161 area residents held commercial fishing permits. Soldotna is the site of the Central Peninsula General Hospital, the Kenai Peninsula Community College, the State Troopers' Headquarters, the Kenai National Wildlife Refuge, and the borough's administrative center and the school district's headquarters office.¹⁰¹⁴ Top employers for 2010 included: Kenai Peninsula Borough School, Central Peninsula General Hospital, State of Alaska, Fred Meyer Stores Inc., ASRC Energy Services O&M Inc., Kenai Peninsula Borough, VECO Alaska Inc., Frontier Community Services Inc., Peninsula Community Health Services Inc., and Safeway Inc.¹⁰¹⁵

According to the 2006-10 American Community Survey (ACS), the per capita income in Soldotna was estimated to be \$28,559 and the median household income was estimated to be \$46,548, compared to \$21,740 and \$48,420 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁰¹⁶ the real per capita income in 2000 is shown to be \$28,588 and the real household income was \$63,672. This shows that per capita income decreased only slightly over the period, while there was a significant decrease in median household income. In 2010, Soldotna ranked 73rd of 305 Alaskan communities for which per capita income was estimated that year, and 154th of 299 Alaskan communities for which household income was estimated. However, Soldotna's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁰¹⁷ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Soldotna in 2010 was \$19,169, which indicates a more significant decrease in per capita income than the

¹⁰¹² Alaska Department of Environmental Conservation (2012). *River Terrace RV Park*. Retrieved April 10, 2013 from: <http://www.dec.state.ak.us/spar/csp/sites/riverterrace.htm>.

¹⁰¹³ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰¹⁴ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰¹⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁰¹⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁰¹⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

2006-10 ACS when compared to the real per capita income values reported by the U.S. Census in 2000.¹⁰¹⁸

Based on the ACS, in the same year, 59.1% of the population was estimated to be in the civilian labor force, compared to an estimated statewide rate of 68.8%. The local unemployment rate was estimated at 6.9%, compared to an estimated statewide unemployment rate of 5.9%. An estimated 8.9% of local residents were living below the poverty line, compared to an estimated 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Soldotna are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the population of Soldotna. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 11.4%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers were estimated to be employed in the private sector (79%), while an estimated 16.5% were employed in the public sector, 3.4% were self-employed, and 1% were unpaid family workers. Out of 1,819 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in education services, health care, and social assistance (27.6%), arts, entertainment, recreation, accommodations, and food services (16.2%), retail trade (10.7%), and agriculture, forestry, fishing, hunting, and mining (10.4%). Smaller percentages of the population were employed in public administration (6.3%), other services, except public administration (6%), professional, scientific, management, administration, and waste management (5.1%), finance, insurance, and real estate (5.3%), information (2.1%), transportation, warehousing, and utilities (1.5%), wholesale trade (5.5%), manufacturing (0.7%), and construction (2.7%). Between 2000 and 2010, a significant proportional increase in employment occurred within the education services, healthcare, and social assistance sectors. Conversely, a significant proportional decline occurred within the retail trade, transportation, warehousing, and utilities sectors (Figure 3).

In terms of employment by occupation type, most (29.9%) employed residents were estimated to hold service positions in 2010; followed by management or professional (25.7%); sales or office (24.6%); production, transportation, or material moving (7.0%); and natural resources, construction, or maintenance (4.4%) positions. Between 2000 and 2010, a significant proportional increase occurred in the estimated number of residents holding service positions. Conversely, a significant proportional decrease occurred in the estimated number of residents holding natural resources, construction, or maintenance positions (Figure 4).

Given the data reported in the *Commercial Fishing* section below, the number of individuals employed in farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

¹⁰¹⁸ See footnote 1015.

Figure 3. Local Employment by Industry in 2000-2010, Soldotna (U.S. Census).

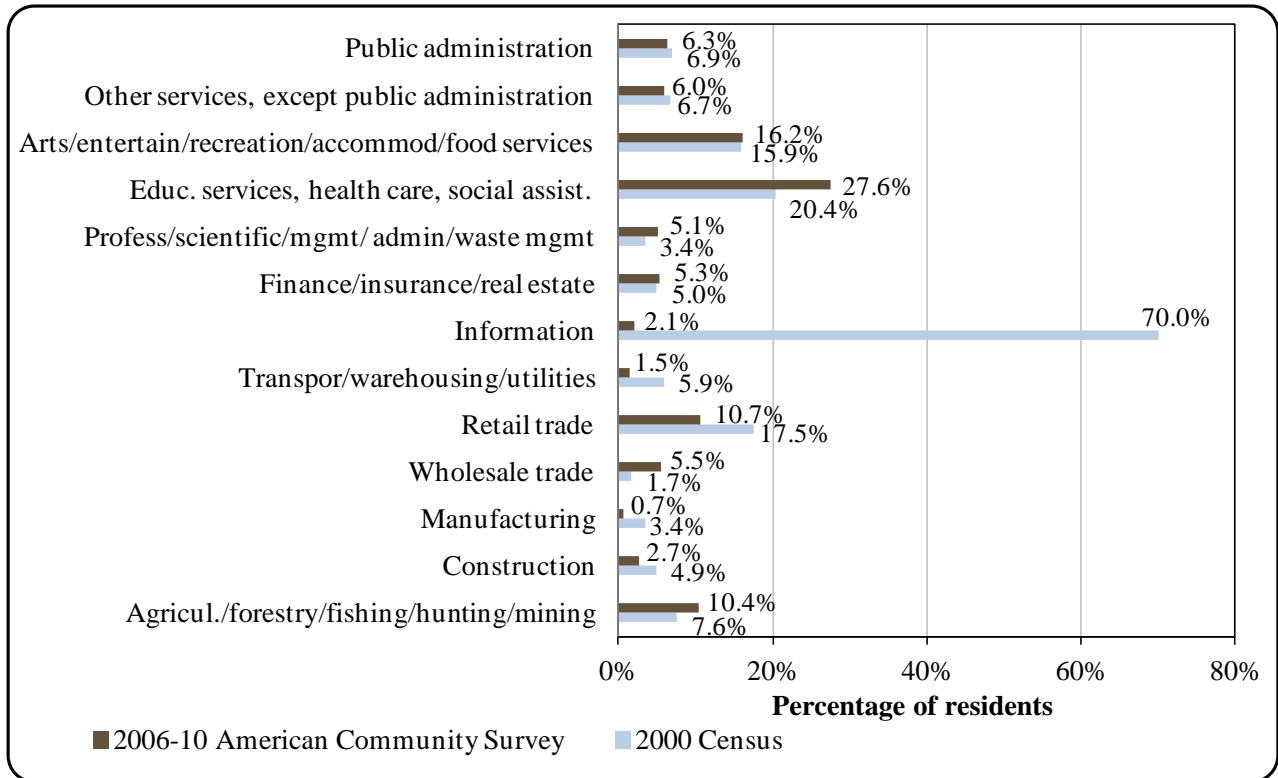
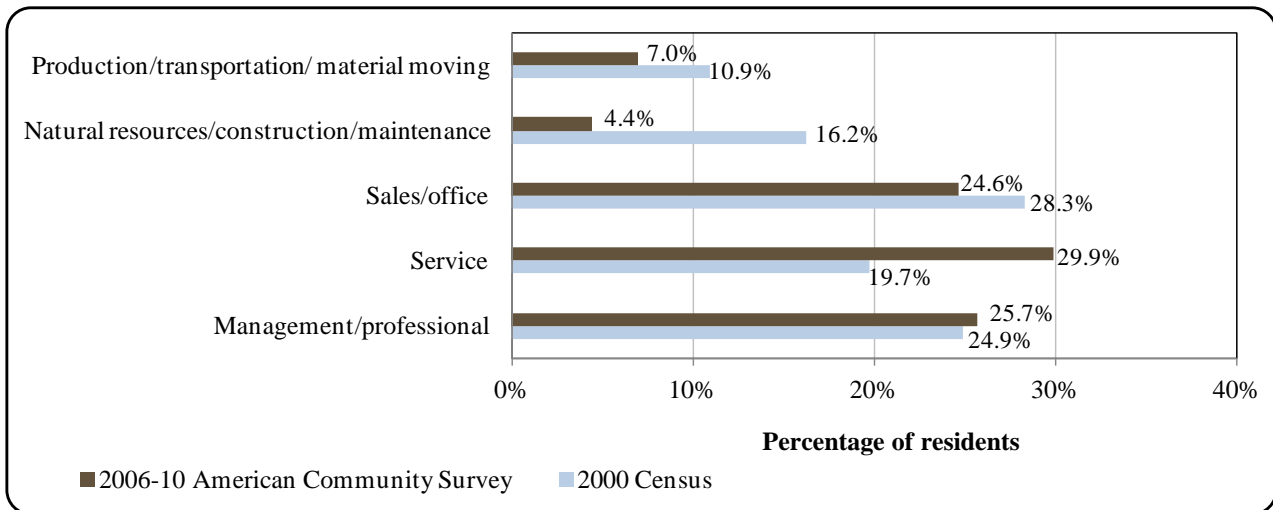


Figure 4. Local Employment by Occupation in 2000-2010, Soldotna (U.S. Census).



Governance

Soldotna is a First-class city located in the Kenai Peninsula Borough. Soldotna administers a 3% sales tax. Total municipal revenue increased overall between 2000 and 2010, though the years of highest municipal revenue during this period were 2008 and 2009. Sales tax revenue also increased overall during this period. Soldotna received revenue from state/community revenue sharing between 2000 and 2003 and in 2009 and 2010. In 2004, Soldotna received grants from the Alaska Department of Commerce, Community, and Economic Development’s Division of Community and Regional Affairs for value-added seafood processing equipment at Peninsula Processing and Smokehouse, equipment upgrades at Sea Products, LLC, and salmon marketing at Peninsula Processing. Municipal revenue totals given in Table 2 pertain to general fund revenues, and do not include operating revenues for utilities or the airport.

Soldotna was not included in the Alaska Native Claims Settlement Act and is not federally recognized as a Native village. However, Soldotna is a member of a regional Native corporation, Cook Inlet Region, Incorporated.

Offices of the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Natural Resources (DNR), and the U.S. Fish and Wildlife Service (FWS) are located in Soldotna. The nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Commerce, Community, and Economic Development, Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Soldotna from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$5,287,411	\$4,694,733	\$73,473	n/a
2001	\$5,432,609	\$4,827,209	\$65,768	n/a
2002	\$5,773,015	\$5,100,316	\$65,784	n/a
2003	\$6,319,577	\$5,232,283	\$65,881	n/a
2004	\$7,231,110	\$5,694,134	n/a	\$179,700
2005	\$7,193,617	\$5,910,189	n/a	n/a
2006	\$8,209,324	\$6,348,529	n/a	n/a
2007	\$8,809,182	\$6,807,184	n/a	n/a
2008	\$9,540,085	\$7,447,481	n/a	n/a
2009	\$9,073,100	\$7,717,581	\$303,169	n/a
2010	\$8,323,283	\$7,236,738	\$297,660	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

The Soldotna Municipal Airport provides facilities for charter services and local air traffic. The main runway is 5,000 ft long by 132 ft wide. The nearby Kenai Municipal Airport, located 10 mi away, offers scheduled flights and float plane facilities. Seaplanes can also land at Mackeys Lakes. There are four additional private landing strips in Soldotna and a heliport for medical emergencies at Central Peninsula General Hospital. The Sterling Highway provides access to Alaska's road system.¹⁰¹⁹ While Soldotna has an airport, there are no regular commercial flights available between Soldotna and Anchorage. In June 2012, round-trip airfare between Kenai (10 mi from Soldotna) and Anchorage was \$171.¹⁰²⁰

*Facilities*¹⁰²¹

The City of Soldotna operates a piped water and sewer system. All homes in Soldotna are completely plumbed. Water is derived from 4 wells and is treated and stored in a 1 million-gallon steel tank along with a second 500,000-gallon tank. Piped sewage receives secondary treatment with an activated sludge process; effluent discharges into the Kenai River. Individual wells and septic tanks are used by a few households outside of the core residential area. A private company provides refuse collection services to the community. Garbage is disposed of in the Borough's Class-1 regional landfill and baling facility at mile 98.5 Sterling Highway in Soldotna. Recycling and hazardous waste disposal are available. Electricity in the community is provided by Homer Electric Association which operates the Bradley Lake Hydroelectric Project and is part owner of the Alaska Electric Generation & Transmission Cooperative. The Cooperative operates a gas turbine plant in Soldotna. The community also purchases electricity from Chugach Electric. For home heating, most residents use natural gas from Enstar.

Law enforcement services are provided by the City Police Department and state troopers located in Soldotna. Fire and rescue services are provided by the Borough/Central Emergency Services (CES) Fire/Rescue/Emergency Medical Technicians (EMT). A youth center is run by the City and the Soldotna Peninsula Sports Center Boys and Girls Club, and a community hall is available at the Soldotna City Hall. Senior services are provided by Soldotna Area Senior Citizens, Inc. and the Senior Center at Frontier Community Services. The Central Peninsula Sports Center provides an ice rink, racquetball courts, weight room, and meeting facilities. Other community facilities include two swimming pools, a movie theater, a historical society and museum, two academic libraries, seven school libraries, and one public library.

¹⁰¹⁹ Alaska Department of Community and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰²⁰ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹⁰²¹ See footnote 1019.

*Medical Services*¹⁰²²

Medical care in Soldotna is provided by the Central Peninsula General Hospital and the Central Peninsula Health Center. These facilities are owned by the Kenai Peninsula Borough and operated by the Central Peninsula Hospital. The hospital is a qualified Acute Care facility and provides Critical Care Air Ambulance Service. Alternate health care is provided by Central Emergency Services. Long term care is provided by Heritage Place, while specialized care is provided by the Frontier Training Center and Family Recovery Center. Emergency Services have highway, airport, and floatplane access and are provided by a 911 telephone service and a paid Emergency Medical Service.

*Educational Opportunities*¹⁰²³

There are 10 schools in Soldotna. The Soldotna Elementary School provides instruction to students in pre-school through sixth grade, and in 2011 had 295 students and 20 teachers. The Soldotna Montessori Charter School provides instruction to students in kindergarten through sixth grade, and in 2011 had 167 students and 11 teachers. The Redoubt Elementary School provides instruction to students in kindergarten through sixth grade, and in 2011 had 393 students and 26 teachers. The Aurora Borealis Charter School provides instruction to students in kindergarten through eighth grade and in 2011 had 193 students and 12 teachers. The Soldotna Middle School provides instruction to students in grades seven and eight, and in 2011 had 408 students and 25 teachers. The Soldotna High School provides instruction to students in grades nine through 12, and in 2011 had 521 students and 33 teachers. The Skyview High School also provides instruction to students in grades nine through 12, and in 2011 had 375 students and 20 teachers. Connections school provides instruction to students in kindergarten through 12th grade, and in 2011 had 871 students and 11 teachers. Kenai Alternative High School provides instruction to students in pre-school through 12th grade, and in 2011 had 88 students and 6 teachers. River City Academy provides instruction to students in grades 7 through 12, and in 2011 had 73 students and five teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Soldotna is located in the traditional territory of the Kenaitze people, a branch of Athabascan Native Americans. Historically, the Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.¹⁰²⁴ The Soldotna area was homesteaded in the 1940s and grew along with the oil industry, which continues to be the primary economic driver in the community.¹⁰²⁵ In addition, some Soldotna residents became involved in commercial fisheries that had developed

¹⁰²² Ibid.

¹⁰²³ Alaska Department of Education and Early Development (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰²⁴ Kenaitze Indian Tribe (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

¹⁰²⁵ See footnote 1019.

in the region following the purchase of Alaska by the U.S. in 1867. Commercial harvest of salmon in Cook Inlet began in 1882¹⁰²⁶ with the development of a cannery at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890.¹⁰²⁷ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹⁰²⁸ In the 1920s, herring had become increasingly valued for oil and meal, and a number of reduction plants were built. Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, a sizable spawning biomass of herring was found in western Cook Inlet, and Lower Cook Inlet also supported commercial fisheries for Dungeness, king, and Tanner crab. However, crab and herring fisheries are currently closed due to low stock abundance.^{1029,1030}

Today, ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.¹⁰³¹

Groundfish and crab fisheries that occur within 3 nautical mi (nm) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Cook Inlet is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch (TAC) set by NMFS applied to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL,

¹⁰²⁶ Clark, J. H., A. McGregor, R. D. Mecum, P. Krasnowski, and A. M. Carroll. 2006. The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Department of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁰²⁷ Cook, L., and F. Norris. 1998. *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

¹⁰²⁸ Thompson, W. F. and N. L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹⁰²⁹ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁰³⁰ Alaska Department of Fish and Game. 2012. *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

¹⁰³¹ See footnote 1026.

and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.¹⁰³²

Soldotna is located 10 mi inland from Cook Inlet along the Kenai river. The community is nearest to Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. Soldotna is not eligible for the Community Development Quota (CDQ) or Community Quota Entity (CQE) programs.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there were two processing facilities in operation in Soldotna. Information about these facilities is presented below.

Echo Lake Superior Meat & Processing LLC has been custom processing seafood (primarily King salmon) and game meat since 1976. Their facility is located off K-Beach Road in Soldotna on the Kenai Peninsula. Their small facility processes fish caught by sport fishermen in summer as well as some commercially caught salmon. In addition, the plant owns a retail store in Soldotna, and Echo Lake sells salmon products on the Internet.¹⁰³³ In 2010, the plant employed between 15 and 35 workers.¹⁰³⁴

According to ADF&G's 2010 Intent to Operate list, Peninsula Processing & Smokehouse operates a seafood processing facility in Soldotna. Peninsula Processing & Smokehouse offer the following products for sale on their website: salmon (Chinook, sockeye, silver, cedar plank), crab (king and Dungeness), lobster, shrimp, prawns, scallops, clams, halibut, Chilean sea bass, ling cod, Black cod, Pacific cod, rockfish.¹⁰³⁵

Fisheries-Related Revenue

Between 2000 and 2010, Soldotna received fisheries-related revenue from the Shared Fisheries Business Tax and the Fisheries Resource Landing Tax. Amounts received from both sources were variable during this time period, as was the total fisheries-related revenue received. During this period, the percentage of total municipal revenue received from fisheries related sources was minimal compared to total municipal revenue, ranging from a low of \$3,765 in 2008 to a high of \$6,205 in 2001.¹⁰³⁶ Information about fisheries-related revenue received by Soldotna between 2000 and 2010 is presented in Table 3.

¹⁰³² See footnote 1029.

¹⁰³³ Echo Lake Superior Meat and Processing (n.d.). *About us*. Retrieved November 1, 2011, from <http://www.echolake meats.com/aboutus.htm>.

¹⁰³⁴ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

¹⁰³⁵ Peninsula Processing and Smokehouse (n.d.). *Company website*. Retrieved November 1, 2011, from <http://great-alaska-seafood.com/>.

¹⁰³⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, there were 161 permit holders that held 195 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for other shellfish, halibut, herring, sablefish, groundfish, other finfish, and salmon (Table 4). The total number of CFEC permits, permit holders, and permits reported as fished decreased overall between 2000 and 2010. There were between one and two permit holders with between two and four crab CFEC permits between 2005 and 2007. The number of other shellfish CFEC permits and permit holders was variable between 2000 and 2010, and other shellfish CFEC permits were only reported as fished in 2000, 2004, 2008, and 2010. In 2010, other shellfish CFEC permits were issued for the Prince William Sound shrimp pot fishery using vessels under 60 ft and the statewide clam shovel fishery. The number of halibut CFEC permits and permit holders, as well as the number of permits reported as fished, decreased between 2000 and 2010. In 2010, 22 of the 23 halibut CFEC permits issued were for the statewide longline fishery using vessels under 60 ft, with one permit issued for the statewide hand troll fishery. The number of herring CFEC permits, permit holders, and permits reported as fished was also variable during this period, and herring CFEC permits were reported as fished only in 2000-2002, 2005-2006, and 2009. Herring CFEC permits were issued in 2010 for the Cook Inlet, Kodiak, and Goodnews Bay roe herring gillnet fisheries and the Norton Sound herring gillnet fishery, as well as the Bristol Bay herring spawn on kelp hand-picking fishery. The number of sablefish permits, permit holders, and number of permits fished was variable between 2000 and 2010, while the number of groundfish permits, permit holders, and permits reported as fished decreased during this period. In 2010, sablefish CFEC permits were issued for the statewide longline fishery using vessels under 60 ft and the Prince William Sound fixed gear fishery using vessels with a maximum length of 50 ft. Groundfish CFEC permits issued in 2010 were for the statewide lingcod longline vessel fishery using vessels under 60 ft, the statewide lingcod dinglebar troll fishery, the statewide and Gulf of Alaska miscellaneous saltwater finfish longline fisheries using vessels under 60 ft, and the Gulf of Alaska miscellaneous saltwater finfish dinglebar troll fishery.

Since 2007, there have been two other finfish permit holders and permits, though those permits have not yet been reported as fished. In 2010, both of these other finfish CFEC permits were issued for the statewide freshwater fish set gillnet fishery. The number of salmon CFEC permits, permit holders, and permits reported as fished also decreased between 2000 and 2010. Of the salmon CFEC permits issued in 2010, the majority were for the Cook Inlet drift gillnet and set gillnet fisheries. The remainder of the salmon CFEC permits issued in 2010 were for the Prince William Sound, Cook Inlet, Kodiak, and Chignik purse seine fisheries, the southeastern, Prince William Sound, Peninsula-Aleutians, and Bristol Bay drift gillnet fisheries, the Bristol Bay set gillnet fishery, the Kuskokwim and Norton Sound gillnet fisheries, and the statewide hand troll fishery.

Also in 2010, there were seven Federal Fisheries Permit holders that held eight permits (Table 4). While the number of Federal Fisheries permits and permit holders decreased between 2000 and 2010, none of those permits were reported as fished until 2005. Since that time, the number of Federal Fisheries Permits reported as fished has varied between one and three. There were six groundfish License Limitation Program (LLP) holders in Soldotna in 2010, with represents a small overall increase since the year 2000, though the number of those permits reported as fished remained relatively stable between 2000 and 2010. In 2009 and 2010, there

was one crab LLP permit held by one individual, though that permit was only reported as fished in 2009.

In 2010, there were 199 crew license holders in Soldotna, a decrease from 255 in 2000. While there have been no fish buyers located in Soldotna since 2004, there are two shore-side processing facilities located in the community, which represents an overall decrease between 2000 and 2010. The number of vessels owned primarily by Soldotna residents declined substantially between 2000 (434 vessels) and 2010 (72 vessels), as did the number of vessels homeported in Soldotna between 2000 (315) and 2010 (21). Between 2000 and 2010, there was one vessel landing catch in Soldotna in 2001 and one vessel landing catch in 2004. However, because only one vessel landed catch in the community in those years, the landings and ex-vessel revenue data for those years are considered confidential. Information on the characteristics of the commercial fishing sector in Soldotna between 2000 and 2010 is presented in Table 5.

The number of halibut quota share account holders decreased between 2000 and 2010, though the total number of quota shares held and the associated amount of halibut Individual Fishing Quota (IFQ) allotment (in pounds) increased during the same period (Table 6). The number of sablefish quota share account holders also decreased between 2000 and 2010, while the number of quota shares held and the amount of sablefish IFQ allotment experienced an increase followed by a decrease during this period (Table 7). The number of crab quota share account holders increased from one to two between 2005 and 2010, but the number of quota shares held and the amount of crab IFQ allotment increased substantially during this period (Table 8).

While there were commercial landings and associated ex-vessel revenue reported in Soldotna in 2001 and 2004, the landings and ex-vessel revenue in those years are considered confidential due to the small number of participants. There were no commercial landings or ex-vessel revenue reported in the other years between 2000 and 2010 (Table 9). Landings reported by Soldotna residents (and associated ex-vessel revenue), irrespective of location, were recorded for halibut in 2000 to 2007 and 2009 to 2010, herring in 2000, other groundfish in 2000 to 2005, Pacific cod in 2000 to 2002 and 2006, and salmon between 2000 and 2010. Landings and ex-vessel revenue for species and years not listed here are considered confidential due to a small number of participants. Landings and ex-vessel value for halibut were variable from year to year, though landings experienced an overall decrease and ex-vessel value experienced an overall increase between 2000 and 2010. Landings and ex-vessel revenue for salmon were also variable from year to year between 2000 and 2010. Information regarding landed pounds and ex-vessel revenue by species for Soldotna residents is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Soldotna: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$4,568	\$5,940	\$3,350	\$4,562	\$3,876	\$4,566	\$4,140	\$5,360	\$3,631	\$4,880	\$5,101
Fisheries Resource Landing Tax ¹	\$292	\$264	\$506	\$389	\$58	\$123	\$117	\$88	\$133	\$64	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$4,860</i>	<i>\$6,205</i>	<i>\$3,856</i>	<i>\$4,951</i>	<i>\$3,935</i>	<i>\$4,689</i>	<i>\$4,256</i>	<i>\$5,448</i>	<i>\$3,765</i>	<i>\$4,944</i>	<i>\$5,101</i>
<i>Total municipal revenue⁵</i>	<i>\$5,287,411</i>	<i>\$5,607,290</i>	<i>\$5,773,015</i>	<i>\$5,874,850</i>	<i>\$6,178,711</i>	<i>\$6,423,483</i>	<i>\$7,275,581</i>	<i>\$7,588,807</i>	<i>\$9,540,085</i>	<i>\$9,073,100</i>	<i>\$8,323,283</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city brings in each year from all sources, including fisheries-related revenue streams. Alaska Department of Comm and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Soldotna: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	5	5	4	4	4	5	5	5	5	6	6
	Active permits	2	2	1	1	0	1	1	1	1	2	1
	% of permits fished	40%	40%	25%	25%	-	20%	20%	20%	20%	33%	16%
	Total permit holders	5	5	4	4	4	5	5	5	5	6	6
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	1	1
	Active permits	0	0	0	0	0	0	0	0	0	1	0
	% of permits fished	-	-	-	-	-	-	-	-	-	100%	-
	Total permit holders	0	0	0	0	0	0	0	0	0	1	1
Federal Fisheries Permits ¹	Total permits	16	17	17	13	13	14	13	13	14	8	8
	Fished permits	0	0	0	0	0	1	3	2	2	3	3
	% of permits fished	-	-	-	-	-	7%	23%	15%	14%	38%	38%
	Total permit holders	15	16	16	12	12	13	13	13	14	7	7
Crab (CFEC) ²	Total permits	0	0	0	0	0	4	2	2	0	0	0
	Fished permits	0	0	0	0	0	2	2	2	0	0	0
	% of permits fished	-	-	-	-	-	50%	100%	100%	-	-	-
	Total permit holders	0	0	0	0	0	2	1	1	0	0	0
Other shellfish (CFEC) ²	Total permits	6	2	4	2	1	1	0	2	1	1	5
	Fished permits	2	0	0	0	1	0	0	0	1	0	1
	% of permits fished	33%	-	-	-	100%	-	-	-	100%	-	20%
	Total permit holders	5	1	4	2	1	1	0	2	1	1	5
Halibut (CFEC) ²	Total permits	42	43	40	34	35	32	29	26	27	23	23
	Fished permits	30	31	33	25	28	29	21	21	21	21	18
	% of permits fished	71%	72%	83%	74%	80%	91%	72%	81%	78%	91%	78%
	Total permit holders	41	43	39	34	35	32	29	26	27	23	23
Herring (CFEC) ²	Total permits	17	9	8	10	8	11	8	10	11	9	12
	Fished permits	5	1	1	0	0	1	2	0	0	1	0
	% of permits fished	29%	11%	13%	-	-	9%	25%	-	-	11%	-
	Total permit holders	15	9	8	10	8	11	8	10	11	9	12

Table 4 cont'd. Permits and Permit Holders by Species, Soldotna: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	4	2	3	2	2	3	1	1	1	2	2
	Fished permits	1	1	2	1	2	3	1	1	1	2	2
	% of permits fished	25%	50%	67%	50%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	4	2	3	2	2	3	1	1	1	2	2
Groundfish (CFEC) ²	Total permits	11	10	9	11	8	10	8	6	9	6	6
	Fished permits	4	2	4	3	3	1	1	1	1	0	0
	% of permits fished	36%	20%	44%	27%	38%	10%	13%	17%	11%	-	-
	Total permit holders	9	9	8	9	7	8	6	4	7	4	4
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	2	2	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	2	2	2	2
Salmon (CFEC) ²	Total permits	153	155	148	143	145	146	136	140	144	147	145
	Fished permits	124	113	100	107	104	113	98	108	101	97	101
	% of permits fished	81%	73%	68%	75%	72%	77%	72%	77%	70%	66%	70%
	Total permit holders	157	157	153	146	146	146	137	146	143	147	144
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>233</i>	<i>221</i>	<i>212</i>	<i>202</i>	<i>199</i>	<i>207</i>	<i>184</i>	<i>189</i>	<i>195</i>	<i>190</i>	<i>195</i>
	<i>Fished permits</i>	<i>166</i>	<i>148</i>	<i>140</i>	<i>136</i>	<i>138</i>	<i>149</i>	<i>125</i>	<i>133</i>	<i>125</i>	<i>121</i>	<i>122</i>
	<i>% of permits fished</i>	<i>71%</i>	<i>67%</i>	<i>66%</i>	<i>67%</i>	<i>69%</i>	<i>72%</i>	<i>68%</i>	<i>70%</i>	<i>64%</i>	<i>64%</i>	<i>63%</i>
	<i>Permit holders</i>	<i>187</i>	<i>186</i>	<i>177</i>	<i>170</i>	<i>169</i>	<i>169</i>	<i>153</i>	<i>164</i>	<i>161</i>	<i>162</i>	<i>161</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Soldotna: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Soldotna ²	Total Net Pounds Landed In Soldotna ²	Total Ex-Vessel Value Of Landings In Soldotna ²
2000	255	0	4	434	315	0	0	\$0
2001	240	1	5	441	319	1	--	--
2002	153	0	5	435	321	0	0	\$0
2003	211	0	4	442	314	0	0	\$0
2004	239	3	3	434	330	1	--	--
2005	234	0	2	97	29	0	0	\$0
2006	181	0	2	81	26	0	0	\$0
2007	201	0	2	86	25	0	0	\$0
2008	198	0	2	80	26	0	0	\$0
2009	193	0	2	70	18	0	0	\$0
2010	199	0	2	72	21	0	0	\$0

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Soldotna: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	57	1,785,453	182,300
2001	59	1,879,150	223,335
2002	57	2,049,767	251,809
2003	53	2,125,378	260,977
2004	50	2,049,342	278,410
2005	50	2,069,115	285,488
2006	43	1,867,541	254,584
2007	37	1,832,118	259,591
2008	36	1,960,341	256,767
2009	33	1,995,209	234,143
2010	32	2,019,722	218,343

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Soldotna: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	4	721	65
2001	5	18,098	1,351
2002	4	16,574	1,500
2003	4	16,574	2,238
2004	4	16,574	2,246
2005	4	65,737	7,526
2006	3	65,483	7,095
2007	3	65,483	7,074
2008	3	65,483	6,445
2009	2	49,483	3,899
2010	2	49,483	3,524

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Soldotna: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	1	286,797	8,279
2006	1	320,684	8,045
2007	1	320,684	13,285
2008	1	320,684	12,348
2009	2	2,733,598	88,534
2010	2	2,424,553	81,841

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Soldotna: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	--	0	0	--	0	0	0	0	0	0
Finfish	0	--	0	0	--	0	0	0	0	0	0
Halibut	0	--	0	0	--	0	0	0	0	0	0
Herring	0	--	0	0	--	0	0	0	0	0	0
Other Groundfish	0	--	0	0	--	0	0	0	0	0	0
Other Shellfish	0	--	0	0	--	0	0	0	0	0	0
Pacific Cod	0	--	0	0	--	0	0	0	0	0	0
Pollock	0	--	0	0	--	0	0	0	0	0	0
Sablefish	0	--	0	0	--	0	0	0	0	0	0
Salmon	0	--	0	0	--	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>--</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	--	\$0	\$0	--	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>--</i>	<i>\$0</i>	<i>\$0</i>	<i>--</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Soldotna Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	153,666	215,334	213,715	193,170	183,935	268,534	213,672	105,515	--	88,262	93,676
Herring	352,094	--	--	--	--	--	--	--	--	--	--
Other Groundfish	3,531	3,818	4,618	6,564	2,348	9,540	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	3,601	4,958	2,884	--	--	--	2,944	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	2,934,537	2,714,488	2,999,765	3,142,378	3,837,423	4,650,491	1,384,709	3,654,628	2,113,377	1,915,193	3,329,354
<i>Total²</i>	<i>3,447,429</i>	<i>2,938,598</i>	<i>3,220,982</i>	<i>3,342,112</i>	<i>4,023,706</i>	<i>4,928,565</i>	<i>1,601,325</i>	<i>3,760,143</i>	<i>2,113,377</i>	<i>2,003,455</i>	<i>3,423,030</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$395,205	\$425,189	\$474,611	\$559,020	\$567,566	\$821,320	\$806,257	\$480,486	--	\$275,507	\$432,215
Herring	\$33,468	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$2,080	\$2,207	\$4,265	\$4,140	\$1,575	\$4,715	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	\$1,188	\$1,222	\$745	--	--	--	\$49	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$1,364,319	\$1,081,693	\$1,099,299	\$1,214,370	\$1,769,212	\$2,084,534	\$848,430	\$1,999,601	\$1,431,007	\$1,490,444	\$2,877,873
<i>Total²</i>	<i>\$1,796,260</i>	<i>\$1,510,310</i>	<i>\$1,578,920</i>	<i>\$1,777,530</i>	<i>\$2,338,353</i>	<i>\$2,910,570</i>	<i>\$1,654,737</i>	<i>\$2,480,087</i>	<i>\$1,431,007</i>	<i>\$1,765,951</i>	<i>\$3,310,088</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Kenai River is the most heavily fished river in Alaska and also supports the largest sockeye sport fishery in the state. The Sterling Highway Bridge in Soldotna marks the beginning of the “Lower River.” This final 21-mile section is gentler than the upper portion of the river, and the river winds its way to empty in Cook Inlet near the City of Kenai. There are about 40 unique species of fish in the Kenai River. There are resident fish, which spend their entire life cycle in the river; anadromous fish, which spend part of their life in the river and part in salt water; and fish which are common to the intertidal area, which is a mixture of both fresh and salt water.¹⁰³⁷

The North Kenai Peninsula Management Area has two personal use sockeye salmon dip net fisheries which are open to Alaska-residents only. The Russian River sockeye salmon fishery is the second largest sockeye fishery in Alaska. Annual harvests in the Russian River regularly exceed 50,000 fish and have come close to 200,000 fish in some years. The Anchor River, Deep Creek, and Ninilchik Rivers also support large Chinook salmon runs from late May through mid-July. Coho salmon arrive in the area early August through mid-September; and Dolly Varden can be found mid-May through mid-July. Many lakes on the Kenai Peninsula are stocked with rainbow trout and salmon to support the large sportfishing economy.¹⁰³⁸

In 2010, there were 141 sport fish guide businesses in Soldotna, of which only 28 were active. This represented a decrease from the number of active businesses in previous years between 2000 and 2009. The number of active sport fish businesses peaked in 2007 at 43. In addition, 177 individuals held sport fish guide licenses in 2010; a decline from 216 in 2000. Also in 2010, there were 6,419 sport fish guide licenses sold to Soldotna residents (irrespective of the location of the point of sale), a number which increased steadily between 2000 and 2010. In the same year, there were 32,797 sportfishing licenses sold within the community, indicating the potential that visitors to Soldotna are participating in recreational fishing activities. The number of sportfishing licenses sold in Soldotna increased substantially between 2000 and 2010 (Table 11).

Soldotna is located within the Kenai Peninsula Alaska Sport Fishing Survey Area. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region was variable from year to year, though the total number of angler days fished in the region decreased overall during this period. There were considerably more angler days fished in freshwater than in saltwater in this region between 2000 and 2010. During this period, the percentage of angler days fished by non-Alaska residents in saltwater increased only slightly, from 23% to 28%, as did the percentage of angler days fished by non-Alaska residents in saltwater, which increased from 42% to 47%. The percentage of angler days fished by non-Alaska residents was higher in freshwater than in saltwater between 2000 and 2010. Information on sportfishing trends in Soldotna between 2000 and 2010 is presented in Table 11.

¹⁰³⁷ Alaska Department of Fish and Game. Division of Sport Fish. Southcentral Region. (n.d.). Kenai Peninsula Recreational Fishing Series: The Kenai River. Retrieved on May 9, 2012 from www.adfg.alaska.gov/static-sf/Region2/pdfpubs/kenairiver.pdf.

¹⁰³⁸ Kenai Peninsula Borough. (2005). Kenai Peninsula Borough Comprehensive Plan. Retrieved on July 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KenaiPeninsulaBorough-CP-2005.pdf>.

The Alaska Statewide Harvest Survey,¹⁰³⁹ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Soldotna: all five species of salmon, rainbow trout, Dolly Varden, whitefish, burbot, Arctic grayling, Northern pike, Pacific halibut, rockfish, lingcod, Pacific cod, smelt, other fish, Dungeness crab, Tanner crab, razor clam, hardshell clam, shrimp, and other shellfish. No kept/release log book data were reported for fishing charters out of Soldotna between 2000 and 2010.¹⁰⁴⁰

Subsistence Fishing

Subsistence fishing activity by Soldotna residents appears limited. Data were not available regarding subsistence participation by household and species (Table 12), subsistence harvest of marine invertebrates and non-salmon fish (Table 13), or subsistence harvest of marine mammal resources (Table 15) between 2000 and 2010. However, data are available regarding subsistence salmon and halibut harvesting. The number of subsistence salmon permits issued in Soldotna between 2000 and 2008 was highly variable, as was the number of those permits reported as fished during this period. Although harvests were limited, sockeye salmon were the most commonly harvested subsistence species under the subsistence salmon permits, followed by Chinook salmon (Table 13). The number of Subsistence Halibut Registration Certificate (SHARC) cards issued to residents increased steadily between 2003 and 2010, though the number of those permits reported as fished and the amount of halibut harvested under those permits was variable from year to year during this period. In 2009 (the last year estimates were available), an estimated 3,473 pounds of halibut were harvested using 18 SHARC. This estimate vastly exceeded previous years, when estimated harvests ranged between 225 and 1,872 pounds (Table 14).

Additional Information

As of March 2012, Soldotna (also known as “Alaska’s Kenai River City”) was home to the World Record King Salmon, which weighed 97 lbs, four oz.¹⁰⁴¹

¹⁰³⁹ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000-2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁰⁴⁰ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000-2020. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁰⁴¹ Soldotna Chamber of Commerce and Visitor Information Center. Visit Soldotna. Retrieved from <http://www.visitsoldotna.com/> on March 20, 2012.

Table 11. Sport Fishing Trends, Soldotna: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Soldotna ²
2000	34	216	5,799	10,087
2001	37	210	5,917	10,341
2002	33	222	5,914	11,712
2003	34	225	6,114	30,489
2004	33	231	6,342	35,386
2005	37	192	6,167	38,084
2006	41	227	6,091	37,639
2007	43	235	6,182	38,672
2008	30	221	6,351	37,411
2009	27	194	6,640	34,396
2010	28	177	6,419	32,797

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	42,157	139,737	242,224	333,118
2001	28,245	69,053	202,305	269,047
2002	26,479	83,335	199,512	299,839
2003	35,299	80,368	205,810	273,743
2004	39,009	83,478	251,002	297,877
2005	37,309	91,489	281,942	270,164
2006	33,988	76,100	229,520	268,434
2007	31,105	89,061	281,832	313,012
2008	28,780	70,285	234,826	295,184
2009	24,959	77,945	203,584	299,194
2010	28,294	71,555	222,375	247,239

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Soldotna: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Soldotna: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	14	14	20	4	n/a	n/a	351	n/a	n/a
2001	20	29	18	n/a	n/a	n/a	309	n/a	n/a
2002	10	19	3	n/a	n/a	n/a	118	n/a	n/a
2003	13	23	8	n/a	106	n/a	152	n/a	n/a
2004	34	33	6	n/a	n/a	n/a	143	n/a	n/a
2005	24	23	n/a	n/a	n/a	n/a	129	n/a	n/a
2006	11	8	3	n/a	n/a	n/a	191	n/a	n/a
2007	12	9	13	n/a	n/a	n/a	203	n/a	n/a
2008	26	26	55	n/a	6	n/a	153	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Soldotna: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	7	4	225
2004	13	n/a	n/a
2005	18	3	497
2006	16	10	1,439
2007	23	8	1,872
2008	24	3	783
2009	39	18	3,473
2010	44	7	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Soldotna: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Sterling



People and Place

*Location*¹⁰⁴²

Sterling is located on the Sterling Highway at the junction of the Moose and Kenai Rivers, 18 miles east of the City of Kenai. Sterling is located in the Kenai Recording District, the Kenai Peninsula Census Area, and the Kenai Peninsula Borough.

*Demographic Profile*¹⁰⁴³

In 2010, there were 5,617 inhabitants in Sterling, making it the 20th largest of 352 total Alaskan communities with recorded populations that year. The community grew by 13.67% between 2000 and 2009, with an average annual growth rate of 1.04% during this period. Overall since 1990, the population of Sterling grew by 32.3%. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, a majority of Sterling residents identified themselves as White (89.8%). Other ethnic groups present in Sterling that year included American Indian and Alaska Native (4.4%), two or more races (4.3%), Hispanic or Latino (2.7%), Asian (0.8%), some other race (0.4%), Native Hawaiian and Other Pacific Islander (0.1%), and Black or African American (0.1%). Between 2000 and 2010, the percentage of the population identifying themselves as White decreased by 2.9%, and the percentages of the population identifying themselves as Black or African American and some other race also decreased. During this period, there were corresponding increases in the percentages of the population identifying themselves as Hispanic or Latino, Asian, two or more races, and American Indian and Alaska Native. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Sterling in 2010 was 2.48, a decrease from 2.9 persons per household in 1990 and 2.8 in 2000. The total number of households in Sterling increased from 1,283 in 1990 to 1,676 in 2000 to 2,254 occupied housing units in 2010. Of the 3,347 total housing units surveyed for the 2010 Decennial Census, 1,865 were owner-occupied, 389 were renter-occupied, and 1,093 were vacant or used only seasonally. There were 14 residents of Sterling reported to be living in group quarters in 2000, and 19 in 2010.

¹⁰⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁴³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Sterling from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	3,802	-
2000	4,705	-
2001	-	4,756
2002	-	4,781
2003	-	4,879
2004	-	4,924
2005	-	4,988
2006	-	5,059
2007	-	5,132
2008	-	5,179
2009	-	5,348
2010	5,617	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Sterling: 2000-2010 (U.S. Census).

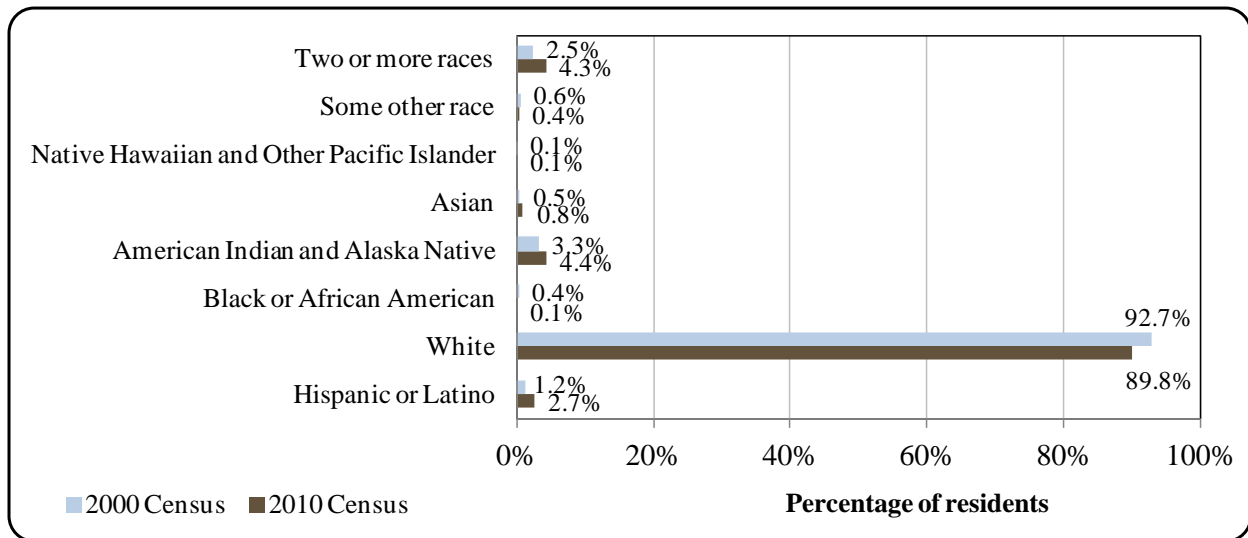
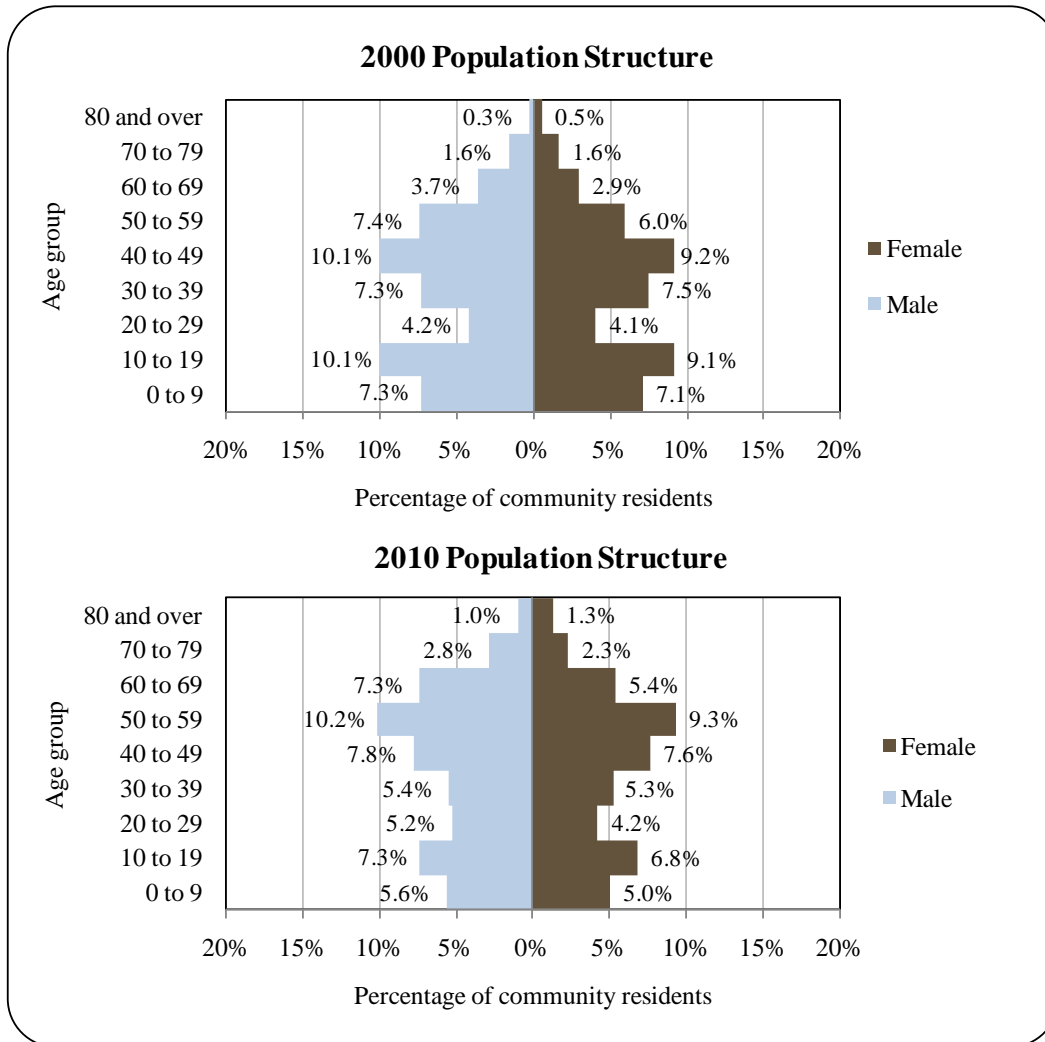


Figure 2. Population Age Structure in Sterling Based on the 2000 and 2010 U.S. Decennial Census.



The gender makeup in Sterling in 2010 was 52.8% male and 47.2% female, similar to the state as a whole (52% male, 48% female). The median age was estimated to be 44.1 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of the population fell within the age group 50 to 59 years old, with the next largest percentage falling within the age group 40 to 49 years old. Relatively few individuals were age 80 or older. The overall population structure of Sterling in 2000 and 2010 is shown in Figure 2.

According to the 2006-10 American Community Survey (ACS),¹⁰⁴⁴ in terms of educational attainment, 94.3% of Sterling residents aged 25 and over were estimated to hold a

¹⁰⁴⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 1.3% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 4.4% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 31.4% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 31% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 7.8% were estimated to hold an Associate's degree, compared to 8% of Alaskan residents overall; 15.4% were estimated to hold a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 8.7% were estimated to hold a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*¹⁰⁴⁵

The Kenai Peninsula has been the home of the Kenaitze Indians for thousands of years. Sterling is a relatively recent settlement. It was formalized as a community in 1954 when a post office was established under that name. An archaeological site containing prehistoric Dena-ina house pits has been discovered at the Izaak Walton Campground in Sterling. Sterling residents are mostly non-Native. Sterling is known as a destination for the tourism, hunting, and sportfishing industries. Much of the population lives in the community seasonally.

Natural Resources and Environment

Winter temperatures range from 4 to 22 °F (-15.6 to -5.6 °C); Summer temperatures vary from 46 to 65 °F (7.8 to 18.3 °C). Average annual precipitation is 20 inches.¹⁰⁴⁶

Sterling is located near the Kenai National Wildlife Refuge (Refuge), and the U.S. Fish and Wildlife Service (FWS) Refuge Manager is located in Soldotna. The following information is from the FWS informational website on Refuge.¹⁰⁴⁷ The Kenai Peninsula in southcentral Alaska is geologically a relatively “young” or recently exposed area. Ice and glaciers, which once covered the entire peninsula, melted from most of the peninsula only 10,000-14,000 years ago. The remnant of this once widespread ice sheet can still be observed today as the Harding Ice Field at high elevation in the eastern Kenai Mountains of the peninsula. At its greatest depth in the center, the Harding Ice Field is thousands of feet thick.

As one leaves the ice and snow of the Harding Ice Field and descends to lower elevations, the first major habitats encountered are the treeless alpine and subalpine zones. These open, rocky, and windy habitats are the home of mountain goats, Dall sheep, caribou, wolverine, marmots, and ptarmigan. Just below the more shrubby subalpine habitat one begins to encounter trees of the boreal forest. Timberline averages about 1,800 feet above sea level on the Refuge.

Most of the lower elevations on the Kenai Peninsula and Refuge are covered by boreal forest and numerous lakes. The largest lake on the Kenai Peninsula is Tustumena Lake at nearly 74,000 acres. Boreal forests are the home of moose, wolves, black and brown bears, lynx,

¹⁰⁴⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁴⁶ Ibid.

¹⁰⁴⁷ U.S. Fish and Wildlife Service. *Kenai National Wildlife Refuge*. Retrieved from <http://kenai.fws.gov/> on March 19, 2012.

snowshoe hares and numerous species of neotropical birds such as olive-sided flycatchers, myrtle warblers and ruby-crowned kinglets.

Continuing down to lowest elevation at sea level, the refuge includes the last remaining, pristine major salt water estuary - the Chickaloon River Flats - on the Kenai Peninsula. It provides a major migratory staging area for thousands of shorebirds and waterfowl in the spring and fall and nesting habitat for waterfowl and shorebirds in the summer. The area is also used as a haul-out area by harbor seals and is used by beluga whales. Thousands of salmon migrate up the Chickaloon River system each year to spawn.

The subarctic stream and lake habitats and associated populations of salmon, trout, char, and other species are highly important resources of the Refuge. Most of the aquatic habitats are in near-pristine condition and many of the fish species have significant recreational and commercial value. Several fish species are also important food resources for a variety of wildlife including loons, bald eagles, river otters, and black and brown bears. Welfare of the fish populations is dependent upon maintaining genetic variability, water quality, protection of critical rearing and spawning habitats, and escapement of sufficient spawning stocks. The national importance of these resources is particularly evident when they are compared to habitats and fish populations elsewhere in the Nation, where many resources have been severely impacted by human expansion and development.

Current Economy¹⁰⁴⁸

The community caters to the sportfishing industry and summer influx of recreational enthusiasts. The economy of the Kenai area is diverse; oil and gas processing, timber, fishing, government, retail, and tourism-related services provide employment.¹⁰⁴⁹ Top employers in 2010¹⁰⁵⁰ included Kenai Peninsula Borough School District, Central Peninsula General Hospital, State of Alaska, ASRC Energy Services O&M Inc., Kenai Peninsula Borough, Fred Meyers Stores Inc., BP Exploration Alaska Inc., Peak Oilfield Service Co., Frontier Community Services Inc., and VECO Alaska Inc.

According to the 2006-2010 ACS,¹⁰⁵¹ the per capita income in Sterling was estimated to be \$32,672 and the median household income was estimated to be \$64,545, compared to \$20,741 and \$47,700 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁰⁵² the real per capita income in 2000 is shown to have been \$27,274 and the real household income was \$62,725. This shows that both per capita and household income increased between 2000 and 2010. In 2010, Sterling ranked 48th of 305 Alaskan communities with per capita income that year, and 62nd out of 299 Alaskan communities with household income data.

¹⁰⁴⁸ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰⁴⁹ See footnote 1045.

¹⁰⁵⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁰⁵¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁰⁵² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

However, Sterling's small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹⁰⁵³ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Sterling in 2010 is \$19,222.¹⁰⁵⁴ This estimate is lower than both the 2000 Census and 2006-2010 ACS per capita income estimates, suggesting that caution is warranted when citing an increase in per capita income in Sterling between 2000 and 2010.

Based on the 2006-2010 ACS, in 2010, 63.4% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. Approximately 5.8% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. The local unemployment rate was 3.6%, slightly lower than the statewide unemployment rate of 5.9%. An alternative estimate based on the ALARI database indicates that the unemployment rate in 2010 was 12.1%, slightly higher than the statewide estimate of 11.5%.¹⁰⁵⁵ It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Sterling are not reflective of the value of subsistence to the local economy.

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was employed in the private sector (66.2%), while 20.7% were employed in the public sector, 12.8% were self-employed, and 0.3% was unpaid family workers. Out of 2,610 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (24.8%), construction (15.7%), agriculture, forestry, fishing, hunting, and mining (10.8%), retail trade (8.9%), and public administration (7.5%). The occupations in which the greatest percentages of the workforce were employed were estimated to be management, business, science, and arts (32%), sales and office (21.2%), and natural resources, construction, and maintenance occupations (20.5%). As with income and poverty statistics, it should also be noted that these employment statistics do not reflect residents' activity in the subsistence economy. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It is also important to note that, although employment in natural resource-related industries and occupations appears high in these statistics, these figures do not reflect not fishing employment. A breakdown of the natural resources, construction, and maintenance occupation category reveals that only four individuals (less than 1% of the civilian labor force) were estimated to work in fishing, forestry, and farming occupations, while the remaining 532 individuals worked in either construction or maintenance occupations. However, fishing-related employment is likely higher than indicated by census statistics, as fishermen may hold another job and characterize their employment accordingly.

¹⁰⁵³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁵⁴ See footnotes 1050 and 1051.

¹⁰⁵⁵ See footnote 1050.

Figure 3. Local Employment by Industry in 2000-2010, Sterling (U.S. Census).

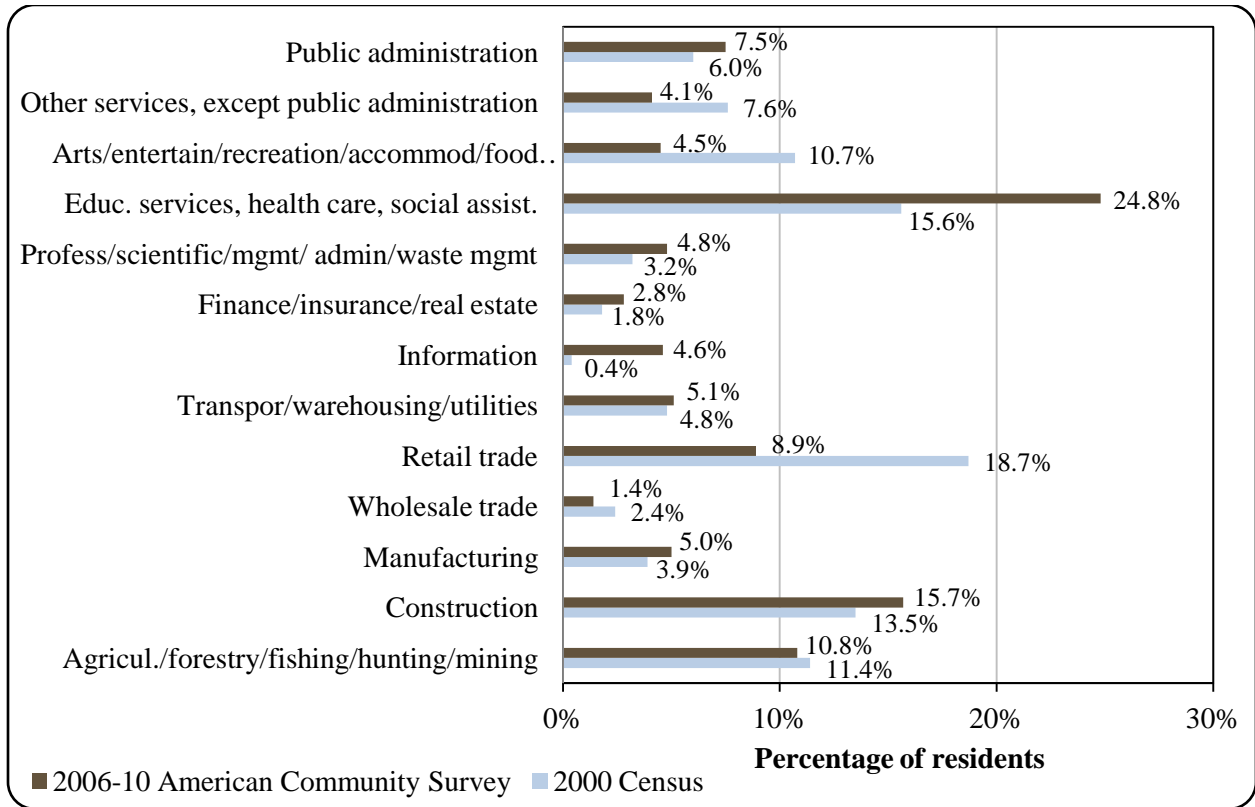
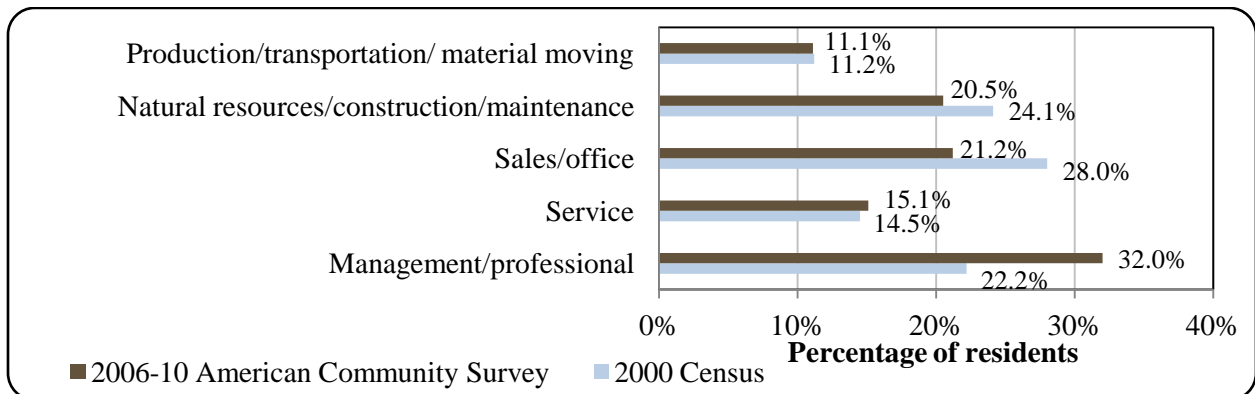


Figure 4. Local Employment by Occupation in 2000-2010, Sterling (U.S. Census).



Governance

Sterling is an unincorporated town located in the Kenai Peninsula Borough. Because of Sterling’s unincorporated status, no municipal taxes were administered between 2000 and 2010. Sterling did not receive any fisheries-related grants between 2000 and 2010 (Table 2).

Sterling was not included in the Alaska Native Claims Settlement Act (ANCSA) and no federally recognized Tribe is based in the community. The nearest offices of the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Natural Resources, and the U.S. Fish and Wildlife Service (FWS) are located in Soldotna. The nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Commerce, Community, and Economic Development, Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Sterling from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*¹⁰⁵⁶

The Sterling Highway provides access to Alaska's road system. There are several private airstrips in the Sterling area, and a private seaplane base at Scout Lake which is approximately three miles from the center of Sterling. There are two privately-operated boat launches. Nearby Kenai and Soldotna offer airports for charter services and local air traffic, as well as docking facilities. Sterling does not have a municipal airport, and nearby Soldotna does not offer regularly scheduled air service between Soldotna and Anchorage. However, Anchorage is accessible from Sterling by road and is approximately 135 miles away.

*Facilities*¹⁰⁵⁷

Occupied houses use individual water wells and septic tank systems and are fully plumbed. The school operates its own well-water system. Many homes in this area are used only seasonally. The Kenai Peninsula borough provides a refuse transfer facility at mile 85 Sterling Highway. Law enforcement services are provided by state troopers in Soldotna. Fire and rescue services are provided by Central Emergency Services. Sterling has a senior center and a school library.

*Medical Services*¹⁰⁵⁸

The nearest medical facility is the Central Peninsula General Hospital, located in Soldotna, approximately 11 miles away. Alternate health care is provided by Central Emergency Services. Emergency services have high way and helicopter access and are within 30 minutes of a higher-level satellite health care facility. Emergency services are provided by a 911 telephone service and volunteers.

Educational Opportunities

The Sterling Elementary School provides instruction to students in pre-school through sixth grade. In 2011 the school had 167 students and 14 teachers.¹⁰⁵⁹ Sterling is also a Head Start site.¹⁰⁶⁰

¹⁰⁵⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁵⁷ Ibid.

¹⁰⁵⁸ Ibid.

¹⁰⁵⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰⁶⁰ 2010 Rural Alaska Community Action Program 2010 Annual Report. Retrieved from www.ruralcap.com on December 20, 2011.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Sterling is located in the traditional territory of the Kenaitze people, a branch of Athabascan Native Americans. Historically, the Kenaitze had summer fish camps along the rivers and shores of Cook Inlet. They harvested all five salmon species using dip nets, weirs, dams, and fish traps.¹⁰⁶¹ The Soldotna area was homesteaded in the 1940s and grew along with the oil industry, which continues to be the primary economic driver in the community.¹⁰⁶² In addition, some Soldotna residents became involved in commercial fisheries that had developed in the region following the purchase of Alaska by the U.S. in 1867. Commercial harvest of salmon in Cook Inlet began in 1882¹⁰⁶³ with the development of a cannery at the mouth of the Kasilof River, in English Bay. An additional 17 canneries had been built in central Alaska by 1890.¹⁰⁶⁴ Commercial exploitation of halibut and groundfish first extended into the Gulf of Alaska (GOA) in the 1920s after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹⁰⁶⁵ In the 1920s, herring had become increasingly valued for oil and meal, and a number of reduction plants were built. Commercial crab fisheries began to develop in the GOA in the 1930s. Historically, a sizable spawning biomass of herring was found in western Cook Inlet, and Lower Cook Inlet also supported commercial fisheries for Dungeness, king, and Tanner crab. However, crab and herring fisheries are currently closed due to low stock abundance.^{1066,1067}

Today, ADF&G manages the Cook Inlet salmon fishery. Lower Cook Inlet is divided into the Southern, Outer, Eastern, and Kamishak Bay fishing districts, and Upper Cook Inlet is divided into the Central and Northern fishing districts. Set gillnet is the only gear allowed in the Northern District, while set and drift gillnet and purse seine gear use is permitted in the Central District. However, seine gear use is limited to the Chinita Bay sub-district, which is open only sporadically. Purse seine gear is used throughout the Lower Cook Inlet management area, and set gillnets are limited to the Kachemak Bay sub-district.¹⁰⁶⁸

Groundfish and crab fisheries that occur within 3 nautical miles (nm) of the coast or in inland waters are under the jurisdiction of the State of Alaska, and fisheries that take place

¹⁰⁶¹ Kenaitze Indian Tribe. (n.d.). *Home Page: Raven's People*. Retrieved January 24, 2012 from <http://www.kenaitze-nsn.gov/RavensPeople.html>.

¹⁰⁶² See footnote 1056.

¹⁰⁶³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁰⁶⁴ Cook, Linda, and Frank Norris. 1998. *A Stern and Rock-bound Coast: Kenai Fjords National Park Historic Resource Study*. National Park Service Alaska Support Office, Anchorage. Retrieved January 25, 2012 from http://www.nps.gov/history/history/online_books/kefj/hrs/hrs.htm.

¹⁰⁶⁵ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹⁰⁶⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁰⁶⁷ Alaska Dept. of Fish and Game. 2012. *Commercial Fisheries Overview: Lower Cook Inlet Management Area*. Retrieved June 19, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyarealci.main>.

¹⁰⁶⁸ See footnote 1063.

beyond 3 nm in the U.S. Exclusive Economic Zone (EEZ) are under federal jurisdiction. Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Cook Inlet is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central GOA federal Sablefish Regulatory Area.

In addition to federal groundfish fisheries that take place in the GOA, state groundfish fisheries take place in the inland and near-coastal waters of Cook Inlet for Pacific cod, sablefish, and rockfish. The Cook Inlet Pacific cod fishery is managed as a parallel fishery, which takes place at the same time as the federal Pacific cod fishery. The Total Allowable Catch (TAC) set by NMFS applied to both fisheries. Beginning in 1997, an additional ‘state-waters fishery’ for Pacific cod was initiated in Cook Inlet. Management plans for state-waters fisheries are approved by the Alaska Board of Fish, and guideline harvest limits (GHL) are set by ADF&G. Typically, state-waters fisheries are opened once federal and parallel fisheries close. In addition to Pacific cod fisheries, a Cook Inlet open access sablefish fishery is managed by ADF&G under a GHL, and the State also manages directed mechanical jig fisheries for lingcod and rockfish in Cook Inlet.¹⁰⁶⁹

Sterling is located in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. Sterling is not eligible to participate in either the Community Development Quota or Community Quota Entity programs.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Sterling does not have a registered processing plant. The nearest processing plant is located in Soldotna.

Fisheries-Related Revenue

Sterling did not receive any known fisheries-related revenue between 2000 and 2010 (Table 3).

Commercial Fishing

In 2010, 15 Sterling residents held a total of 20 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for halibut, herring, and salmon. The total number of CFEC permits and permit holders, as well as the number of CFEC permits reported as fished, increased and then decreased between 2000 and 2010. The number of halibut CFEC permits and permit holders, as well as the number of permits reported as fished, varied slightly but decreased overall between 2000 and 2010. The majority of halibut CFEC permits issued in 2010 were for the statewide longline fishery using vessels under 60 feet, with the remainder for the statewide hand troll fishery. None of the herring CFEC permits that were issued between 2000 and 2010 were reported as fished, and all were issued for the roe herring gill net fishery in Kodiak. The number of salmon CFEC permits, permit holders, and permits reported as fished increased and then decreased between 2000 and 2010. Of the salmon CFEC permits issued in 2010, the majority were for the drift gill net fishery in Cook inlet, with the remainder issued for

¹⁰⁶⁹ See footnote 1066.

the set gill net fishery in Cook Inlet and the beach seine fishery in Kodiak. Information on permits and permit holders by species is presented in Table 4.

There were 33 crew license holders in Sterling in 2010, though the number of crew license holders varied considerably between 2000 and 2010. There were no fish buyers in Sterling between 2000 and 2010, and the only years in which Sterling had a shore-side processing facility were 2008 and 2009. The number of commercial fishing vessels owned primarily by Sterling residents declined substantially between 2000 and 2010, from 94 to 11, as did the number of vessels homeported in Sterling, which declined from 69 to two during this same period. There were no vessels landing catch in the community between 2000 and 2010, and as such there were no landings or associated ex-vessel revenue to report during this period. Information on the characteristics of the commercial fishing sector between 2000 and 2010 is presented in Table 5.

There were four groundfish License Limitation Program (LLP) permits issued to four permit holders in each year between 2000 and 2010, and in each year between zero and two of those permits were reported as fished. There were four Federal Fisheries Permits (FFPs) issued to three permit holders in 2010, both of which represent a decrease from the number of permits and permit holders in 2000. However, none of those permits were reported as fished until 2004. The number of permits reported as fished varied between one and two between 2004 and 2010. Information on the permits and permit holders by species between 2000 and 2010 is provided in Table 4.

Between 2000 and 2010, the number of halibut quota share account holders declined between 2000 and 2010, as did the number of halibut quota shares held and the halibut Individual Fishing Quota (IFQ) allotment (in pounds) (Table 6). There was one sablefish quota share account holder in Sterling between 2000 and 2010, and that account holder held 10 sablefish quota shares in each year during this period. However, those sablefish quota shares translated to only one pound of sablefish IFQ allotment in each year between 2003 and 2006, with no sablefish IFQ allotment in other years during this period (Table 7). There were no crab share account holders or quota shares held by Sterling residents between 2005 and 2010 (Table 8).

As previously stated there were no commercial landings or associated ex-vessel value reported in Sterling between 2000 and 2010 (Table 9). Landings and ex-vessel revenue by Sterling residents between 2000 and 2010 are considered confidential for all species and all years due to the small number of participants, with the exception of halibut in 2000 and 2001 and salmon from 2000 to 2010. While landings of halibut increased slightly between 2000 and 2001, the associated ex-vessel revenue decreased during the same period. Landings and associated ex-vessel revenue for salmon landed by Sterling residents were highly variable between 2000 and 2010. Information on landed pounds and ex-vessel revenue by species by Sterling residents between 2000 and 2010 is provided in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Sterling: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Sterling: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	4	4	4	4	4	4	4	4	4	4	4
	Active permits	2	2	1	1	1	2	1	1	0	1	1
	% of permits fished	50%	50%	25%	25%	25%	50%	25%	25%	-	25%	25%
	Total permit holders	4	4	4	4	4	4	4	4	4	4	4
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	5	5	5	5	5	6	5	5	5	4	4
	Fished permits	0	0	0	0	1	1	1	1	1	2	1
	% of permits fished	-	-	-	-	20%	17%	20%	20%	20%	50%	25%
	Total permit holders	4	4	4	4	4	5	4	4	4	3	3
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	3	4	4	6	5	5	5	6	6	4	0
	Fished permits	3	4	4	5	5	5	0	0	3	0	0
	% of permits fished	100%	100%	100%	83%	100%	100%	-	-	50%	-	-
	Total permit holders	3	4	4	5	5	5	5	6	6	4	0
Halibut (CFEC) ²	Total permits	7	7	6	7	7	7	7	9	5	5	6
	Fished permits	6	6	4	4	5	5	5	6	3	3	4
	% of permits fished	86%	86%	67%	57%	71%	71%	71%	67%	60%	60%	67%
	Total permit holders	6	6	5	6	6	6	6	7	4	4	5
Herring (CFEC) ²	Total permits	2	2	2	2	1	1	1	2	2	3	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	2	2	2	2	1	1	1	2	2	3	1

Table 4 cont'd. Permits and Permit Holders by Species, Sterling: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	1	0	0	0	0	0	3	1	0	0
	Fished permits	0	0	0	0	0	0	0	2	0	0	0
	% of permits fished	-	-	-	-	-	-	-	67%	-	-	-
	Total permit holders	1	1	0	0	0	0	0	2	1	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	14	15	15	20	24	22	23	22	19	16	13
	Fished permits	11	10	8	15	21	19	19	17	15	13	10
	% of permits fished	79%	67%	53%	75%	88%	86%	83%	77%	79%	81%	77%
	Total permit holders	14	16	15	21	22	22	21	21	19	16	13
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>27</i>	<i>29</i>	<i>27</i>	<i>35</i>	<i>37</i>	<i>35</i>	<i>36</i>	<i>42</i>	<i>33</i>	<i>28</i>	<i>20</i>
	<i>Fished permits</i>	<i>20</i>	<i>20</i>	<i>16</i>	<i>24</i>	<i>31</i>	<i>29</i>	<i>24</i>	<i>25</i>	<i>21</i>	<i>16</i>	<i>14</i>
	<i>% of permits fished</i>	<i>74%</i>	<i>69%</i>	<i>59%</i>	<i>69%</i>	<i>84%</i>	<i>83%</i>	<i>67%</i>	<i>60%</i>	<i>64%</i>	<i>57%</i>	<i>70%</i>
	<i>Permit holders</i>	<i>17</i>	<i>21</i>	<i>20</i>	<i>27</i>	<i>26</i>	<i>23</i>	<i>22</i>	<i>25</i>	<i>24</i>	<i>19</i>	<i>15</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Sterling: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ⁴	Vessels Primarily Owned by Residents ⁵	Vessels Homeported ⁵	Vessels Landing Catch in Sterling ²	Total Net Pounds Landed in Sterling ^{2,3}	Total Ex-Vessel Value of Landings in Sterling ^{2,3}
2000	48	0	0	94	69	0	0	\$0
2001	37	0	0	102	75	0	0	\$0
2002	35	0	0	95	75	0	0	\$0
2003	29	0	0	95	73	0	0	\$0
2004	49	0	0	92	65	0	0	\$0
2005	54	0	0	20	6	0	0	\$0
2006	50	0	0	15	4	0	0	\$0
2007	46	0	0	14	4	0	0	\$0
2008	42	0	1	14	4	0	0	\$0
2009	40	0	1	12	3	0	0	\$0
2010	33	0	0	11	2	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Totals only represent non-confidential data.

⁴ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Sterling: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	11	303,462	30,047
2001	12	304,433	36,040
2002	12	304,433	37,265
2003	11	199,175	24,373
2004	12	347,963	47,152
2005	12	252,856	34,829
2006	12	252,856	34,459
2007	10	195,696	27,728
2008	8	118,255	15,489
2009	7	118,255	13,877
2010	7	117,284	12,679

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Sterling: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	1	10	0
2001	1	10	0
2002	1	10	0
2003	1	10	1
2004	1	10	1
2005	1	10	1
2006	1	10	1
2007	1	10	0
2008	1	10	0
2009	1	10	0
2010	1	10	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Sterling: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Sterling: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Sterling Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	55,847	64,010	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	349,863	837,236	361,107	386,987	1,224,408	1,301,125	583,899	720,156	159,243	156,473	270,449
<i>Total²</i>	<i>405,710</i>	<i>901,246</i>	<i>361,107</i>	<i>386,987</i>	<i>1,224,408</i>	<i>1,301,125</i>	<i>583,899</i>	<i>720,156</i>	<i>159,243</i>	<i>156,473</i>	<i>270,449</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$146,175	\$127,119	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$136,722	\$201,090	\$161,795	\$220,048	\$384,117	\$527,299	\$249,556	\$348,470	\$167,432	\$167,952	\$414,744
<i>Total²</i>	<i>\$282,897</i>	<i>\$328,209</i>	<i>\$161,795</i>	<i>\$220,048</i>	<i>\$384,117</i>	<i>\$527,299</i>	<i>\$249,556</i>	<i>\$348,470</i>	<i>\$167,432</i>	<i>\$167,952</i>	<i>\$414,744</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Kenai River is the most heavily fished river in Alaska and also supports the largest sockeye personal use fishery in the state. The Sterling Highway Bridge in Soldotna marks the beginning of the “Lower River.” This final 21-mile section is gentler than the upper portion of the river, and the river winds its way to empty in Cook Inlet near the City of Kenai. There are about 40 unique species of fish in the Kenai River. There are resident fish, which spend their entire life cycle in the river; anadromous fish, which spend part of their life in the river and part in salt water; and fish which are common to the intertidal area, which is a mixture of both fresh and salt water.¹⁰⁷⁰

The North Kenai Peninsula Management Area has two personal use sockeye salmon dip net fisheries which are open to Alaska-residents only. The Russian River sockeye salmon fishery is the second largest sockeye fishery in Alaska. Annual harvests in the Russian River regularly exceed 50,000 fish and have come close to 200,000 fish in some years. The Anchor River, Deep Creek, and Ninilchik Rivers also support large Chinook salmon runs from late May through mid-July. Coho salmon arrive in the area early August through mid-September; and Dolly Varden can be found mid-May through mid-July. Many lakes on the Kenai Peninsula are stocked with rainbow trout and salmon to support the large sportfishing economy.¹⁰⁷¹

In 2010, there were 4 active sport fish guide businesses registered in Sterling. This represents a decrease from the 12 sport fish guide businesses that were registered in 2000. A greater number of licensed sport fish guides were present throughout the period, varying between 32 and 55 guides present in Sterling each year. Between 2000 and 2010, the number of sportfishing licenses sold to Sterling residents (irrespective of the point of sale) increased to a total of 1,438 in 2010, representing 25.6% of the total population. During the same period, the number of sportfishing licenses sold in Sterling increased overall from 932 in 2000 to 1,146 in 2010 (Table 11). However, the number of sportfishing licenses sold in Sterling was smaller than the number of sportfishing licenses sold to community residents in all but three years during this period, indicating the potential that Sterling residents may pursue recreational fishing activities in other communities.

The Alaska Statewide Harvest Survey,¹⁰⁷² conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Sterling: Chinook salmon, coho salmon, sockeye salmon, pink salmon, rainbow trout, Dolly Varden, whitefish, Arctic grayling, northern pike, Pacific halibut, rockfish, lingcod, Pacific cod, shark, smelt, other fish, razor clams, hardshell clams, shrimp, and other shellfish. No kept/released log book data were reported for fishing charters out of Sterling between 2000 and 2010.¹⁰⁷³

¹⁰⁷⁰ Alaska Department of Fish and Game. Division of Sport Fish. Southcentral Region. (n.d.). *Kenai Peninsula Recreational Fishing Series: The Kenai River*. Retrieved on May 9, 2012 from www.adfg.alaska.gov/static-sf/Region2/pdfpubs/kenairiver.pdf.

¹⁰⁷¹ Kenai Peninsula Borough. (2005). *Kenai Peninsula Borough Comprehensive Plan*. Retrieved on July 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/KenaiPeninsulaBorough-CP-2005.pdf>.

¹⁰⁷² Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000-2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey Project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁰⁷³ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000-2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Sterling is located within the Kenai Peninsula Alaska Sport Fishing Survey Area. Information is available from ADF&G about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region was variable from year to year, though the total number of angler days fished in the region decreased overall during this period. There were considerably more angler days fished in freshwater than in saltwater in this region between 2000 and 2010. During this period, the percentage of angler days fished by non-Alaska residents in saltwater increased only slightly, from 23% to 28%, as did the percentage of angler days fished by non-Alaska residents in freshwater, which increased from 42% to 47%. The percentage of angler days fished by non-Alaska residents was higher in freshwater than in saltwater between 2000 and 2010. Information on sportfishing trends in Sterling between 2000 and 2010 is presented in Table 11.

Subsistence Fishing

Sterling residents appear to engage in limited subsistence fishing activity. No data were reported regarding the percentage of households participating in subsistence for various species, or per capita subsistence harvest between 2000 and 2010 (Table 12). However, data were reported regarding salmon subsistence harvest totals, as well as halibut subsistence.

Between 2000 and 2010, the number of subsistence salmon permits issued to Sterling households varied between two and seven per year, and between two and five of those permits were reported as fished each year. The two salmon species reported to have been harvested using these subsistence permits were sockeye and Chinook. Information on subsistence harvest of marine invertebrates and non-salmon fish (excluding halibut) was not reported during this period. Information about salmon, marine invertebrates, and non-salmon fish is reported in Table 13.

Between 2003 and 2010, the number of Subsistence Halibut Registration Certificates (SHARC) issued to Sterling residents varied between four and six per year. The only years in which data indicate that SHARC cards were returned were 2009 and 2010. In 2009, two SHARC cards were reported to have been returned, and total halibut harvest was 132 pounds. In 2010, one card was reported returned, and total harvest was slightly higher (200 pounds). Information on subsistence halibut fishing participation is presented in Table 14.

Between 2000 and 2010, no information was reported regarding subsistence harvest of beluga whale, sea otter, walrus, polar bear, Steller sea lion, harbor seal, or spotted seal (Table 15).

Table 11. Sport Fishing Trends, Sterling: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Sterling ²
2000	12	50	1,333	932
2001	13	47	1,334	704
2002	12	48	1,321	853
2003	6	49	1,305	1,216
2004	8	51	1,435	1,656
2005	10	55	1,400	1,409
2006	7	53	1,364	1,095
2007	7	47	1,435	1,191
2008	3	46	1,420	1,640
2009	3	41	1,591	1,284
2010	4	32	1,438	1,146

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	42,157	139,737	242,224	333,118
2001	28,245	69,053	202,305	269,047
2002	26,479	83,335	199,512	299,839
2003	35,299	80,368	205,810	273,743
2004	39,009	83,478	251,002	297,877
2005	37,309	91,489	281,942	270,164
2006	33,988	76,100	229,520	268,434
2007	31,105	89,061	281,832	313,012
2008	28,780	70,285	234,826	295,184
2009	24,959	77,945	203,584	299,194
2010	28,294	71,555	222,375	247,239

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Sterling: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Sterling: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	4	3	1	n/a	n/a	n/a	44	n/a	n/a
2001	4	3	18	n/a	n/a	n/a	12	n/a	n/a
2002	3	4	50	n/a	n/a	n/a	11	n/a	n/a
2003	4	6	5	n/a	n/a	n/a	21	n/a	n/a
2004	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	4	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	2	n/a	n/a	n/a	n/a	2	n/a	n/a
2007	7	5	4	n/a	n/a	n/a	73	n/a	n/a
2008	6	5	n/a	n/a	n/a	n/a	142	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Sterling: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	4	n/a	n/a
2004	4	n/a	n/a
2005	4	n/a	n/a
2006	4	n/a	n/a
2007	6	n/a	n/a
2008	5	n/a	n/a
2009	5	2	132
2010	4	1	200

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Sterling: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Tyonek (*tie-OH-neck*)



People and Place

*Location*¹⁰⁷⁴

Tyonek lies on a bluff on the northwest shore of Cook Inlet, 43 miles southwest of Anchorage. Tyonek is not located directly on the Kenai Peninsula. Tyonek is located in the Anchorage Recording District, the Kenai Peninsula Census Area, and the Kenai Peninsula Borough.

*Demographic Profile*¹⁰⁷⁵

In 2010, there were 171 inhabitants in Tyonek, making it the 210th largest of 352 total Alaskan communities with recorded populations that year. Overall since 1990, the population of Tyonek increased by 11%. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, a majority of Tyonek residents identified themselves as American Indian and Alaska Native (88.3%). Other ethnic groups present in Tyonek in that year included White (5.3%), two or more races (6.4%), and Hispanic or Latino (5.3%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaska Native decreased by 7%, with corresponding increased in the percentages of the population identifying themselves as White, two or more races, and Hispanic or Latino. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Tyonek in 2010 was 2.44, a decrease from 2.8 persons per household in 1990 and 2.92 in 2000. The total number of households in Tyonek increased from 55 in 1990 to 66 in 2000 to 70 occupied housing units by 2010. Of the 144 housing units surveyed for the 2010 Decennial Census, 46 were owner-occupied, 24 were renter-occupied, and 74 were vacant or used only seasonally. Throughout this period no residents of Tyonek were reported to be living in group quarters.

The gender makeup of Tyonek in 2010 was 56.1% male and 43.9% female, slightly more skewed than the state as a whole (52% male, 48% female). The median age was estimated to be 33.6 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of the population fell within the age group 0 to 9 years in 2010, while the second greatest percentage fell within the age group 50 to 59 years. The overall population structure of Tyonek in 2000 and 2010 is shown in Figure 2.

¹⁰⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁷⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

According to the 2006-2010 American Community Survey (ACS),¹⁰⁷⁶ in terms of educational attainment, 85.4% of Tyonek residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 4.2% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 10.4% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 64.6% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; and 20.8% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall. There were no Tyonek residents estimated to have an Associate’s degree, a Bachelor’s degree, or a graduate or professional degree in 2010.

Table 1. Population in Tyonek from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	154	-
2000	193	-
2001	-	161
2002	-	181
2003	-	192
2004	-	185
2005	-	199
2006	-	199
2007	-	179
2008	-	154
2009	-	166
2010	171	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

¹⁰⁷⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 1. Racial and Ethnic Composition, Tyonek: 2000-2010 (U.S. Census).

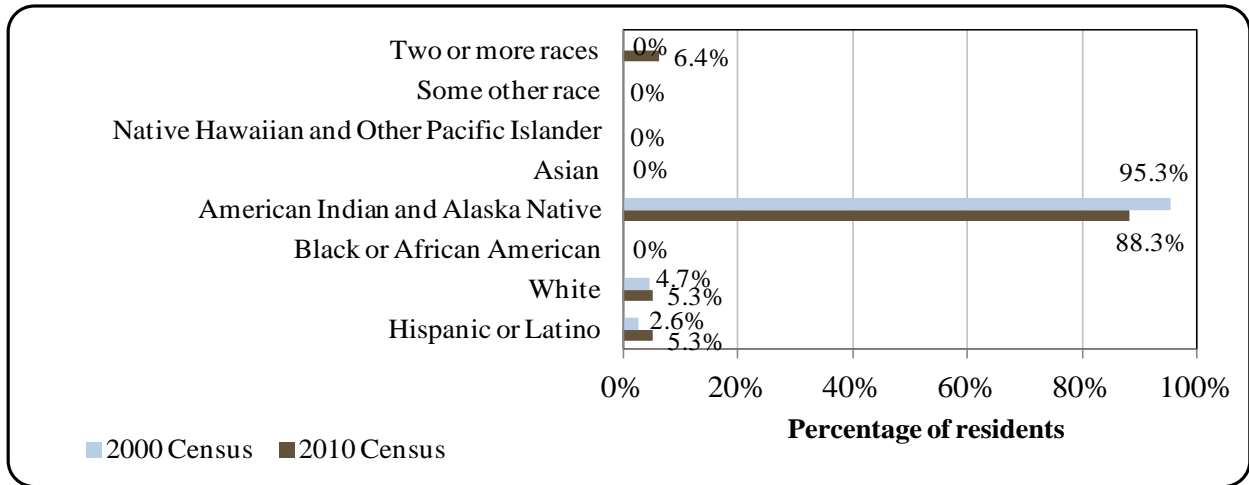
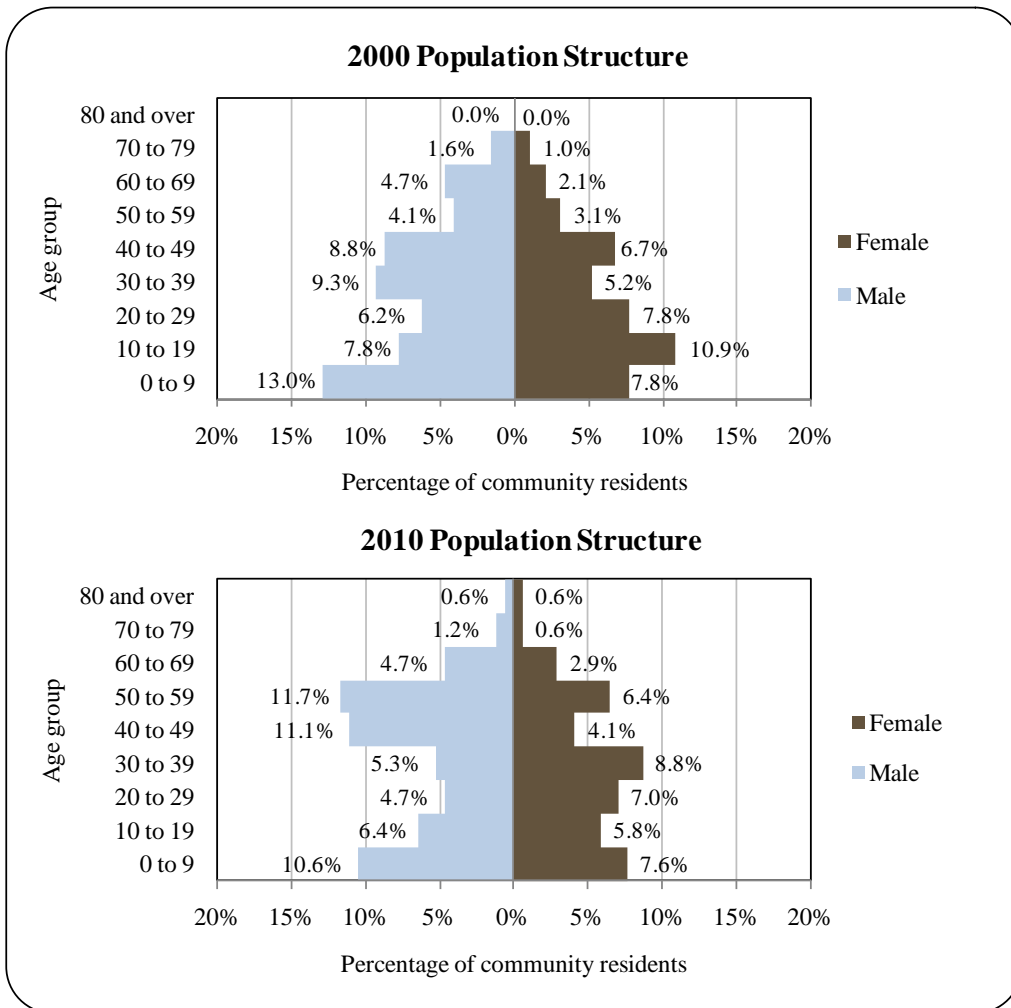


Figure 2. Population Age Structure in Tyonek Based on the 2000 and 2010 U.S. Decennial Census.



*History, Traditional Knowledge, and Culture*¹⁰⁷⁷

Tyonek is a Dena'ina Athabascan village practicing a subsistence lifestyle. Various settlements in this area include Old Tyonek Creek, Robert Creek, Timber Camp, Beluga, and Moquawkie Indian Reservation. Captain Cook's journal provides a description of the Upper Cook Inlet Athabascans in 1778 who possessed iron knives and glass beads. He concluded that the Natives were trading indirectly with the Russians. Russian trading settlements were established at "Tuiunuk" and Iliamna prior to the 1790s but were destroyed due to dissension between the Natives and the Russians. Between 1836 and 1840, half of the region's Indians died from a smallpox epidemic. The Alaska Commercial Company had a major outpost in Tyonek by 1875. In 1880, "Tyonok" station and village, believed to be two separate communities, had a total of 117 residents, including 109 Athabascans, six "creoles", and two whites. After gold was discovered at Resurrection Creek in the 1880s, Tyonek became a major disembarkation point for goods and people. A saltery was established in 1896 at the mouth of the Chuitna River north of Tyonek.

In 1915, the Tyonek Reservation (also known as Moquawkie Indian Reservation) was established. The devastating influenza epidemic of 1918-19 left few survivors among the Athabascans. The village was moved to its present location atop a bluff when the old site near Tyonek Timber flooded in the early 1930s. The population declined when Anchorage was founded. In 1965, the federal court ruled that the Bureau of Indian Affairs had no right to lease Tyonek Indian land for oil development without permission of the Athabascans themselves. The tribe subsequently sold rights to drill for oil and gas beneath the reservation to a group of oil companies for \$12.9 million. The reservation status was revoked with the passage of the Alaska Native Claims Settlement Act in 1971. Beluga, a site near Tyonek, is owned by Chugach Electric Association and provides some electricity for Anchorage.

Natural Resources and Environment

Winter temperatures typically range 4 to 22 °F (-15.6 to -5.6 °C); summer temperatures average from 46 to 65 °F (7.8 to 18.3 °C). Temperature extremes have been recorded from -27 to 91 °F (-32.8 to 32.8 °C). Average annual precipitation is 23 inches, with 82 inches of snow.¹⁰⁷⁸

Tyonek is located near the Lake Clark National Park and Preserve (LACL), an area that is managed by the National Park Service (NPS). The following information was obtained from a report issued by the NPS.¹⁰⁷⁹ The Chigmit Mountains divide the subpolar marine climate of Cook Inlet from the continental climate of Interior Alaska. Local climatic conditions within these two regimes vary with elevation and the distance from mountains and large bodies of water. LACL encompasses approximately 4 million acres of public and private lands in southwestern Alaska and contains more than 6,000 miles of rivers and streams. The Alaska and Aleutian mountain ranges form a continuous watershed divide separating the coast from the interior. Glacial ice covers approximately 30% of the park. LACL contains 130 miles of coastline in

¹⁰⁷⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁷⁸ Ibid.

¹⁰⁷⁹ Bennett, A. J., W. L. Thompson, and D. C. Mortenson (2006). Vital signs monitoring plan, Southwest Alaska Network. National Park Service, Anchorage, AK. Appendix II: Network Park Ecological Profiles.

western lower Cook Inlet. The rivers emptying into Cook Inlet carry very high loads of suspended sediments, mainly fine glacial flour.

Both white and Sitka spruce grow along the coast. Conifer forests have multi-aged trees with thick moss understory, devil's club, salmonberry, and scattered alder. The center of the park is primarily glacial ice and bedrock or till. Most valley glaciers are in retreat, leaving large expanses of moraines and ground till, which are slowly re-vegetating with mosses and lichens, fireweed and *Dryas*, willow and alder. The western side of the park is dominated by a series of large long lakes with their eastern extents in the Alaska Range and their western edge bounded by terminal moraines from the most recent advances of large valley glaciers. Low ridges and subdued mountains lie between the lake systems. The northern part of the park, by the Stony River, is boreal in character, with black spruce, muskeg, aspen and birch, and subject to wildfire. Further south, vegetation is a mosaic of spruce and mixed spruce/birch or cottonwood forests, paper birch, low shrubs dominated by dwarf birch, dwarf shrub tundra with ericaceous shrubs, scattered wetlands, and alpine tundra.

Intertidal sand flats in some locations within LACL support dense populations of mollusk bivalves, including razor, littleneck, and soft-shell clams. Forty-six species of fish are listed as present or probably present in LACL. In marine waters, small pelagic schooling fish, including capelin, sand lance, eulachon, and Pacific herring, occur in nearshore and estuarine waters, while halibut and gray cod are found offshore. Sockeye salmon are a keystone species in the LACL aquatic and terrestrial ecosystem. Sculpin, least cisco, lake trout, rainbow trout, and burbot all derive nutrients from sockeye salmon in one form or another. Salmon influence the seasonal distribution and abundance of birds and mammals that prey on them. In the interior of the park and preserve, bald eagles are exclusively associated with river-lake systems that support salmon. Bears depend on abundant salmon to bolster fat reserves vital to survival during hibernation. Because much of Lake Clark remains ice-free until February, salmon carcasses support overwintering bald eagles and are an important food resource for an array of vertebrate predators and scavengers, including wolves, coyotes, red fox, wolverine, and lynx.

Thirty-six species of terrestrial mammals are documented or expected to occur within LACL, including moose, Dall sheep, and the Mulchatna caribou herd, which calves adjacent to the western boundary of the preserve. This herd is one of the most important for local subsistence and nonlocal Alaska hunters and heavily supports Alaska's guide and transporter industry. Brown/grizzly bears, common in all habitats, are most numerous along the coast. Black bears use all areas of the park and preserve except the higher elevations. Other terrestrial mammals include wolves, lynx, coyotes, wolverines, porcupines, snowshoe hares, hoary marmots, arctic ground squirrels, and pikas, mink, beaver, river otter, red squirrel, American marten, short tail weasel, and least weasel.

Harbor seals haul out at three sites within LACL and pup near the mouth of the Tuxedni River. Beluga whales seasonally occur off the mouths of glacial rivers in both bays and are most numerous during August and September. Sea otter occasionally stray into LACL waters.

One hundred eighty-nine species of birds are documented or expected to occur in LACL. Bird species occurring within LACL include bald eagle, golden eagle, northern goshawk, sharp-shinned hawk, northern harrier, merlin, osprey, and peregrine falcons. Waterfowl nest and molt in wetlands throughout the area. Large migratory flocks of ducks, swans, and geese rest and feed in the LACL. Sea ducks, primarily white-winged scoters and surf scoters, are the most abundant waterfowl on the coast. The coast also provides important breeding habitat for mallards, American widgeon, Barrow's golden-eye, and red-throated loons. Other waterfowl occurring

within the park include diving ducks, other ducks, trumpeter swans, and Canada geese. Seabird breeding colonies occur along Cook Inlet and concentrate at Tuxedni and Chinitna Bays. Seabird surveys have revealed black-legged kittiwakes, horned puffins, double-crested cormorants, pelagic cormorants, glaucous-winged gulls, tufted puffins, common murre, and pigeon guillemots.

Current Economy¹⁰⁸⁰

Subsistence activities augment the local economy with salmon, moose, beluga whale, and waterfowl. In 2010, 17 residents held commercial fishing permits. Tyonek offers recreational fishing and hunting guide services. Some residents trap during winter. The North Foreland Port Facility at Tyonek is the preferred site for export of Beluga coal.¹⁰⁸¹ Top employers in 2010¹⁰⁸² included the Native Village of Tyonek, Tyonek Contractors LLC, Tyonek Native Corp., Kenai Peninsula Borough School, Aurora Gas LLC, and Cook Inlet Housing Authority.

In 2010, per capita income in Tyonek was estimated to be \$14,644 and the median household income was estimated to be \$20,625, compared to \$11,261 and \$26,667 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁰⁸³ the real per capita income in 2000 is shown to have been \$14,808 and the real 2000 median household income was \$35,607. This shows a slight decrease in per capita income between 2000 and 2010 and a substantial decrease in median household income during this period. In 2010, Tyonek ranked 209th out of 305 Alaskan communities with per capita income that year, and 275th out of 299 Alaskan communities with household income data. However, Tyonek's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁰⁸⁴ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Tyonek in 2010 was \$9,736, which indicates an even more substantial decrease in per capita income compared to the real per capita income values reported by the U.S. Census in 2000.¹⁰⁸⁵ This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁰⁸⁶ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

¹⁰⁸⁰ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰⁸¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁸² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁰⁸³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁰⁸⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁸⁵ See footnote 1082.

¹⁰⁸⁶ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

Based on the 2006-10 ACS, 67.3% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 28.2%, compared to the statewide unemployment rate of 5.9%. Approximately 35.9% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Tyonek are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Tyonek. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 27.3%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was employed in the public sector (63.5%), while 36.5% were employed in the private sector. Out of 74 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in public administration (25.9%), transportation, warehousing, and utilities (22.4%), arts, entertainment, recreation, accommodation, and food services (12.1%), educational services, health care, and social assistance (12.1%), and construction (10.3%). Smaller percentages of the workforce were employed in finance, insurance, and real estate (6.9%), retail trade (5.2%), and agriculture, forestry, fishing, hunting, and mining (5.2%) (Figures 3 and 4). However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

Figure 3. Local Employment by Industry in 2000-2010, Tyonek (U.S. Census).

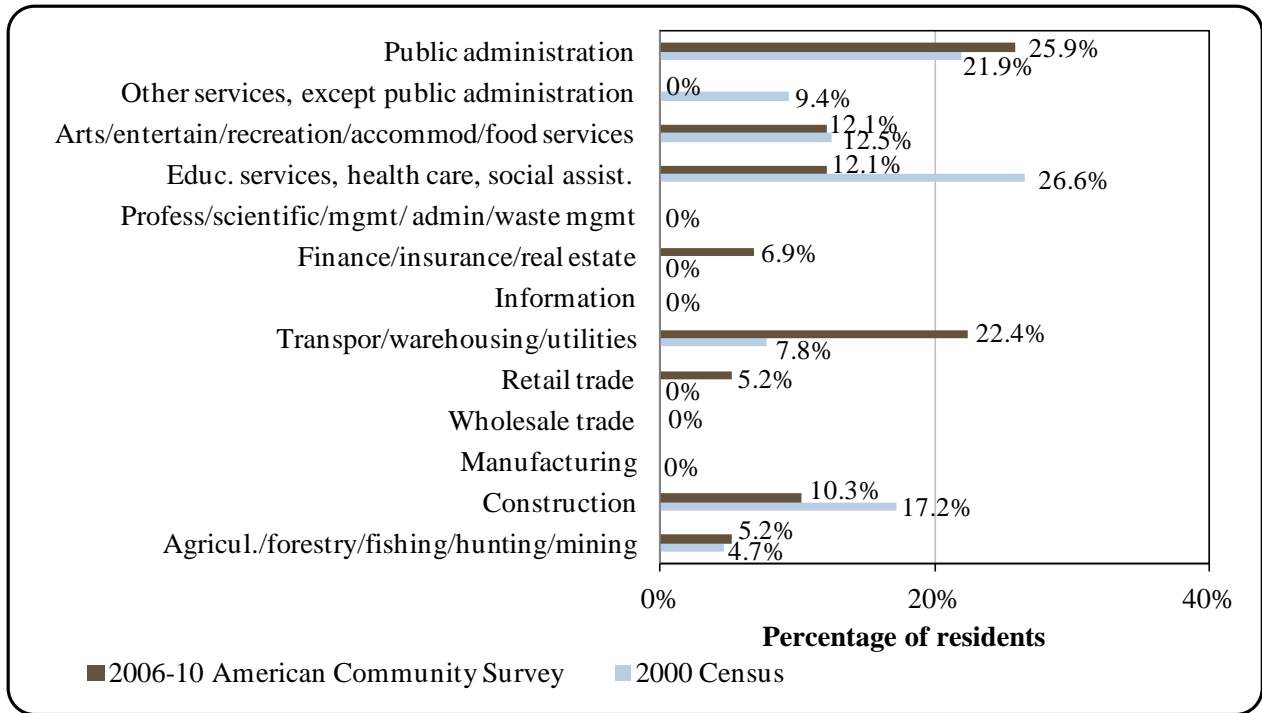
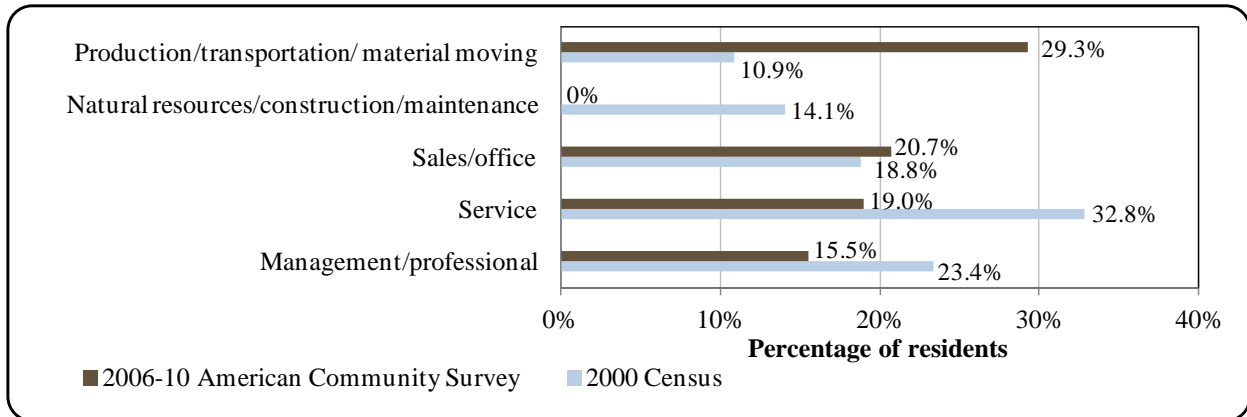


Figure 4. Local Employment by Occupation in 2000-2010, Tyonek (U.S. Census).



Governance

Tyonek is an unincorporated town located in the Kenai Peninsula Borough. Because of Tyonek’s unincorporated status, no municipal taxes were administered between 2000 and 2010. Tyonek did not receive any State or Community Revenue Sharing contributions or fisheries-related grants between 2000 and 2010. Information about selected aspects of Tyonek’s community revenue is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Tyonek from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Tyonek was included in the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Tyonek Native Corporation. The regional native corporation to which Tyonek belongs is the Cook Inlet Region, Inc. (CIRI).¹⁰⁸⁷ CIRI is one of 12 Alaska-based regional corporations established ANCSA to benefit Alaska Natives who had ties to the Cook Inlet region. The Company is owned by more than 7,300 Alaska Native shareholders of Athabascan and Southeast Indian, Inupiat, Yupik, Alutiiq (Sugpiaq) and Aleut (Unangax) descent. It is based in Anchorage and has interests across Alaska, the lower 49 and abroad. CIRI's well-diversified portfolio of business operations and investments includes: traditional and alternative energy and resource development, oilfield and construction services, environmental services, real estate investment and management, tourism and hospitality, telecommunications, aerospace defense, private equity and venture capital investments. CIRI also created a family of nonprofit service organizations that provide needed health care, housing, employment, education and other social and cultural enrichment services for Alaska Natives and others.¹⁰⁸⁸

The closest regional offices of the Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources, Alaska Department of Commerce, Community, and Economic Development, National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are all located in Anchorage.

Infrastructure

Connectivity and Transportation

Tyonek is not accessible by road. Permission is required to land at the local 3,000 foot long by 90 foot wide gravel airstrip, owned by the Village of Tyonek, although regularly-scheduled flights are available. A state-owned 4,003 foot long gravel airstrip is available at Nikolai Creek, and a 2,400 foot gravel airstrip, owned by Arco Alaska, is located at Beluga. Regular commercial air service is not available between Tyonek or Beluga and Anchorage. Private and charter flights are available. A local road connects to nearby Beluga. Barges deliver goods to the village.¹⁰⁸⁹

*Facilities*¹⁰⁹⁰

A piped water and sewer system serves the entire community, including approximately 90 homes and facilities. Water is derived from Second Lake and is treated and stored in a 175,000-gallon tank. Backup water supplies are available from a lake near the airport. A small coin-operated washeteria, with one washer and dryer, is available. Law enforcement services are provided by state troopers in Girdwood. Fire and rescue services are provided by the Tyonek

¹⁰⁸⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁰⁸⁸ Cook Inlet Region, Incorporated (2012). CIRI Company Overview. Retrieved on May 10, 2012 from <http://www.ciri.com/content/company/business.aspx>.

¹⁰⁸⁹ See footnote 1087.

¹⁰⁹⁰ Ibid.

Volunteer Rescue Squad. The Boys and Girls Club operates a youth center, and Tyonek also has a community hall and a school library.

*Medical Services*¹⁰⁹¹

Medical care is provided by the Indian Creek Health Clinic, which is owned by the Village Council and operated by the Native Village of Tyonek. The clinic is a Community Health Aid Program site. Alternate health care is provided by the Tyonek Volunteer Rescue Squad. Emergency services only have air access and are provided by volunteers and a health aide. The nearest hospital is located in Anchorage.

*Educational Opportunities*¹⁰⁹²

The Tebughna School provides instruction to students in kindergarten through 12th grade. In 2011 the school had 35 students and 5 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Originally, the Kachemak Tradition Eskimos and Dena'ina Athabascans occupied the Cook Inlet region. Kachemak Eskimos were the first to arrive approximately 3,000 years ago followed by Dena'ina Athabascans. These groups utilized both marine and riverine ecosystems, relying on marine mammals and fish using drift nets, weirs, and dip nets, and basket traps. In general all five species of Pacific salmon and Dolly Varden char were utilized throughout the Cook Inlet.

Commercial fishing for Chinook salmon in the Cook Inlet began to increase substantially during the 1940s. Before 1940, commercial fishermen harvested approximately 60,000 Chinook annually, however, over the next decade harvests would more than double. Average harvests of Chinook were about 13,000 fish during the 1960s, 12,000 fish during the 1970s, 25,000 fish during the 1980s, and 17,000 fish during the 1990s. Sockeye salmon harvests did not exceed three million fish in any year until 1982. Prior to that, the peak decadal average occurred in the 1940s at 1.6 million fish. Commercial harvests of sockeye averaged 4.5 million fish in the 1980s and 4.1 million fish in the 1990s. Coho salmon harvests averaged less than 400,000 annually until the 1980s when the annual commercial harvest averaged about 540,000 fish. During the 1990s average annual harvest dropped to 360,000 fish. The largest commercial harvest of pink salmon in the Cook Inlet occurred in 1952 when almost five million were caught. Commercial harvests of chum salmon peaked in the 1980s at an average annual catch of around 906,000 fish.¹⁰⁹³

A commercial herring fishery began in the Lower Cook Inlet in 1914. A total of eight salteries were operating during the fisheries peak and over 7,900 tons were averaged between

¹⁰⁹¹ Ibid.

¹⁰⁹² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰⁹³ Clark, J. H.; et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved June 14, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

1924 and 1926. In 1939, a fishery was started in and around Resurrection Bay and Day Harbor within the Eastern District. Again, peak years occurred from 1944 to 1946 where the average harvest was 16,250 tons. The fishery died out during the late 1950s due to over-harvesting. A Lower Cook Inlet herring sac roe fishery began in 1969; however, it went into decline after 1973 until limits were established in 1974. However, quotas were never followed and Outer and Eastern districts were eventually closed until 1984 for stock recovery.¹⁰⁹⁴

Today, the Cook Inlet is managed according to two distinct management areas: Upper and Lower Cook Inlet. The city of Anchorage plays a complex role in the Alaskan fishing industry. Historically, Anchorage was built around mining, and later petroleum. Fishing was never a central component of the city's economy in its early years. However, as fisheries developed in the Cook Inlet and around the Kenai Peninsula, Anchorage found itself playing an increasingly important role in the support of those fisheries.

Tyonek is located in the Tyonek Subdistrict setnet subsistence fishery, within the Northern District of the Upper Cook Inlet Management Area. The Alaska Board of Fisheries has found that salmon in the Tyonek Subdistrict are customarily and traditionally used for subsistence purposes. Subsistence fishing is open during two seasons per year. The early season runs from May 15 through June 15, while the late season is open June 16 through October 15.

Tyonek lies on a bluff on the northwest shore of Cook Inlet and is not located directly on the Kenai Peninsula.¹⁰⁹⁵ The area is included in Federal Statistical and Reporting Area 630, Pacific Halibut Fishery Regulatory Area 3A, and the Central Gulf of Alaska Sablefish Regulatory Area. The community is not eligible for the Community Development Quota program, but is eligible for the Community Quota Entity (CQE) program. However, the community has not formed a non-profit entity eligible to purchase quota share. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated a portion of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.¹⁰⁹⁶

¹⁰⁹⁴ Schroeder, T. R. (1989). *A Summary of Historical Data for the Lower Cook Inlet, Alaska, Pacific Herring Sac Roe Fishery*. Retrieved June 14, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidPDFs/FRB.1989.04.pdf>

¹⁰⁹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁹⁶ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Tyonek does not have a registered processing plant. The nearest processing plant is located in Anchorage.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported on fisheries-related revenue received by Tyonek (Table 3).

Commercial Fishing

In 2010, there were 17 Tyonek residents holding 18 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for the Cook Inlet salmon set gill net fishery (Table 4). The number of CFEC salmon permits and permit holders decreased slightly between 2000 and 2010, while the number of permits reported as fished varied considerably from year to year. There were no Tyonek residents holding Federal Fisheries Permits or License Limitation Program (LLP) permits between 2000 and 2010. Between 2000 and 2010, there were an average of five crew license holders in Tyonek each year, with six crew license holders in 2010. During this period, there were no fish buyers or shore-side processing facilities located in Tyonek. There were an average of four commercial fishing vessels primarily owned by Tyonek residents between 2000 and 2010, and an average of three vessels homeported in Tyonek during this period. There were no vessels landing catch in Tyonek between 2000 and 2010, and therefore no landings or associated ex-vessel revenue to report during this period (Table 5). There were no halibut or sablefish quota share account holders located in Tyonek between 2000 and 2010 (Tables 6 and 7) and no crab quota share account holders between 2005 and 2010 (Table 8). As previously stated, there were no commercial landings recorded in Tyonek between 2000 and 2010 and therefore no associated ex-vessel revenue to report during this period (Table 9). Landings by Tyonek residents and associated ex-vessel revenue between 2000 and 2010 was considered confidential due to a small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Tyonek: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Tyonek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Tyonek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	20	19	20	21	20	19	17	17	17	18	18
	Fished permits	17	13	7	5	8	11	11	10	11	12	13
	% of permits fished	85%	68%	35%	24%	40%	58%	65%	59%	65%	67%	72%
	Total permit holders	23	21	20	21	20	21	17	16	17	17	17
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>20</i>	<i>19</i>	<i>20</i>	<i>21</i>	<i>20</i>	<i>19</i>	<i>17</i>	<i>17</i>	<i>17</i>	<i>18</i>	<i>18</i>
	<i>Fished permits</i>	<i>17</i>	<i>13</i>	<i>7</i>	<i>5</i>	<i>8</i>	<i>11</i>	<i>11</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>
	<i>% of permits fished</i>	<i>85%</i>	<i>68%</i>	<i>35%</i>	<i>24%</i>	<i>40%</i>	<i>58%</i>	<i>65%</i>	<i>59%</i>	<i>65%</i>	<i>67%</i>	<i>72%</i>
	<i>Permit holders</i>	<i>23</i>	<i>21</i>	<i>20</i>	<i>21</i>	<i>20</i>	<i>21</i>	<i>17</i>	<i>16</i>	<i>17</i>	<i>17</i>	<i>17</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Tyonek: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Tyonek ²	Total Net Pounds Landed in Tyonek ^{2,5}	Total Ex-Vessel Value of Landings in Tyonek ^{2,5}
2000	5	0	0	3	2	0	0	\$0
2001	4	0	0	5	4	0	0	\$0
2002	6	0	0	5	4	0	0	\$0
2003	4	0	0	5	4	0	0	\$0
2004	9	0	0	4	3	0	0	\$0
2005	8	0	0	4	3	0	0	\$0
2006	3	0	0	4	3	0	0	\$0
2007	3	0	0	3	2	0	0	\$0
2008	6	0	0	4	3	0	0	\$0
2009	3	0	0	4	3	0	0	\$0
2010	6	0	0	2	1	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Tyonek: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Tyonek: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Tyonek: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Tyonek: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Tyonek Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Although several sport fish guide businesses were locally registered between 2000 and 2004, none were reported active. The number of sport fish guide licenses held by Tyonek residents decreased from 11 in 2000 to one in 2008, and there were no Tyonek residents holding sport fish guide licenses in 2009 and 2010 (Table 11). No kept/released log book data were reported for fishing charters out of Tyonek between 2000 and 2010.¹⁰⁹⁷

The number of sportfishing licenses sold to community residents (irrespective of the location of the point of sale) varied between 2000 and 2010, with an average of 30 sportfishing licenses sold to Tyonek residents each year. The number of sportfishing licenses sold in Tyonek was consistently lower during this period, averaging eight per year. This suggests that Tyonek residents often travel to other areas or nearby communities to participate in sportfishing activities. The Alaska Statewide Harvest Survey, conducted by ADF&G between 2000 and 2010, did not note any species as targeted by private anglers in Tyonek.¹⁰⁹⁸

Tyonek is located in the West Cook Inlet Drainages Alaska Sport Fishing Survey Area. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, sportfishing activity in this region was variable (Table 11). For saltwater sportfishing, non-Alaska resident angler days fished varied between 1,017 and 2,258 days between 2000 and 2005, while Alaska resident angler days fished varied between 788 and 2,595 during this period. There were no saltwater angler days fished in this region between 2006 and 2010. Between 2000 and 2003, Alaska resident anglers fished more freshwater angler days per year in this region, but between 2004 and 2010 non-Alaska resident anglers fished more freshwater angler days per year in this region.

Table 11. Sport Fishing Trends, Tyonek: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in community ²
2000	0	11	31	11
2001	0	8	33	3
2002	0	7	27	12
2003	0	6	34	19
2004	0	7	27	0
2005	0	3	26	0
2006	0	2	26	9
2007	0	2	25	8
2008	0	1	32	7
2009	0	0	37	12
2010	0	0	28	4

¹⁰⁹⁷ Alaska Department of Fish and Game. 2011. Alaska sport fish charter logbook database, 2000-2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁰⁹⁸ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000-2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Tyonek: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	2,258	2,430	7,410	11,230
2001	2,037	1,483	6,555	8,557
2002	1,476	1,255	7,170	9,296
2003	1,017	788	8,057	8,413
2004	1,143	1,786	7,867	7,013
2005	1,756	2,595	8,097	8,011
2006	0	0	10,605	5,166
2007	0	0	10,242	9,463
2008	0	0	9,217	7,410
2009	0	0	8,133	5,619
2010	0	0	8,733	4,047

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Tyonek is a Dena'ina Athabascan village where residents practice a subsistence lifestyle. Subsistence activities contribute salmon, moose, beluga whale, and waterfowl to the local diet. Some residents trap furbearers during winter.¹⁰⁹⁹

In 2006, the only year that a household subsistence survey was conducted by ADF&G in the community of Tyonek between 2000 and 2010, 75% of households were recorded as using salmon for subsistence, 15% of households used halibut, 13% used marine mammals, 28% used marine invertebrates, and 40% used non-salmon fish (not including halibut). Per capita, residents of Tyonek harvested 226.7 pounds of land and sea-based subsistence resources in 2006. Information about per capita subsistence harvest and household participation in subsistence activities is presented in Table 12.

Subsistence salmon fishing regulations for the Tyonek Subdistrict setnet fishery were established by court order in 1980. The lands adjacent to the Tyonek Subdistrict are owned by the Tyonek Native Corporation. Subsistence salmon fishing is open during two seasons per year, May 15 to June 15 and June 16 to October 15. A subsistence fishing permit is required and there

¹⁰⁹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

are separate permits for each season of the fishery. The permit is a household permit and comes with an annual possession limit for each household member. The gear allowed in the Tyonek Subdistrict subsistence salmon fishery includes set gillnets of a specific size. Gear must be marked, and fishing within 600 feet of another set gillnet or within 300 feet of a dam or other artificial obstruction are prohibited.¹¹⁰⁰ In years for which data were reported between 2000 and 2010, an average of 62 subsistence salmon permits was issued to Tyonek residents with an average of 48 permits returned. Chinook salmon were the primary species harvested under subsistence permits (an average of 1,095 per year), along with sockeye, coho, chum, and pink salmon.

In 2006, per capita harvest of marine invertebrates was 248 pounds and per-capita harvest of non-salmon fish (not including halibut) was 3,940 pounds. Information about subsistence harvest of salmon, marine invertebrates, and non-salmon fish (not including halibut) is presented in Table 13. The ADF&G Division of Subsistence noted that marine invertebrates harvested included clams, while non-salmon fish harvested included burbot, Dolly Varden, eulachon (hooligan candlefish), grayling, pike, rainbow trout, and whitefish.¹¹⁰¹ Data were not reported regarding subsistence harvest of halibut in Tyonek between 2003 and 2010 (Table 14).

Between 2000 and 2010, in years for which data were reported, an average of 219 pounds of marine mammals (an average of five animals per year) were harvested for subsistence use, which consists of seals. Information was not reported on any subsistence marine mammal harvest of beluga whales, sea otter, or walrus. Information about subsistence harvest of marine mammals is presented in Table 15. While information on subsistence harvest of sea lion and spotted seal was not reported between 2000 and 2010, between one and five harbor seals were harvested each year for years in which data were reported during this period.

Although not reported by ADF&G Division of Subsistence (Table 15), a review of the literature, including ethnographic and subsistence-related studies, first-hand historical accounts, and archaeological research, revealed documentation of the hunting and use of beluga by upper Cook Inlet Dena'ina, including the people of Tyonek, since at least the 1700s until present. Several sources also noted the high value that Cook Inlet Dena'ina placed on beluga products such as beluga meat and oil. Tyonek residents' level of beluga hunting activity has varied over the years, primarily due to changes in resource availability; however, cultural ties remained strong. After a decline in Cook Inlet beluga hunting during the 1940s through the 1960s, Tyonek residents began regularly hunting beluga again in the late 1970s. A decline in the Cook Inlet beluga population in the 1990s led to restrictions placed on beluga hunting in 1999. Since that time, residents' harvests of beluga, in addition to their harvest methods, have been regulated.¹¹⁰²

¹¹⁰⁰ Holen, D. and J.A. Fall (2011). *Overview of subsistence salmon fisheries in the Tyonek Subdistrict and Yentna River, Cook Inlet, Alaska*. Alaska Department of Fish and Game Division of Subsistence Special Publication No. BOF 2011-01, Anchorage.

¹¹⁰¹ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹¹⁰² Stephen R. Braund & Associates and Huntington Consulting (2011). *Relationship Between the Native Village of Tyonek, Alaska and Beluga Whales in Cook Inlet, Alaska*. Submitted to NOAA Fisheries, Juneau, Alaska, June 2011.

Table 12. Subsistence Participation by Household and Species, Tyonek: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	75%	15%	13%	28%	40%	226.7
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Tyonek: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	46	45	1,083	n/a	26	6	43	n/a	n/a
2001	50	34	1,185	7	51	3	144	n/a	n/a
2002	81	52	1,477	6	132	14	294	n/a	n/a
2003	67	57	1,327	12	46	7	114	n/a	n/a
2004	75	57	1,154	n/a	120	n/a	75	n/a	n/a
2005	59	48	881	n/a	100	n/a	15	n/a	n/a
2006	63	44	770	n/a	3	n/a	8	248	3,940
2007	53	46	1,013	n/a	43	n/a	132	n/a	n/a
2008	60	45	961	7	101	10	76	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Tyonek: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Tyonek: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	3	n/a
2003	n/a	n/a	n/a	n/a	n/a	5	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	1	n/a
2006	n/a	n/a	n/a	n/a	n/a	1	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	5	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

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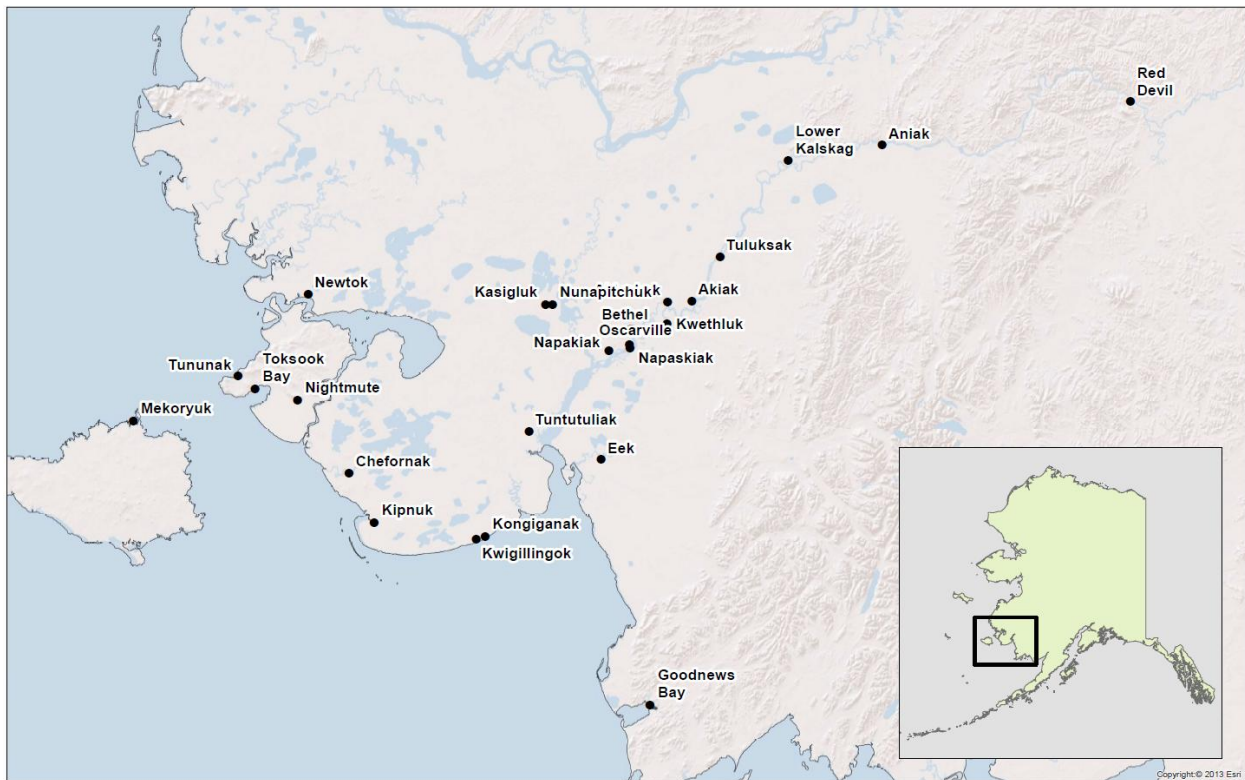
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Regional Introduction: Kuskokwim River Mouth

Communities

Akiachak	Kongiganak	Nunapitchuk
Akiak	Kwethluk	Oscarville
Aniak	Kwigillingok	Platinum
Bethel	Lower Kalskag	Quinhagak
Chefornak	Mekoryuk	Red Devil
Eek	Napakiak	Toksook Bay
Goodnews Bay	Napaskiak	Tuluksak
Kasigluk	Newtok	Tuntutuliak
Kipnuk	Nightmute	Tununak



People and Place

Location

The Kuskokwim River mouth region includes all communities within the Bethel Census Area, which stretches from Nunivak Island in the west to east of Lime Village, and includes the coastline from Newtok in the north to Platinum and Cape Newenham in the south.¹

The Bethel Census Area stretches across diverse landscapes and spans several climate zones, from the maritime climate of Nunivak Island, the Bering Sea coast, and Kuskokwim River mouth, to the transitional maritime-continental climate of many Lower-Central Kuskokwim communities located within the Yukon-Kuskokwim delta, and the continental climate of the easternmost communities in this area located in the Kuskokwim Mountain Range. Temperatures in this interior zone are more extreme, ranging between -58 and 90 °F in the community of Red Devil, with annual rainfall of 20 inches and snowfall of 85 inches. Moving coastward, temperatures are milder in Bethel and surrounding communities, ranging from 42 to 62 °F in summer and -2 to 19 °F in winter, with average annual precipitation of 16 inches and snowfall of 50 inches. Coastal communities experience even milder temperatures; in Nightmute and Quinhagak, for example, summer temperatures average 41 to 57 °F and winter temperatures average 6 to 24 °F. Precipitation in these coastal communities averages 22 inches a year, with 43 inches of snowfall. In Mekoryuk, which is located on Nunivak Island approximately 30 miles off the Alaskan coast in the Bering Sea, summer high temperatures average 48 to 54 °F, and winter high temperatures range from 37 to 44 °F. Extremes temperatures have been recorded from 76 to -48 °F.²

Demographic Profile

In 2010, the total population of the Bethel Census Area was 17,013. Of the 27 communities profiled in this document, only Bethel had a population greater than 1,000 in 2010, with 6,080 residents. The remaining 26 communities had populations ranging from a low of 23 in Red Devil to 721 in Kwethluk. The population of Bethel accounted for 35.7% of the total population of the Census Area that year.³

In 2010, a majority of the residents of the Bethel Census Area identified themselves as American Indian or Alaska Native (82.9%), along with 11.1% who identified as White, 0.9% who identified as Asian, 0.4% as Black or African American, 0.2% as Native Hawaiian or Other Pacific Islander, 0.3% as ‘Some Other Race’, and 4.2% that identified as two or more races. In addition, 1.1% of Bethel Census Area residents identified themselves as Hispanic or Latino. The individual communities with the highest percentages of White residents in 2010 were all located on the mainstem of the Kuskokwim River, including Aniak (31%), Bethel (24%), Lower Kalskag (14%), Red Devil (13%), and Kipnuk (11%).⁴

¹ Alaska Dept. of Labor and Workforce Development. 2010. 2010 Census Boundary Maps. Retrieved November 30, 2012 from <http://labor.alaska.gov/research/census/maps.htm#cen2010>.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Database Online. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³ U.S. Census Bureau. 2010. Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴ Ibid.

In 2010, the overall regional per capita income of the Bethel Census Area was estimated at \$18,584, while the estimated median household income was \$55,402, compared to statewide estimates of \$30,726 and \$77,886, respectively.⁵

History

Yup'ik Eskimos have inhabited the Bering Sea coast and Kuskokwim River area for thousands of years. Historically, Yup'ik people were very mobile, traveling with the migration of game and fish resources. The ancient settlements and seasonal camps contained small populations, with numerous settlements throughout the region consisting of extended families or small groups of families.⁶ Athabascan people historically inhabited interior regions of the Yukon and Kuskokwim Rivers. The Native population of the easternmost community profiled in this section, Red Devil, includes a mix of Athabascan and Yup'ik residents.⁷

Early Russian explorers may have entered this region overland from Iliamna Lake as early as the 1790s.⁸ Members of the Russian American Company landed on Nunivak Island in 1821 and documented 400 people living in 16 villages on the Island.⁹ Many Kuskokwim villages were first documented following the purchase of Alaska by the U.S. in 1867, when Edward W. Nelson, a private in the U.S. Signal Service, traveled overland through the Yukon-Kuskokwim Delta and conducted a detailed survey of the area in 1878-1879.¹⁰

The pace of change in the Kuskokwim region increased in the late 1800s. Missionary activity by Roman Catholic and Moravian churches increased, the fur trade intensified, and commercial fishing, mining and reindeer herding were introduced. The population of furbearers was dramatically reduced by 1900.¹¹ Also by the late 1800s, Bethel had become a hub for trade, attracting Yup'ik Eskimos from the Bering Sea coast and Nunivak Island. In the early 1900s, an increasing number of services were consolidated there, including a medical facility, post office, and federal school. Bethel continued to grow as a transportation and administration hub for the region through the 1900s, and today remains is the largest community in Western Alaska.¹²

⁵ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶ Alaska Native Heritage Center (n.d). Yup'ik & Cup'ik - Who We Are website. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁷ Calista Corporation. 2011. Our Communities: The Villages of the Calista Region. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

⁸ Sturtevant, W. C. 1981. Handbook of North American Indians, Volume 6: Subarctic. Smithsonian Institution, U.S. Government Printing Office, Washington, D.C.

⁹ See footnote 2.

¹⁰ Alaska History and Cultural Studies. 2012. Chapter 4-2: Overland Exploration. Retrieved November 30, 2012 from <http://www.akhistorycourse.org/articles/article.php?artID=167>.

¹¹ U.S. Fish and Wildlife Service. 1897. Yukon Delta National Wildlife Refuge Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plan. *Draft*. Anchorage, AK.

¹² See footnote 2.

Natural Resources and Environment

In the eastern portion of the Bethel Census Area near Red Devil, the landscape is dominated by the Kuskokwim Mountains. Vegetation is characterized by black spruce woodlands at lower elevations, and shrubs and alpine tundra higher up, with elevations rising to 2,000 to 3,000 feet.¹³ Kuskokwim River communities from Aniak downriver, including coastal areas and Nunivak Island, are located within the boundaries of the Yukon Delta National Wildlife Refuge (YDNWR) which covers 19 million acres of the upper and lower Yukon-Kuskokwim Delta region.¹⁴ The landscape in lowland areas of the YDNWR is made up of countless shallow circular and oxbow lakes, streams, and sloughs. Upland areas consist of silt deposits covered by a shallow permafrost layer. Vegetation in the area is characteristic of poorly drained, moist tundra. Vegetation types include dwarf shrubs, mosses, lichens, forbs, grasses, and herbs. In areas along the Kuskokwim River, thickets of alder, willow, and birch can be found.¹⁵ In some areas, the Bering Sea coast is characterized by sandy beaches that merge into active sand dunes greater than 100 feet in height, and in other areas barrier islands and lagoons are located off the coastline.¹⁶ Nunivak Island, 30 miles offshore, has 100 to 450 foot high coastal bluffs and immense sand dunes (up to more than 100 feet) backing sandy beaches along the southern coast, and rocky shores, saltwater lagoons, and eelgrass beds in other areas.^{17,18} Nunivak Island is of volcanic origin. The interior of the Island contains lava flows and craters, some holding deep lakes.¹⁹

The Kuskokwim River generally freezes in October, and breakup is complete by mid-June.²⁰ Communities along the Bering Sea coast and on Nunivak Island are within the range of yearly sea ice pack, which forms throughout the Bering Sea and Kuskokwim Bay each year. Sea ice is associated with winter and spring seal hunting, and also presents hazards, as moving sea ice can cause damage to structures and scour shorelines and intertidal areas. Ice hazards include: ice ridging and instability along the ‘shear zone’, the point where shore ice meets multi-year ice; ‘ice gouging’ on the bottom, with implications for structures such as pipelines built on the ocean floor; ‘ice override’, in which ice piles up in steep nearshore areas, with potential to damage structures on or off shore; and ‘strudel scour’ during spring break-up, when stream flow may run over shorefast ice and drain through holes in the sea ice, creating strong currents that can damage structures on the ocean floor. In addition to these ice hazards, it is important to note that shorefast ice plays an important role in protecting coastlines from erosion caused by winter

¹³ Alaska Dept. of Natural Resources. 1988. Kuskokwim Area Plan, Unit 10: George River. Retrieved November 30, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/kuskokwim/>.

¹⁴ USFWS. (n.d.). Yukon Delta National Wildlife Refuge. Retrieved January 6, 2012 from: <http://www.fws.gov/refuges/profiles/index.cfm?id=74540>.

¹⁵ HDR Alaska. 1997. Bethel Comprehensive Plan. Retrieved January 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel-CP-1997.pdf>.

¹⁶ Ceñaliulriit Coastal Resource Service Area. 2008. Coastal Management Plan: Final Plan Amendment. Retrieved February 9, 2012 from http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

¹⁷ U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge website*. Retrieved December 12, 2011 from <http://yukondelta.fws.gov/>.

¹⁸ Wilderness.net website. (n.d.) *Nunivak Wilderness*. Retrieved December 12, 2011 from <http://www.wilderness.net>.

¹⁹ Ibid.

²⁰ Ibid.

storms. Decreased sea ice and increased exposure of coastlines to severe winter weather is a concern related to global climate change.²¹

Warming temperatures have also led to thawing permafrost in the Kuskokwim area. Permafrost in the Yukon-Kuskokwim Delta varies in depth. While there is limited local data, permafrost depth in the region is known to extend to around 600 feet in some areas, with an active layer estimated to range between 1.5 and 3 feet deep depending on conditions.²² Thawing permafrost can cause severe subsidence, which constrains development of resources, transportation and utility systems, and community expansion. Communities located along the Kuskokwim River are also at high risk of flooding, erosion, and severe weather, and at low risk of wildfire and earthquakes.^{23,24} In addition to sea ice and permafrost thaw hazards, coastal communities are also at risk of flooding, erosion, and storm surges.²⁵

Governance

Communities profiled in this section are located in the Bethel Census Area, but are not under the jurisdiction of an organized borough. As a result, the communities themselves are responsible for basic services and tax administration. All 27 communities profiled for the Kuskokwim River Mouth region are represented by federally-recognized tribal councils, and 17 are also incorporated as cities.²⁶

The communities profiled in this section are all member villages of the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.²⁷ The villages are also members of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”²⁸ AVCP is made up of a total of 56 villages and 45 village corporations.²⁹

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a main office is located in Anchorage. The nearest U.S. Bureau of Citizenship and Immigration Services and Alaska Department of Natural Resources offices are in Anchorage.

²¹ See footnote 16.

²² Association of Village Council Presidents. (2000). *2000 Yukon-Kuskokwim Strategic Plan*. Retrieved January 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/YukonKuskokwimDelta-EDP-2000.pdf>

²³ City of Aniak and Bechtol Planning and Development (2005). *The City of Aniak, Alaska: All-Hazards Mitigation Plan*. Retrieved February 9, 2012 from http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Aniak_HMP.pdf.

²⁴ City of Bethel. 2008. *Local Hazards Mitigation Plan*. Retrieved February 7, 2012 from http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Bethel_LHMP.pdf.

²⁵ See footnote 16.

²⁶ See footnote 2.

²⁷ Calista Corporation (n.d.). *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

²⁸ Association of Village Council Presidents (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

²⁹ See footnote 7.

Involvement in North Pacific Fisheries

Communities profiled in this section are highly engaged in subsistence and commercial fisheries. Important regional commercial fisheries include the Kuskokwim salmon fishery and the Bering Sea halibut fishery. Villages located within 50 miles of the coast are members in the Coastal Villages Region Fund (CVRF), a Community Development Quota (CDQ) group that promotes employment opportunities for residents as well as participation in the Bering Sea crab and groundfish fisheries. As of 2012, Coastal Villages Seafoods, Inc. (CVS), a subsidiary of CVRF, operated halibut processing facilities in five of the communities profiled in this section (Chefornek, Kipnuk, Mekoryuk, Toksook Bay, and Tununak), as well as in Hooper Bay (see the *Norton Sound and Bering Strait Region* for a community profile of Hooper Bay). In addition, CVS has two salmon processing facilities in Platinum and Goodnews Bay,³⁰ and operates a fish buying station along the Kuskokwim River, with a tender often located at Napaskiak.³¹ A salmon processing facility is also located in Bethel.³² A commercial fishery for herring has historically taken place along the Yukon/Kuskokwim coast. However, harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.³³

Kuskokwim River subsistence salmon fisheries rank as one of the largest in the State of Alaska, accounting for over 50% of the state's Chinook salmon harvests. More than 2,000 households in the Kuskokwim Area annually harvest salmon for subsistence use. Subsistence harvest surveys conducted by the ADF&G Division of Subsistence indicate that wild fish account for 85% of the total subsistence-harvested fish and wildlife resource in Kuskokwim River communities, with salmon accounting for up to 53% of the total annual subsistence harvest.³⁴ Residents of Kuskokwim River communities also travel to coastal areas to participate in spring harvest of herring roe on kelp or hemlock boughs,³⁵ as well as hunting of marine mammals species including spotted seal, bearded seal, ringed seal and walrus.³⁶ In Yup'ik communities along the Bering Sea coast and on Nunivak Island, important subsistence resources include herring, marine mammals, Pacific halibut, salmon, flounder, and a variety of freshwater fish species.³⁷ Dried herring plays a relatively more important role for coastal residents compared to Kuskokwim River communities, since the salmon resource is not as readily available.³⁸

³⁰ Coastal Villages Region Fund (n.d.). *Commercial Fishing: Halibut and Salmon*. Retrieved November 30, 2012 from <http://www.coastalvillages.org/>.

³¹ Personal communication, Nick Souza, Coastal Village Seafoods, April 27, 2012.

³² Alaska Dept. of Fish and Game. 2011. *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³³ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L. Hulbert 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁴ Carroll, M. C.; and Patton, E. 2010. *Lower Kuskokwim River Inseason Subsistence Salmon Catch Monitoring, 2008*. Fishery Management Report No. 10-09. Retrieved August 16, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/06-3062008.pdf>.

³⁵ See footnote 33.

³⁶ Coffing, M. 1991. *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of a Lower Kuskokwim River Area Community*. Alaska Dept. of Fish and Game, Technical Paper No. 157. Retrieved December 30, 2011 from <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>.

³⁷ Fienup-Riordan, Ann. 1994. *Boundaries and Passages: Rule and Ritual in Yup'ik Eskimo Oral Tradition*. Norman: University of Oklahoma Press.

³⁸ See footnote 33.

Some sportfishing activity takes place along the Kuskokwim River. The greatest number of guide business and licensed sport fish guides were located in the communities of Aniak and Bethel between 2000 and 2010, along with some activity in the sportfishing industry in coastal communities of Goodnews Bay and Quinhagak.³⁹ The boundaries of the Bethel Census Area are generally aligned with the boundaries of Alaska Sport Fishing Survey Area V (Kuskokwim River and Bay Drainages). Between 2000 and 2010, very little saltwater sportfishing activity was recorded in this region, with between 0 and 28 non-Alaska resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). Species targeted by sport fishermen in the region include all five species of Pacific salmon, rainbow trout, Dolly Varden char, whitefish, burbot, Arctic grayling, northern pike, and Pacific halibut.⁴⁰

Regional Challenges

Challenges facing fishing communities in this region include remoteness from seafood markets and the effect of declining Chinook salmon runs on both commercial and subsistence fisheries. The regional seafood processor, CVS, processes halibut and salmon at eight processing facilities in coastal communities.⁴¹ Processed product is transported to Bethel for air transport to fresh markets.⁴² CVS has also processed herring in the past, but the fishery has been closed in recent years. With the opening of a new processing facility in Platinum in 2010, a 2010 herring fishery in the Cape Newenham area was planned. However, it was cancelled due to expectation of large financial losses⁴³ and does not appear to be financially viable in the near future.⁴⁴

Salmon are one of the most important subsistence resources for communities located in the Kuskokwim region. In 2012, commercial fishery failures were declared on the Yukon and Kuskokwim Rivers and in the Cook Inlet due to low Chinook salmon returns that year.⁴⁵ Salmon fishery failures were also declared for the Kuskokwim River in 1998, 2000, and 2001.⁴⁶ These poor salmon returns have adversely affected many of the communities profiled in this section.

³⁹ Alaska Dept. of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁰ Alaska Dept. of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for the AFSC, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴¹ See footnote 30.

⁴² Mekoryuk Community Development website (n.d.) *Current Services and Providers*. Retrieved December 12, 2011 from <http://mekoryuk.org/>.

⁴³ Coastal Villages Region Fund. 2010. *Herring Fishery Cancelled*. Retrieved April 11, 2012 from <http://coastalvillages.org/current-issues/herring-fishery-cancelled>.

⁴⁴ Personal communication, Nick Souza, Coastal Villages Seafoods, April 16, 2012.

⁴⁵ NOAA Fisheries Service. September 13, 2012. “Secretary of Commerce declares disaster for Alaska King Salmon.” Retrieved November 19, 2012 from http://www.nmfs.noaa.gov/mediacenter/2012/09/13_secretary_of_commerce_declares_disaster_for_alaska_king_salmon.html.

⁴⁶ Upton, H. F. (2010). *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

Akiachak (ACK-ee-uh-chuck)



People and Place

*Location*⁴⁷

Akiachak is located on the west bank of the Kuskokwim River, on the Yukon-Kuskokwim (Y-K) Delta. It lies 18 mi northeast of Bethel and 386 mi west of Anchorage. The area encompasses 6.8 sq mi of land and 0.0 sq mi of water. The community is unincorporated, is located within the Bethel Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁴⁸

In 2010, there were 627 residents, ranking it 98th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew 30.4%. Between 2000 and 2009, the population grew by 10.3% with an average annual growth rate of 0.43%, which was slightly less than the state average of 0.75% and indicative of steady growth. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 998 permanent and 25 seasonal residents living in Akiachak in 2010. Temporary workers typically live in the community from February through September, and seasonal population peaks are somewhat driven by employment in fisheries sectors. Information regarding population trends can be found in Table 1.

Akiachak was predominately Yup'ik Eskimo in 2010. In that year, 95.1% of residents identified themselves as American Indian or Alaska Native, compared to 92.3% in 2000; 3.5% identified themselves as White, compared to 3.4% in 2000; 1.1% identified themselves as two or more races, compared to 4.3% in 2000; 0.2% of residents identified themselves as Black or African American, compared to 0.0% in 2000; and 0.2% identified themselves as Asian, compared to 0.0% in 2000. Residents who identified themselves as Hispanic or Latino made up 0.2% of the population in 2010, compared to 1.2% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 4.18, compared to 4.20 in 1990 and 4.40 in 2000. In that year, there were a total of 183 housing units, compared to 129 in 1990 and 150 in 2000. Of the households surveyed in 2010, 48% were owner-occupied, compared to 75% in 2000; 34% were renter-occupied, compared to 13% in 2000; and 18% were vacant, compared to 11% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

⁴⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

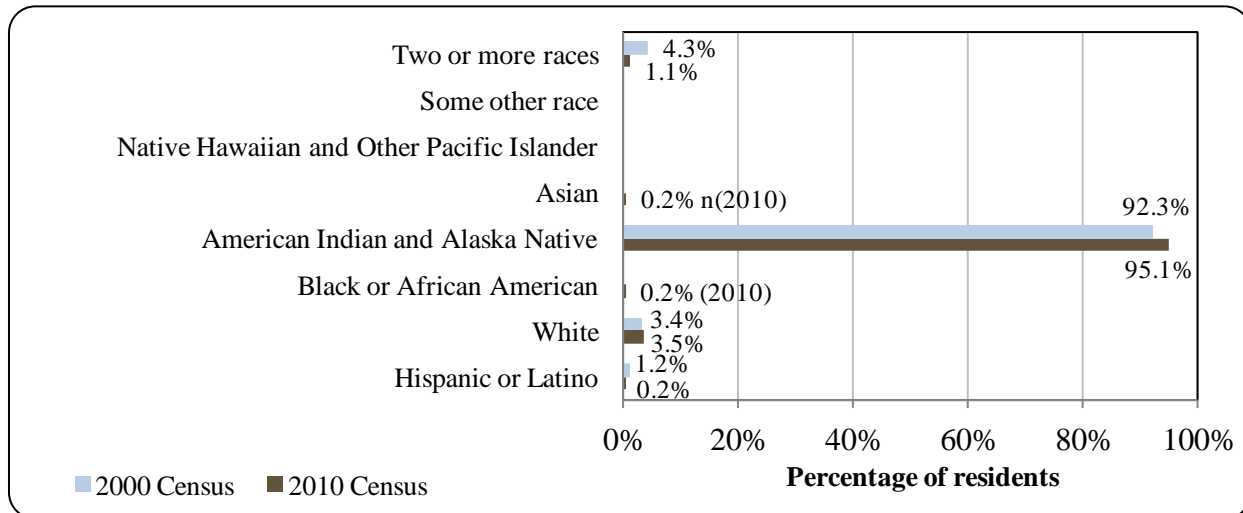
Table 1. Population in Akiachak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	481	-
2000	585	-
2001	-	597
2002	-	625
2003	-	633
2004	-	619
2005	-	645
2006	-	634
2007	-	626
2008	-	657
2009	-	645
2010	627	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Akiachak: 2000-2010 (U.S. Census).



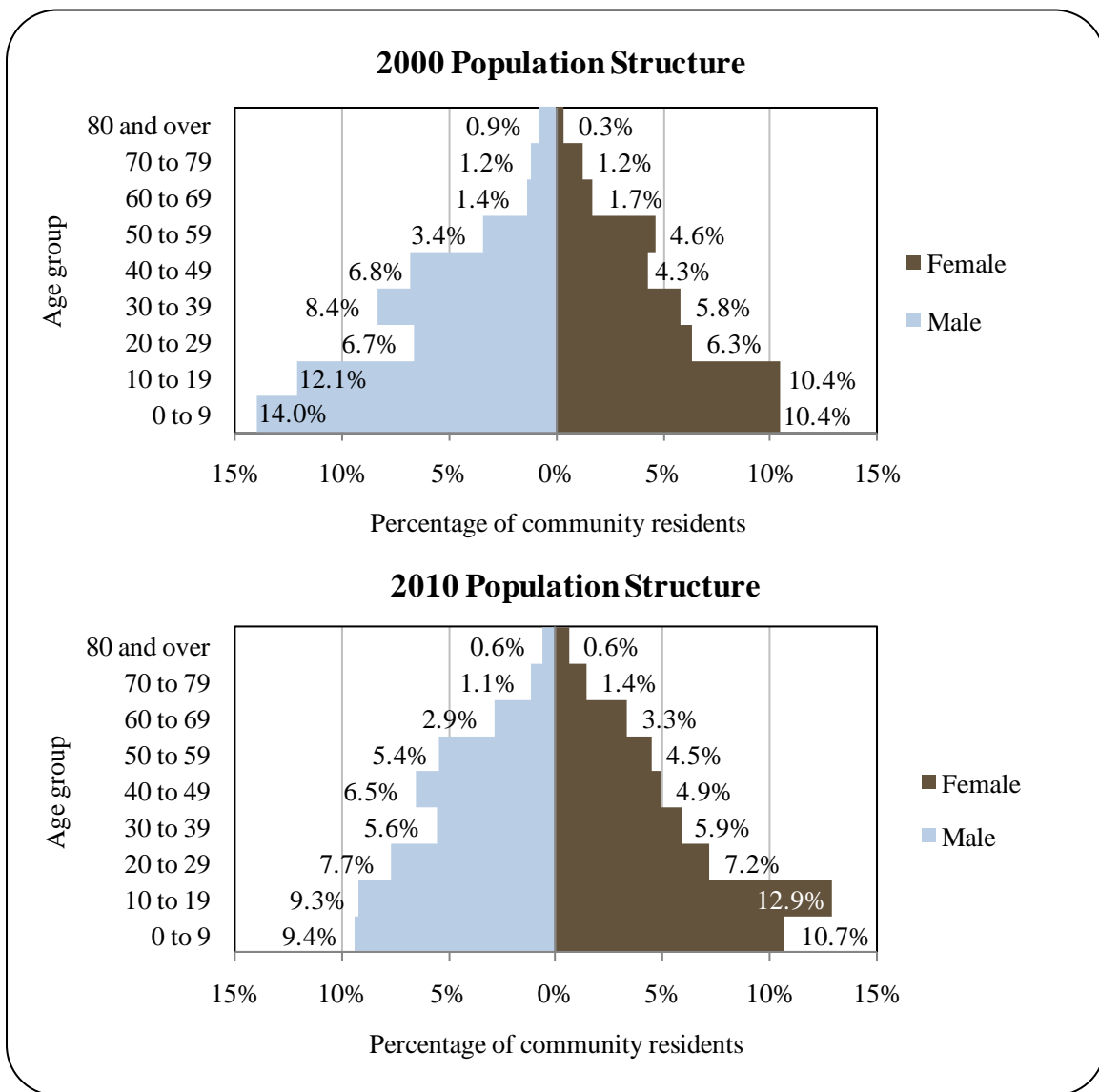
The gender distribution in 2010 was relatively even at 51.5% female and 48.5% male. This was slightly more even than both the statewide distribution (52.0% male, 48.0% female) and distribution in 2000 (54.9% male, 45.1% female). The median age was 24.6 years, significantly younger than the statewide median of 32.7 years and slightly older than the 2000 median of 22.2 years.

The population structure in 2010 was similar to 2000 in that it could be characterized as expansive. In that year, 42.3% of residents were under the age of 20, compared to 46.9% in

2000; 9.9% were over the age of 59, compared to 6.7% in 2000; 32.8% were between the ages of 30 and 59, compared to 33.3% in 2000; and 14.9% were between the ages of 20 and 29, compared to 13.0% in 2000.

Gender distribution by age cohort was somewhat more even in 2010 than in 2000, with slight female biases among most age ranges. In that year, the greatest absolute gender difference occurred in the 10 to 19 range (12.9% female, 9.3% male), followed by the 40 to 49 (6.5% male, 4.9% female) and 0 to 9 (10.7% female, 9.4% male) ranges. Of those three, the greatest relative gender difference occurred in the 10 to 19 range. Information regarding Akiachak’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Akiachak Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁴⁹ estimated that 78.7% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 14.1% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 7.2% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 26.2% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 1.3% had an Associate's degree, compared to an estimated 8% of Alaska residents overall; and an estimated 7.9% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall. No residents were estimated to hold a Bachelor's degree.

History, Traditional Knowledge, and Culture

Like many villages in the Y-K Delta region, Akiachak and the area surrounding was historically part of a network of seasonal Yup'ik and Athabaskan subsistence camps.⁵⁰ With the introduction of European missionaries and Russian fur traders in the late eighteenth and early nineteenth centuries, several outbreaks of smallpox took a heavy toll on the area. Combined with the establishment of Bethel in 1885, permanent villages began to take root. After World War II, the population of Bethel swelled from 400 in 1940, to over 1,200 by 1960.⁵¹ During that time, Bethel saw a large amount of in-migration from surrounding villages as the area became an economic and cultural hub for the Y-K Delta.

The Akiachak area was used by the Yup'ik Eskimos as a seasonal subsistence site. Called "Akiachakchagamiut" in the 1890 census, the village had a population of 43 at that time. A post office was established in 1934. It was incorporated as a Second-class city on February 7, 1974. The city government was dissolved on January 31, 1990, in favor of traditional village council governance.⁵²

Akiachak is a Yup'ik Eskimo village with a fishing and subsistence lifestyle. It has a strong traditional community and was the first city in Alaska to dissolve its city government in favor of the Native village government. The sale, importation, and possession of alcohol are banned in the village.⁵³

Natural Resources and Environment

The area averages 16 in of precipitation annually, with snowfall of 50 in. Summer temperatures range from 42 to 62 °F (6 to 17 °C). Winter temperatures range from -2 to 19 °F (-19 to -7 °C). Ice seasonality on the Kuskokwim River is typically characterized by annual river freeze-up in October and break-up in May.

⁴⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁰ Alaska Department of Transportation and Public Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf.

⁵¹ Ibid.

⁵² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

⁵³ Ibid.

The lower Y-K Delta encompassing Akiachak is an area of low elevation and shallow relief. The terrain is mostly made up of flat and low rolling plains crossed with low gradient streams, tributaries, sloughs, floodplains, wetlands, and shallow lakes. Most of the lower Y-K Delta was ice-free during the last major glacial maximum. Sediments in the area are loamy or sandy textured fluvial and alluvial deposits. Soils are poorly drained and typically overlay a layer of permafrost.⁵⁴

Akiachak is located on Calista Corporation land encompassed by the Yukon Delta National Wildlife Refuge (YDNWR), which provides spawning, rearing, feeding, and wintering habitat for a range of terrestrial and aquatic wildlife.⁵⁵ Terrestrial wildlife of economic and cultural importance include waterfowl and gamebirds, moose, wolf, wolverine, bear, mink, beaver, muskrat, otter, fox, beaver, muskrat, muskox, hares, voles, ermines, squirrels, lemmings, shrews, and weasels.⁵⁶ Aquatic wildlife include Pacific salmon, whitefish, burbot, northern pike, blackfish, smelt, lamprey, char, grayling, trout, sculpin, stickleback, and longnose sucker.⁵⁷

Regional mineral resources include zinc, gold, silver, lead, antimony, tungsten, tin, copper, nickel, mercury, and platinum.⁵⁸ Upriver from Akiachak, the Calista Corporation is undertaking several mineral, oil and gas projects near Red Devil. Calista Corporation also has active projects in Platinum and Goodnews Bay.⁵⁹

There are several natural hazards with the potential to affect the Y-K Delta region.⁶⁰ These hazards include flooding, river bank erosion and destabilization, brush fire, and soil destabilization due to permafrost melt. Spring flooding is a major contributor to localized hazards. As melt-off and ice jamming occurs during spring break-up, flooding and erosion occur. Climate change is thought to be a continuing factor in the seasonality and severity of flooding in the region. In addition, variation in the active permafrost layer caused by climate change and urban development further compound impacts from flood events.⁶¹

While there are no reported Environmental Protection Agency (EPA) established superfund sites in Akiachak, there is currently an evaluation being undertaken regarding the extent of heavy metal contaminants originating from the abandoned Red Devil mine upriver. As of April 2011, the site was not on the EPA's National Priority List.⁶² According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation sites active within Akiachak as of 2010.⁶³

⁵⁴ LKEDC. (2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved February 1, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel%20Region-SAP-2006.pdf>.

⁵⁵ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved November 22, 2011 from: <http://www.fws.gov/refuges/profiles/recEdMore.cfm?ID=74540>.

⁵⁶ Bethel Coastal District et al.(2006). *Bethel Coastal Management Plan*. Retrieved November 22, 2011 from: http://www.alaskacoast.state.ak.us/District_Pages/NW_Region/Bethel/.

⁵⁷ Ibid.

⁵⁸ See footnote 50.

⁵⁹ Calista Corporation. (n.d.). Retrieved November 22, 2011 from: <http://www.calistacorp.com>

⁶⁰ See footnote 55.

⁶¹ See footnote 54.

⁶² U.S. Environmental Protection Agency. (2011). *Superfund Site Information*. Retrieved November 22, 2011 from: <http://cfpub.epa.gov/supercpad/cursites/srchrslt.cfm?Start=1&sortBy=npl>.

⁶³ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 7, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Western>.

Current Economy⁶⁴

The majority of year-round employment in Akiachak is in education and other public services. The Yupiit School District headquarters is located in the community, and provides a source of permanent employment. Otherwise, residents rely on seasonal employment such as commercial fishing, construction, and Bureau of Land Management (BLM) fire-fighting. In 2010, some residents worked at canneries in Bristol Bay. Subsistence activities provide most food sources, supplementing incomes when wage positions are not available. However, since 1997 poor fish returns have significantly affected harvests. The city of Bethel is a regional attraction in regards to wage employment, and many residents from Y-K Delta communities travel there in search of work during the winter.⁶⁵ In a survey conducted by the AFSC in 2011, community leaders reported that Akiachak's economy is reliant on both the mining and fishing industries. Top employers in 2010⁶⁶ included Akiachak Native Community, Yupiit School District, Phillips and Jordan Inc., Yukon Kuskokwim Health Corp. 90, ACVP Housing Authority, Akiachak Enterprises Inc., Association of Village Council Presidents, Early Childhood Leadership Team Inc., Akiachak Fuel Sales Inc., and Akiachak Native Store.

According to the 2006-2010 ACS,⁶⁷ the estimated per capita income in Akiachak was \$12,996 and the estimated median household income was \$39,167, compared to \$8,321 and \$35,833 in 2000, respectively. After accounting for inflation by converting the 2000 values into 2010 dollars,⁶⁸ the real per capita income (\$10,942) and real median household income (\$47,120) indicate both an increase in individual earnings and decrease in household earnings. In 2010, Akiachak ranked 224th of 305 Alaskan communities from which per capita income was estimated, and 211th of 299 Alaskan communities from which median household income was estimated.

It should be noted that Akiachak's small population size may have prevented the ACS from accurately portraying economic conditions.⁶⁹ Another way of understanding per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, residents earned \$5.76 million in total wages in 2010.⁷⁰ When matched with the population in 2010, the per capita income of \$9,187 indicates an overall decrease compared to inflation adjusted values reported by the U.S. Census in 2000.⁷¹ In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁷² However, it

⁶⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁶⁵ See footnote 52.

⁶⁶ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁷ See footnote 49.

⁶⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁹ See footnote 49.

⁷⁰ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁷¹ See footnote 66.

⁷² Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

According to 2006 to 2010 ACS estimates,⁷³ 65.8% of residents aged 16 years of over were part of the civilian labor force in 2010. Unemployment that year was estimated to be 16.6%, compared to 5.9% estimated statewide; and 27.6% of residents were estimated to be living below the poverty level, compared to an estimated 9.5% statewide. Of those employed in 2010, 70.4% worked in the public sector, 25.1% worked in the private sector, and 4.5% were self-employed.

By industry, most (47.7%) of those employed were estimated to work in education, health care, or social assistance sectors in 2010; followed by public administration sectors (17.6%); and transportation, warehousing, or utilities sectors (12.1%). By occupation type, most (34.7%) of those employed were estimated to hold management or professional positions; followed by service positions (22.6%); natural resources, construction, or maintenance positions (22.1%), sales or office positions (16.1%), and production, transportation, or material moving positions (4.5%). Between 2000 and 2010, there were slight increases in several industry sectors, although nothing significant. However, there was a somewhat notable decrease in education services, health care and social assistance sectors. In addition, there were significant increases in the number of natural resources, construction, and maintenance positions; while there was a significant decrease in the number of sales, office, production, transportation, and material moving positions. According to 2010 ALARI estimates,⁷⁴ most (65.4%) employed residents worked in local government sectors; followed by construction (9.6%); trade, transportation, and utilities sectors (7.7%); education and health service sectors (6.7%); and financial service sectors (5.1%). Only 1.0% of employed residents were estimated work in natural resource or mining sectors. In 2010, no individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Finally, while there was a significant proportional rise in the number of employed residents holding natural resource, construction, and maintenance positions, it is impossible to discern how many of those positions are related to fisheries sectors. Information regarding employment trends can be found in Figures 3 and 4.

⁷³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷⁴ See footnote 66.

Figure 3. Local Employment by Industry in 2000-2010, Akiachak (U.S. Census).

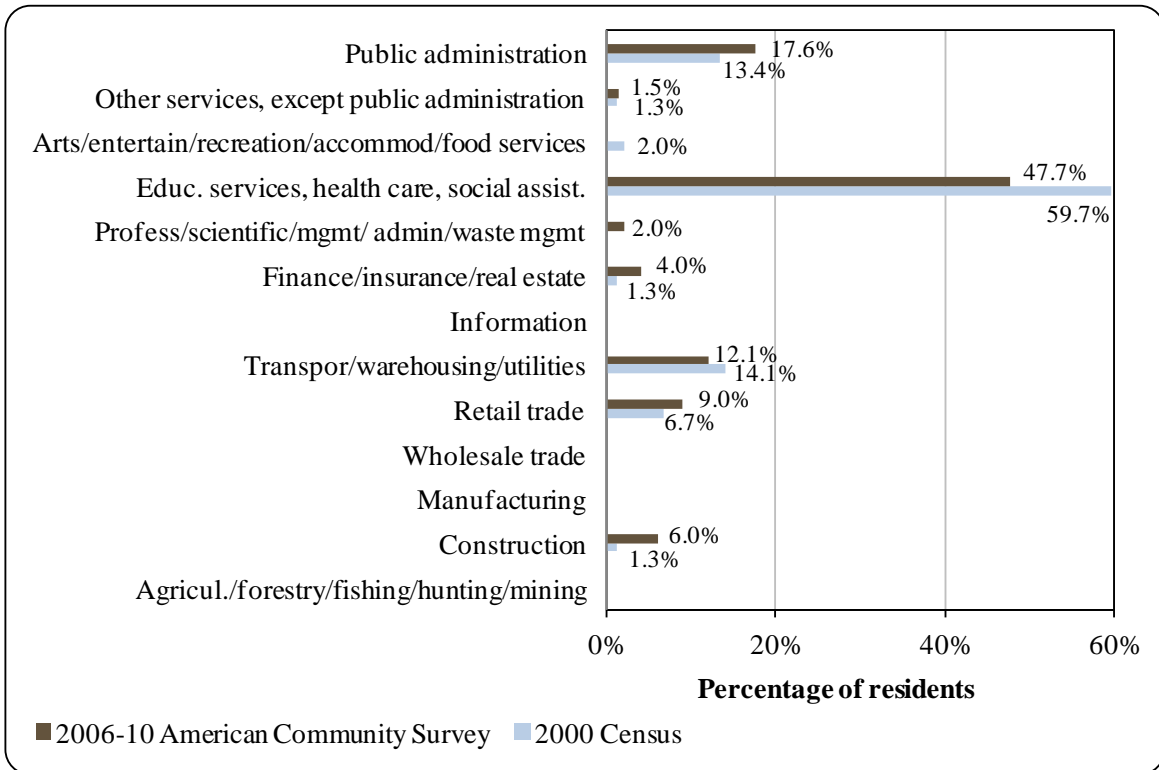
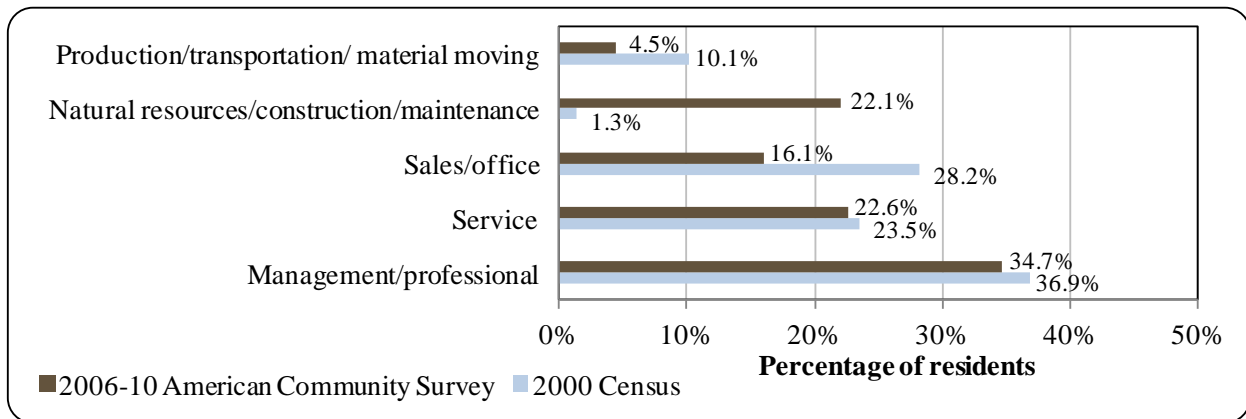


Figure 4. Local Employment by Occupation in 2000-2010, Akiachak (U.S. Census).



Governance

Akiachak is governed by the Akiachak Native Community, a U.S. Bureau of Indian Affairs (BIA) recognized Tribal council. There is an Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Akiachak Limited) and the regional ANCSA chartered Native corporation is Calista Corporation. The closest Alaska Department of Fish and Game (ADF&G) office is located in Dillingham, 117 mi to the southeast. The closest National Marine Fisheries Service (NMFS) field office is located in Bethel, 18 mi to the southwest. The

closest Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage, 386 mi to the east. The community is not incorporated into a municipality or borough; therefore, the majority of government operating revenues comes from state and federal grants and contracts. Information regarding community finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Akiachak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	-	n/a
2005	n/a	n/a	-	n/a
2006	n/a	n/a	-	n/a
2007	n/a	n/a	-	n/a
2008	n/a	n/a	-	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

*Connectivity and Transportation*⁷⁵

A state-owned 1,649-ft long by 40-ft wide gravel airstrip and public seaplane facility provides scheduled and chartered services year-round to Akiachak. Boats, snowmachines, and ATVs are used extensively by locals on the Kuskokwim River. Mail is often delivered by hovercraft. A winter trail exists to Bethel. Barges deliver bulk fuel and supplies during the summer. Bethel provides full jet service to Anchorage year-round as well as limited drivable ice-

⁷⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

roads in the winter. Road networks are severely limited due to the delta's topography, especially in the summer. In June 2012, roundtrip airfare between Anchorage and Bethel was \$364.⁷⁶

*Facilities*⁷⁷

Currently, 12 facilities and the school and teacher's housing are served by a piped system; most residents haul treated water from the "washeteria". Twenty-five households have outhouses hauled by the village and the others haul their own outhouses or use septic tanks. Refuse collection and disposal is provided by the Village Council. Electricity is provided by a diesel generator, which is also operated by the Village Council. There are six bulk fuel tanks in the community. Public safety is provided by Alaska state troopers in Bethel and Akiachak Village police. There is a village volunteer fire department and public safety building. Additional facilities include a Youth/Elder Center, recreation center, community library, cable television and internet infrastructure, and charter air services.

In a survey conducted by the AFSC in 2011, community leaders reported several fisheries related business and services including gear sales, boat repair services (electrical, welding, and machine shop), and boat fuel sales. However, the community lacks harbor facilities and commercial fishing support services.

*Medical Services*⁷⁸

General medical care is provided by the Akiachak Native Community Clinic, a Primary Health facility and Community Health Aid Program (CHAP) member. Long-term, acute, and specialized medical services are provided in Bethel.

*Educational Opportunities*⁷⁹

Akiachak has one school providing Kindergarten through 12th grade instruction. As of 2011, there were 197 students enrolled and 18 teachers employed. Akiachak is also home to the Yupiit School District, which operates three schools consisting of 453 students and 45 teachers as of 2011.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Fisheries participation in the Lower Kuskokwim Delta dates back thousands of years to the original Central Yup'ik occupants. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. During early years, local salmon were cured and salted and by 1920, the largest commercial season to-date took place on the Kuskokwim, with five operators processing

⁷⁶ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011),

⁷⁷ See footnote 75.

⁷⁸ Ibid.

⁷⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

approximately 35,000 Chinook salmon that year. In 1922, there were four salteries operating near the mouth of the Kuskokwim, processing Chinook and sockeye salmon. The Kuskokwim area was closed to all fishing for export from 1926 through 1929. In 1930, regulations were modified to allow commercial fishing in part of Kuskokwim Bay. A floating cannery operated for that year, and by 1932, three companies engaged in commercial fishing. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. Information on commercial fishing during the late 1930s through the 1950s is limited. However in 1952, poor salmon runs prompted the closure of the Kuskokwim River and Bay. Management was finally shifted to the State of Alaska in 1960, and commercial fishing resumed.⁸⁰

At the time of statehood in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.⁸¹

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁸²

On the lower Kuskokwim, subsistence sockeye, chum, and Chinook harvesting typically begins by June 1st, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based from either a fish camp or from a home village. Drift gill nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{83,84}

⁸⁰ Pennoyer, S., K. R. Middleton, and M. E. Morris. 1968. *Arctic-Yukon-Kuskokwim Area Salmon Fishing History*. Retrieved April 11, 2012 from: <http://www.sf.ADFG.state.ak.us/fedaidpdfs/afbrIL.070.pdf>.

⁸¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afbr/clarv12n1_p4.pdf.

⁸² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁸³ Coffing, M. (1991). *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River*. Retrieved July 12, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>

⁸⁴ Andrews, E., and M. Coffing. 1986. *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

Involvement in commercial fishing, particularly within the herring and salmon fisheries, is an important part of the local economy in Akiachak.⁸⁵ In a survey conducted by the AFSC in 2011, community leaders reported that the community's economy relies on fishing. In addition, community leaders observed that the number of commercial fishing vessels within the community during fishing seasons increased between 2005 and 2010. Akiachak does not participate in the fisheries management process in Alaska, although it is eligible to participate in the Community Development Quota (CDQ) program and is represented by the Coastal Villages Region Fund (CVRF). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.⁸⁶ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

Processing Plants

According to the 2010 ADF&G Intent to Operate list, Akiachak does not have a registered processing plant. Kuskokwim Seafoods, in Bethel, is the closest processor to the community, processing Chinook, sockeye, chum, and coho salmon. Other processors in the area include Coastal Villages Seafoods operates facilities in Quinhagak, which processes salmon and herring; Kipnuk, which processes halibut; and Tununak, which also processes halibut.⁸⁷

Fisheries-Related Revenue

The community of Akiachak did not report any fisheries-related revenue between 2000 and 2010. In a survey conducted by the AFSC in 2011, community leaders reported that Akiachak did not receive any direct revenue from CVRF in 2010, although the community most likely indirectly benefits from the CDQ Program in other ways. Information regarding fisheries-related revenue trends can found in Table 3.

Commercial Fishing

In 2010, 83 residents, or 13.2% of the population, held a total 93 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 78 residents held 89 CFEC permits. Of the CFEC permits held in 2010, 85% were for salmon and 15% were for herring. One halibut CFEC permit was issued in 2007, and CFEC permits for other finfish were issued between 2000 and 2005. No residents were issued Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits for crab or groundfish fisheries between 2000 and 2010. In addition, no residents held halibut, sablefish, or crab quota share between 2010 and when the programs began.

⁸⁵ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses. Retrieved from: <http://www.cfec.state.ak.us/gpbycen/2010/mnu.htm>.

⁸⁶ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

⁸⁷ Alaska Seafood Marketing Institute. 2011. Directory of Alaska Seafood Suppliers. Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

Residents held 78 commercial crew licenses, compared to 98 in 2000. In addition, residents held majority ownership of 22 vessels that year, compared to 25 in 2000. Of the CFEC permits issued in 2010, 70% were actively fished, compared to 84% in 2000. This varied by fishery from 82% of salmon permits being fished to 0% of herring permits being fished. Kuskokwim gillnet salmon was the only fishery prosecuted by Akiachak residents in 2010.⁸⁸

No landings were made in the community between 2000 and 2010, although landings were still made by residents. In 2010, a total of 19,027 lbs of salmon valued at \$10,550 ex-vessel were landed, compared to 82,317 lbs valued at \$39,377 ex-vessel in 2000; a decrease of \$0.11 per pound landed ex-vessel after adjusting for inflation⁸⁹ and without considering the species composition of landings. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁸⁸ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁸⁹ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Akiachak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Akiachak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	1	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	100%	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	1	0	0
Herring (CFEC) ²	Total permits	14	16	15	16	15	14	14	13	12	13	14
	Fished permits	10	1	0	1	0	0	0	0	0	0	0
	% of permits fished	71%	6%	0%	6%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	14	16	15	15	15	14	15	13	12	13	14

Table 4. Cont. Permits and Permit Holders by Species, Akiachak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	4	2	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	3	2	1	1	1	1	0	0	0	0	0
Salmon (CFEC) ²	Total permits	71	73	72	72	73	73	72	71	73	76	79
	Fished permits	65	64	54	62	66	59	66	60	62	55	65
	% of permits fished	92%	88%	75%	86%	90%	81%	92%	85%	85%	72%	82%
	Total permit holders	77	77	75	74	81	78	78	72	74	80	83
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>89</i>	<i>91</i>	<i>88</i>	<i>89</i>	<i>89</i>	<i>88</i>	<i>86</i>	<i>84</i>	<i>86</i>	<i>89</i>	<i>93</i>
	<i>Fished permits</i>	<i>75</i>	<i>65</i>	<i>54</i>	<i>63</i>	<i>66</i>	<i>59</i>	<i>66</i>	<i>60</i>	<i>63</i>	<i>55</i>	<i>65</i>
	<i>% of permits fished</i>	<i>84%</i>	<i>71%</i>	<i>61%</i>	<i>71%</i>	<i>74%</i>	<i>67%</i>	<i>77%</i>	<i>71%</i>	<i>73%</i>	<i>62%</i>	<i>70%</i>
	<i>Permit holders</i>	<i>78</i>	<i>79</i>	<i>76</i>	<i>75</i>	<i>81</i>	<i>78</i>	<i>78</i>	<i>73</i>	<i>75</i>	<i>80</i>	<i>83</i>

Note: n/a indicates that no data were reported for that year.

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Akiachak: 2000-2010.

Year	Crew licenses holders ¹	Count of all fish buyers ²	Count of shore-side processing facilities ³	Vessels primarily owned by residents ⁴	Vessels homeported ⁴	Vessels landing catch in Akiachak ²	Total net pounds landed in Akiachak ^{2,5}	Total ex-vessel value of landings in Akiachak ^{2,5}
2000	98	0	0	25	25	0	0	\$0
2001	24	0	0	22	24	0	0	\$0
2002	44	0	0	20	21	0	0	\$0
2003	80	0	0	16	19	0	0	\$0
2004	59	0	0	18	19	0	0	\$0
2005	69	0	1	24	26	0	0	\$0
2006	80	0	0	22	25	0	0	\$0
2007	18	0	0	20	20	0	0	\$0
2008	13	0	0	21	20	0	0	\$0
2009	71	0	0	19	18	0	0	\$0
2010	78	0	0	22	20	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Akiachak: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Akiachak: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Akiachak: 2000-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by species, in Akiachak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Akiachak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	6,053	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	82,317	75,269	--	--	72,186	56,656	--	--	38,646	56,106	19,027
<i>Total²</i>	<i>88,370</i>	<i>75,269</i>	--	--	<i>72,186</i>	<i>56,656</i>	--	--	<i>38,646</i>	<i>56,106</i>	<i>19,027</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$520	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$39,377	\$26,765	--	--	\$22,632	\$20,456	--	--	\$15,981	\$26,122	\$10,550
<i>Total²</i>	<i>\$39,898</i>	<i>\$26,765</i>	--	--	<i>\$22,632</i>	<i>\$20,456</i>	--	--	<i>\$15,981</i>	<i>\$26,122</i>	<i>\$10,550</i>

Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Kuskokwim River is a popular sportfishing destination for both resident and non-Alaskan resident private anglers. Areas along the river and drainages are home to sportfishing lodges which advertise themselves as exotic and remote destinations to non-resident anglers in the contiguous United States. In 2010, 160 sportfishing licenses were sold to residents; an increase from 70 in 2000 although none were sold in the community. There was no registered sport fish guide or charter businesses operating in the community between 2000 and 2010 and non-Alaskan resident sportfishing that takes place in the area is likely based out of Bethel since Akiachak currently lacks visitor accommodations.⁹⁰

Akiachak is located in the Kuskokwim River and Bay ADF&G Harvest Survey Area which includes all drainages flowing into Kuskokwim Bay as well as saltwater from Cape Newenham north to Naskonat Peninsula. The majority of sportfishing targets freshwater fisheries and in 2010, angler days fished totaled 19,455, compared to 19,990 in 2000. In that year, non-Alaska residents accounted for 72% of total angler days fished, compared to 67% in 2000. The Kuskokwim River's popularity among non-Alaska residents and the fact that most local residents typically engage in subsistence fishing likely contributed to the high ratio of non-Alaskan resident to resident angler days fished between 2000 and 2010. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers target all five species of Pacific salmon. Typically, sportfishing is done by private boat owned by local residents. There have been no reports of charter operations within the community between 2000 and 2010. Trends regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Subsistence activities are an important part of the local economy and culture of Akiachak. In a survey conducted by the AFSC in 2011, community leaders reported that the three most important types of subsistence resources include salmon, moose, and caribou. Of the marine species documented by ADF&G in Table 13, residents reported harvesting Chinook salmon the most, followed by sockeye, coho, and chum. The number of subsistence salmon permits issued grew by 15.5% between 2000 and 2008, although permits returned in 2008 was the lowest of all the reported years. The number of fish harvested increased steadily between 2000 and 2008 with the exception of chum salmon. Between 2000 and 2008, Chinook harvests increased by 53%, coho harvests increased by 61%, and sockeye harvests increased by 29%. Chum salmon harvests decreased by 13%. Still, considering Akiachak's population, a comparatively large number of salmon are harvested annually; an indication that salmon are a principal subsistence species. In 2010, one Subsistence Halibut Registration Certificate (SHARC) was issued by NMFS, although no halibut was reported harvested. Marine mammal harvest data was unreported between 2000 and 2010. According to ADF&G's *Community Subsistence Information System*,⁹¹ subsistence species that have been harvested or used by Akiachak residents include mussels, bearded seals, bowhead whales, ribbon seals, ringed seals, spotted seals, Steller sea lions, blackfish, whitefish,

⁹⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹¹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

burbot, cisco, Dolly Varden, grayling, herring, lake trout, lamprey, pike, rainbow smelt, rainbow trout, sheefish, sticklebacks, and suckers. In a survey conducted by the AFSC in 2011, community leaders reported that the subsistence fishing season runs from June through August. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 11. Sport Fishing Trends, Akiachak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Akiachak ²
2000	0	0	70	0
2001	0	0	40	0
2002	0	0	92	0
2003	0	0	101	0
2004	0	0	86	0
2005	0	0	131	0
2006	0	0	106	0
2007	0	0	121	0
2008	0	0	48	0
2009	0	0	123	0
2010	0	0	160	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	n/a	n/a	16,437	4,236
2002	n/a	n/a	14,583	6,062
2003	28	63	16,923	7,355
2004	n/a	15	16,239	9,152
2005	19	18	13,725	5,685
2006	n/a	n/a	14,773	7,616
2007	n/a	n/a	13,390	7,816
2008	n/a	108	17,582	8,172
2009	n/a	n/a	12,625	5,166
2010	n/a	n/a	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Akiachak: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Akiachak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	125	94	6,124	4,589	2,509	n/a	3,597	n/a	n/a
2001	129	89	6,445	2,872	1,633	n/a	4,300	n/a	n/a
2002	132	102	6,860	5,048	1,620	n/a	2,440	n/a	n/a
2003	134	79	5,346	3,943	2,611	n/a	3,016	n/a	n/a
2004	124	88	6,647	3,635	2,130	n/a	2,894	n/a	n/a
2005	134	81	4,611	2,126	1,572	n/a	2,134	n/a	n/a
2006	132	83	4,389	3,179	1,215	212	1,999	n/a	n/a
2007	139	86	7,021	4,407	2,167	672	2,896	n/a	n/a
2008	148	37	9,344	3,971	4,038	n/a	4,631	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Akiachak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Akiachak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Akiak (ACK-ee-ack)

People and Place

*Location*⁹²

Akiak is located on the west bank of the Kuskokwim River, 42 mi northeast of Bethel and 378 mi west of Anchorage, on the Yukon-Kuskokwim Delta. The area encompasses 2.0 sq mi of land and 1.1 sqmi of water. Akiak was incorporated in 1970 as a Second-class city, is located in the Bethel Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁹³

In 2010, there were 346 residents, ranking it 150th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 21.4%. Between 2000 and 2009, the population grew by 12.0% with an average annual growth rate of -0.21%, which was less than the statewide average of 0.75% and reflective of the population peak in 2005. Information regarding population trends can be found in Table 1.

Akiak's population was predominately Yup'ik Eskimo in 2010. In that year, 92.8% of residents identified themselves as American Indian or Alaska Native, compared to 92.9% in 2000; 5.2% identified themselves as White, compared to 4.9% in 2000; and 20% identified themselves as two or more races, compared to 2.3% in 2000. In addition, 0.3% of residents identified themselves as Hispanic or Latino, compared to 0.6% in 2000 (Figure 1).

In 2010, the average household size was 3.84, compared to 4.20 in 1990 and 5.24 in 2000. In that year, there were a total of 98 housing units, compared to 80 in 1990 and 76 in 2000. Of the households surveyed in 2010, 70% were owner-occupied, compared to 63% in 2000; 21% were renter-occupied, compared to 28% in 2000; 7% were vacant, compared to 9% in 2000; and 1% was occupied seasonally, compared to 0% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

In 2010, the gender composition of Akiak was almost even at 51.2% female and 48.8% male. This was somewhat female biased compared to both the distribution statewide (52.0% male, 48.0% female) and in 2000 (55.0% male, 45.0% female). The median age in 2010 was 25.8 years, which was younger statewide median of 33.8 years and older than the 2000 median of 21.3 years.

⁹² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

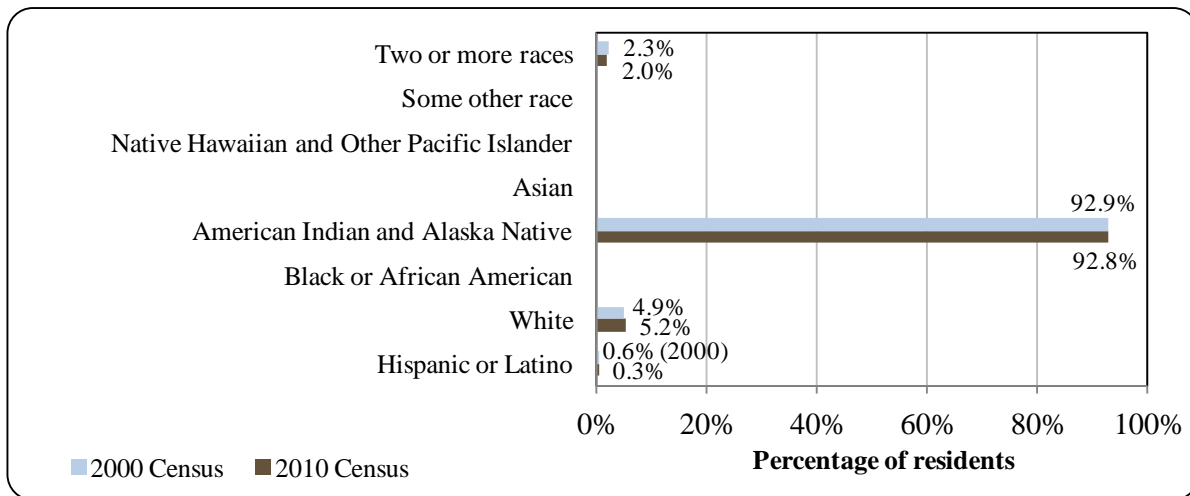
Table 1. Population in Akiak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	285	-
2000	309	-
2001	-	301
2002	-	345
2003	-	346
2004	-	369
2005	-	379
2006	-	365
2007	-	350
2008	-	341
2009	-	346
2010	346	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

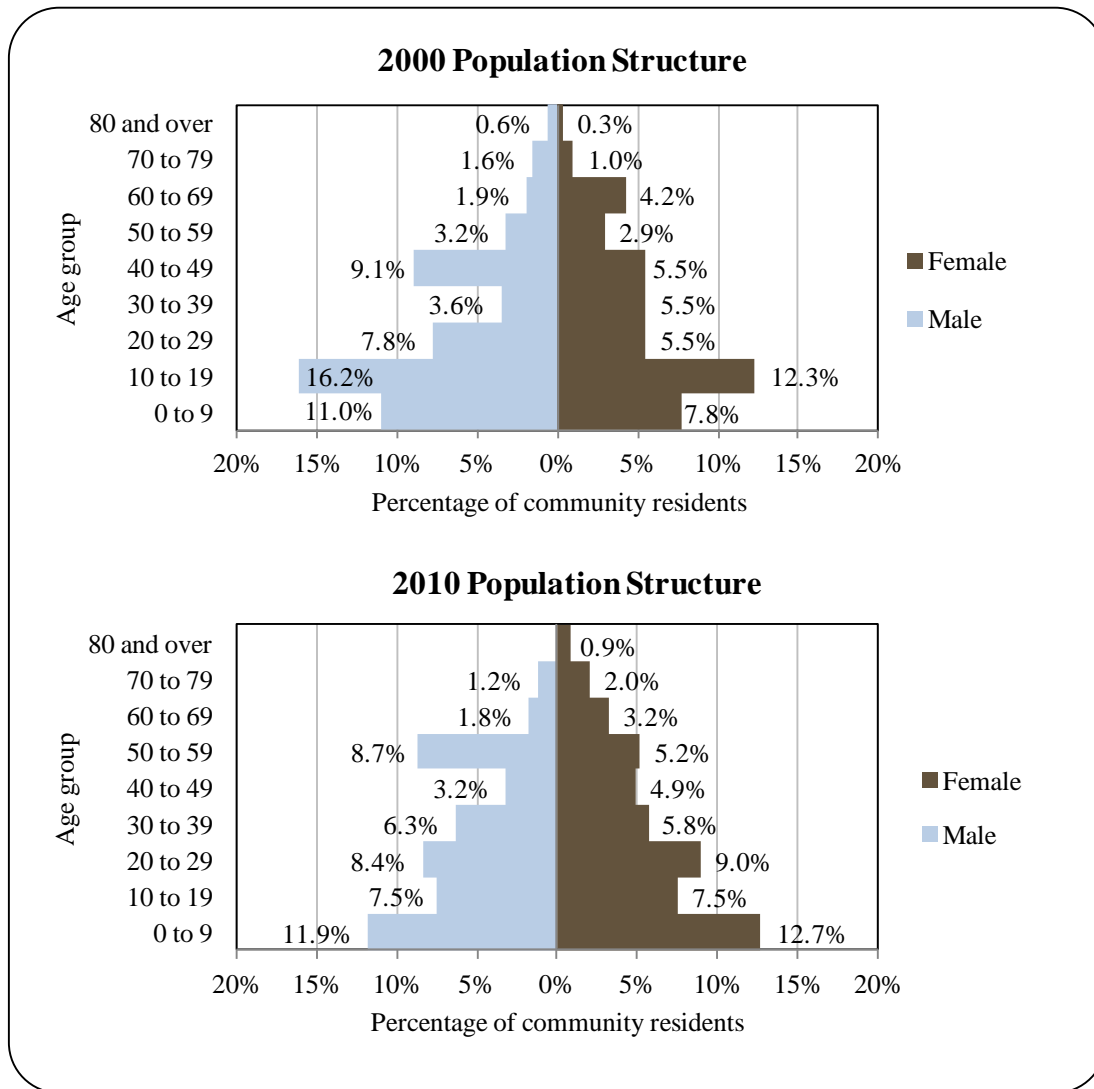
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Akiak: 2000-2010.



Compared to 2000, the population in 2010 was somewhat less expansive. In addition, age transitions were, for the most part, consistent with a stable population; meaning that most cohorts maintained their overall structure as they aged. However, there was some attrition in younger cohorts. In 2010, 39.6% of residents were under the age of 20, compared to 47.3% in 2000; 9.1% were over the age of 59, compared to 9.6% in 2000; 34.1% were between the ages of 30 and 49, compared to 29.8% in 2000; and 17.4% were between the ages of 20 and 29, compared to 13.3% in 2000.

Figure 2. Population Age Structure in Akiak in 2000 and 2010.



Gender distribution by age cohort was more even in 2010 than in 2000, with slight female biases among most age ranges. In that year, the greatest absolute gender difference occurred in the 50 to 59 range (8.7% male, 5.2% female), followed by the 40 to 49 (4.9% female, 3.2% male) and 60 to 69 (3.2% female, 1.8% male) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range. Information regarding Akiak’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)⁹⁴ estimated that 90.8% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year,

⁹⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

an estimated 5.9% of residents had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 3.3% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 36.6% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; and an estimated 3.9% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall. No residents were estimated to hold an Associate, graduate, or professional degree in 2010.

*History, Traditional Knowledge, and Culture*⁹⁵

In 1880, Akiak (then known as *Ackiagmute*) had a population of 175. The name Akiak means "the other side", since the place was a crossing to the Yukon River basin during the winter for area Eskimos. Like many villages in the Yukon-Kuskokwim (Y-K) Delta region, Akiak and the region surrounding was historically part of a network of seasonal Yup'ik and Athabaskan subsistence camps.⁹⁶ With the introduction of European missionaries and Russian fur traders in the late eighteenth and early nineteenth centuries, several outbreaks of smallpox took a heavy toll on the area. Combined with the establishment of Bethel in 1885, permanent villages began to take root. After World War II, the population of Bethel swelled from 400 in 1940, to over 1,200 by 1960.⁹⁷ During that time, Bethel saw a large amount of in-migration from surrounding villages as the area became an economic and cultural hub for the Y-K Delta. The sale and importation of alcohol is prohibited in Akiak.

Natural Resources and Environment

Akiak's temperature ranges from 42 to 62°F (6 to 17 °C) in the summer, and -2 to 19°F (-19 to -7°C) in the winter. Average precipitation is 16 inches and annual snowfall averages at 50 inches. Ice seasonality on the Kuskokwim River is typically characterized by annual river freeze-up in October and break-up in May.⁹⁸

The lower Y-K Delta encompassing Akiak is an area of low elevation and shallow relief. The terrain is mostly made up of flat and low rolling plains crossed with low gradient streams, tributaries, sloughs, floodplains, wetlands, and shallow lakes. Most of the lower Y-K Delta was ice-free during the last major glacial period. Sediments in the area are loamy or sandy textured fluvial and alluvial deposits. Soils are poorly drained and typically overlay a layer of permafrost.⁹⁹

Akiak is located on Calista Corporation land encompassed by the Yukon Delta National Wildlife Refuge (YDNWR), which provides spawning, rearing, feeding, and wintering habitat

⁹⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁶ Alaska Department of Transportation and Public Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf.

⁹⁷ Ibid.

⁹⁸ See footnote 95.

⁹⁹ Lower Kuskokwim Economic Development Council. (2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved February 1, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel%20Region-SAP-2006.pdf>.

for a range of terrestrial and aquatic wildlife.¹⁰⁰ Terrestrial wildlife of economic and cultural importance include waterfowl and gamebirds, moose, wolf, wolverine, bear, mink, beaver, muskrat, otter, fox, beaver, muskrat, muskox, and small furbearers.¹⁰¹ Aquatic resources include all five species of Pacific salmon, whitefish, burbot, northern pike, blackfish, smelt, lamprey, char, grayling, trout, sculpin, stickleback, and longnose sucker.¹⁰²

Regional mineral resources include zinc, gold, silver, lead, antimony, tungsten, tin, copper, nickel, mercury, and platinum.¹⁰³ Upriver from Akiak, Calista Corporation is undertaking several mineral and oil and gas projects near Red Devil. Downriver, Platinum and Goodnews Bay are sites for additional mineral projects.¹⁰⁴

There are several natural hazards affecting the Y-K Delta region.¹⁰⁵ These hazards include flooding, river bank erosion and destabilization, brush fire, and soil destabilization due to permafrost melt. Spring flooding is a major factor contributing to natural hazards in the area. As melt-off and ice jamming occurs during spring break-up, flooding and erosion occur and climate change is thought to be a continuing factor in the seasonality and severity of flooding in the region. In addition, variation in the active permafrost layer caused by climate change and urban development further compound impacts from flood events.¹⁰⁶

While there are no reported Environmental Protection Agency (EPA) established superfund sites in Akiak, there is currently an evaluation being undertaken regarding the extent of heavy metal contaminants originating from the abandoned Red Devil mine upriver. As of April 2011, the site was not on the EPA's National Priority List.¹⁰⁷ According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Akiak as of 2010.¹⁰⁸

Current Economy¹⁰⁹

The majority of the year-round employment in Akiak is with the city, school, or other public services. Commercial fishing and Bureau of Land Management (BLM) firefighting also provide seasonal income. The community is interested in developing a fish processing plant and tourism. Subsistence activities are an important economic supplement to the community.¹¹⁰ Top

¹⁰⁰ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved November 22, 2011 from: <http://www.fws.gov/refuges/profiles/recEdMore.cfm?ID=74540>.

¹⁰¹ Bethel Coastal District et al.(2006). *Bethel Coastal Management Plan*. Retrieved November 22, 2011 from: http://www.alaskacoast.state.ak.us/District_Pages/NW_Region/Bethel/.

¹⁰² Ibid.

¹⁰³ Alaska Dept. of Trans. and Pub. Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf.

¹⁰⁴ Calista Corporation. (n.d.). Retrieved November 22, 2011 from: <http://www.calistacorp.com>.

¹⁰⁵ Bethel Coastal District et al.(2006). *Bethel Coastal Management Plan*. Retrieved November 22, 2011 from: http://www.alaskacoast.state.ak.us/District_Pages/NW_Region/Bethel/.

¹⁰⁶ See footnote 99.

¹⁰⁷ U.S. Environmental Protection Agency. (2011). *Superfund Site Information*. Retrieved November 22, 2011 from: <http://cfpub.epa.gov/supercpad/cursites/srchrslt.cfm?Start=1&sortby=npl>.

¹⁰⁸ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 7, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Western>.

¹⁰⁹ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁰ See footnote 95

employers in 2010¹¹¹ included the Akiak Native Community, Yupiit School District, City of Akiak, Kokarmuit Corporation, Rural AK Community Action Program, ACVP Housing Authority, Early Childhood Leadership Team Inc., Stephan Ivan & Sons Store, Yukon Kuskokwim Health Corp. 90, and Bering Pacific Construction LLC.

In 2010,¹¹² the estimated per capita income in Akiak was \$13,400 and the estimated median household income was \$35,833, compared to \$8,326 and \$26,250 in 2000, respectively. After accounting for inflation by converting the 2000 values to 2010 dollars,¹¹³ the real per capita income (\$10,949) and real median household income (\$34,518) indicate an overall increase in individual and household earnings. In 2010, Akiak ranked 222nd of 305 communities from which per capita income was estimated, and 211th of 299 communities from which median household income was estimated.

It should be noted that Akiak's small population size may have prevented the ACS from accurately portraying economic conditions.¹¹⁴ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned a total of \$2.50 million in total wages in 2010.¹¹⁵ When matched with the population in 2010, the per capita income of \$7,230 indicates an overall decrease in per capita income compared to values reported by the U.S. Census in 2000.¹¹⁶ In addition, Akiak was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹¹⁷ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,¹¹⁸ 71.1% of residents aged 16 and over were part of the civilian labor force in 2010. Unemployment was estimated at 17.0%, compared to an estimated 5.9% statewide; and an estimated 21.9% of residents were living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Of those employed in the civilian labor force, an estimated 57.1% worked in the public sector while an estimated 42.9% worked in the private sector.

By industry, most (34.3%) were estimated to work in education, health care, and social assistance sectors, followed by public administration sectors (21.9%), and construction sectors (12.4%). By occupation type, most (28.6%) employed residents were estimated to hold natural resource, construction, or maintenance positions; followed by sales or office positions (23.8%);

¹¹¹ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹² U.S. Census. American Community Survey, 2006-2010 estimates.

¹¹³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹¹⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹¹⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹¹⁶ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹⁷ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

¹¹⁸ See footnote 114.

service positions (23.8%); management or professional positions (18.1%); and production, transportation, or material moving positions (5.7%). Between 2000 and 2010, there were significant increases in relative employment in construction, agriculture, forestry, fishing, and mining sectors; while there were significant declines in education service, health care, social assistance, transportation, warehousing, and utilities sectors. In addition, there were significant increases in the proportion of natural resource, construction, maintenance, and service positions; while there were significant declines in the proportion of management or professional positions. According to 2010 ALARI estimates, most (70.4%) of those employed work in local government sectors; followed by trade, transportation, or utilities sectors (12.1%) and education and health service sectors (6.5%). In that year there was an estimated 199 residents employed.¹¹⁹ Information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Akiak (U.S. Census Bureau).

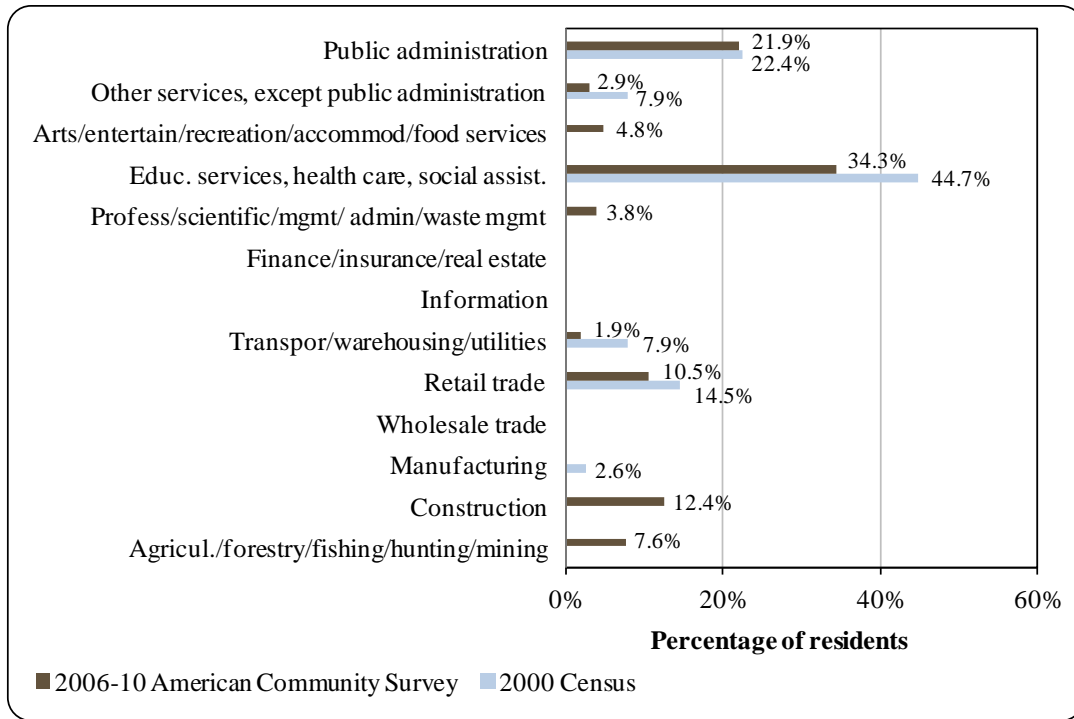
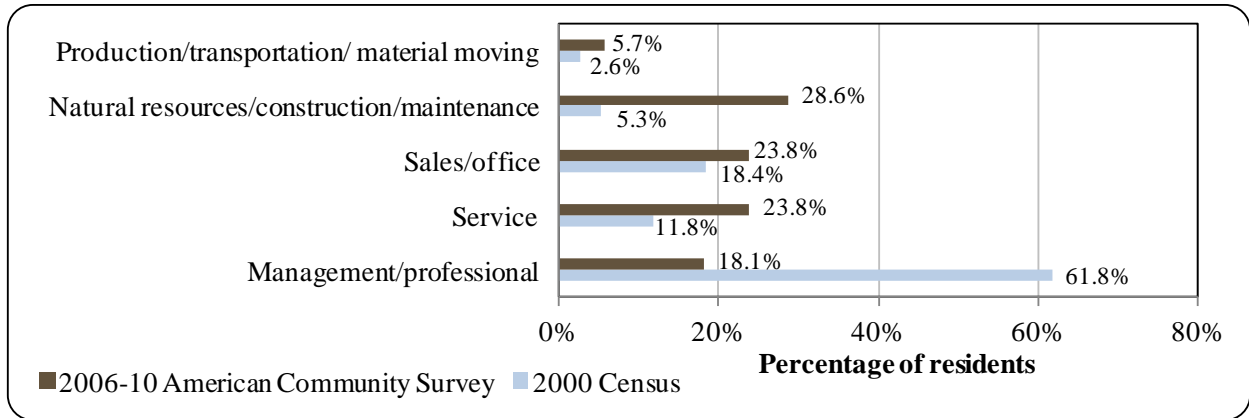


Figure 4. Local Employment by Occupation in 2000-2010, Akiak (U.S. Census Bureau).

¹¹⁹ See footnote 115.

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Governance

The Second-class city of Akiak has a mayoral form of government. There is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal government and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Kokarmuit Corporation). The regional ANCSA Native corporation representing Akiak is the Calista Corporation.

As of 2010, the community administered a 2% sales tax. Total municipal revenue in 2010 was \$792,064, compared to \$313,183 in 2000; an increase of 95.6% after accounting for inflation.¹²⁰ Municipal revenues peaked in 2008 at \$813,998. Most local revenues came from utility rents and gaming. Between 2000 and 2003, the average annual revenue collected from the State Revenue Sharing program was \$26,734. Between 2009 and 2010, the average annual revenue collected from the Community Revenue Sharing program was \$113,716. No fisheries-related grants were reported between 2000 and 2010. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Akiak Municipal Government from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal)
2000	\$313,183	n/a	\$26,943	n/a
2001	\$378,912	n/a	\$26,943	n/a
2002	\$248,586	n/a	\$26,943	n/a
2003	\$246,630	n/a	\$26,108	n/a
2004	\$240,985	n/a	-	n/a
2005	\$559,186	n/a	-	n/a
2006	\$537,012	n/a	-	n/a
2007	\$557,608	n/a	-	n/a
2008	\$813,998	n/a	-	n/a
2009	\$796,968	n/a	\$114,037	n/a
2010	\$792,064	n/a	\$113,396	n/a

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

¹²⁰ Inflation calculated using Anchorage CPI for 2010 from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

The closest Alaska Department of Fish and Game (ADF&G) office is located in Dillingham, 114 mi south. The closest National Marine Fisheries Service (NMFS) field office is located in Bethel, 42 mi to the southwest. The closest Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage, 378 mi east.

Infrastructure

*Connectivity and Transportation*¹²¹

Transportation throughout the Y-K delta is very seasonal. Akiak has a state-owned airport with a gravel runway in good condition; it measures 3,196 ft long by 75 ft wide, at an elevation of 30 ft. The strip provides chartered or private air access year-round. Several air carriers offer passenger flight service.¹²² In June 2012, roundtrip airfare between Anchorage and Bethel was \$364 as of November 22, 2011.¹²³ Chartered air service between Bethel and Akiak is available by appointment through ERA Aviation, Ryan Air, and Yute Air. This airport can be used all year, depending on conditions. Otherwise, skiplanes, snowmachines, and dogsleds are used to access surrounding communities in the winter; and skiff, floatplane, ATVs, and hovercraft in the summer. Bethel provides full jet service to Anchorage year-round as well as limited drivable ice-roads in the winter. Road networks are severely limited due to the Y-K Delta's landscape, especially in the summer.

*Facilities*¹²⁴

The local school and clinic are connected directly to the water plant. Individual wells, septic systems, and plumbing were installed in 14 homes in 1997. Otherwise, sewage is disposed of using septic tanks, outhouses, or privies. There is currently a piped water and gravity sewer system under construction that will provide service to 67 homes. Most residents are dependent upon the “washeteria” for laundry and bathing. Public safety services are provided by local Village Public Safety Office, Akiak police, and Bethel police. Fire and rescue services are provided by Akiak volunteer fire department. Additional public facilities include two youth centers, a community hall, city hall, school gym, and community library. Communications services include local and long distance telephone, local and cable television, local radio, and internet.

*Medical Services*¹²⁵

The Edith Kawagley Memorial Clinic provides local and regional health services. The clinic is part of the Community Health Aides/Practitioners (CHAP) program. It is considered a

¹²¹ Alaska Department of Transportation and Public Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf.

¹²² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²³ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

¹²⁴ See footnote 122.

¹²⁵ Ibid.

primary health care facility and has air and river access. Acute and long-term care is provided in Bethel.

*Educational Opportunities*¹²⁶

There is one school located in Akiak, providing a preschool through 12th grade education. As of 2011, there were a total of 114 students enrolled and 12 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Akiak has a long subsistence fishing tradition dating back to pre-European contact. Historically, the Yup'ik of the Y-K Delta region relied on many species of anadromous and freshwater fish.

Fisheries participation in the lower Kuskokwim Delta dates back thousands of years to the original Central Yup'ik occupants. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. During those years, local salmon were cured and salted and by 1920, the largest commercial season to-date took place on the Kuskokwim, with five operators processing approximately 35,000 Chinook salmon that year. In 1922, there were four salteries operating near the mouth of the Kuskokwim, processing Chinook and sockeye salmon. The Kuskokwim area was closed to all fishing for export from 1926 through 1929 due to adverse impacts to subsistence fisheries. In 1930, regulations were modified to allow commercial fishing in part of Kuskokwim Bay. A floating cannery operated for that year, and by 1932, three companies engaged in commercial fishing. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. Information on commercial fishing during the late 1930s through the 1950s is limited. However in 1952, poor salmon runs prompted the closure of the Kuskokwim River and Bay. Management was finally shifted to the State of Alaska in 1960, and commercial fishing resumed.¹²⁷

At the time of statehood in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, at which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.¹²⁸ Harvest levels continued to increase until the mid-1990s, at which time fishing effort, harvest levels and salmon prices decreased.

¹²⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹²⁷ Pennoyer, S.; Middleton, K. R.; & Morris, M. E. (1968). *Arctic-Yukon-Kuskokwim Area Salmon Fishing History*. Retrieved April 11, 2012 from: <http://www.sf.ADFG.state.ak.us/fedaidpdfs/afrbIL.070.pdf>.

¹²⁸ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.¹²⁹

On the lower Kuskokwim, subsistence sockeye, chum, and chinook harvesting typically begins by June 1st, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based either from a fish camp or from a home village. Drift gill nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{130,131}

In more recent years, commercial and subsistence fishing have become an important part of the local economy and culture. While the community lacks the infrastructure needed for commercial landings, many residents possess commercial fishing licenses. Harvests by Akiak residents are landed in other communities within the region possessing harbor and processing facilities. Recently, residents have expressed interest in developing Akiak's fishery infrastructure in the future.¹³²

Processing Plants

According to the 2010 ADF&G Intent to Operate list, Akiak does not have a registered processing plant. Kuskokwim Seafoods, in Bethel, is the closest processor to the community. The facility processes chinook, sockeye, chum, and coho salmon. Other processors in the area include Coastal Villages Seafoods, which operates facilities in Quinhagak, Kipnuk, and Tununak. Those facilities process salmon, herring, and halibut.¹³³

Fisheries-Related Revenue

In 2010, the only reported revenue from fisheries-related taxes and fees came from a Shared Fisheries Business Tax; totaling \$98 (Table 3).

¹²⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹³⁰ Coffing, M. 1991. *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River*. Retrieved July 12, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>

¹³¹ Andrews, E.; and Coffing, M. (1986). *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

¹³² Ibid.

¹³³ Alaska Seafood Marketing Institute. 2011. *Directory of Alaska Seafood Suppliers*. Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 26 residents, or 7.5% of the population, held 25 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 30 residents held 28 CFEC permits. Of the CFEC permits issued in 2010, 92% were for salmon, compared to 93% in 2000; and 8% were for herring, compared to 7% in 2000. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits for groundfish and crab fisheries. In addition, no residents held halibut, sablefish, or crab quota share between 2010 and when the programs began.

Residents held 15 commercial crew licenses in 2010, compared to 27 in 2000. In addition, residents held majority ownership of 2 vessels, compared to 5 in 2000. Of the CFEC permits issued in 2010, 56% were actively fished, compared to 89% in 2000. This varied by fishery from 61% of salmon to 0% of herring permits actively fished. Fisheries prosecuted by Akiak residents in 2010 included Bristol Bay drift gill net salmon and Kuskokwim gill net salmon.¹³⁴

No landings were reported in the community between 2000 and 2010 and landings made by residents during those years are considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹³⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Akiak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	\$629	\$501	\$96	\$124	\$102	\$251	\$295	\$157	\$113	\$93	\$98
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$629	\$501	\$96	\$124	\$102	\$251	\$295	\$157	\$113	\$93	\$98
Total municipal revenue⁵	\$313,183	\$378,912	\$248,586	\$246,630	\$240,985	\$559,186	\$537,012	\$557,608	\$813,998	\$796,968	\$792,064

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Akiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	2	3	3	3	3	2	2	2	2	2	2
	Fished permits	1	1	0	0	0	0	0	0	0	0	0
	% of permits fished	50%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	3	3	3	3	2	2	2	2	2	2

Table 4 cont'd. Permits and Permit Holders by Species, Akiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	26	27	27	27	26	26	24	24	24	24	23
	Fished permits	24	19	16	13	18	17	12	17	14	5	14
	% of permits fished	92%	70%	59%	48%	69%	65%	50%	71%	58%	21%	61%
	Total permit holders	28	28	28	27	29	28	24	24	24	25	24
<i>Total CFEC Permits²</i>	<i>Permits</i>	28	30	30	30	29	28	26	26	26	26	25
	<i>Fished permits</i>	25	20	16	13	18	17	12	17	14	5	14
	<i>% of permits fished</i>	89%	67%	53%	43%	62%	61%	46%	65%	54%	19%	56%
	<i>Permit holders</i>	30	30	30	29	31	30	26	26	26	27	26

Note: n/a indicates that no data were reported for that year.

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Akiak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Akiak	Total Net Pounds Landed In Akiak ^{2,5}	Total Ex-Vessel Value Of Landings In Akiak ^{2,5}
2000	27	0	0	5	4	0	0	\$0
2001	4	0	0	7	5	0	0	\$0
2002	17	0	0	6	4	0	0	\$0
2003	13	0	0	6	4	0	0	\$0
2004	13	0	0	5	4	0	0	\$0
2005	19	0	0	2	2	0	0	\$0
2006	15	0	0	2	1	0	0	\$0
2007	19	0	0	3	2	0	0	\$0
2008	3	0	0	3	2	0	0	\$0
2009	7	0	0	1	0	0	0	\$0
2010	15	0	0	2	1	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Akiak: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Akiak: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Akiak: 2000-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-Vessel Revenue, by Species, in Akiak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-Vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Akiak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Like other communities in the Y-K Delta, Akiak's proximity to Bethel attracts many private anglers to the area. However, the community's lack of accommodations and recreational fishing services limit visitations by non-Alaska resident anglers. Because of this, most sportfishing in the area by non-Alaska residents is likely based in Bethel. In 2010, residents held 62 sportfishing licenses, compared to 18 in 2000. Also in that year, 56 sportfishing licenses were sold in the community, compared to none in 2000. There were no registered sport fish guide or charter businesses operating in the community between 2000 and 2010.

Akiachak is located in the Kuskokwim River and Bay ADF&G Harvest Survey Area which includes all drainages flowing into Kuskokwim Bay as well as saltwater from Cape Newenham north to Naskonat Peninsula. The majority of sportfishing targets freshwater fisheries and in 2010, resident and non-Alaska resident angler days fished totaled 19,455, compared to 19,990 in 2000. In that year, non-residents accounted for 72% of total angler days fished, compared to 67% in 2000. The Kuskokwim River's popularity among non-residents and the fact that most local residents typically engage in subsistence fishing likely contributed to the high ratio of non-Alaska resident to resident anglers between 2000 and 2010. According to ADF&G Harvest Survey data, local private anglers target chinook and coho salmon, rainbow trout, and Dolly Varden char. Trends regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Subsistence has always been an important part of Akiak's economy and culture. The Bethel Census area is federally recognized as rural, thus subsistence practices are permitted on federal lands and waters. Of the species documented by ADF&G in Table 13, residents reported harvesting chinook salmon the most, followed by sockeye, chum, and coho. In 2008, residents reported harvesting 14,390 salmon, accounting for approximately 1.4% of all reported salmon harvests that year statewide and representing a notable increase from 6,099 salmon in 2000. Between 2000 and 2008, reported sockeye harvests increased 303.7%, reported coho harvests increased 355.9%, reported chum harvests increased 46.5%; and reported chinook harvests increased 113.4%. No residents held Subsistence Halibut Registration Certificates (SHARC) between 2009 and when NMFS began issuing them. In addition, ADF&G data on household subsistence use and marine mammal harvests are unavailable. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 11. Sport Fishing Trends, Akiak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Akiak ²
2000	0	0	18	0
2001	0	0	9	0
2002	0	0	39	0
2003	0	0	43	0
2004	0	0	20	0
2005	0	0	41	31
2006	0	0	53	49
2007	0	0	48	33
2008	0	0	17	2
2009	0	0	65	50
2010	0	0	62	56

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	n/a	n/a	16,437	4,236
2002	n/a	n/a	14,583	6,062
2003	28	63	16,923	7,355
2004	n/a	15	16,239	9,152
2005	19	18	13,725	5,685
2006	n/a	n/a	14,773	7,616
2007	n/a	n/a	13,390	7,816
2008	n/a	108	17,582	8,172
2009	n/a	n/a	12,625	5,166
2010	n/a	n/a	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Akiak: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Akiak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	59	47	2,190	2,456	483	n/a	970	n/a	n/a
2001	65	56	3,369	2,093	564	n/a	1,916	n/a	n/a
2002	71	55	3,340	2,527	1,113	n/a	1,195	n/a	n/a
2003	73	51	3,896	2,715	1,135	n/a	1,698	n/a	n/a
2004	72	51	3,653	3,211	1,236	n/a	1,162	n/a	n/a
2005	77	54	3,420	3,193	1,673	n/a	1,681	n/a	n/a
2006	82	40	3,407	2,417	348	n/a	1,658	n/a	n/a
2007	79	48	3,463	3,435	1,089	16	3,107	n/a	n/a
2008	77	25	4,674	3,598	2,202	n/a	3,916	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011)

Table 14. Subsistence Halibut Fishing Participation, Akiak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Akiak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Aniak (ANN-ee-ack)

People and Place

*Location*¹³⁵

Aniak is located on the south bank of the Kuskokwim River at the head of Aniak Slough, 59 mi southeast of Russian Mission in the Yukon-Kuskokwim Delta. It lies 92 mi northeast of Bethel and 317 mi west of Anchorage. The area encompasses 6.5 sq mi of land and 2.3 sq mi of water. Aniak was incorporated as a Second-class city in 1972. It is located in the Bethel Census Area and is not under the jurisdiction of a borough.

*Demographic Profile*¹³⁶

In 2010, there were 501 residents, ranking Aniak 118th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 7.2%. Between 2000 and 2009, the population declined by 15.2% with an average annual growth rate of -1.22%, which was significantly less than the statewide average of 0.75% and indicative of steady decline. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the estimated population of Aniak was 550 permanent residents and 600 seasonal or transient workers. On average, seasonal workers live in Aniak from June through August with the community's population peaking in June. Population fluctuations are generally somewhat related to employment in the fishing sectors. Information regarding population trends can be found in Table 1.

The population in Aniak was predominately Yup'ik Eskimo and Tanaina Athabascan in 2010.¹³⁷ In that year, 69.5% of residents identified themselves as American Indian or Alaska Native, compared to 68.4% in 2000; 20.4% identified themselves as White, compared to 25.0% in 2000; 0.2% identified themselves as Black or African American, compared to 0.3% in 2000; 9.8% identified themselves as two or more races, compared to 5.8% in 2000; and 0.2% identified themselves as some other race, compared to 0.0% in 2000. In addition, 1.2% of residents identified themselves as Hispanic or Latino, compared to 1.0% in 2000. Information regarding racial and ethnic trends in Aniak can be found in Figure 1.

In 2010, the average household size was 3.02, compared to 3.40 in 1990 and 3.74 in 2000. Total number of households in that year was 214, compared to 175 in 1990 and 203 in 2000. Of those households surveyed in 2010, 49% were owner-occupied, compared to 62% in 2000; 29% were renter-occupied, compared to 24% in 2000; 16% were vacant, compared to 11%

¹³⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹³⁷ See footnote 135.

in 2000; and 6% were occupied seasonally, compared to 3% in 2000. Since 1990 there have not been reports of any residents living in group quarters.

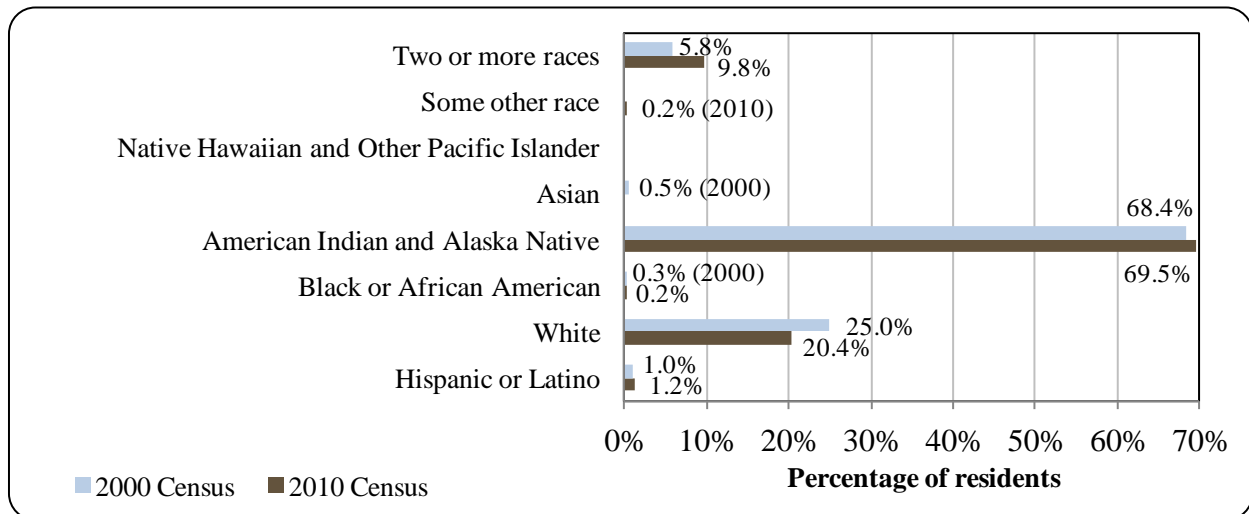
Table 1. Population in Aniak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	540	-
2000	572	-
2001	-	564
2002	-	540
2003	-	541
2004	-	534
2005	-	527
2006	-	515
2007	-	505
2008	-	491
2009	-	485
2010	501	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Aniak: 2000-2010 (U.S. Census).



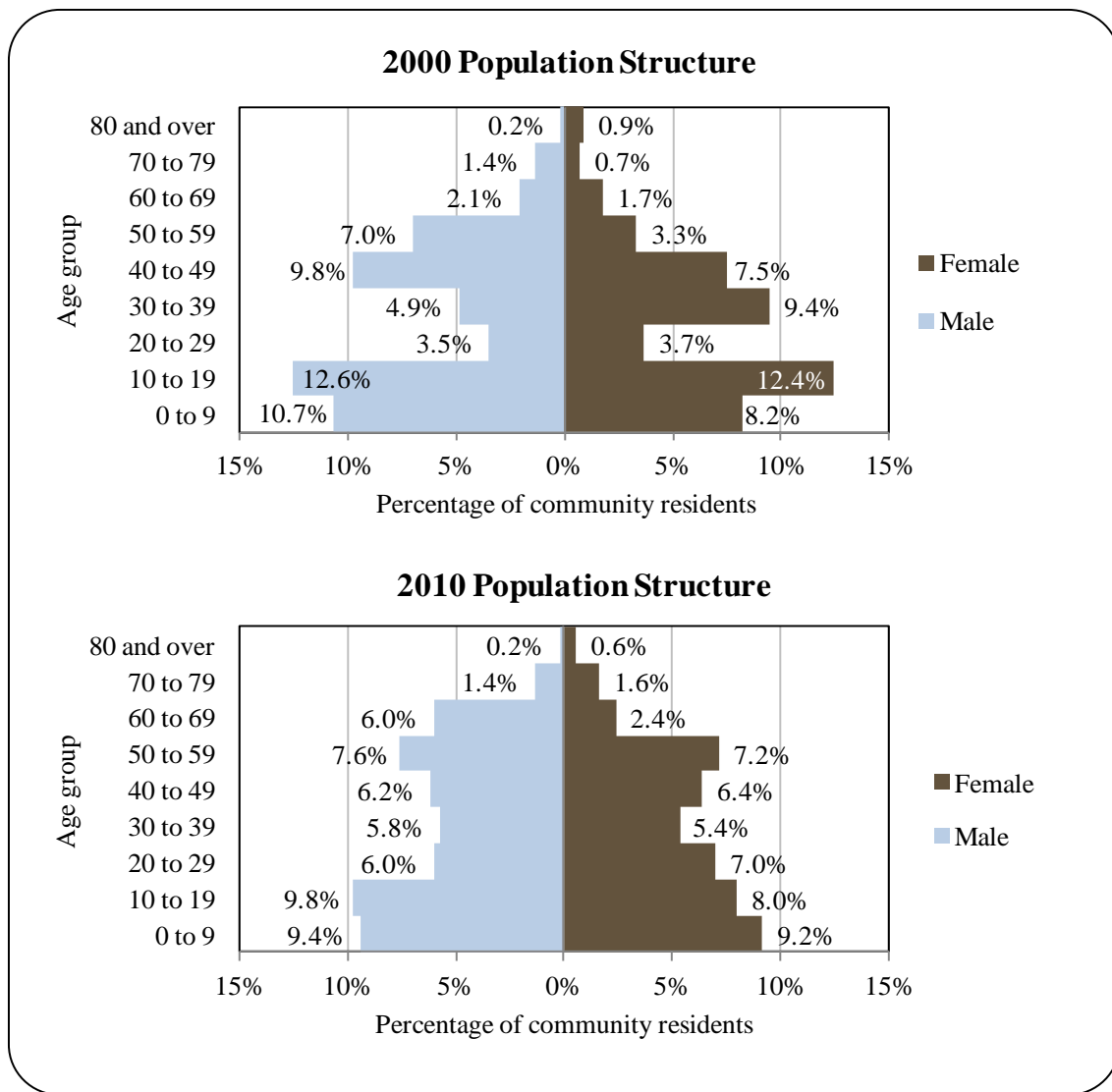
The gender distribution was somewhat skewed in 2010 at 52.3% male and 47.7% female. This was similar to both the distribution statewide (52.0% male, 48.0% female) and distribution in 2000 (52.1% male, 47.9% female). The median age that year was 30.3 years, which was

slightly younger than the statewide median of 33.8 years and slightly older than the 2000 median of 28.3 years.

When compared with 2000, the population structure in 2010 was somewhat less expansive. In that year, 36.4% of residents were under the age of 20, compared to 43.9% in 2000; 12.2% were over the age of 59, compared to 7.0% in 2000; 38.6% were between the ages of 30 and 59, compared to 41.9% in 2000; and 13.0% were between the ages of 20 and 29, compared to 7.2% in 2000.

Gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 60 to 69 range (6.0% male, 2.4% female), followed by the 10 to 19 (9.8% male, 8.0% female) and 20 to 29 (7.0% female, 6.0% male) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range. Information regarding trends in Aniak’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Aniak Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹³⁸ estimated that 92.6% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 2.4% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 5.0% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 25.4% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 5.0% held an Associate's degree, compared to an estimated 8.0% of Alaska residents overall; an estimated 7.1% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 12.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹³⁹

Aniak is a Yup'ik word meaning "the place where it comes out," which refers to the mouth of the Aniak River. This river played a key role in the placer gold rush of 1900-01. In 1914, Tom L. Johnson homesteaded the site and opened a store and post office. The Yup'ik village of Aniak had been abandoned long before this time. Eskimos Willie Pete and Sam Simeon brought their families from Ohagamuit to Aniak, which reestablished the Native community. A Russian-era trader named Semyeon Lukin is credited with the discovery of gold near Aniak in 1832. A territorial school opened in 1936. Construction of an airfield began in 1939, followed by the erection of the White Alice radar-relay station in 1956, which closed in 1978. The city was incorporated in 1972.

Aniak has one property eligible for nomination on the National Register of Historic Places (NRHP). Built in 1944, Protection of the Theotokos Church is a Russian Orthodox church serviced by the Russian Mission Deanery Clergy.¹⁴⁰ However, as of June 18, 2012, the property was not found on the National Park Service database.¹⁴¹

Natural Resources and Environment¹⁴²

Climate is maritime in the summer and continental in winter. Temperatures range between -55 and 87 °F (-48 and 36 °C). Average yearly precipitation is 19 inches, and average yearly snowfall is 60 inches. The Kuskokwim River is ice-free from mid-June through October.

Aniak is located on Calista Corporation land on the eastern edge of the Yukon Delta National Wildlife Refuge (YDNWR), which provides spawning, rearing, feeding, and wintering

¹³⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹³⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁰ Orthodox Church in American. (n.d.). *Protection of the Theotokos Church*. Retrieved June 18, 2012 from: <http://oca.org/parishes/oca-ak-aniptc>.

¹⁴¹ U.S. National Park Service. (n.d.). *National Register of Historic Places*. Retrieved June 18, 2012 from: <http://www.nps.gov/nr/research/>.

¹⁴² Ibid.

habitat for a range of terrestrial and aquatic wildlife.¹⁴³ Terrestrial wildlife known to occur locally include: waterfowl and gamebirds, moose, wolf, wolverine, bear, mink, beaver, muskrat, otter, fox, beaver, muskrat, muskox, hares, voles, ermines, squirrels, lemmings, shrews, and weasels.¹⁴⁴ Aquatic wildlife include: all five species of Pacific salmon, whitefish, burbot, northern pike, blackfish, smelt, lamprey, char, grayling, trout, sculpin, stickleback, and longnose sucker.¹⁴⁵ Local vegetation types are characterized by both lowland and upland tundra. The lowland wet tundra is populated with many streams, sloughs, shallow lakes, and rivers. Vegetation generally includes poplar, spruce, and willows. The upland areas to the north, east, and south, are characterized by rolling hills and plateaus. Vegetation in these areas generally includes forest stands of birch and spruce.¹⁴⁶

Aniak sits on unconsolidated alluvial deposits. The Kilbuck Mountains to the south are comprised of basaltic lavas, graywack, shales, granites, and some coal-bearing rocks. Some glacial moraine exists in the area as well. Soils primarily consist of poorly drained, stratified loams, silts, and sands covered by a thick layer of peat. Gravelly loams dominate hilly areas.¹⁴⁷

Regional mineral resources include Bogus Creek and Nyak gold deposits to the southwest and Mission Creek polymetallic deposits to the east.¹⁴⁸ A large-scale gold operation is being developed by Donlin Gold north of Crooked Creek to the east of Aniak. This project is expected to operate for 25 years and tap into the over 33 million ounces of gold speculated to be in the area.¹⁴⁹

Environmental contaminants in the area include polychlorinated biphenyl (PCB) contaminants in the soils resulting from the White Alice communications program initially developed in the 1950s. The contaminated military facility was used as a middle school from 1981 until 2003 and is still under lease by the school district. A site cleanup was conducted by the U.S. Air Force and the Alaska Department of Environmental Conservation (ADEC) between 1979 and 1983 during which 80 tons of contaminated soil was removed and a sealant was applied to the contaminated building. Since 1983, periodic testing of the area and exposure to residents has yielded normal results, with exposure levels being limited. However, in 2008, damage to the floor sealants resulted in elevated PCB levels being detected, prompting the school district to suspend use of the building. Ongoing tests and cost recovery negotiations with potentially responsible parties are being conducted.¹⁵⁰

¹⁴³ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved November 22, 2011 from: <http://www.fws.gov/refuges/profiles/recEdMore.cfm?ID=74540>

¹⁴⁴ Bethel Coastal District et al.(2006). *Bethel Coastal Management Plan*. Retrieved November 22, 2011 from: http://www.alaskacoast.state.ak.us/District_Pages/NW_Region/Bethel/

¹⁴⁵ Ibid.

¹⁴⁶ Alaska Department of Transportation and Public Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf

¹⁴⁷ U.S. Fish and Wildlife Service. (1988). *Yukon Delta National Wildlife Refuge Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plan*. Retrieved June 19, 2012 from: http://books.google.com/books?id=kkHxAAAAMAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false.

¹⁴⁸ Alaska Department of Community (n.d.). *Mineral Resources of Alaska*. Retrieved December 21, 2011 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>

¹⁴⁹ Donlin Gold. Retrieved December 21, 2011 from: <http://www.donlingold.com/>

¹⁵⁰ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved December 21, 2011 from: <http://www.dec.state.ak.us/spar/csp/list.htm>

According to the Aniak All-Hazards Mitigation Plan,¹⁵¹ the community is susceptible to flooding, wildfire, earthquake, severe weather, and erosion. Of those potential hazards, flood events, erosion, and severe weather have the highest probability or frequency of occurrence. In terms of flooding, the many tributaries and drainages in the area are prone to flooding caused by severe rain events, rapid snow melt, and ice jams. Impacts of flood events include exacerbated erosion, contaminated water supply, sediment deposition, bank destabilization, dike failure, personal injury, and property damage. Severe weather impacts generally include winter storms and cyclone-like events, heavy snow, extreme cold, and ice storms.

Current Economy¹⁵²

The economy of Aniak is based on government, transportation, and retail services. As the largest city in the area, Aniak is a service hub for surrounding villages. Subsistence activities supplement part-time wage earnings, and some commercial fishing occurs. The school district, Kuskokwim Native Association, Bush-Tell Inc., and the Aniak Subregional Clinic provide most year-round employment. Salmon, moose, bear, birds, berries, and home gardening provide food sources.¹⁵³ In a survey conducted by the AFSC in 2011, community leaders reported that Aniak's economy is mostly dependant on mining and recreational hunting/fishing. Top employers in 2010¹⁵⁴ included Kuspuk School District, Yukon Kuskokwim Health Corp. 90, Aniak Traditional Council, Bush-Tell Inc., AVCP Housing Authority, Hageland Aviation Services Inc., Alaska Commercial Co. State of Alaska, Kuskokwim Native Assoc., and Chiulista Camp Services Inc.

In 2010,¹⁵⁵ the estimated per capita income was \$24,488 and the estimated median household income was \$59,018, compared to \$16,550 and \$41,875 in 2000, respectively. After adjusting for inflation by converting 2000 values to 2010 dollars,¹⁵⁶ the real per capita income (\$21,763) and real median household income (\$55,065) indicates that while individual earnings increase, household earnings decreased. In 2010, Aniak ranked 114th of 305 communities from which per capita income was estimated, and 82nd of 299 communities from which median household income was estimates. However, it should be noted that ACS and Department of Labor and Workforce Development (DOLWD) data are based on wage earnings and does not take into account the value of subsistence within the local economy.

Aniak's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁵⁷ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the DOLWD. According to the ALARI database, Aniak

¹⁵¹ City of Aniak (2005). *All Hazards Mitigation Plan*. Retrieved December 23, 2011 from: http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Aniak_HMP.pdf

¹⁵² Unless otherwise noted, all monetary data are reported in nominal values.

¹⁵³ See footnote 139.

¹⁵⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁵⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁵⁷ See footnote 138.

residents earned \$8.34 million in total wages in 2010.¹⁵⁸ When matched with the population in 2010, the per capita income equals \$16,643; which is similar to per capita income in 2000 and suggests that that caution should be used when comparing 2010 ACS estimates with the 2000 Census.¹⁵⁹

According to 2006-2010 ACS estimates,¹⁶⁰ 65.7% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 5.9%, compared to 5.9% estimated statewide; and an estimated 10.2% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in 2010, an estimated 58.6% worked in the private sector; an estimated 39.7% worked in the public sector; and an estimated 1.7% were self-employed.

By industry, most (34.3%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by public administration sectors (21.9%) and construction sectors (12.4%). By occupation type, most (28.6%) employed residents were estimated to hold natural resources, construction, or maintenance positions in that year; followed by sales or office positions (23.8%); service positions (23.8%); management or professional positions (18.1%); and production, transportation, or material moving positions (5.7%). Between 2000 and 2010, there were significant proportional increases in construction, agriculture, forestry, fishing, hunting, mining, and public administration sector employment. In addition, there were significant proportional declines in transportation, utilities, warehousing, finance, information, real estate, and insurance sectors. There were also significant proportional increases in number of natural resources, construction, maintenance, and service positions; while there were significant proportional declines in the number of management and professional positions. While shifts in industry sector employment and occupations could be attributed to changes in economic conditions, it should be noted that ACS sampling techniques may not have accurately captured the scope of industry representation, which may account for extreme variations. Information regarding employment trends can be found in Figures 3 and 4.

According to 2010 ALARI estimates,¹⁶¹ most (32.1%) of those employed are estimated to work in local government sectors; followed by trade, transportation, and utilities sectors (20.2%) and education and health service sectors (13.7%).

¹⁵⁸ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁵⁹ See footnote 154.

¹⁶⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁶¹ See footnote 154.

Figure 3. Local Employment by Industry in 2000-2010, Aniak (U.S. Census Bureau).

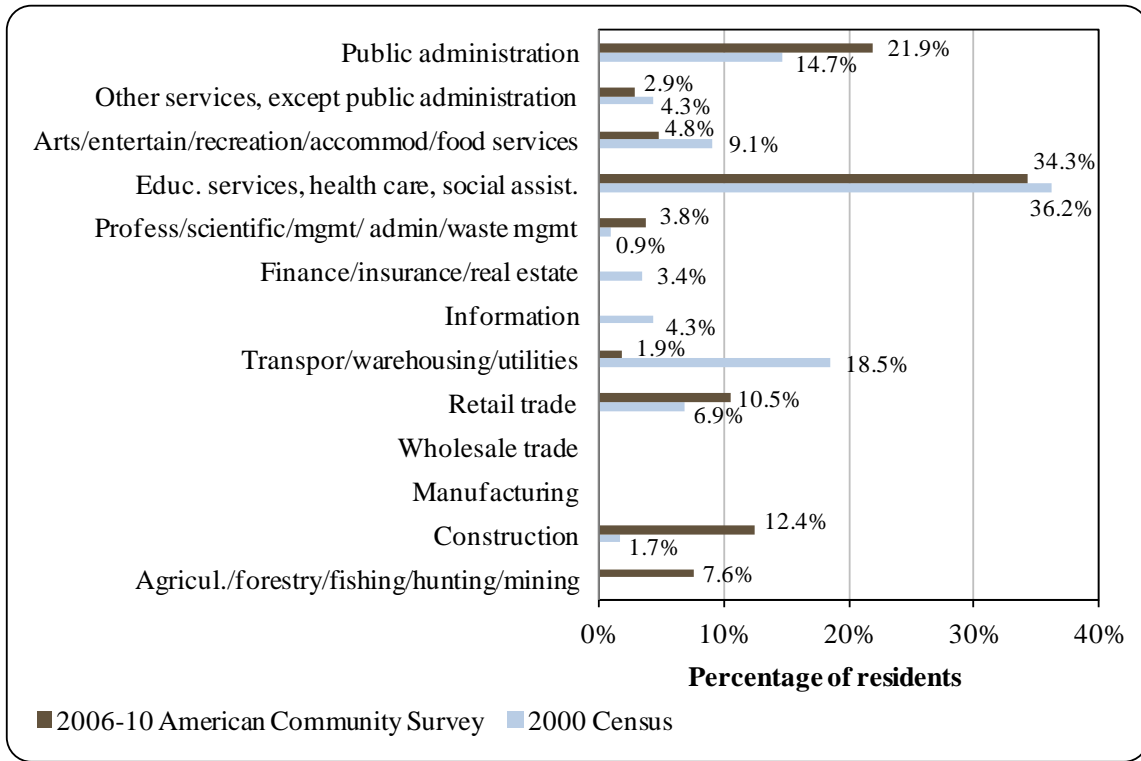
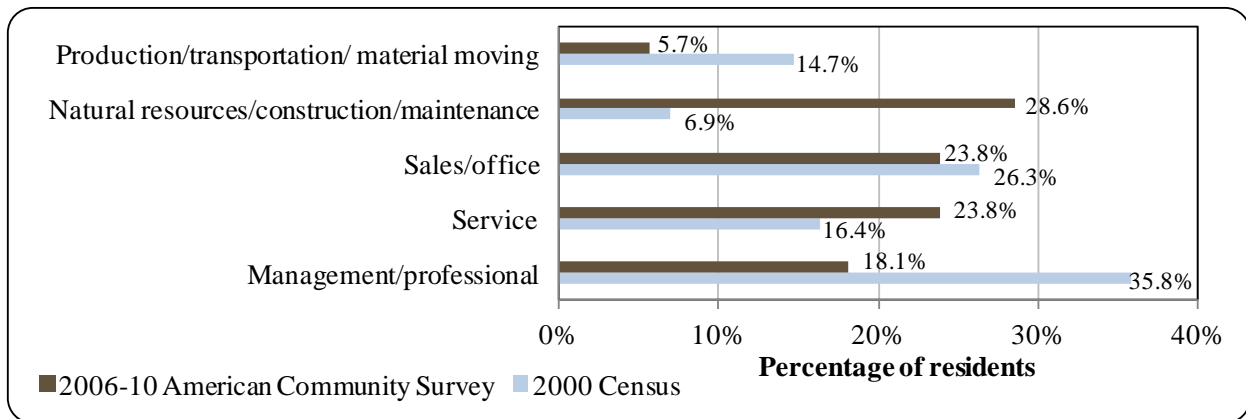


Figure 4. Local Employment by Occupation in 2000-2010, Aniak (U.S. Census Bureau).



Governance

Aniak is a Second-class city located within Calista Corporation land. There is a U.S. Bureau of Indian Affairs (BIA) federally recognized village council. The Kuskokwim Corporation is the Alaska Native Claims Settlement Act (ANCSA) village corporation and the Kuskokwim Native Association is the regional ANCSA non-profit. Calista Corporation is the regional ANCSA for-profit corporation. The closest Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Service (NMFS) offices are located in Bethel, 92 mi

southwest, and the closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Anchorage, 317 mi east.

As of 2010, Aniak administered a 2% sales tax. In that year the city collected \$655,591 in revenues, compared to \$218,524 in 2000; a 132.0% increase after adjusting for inflation.¹⁶² In that year, most (\$272,921) locally generated revenues were collected from gaming sales, followed by utility rents and sales tax revenues. Outside revenues were generated primarily Community Revenue Sharing, Payment in Lieu of Taxes, and grants. In 2010, sales tax accounted for 8.5% of total municipal revenues, compared to 29.0% in 2000. State allocated Community Revenue Sharing accounted for 18.5% of total municipal revenues in 2010, compared to 14.9% from State Revenue Sharing in 2000. Aniak received \$100,000 in fisheries-related grants in 2002 for a harbor feasibility and design project. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Aniak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$218,524	\$63,432	\$32,555	n/a
2001	\$220,780	\$53,615	\$32,812	n/a
2002	\$205,465	\$47,099	\$31,516	\$100,000
2003	\$277,296	\$48,847	\$31,615	n/a
2004	\$237,407	\$49,357	-	n/a
2005	\$231,370	\$47,465	-	n/a
2006	\$250,235	\$47,465	-	n/a
2007	\$314,330	\$52,719	-	n/a
2008	\$331,156	\$52,719	-	n/a
2009	\$401,248	\$53,464	\$122,077	n/a
2010	\$655,591	\$55,739	\$121,201	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

¹⁶² Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

Infrastructure

Connectivity and Transportation

Access to Aniak is limited to air and water. The state-owned airport has an asphalt runway that is 6,000 ft long by 150 ft wide, is lighted, and is equipped for instrument approaches. Regular flights are provided by several carriers, including charter operators. Float-planes can also land on Aniak Slough. Fuel and supplies are brought in by barge during the summer; other goods are delivered by air year-round. There is no road connection between Aniak and other villages, although trails and the frozen river are used by “snowmachines” during winter. A 15-mi winter trail is marked to Kalskag. The community has requested construction of a road to Chuathbaluk.¹⁶³ Roundtrip airfare in June 2012 between Aniak and Anchorage was \$274.¹⁶⁴

Facilities

The majority of homes (155) are plumbed and have individual wells. A central well was completed in 1988 by the village corporation. There are also wells at the Auntie Marie Nicoli School and the Joe Parent Voc Ed Center. Only 21 households haul water. A central piped sewage system serves most residents, with the exception of the school, the clinic, and the Napat subdivision across Aniak Slough. The system has four lift stations, and wastewater is treated in a lagoon. Some homes use individual septic tanks, but permafrost has caused drainfield problems, so most of the unserved homes use pit privies. The city provides septic pumping services. A “washeteria” is operated by the village council. Aniak Power & Light is a privately-owned company. Visitor accommodations include the Aniak Hotel and LOJ’s. Public safety services are provided by local state troopers. Fire and rescue services are provided by Aniak volunteer fire department and city fire and rescue. Legal services are provided by local state magistrate. Additional public facilities include a community hall, senior services, school gym, a public library, and two school libraries. Communications services include local and long-distance telephone, internet, local television, and local radio.¹⁶⁵

In a survey conducted by the AFSC in 2011, community leaders reported fisheries-related infrastructure including tackle sales, fish lodges, boat fuel sales, and air taxi. Public infrastructure includes a public library. There is no harbor infrastructure or dock space available to support permanent or transient vessel moorage. Residents go to Bethel for goods and services not available in Aniak.

¹⁶³ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁴ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

¹⁶⁵ See footnote 163.

*Medical Services*¹⁶⁶

The Clara Morgan Sub-Regional Clinic provides emergency, primary, preventative, dental, and behavioral health care. It has a pharmacy, radiology and optometry services, and mental health services. Acute and long-term care is provided in Bethel.

*Educational Opportunities*¹⁶⁷

Aniak has two schools. Auntie Mary Nicoli Elementary provides preschool through 6th grade instruction. As of 2011 there were 89 students enrolled and six teachers. Aniak Junior and Senior High School provides 7th through 12th grade instruction. As of 2011, there were 50 students enrolled and five teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Fisheries participation in the Lower Kuskokwim Delta dates back thousands of years to the original Central Yup'ik occupants. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. During early years, local salmon were cured and salted and by 1920, the largest commercial season to-date took place on the Kuskokwim, with five operators processing approximately 35,000 Chinook salmon that year. In 1922, there were four salteries operating near the mouth of the Kuskokwim, processing Chinook and sockeye salmon. The Kuskokwim area was closed to all fishing for export from 1926 through 1929. In 1930, regulations were modified to allow commercial fishing in part of Kuskokwim Bay. A floating cannery operated for that year, and by 1932, three companies engaged in commercial fishing. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. Information on commercial fishing during the late 1930s through the 1950s is limited. However in 1952, poor salmon runs prompted the closure of the Kuskokwim River and Bay. Management was finally shifted to the State of Alaska in 1960, and commercial fishing resumed.¹⁶⁸

At the time of statehood in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of

¹⁶⁶ Ibid.

¹⁶⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁶⁸ Pennoyer, S.; Middleton, K. R.; & Morris, M. E. (1968). *Arctic-Yukon-Kuskokwim Area Salmon Fishing History*. Retrieved April 11, 2012 from: <http://www.sf.ADFG.state.ak.us/fedaidpdfs/afrbIL.070.pdf>.

available surpluses.¹⁶⁹ Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.¹⁷⁰

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.¹⁷¹

On the lower Kuskokwim, subsistence sockeye, chum, and Chinook harvesting typically begins by June 1st, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based from either a fish camp or from a home village. Drift gill nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{172,173}

Aniak's participation in North Pacific fisheries is mostly subsistence based; however, several residents do hold commercial salmon permits. Fishing is conducted in the Yukon and Kuskokwim Rivers. Although no commercial fishing was reported in 2009 and 2010, 12 permit holders were present in Aniak in 2010. In addition, several outfitters provide sportfishing opportunities for both resident and non-resident anglers.

While the community typically has conducted the bulk of their fishing on the Kuskokwim and Yukon Rivers, any fishing outside those waters would likely be conducted in Federal Reporting Area 514, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. It should be noted that permits have not been issued for fisheries outside the Yukon and Kuskokwim drainages since 2003.¹⁷⁴ Aniak is ineligible for participation in the Community Quota Entity (CQE) program.

¹⁶⁹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Department of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹⁷⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Department of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹⁷¹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁷² Coffing, M. (1991). *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River*. Retrieved July 12, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>

¹⁷³ Andrews, E.; and Coffing, M. (1986). *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

¹⁷⁴ Commercial Fisheries Entry Commission. (n.d.). Retrieved December 21, 2011 from: <http://www.cfec.state.ak.us/gpbycen/2010/050077.htm>

In a survey conducted by the AFSC in 2011, community leaders reported that the community does not participate in the management of North Pacific fisheries or advocate for itself in the management process.

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Aniak does not have a registered processing plant. The closest fish processing facility is located in Bethel.

Fisheries-Related Revenue

The community received virtually no fisheries-related revenue between 2000 and 2010, with the exception of \$60 in Shared Fisheries Business tax revenue in 2000. In a survey conducted by the AFSC in 2011, community leaders reported that Aniak does not have any fisheries related fee programs which support local infrastructure. Information regarding fisheries-related revenue trends can be found in Table 3.

Commercial Fishing

In 2010, 13 residents, or 2.4% of the population, held a total of 12 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 14 residents held 15 CFEC permits. In 2010, salmon permits made up 92% of CFEC permits issued, while "other" finfish made up the remainder; an increase from 2000 when 86% of CFEC permits were for salmon. Between 2000 and 2010, no residents held Federal Fishing Permits (FFP) or License Limitation Program (LLP) permits. Between 2004 and 2008, 498 shares of halibut quota were held on one account. No residents held sablefish or crab quota between 2010 and when the programs began.

Fishing activity has been in decline since 2000 and no CFEC permits were fished in 2009 or 2010. In addition, the number of vessels owned primarily by residents, and vessels homeported in Aniak has been in decline. In 2000, residents held majority ownership of 29 vessels, compared to four in 2010. In that same year 23 vessels were homeported in Aniak, compared to three in 2010.

Between 2000 and 2010, no landings were made in the community. All landings made by residents outside the community between 2000 and 2010 are considered confidential. In 2010, one resident held a crew license. Information regarding permit trends can be found in Tables 4 through 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Aniak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries											
Business Tax ¹	\$60	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource											
Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish											
tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage											
on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related</i>											
<i>revenue⁴</i>	\$60	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal</i>											
<i>revenue⁵</i>	\$218,524	\$220,780	\$205,465	\$277,296	\$237,407	\$231,370	\$250,235	\$314,330	\$331,156	\$401,248	\$655,591

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Aniak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	1	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	1	1	1	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	0%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	1	1	1	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Aniak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Salmon (CFEC) ²	Total permits	13	13	13	13	12	12	11	11	12	11	11
	Fished permits	6	2	1	1	1	1	1	1	1	0	0
	% of permits fished	46%	15%	8%	8%	8%	8%	9%	9%	8%	0%	0%
	Total permit holders	13	13	13	13	12	12	11	12	13	13	12
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>15</i>	<i>16</i>	<i>15</i>	<i>15</i>	<i>13</i>	<i>13</i>	<i>12</i>	<i>12</i>	<i>13</i>	<i>12</i>	<i>12</i>
	<i>Fished permits</i>	<i>6</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>40%</i>	<i>13%</i>	<i>7%</i>	<i>7%</i>	<i>8%</i>	<i>8%</i>	<i>8%</i>	<i>8%</i>	<i>8%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>14</i>	<i>14</i>	<i>13</i>	<i>13</i>	<i>12</i>	<i>12</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>14</i>	<i>13</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Aniak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Aniak ²	Total Net Lbs Landed In Aniak ^{2,5}	Total Ex-Vessel Value Of Landings In Aniak ^{2,5}
2000	0	0	0	29	23	0	0	\$0
2001	0	0	0	24	18	0	0	\$0
2002	1	0	0	24	20	0	0	\$0
2003	2	0	0	28	25	0	0	\$0
2004	0	0	0	15	19	0	0	\$0
2005	0	0	0	4	3	0	0	\$0
2006	0	0	0	4	3	0	0	\$0
2007	1	0	0	4	3	0	0	\$0
2008	1	0	0	4	3	0	0	\$0
2009	0	0	0	4	3	0	0	\$0
2010	1	0	0	4	3	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Aniak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	2	865	112
2002	2	865	113
2003	2	865	113
2004	1	498	67
2005	1	498	68
2006	1	498	67
2007	1	498	70
2008	1	498	65
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Aniak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Aniak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Aniak: 2000-2010.

	<i>Total net pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Aniak Residents: 2000-2010.

	<i>Total net pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that private anglers in the community target coho salmon, and that the sportfishing season runs from mid-June through the end of September. Recreational fishing is typically done by private anglers and guided charter fishing businesses. The community saw an increase in the number of private vessels between 2005 and 2010.

According to ADF&G Statewide Harvest Survey data, additional species targeted by private anglers between 2000 and 2010 include all five species of Pacific salmon, rainbow trout, Dolly Varden char, whitefish, Arctic grayling, and northern pike. Pacific halibut and Pacific cod have also been targeted in saltwater fisheries. In 2010, 36 sportfishing licenses were sold in the community, compared to none in 2000. In that same year, 185 residents held sportfishing licenses, compared to 237 in 2000. One active sport fish guide business operated from Aniak between 2005 and 2010, although it is not clear whether it was the same businesses each of those years. Also in 2010, residents held 7 sport fish guide licenses, compared to 11 in 2000. No kept/released charter log data is available for Aniak.

Aniak is located in the Kuskokwim River and Bay Drainages ADF&G Harvest Survey Area which includes the Kuskokwim River drainages and all waters flowing into Kuskokwim Bay; adjacent saltwater from Cape Newenham north of the Naskonat Peninsula. In 2010, there were a total of 19,455 angler days fished, compared to 19,990 in 2000. In that year, non-Alaska residents accounted for 72.1% of angler days fished, compared to 67.0% in 2000. Total angler days fished peaked in 2004 at 25,391.

Table 11. Sport Fishing Trends, Aniak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Aniak ²	Freshwater Angler Days Fished – Non-residents ³	Freshwater Angler Days Fished – Alaska Residents ³
2000	0	11	237	0	13,388	6,602
2001	0	10	203	0	16,437	4,236
2002	0	9	206	0	14,583	6,062
2003	0	10	219	0	16,923	7,355
2004	1	8	146	0	16,239	9,152
2005	1	11	129	121	13,725	5,685
2006	1	7	139	49	14,773	7,616
2007	1	5	145	22	13,390	7,816
2008	1	6	206	30	17,582	8,172
2009	1	7	179	11	12,625	5,166
2010	1	7	185	36	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

According to a survey conducted by the AFSC in 2011, community leaders reported that subsistence fisheries typically run from mid-June through September. Popular subsistence resources harvested by residents include all five species of Pacific salmon, Dolly Varden char, arctic char, northern pike, rainbow trout, lush, and geefish.

Information regarding subsistence activities is limited, and data on household subsistence participation, and halibut and marine mammal subsistence harvests are unavailable. Of the species documented by ADF&G in Table 13,¹⁷⁵ Chinook salmon were harvested most, followed by chum, coho, sockeye, and pink salmon. There was a notable increase in the number of coho salmon taken in 2008 compared to previous years, with 3,722 fish taken compared to 1,922 in 2000. Overall, 11,275 salmon were harvested in 2008, compared to 8,125 in 2000; a 39% increase. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Aniak: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁷⁵ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Aniak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	169	153	3,117	1,943	1,922	n/a	1,143	n/a	n/a
2001	164	134	2,524	1,982	1,906	n/a	2,223	n/a	n/a
2002	165	163	2,994	3,002	2,616	n/a	723	n/a	n/a
2003	150	118	2,077	1,160	1,552	n/a	670	n/a	n/a
2004	139	117	2,606	2,331	1,655	n/a	867	n/a	n/a
2005	161	142	1,987	2,539	1,886	173	975	n/a	n/a
2006	166	91	2,011	3,611	1,101	2	721	n/a	n/a
2007	162	127	2,737	3,391	2,435	20	953	n/a	n/a
2008	205	100	3,283	2,549	3,722	n/a	1,721	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Aniak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Aniak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Bethel (BETH-ul)



People and Place

*Location*¹⁷⁶

Bethel is located at the mouth of the Kuskokwim River, 40 mi inland from the Bering Sea. It lies in the Yukon Delta National Wildlife Refuge, 400 mi west of Anchorage. The area encompasses 43.8 sq mi of land and 5.1 sq mi of water. Bethel was incorporated as a Second-class city in 1957, is located in the Bethel Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*¹⁷⁷

In 2010, there were 6,080 residents, ranking Bethel 17th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 30%. Between 2000 and 2009, the population grew by 6.1% with an average annual growth rate of -0.13%, somewhat lower than the statewide 0.75% and indicative of a slowing rate of growth. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported an estimated 200 transient or seasonal workers living in Bethel in 2010. Seasonal workers typically live in the community from June through September, and the population peaks in July and August as well as December and January. These population peaks are somewhat to mostly driven by employment in the fishing sectors. Information regarding population trends can be found in Table 1.

Bethel's population was predominately Yup'ik Eskimo in 2010. In that year, 65.0% of residents identified themselves as American Indian or Alaska Native, compared to 61.8% in 2000; 23.3% identified themselves as White, compared to 26.8% in 2000; 2.5% identified themselves as Asian, compared to 2.9% in 2000; 0.9% identified themselves as Black or African American, compared to 0.9% in 2000; 0.4% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.2% in 2000; 7.3% identified themselves as two or more races, compared to 6.9% in 2000; and 0.6% identified themselves as some other race, compared to 0.5% in 2000. In addition, 2.2% of residents identified themselves as Hispanic or Latino, compared to 1.7% in 2000.

In 2010, the average household size was 3.04, a decrease from 3.1 in 1990 and 3.65 in 2000. In that same year there were 2,364 total housing units, an increase from 1,624 in 1990 and 1,990 in 2000. Of those households surveyed in 2010, 35.8% were owner-occupied, compared to 37.6% in 2000; 44.4% were renter-occupied, compared to 49.8% in 2000; 13.7% were vacant, compared to 9.4% in 2000; and 6% were occupied seasonally, compared to 3.1% in 2000. In 2010, 321 residents were living in group quarters, compared to 241 in 2000.

¹⁷⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Gender distribution in Bethel was relatively equal in 2010 at 51.9% male and 48.1%. This was similar to both the distribution statewide (52.0% male, 48.0% female) and distribution in 2000 (52.5% male, 47.5% female). The median age that year was 28.7 years, which was younger than the statewide median of 33.8 years and similar to the 2000 median of 29.1 years.

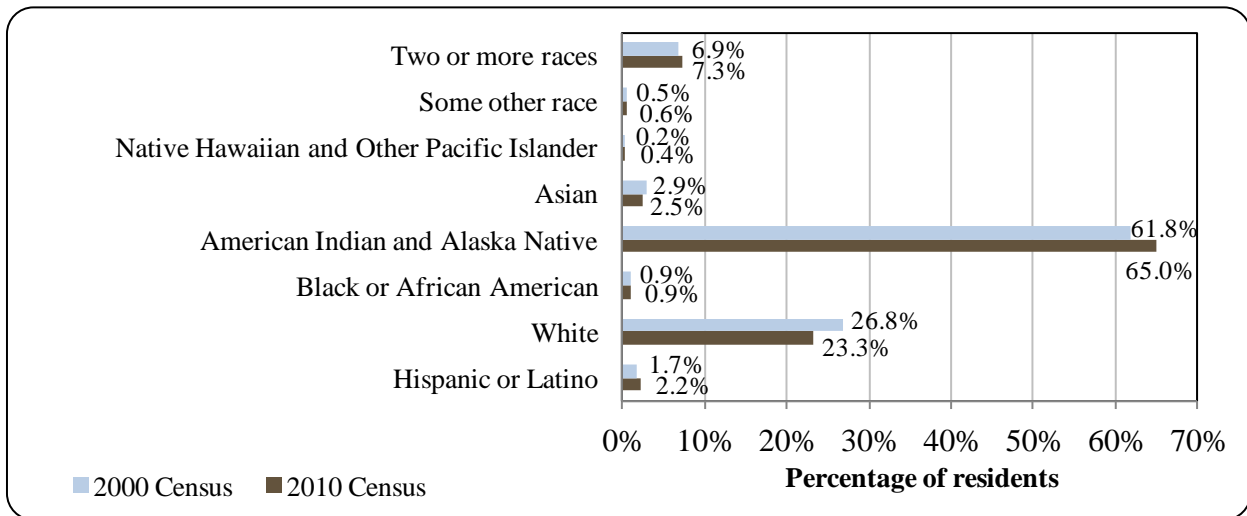
Table 1. Population in Bethel from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	4,674	-
2000	5,471	-
2001	-	5,463
2002	-	5,740
2003	-	5,885
2004	-	5,872
2005	-	5,963
2006	-	5,810
2007	-	5,634
2008	-	5,649
2009	-	5,803
2010	6,080	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

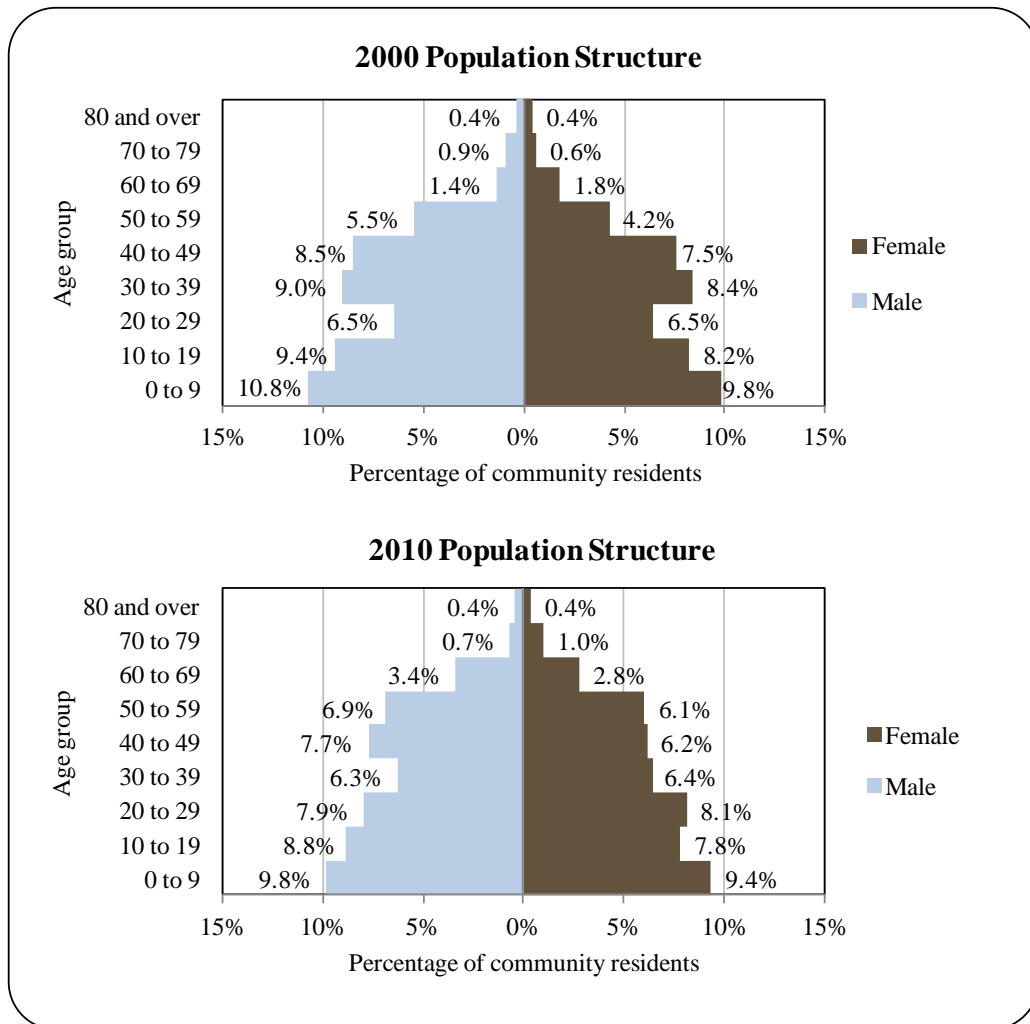
Figure 1. Racial and Ethnic Composition, Bethel: 2000-2010 (U.S. Census).



Overall, the population structure in both 2010 and 2000 was expansive. In addition, cohorts maintained their overall structure as they aged, possibly indicating a stable population. In 2010, 35.8% of residents were under the age of 20, compared to 38.2% in 2000; 8.7% were over the age of 59, compared to 5.5% in 2000; 39.6% were between the ages of 39 and 59, compared to 43.1% in 2000; and 16.0% were between the ages of 20 and 29, compared to 13.0% in 2000.

Gender distribution by age cohort was slightly more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 40 to 49 range (7.7% male, 6.2% female), followed by the 10 to 19 (8.8% male, 7.8% female) and 50 to 59 (6.9% male, 6.1% female) ranges. Of those three, the greatest relative gender difference occurred in the 40 to 49 range. Information regarding trends in Bethel’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Bethel Based on the 2000 and 2010 U.S. Decennial Census.



According to the U.S. Census' 2006-2010 American Community Survey (ACS),¹⁷⁸ an estimated 91.7% of the population in Bethel aged 25 and over held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in 2010, an estimated 3.6% of the population had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 4.7% of the population had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 26.5% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 5.7% had an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 14.8% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 11% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹⁷⁹

The area around what is now Bethel was originally occupied by Yup'ik Eskimos around 2,000 years ago. At that time, the area provided a strategic trading route along the Yukon-Kuskokwim (Y-K) Delta region, connecting many communities located on the two rivers. The original settlement "Mamterillermuit" was located across the river from modern day Bethel. In 1880, the U.S. Census recorded 29 people living in Mamterillermuit. At that time the community was primarily an Alaska Commercial Trading post. On the advice of a local shaman, the original site was moved across the river, and a Moravian mission was constructed. After the purchase of Alaska in 1867, trading posts were established in Fort Komakovsky and Vinasale. By the late nineteenth century, Bering Sea Eskimos and Nunivak Islanders traveled to Bethel to trade, and around the turn of the century a medical facility, post office, and federal school were constructed. In 1912, the U.S. Army Corps of Engineers mapped a deep water channel, and by 1915 ocean liners began visiting Bethel regularly. Around that point Bethel had been established as a regional hub for the Y-K Delta region, and by the late 1930s, the region's center for aviation and government administration. After World War II, Bethel's city government was organized, and it became the largest community in western and arctic Alaska by the 1980s. Today, Bethel's culture is strongly rooted in Yup'ik tradition and subsistence activities continue to be a central component of community cohesion. As a regional hub, many people come from surrounding villages to meet, work, and network in a setting where traditional and modern values are interwoven.

Bethel has one property on the National Register of Historic Places. The First Mission House was constructed in 1885 and was the first Moravian mission in southwest Alaska.¹⁸⁰

¹⁷⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷⁹ HDR Alaska. (1997). *Bethel Comprehensive Plan*. Retrieved January 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel-CP-1997.pdf>.

¹⁸⁰ National Park Service. (n.d.). *National Register of Historic Places*. Retrieved January 6, 2012 from: <http://pdfhost.focus.nps.gov/docs/NRHP/Text/90001551.pdf>.

Natural Resources and Environment

Precipitation averages 16 inches per year, and snowfall averages 50 inches per year. Summer temperatures range from 42 to 62 °F (6 to 17 °C). Winter temperatures range from -2 to 19 °F (-19 to -7 °C).¹⁸¹

Bethel is located in the Yukon Delta National Wildlife Refuge (YDNWR) which covers 19 million acres of the upper and lower Y-K Delta region.¹⁸² Bethel itself is located on lowland alluvial deposits comprised of mud, silt, sand, gravel, and various organics; similar to conditions found on coastal plains found in much of western Alaska. The landscape in these lowland areas is populated with shallow circular and oxbow lakes, streams, and sloughs. Upland areas consist of silt deposits covered by a shallow permafrost layer. Vegetation in the area is characteristic of poorly drained, moist tundra. Vegetation types include dwarf shrubs, mosses, lichens, forbs, grasses, and herbs. In areas along the Kuskokwim River, thickets of alder, willow, and birch can be found. Most of the area surrounding Bethel is classified as wetland habitat.¹⁸³ In terms of wildlife, the area is probably best known for the abundant species of waterfowl. Many migratory birds make use of the wetlands for nesting. Terrestrial mammals in the area include moose, wolves, red and arctic fox, snowshoe hare, beaver, muskrat, and caribou. Marine and freshwater fish include all five species of Pacific salmon, sheefish, smelt, whitefish, burbot, northern pike, Dolly Varden char, rainbow trout, arctic grayling, herring, halibut, tomcod, and flounder.¹⁸⁴

Natural resources in the area include several mineral locations within 100 mi of Bethel. These include placer deposits of gold, and a mercury project at Arsenic Creek.¹⁸⁵ Other mineral projects in the area include Bogus Creek and Nyak gold prospects to the east.¹⁸⁶

Natural hazards in the area primarily include bank erosion and flooding.¹⁸⁷ Bethel is located on an oxbow curve in the Kuskokwim River, making it susceptible to erosion. When the city was founded it was protected by several islands; however, by 1939 the islands had eroded and Bethel was left unprotected. In addition, steep banks of unconsolidated silty soils are left susceptible to erosive forces as permafrost retreats. Much of Bethel lies within a floodplain, which is inundated annually. Elevations below 17 ft are at high risk of flooding due to seasonal ice jams and poorly drained soils. Bulkheads and pilings have been constructed to mitigate impacts; however, undercutting continues to be an issue.¹⁸⁸

According to the Alaska Department of Environmental Conservation (DEC), there are no significant environmental remediation sites active in Bethel.¹⁸⁹

¹⁸¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸² USFWS. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved January 6, 2012 from: <http://www.fws.gov/refuges/profiles/index.cfm?id=74540>.

¹⁸³ See footnote 179.

¹⁸⁴ See footnote 182.

¹⁸⁵ See footnote 179.

¹⁸⁶ Alaska Department of Commerce. (n.d.). *Mineral Property Map*. Retrieved January 6, 2012 from: <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

¹⁸⁷ See footnote 179.

¹⁸⁸ Ibid.

¹⁸⁹ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 20, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Western>.

Current Economy¹⁹⁰

Bethel serves as the regional hub for 56 villages in the Y-K Delta. Food, fuel, transportation, medical care, and other services for the region are provided by Bethel. Subsistence activities contribute substantially to villager's diets, particularly salmon, freshwater fish, game birds, and berries. Poor fish returns since 1997 have significantly affected the community.¹⁹¹

In a survey conducted by the AFSC in 2011, community leaders reported that Bethel's economy relies upon mining, fishing, ecotourism, and sport hunting and fishing. While the community relies mostly on employment in the fishing sectors, 1,300 residents are employed at the regional hospital making it the largest contributor to local employment.

Top employers in Bethel for 2010¹⁹² include Yukon Kuskokwim Health Corporation, Lower Kuskokwim School District, State of Alaska, Association of Village Council Presidents (AVCP), City of Bethel, Omni Enterprises Inc., AVCP Housing Authority, AK Commercial Company, University of Alaska, and Hageland Aviation Services Inc.

In 2010,¹⁹³ the estimated per capita income in Bethel was \$29,220 and the estimated median household income was \$86,935, compared to \$20,267 and \$57,321 in 2000, respectively. After accounting for inflation by converting the 2000 values to 2010 dollars,¹⁹⁴ the real per capita income (\$26,651) and real median household income (\$75,376) indicate an overall increase in individual and household earnings between 2000 and 2010. Bethel's per capita income and median household income in 2010 was significantly higher than the Bethel Census Area as a whole (\$18,584 per capita income, \$52,214 median household income), highlighting the community's relative weight within the region's cash economy. In 2010, Bethel ranked 65th of 305 communities who reported per capita earnings, and 19th of 299 communities for which median household earnings were reported.

Bethel's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁹⁵ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$112.53 million in total wages in 2010.¹⁹⁶ When matched with the population in 2010, the per capita income equals \$18,507; suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census.¹⁹⁷ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

¹⁹⁰ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁹¹ See footnote 181.

¹⁹² Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁹³ U.S. Census. American Community Survey 2006-10 estimates.

¹⁹⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁹⁵ See footnote 178.

¹⁹⁶ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

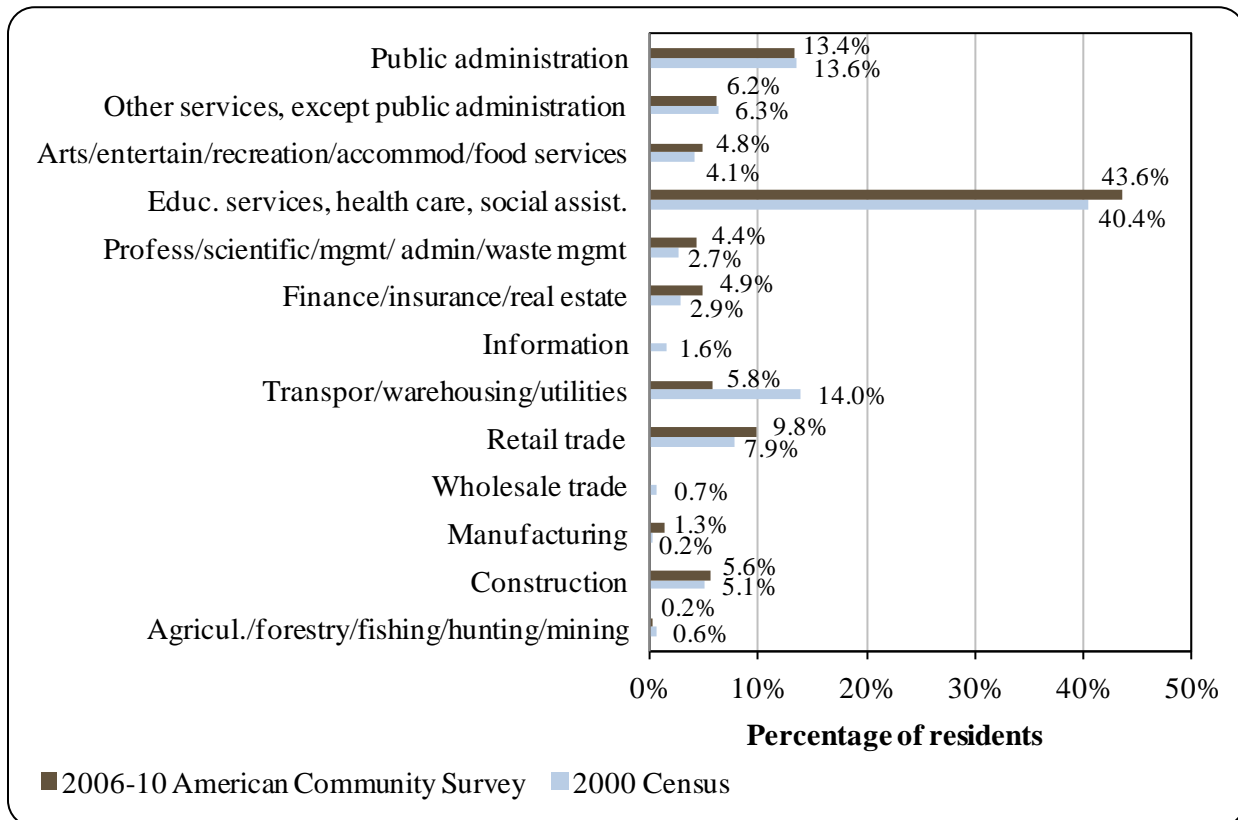
¹⁹⁷ See footnote 192.

According to 2006-10 ACS estimates,¹⁹⁸ 75.6% of residents aged 16 and older were part of the civilian labor force in 2010. The unemployment rate in Bethel was estimated at 7.6%, compared to an estimated 5.9% statewide; and 7.8% of the population was estimated to be living below the poverty level, compared to an estimated 9.5% statewide. Of those employed, 60.8% worked in the private sector, 37.8% worked in the public sector, and 1.4% was self-employed.

By industry, most (43.6%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by public administration sectors (13.4%) and retail trade sectors (9.8%). By occupation type, most (46.5%) employed residents were estimated to hold management or professional positions that year; followed by sales or office positions (22.1%); service positions (14.6%); natural resources, construction, or maintenance positions (9.4%); and production, transportation, or material moving positions (7.5%). Overall there was little variation in sector and occupational employment between 2000 and 2010. Information regarding employment trends can be found in Figures 3 and 4.

According to 2010 ALARI estimates,¹⁹⁹ most (31.2%) employed residents worked in education and health service sectors; followed by local government sectors (19.7%); trade, transportation, and utilities sectors (18.7%); and state government sectors (10.0%).

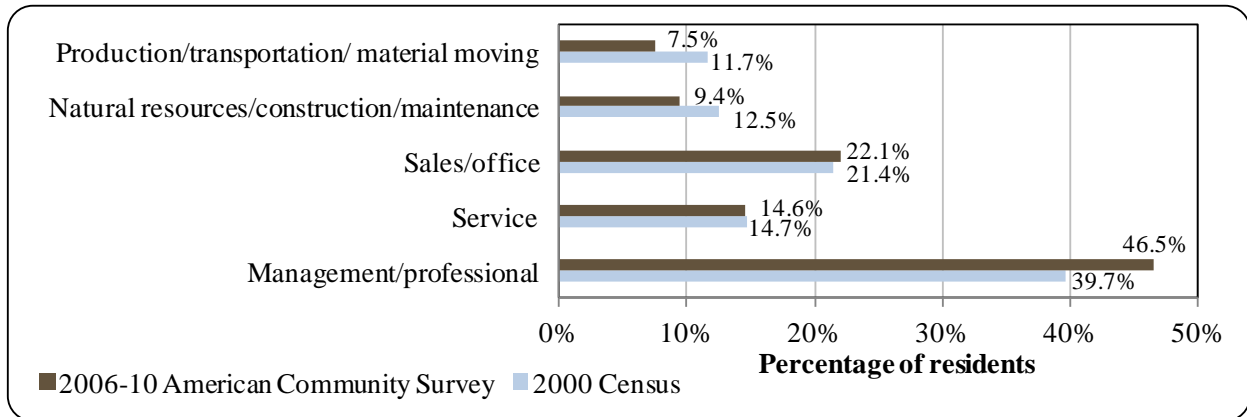
Figure 3. Local Employment by Industry in 2000-2010, Bethel (U.S. Census).



¹⁹⁸ See footnote 178.

¹⁹⁹ See footnote 192.

Figure 4. Local Employment by Occupation in 2000-2010, Bethel (U.S. Census).



Governance

Bethel was incorporated as a Second-class city in 1957. It has a mayoral form of government. In addition, there is a federally recognized Tribal government (Orutsararmuit Native Council) and an Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Bethel Native Corporation). The regional ANCSA chartered Native corporation is Calista Corporation. Additional organizations located within the community include the AVCP, a non-profit corporation which provides a range of services to the Y-K Delta region; and the Native Village of Napaimute. There are National Marine Fisheries Service (NMFS) and Alaska Department of Fish and Game (ADF&G) offices located within the community and the closest U.S. Bureau of Citizenship and Immigration Services (BCIS) offices is located in Anchorage, 400 mi east.

In 2010, the city administered a 6% sales tax, 3% bed tax, 6% alcohol tax, 6% gaming tax, and a motor vehicle registration tax. When adjusted from inflation,²⁰⁰ municipal revenues increased 34.6% between 2000 and 2010 from \$5.63 million to \$9.80 million. In 2010, most local revenue came from sales taxes, gaming fees, taxi permits, and services charges. Most outside revenues came from payments in lieu of taxes, community revenue sharing, and federal stimulus. Sales tax revenue accounted for 76.0% of total municipal revenue in 2010, compared to 64.6% in 2000. State allocated Community Revenue Sharing accounted for 4.0% of total municipal revenues, compared to 3.2% from State Revenue Sharing in 2000. Bethel received several state and federal fisheries-related grants between 2000 and 2010, including \$15,500 for a slush bag delivery and installation system, \$600,000 for the appropriation and deferred maintenance costs of a state-owned dock, and \$500,000 for a small boat harbor dredge project. Information regarding municipal budget trends can be found in Table 2.

²⁰⁰ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

Infrastructure

*Connectivity and Transportation*²⁰¹

The state-owned Bethel Airport is the regional transportation center and is served by a number of passenger airlines, cargo carriers, and numerous air taxi services. Bethel is the third busiest state-owned airport in Alaska. It offers 6,400-ft long by 150-ft wide and 4,000-ft long by 75 ft wide asphalt runways and a 1,860-ft long by 75-ft wide gravel crosswind runway. Two float plane bases (Hangar Lake and H Marker Lake) are nearby. The Port of Bethel includes a small boat harbor, drydock storage, and up to 5,000 ft of transient moorage on the seawall. River travel is the primary means of local transportation in the summer, and it becomes a 150-mi ice road to surrounding villages in the winter. A barge service based in Bethel provides goods to the Kuskokwim villages. There are 16 mi of graded dirt roads maintained by the City and 22 mi of paved roads maintained by the State Department of Transportation (DOT). Public transportation services include taxi service, bus service, and boat shuttle service.²⁰² Roundtrip airfare²⁰³ between Bethel and Anchorage in June 2012 was \$360.

*Facilities*²⁰⁴

Public facilities are managed through nine departments, and provide a range of services including general city operations; finance services, including permitting and licensing; planning services; water, wastewater, and waste disposal; communications infrastructure; police and fire services; youth center; several parks, trails and boardwalks; and port and harbor infrastructure including a cargo dock, petro port, small boat harbor, float plane beach, and seawall. Fuel supply is provided by Crowley and Delta Western, electricity is provided by the Bethel Utilities Corporation via six 2,500-kW diesel generators, telephone services are provided by United Utilities, Inc. and GCI, internet is provided by GCI, a museum and community center is maintained by the AVCP, and a library is operated by the City in cooperation with the University of Alaska.

²⁰¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰² AGNEW::Beck. (2011). *Bethel Comprehensive Plan*. Retrieved January 9, 2012 from: http://www.cityofbethel.org/vertical/Sites/%7B86032ACB-92B0-4505-919A-3F45B84FECD9%7D/uploads/Final_2035_Comprehensive_Plan.pdf.

²⁰³ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

²⁰⁴ Ibid.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Bethel from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$5,627,565	\$3,635,905	\$178,955	n/a
2001	\$5,930,185	\$4,194,997	\$155,918	n/a
2002	\$6,725,666	\$4,322,478	\$154,688	n/a
2003	\$6,542,212	\$4,603,797	\$169,456	n/a
2004	\$7,003,253	\$4,880,743	-	\$615,500
2005	\$8,741,801	\$5,357,912	-	n/a
2006	\$7,323,670	n/a	-	n/a
2007	\$8,059,713	\$5,782,218	-	n/a
2008	\$9,880,807	\$6,801,070	-	n/a
2009	\$11,415,358	\$8,007,750	\$384,996	n/a
2010	\$9,797,338	\$7,448,211	\$387,030	\$500,000

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

In a survey conducted by the AFSC in 2011, community leaders reported the community had 1,400 ft in public dock space available for permanent moorage and 240-ft of moorage space for transient vessels. Vessels up to 350-ft can use moorage in Bethel. Dock infrastructure is capable of handling regulated vessels, including rescue vessels, fuel barges, hazardous materials, tugs, and freight barges. Typically, commercial vessels under 125-ft use Bethel as a base of operations during the fishing season. Infrastructure projects completed between 2000 and 2010 include dockside electricity, roads serving dock space, haul out facilities, roads, water and sewer pipelines, water treatment, fire department improvements, school improvements, telephone service improvements, and post office improvements. Projects currently in progress or under development as of 2011 include a barge landing area, new dock spaces, dock improvements, dockside utilities, breakwater, harbor dredging, general utilities improvements, alternative energy, landfill improvements, public safety improvements, and communications improvements. Fisheries-related businesses within the community include fishing gear sales, boat repair services (electrical, welding, and mechanical), small vessel haulout services, commercial fishing moorage, recreational fishing moorage, tackle sales, drydock storage, fish lodging, boat fuel sales, fishing gear repair, ice (provided, but no sales), and air taxi. Residents of Bethel go to Kodiak, Homer, Seward, and Seattle for fisheries-related businesses and services not available in the community. A food bank, job placement services, and public subsidized housing are all available in the city.

*Medical Services*²⁰⁵

The Yukon-Kuskokwim Delta Regional Hospital is a qualified Acute Care and long-term care facility which provides regional services to 56 communities around the Y-K Delta. The Bethel Family Clinic is a qualified Emergency Care Center and Primary Health Care facility. Additional specialized care includes alcohol treatment and prevention services, and other outpatient services. Regional Emergency Medical Services (EMS) are also available within the community.

*Educational Opportunities*²⁰⁶

Bethel has a total of 6 schools within the city which provide a K-12 education. In 2011, there were a total of 1,375 students enrolled and 90 teachers, system-wide. In addition, the Kuskokwim campus of the University of Alaska Fairbanks (UAF) is located in Bethel, providing outreach and distance education services to the region. Finally, Yuut Elitnaurviat, a local non-profit corporation, provides regional vocational and on-the-job training.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvesting has been important to residents of the Bethel area for thousands of years. Subsistence salmon harvesting continues to be a primary economic activity along the Kuskokwim River.²⁰⁷ In addition to salmon, spring harvests of herring roe on kelp or hemlock boughs is an important subsistence resource for coastal Alaskan communities.²⁰⁸

Fisheries participation in the Lower Kuskokwim Delta dates back thousands of years to the original Central Yup'ik occupants. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. During early years, local salmon were cured and salted and by 1920, the largest commercial season to-date took place on the Kuskokwim, with five operators processing approximately 35,000 Chinook salmon that year. In 1922, there were four salteries operating near the mouth of the Kuskokwim, processing Chinook and sockeye salmon. The Kuskokwim area was closed to all fishing for export from 1926 through 1929. In 1930, regulations were modified to allow commercial fishing in part of Kuskokwim Bay. A floating cannery operated for that year, and by 1932, three companies engaged in commercial fishing. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. Information on commercial fishing during the late 1930s through the 1950s is limited. However in 1952, poor salmon runs prompted the closure of the

²⁰⁵ See footnote 201.

²⁰⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁰⁷ HDR Alaska. (1997). *Bethel Comprehensive Plan*. Retrieved January 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel-CP-1997.pdf>.

²⁰⁸ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

Kuskokwim River and Bay. Management was finally shifted to the State of Alaska in 1960, and commercial fishing resumed.²⁰⁹

At the time of statehood in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.²¹⁰ Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.²¹¹

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.²¹²

On the lower Kuskokwim, subsistence sockeye, chum, and Chinook harvesting typically begins by June 1st, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based from either a fish camp or from a home village. Drift gill nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{213,214}

The fishing sectors provide one of the few sources of revenue in the region not originating from government sources. However, over the past 20 years, the contribution of commercial fishing in has fallen due to poor runs and prices. Since the early 1990s, declines in

²⁰⁹ Pennoyer, S.; Middleton, K. R.; & Morris, M. E. (1968). *Arctic-Yukon-Kuskokwim Area Salmon Fishing History*. Retrieved April 11, 2012 from: <http://www.sf.ADFG.state.ak.us/fedaidpdfs/afrbIL.070.pdf>.

²¹⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Department of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

²¹¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Department of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

²¹² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²¹³ Coffing, M. (1991). *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River*. Retrieved July 12, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>

²¹⁴ Andrews, E.; and Coffing, M. (1986). *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

prices and landings have cost the community millions of dollars in lost revenue; however, prices have rebounded somewhat in recent years.²¹⁵ Bethel is located in Federal Reporting Area 514, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. In addition, the community is eligible to participate in the Community Development Quota (CDQ) program and is represented by the Coastal Villages Region Fund (CVRF). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.²¹⁶ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

In a survey conducted by the AFSC in 2011, community leaders reported that between 2005 and 2010, Bethel saw an increase in the number of commercial fishing vessels in the community; however, the number of vessels less than 35 ft long has declined due to fuel prices. In addition, although the community itself does not participate in the fisheries management process in Alaska, it is represented by CVRF in regional fisheries issues.

Processing Plants

Kuskokwim Seafoods is a small processing facility in Bethel that started in 2010 in order to provide a market to local salmon fishers to help them sell their catch closer to home.²¹⁷ Kuskokwim Seafoods processes four salmon species: Chinook, sockeye, chum and coho.²¹⁸

Fisheries-Related Revenue

In 2010, Bethel received \$1.87 million in fisheries-related revenue from the Shared Fisheries Business Tax, Fisheries Resource Landing Tax, harbor usage fees, port/dock usage fees, and marine fuels taxes, compared to \$1.2 million in 2000. After accounting for inflation,²¹⁹ total fisheries-related revenue grew by 21% between 2000 and 2010. Harbor usage fees have consistently provided the most revenue annually, compared to Shared Fisheries Landing Tax revenue, which has declined substantially between 2000 and 2010. In a survey conducted by the AFSC in 2011, community leaders reported that there are no fishing-industry related taxes or fee programs that support local services and infrastructure. In addition, there were no reports of Bethel receiving funds from CVRF in 2010; however, CVRF typically provides support each year to its communities through educational scholarships, jobs, and other community services. Information regarding fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

²¹⁵ AGNEW::Beck. (2011). *Bethel Comprehensive Plan*. Retrieved January 9, 2012 from: http://www.cityofbethel.org/vertical/Sites/%7B86032ACB-92B0-4505-919A-3F45B84FECD9%7D/uploads/Final_2035_Comprehensive_Plan.pdf.

²¹⁶ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

²¹⁷ Kuskokwim Seafoods (n.d.). Retrieved from: <http://kuskokwimseafoods.com/>

²¹⁸ Alaska Seafood Marketing Institute. (n.d.) Retrieved from: <http://alaskaseafood.org/industry/suppliers/>

²¹⁹ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

Commercial Fishing

Commercial fishing, particularly in salmon fisheries in Kuskokwim and Bristol Bay, is an important part of the local economy in Bethel. In 2010, 233 residents, or 3.8% of the population, held 238 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 218 residents held 225 CFEC permits. Of the CFEC permits held in 2010, 87% were for salmon, compared to 88% in 2000; 12% were for herring, compared to 9% in 2000; and 1% were for “other” finfish, compared to 1% in 2000. In addition, one resident held one License Limitation Program (LLP) permit for groundfish that year, although it was not actively fished. No residents held Federal Fisheries Permits (FFP) since between 2006 and 2010. Two residents held 958 shares of halibut quota in 2010; however, no quota share accounts were held and no quota allotment was given. The number of halibut quota shares peaked in 2002 and 2003 when 51,151 quota shares were held on one account. No residents held sablefish or crab quota between 2010 and when the programs began.

In 2010, 140 residents held commercial crew licenses, compared to 199 in 2000. In addition, residents held majority ownership of 33 vessels, compared to 55 in 2000. Of the CFEC permits held in 2010, 45% were actively fished, compared to 61% in 2000. This varies by fishery from 52% of salmon permits to 0% of herring and “other” finfish permits. No herring permits were actively fished between 2006 and 2010. No “other” finfish permits were actively fished between 2000 and 2010. No LLP groundfish permits were fished between 2005 and 2010. Fisheries prosecuted in 2010 by Bethel residents included: Bristol Bay drift gillnet and Lower Yukon gillnet salmon.²²⁰

In 2010, 1.25 million lbs of salmon valued at \$781,809 ex-vessel was landed in Bethel, compared to 3.70 million lbs valued at \$1.27 million in 2000; an increase of \$0.16 per pound landed after adjusting for inflation²²¹ and without considering the species composition of landings. Landings in Bethel peaked in 2009 at 3.93 million lbs valued at \$1.97 million ex-vessel. In 2010, Bethel ranked 38th of 67 Alaskan communities in terms of reported lbs landed and 41st in terms of ex-vessel value of landings. Residents reported landings 237,593 lbs of salmon valued at \$218,883 ex-vessel in 2010, compared to 444,516 lbs valued at \$274,549 ex-vessel in 2000; an increase of \$0.07 per pound landed after adjusting for inflation²²² and without considering the species composition of landings. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²²⁰ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²²¹ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

²²² Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Bethel: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$90,492	\$480,450	\$15,895	\$16,000	\$6,500	\$600	\$600	n/a	\$2,300	\$1,300	n/a
Shared Fisheries Business Tax ¹	\$92,830	\$76,733	\$15,895	\$5,484	\$601	\$1,509	\$1,716	\$910	\$644	\$535	\$568
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$638
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$1.02 M	\$1.05 M	\$980,700	\$979,760	\$1.00 M	\$1.07 M	\$1.04 M	\$1.19 M	\$1.24 M	\$1.22 M	\$1.06 M
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$210,000*
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$600,000*
<i>Total fisheries-related revenue⁴</i>	<i>\$1.20 M</i>	<i>\$1.61 M</i>	<i>\$1.01 M</i>	<i>\$1.00 M</i>	<i>\$1.01 M</i>	<i>\$1.07 M</i>	<i>\$1.04 M</i>	<i>\$1.19 M</i>	<i>\$1.24 M</i>	<i>\$1.22 M</i>	<i>\$1.87 M</i>
<i>Total municipal revenue⁵</i>	<i>\$5.63 M</i>	<i>\$5.93 M</i>	<i>\$6.73 M</i>	<i>\$6.54 M</i>	<i>\$7.00 M</i>	<i>\$8.74 M</i>	<i>\$7.32 M</i>	<i>\$8.06 M</i>	<i>\$9.88 M</i>	<i>\$11.42 M</i>	<i>\$9.80 M</i>

Note: n/a indicates that no data were reported for that year.

*AFSC 2011 Community Survey

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Bethel: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	1	1	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	1	1	1	1	1	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Halibut (CFEC) ²	Total permits	3	6	6	3	0	0	0	1	1	0	0
	Fished permits	1	2	2	1	0	0	0	0	0	0	0
	% of permits fished	33%	33%	33%	33%	n/a	n/a	n/a	0%	0%	n/a	n/a
	Total permit holders	3	6	6	3	0	0	0	1	1	0	0
Herring (CFEC) ²	Total permits	20	28	28	34	32	33	31	29	29	31	28
	Fished permits	5	2	0	2	2	1	0	0	0	0	0
	% of permits fished	25%	7%	0%	6%	6%	3%	0%	0%	0%	0%	0%
	Total permit holders	20	26	26	32	31	32	31	28	29	30	27

Table 4 cont'd. Permits and Permit Holders by Species, Bethel: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	3	3	3	3	2	2	2	1	2	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	3	3	3	3	2	2	2	1	2	2	2
Salmon (CFEC) ²	Total permits	198	202	207	215	215	218	212	207	201	204	207
	Fished permits	131	102	87	92	105	106	91	92	85	76	108
	% of permits fished	66%	50%	42%	43%	49%	49%	43%	44%	42%	37%	52%
	Total permit holders	205	205	209	218	219	221	214	212	203	208	214
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>225</i>	<i>240</i>	<i>245</i>	<i>256</i>	<i>250</i>	<i>254</i>	<i>246</i>	<i>239</i>	<i>234</i>	<i>238</i>	<i>238</i>
	<i>Fished permits</i>	<i>137</i>	<i>106</i>	<i>89</i>	<i>95</i>	<i>107</i>	<i>107</i>	<i>91</i>	<i>92</i>	<i>85</i>	<i>76</i>	<i>108</i>
	<i>% of permits fished</i>	<i>61%</i>	<i>44%</i>	<i>36%</i>	<i>37%</i>	<i>43%</i>	<i>42%</i>	<i>37%</i>	<i>38%</i>	<i>36%</i>	<i>32%</i>	<i>45%</i>
	<i>Permit holders</i>	<i>218</i>	<i>220</i>	<i>223</i>	<i>235</i>	<i>235</i>	<i>239</i>	<i>233</i>	<i>229</i>	<i>222</i>	<i>228</i>	<i>233</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Bethel: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Bethel ^{2,5}	Total Net Lbs Landed In Bethel ²	Total Ex-Vessel Value Of Landings In Bethel ^{2,5}
2000	199	5	1	55	44	101	3,703,446	\$1,271,147
2001	137	10	1	55	36	245	6,594,702	\$1,078,261
2002	90	10	0	45	31	134	4,160,650	\$492,185
2003	93	4	0	48	29	106	6,205,245	\$1,046,926
2004	108	5	0	40	27	146	6,720,599	\$1,766,245
2005	120	11	0	41	26	132	9,208,413	\$1,628,007
2006	105	6	0	31	20	80	4,148,701	\$1,278,886
2007	118	5	0	30	17	52	3,296,951	\$1,389,231
2008	99	9	0	26	16	44	3,608,822	\$1,713,439
2009	116	7	0	25	14	46	3,930,847	\$1,973,926
2010	140	5	1	33	21	23	1,250,256	\$781,809

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Bethel: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	219	0
2001	0	958	0
2002	1	51,151	6,144
2003	1	51,151	6,142
2004	0	958	0
2005	0	958	0
2006	0	958	0
2007	0	958	0
2008	0	958	0
2009	0	958	0
2010	0	958	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Bethel: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Bethel: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Bethel: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	3,974,252	2,654,445	--	--	5,790,126	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	3,698,783	2,620,450	1,506,205	--	4,876,647	3,418,287	3,368,556	3,296,951	3,608,822	3,930,796	1,250,214
<i>Total²</i>	3,698,783	6,594,702	4,160,650	--	4,876,647	9,208,413	3,368,556	3,296,951	3,608,822	3,930,796	1,250,214
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	\$271,143	\$147,556	--	--	\$420,944	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$1,270,671	\$807,118	\$344,629	--	\$1,568,550	\$1,207,063	\$1,236,866	\$1,389,231	\$1,713,439	\$1,973,875	\$781,793
<i>Total²</i>	\$1,270,671	\$1,078,261	\$492,185	--	\$1,568,550	\$1,628,007	\$1,236,866	\$1,389,231	\$1,713,439	\$1,973,875	\$781,793

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Bethel Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	143,406	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	444,516	280,771	210,697	297,788	572,460	505,937	415,526	437,070	356,568	239,408	237,593
<i>Total²</i>	<i>587,922</i>	<i>280,771</i>	<i>210,697</i>	<i>297,788</i>	<i>572,460</i>	<i>505,937</i>	<i>415,526</i>	<i>437,070</i>	<i>356,568</i>	<i>239,408</i>	<i>237,593</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$13,459	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$274,549	\$107,662	\$89,628	\$151,285	\$265,605	\$293,416	\$255,775	\$280,244	\$254,288	\$181,013	\$218,883
<i>Total²</i>	<i>\$288,008</i>	<i>\$107,662</i>	<i>\$89,628</i>	<i>\$151,285</i>	<i>\$265,605</i>	<i>\$293,416</i>	<i>\$255,775</i>	<i>\$280,244</i>	<i>\$254,288</i>	<i>\$181,013</i>	<i>\$218,883</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing, while less significant than commercial and subsistence fishing, is nevertheless an important part of Bethel's fisheries involvement. In 2010, there were no active sport fish guide businesses, compared to 2 in 2000. In addition, residents held 7 sport fish guide licenses that year, compared to 6 in 2000. The number of sport fish guide licenses held in Bethel peaked in 2003 and 2004 at 9 each year. The number of sportfishing licenses sold in the city increased steadily between 2000 and 2010, with 1,799 sold in 2010 compared to 943 in 2000. In addition, 1,058 sportfishing licenses were sold to residents in 2010, compared to 814 in 2000.

Bethel is located in the Kuskokwim River and Bay Drainage ADF&G Harvest Survey Area which includes the Kuskokwim River drainage and all waters flowing into Kuskokwim Bay. While saltwater survey data is somewhat limited, 2008 saw a peak of 108 resident angler days fished. In 2010, there were a total of 19,455 freshwater angler days fished, compared to 19,990 in 2000. In that year, non-Alaska residents accounted for 72.1% of freshwater angler days fished, compared to 67.0% in 2000.

According to ADF&G Harvest Survey data, private anglers in Bethel target all five species of Pacific salmon, rainbow trout, Dolly Varden char, whitefish, burbot, arctic grayling, northern pike, halibut, and razor clams. There is no kept/released charter information available for Bethel.

In a survey conducted by the AFSC in 2011, community leaders reported that most recreational fishing in the community is either shore based or private-vessel based. Marine species targeted by private vessels include chum, king, coho, and sockeye salmon. Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Kuskokwim Area subsistence salmon fisheries rank as one of the largest in the State of Alaska, accounting for over 50% of the state's Chinook salmon harvests. More than 2,000 households in the Kuskokwim Area annually harvest salmon for subsistence use from June through August. ADF&G Division of Subsistence studies indicate that wild fish account for 85% of the total subsistence-harvested fish and wildlife resource in Kuskokwim River communities; with salmon accounting for up to 53% of the total annual subsistence harvest.²²³

Interviews of subsistence users conducted in 2008 indicated that fishing effort was concentrated during the week ending June 15, and extends through the week ending July 6. This period typically coincides with Chinook abundance. The majority of subsistence harvesters use gillnets and to a lesser degree, rod and reel gear types.²²⁴ Subsistence fishing and hunting are practiced in Bethel although detailed data is limited and information gathered by the ADF&G regarding household subsistence participation is unavailable.

Of the species listed by ADF&G in Table 13, Chinook salmon were harvested most, followed by coho, chum, sockeye, and pink salmon. In 2008, 88,757 salmon were harvested, accounting for 8.5% of statewide subsistence salmon harvests that year. In 2000, a total of 59,461 salmon were harvested. Salmon harvests peaked in 2008. In 2010, 8 residents held

²²³ Carroll, M. C.; and Patton, E. (2010). *Lower Kuskokwim River Inseason Subsistence Salmon Catch Monitoring, 2008*. Fishery Management Report No. 10-09. Retrieved August 16, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/06-3062008.pdf>.

²²⁴ Ibid.

Subsistence Halibut Registration Certificates (SHARC), compared to 10 in 2003. In that year, an estimated 560 lbs was harvested on 1 SHARC, compared to an estimated 44 lbs in 2000. Subsistence halibut harvests peaked in 2006 at an estimated 1,432 lbs. Between 2000 and 2010, an estimated 5 sea otters were harvested and 9 walrus. No information is available regarding subsistence sea lion, harbor seal, or spotted seal harvests. Information regarding subsistence trends can be found in Table 12 through 15.

Table 11. Sport Fishing Trends, Bethel: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Bethel ²
2000	0	6	814	943
2001	0	8	1,003	1,136
2002	0	7	1,011	1,442
2003	0	9	1,000	1,456
2004	0	9	974	1,400
2005	0	3	1,001	1,402
2006	0	4	865	1,294
2007	0	6	871	1,366
2008	0	5	911	1,489
2009	0	6	894	1,303
2010	0	7	1,058	1,799

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	n/a	n/a	16,437	4,236
2002	n/a	n/a	14,583	6,062
2003	28	63	16,923	7,355
2004	n/a	15	16,239	9,152
2005	19	18	13,725	5,685
2006	n/a	n/a	14,773	7,616
2007	n/a	n/a	13,390	7,816
2008	n/a	108	17,582	8,172
2009	n/a	n/a	12,625	5,166
2010	n/a	n/a	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Bethel: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Bethel: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1,739	1,213	22,515	10,616	13,794	n/a	12,536	n/a	n/a
2001	1,722	837	27,209	11,319	14,949	n/a	15,724	n/a	n/a
2002	1,500	1,312	19,305	15,082	12,966	n/a	7,350	n/a	n/a
2003	1,651	1,077	21,475	9,829	13,237	n/a	10,542	n/a	n/a
2004	1,876	982	27,504	12,162	15,068	n/a	10,606	n/a	n/a
2005	1,740	451	24,473	12,535	12,268	449	13,135	n/a	n/a
2006	1,771	403	23,094	18,794	17,004	906	11,798	n/a	n/a
2007	1,769	444	29,548	15,836	12,787	383	13,556	n/a	n/a
2008	1,987	452	35,144	18,639	16,969	n/a	18,005	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Bethel: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	10	4	44
2004	11	11	555
2005	8	5	592
2006	11	14	1,432
2007	15	4	289
2008	11	5	692
2009	13	1	n/a
2010	8	1	560

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Bethel: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	2	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	1	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	1	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	5	3	n/a	n/a	n/a	n/a
2008	n/a	n/a	1	n/a	n/a	n/a	n/a
2009	n/a	n/a	1	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that some of the current challenges for the portion of Bethel's economy that is based on fishing include limited moorage and shoreside space for commercial fishing. Community leaders reported that management actions by state and federal agencies have been fair; however, a lack of fish has affected Bethel significantly.

Chefnak (chuh-FORE-nuck)



People and Place

*Location*²²⁵

Chefnak is located on the south bank of the Kinia River, at its junction with the Keguk River, in the Yukon-Kuskokwim Delta. Chefnak is 98 mi southwest of Bethel and 490 mi southwest of Anchorage. The area encompasses 5.7 sq mi of land and 0.8 sq mi of water. The community was incorporated as a Second-class city in 1974, is located within the Bethel Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*²²⁶

In 2010, there were 418 residents, ranking Chefnak 131st of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 30.6%. Between 2000 and 2009, the population grew by 20.56% with an average annual growth rate of 1.05%; which was slightly higher than the statewide average annual growth rate of 0.75% and indicative of steady growth. However, this figure does not account for the dip in population between the 2009 state estimate and 2010 census number, which brought the total population closer to what it was in 2000.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were more than 475 permanent residents estimated to be living in Chefnak in 2010. Also in that year, approximately 500 seasonal or transient workers were living in the community. Peaks in population are typically seen between May and August, and are somewhat driven by employment in fishing sectors. Further information regarding population trends can be found in Table 1.

Chefnak was predominantly Yup'ik Eskimo in 2010.²²⁷ In that year, 95.7% of residents identified themselves as American Indian or Alaska Native, compared to 93.4% in 2000; 3.3% identified themselves as White, compared to 2.0% in 2000; 0.2% identified themselves as Black or African American, compared to 0.0% in 2000; and 0.7% identified themselves as two or more races, compared to 4.6% in 2000 (Figure 1).

In 2010, the average household size was 4.54, compared to 5.0 in 1990 and 5.25 in 2000. In that year, there were 99 total housing units, compared to 79 in 1990 and 82 in 2000. Of the households surveyed in 2010, 52.5% were owner-occupied, compared to 80.5% in 2000; 40.4% were renter-occupied, compared to 11.0% in 2000; 4.0% were vacant, compared to 7.3% in 2000; and 3.0% were occupied seasonally, compared to 1.2% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

²²⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²²⁷ See footnote 225.

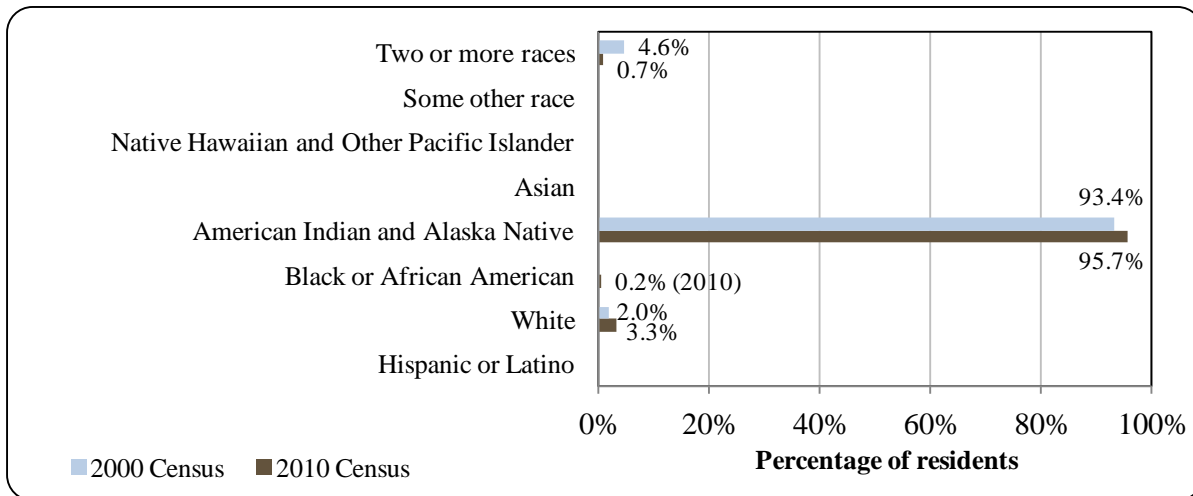
Table 1. Population in Chefnak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	320	-
2000	394	-
2001	-	397
2002	-	420
2003	-	433
2004	-	440
2005	-	458
2006	-	460
2007	-	448
2008	-	470
2009	-	475
2010	418	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Chefnak: 2000-2010 (U.S. Census).



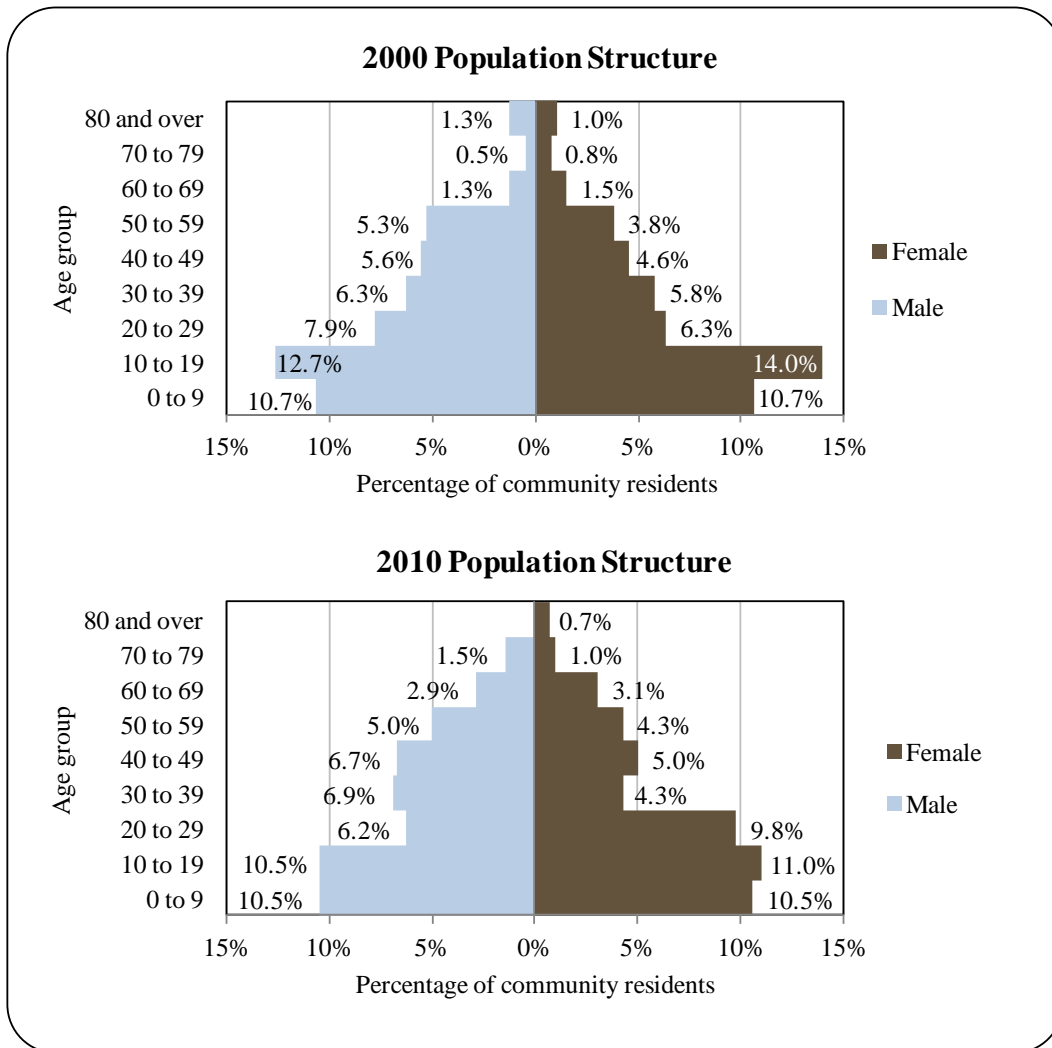
Gender distribution in 2010 was even at 50.2% male and 49.8% female. This was more even than both the distribution statewide (52.0% male, 48.0% female) and in 2000 (51.5% male, 48.5% female). The median age that year was 23.6 years, which was significantly younger than the statewide median of 33.8 years, and somewhat older than the 2000 median of 20.8 years.

Compared with 2000, the population structure in 2010 was somewhat less expansive. In that year, 42.5% of residents were under the age of 20, compared to 48.1% in 2000; 9.2% were

over the age of 59, compared to 6.4% in 2000; 32.2% were between the ages of 30 and 59, compared to 31.4% in 2000; and 16.0% were between the ages of 20 and 29, compared to 14.2% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 20 to 29 range (9.8% female, 6.2% male), followed by 30 to 39 (6.9% male, 4.3% female) and 40 to 49 (6.7% male, 5.0% female) ranges. Information regarding trends in Chefnak’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Chefnak Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-10 American Community Survey (ACS)²²⁸ estimated that 74.7% of the population aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 20.7% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 4.6% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 12.6% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 2.9% had an Associate's degree, compared to an estimated 8% of Alaska residents overall; no residents were estimated to have a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 3.4% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*²²⁹

The Native people of the Yukon-Kuskokwim (Y-K) Delta region have followed a traditionally nomadic, subsistence lifestyle dating back centuries. Extensive trade networks throughout the Y-K Delta were established prior to contact with Russian explorers in the late nineteenth century, and by the time of contact the Native people in the region already had access to Eurasian goods from trade routes across the Bering Strait. *Pastuliarraq*, near present-day Kotlik, was a trading center which connected these routes with the lower Y-K Delta region.

The nineteenth century was a time of European expansion and development in the region and with it came waves of disease epidemics which had disastrous effects on the Native peoples in the area. In the early twentieth century, the influence of missionaries coinciding with the influenza epidemics of 1900 and 1912 drastically changed the social and cultural identity of an entire generation within the region.

The village of Chefnak was not established in its current location until the mid-twentieth century, when Alexie Amagiqchik founded a small general store at the site. He had moved from a village on the Bering Sea to the new location one mi inland to escape potential floodwaters. Others from the original village followed and settled in Chefnak. The city was incorporated in 1974.²³⁰

Natural Resources and Environment

Chefnak is located in a marine climate. Precipitation averages 22 in, with 43 in of snowfall annually. Summer temperatures range from 41 to 57 °F (5 to 14 °C). Winter temperatures range 6 to 24 °F (-14 to -4 °C).²³¹ The community lies within the Clarence Rhode National Wildlife Refuge, established for migratory waterfowl protection.

²²⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²²⁹ Association of Village Council Presidents. (2000). *2000 Yukon-Kuskokwim Strategic Plan*. Retrieved January 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/YukonKuskokwimDelta-EDP-2000.pdf>

²³⁰ See footnote 225.

²³¹ Ibid.

The geography of the Y-K Delta region is characterized by sub-arctic tundra, tidal wetlands, and boreal forests. The region contains more than 400,000 charted lakes and ponds. Soils around Chefnak consist of alluvial delta sediments and coastal marine deposits. The soil is fine grained and poorly drained. Permafrost in the area varies in depth and while there is limited local data, regional depths can extend to around 600 ft in some areas. The active layer is estimated to range between 1.5 and 3 ft deep, depending on conditions. Coastal areas are classified typically as wet tundra consisting of marshes, swamps, and water ponds. Vegetation in tundra areas consists of sedges, grass, dwarf shrub, and peatland. Fish in the area include all five species of Pacific salmon, boreal smelt, arctic cisco, northern pike, blackfish, stickleback, sheefish, burbot, and whitefish. Terrestrial wildlife includes bear, moose, hares, beaver, mink, muskrat, otter, fox, weasel, and caribou. Aquatic mammals include seals, walrus, and several species of whale. In addition, the Y-K delta is renowned as one of the most productive waterfowl breeding areas in the world.²³²

On a regional level, natural hazards present in coastal areas of western Alaska include storm urges, flooding, shoreline erosion, and sea level rise.²³³ While Chefnak is not located directly on the coast, it is subject to marine influences due to its close proximity. Snow-drifting is a potential hazard due to strong prevailing winds during the winter and low vegetation.

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in 2010.²³⁴

Current Economy²³⁵

Chefnak is largely dependent on a subsistence economy, with employment opportunities limited to part time and seasonal work. The local seafood processor provides some employment when in operation. Top employers in 2010²³⁶ included the Lower Kuskokwim School District, Chefnak Traditional Council, Chefnarmute Inc., Coastal Villages Seafoods Inc., City of Chefnak, Yukon Kuskokwim Health Corp. 90, Naterkaq Light Plant, Chefnak Water & Sewer Supply, Rural Alaska Community Action Program, and Association of Village Council Presidents. In a survey conducted by the AFSC in 2011, community leaders reported that an estimated 20 to 30 permanent residents worked in the local seafood processing industry in 2010.

In 2010,²³⁷ the estimated per capita income was \$11,562 and the estimated median household income was \$39,583, compared to \$8,474 and \$35,556 in 2000, respectively. However, after accounting for inflation,²³⁸ the adjusted per capita income (\$11,143) and adjusted

²³² See footnote 229.

²³³ Alaska Department of Natural Resources. (n.d.). *Alaska Coastal Hazards*. Retrieved January 12, 2012 from: http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

²³⁴ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 21, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

²³⁵ Unless otherwise noted, all monetary data are reported in nominal values.

²³⁶ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²³⁷ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²³⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

median household income (\$46,756) indicate that individual earnings have stayed the same while household earnings declined. In 2010, Chefnak ranked 248th of 305 communities reporting per capita earnings and 193rd of 299 communities reporting median household earnings.

Chefnak's small population size may have prevented the ACS from accurately portraying economic conditions.²³⁹ Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$3.01 million in total wages in 2010.²⁴⁰ When compared with the population in 2010, the per capita income equals \$7,202, suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census.²⁴¹ In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²⁴² However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,²⁴³ 62.3% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, the estimated unemployment rate was 15.6%, compared to an estimated 5.9% statewide; and an estimated 24.2% of residents were estimated to be living below the poverty line, compared to an estimated 9.5% statewide. However, there is the possibility that unemployment and poverty statistics are likely inaccurate given the small population of 418. The ALARI database indicates that the unemployment rate in 2010 was 24.6% based on unemployment claimants.

Of those employed in 2010,²⁴⁴ an estimated 43.0% worked in the private sector and an estimated 57.0% worked in the public sector. By industry, most (37.7%) of those employed were estimated to work in education service, health care, and social assistance sectors in 2010; followed by public administration sectors (22.8%); transportation, warehousing, and utilities sectors (11.4%); and retail trade sectors (11.4%). By occupation type, most (28.9%) employed residents were estimated to hold service positions that year; followed by sales or office positions (25.4%); management or professional positions (21.9%); natural resources, construction, or maintenance positions (13.2%); and production, transportation, or material moving positions (9.6%). Between 2000 and 2010, there were significant proportional increases in public administration, finance, insurance, and real estate sectors; while were proportional declines in education service, health care and social assistance sectors. Information regarding employment trends can be found in Figures 3 and 4.

No individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

²³⁹ See footnote 228.

²⁴⁰ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²⁴¹ See footnote 236.

²⁴² Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

²⁴³ See footnote 228.

²⁴⁴ See footnote 237.

According to 2010 ALARI estimates, most (40.1%) employed residents worked in local government sectors; followed by trade, transportation, and utilities sectors (25.3%) and manufacturing sectors (10.1%).

Figure 3. Local Employment by Industry in 2000-2010, Chefnak (U.S. Census).

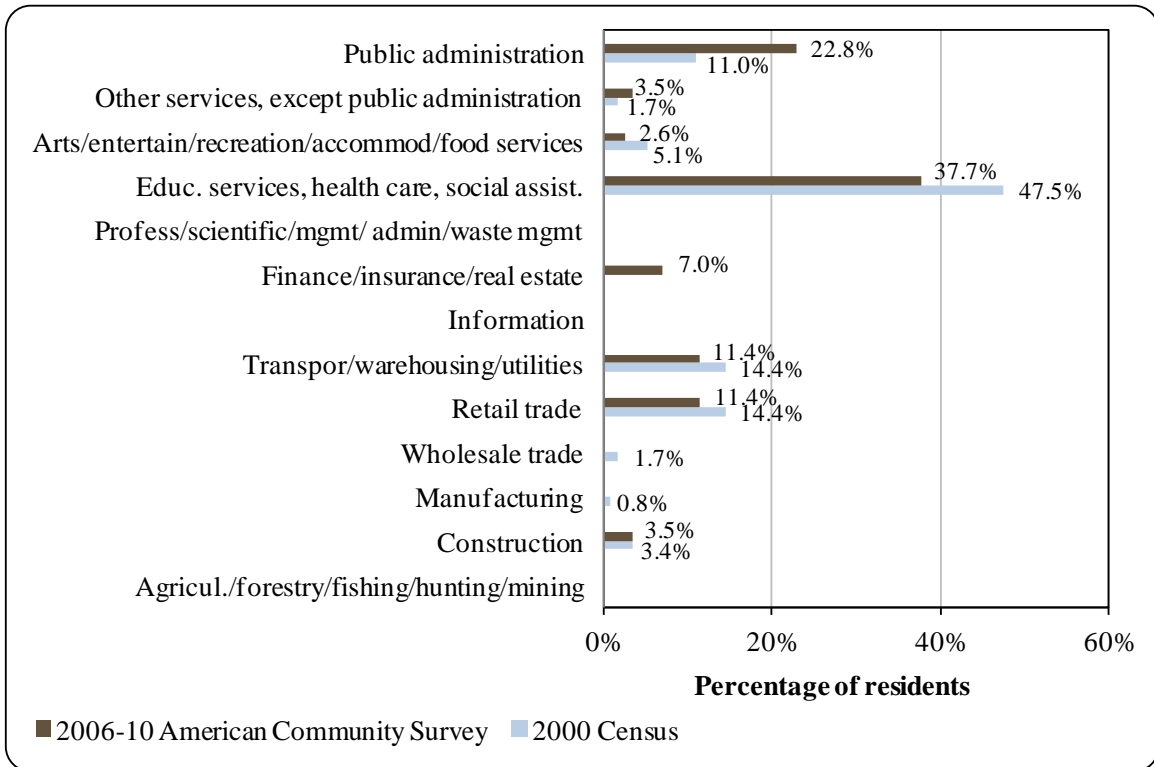
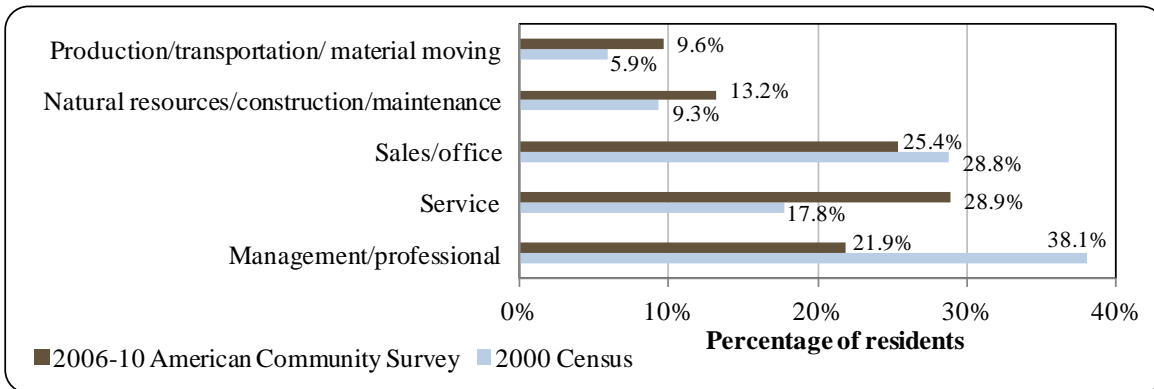


Figure 4. Local Employment by Occupation in 2000-2010, Chefnak (U.S. Census).



Governance

Chefnak is a Second-class city with a mayoral form of government. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal government (Village of Chefnak) and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Chefnakmute Inc.). The regional ANCSA Native Corporation representing Chefnak is the Calista Corporation. The closest Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Services (NMFS) offices are located in Bethel, 98 mi northeast. The closest

U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage, 490 mi northeast.

Chefnak administered a 2% sales tax in 2010. When adjusted for inflation,²⁴⁵ total municipal revenues increased 86.1% between 2000 and 2010 from \$417,064 to \$1.0 million. In 2010, most locally generated revenues were collected from utility rents, gaming fees, and sales taxes. Most outside revenues were collected from Community Revenue Sharing and payments in lieu of taxes. In that year, sales tax accounted for 4.5% of total municipal revenues, compared to 4.3% in 2000. State allocated Community Revenue Sharing accounted for 11.9% of total municipal revenues in 2010, compared to 6.4% from State Revenue Sharing in 2000. Between 2000 and 2010, there were no state or federal fisheries-related grants awarded to Chefnak. Information regarding municipal revenue trends can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Chefnak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$417,064	\$18,130	\$26,566	n/a
2001	\$323,673	\$13,438	\$25,359	n/a
2002	\$513,215	\$1,926	\$25,387	n/a
2003	\$479,516	\$55,840	\$26,108	n/a
2004	\$511,312	\$24,027	-	n/a
2005	\$301,143	\$29,842	-	n/a
2006	\$479,292	\$52,788	-	n/a
2007	\$621,182	\$27,000	-	n/a
2008	\$648,767	\$36,492	-	n/a
2009	\$1,336,253	\$40,935	\$119,977	n/a
2010	\$1,003,835	\$45,446	\$119,822	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

²⁴⁵ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

*Connectivity and Transportation*²⁴⁶

A state-owned 2,500-ft long by 28-ft wide gravel airstrip provides chartered and private air access year-round, and a seaplane base is available. Although there are no docking facilities, a number of fishing boats and skiffs are used for local travel. “Snowmachines” are relied upon during the winter. Winter trails are marked to Kipnuk, 20 mi southeast and Kasigluk 83 mi northeast. Roundtrip airfare between Anchorage and Chefnak in June 2012 was \$724.²⁴⁷

*Facilities*²⁴⁸

One well and a water treatment plant serve 12 watering points. The treated water is undrinkable due to saltwater intrusion. Residents drink melted ice cut from a local pond in the winter and rain catchment the rest of the year. High snow drifts make the boardwalk impassable for winter haul service. The community has requested a grant for a new water treatment plant. The school is in the process of establishing its own water system using reverse osmosis to treat the salty water. Public safety services are provided by Chefnak police department. Fire and rescue services are provided by Chefnak volunteer fire department. Additional public facilities include a school gym, community center, and school library. Communications services include local and long distance telephone, internet, local and cable television, and local radio.

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed or still in progress as of 2010 included a fish cleaning station, jetty, diesel powerhouse, water treatment facilities, public safety improvements, telephone service, fire department improvements, school improvements, and post office improvements. In addition, projects under development include airport improvements, water and sewer pipelines, alternative energy systems, land fill, and a barge landing area. There is no public dock space available for permanent and transient moorage, and vessels under 35 ft typically use Chefnak as their base of operations. Fuel barges were the only regulated vessel type being handled by Chefnak’s port infrastructure as of 2010. Fisheries-businesses and services in the area include a seafood processing plant, fishing gear sales, boat repair (electrical, welding, mechanical services, machine shop), tackle sales, bait sales, commercial cold storage facilities, boat fuel sales, and air taxi services. Residents travel to Bethel and Anchorage for businesses and services not available locally.

*Medical Services*²⁴⁹

The Chefnak Clinic is a Primary Health Care facility and Community Health Aid Program (CHAP) site. Acute, specialized, and long-term care is provided in Bethel.

²⁴⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁴⁷ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

²⁴⁸ See footnote 246.

²⁴⁹ Ibid.

*Educational Opportunities*²⁵⁰

Chaputnguak School offers preschool through 12th grade instruction. In 2011, there were 163 students enrolled and 13 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Like many communities on the Y-K Delta, Chefnak has an extensive history of involvement in subsistence fisheries. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.²⁵¹ However, the salmon resource is not as easily accessible for communities along the Bering Sea coast as in other regions of Alaska.²⁵²

Today, subsistence activities continue to be an important part of the community's identity; however, commercial fishing has also taken root as a driver of the local economy. In a survey conducted by the AFSC in 2011, community leaders reported that there have been a lot less charter and private boats, as well as vessels greater 35 ft in length between 2005 and 2010. Chefnak does not participate in the fisheries management process in Alaska.

Chefnak is located in Federal Reporting Area 415, International Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. The community is eligible for participation in the Community Development Quota (CDQ) program and represented by the Coastal Villages Region Fund (CVRF). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.²⁵³ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

²⁵⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁵¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Department of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

²⁵² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²⁵³ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

Processing Plants

The Coastal Villages Seafoods fish processing plant in Chefnak is a CDQ operation and a subsidiary of the CVRF. This facility processes halibut in June and July.²⁵⁴ Coastal Villages Seafoods processing facilities (including the other facilities in Quinhagak, Toksook Bay, Mekoryuk, Tununak, Kipnuk, Hooper Bay, and Platinum) also process black cod, Pacific cod, King and Snow crab, salmon (Chinook, chum, coho, sockeye).²⁵⁵ CVRF maintains a local community service center that helps local fishing families maintain, repair, service, and modify their boats, motors, and fishing gear. The local plant provides free room and board to its fish processing workers, as well as transportation to and from the plant site and a cash bonus for all those who complete their contracts.²⁵⁶

Fisheries-Related Revenue

The community of Chefnak took in very little fisheries-related revenue between 2000 and 2010. Revenues that were collected came from raw fish taxes and Shared Fisheries Landings taxes for the most part. In a survey conducted by the AFSC in 2011, community leaders reported that revenues that were collected from fisheries-related sources were put towards roads, water and wastewater systems, and police and fire services. It is not known if the community received any funds from CVRF in 2010. Information regarding fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that the halibut season runs on average between June 1st and August 15th. Gear types used by commercial fishing vessels that used Chefnak as their base of operations during the fishing season include longline, gill net, and rod and reel. In 2010, 36 residents, 8.6% of the population, held 48 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 30 residents held 59 CFEC permits. In that year, 65% of CFEC permits issued were for halibut; compared to 46% in 2000; 19% were for herring, compared to 41% in 2000; and 17% were for salmon, 14% in 2000. Between 2000 and 2010, no residents held Federal Fishery Permits (FFP) or License Limitation Program (LLP) permits. No residents held halibut, sablefish, or crab quota between 2010 and when the programs began.

In 2010, 14 residents held commercial crew licenses, compared to 21 in 2000. In addition, residents held majority ownership of 35 vessels, compared to 33 in 2000. Of the CFEC permits held in 2010, 63% were actively fished, compared to 41% in 2000. This varied by fishery from 81% of halibut permits, to 63% of salmon and 0% of herring permits. Herring permit activity had been in decline since 2000 when 38% of permits were actively fished.

²⁵⁴ Coastal Villages Seafood. (n.d.). Retrieved from: <http://coastalvillages.org/>.

²⁵⁵ Alaska Seafood Marketing Institute (n.d.) Retrieved from <http://alaskaseafood.org/industry/suppliers/detail.cfm?Supplier=419>.

²⁵⁶ See footnote 254.

Conversely, halibut permit activity increased during that time. Fisheries prosecuted by Chefnak residents in 2010 included: statewide longline, mechanical jig, and hand troll halibut; and Bristol Bay drift gillnet salmon.

Landings made in Chefnak in 2009 and 2010 are considered confidential. In 2010, residents landed 22,697 lbs of halibut valued at \$72,342 ex-vessel, compared to 12,298 lbs valued at \$15,383 ex-vessel; an increase of \$1.43 per pound after adjusting for inflation.²⁵⁷ In that same year, 270,487 lbs of salmon were landed valued at \$248,649 ex-vessel, compared to 339,705 lbs valued at \$224,000 ex-vessel in 2000; an increase of \$0.01 per pound after adjusting for inflation²⁵⁸ and without considering the species composition of landings. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁵⁷ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

²⁵⁸ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Chefnak: 2000-2010.

Revenue Source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$250	\$693	\$700	\$343	\$149	\$293	n/a	\$430	\$300	\$800	\$1,100
Shared Fisheries Business Tax ¹	\$693	\$538	\$121	\$384	\$149	\$292	\$420	\$364	\$695	\$1,043	\$110
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$123
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$943</i>	<i>\$1,231</i>	<i>\$821</i>	<i>\$727</i>	<i>\$298</i>	<i>\$585</i>	<i>\$420</i>	<i>\$794</i>	<i>\$995</i>	<i>\$1,843</i>	<i>\$1,333</i>
<i>Total municipal revenue⁵</i>	<i>\$417,064</i>	<i>\$232,673</i>	<i>\$513,215</i>	<i>\$479,292</i>	<i>\$511,312</i>	<i>\$301,143</i>	<i>\$479,292</i>	<i>\$621,182</i>	<i>\$648,767</i>	<i>\$1.34 M</i>	<i>\$1.00 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Chefornak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	27	43	35	25	27	25	24	35	34	31	31
	Fished permits	10	25	16	10	18	16	18	30	29	22	25
	% of permits fished	37%	58%	46%	40%	67%	64%	75%	86%	85%	71%	81%
	Total permit holders	18	29	24	19	21	20	20	31	30	28	28
Herring (CFEC) ²	Total permits	24	20	18	15	15	15	13	11	10	9	9
	Fished permits	9	4	4	1	1	0	1	0	0	0	0
	% of permits fished	38%	20%	22%	7%	7%	0%	8%	0%	0%	0%	0%
	Total permit holders	22	18	16	14	14	14	12	10	9	8	8

Table 4 cont'd. Permits and Permit Holders by Species, Chefnak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	8	8	8	8	8	8	8	9	9	9	8
	Fished permits	5	5	5	5	5	5	5	5	5	5	5
	% of permits fished	63%	63%	63%	63%	63%	63%	63%	56%	56%	56%	63%
	Total permit holders	9	8	8	8	8	8	8	9	9	9	8
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>59</i>	<i>71</i>	<i>61</i>	<i>48</i>	<i>50</i>	<i>48</i>	<i>45</i>	<i>55</i>	<i>53</i>	<i>49</i>	<i>48</i>
	<i>Fished permits</i>	<i>24</i>	<i>34</i>	<i>25</i>	<i>16</i>	<i>24</i>	<i>21</i>	<i>24</i>	<i>35</i>	<i>34</i>	<i>27</i>	<i>30</i>
	<i>% of permits fished</i>	<i>41%</i>	<i>48%</i>	<i>41%</i>	<i>33%</i>	<i>48%</i>	<i>44%</i>	<i>53%</i>	<i>64%</i>	<i>64%</i>	<i>55%</i>	<i>63%</i>
	<i>Permit holders</i>	<i>30</i>	<i>37</i>	<i>32</i>	<i>28</i>	<i>30</i>	<i>29</i>	<i>29</i>	<i>39</i>	<i>39</i>	<i>37</i>	<i>36</i>

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Chefnak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Chefnak ²	Total Net Lbs Landed In Chefnak ^{2,5}	Total Ex-Vessel Value Of Landings In Chefnak ^{2,5}
2000	21	0	1	33	26	0	0	\$0
2001	19	0	1	34	27	0	0	\$0
2002	12	0	1	28	22	0	0	\$0
2003	16	0	1	25	18	0	0	\$0
2004	17	0	1	27	20	0	0	\$0
2005	14	0	1	26	21	0	0	\$0
2006	18	0	1	27	22	0	0	\$0
2007	16	0	1	38	33	0	0	\$0
2008	15	0	1	37	31	0	0	\$0
2009	17	1	1	34	28	21	--	--
2010	14	1	1	35	29	24	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Chefnak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Chefnak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Chefnak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Chefnak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	--	--
Finfish	0	0	0	0	0	0	0	0	0	--	--
Halibut	0	0	0	0	0	0	0	0	0	--	--
Herring	0	0	0	0	0	0	0	0	0	--	--
Other Groundfish	0	0	0	0	0	0	0	0	0	--	--
Other Shellfish	0	0	0	0	0	0	0	0	0	--	--
Pacific Cod	0	0	0	0	0	0	0	0	0	--	--
Pollock	0	0	0	0	0	0	0	0	0	--	--
Sablefish	0	0	0	0	0	0	0	0	0	--	--
Salmon	0	0	0	0	0	0	0	0	0	--	--
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>--</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>--</i>	<i>--</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Chefnak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	12,298	14,202	6,993	6,304	5,315	7,060	16,360	23,445	47,124	28,884	22,967
Herring	156,104	34,502	28,404	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	339,705	216,431	178,697	296,139	429,440	353,904	415,651	404,944	347,728	333,908	270,487
<i>Total²</i>	<i>508,107</i>	<i>265,135</i>	<i>214,094</i>	<i>302,443</i>	<i>434,755</i>	<i>360,964</i>	<i>432,011</i>	<i>428,389</i>	<i>394,852</i>	<i>362,792</i>	<i>293,454</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$15,383	\$16,993	\$10,894	\$7,881	\$6,646	\$12,303	\$59,892	\$101,481	\$145,193	\$66,861	\$72,342
Herring	\$14,814	\$1,622	\$1,415	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$224,000	\$84,388	\$78,220	\$137,760	\$203,406	\$198,197	\$252,944	\$251,542	\$251,700	\$254,051	\$248,649
<i>Total²</i>	<i>\$254,197</i>	<i>\$103,003</i>	<i>\$90,529</i>	<i>\$145,641</i>	<i>\$210,052</i>	<i>\$210,500</i>	<i>\$312,835</i>	<i>\$353,023</i>	<i>\$396,892</i>	<i>\$320,912</i>	<i>\$320,991</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Chefnak is located in the Kuskokwim River and Bay Drainages ADF&G Harvest Survey Area, which includes all waters flowing into Kuskokwim Bay. In a survey conducted by the AFSC in 2011, community leaders reported that no recreational fishing takes place in the area. In addition, there were no active sport fish businesses or guides located in the community between 2000 and 2010. However, in 2010, 18 sportfishing licenses were sold in the community, compared to 20 in 2006. In that same year, 30 sportfishing licenses were sold to residents, compared to two in 2000.

In 2010, there was a total of 19,455 freshwater angler days fished, compared to 19,940 in 2000. In that year, non-Alaska residents accounted for 72.1% of the freshwater angler days fished, compared to 67.1% in 2000. Data regarding saltwater angler days fished is limited; however, resident angler days fished in the survey area peaked in 2008 with 108. ADF&G data on species targeted by local private anglers are unavailable. Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Most residents in the community practice a subsistence lifestyle, which supplements diets and incomes as well as sustaining community identity. ADF&G data on subsistence is limited, and there is no information available on household participation in subsistence fisheries. Records on subsistence salmon, marine invertebrates, and non-salmon fish harvests are limited to 2004, when 63 salmon were taken. In 2010, 14 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 20 in 2003. In that year an estimated 371 lbs of halibut was harvested on 3 SHARC, compared to 3,492 lbs on all 20 SHARC in 2003. The steep decline in reported halibut harvests since 2003 is related to the decline in SHARC cards fished. Between 2000 and 2010, an estimated four walrus were harvested, with reports of one being harvested in 2010. Data are unavailable for Steller sea lion, harbor seal, and spotted seal harvests. Information regarding subsistence participation can be found in Tables 12 through 15.

Table 11. Sport Fishing Trends, Chefnak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Chefnak ²
2000	0	0	2	0
2001	0	0	3	0
2002	0	0	14	0
2003	0	0	4	0
2004	0	0	12	0
2005	0	0	9	0
2006	0	0	21	20
2007	0	0	32	21
2008	0	0	33	29
2009	0	0	39	38
2010	0	0	30	18

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	n/a	n/a	16,437	4,236
2002	n/a	n/a	14,583	6,062
2003	28	63	16,923	7,355
2004	n/a	15	16,239	9,152
2005	19	18	13,725	5,685
2006	n/a	n/a	14,773	7,616
2007	n/a	n/a	13,390	7,816
2008	n/a	108	17,582	8,172
2009	n/a	n/a	12,625	5,166
2010	n/a	n/a	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Chefnak: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Chefnak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	93	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	93	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	93	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	93	1	5	15	15	n/a	10	n/a	n/a
2004	91	3	6	13	18	n/a	26	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	91	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	92	1	n/a	n/a	n/a	n/a	2	n/a	n/a
2008	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Chefnak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	20	20	3,492
2004	20	20	2,852
2005	20	13	2,746
2006	20	10	2,078
2007	25	18	2,066
2008	15	8	1,010
2009	15	3	250
2010	14	3	371

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Chefnak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	1	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	1	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	1	n/a	n/a	n/a	n/a
2010	n/a	n/a	1	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Eek (EEK)



People and Place

*Location*²⁵⁹

Eek lies on the south bank of the Eek River, 12 mi east of the mouth of the Kuskokwim River. It is 35 air mi south of Bethel and 420 mi west of Anchorage. The area encompasses 0.9 sq mi of land and 0.1 sq mi of water. Eek was incorporated as a Second-class city in 1970, is located in the Bethel Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*²⁶⁰

In 2010, there were 296 residents ranking Eek 165th of 352 communities in terms of population size. Overall, between 1990 and 2010 the population grew by 16.5%. Between 2000 and 2009, the population grew by 0.71% with an average annual growth rate of -0.58, which was less than the statewide average of 0.75% and indicative of a fairly consistent population size. Information regarding population trends can be found in Table 1.

Eek's population is predominately Yup'ik Eskimo. In 2010, 97.6% of residents identified themselves as American Indian or Alaska Native, compared to 95.7% in 2000. Also in that year, 2.4% of residents identified themselves as White, compared to 3.2% in 2000. In addition, 1% of residents identified themselves as Hispanic or Latino in 2010, compared to 0.4% in 2000. Information regarding Eek's racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 3.25, compared to 3.50 in 1990 and 3.68 in 2000. In that year, there were a total of 101 housing units, compared to 80 in 1990 and 83 in 2000. Of the households surveyed in 2010, 64% were owner occupied, compared to 80% in 2000; 26% were renter-occupied, compared to 12% in 2000; 7% were vacant, compared to 8% in 2000; and 3% were occupied seasonally, compared to 0% in 2000. Since 1990, there have been no reports of residents living in group quarters.

The gender distribution in Eek was slightly skewed in 2010 at 53.0% male and 47.0% female, and was similar the distribution statewide (52.0% male, 48.0% female) and slightly more even than the distribution in 2000 (54.6% male, 45.4% female). The median age in 2010 was 27.5 years, which was younger than the statewide median of 33.8 years and slightly older than the 2000 median of 24 years.

²⁵⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

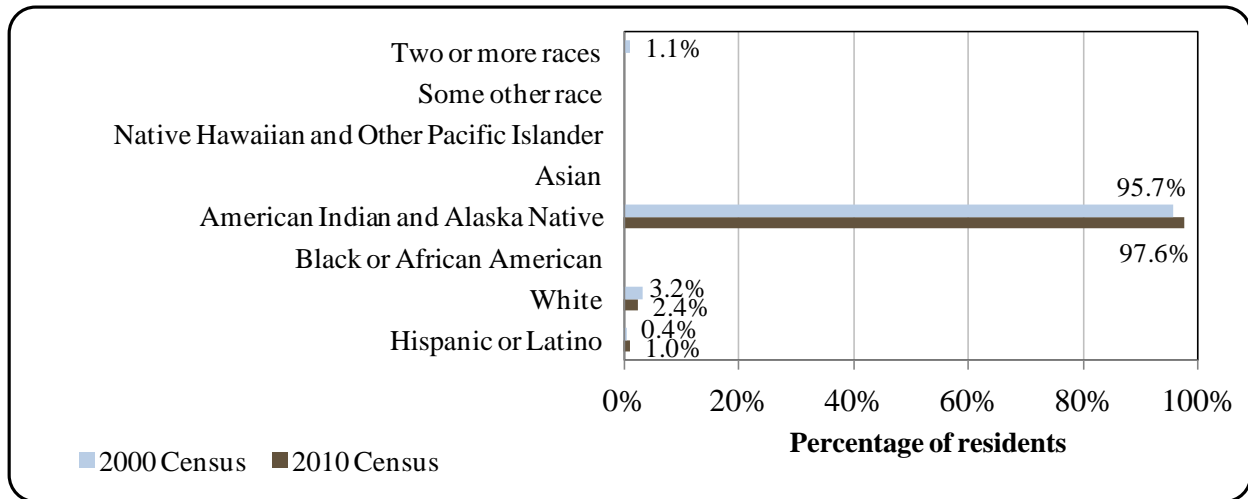
Table 1. Population in Eek from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	254	-
2000	280	-
2001	-	271
2002	-	290
2003	-	290
2004	-	292
2005	-	292
2006	-	287
2007	-	284
2008	-	271
2009	-	282
2010	296	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

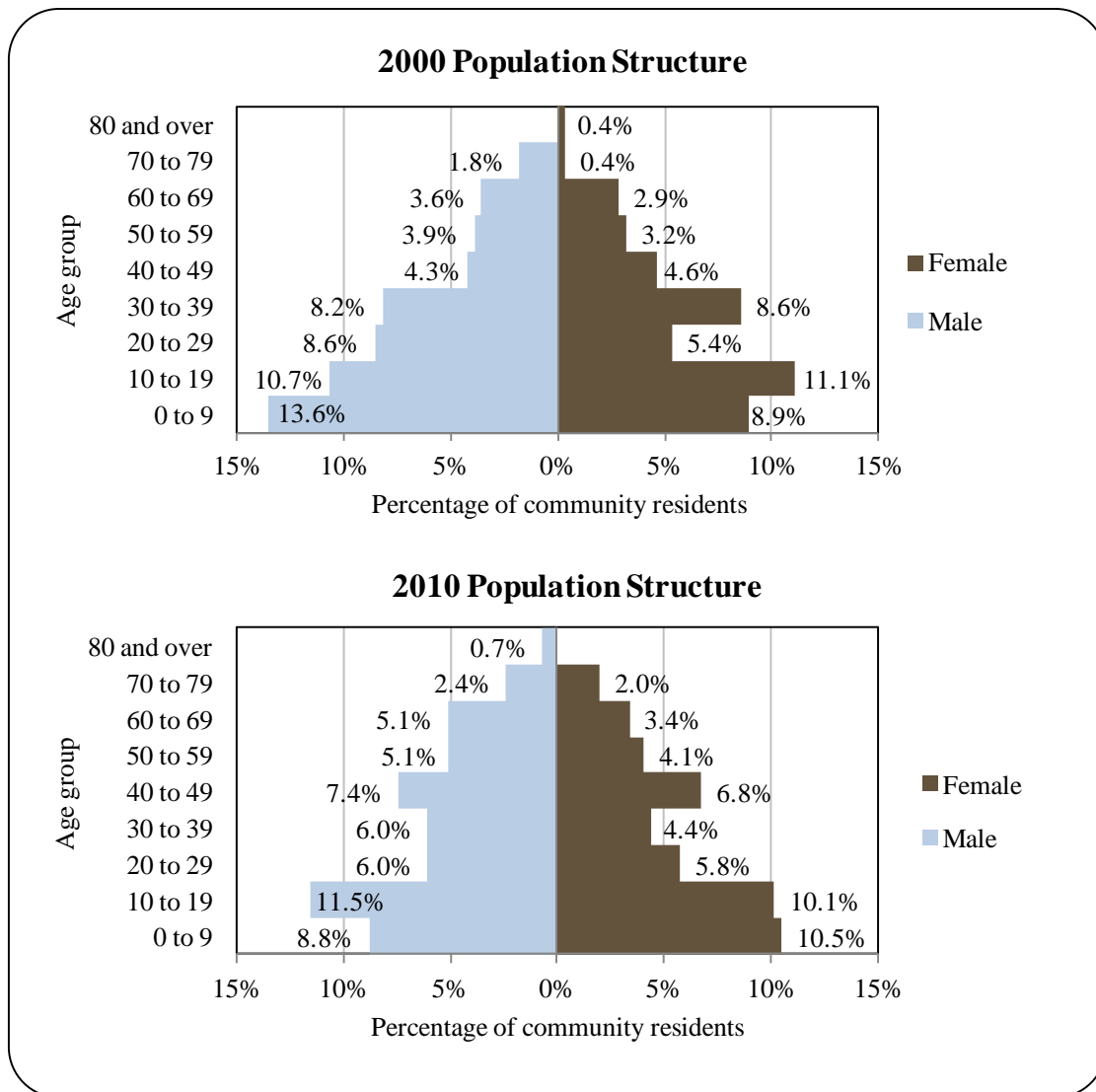
Figure 1. Racial and Ethnic Composition, Eek: 2000-2010 (U.S. Census).



Compared with 2000, the population structure in 2010 was slightly less expansive, indicating a shift towards a more aged population. In that year, 40.9% of residents were under the age of 20, compared to 44.3% in 2000; 13.6% were over the age of 59, compared to 9.1% in 2000; 33.8% were between the ages of 30 and 59, compared to 32.8% in 2000; and 11.8% were between the ages of 20 and 29, compared to 14% in 2000.

Overall, gender distribution by age cohort was more even in 2010 than in 2000, with slight male biases along most age ranges. The greatest absolute gender difference occurred in the 60 to 69 range (5.1% male, 3.4% female), followed by the 0 to 9 range (10.5% female, 8.8% male) and 30 to 39 range (6% male, 4.4% female). Of those three, the greatest relative gender difference occurred within the 60 to 69 range. Information regarding trends in Eek’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Eek Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²⁶¹ estimated that 57% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 26.4% of residents had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 16.5% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 12.4% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 3.3% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 4.1% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall. No residents were estimated to hold an Associate's degree in 2010.

*History, Traditional Knowledge, and Culture*²⁶²

The area around what is now Eek was originally occupied by Yup'ik Eskimos around 2,000 years ago. At that time, the area provided a strategic trading route along the Yukon-Kuskokwim (Y-K) Delta region, connecting many communities located on the two rivers. The village was originally located on the Apokok River. It moved to its present location in the 1930s when constant flooding and erosion forced relocation. A U.S. Bureau of Indian Affairs (BIA) school and a Moravian church were constructed at the new site. A post office was established in 1949. The city was incorporated in 1970.

Natural Resources and Environment²⁶³

Eek is located in a marine climate. Annual precipitation averages 22 inches, with an annual average of 43 inches of snowfall. Summer temperatures average 41 to 57 °F (5 to 14 °C); winter temperatures average 6 to 24 °F (-14 to -4 °C).

The community is located in the Yukon Delta National Wildlife Refuge (YDNWR) which covers 19 million acres of the upper and lower Yukon Delta region.²⁶⁴ Eek itself is located on lowland alluvial deposits comprised of mud, silt, sand, gravel, and various organics; similar to conditions found on coastal plains found in much of western Alaska. The landscape in these lowland areas is populated with shallow circular lakes, streams, and sloughs. Vegetation in the area is characteristic of poorly drained, moist tundra. Vegetation types include dwarf shrubs, mosses, lichen forbs, grasses, and herbs. In areas along the Eek River, thickets of alder, willow, and birch can be found. In terms of wildlife, the area is probably best known for the abundant species of waterfowl. Many migratory birds make use of the wetlands for nesting. Terrestrial mammals in the YDNWR include moose, wolves, red and arctic fox, snowshoe hare, beaver, muskrat, and caribou. Marine and freshwater fish include all five species of Pacific salmon,

²⁶¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁶² See footnote 259.

²⁶³ Ibid.

²⁶⁴ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved January 6, 2012 from: <http://www.fws.gov/refuges/profiles/index.cfm?id=74540>.

sheefish, smelt, whitefish, burbot, northern pike, Dolly Varden char, rainbow trout, arctic grayling, herring, halibut, tomcod, and flounder. Marine mammals include Pacific walrus, spotted seals, ringed seals, Pacific bearded seals, porpoise, fur and harbor seals, and beluga, fin, gray, killer, and minke whales.²⁶⁵

Natural resources present in the area consist of fish and wildlife resources and the ecosystems that sustain them within the YDNWR. Eek's position on a wetland delta coupled with the area's designation as a national wildlife refuge precludes mineral and oil development outside Alaska Native Claims Settlement Act (ANCSA) and Alaska National Interest Lands Conservation Act (ANILCA) Native selected lands. Most historic mineral claims were located in the Kilbuck Mountains, southeast of Eek. In addition, several "grandfathered" oil lease applications are on file with the U.S. Bureau of Land Management (BLM), and they have yet to be released.²⁶⁶

Environmental hazards present in Eek include flood, wildfire, earthquake, tsunami, severe weather, and erosion. Of those hazards, flooding and severe weather have the highest probability of occurrence.²⁶⁷

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation sites active within Eek in 2010.²⁶⁸

Current Economy²⁶⁹

Eek's economy is heavily subsistence based since year round wage employment is limited. A few full-time positions are available at the school, city, and village office. Commercial fishing is a large contributor to the seasonal wage economy. Top employers²⁷⁰ in 2010 included: Lower Kuskokwim School District, City of Eek, Iqfijouaq Company Inc., Eek Traditional Council, Yukon Kuskokwim Health Corporation, Association of Village Council Presidents (AVCP) Housing Authority, Costal Villages Region Fund, Association of Village Council Presidents, and Ridge Contracting Inc.

In 2010,²⁷¹ the estimated per capita income was \$10,626 and the estimated median household income was \$17,350, compared to \$8,957 and \$17,500 in 2000, respectively. However, after accounting for inflation by converting 2000 values into 2010 dollars,²⁷² the real per capita income (\$11,778) and real median household income (\$23,012) indicate declines in both individual and household earnings. In 2010, Eek ranked 263rd of 305 communities from which per capita income was estimated, and 285th of 299 communities from which median household income was estimated.

²⁶⁵ U.S. Fish and Wildlife Service. (2004). *Land Conservation Plan for Yukon Delta National Wildlife Refuge*. Retrieved April 11, 2012 from: http://alaska.fws.gov/nwr/planning/pdf/YD_LCP.pdf.

²⁶⁶ Ibid.

²⁶⁷ U.S. Division of Homeland Security and Emergency Management. (2010). *State of Alaska Hazard Mitigation Plan 2010*. Retrieved April 11, 2012 from: http://www.ready.alaska.gov/plans/documents/SHMP_2010_UPDATE_ENTIRE_FINAL_COMPLETE.pdf.

²⁶⁸ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved April 11, 2012 from: <http://dec.alaska.gov/spar/csp/>.

²⁶⁹ Unless otherwise noted, all monetary data are reported in nominal values.

²⁷⁰ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

²⁷¹ U.S. Census American Community Survey 2006-2010 estimates.

²⁷² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Although Eek's small population size may have prevented the ACS from accurately portraying economic conditions, this decrease in per capita income is confirmed by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$2.29 million in total wages in 2010.²⁷³ When matched with the population in 2010, the per capita income equals \$7,721, which is somewhat similar to the ACS estimate for 2010. In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²⁷⁴ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,²⁷⁵ 51.2% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, an unemployment was estimated at 15.9%, compared to an estimated 5.9% statewide; and an estimated 27.9% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 31% worked in the private sector while an estimated 69% worked in the public sector.

By industry, most (34.5%) employed residents were estimated to work in education service, health care, or social assistance sectors in 2010; followed by retail trade sectors (25.9%); transportation, warehousing, and utilities sectors (17.2%); and public administration sectors (17.2%) (Figure 3). By occupation type, most (34.5%) employed residents were estimated to hold management or professional positions; followed by sales or office positions (34.5%); service positions (20.7%); production, transportation or material moving positions (5.2%); and natural resources, construction, or maintenance positions (5.2%) (Figure 4). Between 2000 and 2010 there were significant shifts in industry representation in those years. Notable declines occurred in arts, entertainment, recreation, accommodations, food services, and private service sectors; while significant gains occurred in transportation, warehousing, utilities, and retail trade sectors. However, it should be noted that sampling techniques may not have captured the true scope of industry representation.²⁷⁶ According to 2010 ALARI estimates, most (52.7%) employed residents worked in local government sectors; followed by trade, transportation, and utilities sectors (17.6%); and financial service sectors (8.4%).²⁷⁷

²⁷³ ALARI estimates are based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²⁷⁴ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

²⁷⁵ See footnote 261.

²⁷⁶ Ibid.

²⁷⁷ See footnote 270.

Figure 3. Local Employment by Industry in 2000-2010, Eek (U.S. Census).

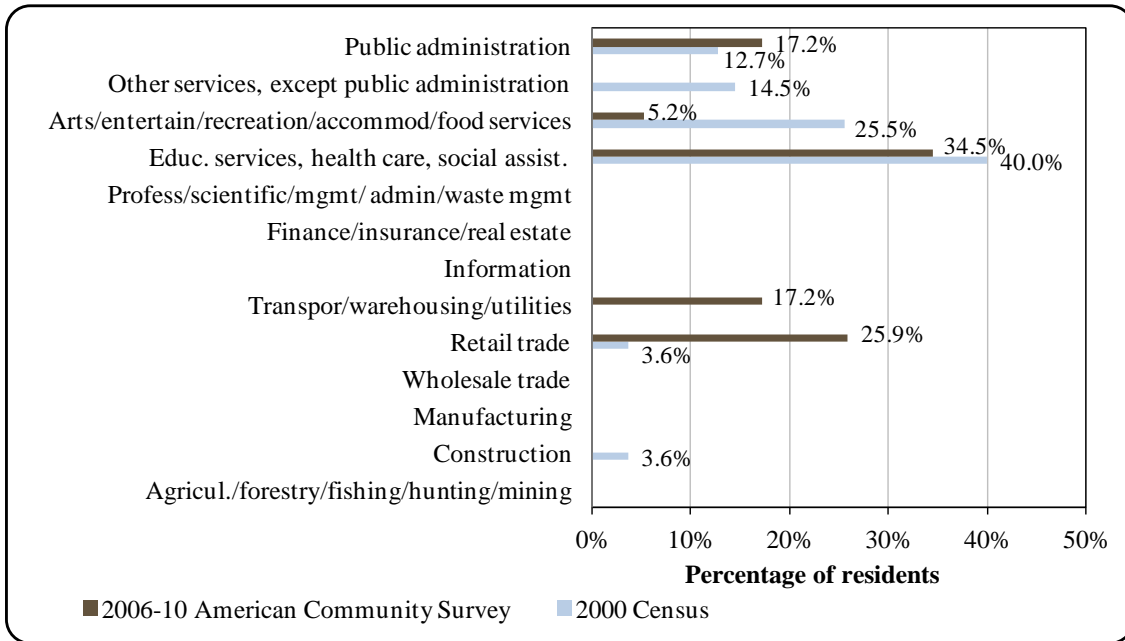
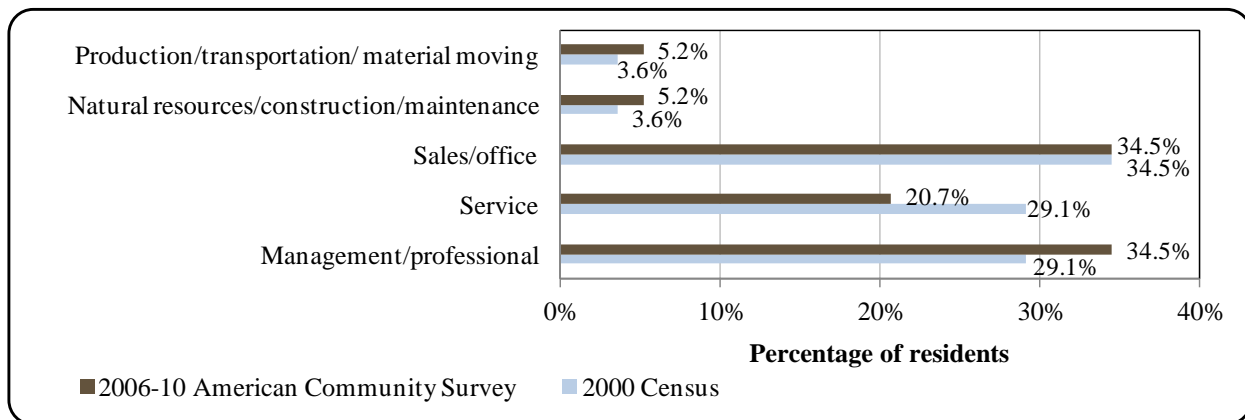


Figure 4. Local Employment by Occupation in 2000-2010, Eek (U.S. Census).



No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Further information regarding employment trends can be found in Figures 3 and 4.

Governance

Eek is a Second-class city with a mayoral form of government. There is a Bureau of Indian Affairs recognized Tribal council and Iqfijouaq Company is the local ANCSA Native village corporation. Calista Corporation is the regional ANCSA Native corporation. The closest Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Service (NMFS) offices are located in Bethel, 35 mi north. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage, 420 mi east.

In 2010, Eek administered a 2% sales tax. When adjusted for inflation,²⁷⁸ total municipal revenues declined by 34.4% between 2000 and 2010 from \$442,367 to \$375,342. Inflation adjusted revenues peaked in 2001 at \$458,952 (Table 2). In 2010, most locally generated revenues were collected from utility rents, followed by Alaska Village Electric Cooperative reimbursements, sales taxes, and gaming. Most outside revenues were collected from Community Revenue Sharing and payments in lieu of taxes.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Eek from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$442,367	\$17,200	\$27,159	n/a
2001	\$458,952	\$19,200	\$26,142	n/a
2002	\$405,435	\$20,813	\$26,142	n/a
2003	\$427,087	\$21,400	\$26,317	n/a
2004	\$438,069	\$23,850	-	n/a
2005	\$430,135	\$22,234	-	n/a
2006	\$394,665	\$24,000	-	n/a
2007	\$490,737	\$24,000	-	n/a
2008	\$559,214	\$27,500	-	n/a
2009	\$351,401	\$28,000	\$109,876	n/a
2010	\$375,342	\$32,700	\$110,143	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

²⁷⁸ Inflation calculated using the 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

In 2010, sales tax revenue accounted for 8.7% of the municipal budget, compared to 3.9% in 2000. State allocated Community Revenue Sharing accounted for 29.3% of the total municipal budget in 2010, compared to 6.1% in 2000 from State Revenue Sharing. Information regarding municipal finances can be found in Table 2.

Infrastructure

*Connectivity and Transportation*²⁷⁹

A state-owned 3,243-ft long by 60-ft wide gravel airstrip provides chartered and private air access. A dock is available. Roundtrip airfare between Anchorage and Bethel in June 2012 was \$360.²⁸⁰ Charter flights to Eek are available by appointment. A seaplane base is also available on the Eek River. Fishing boats, skiffs, and snowmobiles machines are used for local transportation to Bethel and other villages. There is a one-mile gravel road in the city. Winter trails are marked to Quinhagak (39 mi), Eek Island (15 mi), and the Kwethluk River (45 mi). Barges deliver fuel and supplies during the summer months.

*Facilities*²⁸¹

The City and Village have formed a joint utility commission. Water is derived from Eek River and is treated and stored in a tank at the “washeteria.” A few homes have tanks that provide running water to the kitchen, but houses do not have additional plumbing. Rain catchment systems and ice melt are also used for drinking water. “Honeybuckets” are collected by the city and sewage is disposed of in a sewage lagoon. Public safety services are provided by Village Public Safety Office (VPSO) and state troopers in Bethel. Fire and rescue services are provided by VPSO and city volunteer fire department. Electricity is provided by diesel generator. Other public facilities include a community hall and gym. Communications services available include local and long distance telephone, local and cable television, and internet.

*Medical Services*²⁸²

Eek Health Clinic provides basic health care and is a Community Health Aid Program (CHAP) site. The nearest hospital is located in Bethel.

*Educational Opportunities*²⁸³

Eek School provides preschool through 12th grade instruction. As of 2011, there were 89 students enrolled and 9 teachers employed.

²⁷⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸⁰ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

²⁸¹ See footnote 279.

²⁸² Ibid.

²⁸³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Fisheries participation in the Lower Kuskokwim Delta dates back thousands of years to the original Central Yup'ik occupants. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. During early years, local salmon were cured and salted and by 1920, the largest commercial season to-date took place on the Kuskokwim, with five operators processing approximately 35,000 Chinook salmon that year. In 1922, there were four salteries operating near the mouth of the Kuskokwim, processing Chinook and sockeye salmon. The Kuskokwim area was closed to all fishing for export from 1926 through 1929. In 1930, regulations were modified to allow commercial fishing in part of Kuskokwim Bay. A floating cannery operated for that year, and by 1932, three companies engaged in commercial fishing. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. Information on commercial fishing during the late 1930s through the 1950s is limited. However in 1952, poor salmon runs prompted the closure of the Kuskokwim River and Bay. Management was finally shifted to the State of Alaska in 1960, and commercial fishing resumed.²⁸⁴

At the time of statehood in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.²⁸⁵ Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.²⁸⁶

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.²⁸⁷

On the lower Kuskokwim, subsistence sockeye, chum, and Chinook harvesting typically begins by June 1st, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based from either a fish camp or from a home village. Drift gill

²⁸⁴ Pennoyer, S.; Middleton, K. R.; & Morris, M. E. (1968). *Arctic-Yukon-Kuskokwim Area Salmon Fishing History*. Retrieved April 11, 2012 from: <http://www.sf.ADFG.state.ak.us/fedaidpdfs/afrbIL.070.pdf>.

²⁸⁵ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Department of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

²⁸⁶ Ibid.

²⁸⁷ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{288,289}

Eek is located in Federal Reporting Area 514, International Pacific Halibut Commission Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. Eek is eligible to participate in the Community Development Quota program and is represented by the Coastal Villages Region Fund.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Eek does not have a registered processing plant. The nearest shoreside seafood processors are located in Quinhagak and Bethel.

Fisheries-Related Revenue

Between 2000 and 2010, Eek received fisheries-related revenue from raw fish taxes, Shared Fisheries Business Taxes, and Fisheries Resource Landing Taxes. In 2010, \$196 was collected, compared to \$1,249 in 2000. Information regarding fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 43 residents, or 14.5% of the population, held 49 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 47 residents held 55 CFEC permits. Of the CFEC permits held in 2010, 87% were for salmon, compared to 80% in 2000 and 13% were for herring, compared to 13% in 2000. Between 2000 and 2010, no residents held License Limitation Program (LLP) groundfish or crab permits or Federal Fisheries Permits (FFP). In addition, no residents held halibut, sablefish, or crab quota shares between 2000 and 2010.

Residents held 49 commercial crew licenses in 2010 (16.6% of the total population), compared to 51 in 2000. Also in that year, residents held majority ownership of 27 vessels, compared to 31 in 2000. Of the CFEC permits issued in 2010, 80% were actively fished, compared to 82% in 2000. This varied by fishery from 91% of salmon permits being actively fished to 0% of herring permits. Fisheries prosecuted by Eek residents in 2010 included Bristol

²⁸⁸ Coffing, M. (1991). *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River*. Retrieved July 12, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>

²⁸⁹ Andrews, E.; and Coffing, M. (1986). *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

Bay drift gillnet and Kuskokwim gillnet salmon. Between 2000 and 2010, no landings were made in Eek. However, landings were made by residents of Eek in other locations. In 2010, residents landed 98,461 lb of salmon valued at \$87,481, compared to 152,599 lb valued at \$85,469; an increase of \$0.12 per pound after accounting for inflation²⁹⁰ and without considering the species composition of landings. Salmon landings by residents peaked in 2009 at 223,980 lb valued at \$140,147. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁹⁰ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Eek: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$624	\$474	\$224	\$183	\$180	\$85	\$255	\$180	\$180	\$170	n/a
Shared Fisheries Business Tax ¹	\$625	\$475	\$93	\$121	\$97	\$241	\$275	\$146	\$105	\$88	\$92
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$316	\$103
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$1,249	\$949	\$317	\$304	\$277	\$326	\$530	\$326	\$285	\$574	\$196
Total municipal revenue⁵	\$442,367	\$458,9527	\$405,435	\$427,087	\$438,069	\$430,135	\$394,665	\$490,737	\$559,214	\$351,401	\$375,342

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Eek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	4	5	6	4	4	3	1	2	0	0	0
	Fished permits	0	1	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	20%	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a
	Total permit holders	4	5	5	3	3	3	1	2	0	0	0
Herring (CFEC) ²	Total permits	7	7	6	6	6	6	6	6	6	6	6
	Fished permits	3	0	0	0	0	0	0	0	0	0	0
	% of permits fished	43%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	7	7	6	6	6	6	6	6	6	6	6

Table 4 cont'd. Permits and Permit Holders by Species, Eek: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	1	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	0%	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	1	0	0	0	0
Salmon (CFEC) ²	Total permits	44	42	42	41	39	39	41	41	40	41	43
	Fished permits	42	28	30	33	30	30	34	34	36	37	39
	% of permits fished	95%	67%	71%	80%	77%	77%	83%	83%	90%	90%	91%
	Total permit holders	46	45	45	42	39	39	42	42	43	42	43
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>55</i>	<i>54</i>	<i>54</i>	<i>51</i>	<i>49</i>	<i>48</i>	<i>49</i>	<i>49</i>	<i>46</i>	<i>47</i>	<i>49</i>
	<i>Fished permits</i>	<i>45</i>	<i>29</i>	<i>30</i>	<i>33</i>	<i>30</i>	<i>30</i>	<i>34</i>	<i>34</i>	<i>36</i>	<i>37</i>	<i>39</i>
	<i>% of permits fished</i>	<i>82%</i>	<i>54%</i>	<i>56%</i>	<i>65%</i>	<i>61%</i>	<i>63%</i>	<i>69%</i>	<i>69%</i>	<i>78%</i>	<i>79%</i>	<i>80%</i>
	<i>Permit holders</i>	<i>47</i>	<i>46</i>	<i>46</i>	<i>42</i>	<i>39</i>	<i>39</i>	<i>42</i>	<i>43</i>	<i>43</i>	<i>42</i>	<i>43</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Eek: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Eek ²	Total Net Lb Landed In Eek ^{2,5}	Total Ex-Vessel Value Of Landings In Eek ^{2,5}
2000	51	0	0	31	28	0	0	\$0
2001	6	0	0	30	26	0	0	\$0
2002	24	0	0	30	29	0	0	\$0
2003	1	0	0	22	22	0	0	\$0
2004	25	0	0	23	23	0	0	\$0
2005	5	0	0	25	25	0	0	\$0
2006	32	0	0	27	27	0	0	\$0
2007	34	0	0	25	25	0	0	\$0
2008	6	0	0	25	24	0	0	\$0
2009	46	0	0	27	26	0	0	\$0
2010	49	0	0	27	26	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Eek: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Eek: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Eek: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Eek: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Eek Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	152,599	101,303	--	--	73,440	67,407	179,062	171,173	189,197	223,980	98,461
<i>Total²</i>	<i>152,599</i>	<i>101,303</i>	--	--	<i>73,440</i>	<i>67,407</i>	<i>179,062</i>	<i>171,173</i>	<i>189,197</i>	<i>223,980</i>	<i>98,461</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$85,469	\$35,835	--	--	\$23,722	\$28,321	\$95,111	\$86,815	\$110,586	\$140,147	\$87,481
<i>Total²</i>	<i>\$85,469</i>	<i>\$35,835</i>	--	--	<i>\$23,722</i>	<i>\$28,321</i>	<i>\$95,111</i>	<i>\$86,815</i>	<i>\$110,586</i>	<i>\$140,147</i>	<i>\$87,481</i>

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Due to Eek's remote location and lack of sportfishing and visitor infrastructure, non-Alaska resident recreational fishing is limited. Between 2000 and 2010, there were no sport fish guide businesses operating in Eek between 2000 and 2010. In 2010, 76 sportfishing licenses were sold to residents and 86 were sold in the community, compared to 34 and 26 in 2000, respectively.

Eek is located in the Kuskokwim River and Bay drainages ADF&G Harvest Survey Area which includes the Kuskokwim River drainage and all waters following into Kuskokwim Bay, as well as adjacent waters north from Cape Newenham to the Naskonat Peninsula. In 2010, there were a total of 19,455 freshwater angler days fished, compared to 19,990 in 2000. In that year, non-Alaska residents accounted for 72.1% of angler days fished, compared to 67.0% in 2000. Survey data for saltwater angler days fished is not available for 2010. No kept/released charter information is available for Eek. Information regarding sportfishing trends can be found in Table 11.

Subsistence Fishing

Subsistence activities are practiced widely in Eek and are an important aspect of daily life in the community. According to 2009 ADF&G estimates, 77% of overall subsistence salmon harvests on the Kuskokwim River occurred in the lower Kuskokwim area, which includes Eek.²⁹¹ According to a 2005 ADF&G survey²⁹², an estimated 18% of households participated in halibut subsistence activities while an estimated 60% participated in non-salmon fish subsistence activities. Per capita subsistence harvest that year was estimated at 550.5 lb. According to ADF&G's *Community Subsistence Information System*,²⁹³ species which residents of Eek harvest or use include Arctic char, Bering cisco, blackfish, broad whitefish, burbot, Dolly Varden, grayling, herring, humpback whitefish, lamprey, least cisco, Pacific tom cod, rainbow trout, rockfish, round whitefish, sheefish, smelt, stickleback, and sucker.

Of the species documented by ADF&G in Table 13, Chinook salmon were harvested most often, although there was a significant decline in reported harvests in 2006 and 2007. In 2007, residents reported harvesting 256 salmon, compared to 4,114 in 2000. Reported salmon harvests peaked in 2002 at 5,343 fish. This decline may be attributed to a sharp drop in returned subsistence salmon permits in 2006 and 2007.

In 2010, 6 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 21 in 2003. In that year, an estimated 80 lb of halibut was harvested on two SHARC, compared to an estimated 608 lb on eight SHARC cards in 2003. Subsistence halibut harvests peaked in 2004 at an estimated 3,780 lb. No information on sea mammal harvests is available for Eek. Information regarding subsistence trends can be found in Tables 12 through 15.

²⁹¹ Brazil, C.; Bue D.; Carroll, H.; & Elison, T. (2011). *2010 Kuskokwim Area Management Report*. FMR No. 11-67. Retrieved April 12, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-67.pdf>.

²⁹² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

²⁹³ Ibid.

Table 11. Sport Fishing Trends, Eek: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Eek ²
2000	0	0	34	36
2001	0	0	11	7
2002	0	0	49	49
2003	0	0	44	50
2004	0	0	39	52
2005	0	0	30	43
2006	0	0	34	42
2007	0	0	46	40
2008	0	0	49	48
2009	0	0	73	83
2010	0	0	76	86

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	n/a	n/a	16,437	4,236
2002	n/a	n/a	14,583	6,062
2003	28	63	16,923	7,355
2004	n/a	15	16,239	9,152
2005	19	18	13,725	5,685
2006	n/a	n/a	14,773	7,616
2007	n/a	n/a	13,390	7,816
2008	n/a	108	17,582	8,172
2009	n/a	n/a	12,625	5,166
2010	n/a	n/a	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Eek: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	18%	n/a	n/a	60%	550.5
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Eek: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	67	59	2,112	636	488	n/a	878	n/a	n/a
2001	71	59	1,728	347	207	n/a	923	n/a	n/a
2002	73	54	2,432	1,259	904	n/a	748	n/a	n/a
2003	78	58	2,364	621	1,493	n/a	714	n/a	n/a
2004	81	61	2,636	587	764	n/a	472	n/a	n/a
2005	80	51	2,899	764	346	28	893	n/a	43,027
2006	78	5	272	169	11	n/a	119	n/a	n/a
2007	78	2	110	130	n/a	n/a	16	n/a	n/a
2008	85	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Eek: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	21	8	608
2004	21	7	3,780
2005	21	10	2,857
2006	20	8	1,398
2007	20	4	243
2008	6	4	n/a
2009	6	4	100
2010	6	2	80

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Eek: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Goodnews Bay



People and Place

*Location*²⁹⁴

The community is located on the north shore of Goodnews Bay at the mouth of the Goodnews River. It is 116 air miles south of Bethel, 110 miles northwest of Dillingham, and 400 miles west of Anchorage. Goodnews Bay is located in the Bethel Census Area and the Bethel Recording District. The City encompasses 3.2 square miles of land and 0 square miles of water.

*Demographic Profile*²⁹⁵

In 2010, there were 243 residents in Goodnews Bay, ranking it the 180th largest community in Alaska in terms of population size. Between 1990 and 2010, the population increased by 9.9%. Between 2000 and 2009, the population increased by 9.4% with an average annual growth rate of -0.85%, which was under the statewide average of 0.75%. However, the population has remained relatively stable over time (Table 1). In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that the permanent population in 2010 was over 300, which was significantly greater than what is reported in the 2010 Decennial Census for that year. On average, seasonal workers live in Goodnews Bay from June through July, and population peaks are somewhat attributed to employment in fisheries sectors.

No significant changes in the racial and ethnic composition were observed between 2000 and 2010 (Figure 1). In 2010, the majority of Goodnews Bay residents identified themselves as American Indian and Alaska Native (94.7%), compared to 92.6% in 2000; 4.5% identified themselves as White, compared to 5.7% in 2000; 0.8% identified themselves as of two or more races, compared to 1.7% in 2000; 0.4% identified themselves as Hispanic or Latino, compared to 0.0% in 2000; 0.0% identified themselves as of some other race, compared to 0.0% in 2000; 0.0% identified themselves as Black or African American, compared to 0.0% in 2000; 0.0% identified themselves as Native Hawaiian and Other Pacific Islander, compared to 0.0% in 2000; and 0.0% identified themselves as Asian, compared to 0.0% in 2000.

In 2010, the average household size was 3.20, compared to 3.60 in 1990 and 3.24 in 2000. In that year, there were a total of 82 housing units, compared to 72 in 1990 and 87 in 2000. Of the households surveyed in 2010, 56% were owner-occupied, compared to 30% in 2000; 37% were renter-occupied, compared to 52% in 2000; 2% were vacant, compared to 17% in 2000; and 5% were occupied seasonally, compared to 1% in 2000. No residents lived in group quarters between 1990 and 2010.

²⁹⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁹⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

In 2010, the gender distribution in Goodnews Bay was biased towards males at 55.6% male and 44.4% female. This was less even than both the distribution statewide (52.0% male, 48.0% female), and the distribution in 2000 (51.3% male, 48.7% female). In that year, the median age was 26.8 years, which was younger than both the statewide median of 33.8 years, and 2000 median of 30.7 years.

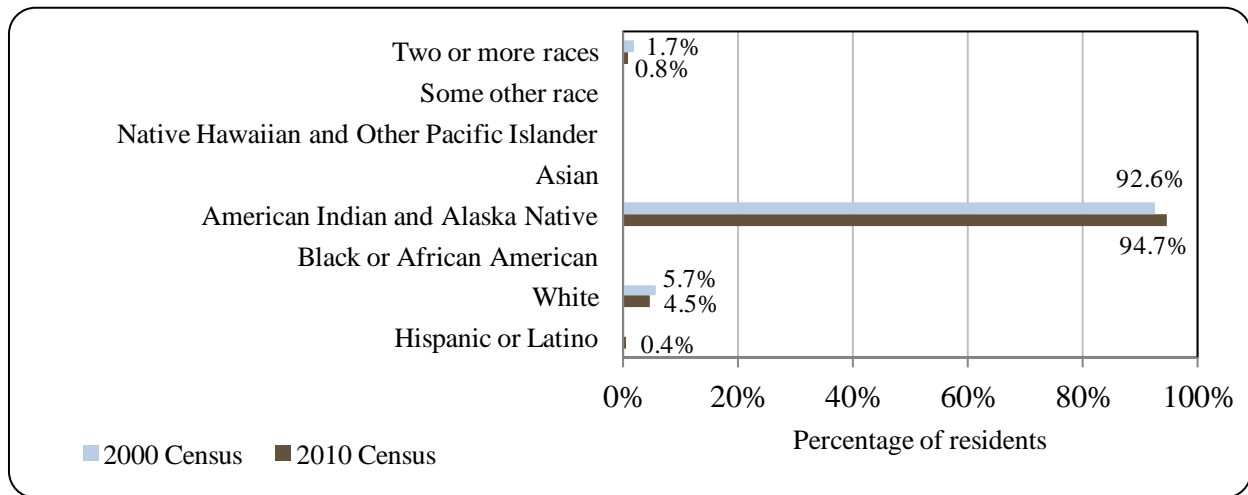
Table 1. Population in Goodnews Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	241	-
2000	230	-
2001	-	228
2002	-	234
2003	-	245
2004	-	237
2005	-	238
2006	-	244
2007	-	234
2008	-	225
2009	-	237
2010	243	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

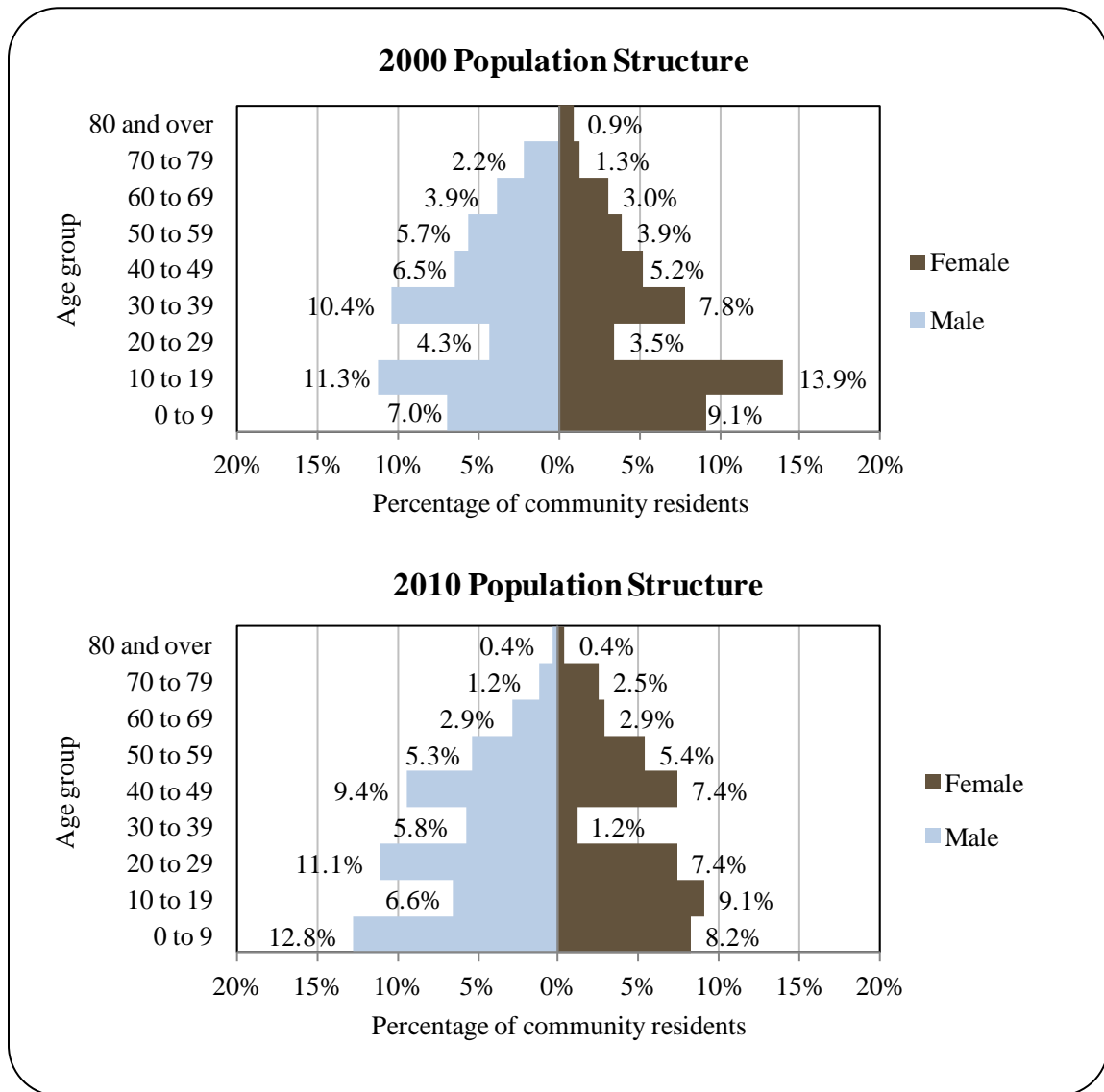
Figure 1. Racial and Ethnic Composition, Goodnews Bay: 2000-2010 (U.S. Census).



The population structure was somewhat irregular in both 2000 and 2010; however, in both years it could be described as expansive. In 2010, 36.7% of residents were under the age of 20, compared to 41.3% in 2000; 10.3% were over the age of 59, compared to 11.3% in 2000; 34.5% were between the ages of 30 and 59, compared to 39.5% in 2000; and 18.5% were between the ages of 20 and 29, compared to 7.8% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 0 to 9 range (12.8% male, 8.2% female), followed by the 30 to 39 (5.8% male, 1.2% female) and 20 to 29 (11.1% male, 7.4% female) ranges. Of those three, the greatest relative gender difference occurred within the 30 to 39 range. Information regarding population structure trends can be found in Figure 2.

Figure 2. Population Age Structure in Goodnews Bay Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²⁹⁶ estimated that 58.2% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. If accurate, this estimate highlights a significant difference between local educational attainment, and that of the state as a whole. Also in that year, an estimated 22.6% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 19.2% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 15.3% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 4% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 2.3% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Stone tools and implements found from the Norton Tool tradition indicates that the Goodnews Bay/Platinum area has been occupied continuously for at least 2,000 years.²⁹⁷ One site, at nearby Security Cove, shows evidence of possible habitation dating to 4,000 or 5,000 years ago. Historical inhabitants of the region utilized fish and marine mammal resources, as well as caribou.²⁹⁸ The original inhabitants of the coastal area between the Kuskokwim River mouth and Chavgan Bay were known as the *Kukowogamiut*, and the Goodnews Bay area may also have been used by the *Togiagamiut*, who historically populated the Togiak/Dillingham area from Nanvak Bay east to Cape Constantine.²⁹⁹

Captain James Cook was the first European to make contact with the indigenous peoples of this region, when his expedition encountered them in kayaks north of Cape Newenham on July 16, 1778. Russians established fur trading in the region in the following century. Gold was discovered in the 1890s in Alaska. By the turn of the century, mineral discoveries in the Goodnews Bay area brought a flood of miners to the region.³⁰⁰

Yup'ik Eskimos referred to Goodnews Bay as the village of *Mumtraq*. The community was forced to relocate in the early 20th century due to storm surges and constant flooding. In the 1930s, a government school and post office were built, and the City was incorporated in 1970. A high school was built in 1979.³⁰¹

As a traditional Yup'ik village, Goodnews Bay residents practice a subsistence, trapping, and fishing lifestyle. The Native People of Mumtraq (Goodnews Bay) have always had strong values that centers around the Yup'ik culture. Current values in the community are strongly

²⁹⁶ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁹⁷ The Native Village of Goodnews Bay. (2005). *Goodnews Bay Community Plan*. Retrieved October 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/GoodnewsBay-GCP-2005.pdf>.

²⁹⁸ U.S. Fish and Wildlife Service. (n.d.). *Togiak National Wildlife Refuge Overview*. Retrieved April 11, 2012 from <http://www.fws.gov/refuges/profiles/index.cfm?id=74535>.

²⁹⁹ Alaska Department of Natural Resources. (2005). *Bristol Bay Area Plan for State Lands*. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

³⁰⁰ Ibid.

³⁰¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

informed by Yup'ik culture, yet residents still exhibit a strong need for economic, physical, and spiritual independence upon themselves. The sale, importation, and possession of alcohol is banned in the village. Bureau of Indian Affairs schools operated from the 1930s until 1980, when the State of Alaska built a high school in 1979, under the newly established Lower Kuskokwim School District.³⁰²

Natural Resources and Environment

Goodnews Bay is located in a transitional climatic zone and is impacted by both continental and marine influences. Average annual precipitation is 22 inches, with 43 inches of snowfall. Summer temperatures range from 41 to 57 °F (5 to 14 °C); winter temperatures average 6 to 24 °F (-14 to -4 °C).³⁰³

The discovery of white gold platinum in the Goodnews Bay area was made in 1926 by a villager from Kakanagamute, a village in Chagvan Bay (south of Goodnews Bay), and shortly after placer mining operations began, with the eventual development of the Goodnews Bay Mining Company in 1934. The mining company supplied platinum for the Johnson, Matthey and Company, Inc. in New York, and the crude platinum was shipped in moose-hide or calfskin bags called “pokes” which were then doublesacked in canvas for transport.³⁰⁴

A wide variety of fish and wildlife are present around Goodnews Bay. The coastal waterways consist of birds, seal, whale, walrus and many varieties of fish. The bay and offshore waters are a major herring fishery, drawing residents of many other villages during the height of the season. Goodnews River is home to Chinook, sockeye, chum, pink, and coho salmon. Other species such as rainbow trout, Arctic grayling, Dolly Varden, and Arctic char can be found in the Goodnews River. To the west, Steller sea lions are present in the offshore waters. Village lands are bounded on the north, south, and east by the Togiak National Wildlife Refuge, which was initially created in 1980 as part of a larger collection of public land withdrawals. The Refuge itself provides critical habitat for threatened and endangered species including spectacled eider, Steller's eider, and Steller sea lion.³⁰⁵

Black bears, brown bears, moose, wolverines, wolves, red and arctic foxes, land otters, mink, marten, weasel, lynx, beavers, muskrat, and hares inhabit the Goodnews Bay area. The Yukon-Kuskokwim Delta is an important migratory route for numerous species of waterfowl and other migratory birds, and provides suitable habitat for various predatory, game, shore, and songbirds, including gyrfalcons, peregrine falcons, ptarmigan, snipes, cranes, and loons. A rookery is located south of Goodnews Bay at Cape Newenham; species include horned and tufted puffins and glaucous-winged gulls.³⁰⁶

Goodnews Bay is also surrounded by wetland habitat used for migratory birds in the spring and fall. Essential Fish Habitat in the Goodnews Bay area includes the Goodnews River and its tributaries. No other Essential Fish Habitat was identified by the National Marine Fisheries Service (NMFS) in the Goodnews Bay area. No wild and scenic rivers are located in

³⁰² Ibid.

³⁰³ See footnote 301.

³⁰⁴ Johnston, Charles. (1962). *Platinum Mining in Alaska: Dredge and Dragline Operations at Goodnews Bay. Platinum Metals Review* 6(2): 68-74.

³⁰⁵ National Park Service (n.d.). *Togiak National Wildlife Refuge*. Retrieved October 22, 2012 from <http://togiak.fws.gov/>.

³⁰⁶ Goodnews Bay Community Plan. (2005). Retrieved February 22, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_Results.cfm.

the vicinity of Goodnews Bay. Consultation with the U.S. Fish and Wildlife Service, NMFS, and the Alaska Department of Fish and Game (ADF&G) will be required for development in the community.³⁰⁷

The Native Village of Goodnews Bay entered into a 638 contract with the Bureau of Indian Affairs to manage the Natural Resources Program for the Village of Goodnews Bay. The purpose of the Natural Resources Program is to ensure the protection, conservation, and sustainable utilization of the natural resources of the Tribe, to promote a healthy and clean environment, and promote Native co-management of these resources. The goal of the Natural Resource program is to enhance and protect the natural resources the Tribe depends on for subsistence and economic needs. The primary objectives are to provide the necessary services, liaison, and detailed follow through to achieve protection and enhancement of the Tribes natural resources.³⁰⁸

The general geology of the area consists of older coastal deposits of interlayered alluvial and marine sediments including coastal delta deposits. The area surrounding the community is characterized by low mountains, plateaus, and a generally rolling topography. Goodnews Bay is located on lowland coastal areas which are underlain by isolated masses of permafrost with a predominant presence of fine-grained deposits. Soils conditions in Goodnews Bay generally exhibit features of recently glaciated valleys consisting of small lakes and streams, moraines, and gravelly outwash terraces. Frost features such as frost scars, low mounds, and solifluction lobes are frequent. The Goodnews Bay area is primarily flat, surrounded by tundra and muskeg, with irregular shaped moraine knolls and ridges, and dotted with lakes and water bodies. The community is located in a coastal plain, consisting of lowland tundra. Low bush willow's make up a majority of the trees within the outlying area. Birch trees line the riverbanks all the way up to the Goodnews Lake, some 35 miles east of the village of Goodnews Bay.³⁰⁹

Local natural hazards come primarily in the form of flooding and erosion. Most flooding in the area is a result of storm surges. Although located within a relatively protected bay, erosion is most prevalent along the coastline around Goodnews Bay.³¹⁰ Snowdrifts are of concern due to scarce vegetation and frequent high winds. The Goodnews River is prone to flooding, and flood events occurred in 2004, 1989, and 1979. All flood events resulted from wind-driven waves.³¹¹

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active in Goodnews Bay in 2010.³¹²

Current Economy³¹³

The community of Goodnews Bay relies on a mixed subsistence and cash economy. Important subsistence resources for local community members include salmon, seal, walrus, birds, berries, moose, and bear. Residents also depend on seasonal employment including

³⁰⁷ Ibid.

³⁰⁸ Ibid.

³⁰⁹ Ibid.

³¹⁰ City of Dillingham. (2006). *City of Dillingham Comprehensive Plan*. Retrieved March 13, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Dillingham-CP-2006.pdf>.

³¹¹ The Native Village of Goodnews Bay. (2005). *Goodnews Bay Community Plan*. Retrieved October 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/GoodnewsBay-GCP-2005.pdf>.

³¹² Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved October 19, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Western>.

³¹³ Unless otherwise noted, all monetary data are reported in nominal values.

commercial fishing, ivory carving, and other Native arts and crafts. Many residents engage in trapping.³¹⁴ The city, school, local businesses, and commercial fishing provide the majority of the income, supplemented by subsistence activities.³¹⁵ In a survey conducted by the AFSC in 2011, community leaders reported that fishing is the natural resource-based industry on which Goodnews Bay's economy most depends. In 2010, Goodnews Bay residents held commercial fishing permits for salmon and herring roe fisheries (see the *Commercial Fisheries* section).

Based on household surveys conducted for the 2006-2010 ACS,³¹⁶ In 2010, the estimated per capita income in Goodnews Bay was estimated to be \$9,908, and the estimated median household income was \$30,313. These numbers represent increases from the per capita and median household income levels reported in 2000 (\$6,851 and \$16,250, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,³¹⁷ the real per capita income in 2000 (\$9,009) is shown to have been very similar to the 2010 per capita income estimate, while there appears to have been a real increase in household income, from a \$21,369 real median household income. In 2010, Goodnews Bay ranked 278th of 305 Alaskan communities with per capita income data, and 245th in median household income, out of 299 Alaskan communities with household income data that year.

However, Goodnews Bay's small population size may have prevented the ACS from accurately portraying economic conditions.³¹⁸ An alternative understanding of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Goodnews Bay in 2010 is \$7,061.^{319,320} Given that this figure is lower than the 2010 ACS estimate, caution should be used when citing per capita income stability in Goodnews Bay between 2000 and 2010. These relatively low per capita income estimates are reflected in the fact that the community was recognized as "distressed" by the Denali Commission,³²¹ prioritizing it for economic assistance. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

³¹⁴ See footnote 311.

³¹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³¹⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³¹⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³¹⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³²⁰ See footnote 316.

³²¹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

Based on the 2006-2010 ACS, in 2010, a much lower percentage of Goodnews Bay residents (42.9%) were estimated to be in the civilian labor force than in the civilian labor force statewide (68.8%). In the same year, 38.6% of local residents were estimated to be living below the poverty line, more than 3 times higher than the poverty rate in Alaska overall (9.5%). The unemployment rate in Goodnews Bay was 12.1%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment, based on the ALARI database, indicates that the unemployment rate in Goodnews Bay was much higher in 2010 (23.7%), more than double the statewide unemployment rate estimate of 11.5%.³²² As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Also based on the 2006-2010 ACS, a majority of the Goodnews Bay civilian labor force was estimated to be employed in the public sector (66.2%), along with 17.6% in the private sector, and 16.2% estimated to be self-employed. There were 74 people aged 16 and over that were estimated to be employed in the civilian labor force. These workers were spread relatively evenly across six industries, with 31.1% estimated to be working in public administration (31.1%), 21.6% in educational services, health care, and social assistance, 13.5% in retail trade, 13.5% in transportation, warehousing, and utilities, 12.2% in finance and insurance, real estate, rental, and leasing, and 8.1% in services other than public administration. Occupations in which the greatest percentages of the workforce were estimated to be employed were management, business, science, and arts (55.4%) and sales and office occupations (25.7%). Compared to 2000, employment in arts, entertainment, recreation, and accommodation and food service industries appears to have been eliminated, along with employment in construction industries. At the same time, a significant amount of employment in finance and insurance industries appears to have developed between 2000 and 2010. Information regarding employment trends can be found in Figures 3 and 4.

It should be noted that no individuals were estimated to be working in natural resource-based occupations or industries that include fishing in 2010. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

³²² See footnote 319.

Figure 3. Local Employment by Industry in 2000-2010, Goodnews Bay (U.S. Census).

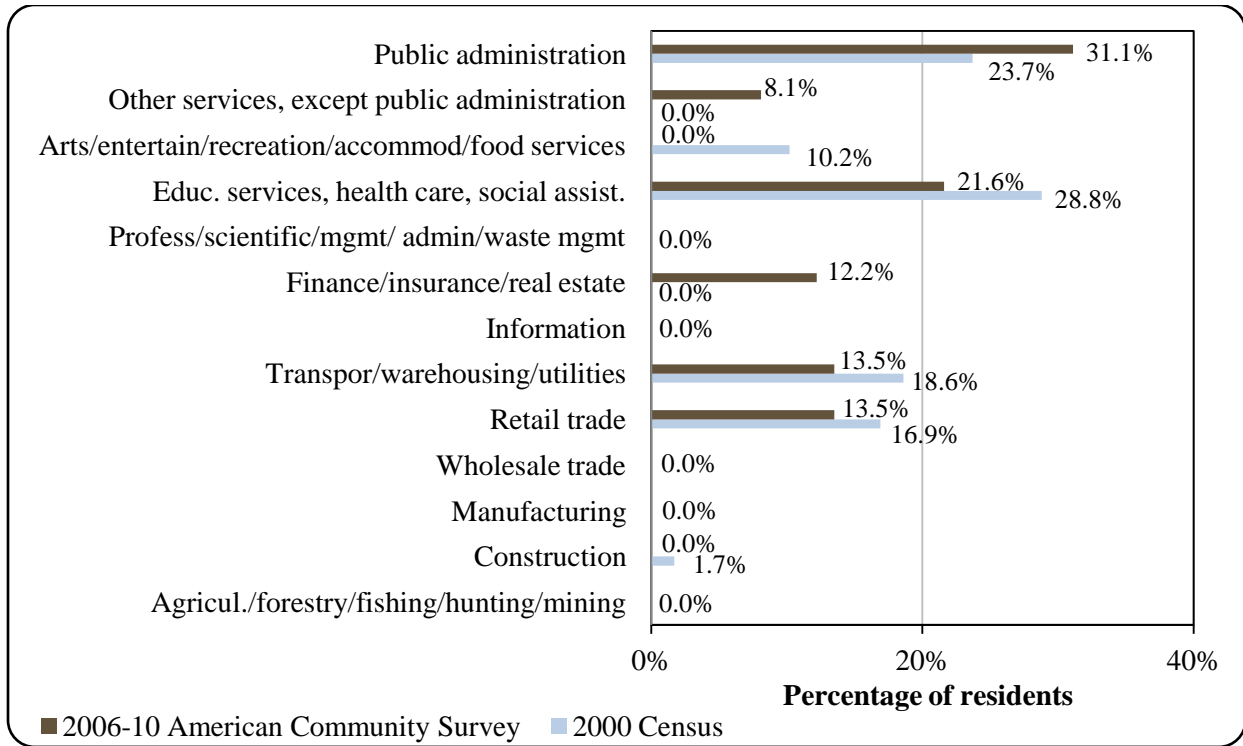
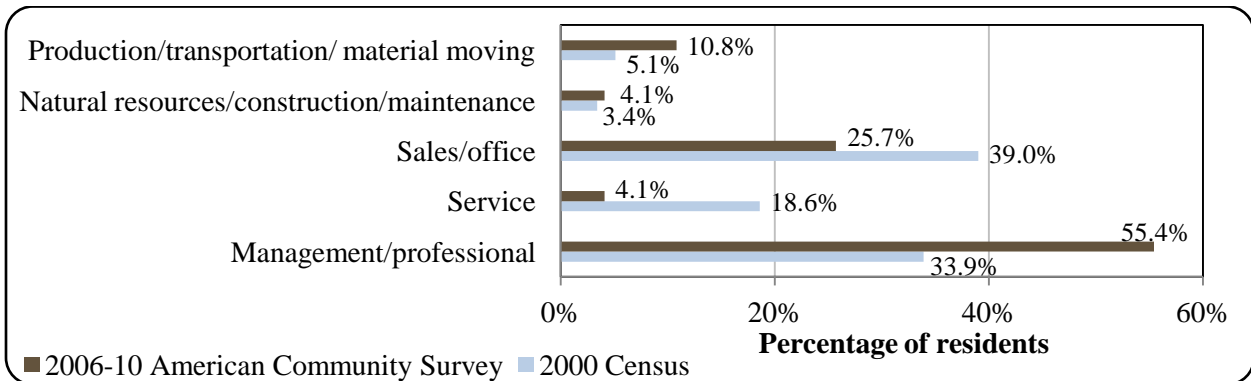


Figure 4. Local Employment by Occupation in 2000-2010, Goodnews Bay (U.S. Census).



Governance

Goodnews Bay is a 2nd Class City, and is not located in an organized borough. The City was incorporated in 1970. It has a Manager, or “Strong Mayor”, form of government, with a seven-person city council including the Mayor, a nine-member school board, and several municipal employees. The City administers a 3% sales tax.³²³ However, no sales tax revenue was reported between 2000 and 2010. Total annual municipal revenues remained relatively stable between 2000 and 2010. In addition to locally-generated revenue sources, the City received on

³²³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

average \$25,000 in State Revenue Sharing contributions in the early half of the decade. When the Community Revenue Sharing Program was instituted, the City received substantially more revenue, earning a total of \$104,162 in 2010 (Table 2).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Goodnews Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$193,058	n/a	\$26,943	n/a
2001	\$351,611	n/a	\$25,543	n/a
2002	\$246,671	n/a	\$25,546	n/a
2003	\$163,321	n/a	\$25,745	n/a
2004	\$160,565	n/a	n/a	n/a
2005	\$214,073	n/a	n/a	n/a
2006	\$203,846	n/a	n/a	n/a
2007	\$243,846	n/a	n/a	n/a
2008	\$212,579	n/a	n/a	n/a
2009	\$205,436	n/a	\$104,606	n/a
2010	\$210,397	n/a	\$104,162	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Goodnews Bay was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Goodnews Bay. The Native village corporation is Kuitsarak, Incorporated, which manages 115,200 acres of land.³²⁴ Goodnews Bay belongs to the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.³²⁵

Goodnews Bay is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-

³²⁴ Ibid.

³²⁵ Calista Corporation. (n.d.) *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

determination and self-governance and to work to protect tribal culture and traditions.³²⁶ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.³²⁷ AVCP is made up of 56 villages and 45 village corporations.³²⁸

The closest offices of the ADF&G and the Alaska Department of Commerce, Community, and Economic Development are located in Bethel and Dillingham. Anchorage offers the closest offices of the NMFS, Alaska Department of Natural Resources (DNR), and U.S. Bureau of Citizenship and Immigration Services.

Infrastructure

Connectivity and Transportation

A state-owned 2,835-foot long by 80-foot wide gravel airstrip is available for chartered or private planes year-round. However, regularly scheduled flights must be taken from or to Dillingham. As of June 2012, roundtrip airfare from Anchorage to Dillingham (the nearest airport to Goodnews Bay) was \$428.³²⁹ There are no docking facilities, although locals use boats and skiffs extensively during the summer months. Snowmachines are the primary means of travel during the winter. Winter trails are marked along the Coastal Trail (60.3 mi) and the Arolik Trail (60.1 mi). Barges deliver fuel and other supplies during the summer months.³³⁰

*Facilities*³³¹

The City Multi-Purpose building, which was built in 1970 and is 3,240 square feet, serves as the village clinic, Head Start program, mental health office, drug and alcohol prevention program and city offices, the washeteria, water plant, Coastal Villages Region Fund office, and utilities office. The Kuitsarak, Inc. Corporation operates a cooperative store and bulk fuel facility. The store was built in 1997 and it is 5,664 square feet. The village post office also operates out of the building. Visitor accommodations include Daniel Schouten B&B. Public safety services are provided by local Village Public Safety Officer and state troopers based in Bethel. Fire and rescue services are provided by city volunteer fire and Goodnews Bay first responders. Additional public facilities include a community hall and school library.

³²⁶ Association of Village Council Presidents. (n.d.). *AVCP homepage*. Retrieved December 6, 2011 from www.avcp.org.

³²⁷ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

³²⁸ Calista Corporation. 2011. *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

³²⁹ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

³³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved February 22, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³³¹ The Native Village of Goodnews Bay. (2005). *Goodnews Bay Community Plan*. Retrieved October 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/GoodnewsBay-GCP-2005.pdf>.

Communications services include local and long distance telephone, internet (school only), local and cable television, and local radio.³³²

The Goodnews Bay power plant is currently equipped with two peak load generator sets capable of individually meeting the current peak load requirements. One of the highest output units, an Allis Chalmers 685Is, is no longer manufactured. Based upon the 2006 peak load projection from the latest Power Requirements Study, the power plant will not have redundant peak load engine capacity beyond the next 2 years. The Goodnews Bay power plant is also equipped with two remote radiators which provide redundant cooling capacity along with a separate heat exchanger for transfer of heat to the adjacent water plant. The Goodnews Bay tank farm has adequate useable fuel storage capacity to meet the annual requirements of the next 2-year period.

In April of 2004 a door-to-door survey was conducted to obtain the community's opinion of the current facilities located in Goodnews Bay. Facilities in the survey included: airstrip, tribal and city offices, power plant, community hall, water treatment plant, landfill and sewage lagoon, walkways, armory, high school, dock, health clinic, post office, trailmarks and the local gas station. The results from the survey indicate that the majority of those surveyed were displeased with the current barge landing area (or lack thereof). Residents were equally dissatisfied with the existing airstrip and the landfill and sewage lagoon. Local residents were more satisfied with the existing post office, power plant and gas station.

In a survey conducted by the AFSC in 2011, community leaders reported that public facilities projects completed between 2000 and 2010 included water and sewer pipelines, sewage treatment, water treatment, new landfill/solid waste site, public safety improvements, emergency response improvements, school improvements, telephone service improvements, and post office improvements. Public facilities projects under development in 2010 included a barge landing area and broadband internet access. Fisheries-related businesses and services available locally include fishing gear sales, boat repair (welding, mechanical services), fish lodges, and boat fuel sales. According to community leaders, there is no dock space available for permanent or transient moorage.

*Medical Services*³³³

Bristol Bay Area Health Corporation (BBAHC) provides primary health care services in Goodnews Bay through the Community Health Aid Program (CHAP). BBAHC has provided health care services for the Bristol Bay region under the Alaska Tribal Health Compact with federal Indian Health Services (IHS) funding and grants. The City of Goodnews Bay owns and maintains the clinic with IHS lease funds and operates on a referral basis for medical, dental, behavioral health and human services. Goodnews Bay has two full-time CHAP employees trained to deal with emergencies and provide the general health care to village residents and are often Emergency Medical Technicians. The CHAPs receive direction from physicians located at the Dillingham Kakanak Hospital, in which residents go to for higher level of care. Residents are also referred to the Alaska Native Medical Center or a private hospital in Anchorage for higher level of care. Telemedicine through the internet has become a major factor in improved health care at the community level. Goodnews Bay receives itinerant care including dentists who travel to the village four weeks per year, a public health nurse, pediatrician and doctor who visit

³³² See footnote 330.

³³³ Ibid.

quarterly, and optometry, audiology and behavioral health. The Native Village of Goodnews Bay is currently in the process of re-activating the Indian Child Welfare Act program for the community.

*Educational Opportunities*³³⁴

Goodnews Bay has one school, the Rocky Mountain School, which offers preschool through 12th grade instruction. In 2011, there were a total of 59 students enrolled and 9 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvests have been important to residents of the Goodnews Bay area for thousands of years.³³⁵ Most subsistence activities are conducted from seasonal camps, where residents spend the majority of the spring and summer months. In the spring, spotted, ringed, and bearded seals have historically been hunted until the first salmon runs in June. In addition, beluga whale have occasionally been harvested. During summer subsistence season, residents net salmon, smelt, herring, and capelin along the Goodnews River. During fall and winter months, smelt, Dolly Varden, blackfish, burbot, northern pike, and Arctic char are harvested.³³⁶

Goodnews Bay is located in District 5 (Goodnews Bay) of the Kuskokwim salmon fishery. In 1996, the Coastal Villages Regional Fund (CVRF) was created as part of six regional non-profit corporations formed under the newly implemented Community Development Quota (CDQ) program. The CVRF represents 20 member communities within the region from Platinum to Scammon Bay. Its mission is to improve social conditions in member communities through fisheries development, and has assisted Goodnews Bay by providing a tender vessel to Platinum for local salmon and herring fisheries. The CVRF also operates a shoreside seafood processing facility in nearby Platinum. In 1998, the community was impacted by the Western Alaska Fisheries Disaster, and commercial fishermen received just under \$40,000 in financial relief.³³⁷

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels

³³⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³³⁵ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

³³⁶ LaVine, R.; Lisac, M. J.; and Coiley-Kenner, P. (2007). *Traditional Ecological Knowledge of 20th-Century Ecosystems and Fish Populations in the Kuskokwim Bay Region*. Fisheries Resource Monitoring Program FIS 04-351. Retrieved October 22, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-351final.pdf>.

³³⁷ The Native Village of Goodnews Bay. (2005). *Goodnews Bay Community Plan*. Retrieved October 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/GoodnewsBay-GCP-2005.pdf>.

and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.³³⁸

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.³³⁹

Goodnews Bay is located in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Given the community's location outside the Gulf of Alaska, it is not eligible for the Community Quota Entity program. However, it is eligible to participate in the CDQ program and is represented by the CVRF. In a survey by the AFSC in 2011, community leaders reported that Goodnews Bay participates in the fisheries management process in Alaska through a representative who sits on regional fisheries advisory and/or working group run by ADF&G, and through cooperation with the U.S. Fish and Wildlife Service.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Goodnews Bay does not have a registered processing plant. The closest seafood processor is located in Platinum.

Fisheries-Related Revenue

Between 2000 and 2010, fisheries-related revenue collected by Goodnews Bay was minimal. In 2010, known fisheries-related revenue totaled \$275, compared to \$1,186 in 2000. Between 2000 and 2010, fisheries-related revenues were at their highest in 2001, totaling \$9,815. Raw fish tax collections made up the majority of known fisheries-related revenues between 2000 and 2010, followed by shared fisheries business tax collections, which ranged from \$84 to \$5,139 between 2000 and 2010. Further information of known fisheries-related revenue for Goodnews Bay is provided in Table 3.³⁴⁰ In a survey conducted by the AFSC in 2011, community leaders reported that Goodnews Bay received \$10,000 from the CVRF in 2010.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

³³⁸ Clark, McGregor, Mecum, Krasnowski and Carroll. (2006). Kuskokwim Commercial Salmon Fishery. In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

³³⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁴⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 47 Goodnews Bay residents (equivalent to 19.3% of the local population) held a total of 59 Commercial Fisheries Entry Commission (CFEC) permits, including 27 salmon permits, 24 herring permits, and 8 halibut permits (Table 4). Most recently, residents have engaged in statewide halibut fisheries using longline vessels under 60 feet and dinglebar trolling, herring gill net fishing on Nelson Island, roe herring gill net fishing in Goodnews Bay, salmon drift and set gill net fishing in Bristol Bay, and salmon gill net fishing in Kuskokwim. In a survey conducted by the AFSC in 2011, community leaders reported that the number of commercial fishing vessels (under 35 feet long) within the community increased between 2005 and 2010. In addition, commercial salmon fishermen from other communities often use Goodnews Bay as a base of operation during fishing seasons.

In 2010, 19 fishing vessels were primarily owned by Goodnews Bay residents and 39 residents held a commercial crew license, compared to 31 vessels primarily owned by residents and 37 crew license holders in 2000. Between 2000 and 2010, the number of vessels primarily owned by Goodnews Bay residents declined by 38.7%, and the number of vessels homported also declined by 53.5% during that time period. In 2010, non-confidential ex-vessel landings by resident totaled \$92,050, compared to \$40,122 in 2000. Non-confidential pounds landed were at their lowest in 2009, and at their highest in 2004 (Table 10). By species, residents landed 111,677 pounds of salmon valued at \$92,050 ex-vessel in 2010, compared to 93,443 pounds valued at \$38,120 ex-vessel in 2000; an increase of \$0.26 per pound ex-vessel after adjusting for inflation,³⁴¹ and without considering the species composition of landings. Residents landed 150,455 pounds of herring valued at \$7,657 ex-vessel, compared to 21,143 pounds valued at \$2,002 in 2000; a decrease of \$0.08 per pound ex-vessel after adjusting for inflation.³⁴² Between 2000 and 2010, no fish buyers or shoreside processors reported activity or the intent to operate out of Goodnews Bay. Following this, no landings were recorded in the community during this timeframe (Tables 5 and 9).

Between 2000 and 2010, no Federal Fisheries Permits (FFP) or License Limitation Program permits (LLP) were held by Goodnews Bay residents in federal crab or groundfish fisheries (Table 4). In that time period, however, residents did hold federal quota share accounts in federal catch share fisheries for halibut, but not for sablefish or crab (Tables 6 through 8). In 2010, there was one halibut quota share account holder who held a total of 5,155 shares, compared to two account holders holding 13,287 shares in 2000.

³⁴¹ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

³⁴² Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Goodnews Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$593	\$4,676	\$4,676	\$115	\$7,905	\$400	\$0	\$138	\$100	\$100	\$88
Shared Fisheries Business Tax ¹	\$593	\$5,139	\$88	\$115	\$92	\$231	\$261	\$139	\$100	\$84	\$88
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$99
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$1,186	\$9,815	\$4,764	\$230	\$7,997	\$631	\$261	\$277	\$200	\$184	\$275
Total municipal revenue⁵	\$193,058	\$351,612	\$246,671	\$163,321	\$160,566	\$214,073	\$203,847	\$243,847	\$212,579	\$205,436	\$210,397

Note: n/a refers to data that was not available at the time of printing.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Goodnews Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	4	4	0	1	0	0	0	9	8
	Fished permits	0	0	0	0	0	0	0	0	0	4	2
	% of permits fished	0%	0%	0%	0%	n/a	0%	n/a	n/a	n/a	44%	25%
	Total permit holders	1	1	4	4	0	1	0	0	0	9	8
Herring (CFEC) ²	Total permits	23	26	24	24	24	25	24	24	24	24	24
	Fished permits	7	11	5	11	10	6	5	0	0	0	0
	% of permits fished	30%	42%	21%	46%	42%	24%	21%	0%	0%	0%	0%
	Total permit holders	25	28	24	25	24	26	24	24	24	24	25

Table 4 cont'd. Permits and Permit Holders by Species, Goodnews Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	30	28	27	28	28	25	27	26	25	25	27
	Fished permits	29	21	18	19	17	20	22	22	21	21	26
	% of permits fished	97%	75%	67%	68%	61%	80%	81%	85%	84%	84%	96%
	Total permit holders	34	32	27	31	29	28	31	29	27	29	30
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>54</i>	<i>55</i>	<i>55</i>	<i>56</i>	<i>52</i>	<i>51</i>	<i>51</i>	<i>50</i>	<i>49</i>	<i>58</i>	<i>59</i>
	<i>Fished permits</i>	<i>36</i>	<i>32</i>	<i>23</i>	<i>30</i>	<i>27</i>	<i>26</i>	<i>27</i>	<i>22</i>	<i>21</i>	<i>25</i>	<i>28</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>58%</i>	<i>42%</i>	<i>54%</i>	<i>52%</i>	<i>51%</i>	<i>53%</i>	<i>44%</i>	<i>43%</i>	<i>43%</i>	<i>47%</i>
	<i>Permit holders</i>	<i>48</i>	<i>46</i>	<i>41</i>	<i>45</i>	<i>43</i>	<i>44</i>	<i>44</i>	<i>43</i>	<i>42</i>	<i>45</i>	<i>47</i>

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Goodnews Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Goodnews Bay ²	Total Net Pounds Landed in Goodnews Bay ^{2,5}	Total Ex-Vessel Value of Landings in Goodnews Bay ^{2,5}
2000	37	0	0	31	43	0	0	\$0
2001	36	0	0	33	45	0	0	\$0
2002	28	0	0	29	39	0	0	\$0
2003	34	0	0	29	36	0	0	\$0
2004	32	0	0	29	37	0	0	\$0
2005	26	0	0	27	19	0	0	\$0
2006	32	0	0	20	17	0	0	\$0
2007	28	0	0	19	18	0	0	\$0
2008	26	0	0	18	18	0	0	\$0
2009	35	0	0	20	20	0	0	\$0
2010	39	0	0	19	20	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ National Marine Fisheries Service. (2011). Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Goodnews Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	2	13,287	805
2001	1	5,155	0
2002	1	5,155	0
2003	1	5,155	0
2004	1	5,155	0
2005	1	5,155	0
2006	1	5,155	0
2007	1	5,155	0
2008	1	5,155	0
2009	1	5,155	0
2010	1	5,155	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Goodnews Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Goodnews Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Goodnews Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Goodnews Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	756	--
Herring	21,143	77,199	101,187	133,881	150,376	209,876	150,455	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	93,443	148,348	--	103,871	181,480	94,062	108,370	133,008	106,346	--	111,677
<i>Total²</i>	<i>114,586</i>	<i>225,547</i>	<i>101,187</i>	<i>237,752</i>	<i>482,232</i>	<i>303,938</i>	<i>258,825</i>	<i>133,008</i>	<i>106,346</i>	<i>756</i>	<i>111,677</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	\$1,894	--
Herring	\$2,002	\$4,565	\$5,168	\$6,387	\$15,726	\$10,348	\$7,657	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$38,120	\$48,250	--	\$43,790	\$64,172	\$42,454	\$44,488	\$65,512	\$59,876	--	\$92,050
<i>Total²</i>	<i>\$40,122</i>	<i>\$52,815</i>	<i>\$5,168</i>	<i>\$50,177</i>	<i>\$79,898</i>	<i>\$52,802</i>	<i>\$52,145</i>	<i>\$65,512</i>	<i>\$59,876</i>	<i>\$1,894</i>	<i>\$92,050</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, a limited amount of recreational fishing activity was reported out of Goodnews Bay. Although no active sport fish guide businesses were present during this period, from 2002 to 2010 at least one licensed sport fish guide was registered in the community each year. Between 2000 and 2010, the number of residents that purchased sportfishing licenses (irrespective of the point of sale) steadily increased from 6 in 2000 to 35 in 2010. However, no sportfishing licenses were sold in Goodnews Bay itself until 2010. The Alaska Statewide Harvest Survey,³⁴³ conducted by ADF&G between 2000 and 2010, did not report information regarding species targeted by Goodnews Bay sport fishermen. However, the survey did list species targeted in freshwater by sport fishermen in nearby Quinhagak: Chinook, coho and sockeye salmon, and Dolly Varden.

Goodnews Bay is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 28 non-resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). Further information about the sportfishing trends in and near Goodnews Bay is displayed in Table 11.

Table 11. Sport Fishing Trends, Goodnews Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Goodnews Bay ²
2000	0	0	6	0
2001	0	0	3	0
2002	0	1	20	0
2003	0	1	28	0
2004	0	5	16	0
2005	0	4	24	0
2006	0	3	22	0
2007	0	2	21	0
2008	0	2	39	0
2009	0	4	34	0
2010	0	5	35	34

³⁴³ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Goodnews Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Many Native people in Goodnews Bay region continue the traditional ways of their ancestors, living a subsistence lifestyle and maintaining their cultural beliefs. Subsistence users rely on the plants and wildlife as a source of food, clothing, and raw materials. Residents harvest all five species of Pacific salmon, rainbow trout, Dolly Varden, Arctic char, lake trout, Arctic grayling, rainbow smelt, burbot, Bering cisco, least cisco, round whitefish, pigmy whitefish, northern pike, and Alaska blackfish. Popular subsistence areas include the Goodnews River and accompanying drainages, Goodnews Lake, Goodnews Bay, and other ponds, lakes, and drainages throughout the region. Marine species harvested in coastal areas by residents include starry flounder, yellow fin sole, Pacific and saffron cod, Pacific tomcod, Pacific halibut, and Pacific herring. Pacific walrus, spotted seals, ringed seals and Pacific bearded seals are hunted on the ice during the spring, and some seal hunting continues during summer months in bays and estuaries. In a survey conducted by the in 2011, community leaders reported that the most

important subsistence marine and aquatic resources included salmon, marine mammals, halibut, and herring.³⁴⁴

No information is available from ADF&G between 2000 and 2010 regarding the percentage of Goodnews Bay households participating in the harvest of various subsistence resources, or per capita subsistence harvest (Table 12). However, data were available regarding total subsistence harvests of salmon, halibut, and walrus.

From 2000 to 2008, the number of subsistence salmon permits issued to Goodnews Bay each year households increased from 53 to 73. In contrast, the number of salmon permits that were reported as actively fished declined over the period. Of the five salmon species, residents reported harvesting the greatest quantities of sockeye salmon. Sizeable annual harvests of Chinook, coho, and chum salmon were also reported. A small number of pink salmon were reported harvested in two years of the 2000-2008 period. Further information about subsistence salmon permits and harvest of marine invertebrates and non-salmon fish is presented in Table 13.

Between 2003 and 2010, the number of residents participating in subsistence halibut fisheries declined significantly. In 2000, 17 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 4 in 2010. The total number of pounds reported harvest also declined over the period, although in 2010, the volume of halibut harvested was higher than preceding years. Information about halibut subsistence harvest is presented in Table 14.

Limited information is reported regarding marine mammal harvest in Goodnews Bay between 2000 and 2010. Two walrus were harvested in 2000 and one was harvested 2001. No data were reported by management agencies regarding subsistence harvest of sea otter, beluga whale, polar bear, spotted seal, harbor seal, or Steller sea lion (Table 15).

Although little information was available regarding subsistence activities in Goodnews Bay in recent decades, an earlier ADF&G household subsistence survey conducted in the nearby village of Quinhagak (about 67 miles north of Goodnews Bay) provides insight in to subsistence harvest patterns in the region. During the 1982 season, species of non-salmon fish harvested by the greatest percentage of Quinhagak households included: Dolly varden (100% of households reported harvesting), cod (100%), smelt (75%), cisco (50%), and blackfish (8%). The species of marine mammal reported to be harvested by the greatest number of Quinhagak households that year included: ringed seal (50% of household reported harvesting), spotted seal (50%), bearded seal (25%), and Steller sea lion (17%).³⁴⁵

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported concerns that the commercial trawl fishery is impacting the Goodnews River subsistence salmon fishery. They emphasized that the bycatch of Chinook, sockeye, and chum salmon negatively affects the livelihoods of both local commercial and subsistence fishermen. When asked what potential future fisheries policy or management actions concerns Goodnews Bay the most, community

³⁴⁴ LaVine, R., M. J. Lisac, and P. Coiley-Kenner. (2007). *Traditional Ecological Knowledge of 20th-Century Ecosystems and Fish Populations in the Kuskokwim Bay Region*. Fisheries Resource Monitoring Program FIS 04-351. Retrieved October 22, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-351final.pdf>.

³⁴⁵ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

leaders reported that future restriction of subsistence fishing and commercial fishing due to low salmon escapement would have the most significant impact.

Table 12. Subsistence Participation by Household and Species, Goodnews Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Goodnews Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	53	52	601	280	414	n/a	1,028	n/a	n/a
2001	61	51	859	182	508	n/a	921	n/a	n/a
2002	55	43	703	312	202	n/a	794	n/a	n/a
2003	64	42	649	126	1,110	n/a	672	n/a	n/a
2004	64	50	851	221	1,411	n/a	805	n/a	n/a
2005	61	49	794	187	615	1	1,143	n/a	n/a
2006	61	48	630	544	592	20	947	n/a	n/a
2007	62	3	24	7	20	n/a	66	n/a	n/a
2008	73	20	1,428	958	1,790	n/a	3,914	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011). Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Goodnews Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	17	12	3,919
2004	17	14	2,173
2005	17	9	2,986
2006	15	5	375
2007	16	7	102
2008	4	n/a	n/a
2009	4	n/a	n/a
2010	4	1	2,120

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Goodnews Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	2	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	1	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kasigluk (ka-SEE-ga-luck)



People and Place

*Location*³⁴⁶

Kasigluk is on the Johnson River in the Kuskokwim River Delta, 26 miles northwest of Bethel. The community is comprised of Old and New Kasigluk, surrounded by the Johnson River and a network of lakes. Kasigluk is located in the Bethel Census Area and the Bethel Recording District.

*Demographic Profile*³⁴⁷

In 2010, there were 569 Kasigluk residents, ranking Kasigluk 104th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 33.9%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 9.7%, with an average annual growth rate of 0.89%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 4.1%, with an average annual growth rate of 4.06%, which was over the statewide average of 0.75%.³⁴⁸ In 2010, the majority of Kasigluk residents identified themselves as American Indian and Alaska Native (94.7%), with 3.3% identifying themselves as White. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1. According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that approximately 20 seasonal workers or transients are present in Kasigluk throughout the year in addition to the population of permanent residents. They also reported that the population of Kasigluk reaches an annual peak between August and September.

The average household size in Kasigluk increased from 4.7 in 1990 to 5.38 in 2000, and then decreased slightly to 5.04 persons per household in 2010. The total number of occupied housing units increased more consistently, from 89 in 1990 to 101 in 2000, and 113 in 2010. Of the 121 housing units surveyed for the 2010 U.S. Census, 54.5% were owner-occupied, 38.8% were rented, and 6.6% were vacant or used only seasonally. Between 1990 and 2010, no Kasigluk residents lived in group quarters.

In 2010, the gender makeup in Kasigluk was 53.1% male and 46.9% female, slightly more weighted toward males than the population of the state as a whole, which was 52% male and 48% female. The median age in Kasigluk was estimated to be 21.8 years, lower than both the

³⁴⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁴⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁴⁸ Alaska Department of Labor. 2011. *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. Also in 2010, 8.9% of the Kasigluk population was age 60 or older. The overall population structure of Kasigluk in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³⁴⁹ estimated significantly fewer (68.6%) residents aged 25 and over held a high school diploma or higher degree in 2010, when compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 23.6% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 7.7% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 15.5% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; 2.6% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 2.6% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

Table 1. Population in Kasigluk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	425	-
2000	543	-
2001	-	542
2002	-	528
2003	-	528
2004	-	530
2005	-	535
2006	-	540
2007	-	543
2008	-	576
2009	-	567
2010	569	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

³⁴⁹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 1. Racial and Ethnic Composition, Kasigluk: 2000-2010 (U.S. Census).

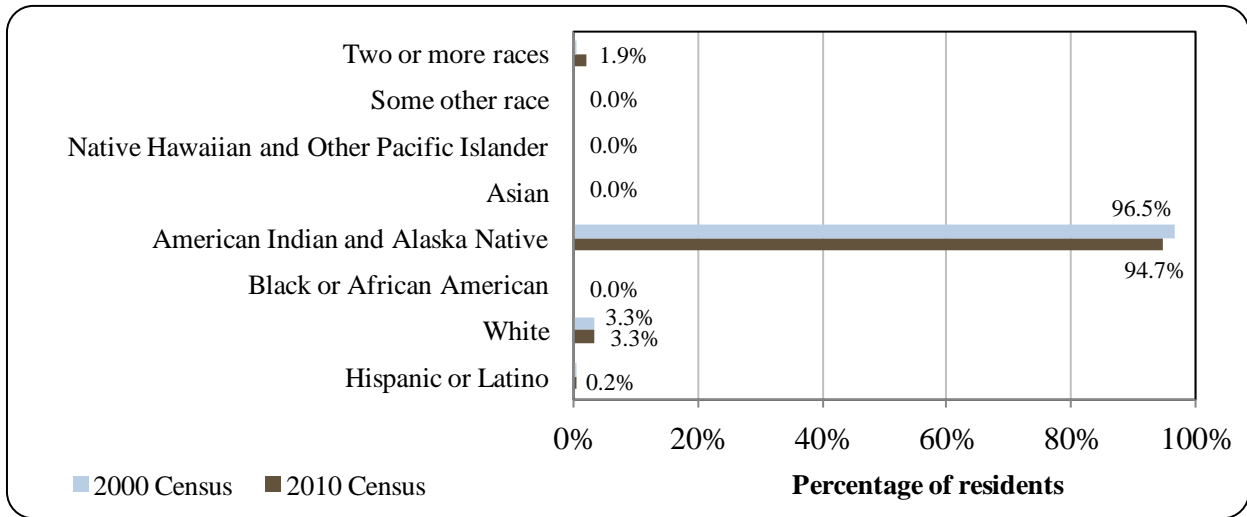
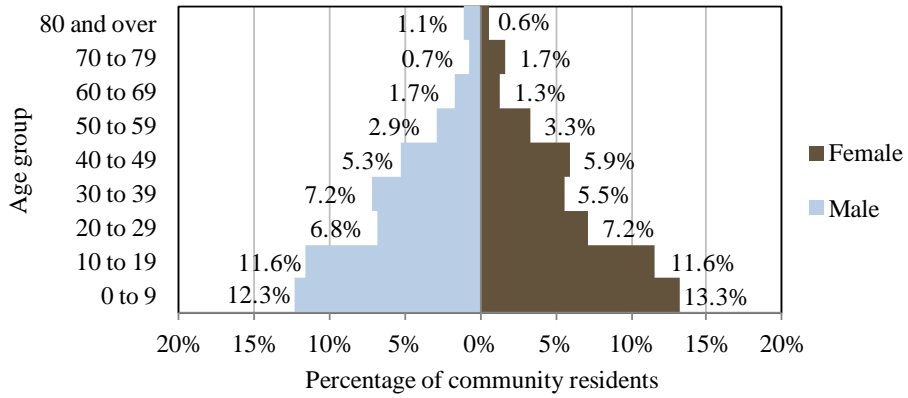
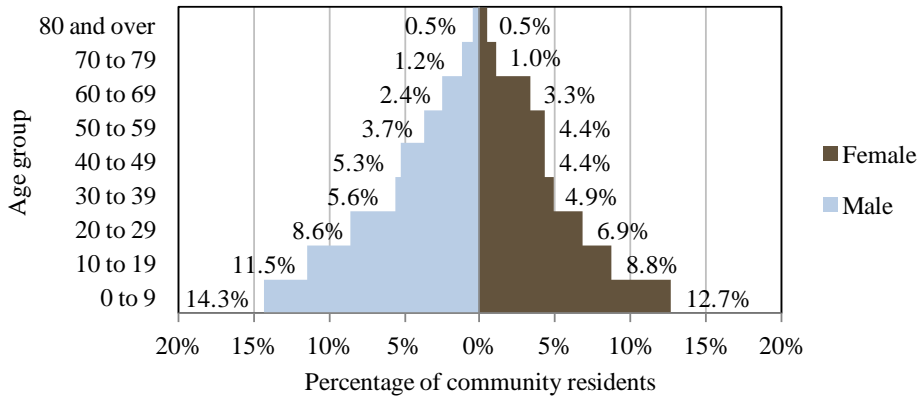


Figure 2. Population Age Structure in Kasigluk Based on the 2000 and 2010 U.S. Decennial Census.

2000 Population Structure



2010 Population Structure



History, Traditional Knowledge, and Culture

Yup'ik Eskimos have inhabited the Yukon-Kuskokwim delta for thousands of years. Historically, Yup'ik people were very mobile, traveling with the migration of game, fish, and plants. Ancient settlements and seasonal camps contained small populations, with numerous settlements throughout the region consisting of extended families or small groups of families.³⁵⁰ Residents of Kasigluk and two nearby villages, Atmautluak (8 miles east of Kasigluk) and Nunapitchuk (2 ½ miles northeast of Kasigluk), are collectively known as the Akulmiut, a subgroup of Yup'ik Eskimo.³⁵¹ These three 'tundra villages' were enumerated as one village in the 1940 U.S. Census, with a total population of 66. Later, in the 1970 U.S. Census, the populations of Kasigluk, Nunapitchuk, and Atmautluak were again recorded as one village, under the name "Akolmiut," with a population of 526. This 1970 population is now assigned under 'Nunapitchuk' in Census records. Today, subsistence activities remain a focal point of local culture in Kasigluk and the other tundra villages. The sale, importation, and possession of alcohol are banned in the Kasigluk.³⁵²

Natural Resources and Environment

Kasigluk is located within a maritime climate zone. The area's precipitation averages 16 inches annually, with average snowfall of 50 inches. Summer temperatures range from 42 to 62 °F, and winter temperatures range from -2 to 19 °F.³⁵³ The terrain of the Lower Kuskokwim River region is characterized as a level to rolling delta plain crossed by many river channels, meander scars, oxbow lakes, sloughs, and thousands of lakes. The area is underlain by permafrost, preventing drainage.³⁵⁴

Kasigluk is located within the boundaries of the Yukon Delta National Wildlife Refuge. The Refuge was established "to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity."³⁵⁵

Geological formations in the Kasigluk area are not indicative of metallic mineral deposits. The greatest concentration of known mineral occurrences in the Lower Kuskokwim River region is located east of Kasigluk, in the region of the Kilbuk Mountains. In addition, four

³⁵⁰ Alaska Native Heritage Center. (n.d.) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

³⁵¹ Ceñaliulriit Coastal Resource Service Area. 2008. *Coastal Management Plan: Final Plan Amendment*. Retrieved February 9, 2012 from http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

³⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵³ Ibid.

³⁵⁴ Lower Kuskokwim Economic Development Council. 2006. *Comprehensive Economic Development Strategy & Area Plan*. Retrieved March 6, 2012 from <http://www.lkedc.org/ARDPLAN1.pdf>.

³⁵⁵ U.S. Fish and Wildlife Service. 2011. *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

exploratory oil wells were drilled near Nunavakpak Lake, southwest of Kasigluk. These wells were dry and have been plugged and abandoned.³⁵⁶

According to a local hazard mitigation plan published by the City of Bethel in 2008, the Kasigluk area is at high risk of floods, severe weather, and erosion. The threat of earthquakes is also noted. The plan addresses the role of climate change in exacerbating threats from flooding and erosion. Warming temperatures have led to thawing permafrost. This has caused severe subsidence, which constrains development of resources, transportation and utility systems, and community expansion. In addition, delayed formation of protective shore ice along the coast leaves shorelines more vulnerable to fall storms and storm surges, resulting in increased flooding and erosion.³⁵⁷

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in Kasigluk as of August 2012.³⁵⁸

Current Economy³⁵⁹

In Kasigluk, a majority of employment is provided by the school, commercial fishing, retail businesses, and village government.³⁶⁰ According to a survey conducted by the AFSC in 2011, community leaders indicated that fishing is the most important natural-resource based industry in Kasigluk. Between 2000 and 2010, the number of Kasigluk residents holding state Commercial Fisheries Entry Commission (CFEC) averaged 46 per year, equivalent 8.5% of the total local population on average. A majority of CFEC permits were held in the Kuskokwim River salmon gillnet fishery (see *Commercial Fisheries* section). Subsistence activities also contribute significantly to household diets.³⁶¹ In the 2011 AFSC survey, community leaders reported that humpback whitefish and Alaska blackfish are two of the most important subsistence resources. They indicated that whitefish are harvested using set nets in nearby lakes and rivers, and Alaska blackfish are harvested using traps in local streams.

Based on household surveys for the 2006-2010 ACS, in 2010,³⁶² the per capita income in Kasigluk was estimated to be \$11,355 and the median household income was estimated to be \$37,500. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$7,194 and \$31,500, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,³⁶³ real per capita income in 2000 was \$9,460 and real median household income was \$41,422, revealing that while the per capita income estimate showed a real increase, median household income is estimated to have decreased slightly over

³⁵⁶ See footnote 351.

³⁵⁷ City of Bethel. 2008. *Local Hazards Mitigation Plan*. Retrieved February 7, 2012 from http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Bethel_LHMP.pdf.

³⁵⁸ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved August 24, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³⁵⁹ Unless otherwise noted, all monetary data are reported in nominal values.

³⁶⁰ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

³⁶¹ Ibid.

³⁶² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁶³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

the period. In 2010, Kasigluk ranked 252nd of 305 Alaskan communities with per capita income data that year, and 203rd in median household income, out of 299 Alaskan communities with household income data.

However, Kasigluk's small population size may have prevented the ACS from accurately portraying economic conditions.³⁶⁴ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Kasigluk in 2010 is \$5,872.^{365,366} This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Kasigluk between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is supported by the fact that the community was recognized as "distressed" by the Denali Commission in 2011,³⁶⁷ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a much lower percentage of Kasigluk residents were estimated to be in the civilian labor force (49.2%) than in the civilian labor force statewide (68.8%). Also in 2010, 25.7% of Kasigluk residents were estimated to be living below the poverty line, compared to a 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 14%, more than double statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 27.1%, more than double the statewide unemployment rate estimate of 11.5%.^{368,369}

Also based on the 2006-2010 ACS, a majority of workers were estimated to be employed in the public sector (65.5%), along with 34.5% in the private sector. Of the 116 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in educational services, health care, and social assistance (52.6%), public administration (13.8%), transportation, warehousing, and utilities (11.2%), and retail trade (10.3%). None of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining in 2010. However, the number of individuals employed in the fishing industry is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

³⁶⁴ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁶⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁶⁶ See footnote 362.

³⁶⁷ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

³⁶⁸ See footnote 365.

³⁶⁹ Ibid.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 236 employed residents in Kasigluk in 2010, of which 77.5% were employed in local government, 11.4% in education and health services, 3.8% in financial activities, 2.1% in trade, transportation, and utilities, 0.8% in natural resources and mining, 0.8% in manufacturing, 0.4% in information, 0.4% in leisure and hospitality, 0.4% in state government, and 2.1% in other industries.³⁷⁰ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Kasigluk (U.S. Census).

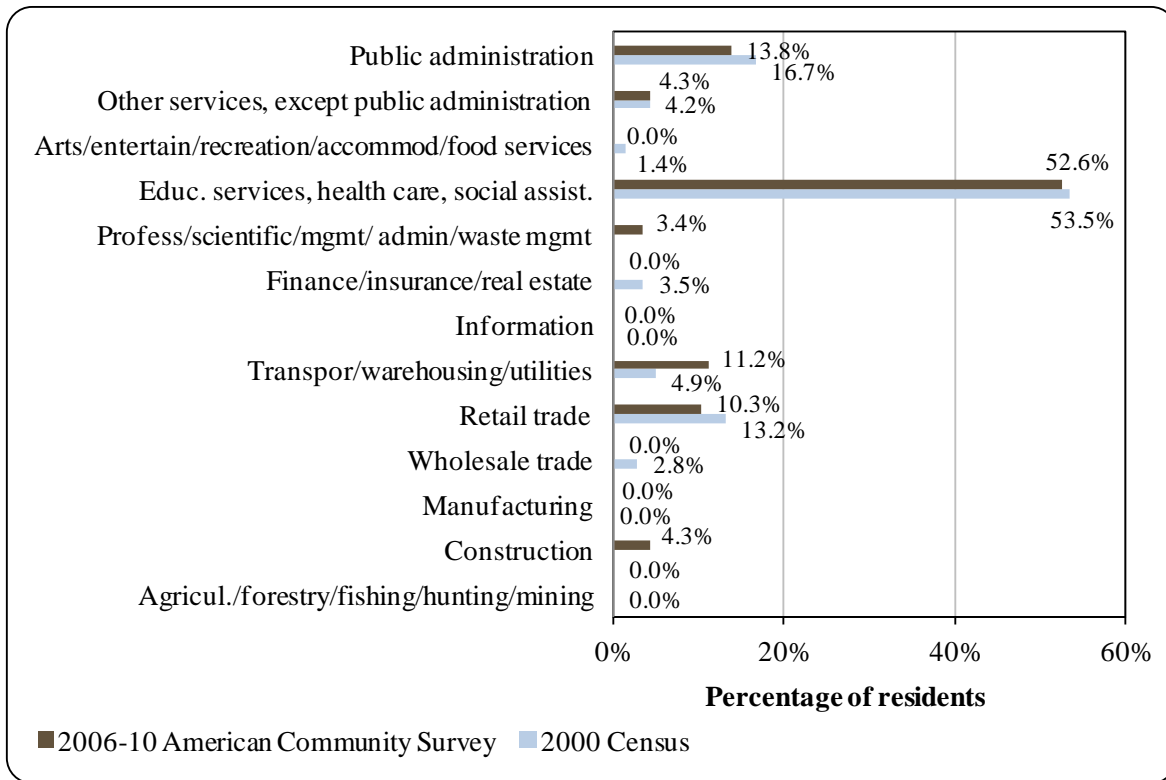
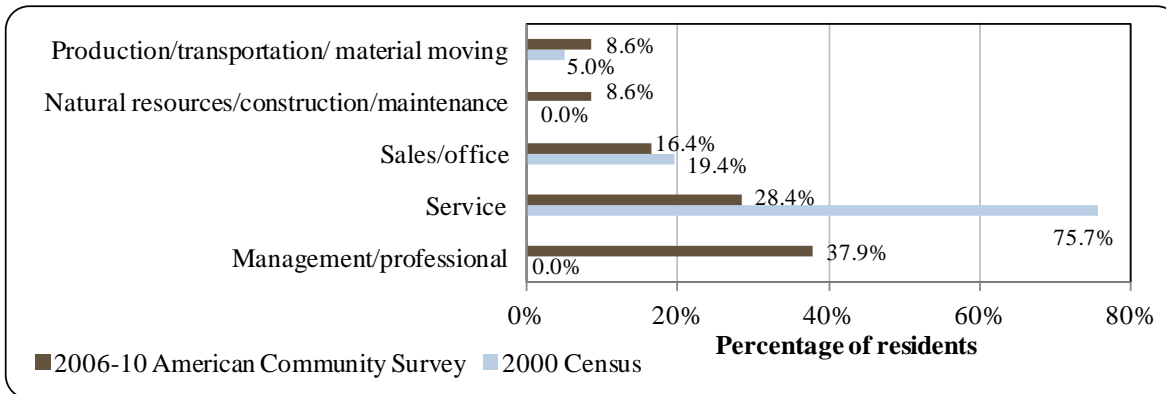


Figure 4. Local Employment by Occupation in 2000-2010, Kasigluk (U.S. Census).



³⁷⁰ Ibid.

Governance

Kasigluk was incorporated as a city in 1982 but was dissolved on October 21, 1996 in favor of the traditional Village Council. Kasigluk is not located in an organized borough. No taxes are administered as there is no local taxing authority.³⁷¹ Given that Kasigluk is not a municipality, no information is reported regarding municipal revenue sources between 2000 and 2010 (Table 2).

Kasigluk was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Kasigluk Traditional Elders Council. The Native village corporation is Kasigluk, Incorporated, which manages 115,200 acres of land.³⁷² Kasigluk belongs to the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.³⁷³

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kasigluk from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

³⁷¹ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

³⁷² Ibid.

³⁷³ Calista Corporation. (n.d.) *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

Kasigluk is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”³⁷⁴ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.³⁷⁵ AVCP is made up of 56 villages and 45 village corporations.³⁷⁶

The closest offices of the Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community, and Economic Development (DCCED) are located in Bethel. A National Marine Fisheries Service (NMFS) field office is located in Bethel and a main office is located in Anchorage. The nearest offices of the Alaska Department of Natural Resources and the Bureau of Citizenship and Immigration Services are located in Anchorage.

Infrastructure

Connectivity and Transportation

A state-owned 3,000 feet long by 60 feet wide gravel airstrip provides chartered or private air transportation year-round.³⁷⁷ As of June 2012, roundtrip airfare from Anchorage to Kasigluk was \$592.³⁷⁸ Locals use skiffs in the summer and snowmobiles, ATVs, and dogsleds in the winter to travel to Bethel and other nearby villages. Winter trails exist to nearby Nunapitchuk (2 ½ miles to the northeast) and Atmautluak (8 miles east), as well as a longer winter trail to Chefornak, a village 83 miles southwest of Kasigluk, near the coast of the Yukon-Kuskokwim Delta on the Kinia River.³⁷⁹

According to the 2011 AFSC survey, community leaders reported that no docking facilities are present in Kasigluk, and the only vessels that can be accommodated locally are barges. Barges from Bethel deliver fuel and supplies during summer months. It is also important to note that a dock, small boat harbor, and seaplane base are located nearby in Nunapitchuk.³⁸⁰

Facilities

Homes in Kasigluk are not plumbed, and residents are reliant on the Village Council-operated washeteria for bathing and laundry. Filtered and chlorinated well water is available to be hauled to homes from the washeteria. Individual wells are also in use, and homes in Akula

³⁷⁴ Association of Village Council Presidents. (n.d.). *AVCP homepage*. Retrieved December 6, 2011 from www.avcp.org.

³⁷⁵ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

³⁷⁶ Calista Corporation. 2011. *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

³⁷⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷⁸ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

³⁷⁹ See footnote 377.

³⁸⁰ Ibid.

Heights use the school well. Honeybuckets are hauled to sewage bunkers. The Village Council operates a landfill and provides refuse collection services in the village.³⁸¹ According to the 2011 AFSC survey, community leaders reported that improvements to water and sewer pipelines, water treatment, and the landfill are currently in progress.

Kasigluk and nearby villages have historically been known for their high fuel prices. The Alaska Village Electric Cooperative (AVEC) currently provides electricity to 53 remote Alaskan villages, including Kasigluk, using diesel generators. Given rising fuel prices, AVEC has been introducing wind turbines to some of the remote villages it serves. In Kasigluk, wind power now supplements the existing diesel power grid, reducing the price per kilowatt hour from 37 cents to 25 cents in Kasigluk.³⁸²

Police services in Kasigluk are provided by the Village Police Department, as well as state troopers stationed in Bethel. Fire and rescue services are provided by the Nick J. Slim Memorial Volunteer Firefighters. Additional community facilities include a community building, village bingo hall, and school library.³⁸³ According to the 2011 AFSC survey, community leaders also noted the presence of a U.S. post office. They also indicated that telephone service is available in the community, and that broadband internet service is expected to be available within the next 10 years. Current internet service is provided by United Utilities Inc, and the Village of Kasigluk also serves as a local cable provider.³⁸⁴

Despite the lack of docking facilities in Kasigluk, residents are highly involved in subsistence and commercial fisheries, and in the 2011 AFSC survey, community leaders reported the presence of some fisheries-related services in the 2011 AFSC survey. According to the survey, boat repair services available locally include welding, mechanical services, and a machine shop. In addition, community leaders indicated that fishing gear, bait and tackle, and boat fuel are sold in Kasigluk.

Medical Services

The Kasigluk Health Clinic is owned by the Village Council and operated by the Yukon Kuskokwim Health Corporation. The Clinic provides residents with basic medical services. It is a Community Health Aide Program site, and a health aide provides emergency service. Outside emergency services have air and river access.³⁸⁵ The nearest hospital is located in Bethel.

Educational Opportunities

There are two schools in Kasigluk that offer preschool through 12th grade education. As of 2011, the Akiuk Memorial School had 87 students and 9 teachers, and the Akula Elitnaurvik School had 107 students and 8 teachers.³⁸⁶

³⁸¹ Ibid.

³⁸² Northern Power Systems. (n.d.). *Case Study: Kasigluk Alaska*. Retrieved August 27, 2012 from <http://www.northernpower.com/pdf/case-study-kasigluk.pdf>.

³⁸³ See footnote 377.

³⁸⁴ Ibid.

³⁸⁵ Ibid.

³⁸⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence fishing has been important to residents of the Kasigluk area for thousands of years.³⁸⁷ Subsistence salmon harvest continues to be a primary economic activity along the Kuskokwim River. In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs is an important subsistence resource for coastal Alaskan communities.³⁸⁸ In addition to saltwater fisheries, community leaders in Kasigluk indicated in the 2011 AFSC survey that whitefish and blackfish are important inland subsistence resources as well.

Commercial harvest of salmon first took place in the Kuskokwim River in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. When Alaska became a state in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s, commercial salmon fisheries in the Kuskokwim River were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current state dictated management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.³⁸⁹

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.³⁹⁰

Kasigluk is located closest to the Lower Kuskokwim salmon fishing district (District 1). The closest marine area to Kasigluk, Kuskokwim Bay, is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Kasigluk is a member of the Coastal Villages Region Fund (CVRF), a Community Development Quota group that promotes employment opportunities for residents as well as participation in the Bering Sea crab and groundfish fisheries.³⁹¹ Kasigluk is not eligible to participate in the Community Quota Entity program. In the 2011 AFSC survey, community leaders reported that Kasigluk does not actively participate in the fisheries management process

³⁸⁷ Alaska Native Heritage Center. (n.d.) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

³⁸⁸ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁸⁹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

³⁹⁰ See footnote 388.

³⁹¹ Coastal Villages Region Fund website. (n.d.). *Home page*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

in Alaska. Community leaders also indicated that a current challenge for Kasigluk's fishing economy is the late commercial fishing schedule.

Processing Plants

The ADF&G 2010 Intent to Operate list did not list a registered processing plant in Kasigluk. According to the 2011 AFSC survey, community leaders confirmed this, noting that the location of Kasigluk on the Johnson River is not accessible to a majority of vessels, with the exception of fuel barges. It is important to note that, according to ADF&G's 2010 Intent to Operate list, a small processing facility was located in nearby Bethel. The plant, run by Kuskokwim Seafoods LLC, was started in 2010 to provide a market to local salmon fishers to help them sell their catch closer to home. Kuskokwim Seafoods processes four species of salmon: Chinook, sockeye, chum, and coho.³⁹²

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue in Kasigluk (Table 3).

Commercial Fishing

Between 2000 and 2010, Kasigluk residents participated in commercial fisheries as crew members, vessel owners, and state permit holders. Trends in local commercial fishing activity generally declined over the period, with the number of crew license holders falling from 51 in 2000 to 2 in 2006, and then rebounding to 39 by 2010. The number of vessels primarily owned by residents declined from 16 in 2000 to 5 in 2010, and the number of vessels homeported in Kasigluk also declined, from 13 in 2000 to 7 in 2010. There were no fish buyers or shore-side processors in Kasigluk during the 2000-2010 period, no vessels were reported to land catch in the community, and no local landings or revenue were reported. This information about the commercial fishing sector in Kasigluk is presented in Table 5. These declining trends were echoed in the 2011 AFSC survey, in which community leaders reported that a lot less people were commercial fishing and there were fewer commercial fishing boats in Kasigluk overall than 5 years earlier. More specifically, they indicated that there were a lot less boats over 60 feet in length, while there were a lot more smaller vessels (under 35 feet in length) compared to 5 years prior. Community leaders also reported that the most common gear used by fishing vessels based out of Kasigluk is small whitefish nets.

The number of commercial fishing permits held in Kasigluk also declined slightly between 2000 and 2010. In 2000, there were 49 permit holders in Kasigluk holding a total of 50 state Commercial Fisheries Entry Commission (CFEC) permits. A majority of these permits (45) were held in the Kuskokwim salmon gillnet fishery, along with 1 Bristol Bay salmon drift gillnet permit, and 4 herring gillnet permits. The herring permits included two for the Goodnews Bay roe and food/bait gillnet fishery and two for the Cape Avinof herring roe fishery. Starting in 2002, the only salmon permits held were for the Kuskokwim gillnet fishery, and the only remaining herring permits were held in the Goodnews Bay roe and food/bait fishery. It is

³⁹² Kuskokwim Seafoods LLC. (n.d.). *Homepage*. Retrieved August 2011 from <http://kuskokwimseafoods.com/>.

important to note that no herring permits were actively fished by Kasigluk residents in any year during the 2000-2010 period. The percentage of salmon permits that were actively fished declined from 83% in 2000 to a low of 51% in 2004, and then increased again to 71% of all permits actively fished in 2010. This information about CFEC permits is presented in Table 4.

Between 2000 and 2010, no Kasigluk residents held federal License Limitation Permits or Federal Fisheries Permits (Table 4). In addition, no Kasigluk residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab during the period (Tables 6 through 8). Given the lack of fish buyers and shore-side processors (Table 5), no landings or ex-vessel revenue were generated in the community during the 2000-2010 period (Table 9). With regard to landings and ex-vessel revenue generated by Kasigluk residents, including all delivery locations, information is considered confidential during the 2000-2010 period due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kasigluk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kasigluk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	4	6	4	4	4	4	4	4	4	4	4
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	6	4	4	4	4	4	4	5	4	4

Table 4 cont'd. Permits and Permit Holders by Species, Kasigluk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	46	47	45	44	43	44	43	42	41	39	38
	Fished permits	38	38	24	24	22	28	21	24	20	23	27
	% of permits fished	83%	81%	53%	55%	51%	64%	49%	57%	49%	59%	71%
	Total permit holders	48	47	45	45	46	45	44	44	44	41	40
<i>Total CFEC Permits</i> ²	<i>Permits</i>	<i>50</i>	<i>53</i>	<i>49</i>	<i>48</i>	<i>47</i>	<i>48</i>	<i>47</i>	<i>46</i>	<i>45</i>	<i>43</i>	<i>42</i>
	<i>Fished permits</i>	<i>38</i>	<i>38</i>	<i>24</i>	<i>24</i>	<i>22</i>	<i>28</i>	<i>21</i>	<i>24</i>	<i>20</i>	<i>23</i>	<i>27</i>
	<i>% of permits fished</i>	<i>76%</i>	<i>72%</i>	<i>49%</i>	<i>50%</i>	<i>47%</i>	<i>58%</i>	<i>45%</i>	<i>52%</i>	<i>44%</i>	<i>53%</i>	<i>64%</i>
	<i>Permit holders</i>	<i>49</i>	<i>49</i>	<i>47</i>	<i>47</i>	<i>48</i>	<i>46</i>	<i>46</i>	<i>45</i>	<i>46</i>	<i>43</i>	<i>42</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kasigluk: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kasigluk ²	Total Net Pounds Landed in Kasigluk ^{2,5}	Total Ex-Vessel Value of Landings in Kasigluk ^{2,5}
2000	51	0	0	16	13	0	0	\$0
2001	40	0	0	14	11	0	0	\$0
2002	27	0	0	11	9	0	0	\$0
2003	22	0	0	6	4	0	0	\$0
2004	25	0	0	4	3	0	0	\$0
2005	32	0	0	4	4	0	0	\$0
2006	2	0	0	4	4	0	0	\$0
2007	22	0	0	3	3	0	0	\$0
2008	18	0	0	2	2	0	0	\$0
2009	30	0	0	2	2	0	0	\$0
2010	39	0	0	5	7	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kasigluk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kasigluk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kasigluk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kasigluk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kasigluk Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to the 2011 AFSC survey, community leaders indicated that no sportfishing activity takes place locally. This is reflected in the fact that no active sport fish guide businesses were present in Kasigluk between 2000 and 2010, and no licensed sport fish guides resided in the community. However, local residents participated in sportfishing during the 2000-2010 period, purchasing between 20 and 104 sportfishing licenses per year (irrespective of point of sale). The number of sportfishing licenses purchased in the community of Kasigluk itself was very close to the number purchased by residents, indicating that sportfishing does not draw a significant number of visitors to Kasigluk (Table 11).

The Alaska Statewide Harvest Survey,³⁹³ conducted by ADF&G between 2000 and 2010, did not provide information regarding the species targeted by private anglers on the Johnson River near Kasigluk. However, the survey did note the following species as targeted by private anglers in Napakiak, one of the nearby communities located on the main stem of the Kuskokwim River: Dolly Varden, northern pike, and whitefish. Given the lack of sport fish guide businesses in Kasigluk, no kept/release log book data were reported for sportfishing charters out of Kasigluk between 2000 and 2010.³⁹⁴

Kasigluk is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the regional sportfishing activity is displayed in Table 11.

³⁹³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁹⁴ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Kasigluk: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kasigluk ²
2000	0	0	102	99
2001	0	0	93	90
2002	0	0	90	100
2003	0	0	98	100
2004	0	0	54	61
2005	0	0	26	15
2006	0	0	20	0
2007	0	0	70	69
2008	0	0	88	100
2009	0	0	89	100
2010	0	0	104	100

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence activities are fundamental to the way of life in Kasigluk.³⁹⁵ Fish has historically been the basis of the Akulmiut³⁹⁶ economy. Northern pike, whitefish, and Alaska blackfish were the primary subsistence fishery resources in the 19th century, and the harvest of salmon increased in importance during the 20th century.³⁹⁷ According to a survey conducted by the AFSC in 2011, community leaders indicated that fishing is still the most important natural-resource based industry in Kasigluk, and that whitefish and blackfish remain two of the most important aquatic subsistence resources. Additional species of freshwater fish found in the region including rainbow trout, lake trout, and Dolly Varden. Rainbow trout occur in the Kasigluk River; the Kuskokwim River is the approximate northern limit of the range of rainbow trout.³⁹⁸

No information is available from ADF&G between 2000 and 2010 regarding the percentage of Kasigluk households participating in the harvest of various subsistence resources or per capita subsistence harvest (Table 12). In addition, no data are available regarding harvest of marine invertebrates and non-salmon fish (Table 13), Pacific halibut (Table 14), or marine mammals (Table 15) during the 2000-2010 period. Some information is available between 2000 and 2010 regarding subsistence salmon permits, however. From 2000 to 2008, the number of Kasigluk households that were issued subsistence salmon permits varied between 129 and 136 per year. For those years in which harvest numbers were reported, an average of 1,306 Chinook, 878 chum, 668 coho, and 573 sockeye salmon were harvested by Kasigluk households per year using subsistence salmon permits. This information is presented in Table 13.

Although minimal information was available regarding subsistence harvests in the village of Kasigluk, subsistence harvests by residents of Kasigluk follow the pattern of seasonal harvests of the community Nunapitchuk,³⁹⁹ so it is useful to consider subsistence data recorded for Nunapitchuk to shed light on Kasigluk subsistence patterns as well. Results of an ADF&G subsistence survey conducted in 2005 show that 4% of Nunapitchuk households participated in Pacific halibut subsistence and 53% of Nunapitchuk households participated in non-salmon fish subsistence (other than halibut), and the total pounds of non-salmon fish harvested by Nunapitchuk residents for subsistence purposes was 89,846 that year.⁴⁰⁰

A 1983 ADF&G subsistence survey considered subsistence harvest by Akulmiut residents of all three tundra villages, Nunapitchuk, Kasigluk, and Atmautluak. Together, the population of the three villages totaled 1,000 in 1983. Residents of these three communities were found to use an area of approximately 2,500 to 3,000 square miles for subsistence harvest of fish and wildlife resources. In 1983, 100% of households reported harvesting pike, 94% reported harvesting whitefish, 77% reported harvest of burbot, 53% reported harvest of blackfish, and

³⁹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁹⁶ The Akulmiut are a sub-group of Yup'ik Eskimo residing in three villages in the Yukon-Kuskokwim Delta: Kasigluk, Nunapitchuk, and Atmautluak (See footnote 351).

³⁹⁷ Ceñaliulriit Coastal Resource Service Area. 2008. *Coastal Management Plan: Final Plan Amendment*. Retrieved February 9, 2012 from http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

³⁹⁸ Ibid.

³⁹⁹ Ibid.

⁴⁰⁰ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

12% reported harvest of sheefish. In addition, the 1983 ADF&G survey found that 29% of households reported harvesting seal for subsistence purposes that year. No information was provided regarding the species of seal harvested.⁴⁰¹ Kuskokwim Bay is an important site for both seal and beluga whale hunts. In addition, waterfowl are an important subsistence resource during spring, late summer, and early fall.⁴⁰²

Table 12. Subsistence Participation by Household and Species, Kasigluk: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁴⁰¹ Ibid.

⁴⁰² See footnote 397.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kasigluk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	136	19	731	930	1,667	n/a	666	n/a	n/a
2001	135	4	588	550	344	n/a	320	n/a	n/a
2002	136	5	381	306	142	n/a	59	n/a	n/a
2003	135	4	356	297	134	n/a	210	n/a	n/a
2004	129	13	1,526	906	690	n/a	336	n/a	n/a
2005	129	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	129	1	157	103	107	n/a	53	n/a	n/a
2007	129	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	135	30	5,403	3,056	1,595	n/a	2,367	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kasigluk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kasigluk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kipnuk (KIP-nuck; A.K.A. Kanganak)



People and Place

*Location*⁴⁰³

Kipnuk is located on the west bank of the Kugkaktlik River in the Yukon-Kuskokwim River Delta, 85 air miles southwest of Bethel and approximately 485 air miles west of Anchorage. It lies 4 miles inland from the Bering Sea coast. Kipnuk is located in the Bethel Census Area and the Bethel Recording District.

*Demographic Profile*⁴⁰⁴

In 2010, there were 639 residents in Kipnuk, making it the 97th largest of 352 total Alaskan communities with recorded populations that year. The population of Kipnuk increased by 37.0% between 1990 and 2000, and stayed stable through 2010, with an overall population increase of 35.6% between 1990 and 2010. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 4.2%, with an average annual growth rate of 0.01%, significantly below than the statewide average of 0.75%.

In 2010, the majority of Kipnuk residents identified themselves as American Indian and Alaska Native (97.7%), along with 2.0% that identified as White, and just under 1% of the population identified with two or more races. Other racial and ethnic groups were not represented in Kipnuk in 2000 or 2010. There was little change in racial and ethnic composition between 2000 and 2010; there was a small increase in the percentage of the population identifying as American Indian and Alaska Native, and a commensurate decrease in the number of individuals identifying with two or more races between 2000 and 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Kipnuk was 4.18, a decrease from 4.7 persons per household in 1990 and 2000. The number of households in Kipnuk increased over time, from 99 in 1990 and 137 in 2000, to 153 occupied housing units in 2010. Of a total of 176 housing units surveyed for the 2010 U.S. Decennial Census, 123 (69.9%) were owner-occupied households and 30 (17%) were renter-occupied. In that same year, 23 housing units (13.1%) were vacant, compared to 11% of total housing units in 2000. In 1990, two Kipnuk residents were reported to be living in group quarters. This number fell to zero in 2000 and 2010.

⁴⁰³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁰⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

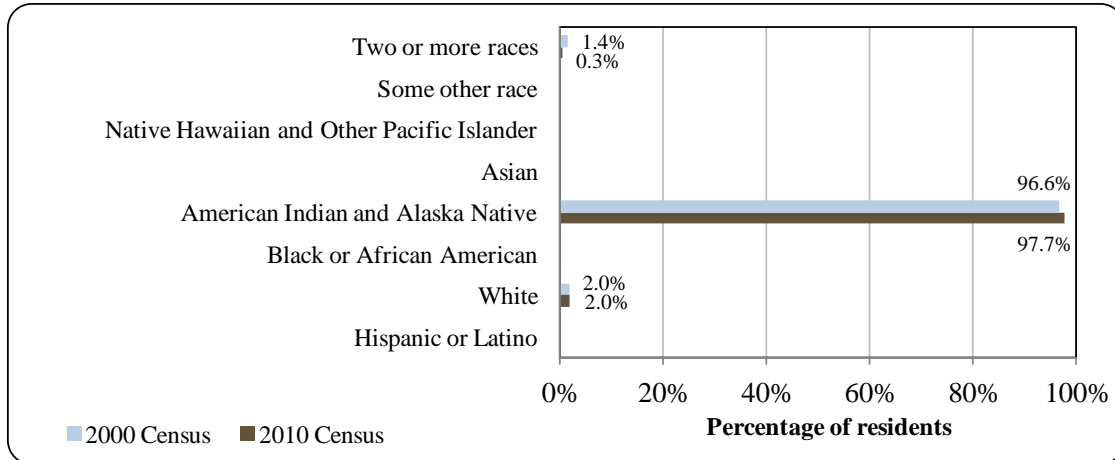
Table 1. Population in Kipnuk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	470	-
2000	644	-
2001	-	621
2002	-	646
2003	-	649
2004	-	662
2005	-	688
2006	-	667
2007	-	662
2008	-	694
2009	-	671
2010	639	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

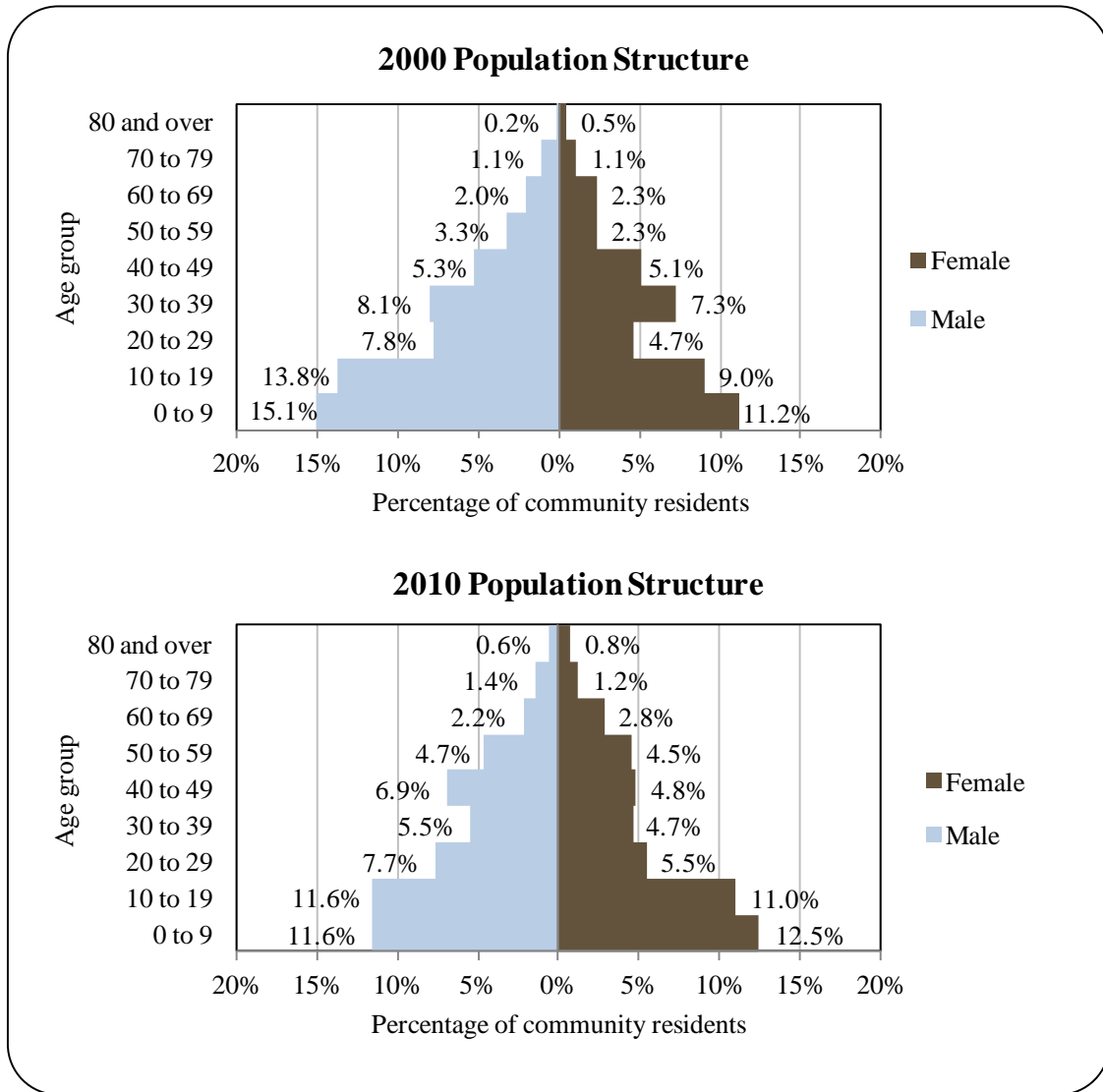
Figure 1. Racial and Ethnic Composition, Kipnuk: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Kipnuk was 52.1% male and 47.9% female, nearly identical to the gender distribution statewide (52.0% male, 48.0% female). Also in 2010, the median age was estimated to be 21.9 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska of 33.8 years. That year, 9% of the Kipnuk population was age 60 or older. Compared with 2000, the population structure in 2010 became more constricted. In that year, 46.6% of residents were under the age of 20, compared to 49.1% in 2000; 9.1% were over the age of 59, compared to 7.1% in 2000; 31.1% were between the ages of 30 and 59, compared to 31.4% in 2000; and 13.1% were between the ages of 20 and 29, compared to 12.4%

in 2000. Age distribution by gender cohort was slightly more even in 2010 than in 2000. In 2010, the greatest absolute gender difference occurred within the 20 to 29 age range (7.7% male, 5.5% female), closely followed by the 40 to 49 age range (6.9% male, 4.8% female). The overall population structure of Kipnuk in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Kipnuk Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁴⁰⁵ estimated that 72.4% of residents aged 25 and over held a high school diploma or higher degree in 2010, significantly less than the estimated 90.7% of Alaska residents overall. Also in that year, an estimated 15.6% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 11.9% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 18.4% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; 5.4% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and no residents held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Kipnuk is a traditional Yup'ik Eskimo community, maintaining a subsistence lifestyle. The Native people of the Yukon-Kuskokwim (Y-K) Delta region traditionally followed a nomadic, subsistence lifestyle. Extensive trade networks throughout the Y-K Delta were established prior to contact with Russian explorers in the late 19th century, and by the time of contact the Native people in the region already had access to Eurasian goods from trade routes across the Bering Strait. *Pastuliarraq*, near present-day Kotlik, was a trading center which connected these routes with the lower Y-K Delta region. The 19th century was a time of European expansion and development in the region and with it came waves of disease epidemics which had disastrous effects on the Native peoples in the area. In the early 20th century, the influence of missionaries coinciding with the influenza epidemics of 1900 and 1912 drastically changed the social and cultural identity of an entire generation within the region.⁴⁰⁶ According to Bureau of Indian Affairs records, the village of Kipnuk was established around 1922. Today, commercial fishing is an important source of income in Kipnuk. The sale and importation of alcohol is banned in the village.⁴⁰⁷

Natural Resources and Environment

The community is located in a marine climate. Annual precipitation averages 22 inches, with 43 inches of snowfall annually. Summer temperatures range from 41 to 57 °F, and winter temperatures average from 6 to 24 °F.⁴⁰⁸ Kipnuk is located 4 miles from the coast, on the south shore of the Kugkaktlik River, a meandering stream that originates about 30 miles inland.⁴⁰⁹ The

⁴⁰⁵ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁰⁶ Association of Village Council Presidents. 2000. *2000 Yukon-Kuskokwim Strategic Plan*. Retrieved January 12, 2012 from <http://www.commerce.state.ak.us/dca/plans/YukonKuskokwimDelta-EDP-2000.pdf>.

⁴⁰⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁰⁸ Ibid.

⁴⁰⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Alaska Climate Change Impact Mitigation Program: Kipnuk*. Retrieved September 25, 2012 from <http://www.commerce.state.ak.us/dca/planning/ACCIMP/kipnuk.htm>.

entrance to the Kuguklik River is partially protected by a system of barrier islands that extend south of Kinak Bay, including Kwigluk, Pingerbek, and Kikegtek Islands.⁴¹⁰

The geography of the mainland Y-K Delta is characterized by sub-arctic tundra, tidal wetlands, and boreal forests. The delta plain is crossed by many river channels, meander scars, oxbow lakes, sloughs, and contains more than 400,000 charted lakes. Drainage in the Kipnuk area is limited by fine soils and a permafrost layer underlying the tundra complex. Permafrost in the area varies, and while there is limited local data, regional depths can extend to around 600 feet in some areas. The active permafrost layer is estimated to range between 1.5 and 3 feet deep, depending on conditions. Coastal areas of the delta are classified typically as wet tundra consisting of marshes, swamps, and water ponds.^{411,412}

Fish in the area include all five species of Pacific salmon, boreal smelt, Arctic cisco, northern pike, blackfish, stickleback, sheefish, burbot, and whitefish. Terrestrial wildlife includes bear, moose, hares, beaver, mink, muskrat, otter, fox, weasel, and caribou. Aquatic mammals include seals, walrus, and several species of whale. In addition, the Y-K Delta is renowned as one of the most productive waterfowl breeding areas in the world.⁴¹³

Kipnuk is located within the 22 million acre Yukon Delta National Wildlife Refuge (NWR). The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” NWR lands are open to sport and subsistence hunting and fishing.⁴¹⁴

Natural hazards that have been identified to be present in the Bethel Census Area include flooding, earthquakes, and severe weather.⁴¹⁵ Communities in the region are also suffering from severe erosion of both riverbanks and coastal shorelines, and are susceptible to tundra fires.^{416,417} Flooding and erosion rates, as well as rates of permafrost thawing, are exacerbated by climate change. In 2011, Kipnuk was awarded a \$50,000 State Hazard Impact Assessment grant to identify and define climate-change related hazards in the community and to develop a mitigation plan. Kipnuk is located on a badly eroding bend of the Kuguklik River. Community structures in Kipnuk that may be impacted by erosion, flooding, and permafrost thawing hazards include

⁴¹⁰ Ceñaliulriit Coastal Resource Service Area. 2008. *Coastal Management Plan: Final Plan Amendment*. Retrieved February 9, 2012 from http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

⁴¹¹ See footnote 406.

⁴¹² Lower Kuskokwim Economic Development Council. 2006. *Comprehensive Economic Development Strategy & Area Plan*. Retrieved March 6, 2012 from <http://www.lkedc.org/ARDPLAN1.pdf>.

⁴¹³ Ibid.

⁴¹⁴ U.S. Fish and Wildlife Service. 2011. *Yukon Delta National Wildlife Refuge website*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁴¹⁵ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁴¹⁶ Climate Adaptation Knowledge Exchange (CAKE). 2011. *Relocating the Village of Newtok, Alaska due to Coastal Erosion*. Retrieved January 19, 2012 from <http://www.cakex.org>.

⁴¹⁷ Village of Newtok, Alaska. March 12, 2008. *Local Hazards Mitigation Plan*. Retrieved January 19, 2012 from http://www.dced.state.ak.us/dca/planning/pub/Newtok_HMP.pdf.

homes, commercial and public buildings, power generation facilities, bulk fuel storage, boardwalks, and communication infrastructure.⁴¹⁸

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Kipnuk as of September 2012.⁴¹⁹ However, it is important to note that a number of contamination concerns have been encountered during preparation for the construction of a new school in Kipnuk. These have included removing and treating effluent and sludge from the previous sewage lagoon, determining the extent of contaminated surface soils from the community's fuel tank farm, and managing demolition of existing structures at the site of the new school that may contain hazardous materials such as asbestos, lead paint, mercury, or polychlorinated biphenyls (PCBs). In addition, the ground in Kipnuk is permeated with methane gas, possibly from thawing of permafrost, an old buried landfill, or leakage from the sewage lagoon.⁴²⁰

Current Economy⁴²¹

Local government and utilities provide a majority of wage employment in Kipnuk,⁴²² along with seasonal activities such as fishing and construction. Subsistence activities also provide a foundation for the local economy and lifestyle. Coastal Villages Seafoods, Inc., a subsidiary of the regional Community Development Quota (CDQ) group, the Coastal Villages Region Fund (CVRF), operates a seafood processor in Kipnuk that processes halibut and salmon.⁴²³ In 2000, 99 Kipnuk residents held state commercial fishing permits, equivalent to 15% of the total local population, and the number of crew licenses holders (82) was equivalent to 13% of the population. These numbers declined over the decade, with 45 permit holders in 2010 (equivalent to 7% of the total local population), and 31 crew license holders (5% of the population). See the *Commercial Fishing* section for more information. Trapping is also a source of income in Kipnuk.⁴²⁴

Based on household surveys conducted for the 2006-2010 ACS,⁴²⁵ in 2010, per capita income in Kipnuk was estimated to be \$11,123 and the median household income was estimated to be \$34,792, compared to \$8,589 and \$34,375 reported in 2000, respectively. Taking inflation

⁴¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Alaska Climate Change Impact Mitigation Program: Kipnuk*. Retrieved September 25, 2012 from <http://www.commerce.state.ak.us/dca/planning/ACCIMP/kipnuk.htm>.

⁴¹⁹ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved September 25, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁴²⁰ Seely, Nichelle. August, 2012. "Decontaminating Kipnuk: Preparing the site for a new school." *Alaska Business Monthly*. Retrieved September 25, 2012 from <http://www.akbizmag.com/Alaska-Business-Monthly/July-2012/Decontaminating-Kipnuk/>.

⁴²¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁴²² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved September 25, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴²³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴²⁴ Ibid.

⁴²⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

into account by converting the 2000 values to 2010 dollars,⁴²⁶ the real per capita income in 2000 is shown to have been \$11,294 and the real 2000 median household income was \$45,203. This shows that per capita income stayed stable over the period, while there appears to have been a real decrease in median per capita income. In 2010, Kipnuk ranked 262nd of 305 Alaskan communities with per capita income that year, and 225th out of 299 Alaskan communities with household income data.

However, Kipnuk's small population size may have prevented the ACS from accurately portraying economic conditions.⁴²⁷ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Kipnuk in 2010 is \$7,540.⁴²⁸ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an per capita income stability in Kipnuk between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,⁴²⁹ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 58.5% of the Kipnuk population age 16 and older was estimated to be in the civilian labor force, lower than the statewide rate of 68.8%. That year, approximately 23.7% of local residents were living below the poverty line, 2.5 times the rate of Alaskans overall (9.6%), and the unemployment rate was estimated to be 12.7%, more than double the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Kipnuk in 2010 was 26.1%, more than twice the ALARI statewide unemployment rate estimate of 11.5%.⁴³⁰

Also based on the 2006-2010 ACS, almost half of the Kipnuk workforce was estimated to be employed in the private sector (49.2%), with the other half employed in the public sector (48.1%), and the remaining 2.8% estimated to be self-employed. Out of 181 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in educational services, health care and social services (41.4%), retail trade (30.4%), transportation, warehousing and utilities (15.5%), and public administration (5%) industries (Figure 3). In 2010, 2.2% of the workforce was also estimated to be working in the agriculture, forestry, and fishing industries. The number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

⁴²⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴²⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴²⁸ See footnotes 422 and 425.

⁴²⁹ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁴³⁰ See footnote 422.

Compared to employment statistics in 2000, the distribution of employment by industry appears to have remained stable in some key categories in Kipnuk, with a similar percentage of the work force employed in education, health care, and social assistance services. Some of the most notable shifts were a greater than 50% decrease in the number of individuals employed in public administration, and a more than doubling of percentage employed in retail trade. In addition, several industries that had small employment numbers in 2000 appear to no longer be represented in 2010, including arts, entertainment, recreation, accommodation, and food services, finance, and information industries (Figure 3).

Viewing employment from the perspective of occupation, 2006-2010 ACS estimates indicate that the highest percentages of the Kipnuk workforce were employed in sales and office occupations (37.6%) and management, business, science, and arts occupations (35.9%). In addition, 9.9% of the civilian labor force was estimated to be employed in production, transportation, and material moving service occupations, 9.4% in service occupations, and 7.2% in natural resources, construction, and maintenance occupations. Between 2000 and 2010, the percentage of the workforce employed in sales and office occupations increased by over 50%, while the percentage employed in service occupation decreased by almost 50% and the percentage employed in management/professional occupations decreased by almost 20%. This information about employment by occupation is presented in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Kipnuk (U.S. Census).

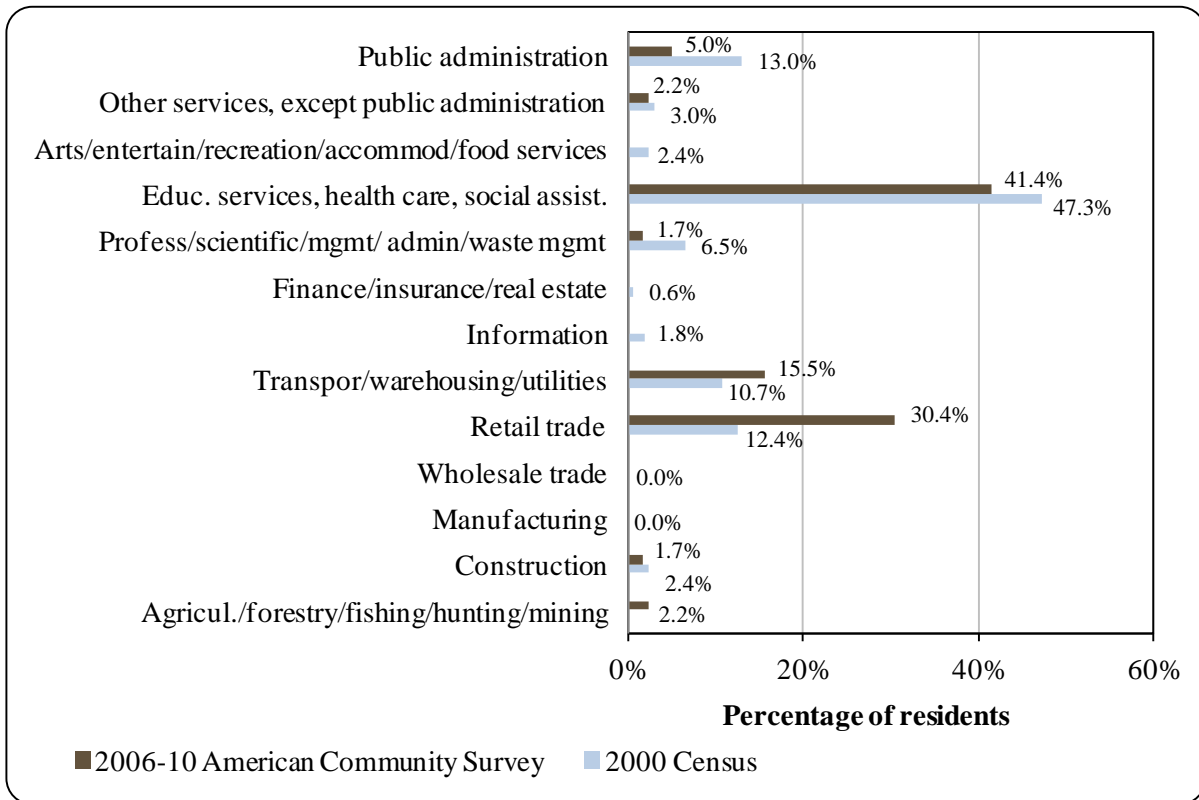
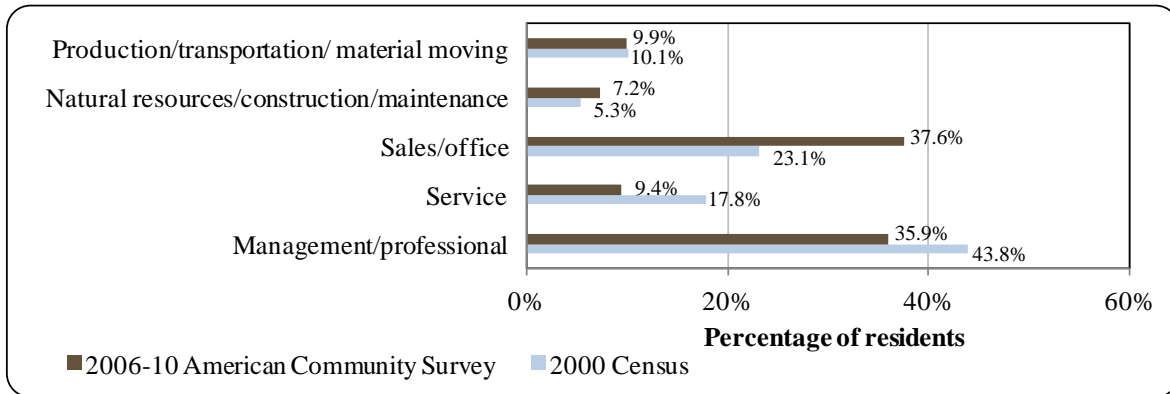


Figure 4. Local Employment by Occupation in 2000-2010, Kipnuk (U.S. Census).



The 2010 ALARI estimate of employment by industry mirrors 2006-2010 ACS estimates, with high percentages of the labor force working in government and trade, transportation, and utilities positions. Economic data compiled in the ALARI database indicate that there were 295 employed residents in Kipnuk in 2010, of which 44.4% were employed in local government, 22.7% were employed in trade, transportation, and utilities, 7.8% in education and health services, 7.5% in manufacturing, 3.7% in financial activities, 1.4% in construction, 0.7% in leisure and hospitality, 0.7% in state government, 0.3% in natural resources and mining, 0.3% in information, and 10.5% in other industries.⁴³¹ ACS estimates conflict somewhat with economic data compiled in the ALARI database, which shows the greatest number of Kipnuk residents employed in production, transportation, and material moving occupations, along with a high number employed in service occupations. It should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

Kipnuk is an unincorporated community and is not located in an organized borough. There is no taxing authority in Kipnuk,⁴³² and no municipal revenue information was reported by the community between 2000 and 2010. The community did receive State Revenue Sharing contributions of between \$3,000 and \$4,000 per year from 2000 to 2003, as well as a \$474,525 grant from the U.S. Economic Development Administration (EDA) in 2001 to assist with construction of a new halibut processing facility (see *Processing Plants* section for more information). Details about these selected community revenue sources are presented in Table 2.

Kipnuk was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Kipnuk. The local village Native corporation is Kugkaktlik, Limited, which manages 115,200 acres of land. Kipnuk belongs to the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and

⁴³¹ Ibid.

⁴³² Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved January 24, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm.

lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.⁴³³

Kipnuk is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁴³⁴ The AVCP is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁴³⁵ AVCP is made up of 56 villages and 45 village corporations.⁴³⁶

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kipnuk from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	\$474,525
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁴³³ Calista Corporation. *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

⁴³⁴ Association of Village Council Presidents. (n.d.). AVCP homepage. Retrieved December 6, 2011 from www.avcp.org.

⁴³⁵ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁴³⁶ Calista Corporation. 2011. *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

The closest offices of the Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community, and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is located in Bethel and a main office is located in Anchorage. The nearest offices of the Alaska Department of Natural Resources and the Bureau of Citizenship and Immigration Services are located in Anchorage.

Infrastructure

Connectivity and Transportation

Kipnuk offers a state-owned 2,120 feet long by 35 feet wide gravel airstrip, with scheduled air taxi service and available charter services. As of June 2012, roundtrip airfare from Anchorage to Kipnuk costs \$726.⁴³⁷ A seaplane base is also available. Boats and skiffs are used by residents for local travel during the summer, with snowmobiles in the winter. Winter trails lead to Tuntutuliak (77 miles), Chefornak (20 miles), and Kwigillingok (35 miles). Although there is no dock, barges from Bethel deliver cargo each summer.⁴³⁸

Facilities

Electricity in Kipnuk is provided by the Kipnuk Light Plant, a diesel plant operated by the Village Council. Water is supplied from a 210,000 gallon water storage tank, which is filled from a reservoir on a nearby lake and maintained by the Village Council and the school. Homes in Kipnuk are not plumbed. Residents haul filtered and chlorinated water to their homes from several watering points throughout the community. The Village Council provides honeybuckets haul service, and sewage is deposited in a sewage lagoon. Some outhouses are also in use in Kipnuk.⁴³⁹ In 2009, the Alaska Native Tribal Health Consortium received a grant from the U.S. Environmental Protection Agency for construction of a new sewage lagoon in Kipnuk to meet Clean Water Act standards.^{440,441} The old sewage lagoon was affected by flooding and overflow events.⁴⁴² The Village Council also offers refuse collection services and maintains a Class III unpermitted landfill.⁴⁴³

Other community facilities in Kipnuk include the Kanganak Community Hall is located in Kipnuk, a volunteer fire department, and a school library. Safety services are provided by the Village Public Safety Officer stationed in Kipnuk. The nearest state trooper post is in Bethel.

⁴³⁷ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

⁴³⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴³⁹ See footnote 438.

⁴⁴⁰ ProPublica website. 2012. "Grant: Alaska Native Tribal Health Consortium, Inc." *Recovery Tracker – Eye on the Stimulus*. Retrieved September 25, 2012 from <http://projects.propublica.org/recovery/item/20120201/14755>.

⁴⁴¹ Bezek Durst Seiser Inc. 2012. *Lower Kuskokwim School District – Kipnuk K-12 Renovation / Addition – Specifications Volume IV of V. Bid Documents*. Retrieved September 26, 2012 from <http://www.djc.com/func/project.php?action=plans&jobid=2000112724>.

⁴⁴² Seely, Nichelle. August, 2012. "Decontaminating Kipnuk: Preparing the site for a new school." *Alaska Business Monthly*. Retrieved September 25, 2012 from <http://www.akbizmag.com/Alaska-Business-Monthly/July-2012/Decontaminating-Kipnuk/>.

⁴⁴³ See footnote 438.

Visitor accommodations are not available in Kipnuk. Local and long-distance telephone service, cable, and internet access are all available locally.⁴⁴⁴ Kipnuk also has a post office.

With regard to fisheries-related infrastructure, no dock infrastructure is available in Kipnuk.⁴⁴⁵

Medical Services

The Kipnuk Clinic, owned by the Village Council and operated by the Yukon Kuskokwim Health Corporation, provides residents with basic medical services. The clinic is a Community Health Aid Program site. The health aide provides emergency services in the community. Outside Emergency Services have coastal and air access.⁴⁴⁶ The nearest hospital is located in Bethel.

Educational Opportunities

There is one school in the Kipnuk, which offers a preschool through 12th grade education. As of 2011, the Chief Paul Memorial School had with 211 students and 14 teachers. Kipnuk is located in the Lower Kuskokwim School District.⁴⁴⁷

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Harvest of marine resources has been important to residents of the Kipnuk area since prehistory. Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁴⁴⁸ Today, subsistence harvest remains fundamental to the way of life and economy in Kipnuk, and commercial fisheries are also an important source of income.⁴⁴⁹ Between 2000 and 2010, residents of Kipnuk were involved in commercial fisheries for herring, halibut, and salmon (see *Commercial Fishing* section).

Kipnuk is located near the Kuskokwim River. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. When Alaska became a state in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s, commercial salmon fisheries in the Kuskokwim River were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels, and salmon prices decreased. Current state-

⁴⁴⁴ Ibid.

⁴⁴⁵ Ibid.

⁴⁴⁶ Ibid.

⁴⁴⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴⁴⁸ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁴⁴⁹ See footnote 438.

dictated management is focused on sustainability of salmon runs, ensuring first that subsistence needs are met followed by providing opportunity for commercial harvest of available surpluses.⁴⁵⁰

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the village of Togiak. Spawning herring are harvested using purse seines and gillnets in the Togiak sac roe fishery. A spawn-on-kelp harvest is also taken in Togiak. Along the coast of the Y-K Delta there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁴⁵¹

Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁴⁵² Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

The closest marine area to Kipnuk, Kinak Bay, is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Kipnuk is a member of the CVRF, a CDQ group that promotes employment opportunities for residents as well as participation in the Bering Sea crab and groundfish fisheries.⁴⁵³ Kipnuk is not eligible to participate in the Community Quota Entity program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Coastal Villages Seafoods operates a seafood processing plant in Kipnuk. The facility was constructed during the summer of 2002,⁴⁵⁴ funded by a grant from the EDA (see *Governance* section). The Kipnuk facility processes halibut from June to July. Coastal Villages maintains a local community service center that helps local fishing families maintain, repair, service, and modify their boats, motors, and fishing gear. The local plant provides free room and board to its fish processing workers, as well as transportation to and from the plant site and a cash bonus for all those who complete their contracts.⁴⁵⁵

⁴⁵⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁴⁵¹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁴⁵² Thompson, W. F. and N. L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁴⁵³ Coastal Villages Region Fund. (n.d.). *Home page*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

⁴⁵⁴ Coastal Villages Region Fund. 2002. *CDQ Quarterly Report: October 1 through December 31, 2002*. Retrieved September 25, 2012 from www.commerce.state.ak.us/bsc/CDQ/pub/CDQ_CV_Qtr4_Report_02.pdf.

⁴⁵⁵ Coastal Villages Region Fund website. 2010. *Community Service Centers, Careers, and Halibut Commercial Fishing*. Retrieved September 25, 2012 from <http://coastalvillages.org/>.

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue in Kipnuk (Table 3).

Commercial Fishing

During the 2000-2010 period, Kipnuk residents were active in commercial fisheries for herring, halibut, and salmon. They participated in fisheries for these species as state permit holders, vessel owners, and crew license holders, with declining participation numbers over the decade. In 2000, 99 Kipnuk residents held state issued Commercial Fishery Entry Commission (CFEC) permits, 85 residents held commercial crew licenses, and 90 vessels were primarily owned by a Kipnuk resident. By 2010, 45 Kipnuk residents were CFEC permit holders, 31 held crew licenses, and 34 vessels were primarily owned by residents. The number of vessels that were homeported in Kipnuk also decreased steadily through this period. Permit information is presented in Table 4, and other statistics about the commercial fishing sector in Kipnuk are presented in Table 5.

In 2010, 45 Kipnuk residents held a total of 61 CFEC permits, including 24 halibut permits, 21 salmon permits, and 14 herring permits. The number of herring permits held by Kipnuk residents decreased substantially over the 2000-2010 period, from a high of 89 permits held by 89 permit holders in 2000 to a low of 3 permits held by 2 permit holders in 2008, rebounding slightly by 2010. Salmon permit numbers declined very slightly over the period, while halibut permit numbers remained stable despite greater yearly variability.

Throughout the 2000-2010 period, salmon CFEC permits were held in the Kuskokwim gillnet and Bristol Bay drift gillnet fisheries, with a much higher rate of active permits in the Bristol Bay fishery. In 2010, herring CFEC permits were held in the Nelson Island gillnet fishery, the Cape Avinof and Goodnews Bay roe herring gillnet fisheries, and the Bristol Bay spawn-on-kelp hand-picking fishery. No herring permits were actively fished from 2006 to 2010. From 2000 to 2005, all active herring permits were fished in the Cape Avinof roe herring gillnet fishery, with 63 active permits in 2000 declining to 14 by 2005. Halibut permits were held in the statewide hand troll fishery, the statewide longline fishery using vessels under 60 feet in length, and the statewide mechanical jig fishery. The total number of halibut permits held were spread relatively evenly across these three gear types, and the rate at which the gear types were actively fished was similar across gear types as well. It is important to note that very few halibut permits were actively fished in the earlier years of the 2000-2010 period. The increase in the number of halibut permits actively fished starting in 2003 may be related to the construction of the new halibut processing plant in Kipnuk, which was completed in 2002.⁴⁵⁶

Between 2000 and 2010, no Federal Fisheries Permits or federal License Limitation Permits were held by Kipnuk residents (Table 4), and no Kipnuk residents held participated in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8).

In addition to commercial fishing activity, the community of Kipnuk is engaged in seafood processing. Starting in 2002, one shore-side processing facility was located in Kipnuk (see *Processing Plants* section). No locally operating fish buyers were reported between 2000 and 2008, and no vessels were reported to make landings during those years. However, in 2009

⁴⁵⁶ See footnote 454.

and 2010, one fish buyer was reported to be present, and 19 vessels were reported to have delivered landings in Kipnuk. In 2010, Kipnuk ranked 60th in landings and 58th in ex-vessel revenue out of 67 Alaskan ports that received landings in 2010. Total landings and revenue in Kipnuk is considered confidential for 2009 or 2010 due to the small number of fish buyers in operation (Table 5).

Given the lack of fish buyers in Kipnuk between 2000 and 2008, no landings or ex-vessel revenue were reported in the community during those years. Given the small number of fish buyers present in 2009 and 2010, landings in Kipnuk in these two years is considered confidential for all species except crab, which received no landings (Table 9). In addition to local landings in Kipnuk, vessel owners based out of Kipnuk made landings in various ports between 2000 and 2010. In the case of salmon, halibut, and herring landings, data can be reported in most years, but in some years is considered confidential due to the small number of participants, and information is considered confidential for all other management groups in all years of the period. For those years in which data can be reported, salmon landings averaged 352,931 net pounds per year, with an average ex-vessel revenue of \$234,548 per year. From 2000 to 2005, prior to the precipitous drop in herring permit activity, herring landings averaged 303,747 net pounds per year, valued on average at \$20,690. Not including 2001 and 2002 when few halibut permits were fished, halibut landings by Kipnuk vessel owners averaged 7,778 net pounds per year, valued on average at \$21,991. This information about landings and revenue generated by Kipnuk vessel owners is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kipnuk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kipnuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	21	19	19	33	27	17	19	26	26	31	25
	Fished permits	7	0	1	24	16	9	14	22	21	24	21
	% of permits fished	33%	0%	5%	73%	59%	53%	74%	85%	81%	77%	84%
	Total permit holders	21	19	19	33	27	17	19	26	24	30	24
Herring (CFEC) ²	Total permits	89	65	55	38	33	28	20	5	3	6	15
	Fished permits	63	40	31	17	21	14	0	0	0	0	0
	% of permits fished	71%	62%	56%	45%	64%	50%	0%	0%	0%	0%	0%
	Total permit holders	89	65	55	38	33	28	19	4	2	5	14

Table 4 cont'd. Permits and Permit Holders by Species, Kipnuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	25	24	24	23	23	24	22	21	21	21	21
	Fished permits	15	9	6	10	12	11	9	8	8	9	11
	% of permits fished	60%	38%	25%	43%	52%	46%	41%	38%	38%	43%	52%
	Total permit holders	28	26	23	25	23	25	23	23	21	22	21
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>135</i>	<i>108</i>	<i>98</i>	<i>94</i>	<i>83</i>	<i>69</i>	<i>61</i>	<i>52</i>	<i>50</i>	<i>58</i>	<i>61</i>
	<i>Fished permits</i>	<i>85</i>	<i>49</i>	<i>38</i>	<i>51</i>	<i>49</i>	<i>34</i>	<i>23</i>	<i>30</i>	<i>29</i>	<i>33</i>	<i>32</i>
	<i>% of permits fished</i>	<i>63%</i>	<i>45%</i>	<i>39%</i>	<i>54%</i>	<i>59%</i>	<i>49%</i>	<i>38%</i>	<i>58%</i>	<i>58%</i>	<i>57%</i>	<i>52%</i>
	<i>Permit holders</i>	<i>99</i>	<i>78</i>	<i>69</i>	<i>70</i>	<i>59</i>	<i>50</i>	<i>47</i>	<i>49</i>	<i>44</i>	<i>51</i>	<i>45</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kipnuk: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kipnuk ²	Total Net Pounds Landed in Kipnuk ^{2,5}	Total Ex-Vessel Value of Landings in Kipnuk ^{2,5}
2000	82	0	0	90	85	0	0	\$0
2001	47	0	0	70	65	0	0	\$0
2002	53	0	1	61	56	0	0	\$0
2003	37	0	1	59	56	0	0	\$0
2004	34	0	1	54	49	0	0	\$0
2005	32	0	1	40	34	0	0	\$0
2006	22	0	1	35	30	0	0	\$0
2007	21	0	1	34	29	0	0	\$0
2008	25	0	1	31	24	0	0	\$0
2009	28	1	1	35	28	19	-	-
2010	31	1	1	34	28	19	-	-

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kipnuk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kipnuk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kipnuk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kipnuk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	-	-
Finfish	0	0	0	0	0	0	0	0	0	-	-
Halibut	0	0	0	0	0	0	0	0	0	-	-
Herring	0	0	0	0	0	0	0	0	0	-	-
Other Groundfish	0	0	0	0	0	0	0	0	0	-	-
Other Shellfish	0	0	0	0	0	0	0	0	0	-	-
Pacific Cod	0	0	0	0	0	0	0	0	0	-	-
Pollock	0	0	0	0	0	0	0	0	0	-	-
Sablefish	0	0	0	0	0	0	0	0	0	-	-
Salmon	0	0	0	0	0	0	0	0	0	-	-
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-</i>	<i>-</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>-</i>	<i>-</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kipnuk Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	2,716	-	-	5,516	1,854	1,146	4,061	7,683	17,545	15,406	14,079
Herring	538,676	414,550	128,377	326,430	115,843	298,604	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	348,158	110,240	-	198,638	406,436	395,633	407,445	457,630	419,933	495,032	290,161
<i>Total²</i>	<i>889,550</i>	<i>524,790</i>	<i>128,377</i>	<i>530,584</i>	<i>524,133</i>	<i>695,383</i>	<i>411,506</i>	<i>465,313</i>	<i>437,478</i>	<i>510,438</i>	<i>304,240</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$3,398	-	-	\$6,896	\$2,317	\$2,077	\$14,865	\$33,007	\$53,297	\$37,717	\$44,349
Herring	\$50,033	\$19,484	\$6,034	\$16,974	\$14,596	\$17,021	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$231,853	\$46,527	-	\$96,928	\$204,374	\$235,631	\$259,527	\$297,850	\$312,276	\$388,605	\$271,907
<i>Total²</i>	<i>\$285,284</i>	<i>\$66,011</i>	<i>\$6,034</i>	<i>\$120,798</i>	<i>\$221,287</i>	<i>\$254,729</i>	<i>\$274,392</i>	<i>\$330,857</i>	<i>\$365,573</i>	<i>\$426,322</i>	<i>\$316,256</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were present in Kipnuk. A small number of Kipnuk residents purchased sportfishing licenses during this period, varying between 7 and 33 per year. For most years during the period, no sportfishing licenses were sold within the community of Kipnuk. This indicates that Kipnuk is not a center of sportfishing activity in the Y-K delta region, and that Kipnuk residents must travel elsewhere to prepare for sportfishing activity.

The Alaska Statewide Harvest Survey,⁴⁵⁷ conducted by ADF&G between 2000 and 2010, did not provide information regarding the species targeted by private anglers in on the Kugkaktlik River near Kipnuk. No kept/release log book data were reported for fishing charters out of Nunapitchuk between 2000 and 2010.⁴⁵⁸ However, Kipnuk is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale (Table 11). Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 28 non-Alaska resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year).

Table 11. Sport Fishing Trends, Kipnuk: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kipnuk ²
2000	0	0	7	0
2001	0	0	24	0
2002	0	0	15	0
2003	0	0	20	0
2004	0	0	18	0
2005	0	0	20	0
2006	0	0	18	0
2007	0	0	13	0
2008	0	0	23	0
2009	0	0	33	10
2010	0	0	27	15

⁴⁵⁷ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴⁵⁸ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Kipnuk: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Historically, Yup'ik Eskimos along the Bering Sea coast harvested herring, marine mammals, Pacific halibut, salmon, flounder, and a variety of freshwater fish species.⁴⁵⁹ Traditionally, dried herring has also been an important protein source for residents of Bering Sea communities such as Kipnuk, where salmon are not as readily available as in other regions.⁴⁶⁰ Today, subsistence harvest remains a fundamental aspect of the local economy and culture. Marine mammals are harvested throughout the year, except for the short days of December and January and the peak of subsistence salmon harvest during summer. Subsistence herring harvest is primarily conducted during May and June.⁴⁶¹

⁴⁵⁹ Fienup-Riordan, A. 1994. *Boundaries and Passages: Rule and Ritual in Yup'ik Eskimo Oral Tradition*. Norman: University of Oklahoma Press.

⁴⁶⁰ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁴⁶¹ Ceñaliulriit Coastal Resource Service Area. 2008. *Coastal Management Plan: Final Plan Amendment*. Retrieved February 9, 2012 from http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

No information was reported by ADF&G between 2000 and 2010 regarding per capita subsistence harvest or the percentage of Kipnuk households utilizing various marine resources for subsistence purposes (Table 12). Likewise, no information was reported about total pounds of marine invertebrates or non-salmon fish harvested for subsistence purposes in Kipnuk (Table 13).

However, information was reported by ADF&G regarding both subsistence salmon permits and Subsistence Halibut Registration Certificates (SHARC) issued in Kipnuk for some years during the 2000-2010 period. Between 2000 and 2008, the number of subsistence salmon permits issued to Kipnuk households stayed very consistent, fluctuating between 175 and 177 per year. Subsistence salmon harvest was relatively low compared to communities along the Kuskokwim and Yukon Rivers, and areas further south in Alaska (Table 13). For those years in which harvest data were reported, coho and chum salmon were the most heavily harvested species, averaging 154 and 108 fish harvested per year, respectively. Smaller numbers of sockeye and Chinook salmon were reported as harvested in some years. No pink salmon were reported harvested between 2000 and 2008.

Between 2003 and 2010, the number of SHARC cards issued to Kipnuk residents declined from 89 to 12. The highest harvest volume of subsistence halibut during the reported period took place in 2007, when 64 SHARC cards were fished with a total harvest of 17,364 pounds of halibut. This was much higher than harvest in other years during the period (Table 14).

Bering Sea coastal communities, including Kipnuk, are known to harvest sea mammals year-round,⁴⁶² and residents of other communities in the region have traditionally traveled to Kipnuk and other coastal villages to participate in subsistence harvest of walrus and seal.⁴⁶³ Data reported by the U.S. Fish and Wildlife Service between 2000 and 2007 indicate that an average of 5 walrus were harvested per year by Kipnuk households (39 total walrus during this period). No data were reported by management agencies regarding harvest of beluga whale, sea otter, sea lion, or seal species by Kipnuk residents between 2000 and 2010 (Table 15).

⁴⁶² Ibid.

⁴⁶³ Coffing, M. 1991. *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of a Lower Kuskokwim River Area Community*. Alaska Dept. of Fish and Game, Division of Subsistence. Technical Paper No. 157.

Table 12. Subsistence Participation by Household and Species, Kipnuk: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kipnuk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	177	13	170	269	223	n/a	179	n/a	n/a
2001	176	1	1	2	74	n/a	4	n/a	n/a
2002	176	1	1	5	69	n/a	11	n/a	n/a
2003	176	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	175	10	49	156	250	n/a	89	n/a	n/a
2005	175	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	175	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	175	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	176	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kipnuk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	89	67	8,273
2004	88	68	7,677
2005	87	38	4,409
2006	87	68	8,976
2007	88	64	17,364
2008	11	12	1,680
2009	12	7	273
2010	12	2	490

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kipnuk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	10	n/a	n/a	n/a	n/a
2001	n/a	n/a	5	n/a	n/a	n/a	n/a
2002	n/a	n/a	1	n/a	n/a	n/a	n/a
2003	n/a	n/a	4	n/a	n/a	n/a	n/a
2004	n/a	n/a	2	n/a	n/a	n/a	n/a
2005	n/a	n/a	6	n/a	n/a	n/a	n/a
2006	n/a	n/a	6	n/a	n/a	n/a	n/a
2007	n/a	n/a	5	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kongiganak (kahn-GIG-uh-nuk)



People and Place

*Location*⁴⁶⁴

Kongiganak is located on the west shore of Kuskokwim Bay, west of the mouth of the Kuskokwim River. It lies 70 miles southwest of Bethel and 451 miles west of Anchorage. The community occupies 1.7 square miles of land and 0.2 square miles of water. Kongiganak is unincorporated, is located within the Bethel Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁴⁶⁵

In 2010, there were 439 inhabitants in Kongiganak, making it the 130st largest of 352 total Alaskan communities with recorded populations that year (Table 1). Overall between 1990 and 2010, the population increased by 49.3%. Between 2000 and 2009, the population grew by 29.5% with an average annual growth rate of 1.8%; which was higher than the statewide average of 0.75% and indicative of relatively robust growth. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 10 temporary residents living in Kongiganak in 2010. Population peaks are somewhat driven by employment in fisheries sectors.

Kongiganak is a traditional Yup'ik Eskimo village. Racial and ethnic composition changed little between 2000 and 2010 (Figure 1). In 2010, 95.7% of residents identified themselves as American Indian or Alaska Native, compared to 95.8% in 2000; 2.1% identified themselves as White, compared to 2.8% in 2000; and 2.3% identified themselves as two or more races, compared to 1.4% in 2000. In addition, 1.8% of residents identified themselves as Hispanic or Latino, compared to 1.7% in 2000.

In 2010, the average household size in Kongiganak was 4.67, compared to 4.90 in 1990 and 4.54 in 2000. In that year, there were a total of 102 housing units, compared to 67 in 1990 and 90 in 2000. Of the households surveyed in 2010, 42% were owner-occupied, compared to 50% in 2000; 50% were renter-occupied, compared to 38% in 2000; 7% were vacant, compared to 11% in 2000; and 1% were occupied seasonally, compared to 1% in 2000. No residents lived in group quarters between 1990 and 2010.

In 2010, the gender distribution was somewhat male biased at 54.0% male and 46.0% female. This was somewhat less even than the distribution statewide (52.0% male, 48.0% female), and similar to the distribution in 2000 (54.6% male, 45.4% female). The median

⁴⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁶⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

age that year was 23.9 years, which was significantly younger than the statewide median of 33.8 years and slightly older than the 2000 median of 21.8 years.

Table 1. Population in Kongiganak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	294	-
2000	359	-
2001	-	372
2002	-	372
2003	-	404
2004	-	413
2005	-	426
2006	-	416
2007	-	434
2008	-	444
2009	-	465
2010	439	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kongiganak: 2000-2010 (U.S. Census).

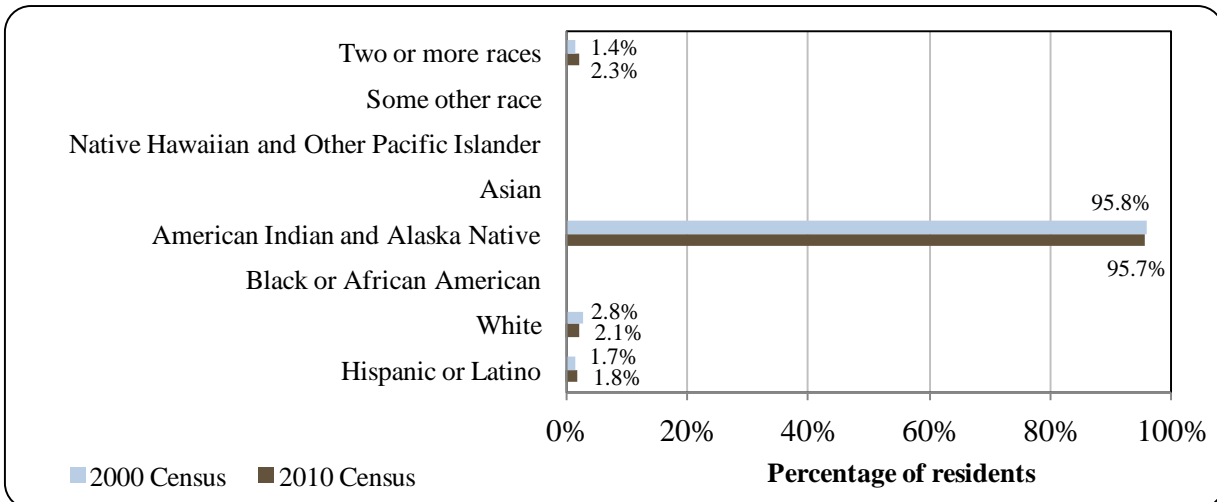
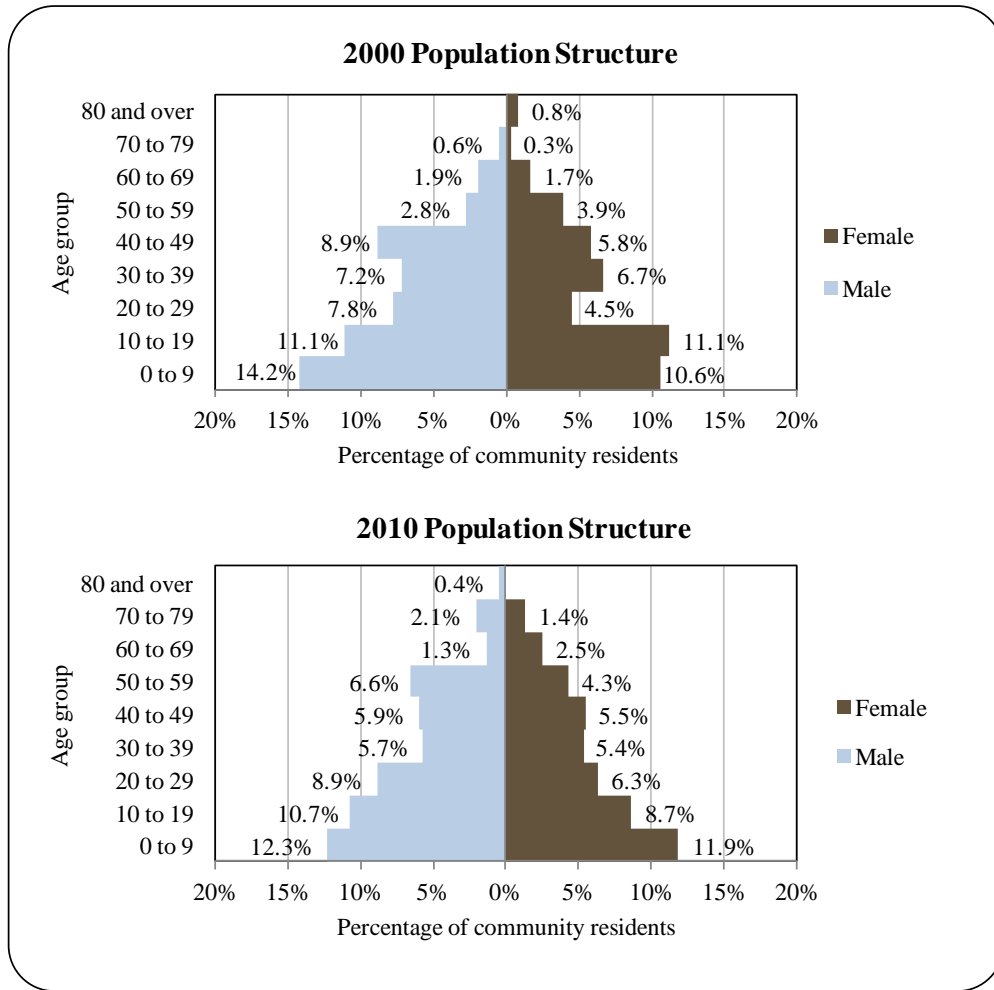


Figure 2. Population Age Structure in Kongiganak Based on the 2000 and 2010 U.S. Decennial Census.



The population structure was significantly expansive in both 2010 and 2000. In 2010, 43.6% of residents were under the age of 20, compared to 47% in 2000; 7.7% were over the age of 59, compared to 5.3% in 2000; 33.4% were between the ages of 30 and 59, compared to 35.3% in 2000; and 15.2% were between the ages of 20 and 29, compared to 12.3% in 2000.

Gender distribution by age cohort was slightly more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 20 to 29 age range (8.9% male, 6.3% female), followed by the 10 to 19 age range (10.7% male, 8.7% female) and the 60 to 69 age range (6.6% male, 4.3% female). However, the difference in males and females in the 0 to 9 age range decreased to 0.4% in 2010 from 3.6% in 2000. Further information regarding trends in Kongiganak’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)⁴⁶⁶ estimated that 77.1% of residents aged 25 and over held a high school diploma

⁴⁶⁶ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the

or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 10.6% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 12.4% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 16.5% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; 2.4% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and no resident held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

The Native people of the Yukon-Kuskokwim Delta region have followed a traditionally nomadic, subsistence lifestyle dating back centuries. Extensive trade networks throughout the Yukon-Kuskokwim Delta were established prior to contact with Russian explorers in the late nineteenth century, and by the time of contact the Native people in the region already had access to Eurasian goods from trade routes across the Bering Strait. *Pastuliarraq*, near present-day Kotlik, was a trading center which connected these routes with the lower Yukon-Kuskokwim Delta region.⁴⁶⁷

The nineteenth century was a time of European expansion and development in the region and with it came waves of disease epidemics which had disastrous effects on the Native peoples in the area. In the early twentieth century, the influence of missionaries coinciding with the influenza epidemics of 1900 and 1912 drastically changed the social and cultural identity of an entire generation within the region.⁴⁶⁸

The area has been occupied historically by Yup'ik Eskimos. The village was permanently settled in the late 1960s by former residents of Kwigillingok, who were seeking higher ground to escape periodic flooding. Kongiganak has a fishing and subsistence lifestyle and culture. The sale, importation, and possession of alcohol is banned in the village.⁴⁶⁹

Natural Resources and Environment

Kongiganak is located in a marine climate. Annual precipitation averages 22 inches, with 43 inches of snowfall annually. Summer temperatures range from 41 to 57 °F, and winter temperatures average 6 to 24 °F.

The entire Kuskokwim River system covers approximately 52,000 square miles of southwest Alaska, or 11 % of all the land area of Alaska. The river system originates on the northwest flank of the Alaska Range, where glacial streams merge to form the meandering, silt-laden Kuskokwim River which flows southwest between the high alluvial terraces. Fast, clear tributaries enter the river from the western Alaska Range. The river courses a broad valley, laden

population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁶⁷ Association of Village Council Presidents. (2000). *2000 Yukon-Kuskokwim Strategic Plan*. Retrieved January 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/YukonKuskokwimDelta-EDP-2000.pdf>.

⁴⁶⁸ Ibid.

⁴⁶⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

with tundra ponds and lakes, until finally emptying into the Bering Sea, at a point nearly 40 miles southwest of Bethel, Alaska.⁴⁷⁰

Kongiganak is part of the Lower Kuskokwim Resource Conservation and Development region which encompasses the area from the boundary of the Lower Kuskokwim Regional Educational Attendance Area (defined by the villages of Newtok on Baird Inlet, Kasigluk, and Nunapitchuk on the Johnson River and Tuluksak on the Kuskokwim River) including the villages of Chevak and Hooper Bay to the north; the Kuskokwim River downriver of Tuluksak to the east; the Ahklun and Kilbuck Mountains to the south; and the Bering Sea to the west. There are 27 communities located in this portion of southwest Alaska. The population is over 15,000, of which approximately 6,000 live in Bethel, the regional center. No roads connect any of the communities to each other—mechanized access is by air, boat, or snow-machine only. Most communities are located along the Kuskokwim River or near the Bering Sea. The area also includes Nunivak and Nelson Islands. There are no major agricultural or industrial enterprises on the Yukon-Kuskokwim Delta due to poor soil conditions and the area's remoteness from major markets in the rest of the state. Local residents use this remote area primarily for subsistence hunting, fishing, and gathering purposes.⁴⁷¹

The Yukon-Kuskokwim Delta is an alluvial flood plain. The Kuskokwim River is the second largest drainage area in the state of Alaska. The glacially turbid mainstem is approximately 900 miles long, originating from the interior headwaters of the Kuskokwim Mountains and the shadows of the Alaska Range. The Kuskokwim River flows in a southwest direction to the Bering Sea. The sparsely populated Kuskokwim drainage has population centers at Bethel, Aniak, and McGrath, in addition to numerous villages along its length, including Kwigillingok.⁴⁷²

Kongiganak is located within the boundaries of the Yukon Delta National Wildlife Refuge (NWR). The Yukon Delta NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Most of the Refuge is a vast, flat wetland/tundra complex dotted by countless ponds, lakes, and meandering rivers. Approximately half of the Yukon Delta NWR is covered by water. Many streams and sloughs are former tributaries of the two major rivers. Some forest habitat is present along rivers and in the Kilbuck Mountains, located in the southeastern part of the Refuge. Moose, caribou, brown bear and black bear can be found in this mountain range, which rises to between 2,000 and 4,000 feet in elevation.⁴⁷³

Kongiganak is also approximately 50 miles across the Kuskokwim Bay from the Togiak NWR and the Wood-Tikchik State Park. Togiak NWR covers 4.7 million acres, of which the northern 2.3 million acres are designated as Togiak Wilderness Area. Like the Yukon Delta NWR, the Togiak NWR protects the habitat of a wide array of birds, fish and mammals. East of

⁴⁷⁰ Lower Kuskokwim Economic Development Council. (June 2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved May 16, 2012 from <http://www.lkedc.org/ARDPLAN1.pdf>.

⁴⁷¹ Association of Village Council Presidents. (2000). *2000 Yukon-Kuskokwim Strategic Plan*. Retrieved January 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/YukonKuskokwimDelta-EDP-2000.pdf>.

⁴⁷² Alaska Department of Fish and Game. *Kuskokwim Management Area: Overview*. Retrieved May 17, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorKuskokwim.moreoverview>.

⁴⁷³ U.S. Fish and Wildlife Service. 2011. *Yukon Delta National Wildlife Refuge Homepage*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

Togiak NWR, Wood-Tikchik is the largest state park in the United States. The Togiak NWR includes a diversity of terrain and ecosystems. The Wood River and Tilchik systems host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, Arctic char, Dolly Varden and northern pike. Tilchik Lake is an important site for whitefish subsistence harvest. Moose, caribou and brown bear are common in the park, along with black bear in a limited area of the park. Small game present in the area includes beaver, muskrat, otter, fox, wolverine, mink and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.⁴⁷⁴

Current Economy⁴⁷⁵

As a region, western Alaska is characterized by the lowest per capita income and highest unemployment rate in the state. Obstacles to local economic development are complex. Unemployment and underemployment are chronic problems and wage employment opportunities are rare and often restricted to seasonal work. The poverty rate approaches elevated levels in most villages, and many residents rely on public assistance. Subsistence activities are adopted not only as way to supplement income, but as a way of life which combats social stressors associated with high wage unemployment. Subsistence activities are interwoven into the social and cultural fabric of western Alaska communities and are imperative to cultural identity as much as to village survival. The economic value of subsistence is very difficult to calculate. Most food and goods harvested cannot be sold so value is derived from substitute goods. However, many goods are without an obvious market substitute, so even this proves difficult.⁴⁷⁶

In 2010,⁴⁷⁷ the estimated per capita income was \$7,842 and the estimated median household income was \$33,542, compared to \$9,881 and \$33,250 in 2000. After adjusting for inflation by converting 2000 values into 2010 dollars,⁴⁷⁸ the real per capita income (\$12,993) and real median household income (\$43,723) indicate a significant decline in both personal and household earnings. In 2010, Kongiganak ranked 297th of 305 communities from which per capita income was estimated, and 226th of 299 communities from which median household income was estimated. This ranks Kongiganak among communities with the lowest per capita income in the state.

Kongiganak's small population size may have prevented the American Community Survey from accurately portraying economic conditions.⁴⁷⁹ Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce

⁴⁷⁴ Alaska Dept. of Natural Resources. (n.d.) Wood-Tilchik State Park website. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

⁴⁷⁵ Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁷⁶ See footnote 471.

⁴⁷⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁷⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁷⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Development (DOLWD). According to the ALARI database, residents earned \$2.47 million in total wages in 2010.^{480,481} When matched with the 2010 Decennial Census population, the per capita income equaled \$5,629, which was less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Decennial Census figures. This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁴⁸² However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,⁴⁸³ 56.1% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 21.1%, compared to 5.9% statewide; and an estimated 30.2% of residents lived below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Again, Kongiganak’s small population size may have prevented the ACS from accurately portraying unemployment. Based on 2010 ALARI estimates, which were based on unemployment insurance claimants, the unemployment rate (27.2%) was approximately one and a quarter times that of the ACS estimate.

Of those employed, an estimated 31.3% worked in the private sector, an estimated 65.0% worked in the public sector, and an estimated 3.8% were self-employed. By industry, most (39.9%) employed residents were estimated to work in education services, health care, and social assistance sectors; followed by public administration (25.1%) and retail trade sectors (10.4%) (Figure 3). Between 2000 and 2010, there were significant proportional declines in arts, entertainment, recreation, accommodations, food services, agriculture, forestry, fishing, hunting, and mining sectors. Conversely, there were significant proportional gains in public administration and other service sectors. According to 2010 ALARI estimates, most (44.2%) employed residents worked in local government sectors; followed by trade, transportation, and utilities (21.4%) and financial service sectors (9.3%).

By occupation type, most (54.6%) employed residents were estimated to hold management or professional positions; followed by natural resources, construction, or maintenance positions (14.2%); sales or office positions (13.1%); service positions (9.3%); and production, transportation, or material moving positions (8.7%) (Figure 4). Between 2000 and 2010, there were significant proportional gains in the number of residents employed in management and professional positions. Conversely, there were significant proportional declines in the number of residents holding service positions.

No individuals characterized themselves as working in natural resource based industries that include fishing in 2010. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

⁴⁸⁰ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁴⁸¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁴⁸² Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

⁴⁸³ See footnote 479.

Figure 3. Local Employment by Industry in 2000-2010, Kongiganak (U.S. Census).

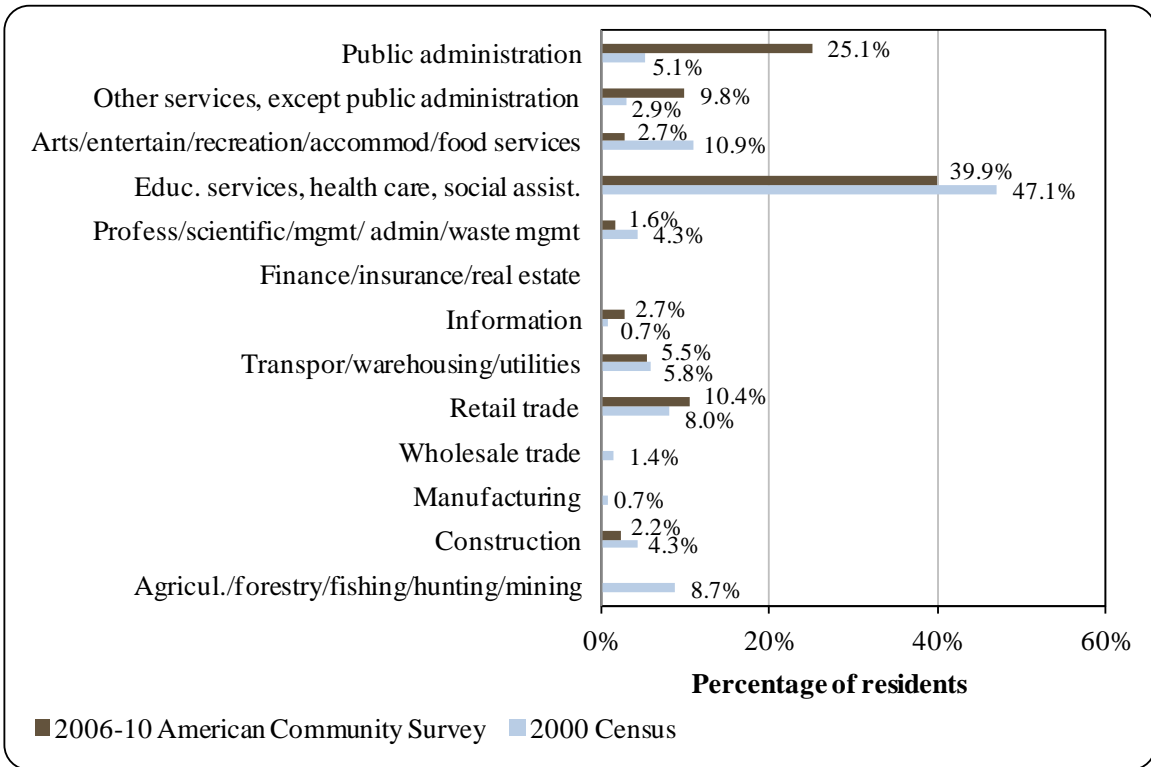
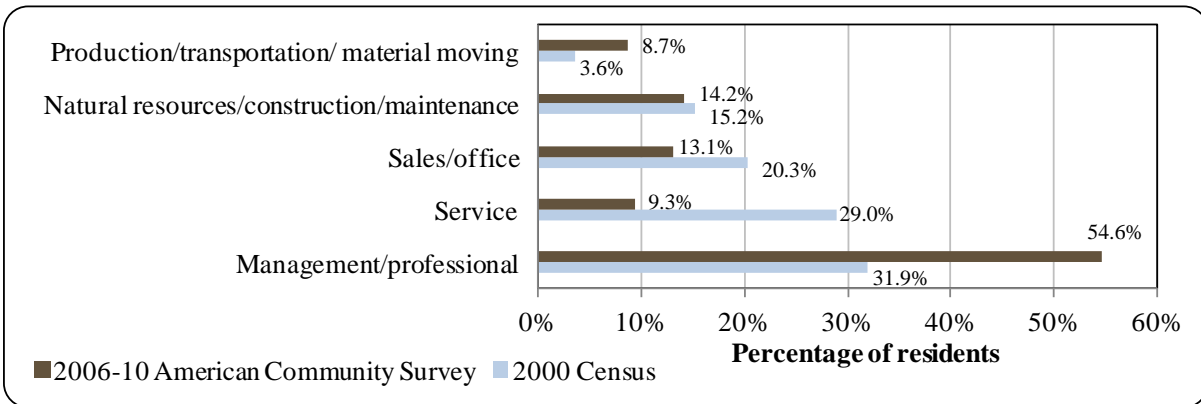


Figure 4. Local Employment by Occupation in 2000-2010, Kongiganak (U.S. Census).



Governance

Kongiganak is an unincorporated community and is not located within an organized borough. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Kongiganak is the Calista Corporation, and the local ANCSA chartered non-profit is the Association of Village Council Presidents. The ANCSA chartered village corporation is Qemirtalek Coast Corporation. The Bureau of Indian Affairs recognized traditional council for Kongiganak is the Kongiganak Traditional Council. Kongiganak is also a member of the Bering

Sea Elders Advisory Group (BSEAG), whose mission is “to bring together elders as one voice to protect our traditional ways of life, the ocean web of life that supports the resources we rely on, and our children’s future.”⁴⁸⁴ The BSEAG was established in 2007 due to the elders’ concerns about the proximity of bottom trawling to some of their villages in the Yukon-Kuskokwim and Bering Strait regions, and the potential movement of industrial fisheries into northern Bering Sea Waters.

Kongiganak is unincorporated and unable to administer taxes or collect local fees. However, between 2000 and 2003, traditional council received State Revenue Sharing funds totaling \$15,189. Information regarding municipal finances can be found in Table 2.

The closest Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Service (NMFS) offices are located in Bethel, 70 miles northeast. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage, 451 miles east.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kongiganak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁴⁸⁴ Bering Sea Elders Advisory Group (n.d.). *Homepage*. Retrieved May 18, 2012 from <http://www.beringsealders.org/>.

Infrastructure

*Connectivity and Transportation*⁴⁸⁵

Residents of Kongiganak utilize air, water, and land travel to reach other communities. A state-owned 1,885-foot long by 35-foot wide gravel airstrip is available, and charter flights are available from a variety of providers including ERA Alaska, Grant Aviation, Ryan Air Service, and Yute Air. As of June 2012, roundtrip airfare from Anchorage to Kongiganak cost \$674.

Snowmobiles, boats, and skiffs provide local transportation to Bethel and other area villages. Winter trails exist to Kwigillingok (11.1 miles) and Tuntutuliak (29 miles). There are no docking facilities in Kongiganak; barges deliver cargo once or twice each summer.

Facilities

Electricity in Kongiganak is provided by a diesel powerhouse owned by the Puvurna Power Company. The Village Council provides disposal bunkers for honeybuckets and operates both a pre-treatment plant and a sewage lagoon for waste disposal. Kongiganak homes and facilities use treated surface water hauled from the washeteria operated by the Village Council. No homes have complete plumbing. Some residents use rain catchment during the summer and ice melt in the winter. Water is filtered and chlorinated by the village council before distribution from a central watering point or through water truck delivery.⁴⁸⁶ A multipurpose, community hall is available in Kongiganak.

The nearest Village Public Safety Officer (VPSO) is stationed in Kongiganak,⁴⁸⁷ and the nearest state trooper post is in Bethel.⁴⁸⁸ A volunteer fire department in Kongiganak provides fire protection services. Kongiganak does not have a post office, but telephone service and internet access are provided by United Utilities Inc. and AT&T.

With regard to fisheries-related infrastructure, the DOLWD community profile of Levelock states there are no docking facilities in Kongiganak.⁴⁸⁹ Community leaders declined to elaborate on fishing-related infrastructure and businesses operating in Kongiganak in the 2011 AFSC survey.

Medical Services

The Lillian E. Jimmy Memorial Health Clinic operated by the Yukon Kuskokwim Health Corporation provides residents with basic medical services. Emergency Services have coastal and air access. Emergency service is provided by a health aide. The closest hospital services are located in Bethel.

⁴⁸⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁸⁶ Ibid.

⁴⁸⁷ Dept. of Public Safety, Alaska State Troopers. *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁴⁸⁸ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁴⁸⁹ Ibid.

Educational Opportunities

Ayagina'ar Elitnaurvik offers preschool through 12th grade instruction. As of 2011, there were 144 students enrolled and 12 teachers.⁴⁹⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Harvest of marine resources has been important to residents of the Kongiganak area since prehistory. Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁴⁹¹ Subsistence salmon harvest continues to be a primary economic activity along the Kuskokwim River. In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs is an important subsistence resource for coastal Alaskan communities.⁴⁹²

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s, commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current state dictated management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.⁴⁹³

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s.⁴⁹⁴ The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the village of Togiak and to the south of Kongiganak. Spawning herring are harvested using purse seines and gillnets in the Togiak sac roe fishery. A spawn-on-kelp harvest is also taken, primarily by local residents. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁴⁹⁵

⁴⁹⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴⁹¹ Alaska Native Heritage Center. (n.d) Yup'ik & Cup'ik - Who We Are website. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/Yup'ik/.

⁴⁹² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁴⁹³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁴⁹⁴ See footnote 492.

⁴⁹⁵ Ibid.

Kongiganak is located in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. The community is not eligible for the Community Quota Entity program. Kongiganak participates in the Community Development Quota program through the Coastal Villages Regional Fund (CVRF), which promotes training and employment opportunities for residents, provides community and development programs for member villages, and offers loans to facilitate involvement of locals in Bering Sea crab and groundfish fisheries.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Kongiganak does not have a registered processing plant. The closest seafood processor is located in Goodnews Bay, 68 miles southeast.

Fisheries-Related Revenue

Between 2000 and 2010, there was no known fisheries-related revenue received by the community of Kongiganak.

Commercial Fishing

Most residents in Kongiganak fish from within the Kuskokwim River drainage and from local drainages that drain into Kuskokwim Bay. Chinook salmon enter the Kuskokwim River in late May, while chum and sockeye salmon begin their entry in mid-June. Chinook and sockeye salmon runs decline rapidly in early July. Chum salmon run entry begins to decline in late July when coho salmon runs begin. Coho salmon run through August and September. Kuskokwim River Chinook are primarily harvested for subsistence purposes, although commercial Chinook fisheries do occur in Kuskokwim Bay.⁴⁹⁶

The Kuskokwim Area commercial fishery was generally stable from 1985 to 1996. Beginning in 1997, the value of salmon, particularly chum salmon, began to decline. This led to decreased fishing effort and number of fish harvested. Furthermore, poor Chinook and chum salmon returns from 1999 through 2001 resulted in increased fishery restrictions. Chinook and chum abundances rebounded in the mid-2000s; however, poor market conditions continued along with limited seafood processing capacity. The opening of a new fish processor in Platinum in 2009 led to local market improvements.⁴⁹⁷

In 1984, commercial herring fishing was initiated in the Nunivak Island District by emergency order. Kuskokwim area herring fisheries developed rapidly in response to strong herring sac roe markets. However, by 1990, stocks began to decline from increased pressure on the fishery. In response, harvest levels were reduced until recruitment levels increased in the late 1990s. After stocks peaked in 1997-1999, market conditions began to falter, and effort was reduced through the 2006 season. The decline in markets for herring sac roe continued through 2010, with no commercial herring harvests occurring in the Kuskokwim area since 2006.⁴⁹⁸

⁴⁹⁶ Brazil, C., Bue, D., Carroll, H., and Elison, T. (2011). *2010 Kuskokwim Area Management Report*. Retrieved August 24, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-67.pdf>.

⁴⁹⁷ Ibid.

⁴⁹⁸ Ibid.

Between 2000 and 2010, the number of commercial fishing permits held within the community followed a declining trend. In 2010, 26 residents, or 5.9% of the population, held 26 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 31 residents held 38 CFEC permits. Most notably, there was a significant decline in CFEC permits between 2000 and 2003 before leveling off. Of the permits held in 2010, 81% were for salmon, compared to 68% in 2000; 15% were for herring, compared to 18% in 2000; and 4% were for halibut, compared to 13% in 2000. Both halibut and herring permit ownership and activity was in steady decline during those years as the fisheries became less popular locally. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. In addition, no residents held federal halibut, sablefish, or crab quota shares between 2000 and 2010.

Residents held 24 commercial crew licenses in 2010, compared to 38 in 2000; which was also the year that resident held commercial crew licenses peaked. Also in 2010, residents held majority ownership of 13 vessels, compared to 24 in 2000; which was also the year that local vessel ownership peaked. Of the CFEC permits held in 2010, 54% were actively fished, compared to 55% in 2000. This varied by fishery from 67% of salmon permits, to 0% of halibut and herring permits. Herring permits were actively fished in 2000, 2001, and 2003. Halibut permits were actively fished in 2000 and 2008. Overall permit activity peaked in 2000. Fisheries prosecuted in 2010 by Kongiganak residents included: Bristol Bay drift gillnet salmon and Kuskokwim gillnet salmon.⁴⁹⁹

Between 2000 and 2010, no landings were reported in Kongiganak. Landings reported by residents are confidential with the exception of salmon landings between 2000 and 2003. In 2003, residents landed 122,225 pounds of salmon valued at \$59,923 ex-vessel, compared to 180,998 valued at \$116,599 in 2000; a decrease of \$0.15 per pound landed after adjusting for inflation,⁵⁰⁰ and without considering the species composition of landings. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁴⁹⁹ Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵⁰⁰ Inflation calculated using 2003 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kongiganak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal revenue</i> ⁵	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Kongiganak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	5	4	4	1	2	2	6	7	1	1	1
	Fished permits	1	0	0	0	0	0	0	0	1	0	0
	% of permits fished	20%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
	Total permit holders	5	4	4	1	2	2	6	7	1	1	1
Herring (CFEC) ²	Total permits	7	4	4	4	3	3	4	3	3	3	4
	Fished permits	3	2	0	1	0	0	0	0	0	0	0
	% of permits fished	43%	50%	0%	25%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	7	4	4	4	3	3	4	3	3	3	4

Table 4 cont'd. Permits and Permit Holders by Species, Kongiganak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	26	23	23	22	22	23	21	21	21	21	21
	Fished permits	17	15	8	5	8	12	8	10	10	8	14
	% of permits fished	65%	65%	35%	23%	36%	52%	38%	48%	48%	38%	67%
	Total permit holders	25	22	22	22	21	22	21	20	20	22	22
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>38</i>	<i>31</i>	<i>31</i>	<i>27</i>	<i>27</i>	<i>28</i>	<i>31</i>	<i>31</i>	<i>25</i>	<i>25</i>	<i>26</i>
	<i>Fished permits</i>	<i>21</i>	<i>17</i>	<i>8</i>	<i>6</i>	<i>8</i>	<i>12</i>	<i>8</i>	<i>10</i>	<i>11</i>	<i>8</i>	<i>14</i>
	<i>% of permits fished</i>	<i>55%</i>	<i>55%</i>	<i>26%</i>	<i>22%</i>	<i>30%</i>	<i>43%</i>	<i>26%</i>	<i>32%</i>	<i>44%</i>	<i>32%</i>	<i>54%</i>
	<i>Permit holders</i>	<i>31</i>	<i>25</i>	<i>24</i>	<i>24</i>	<i>23</i>	<i>25</i>	<i>28</i>	<i>28</i>	<i>23</i>	<i>25</i>	<i>26</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kongiganak: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kongiganak ²	Total Net Pounds Landed in Kongiganak ^{2,5}	Total Ex-vessel Value of Landings in Kongiganak ^{2,5}
2000	38	0	0	24	17	0	0	\$0
2001	27	0	0	20	16	0	0	\$0
2002	15	0	0	16	10	0	0	\$0
2003	6	0	0	11	5	0	0	\$0
2004	17	0	0	10	4	0	0	\$0
2005	26	0	0	14	7	0	0	\$0
2006	16	0	0	11	9	0	0	\$0
2007	15	0	0	15	13	0	0	\$0
2008	25	0	0	8	6	0	0	\$0
2009	19	0	0	10	8	0	0	\$0
2010	24	0	0	13	9	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Kongiganak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kongiganak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kongiganak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kongiganak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kongiganak Residents:
2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish											
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	180,998	134,930	85,703	122,225	--	--	--	--	--	--	--
<i>Total²</i>	<i>180,998</i>	<i>134,930</i>	<i>85,703</i>	<i>122,225</i>	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish											
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$116,599	\$54,548	\$40,935	\$59,293	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$116,599</i>	<i>\$54,548</i>	<i>\$40,935</i>	<i>\$59,293</i>	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Local information on sportfishing is limited, and Kongiganak’s remote location likely limits the amount of tourism-based sportfishing occurring within the community. In a survey conducted by the AFSC in 2011, community leaders reported that there is no recreational fishing taking place locally.

Most recreational fishing that does occur in the area takes place in clear-water tributaries of the Kuskokwim River, and sportfishing effort likely originates from other communities. Depending on conditions and time of year, private anglers target several species of Pacific salmon, rainbow trout, Dolly Varden, Arctic grayling, northern pike, and sheefish.⁵⁰¹

In 2010, residents held 29 sportfishing licenses and 26 sportfishing licenses were sold in the community, compared to 7 and 6 in 2000, respectively. Between 2000 and 2010, there were no sport fish guide business nor any sport fish guide licenses issued.

Kongiganak is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater. In 2010, there were 19,455 total angler days fished, compared to 19,990 in 2000. Total freshwater angler days fished peaked in 2004 at 25,391. Non-Alaska residents accounted for 72.1% of freshwater angler days fished in 2010, compared to 67.0% in 2000. Information regarding sportfishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Kongiganak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kongiganak ²
2000	0	0	7	6
2001	0	0	21	11
2002	0	0	24	11
2003	0	0	29	11
2004	0	0	21	7
2005	0	0	19	16
2006	0	0	11	8
2007	0	0	23	23
2008	0	0	37	35
2009	0	0	43	47
2010	0	0	29	26

⁵⁰¹ Alaska Dept. of Fish and Game. (n.d.). *Kuskokwim River Management Area*. Retrieved August 24, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorKuskokwim.moreoverview>.

Table 11. Sport Fishing Trends, Kongiganak: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

The subsistence salmon fishery in the Kuskokwim region is one of the largest and most important in the State. As of 2010, approximately 1,700 households in the Kuskokwim area annually harvest for salmon. Households that do not directly participate in subsistence harvests, often participate through cutting, drying, smoking, and other preservation activities.⁵⁰²

Along the lower Kuskokwim River, subsistence Chinook fishing begins by June 1, and is concluded by mid-July. Drift gill nets, set gill nets, fishwheels, and rod and reel are used for harvesting Chinook in Kuskokwim drainages.⁵⁰³ Historically, Kuskokwim River chum and sockeye salmon have been primarily harvested for commercial use. However, elevated subsistence harvests occur when Chinook are limited. Kuskokwim river coho are harvested in the late summer following Chinook; however, coho salmon are primarily harvested for commercial

⁵⁰² Brazil, C. D. Bue, H. Corroll, and T. Elison, .2011. *2020 Kuskokwim Area Management Report*. Fishery Management Report No. 11-67. Retrieved August 27, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-67.pdf>.

⁵⁰³ Andrews, E. and M. Coffing.1986. *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Technical Paper No. 146. Retrieved August 27, 2012 from: <http://www.arlis.org/docs/vol1/A/17360821.pdf>.

use, accounting for over half of the District 1 (Lower Kuskokwim River) ex-vessel value in 2009.⁵⁰⁴

Pacific herring is an extremely important subsistence fishery for residents of Kongiganak. Harvest data specific to the community was gathered between 1976 and 1985. In 1976, residents harvested an estimated 11 tons of subsistence herring, while only harvesting a small fraction (1 ton) the next year. Subsistence herring harvests peaked in 1980 and 1982 at an estimated 13.2 tons in both years. In 1985, the most recent survey year, residents harvested an estimated 4.6 tons of subsistence herring.⁵⁰⁵ More recent data pertaining to nearby Nelson Island villages estimates herring harvests at approximately 110 tons annually.⁵⁰⁶ In a survey conducted by the AFSC in 2011, community leaders reported that salmon, seal, and walrus were the three most important aquatic subsistence resources to local residents.

Recent ADF&G subsistence data is limited, and information regarding local subsistence participation by household is unavailable. Of these species listed by ADF&G in Table 13, residents reported harvesting chum salmon most often, followed closely by Chinook, sockeye, coho, and pink salmon. In 2008, residents reported harvesting 6,915 salmon, compared to 5,277 in 2000. Reported salmon harvests peaked in 2008. In that year, Chinook salmon accounted for 37.1% of reported salmon harvests and chum accounted for 29.1%. In 2010, 6 residents held Subsistence Halibut Registration Certificates (SHARC) issued by NMFS, compared to 12 in 2003. In that year, an estimated 150 pounds of halibut was harvested using 1 SHARC, compared to an estimated 1,602 pounds using 12 SHARC in 2000. Estimated halibut harvests peaked in 2004 at 2,958 pounds harvested on 10 SHARC. Information on marine mammal harvests is limited. Data regarding marine mammal harvests are limited. However, information available highlights a significant use of walrus compared with many western Alaska communities. Between 2000 and 2010, an estimated 13 walruses were harvested, with one to two harvested almost every year. Further information regarding known subsistence harvesting trends can be found in Tables 12 through 15.

⁵⁰⁴ Brazil, C.; Bue, D.; Corroll, H.; and Elison, T. (2011). *2020 Kuskokwim Area Management Report*. Fishery Management Report No. 11-67. Retrieved August 27, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-67.pdf>.

⁵⁰⁵ Pete, M.C. (1991). *Subsistence Herring Fishing in the Eastern Bering Sea Region: Nelson Island, Nunivak Island, and Kuskokwim Bay*. Technical Paper No. 192. Retrieved August 27, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp192.pdf>.

⁵⁰⁶ Brazil, C.; Bue, D.; Corroll, H.; and Elison, T. (2011). *2020 Kuskokwim Area Management Report*. Fishery Management Report No. 11-67. Retrieved August 27, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-67.pdf>.

Table 12. Subsistence Participation by Household and Species, Kongiganak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kongiganak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	73	62	1,299	1,850	339	n/a	1,789	n/a	n/a
2001	77	61	1,454	1,998	925	n/a	1,460	n/a	n/a
2002	81	51	808	1,965	596	n/a	774	n/a	n/a
2003	84	36	1,386	970	768	n/a	637	n/a	n/a
2004	84	37	1,478	1,587	551	n/a	876	n/a	n/a
2005	87	33	1,508	1,519	781	125	987	n/a	n/a
2006	92	69	1,429	1,990	530	42	1,191	n/a	n/a
2007	92	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	87	22	2,568	2,014	614	n/a	1,719	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kongiganak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	12	12	1,602
2004	12	10	2,958
2005	13	5	638
2006	9	10	1,125
2007	9	4	224
2008	6	6	394
2009	7	3	117
2010	6	1	150

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kongiganak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	2	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	1	n/a	n/a	n/a	n/a
2003	n/a	n/a	1	n/a	n/a	n/a	n/a
2004	n/a	n/a	4	n/a	n/a	n/a	n/a
2005	n/a	n/a	2	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	1	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	2	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kwethluk (KWEETH-luk)



People and Place

*Location*⁵⁰⁷

Kwethluk is a Yup'ik community located 12 air miles east of Bethel on the Kwethluk River at the junction with the Kuskokuok Slough of the Kuskokwim River. It is the second largest community along the Lower Kuskokwim River. The area encompasses 10.0 square miles of land and 1.7 square miles of water. Kwethluk was incorporated in 1975, is located in the Bethel Census area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁵⁰⁸

In 2010, there were 721 residents in Kwethluk, ranking it the 85th largest of 352 Alaskan communities in terms of population size. Overall between 1990 and 2010, the population increased by 29.2%. While the community has continued to grow since 1990, the growth rate has slowed in recent years with the community adding only eight residents between 2000 and 2010. Between 2000 and 2009, the population grew by 1.4% with an average annual growth rate of -0.1%, which was less than the statewide average of 0.75% and indicates very little population change. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that on average, there are seasonal or temporary residents living in Kwethluk from June through late September. Peaks in the seasonal population are attributed to local construction projects, and is not driven by employment in fisheries sectors. Furthermore, community leaders report the annual peak in population for Kwethluk coincides with the July 4th activities and Slavic Christmas week in July and January, respectively. Community leaders estimated the seasonal workforce and transient population to be roughly 10 to 15 people. Further information regarding population trends can be found in Table 1.

Kwethluk is predominately a Yup'ik community. In 2010, 94.2% of residents identified themselves as American Indian or Alaska Native, compared to 92.8% in 2000; 2.2% identified themselves as White, compared to 4.8% in 2000; 0.1% identified themselves as Asian, compared to 0.3% in 2000; and 3.5% identified themselves as two or more races, compared to 2.0% in 2000. Further information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 4.19, compared to 4.30 in 1990 and 4.66 in 2000. In that year, there were a total of 231 housing units, compared to 138 in 1990 and 199 in 2000. Of the households surveyed in 2010, 54% were owner-occupied, compared to 54% in 2000; 20% were renter-occupied, compared to 13% in 2000; 4% were vacant, compared to 7% in

⁵⁰⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁰⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

2000; and 21% were occupied seasonally, compared to 17% in 2000. No residents lived in group quarters between 1990 and 2010.

In 2010, the gender distribution of Kwethluk was 52.1% male and 47.9% female. This was in line with the gender distribution statewide (52.0% male, 48.0% female), and slightly more even than the gender distribution in 2000 (53.9% male, 46.1% female). The median age that year was 23.4 years, which was lower than the statewide median of 33.8 years and older than the 2000 median of 19.6 years.

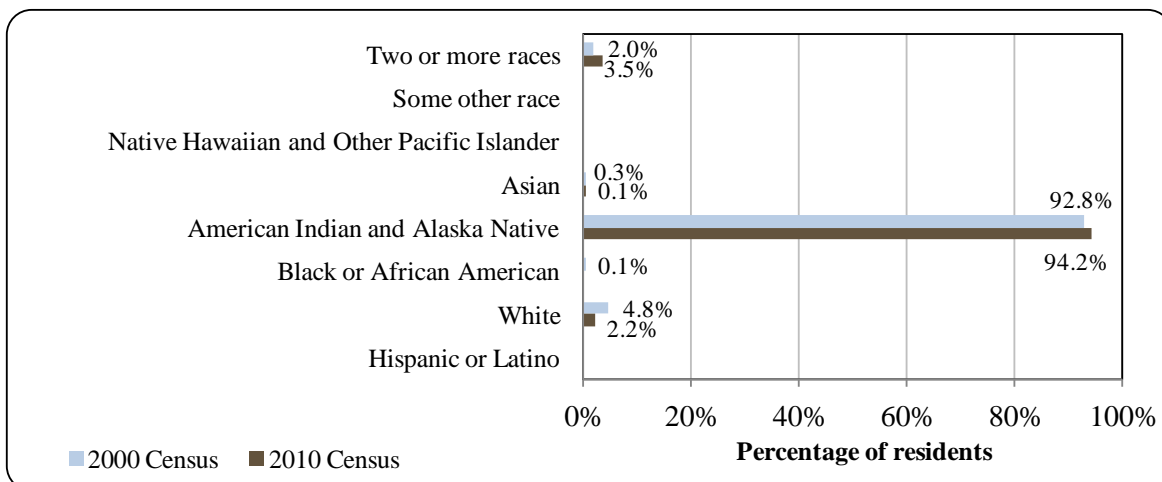
Table 1. Population in Kwethluk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	558	-
2000	713	-
2001	-	691
2002	-	695
2003	-	709
2004	-	698
2005	-	696
2006	-	696
2007	-	719
2008	-	738
2009	-	723
2010	721	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

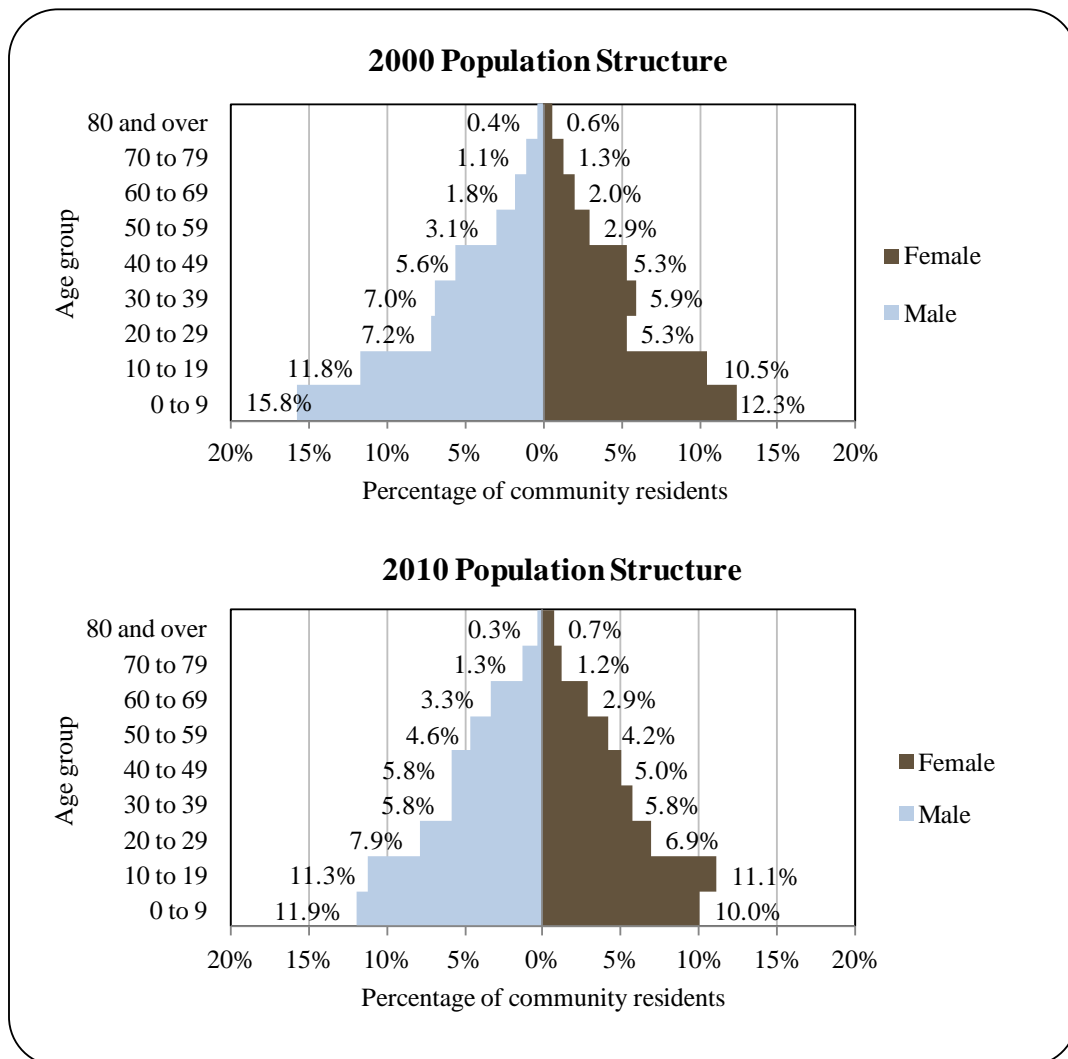
Figure 1. Racial and Ethnic Composition, Kwethluk: 2000-2010 (U.S. Census).



Compared with 2000, the population structure in 2010 was relatively less expansive. However, the overall structure remained similar between those years. In 2010, 44.3% of residents were under the age of 20, compared to 50.4% in 2000; 9.7% were over the age of 59, compared to 7.2% in 2000; 31.2% were between the ages of 30 and 59, compared to 29.8% in 2000; and 14.8% were between the ages of 20 and 29, compared to 12.5% in 2000.

Gender distribution by age cohort was slightly more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 0 to 9 age range (11.9% male, 10.0% female), followed by the 20 to 29 (7.9% male, 6.9% female) and 40 to 49 (5.8% male, 5.0% female) ranges. Of those three, the greatest relative gender difference occurred within the 0 to 9 age range. The 30 to 39 age range was evenly split with 5.8% identifying as female and 5.8% identifying as male. Other age brackets, such as 10 to 19 (11.3% male, 11.1% female) and 70 to 79 (1.3% male, 1.2% female), presented only slight variations. Further information regarding trends in Kwethluk’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Kwethluk Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁵⁰⁹ estimated that 75.4% of residents aged 25 and over held a high school diploma or higher degree in 2010, which is significantly less than the estimated 90.7% of Alaska residents overall. Also in that year, an estimated 14.7% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 9.9% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 19.3% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; 9.6% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 1.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Human occupation of the Kuskokwim area dates back as far as 11,000 years as the first nomadic inhabitants migrated from Asia. Approximately 4,000 years ago, the northern Arctic Small Tool tradition migrated from the north, into the lower Kuskokwim region. Semi-permanent occupation of the Kuskokwim Delta occurred approximately 1,600 years ago.⁵¹⁰

The Yup'ik (*Kusquqvagmiut*) Eskimo culture of the region has been organized around terrestrial and marine resources and trading has historically been an important part of the regional economy, and an extensive trade network was established throughout the Yukon-Kuskokwim region since well before European contact. During their peak, trade routes throughout the region extended as far as Siberia, and by the time Russian fur traders set up trading posts in the area an extensive trade network throughout the Norton Sound had already been established.⁵¹¹ The village of Pastuliarraq, next to the Pastolik River east of present day Kotlik became a trading hub for region. The salmon fishermen of the lower and middle Kuskokwim River regularly traded salmon for seal oil from coastal villages.⁵¹²

Kwethluk is predominantly a Yup'ik Eskimo village that practices a subsistence lifestyle. Archaeological finds indicate that the area has been inhabited since prehistoric times. The name Kwethluk is derived from the Yup'ik word "Kuiggluk," meaning "dangerous river." In the late 1860s and early 1870s, Russian Orthodox missionaries from Russian Mission founded a small congregation. The Moravian Church built a chapel in 1896 and a Russian Orthodox church was built in 1912. Influenza devastated the region in 1900, and the populations villages further up the

⁵⁰⁹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵¹⁰ Buzzell, R. (2010). *Kwethluk River*. Alaska Department of Natural Resources. Final Interim Summary Report. Retrieved October 23, 2012 from: <http://dnr.alaska.gov/mlw/nav/naar/kwethlukriver/KwethlukRiverII-BInterimSummaryRpt6-29-2010Final.pdf>.

⁵¹¹ Griffin, D. (1996). A Culture in Transition: a History of Acculturation and Settlement near the Mouth of the Yukon River, Alaska. *Arctic Anthropology*, 33(1), 98-115.

⁵¹² Lower Kuskokwim Economic Development Council. (2003), *Two Year Strategic Plan for the Lower Kuskokwim Economic Development Council*. Retrieved August 15, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel%20Region-EDP-2003.pdf>.

Kwethluk River (including the former village of *Cinqineq*) were decimated. Only seven families in Kwethluk survived the epidemic.⁵¹³

Discovery of gold in nearby creeks in 1909 attracted prospectors until 1911, when disappointing yields were produced. One placer gold deposit on the upper Kwethluk River continued to produce until it was exhausted in the early 1940s. A Moravian orphanage, located three miles upriver, provided children services between 1930 and the early 1970s. In 1939, the villagers owned 31,000 reindeers and harvested the herd for food and skins. The tuberculosis epidemic of the late 1930s impacted the local population. The community has a post office since 1947, and a store since 1948. The City was incorporated in 1975.

Residents of Kwethluk continue to rely on a traditional lifestyle, much like in the past. Historic caribou hunting areas and seasonal subsistence camps continue to be used. Before the widespread use of contemporary hunting and fishing technologies, Kwethluk hunters would travel to hunting camps in the spring, and construct skin boats for the return trip following the breakup of river ice. By the 1950s, wooden skiffs and outboard motors were starting to be utilized. In the 1970s, aluminum hulled boats became a common source of travel between villages and subsistence camps. Around that time, the U.S. Bureau of Land Management began collecting information pertaining to subsistence use areas in order to facilitate Native allotment applications that were flowing in following the 1971 Alaska Native Claims Settlement Act (ANCSA). Twenty-eight Kwethluk residents filled allotment applications for 29 parcels along the Kwethluk River and other portions of the Yukon Delta and Togiak national wildlife refuges.⁵¹⁴

Natural Resources and Environment⁵¹⁵

Kwethluk's annual precipitation averages 16 inches, with snowfall of 50 inches. Summer temperatures average from 42 to 62 °F (6 to 17 °C); winter averages are -2 to 19 °F (-19 to -7 °C). Extremes have been recorded from -46 to 86 °F (-41 to 30 °C). The Kuskokwim is typically ice-free from June through October.

The entire Kuskokwim River system covers approximately 52,000 square miles of southwest Alaska. The River courses a broad valley, laden with tundra ponds and lakes, until finally emptying into the Bering Sea. The lower Yukon-Kuskokwim Delta encompassing Kwethluk is an area of low elevation and shallow relief. The terrain is mostly made up of flat and low rolling plains crossed with low gradient streams, tributaries, sloughs, floodplains, wetlands, and shallow lakes. Most of the lower Yukon-Kuskokwim Delta was ice-free during the last major ice age. Sediments in the area are loamy or sandy textured fluvial and alluvial deposits. Soils are poorly drained and typically overlay a layer of permafrost.⁵¹⁶ Vegetation includes tall and low shrub types dominated by willow and alder. Wet tundra, characterized by hydrophilic

⁵¹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵¹⁴ See footnote 510.

⁵¹⁵ See footnote 512.

⁵¹⁶ Lower Kuskokwim Economic Development Council. (2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved February 1, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel%20Region-SAP-2006.pdf>.

vegetation as well as water tolerant sedges and grasses. White spruce and balsam polar can be found in well-drained areas. Paper birch is also present.⁵¹⁷

Kwethluk is located on Calista Corporation land encompassed by the Yukon Delta National Wildlife Refuge, which provides spawning, rearing, feeding, and wintering habitat for a range of terrestrial and aquatic wildlife.⁵¹⁸ A significant portion of at least 19 waterfowl species and 30 common shorebird species depend on the area. The first week in May brings Canada geese, whistling swans, white-fronted geese, and various other species. Species of fish include salmon, smelt, whitefish, Dolly Varden, sheefish, northern pike, blackfish, and burbot. Terrestrial mammals include black bear, moose, mink, land otter, red fox, beaver, snowshoe hare, and tundra hare. Four species of hair seal are found along the coast and upstream in the Kuskokwim River. Walrus and Steller sea lions can be found along the Kuskokwim Delta coast.⁵¹⁹

Regional mineral resources include zinc, gold, silver, lead, antimony, tungsten, tin, copper, nickel, mercury, and platinum.⁵²⁰ Near Kwethluk, the Calista Corporation maintains several mineral prospects near Red Devil. The Red Devil mineral district historically produced 75,000 tons of mercury, and twice as much antimony. More recent interest by Calista Corporation is aimed at development of a mercury-gold system, with secondary arsenic and stibnite potential.⁵²¹ Downriver, Platinum and Goodnews Bay are sites of gravel and rock quarry projects.⁵²²

There are several natural hazards affecting the Yukon-Kuskokwim Delta region. These hazards include flooding, river bank erosion and destabilization, brush fire, and soil destabilization due to permafrost melt. Spring flooding is a major factor contributing to natural hazards in the area. As melt-off and ice jamming occurs during spring break-up, flooding and erosion occur and climate change is thought to be a continuing factor in the seasonality and severity of flooding in the region. In addition, variation in the active permafrost layer caused by climate change and urban development further compound impacts from flood events.⁵²³ Localized flooding and erosion is of ongoing concern to Kwethluk. The riverbank in the eastern and central portion of the village is consistently subjected to erosion, and homes are in danger from bank destabilization. Exposed sewage pits are also posing an environmental hazard as they are eroded.⁵²⁴

⁵¹⁷ Zerbetz, M. (1998). *Organized Village of Kwethluk Comprehensive Community Long Range Plan 1998-2003*. The Arcturus Group. Retrieved August 15, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kwethluk-CP-1998.pdf>.

⁵¹⁸ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved November 22, 2011 from: <http://www.fws.gov/refuges/profiles/recEdMore.cfm?ID=74540>.

⁵¹⁹ See footnote 517.

⁵²⁰ Alaska Department of Transportation and Public Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf.

⁵²¹ Calista Corporation. (n.d.). *Red Devil Prospectus*. Retrieved August 15, 2012 from: http://www.calistacorp.com/sites/default/files/documents/lands/reports/Red_Devil_Prospectus.pdf

⁵²² Calista Corporation. (n.d.). *Calista Corporation Homepage*. Retrieved November 22, 2011 from: <http://www.calistacorp.com>.

⁵²³ Bethel Coastal District. (2006). *Bethel Coastal Management Plan*. Retrieved November 22, 2011 from: http://www.alaskacoast.state.ak.us/District_Pages/NW_Region/Bethel/.

⁵²⁴ See footnote 517.

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active within Kwethluk in 2010.⁵²⁵

Current Economy⁵²⁶

Kwethluk has a mixed cash/subsistence economy. Fishing, hunting, and gathering are popular activities along with some commercial fishing and employment opportunities through the school and government organizations. Some of the largest employers include the Lower Kuskokwim School District, Kwethluk Incorporated, the City of Kwethluk, and the Native store.⁵²⁷ In a survey conducted by the AFSC in 2011, community leaders reported that Kwethluk's economy is dependent on fishing, sport hunting and fishing, and subsistence.

In 2010,⁵²⁸ the estimated per capita income was \$14,522 and the estimated median household income was \$40,625, compared to \$6,503 and \$25,417 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,⁵²⁹ the real per capita income (\$8,551) and real median household income (\$25,417) indicate significant increases in both individual and household earnings. In 2010, Kwethluk ranked 211th of 305 communities from which per capita income was estimated, and 186th of 299 communities from which median household income was estimated.

However, Kwethluk's small population size may have prevented the ACS from accurately portraying economic conditions.⁵³⁰ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$4.97 million in total wages in 2010.⁵³¹ When matched with the 2010 Decennial Census population, the per capita income equals \$6,898, which is significantly less than the 2010 ACS estimate and similar to what was reported in 2000.⁵³² This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁵³³ However, it should be noted that ACS and DOLWD data

⁵²⁵ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved October 23, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

⁵²⁶ Unless otherwise noted, all monetary data are reported in nominal values.

⁵²⁷ See footnote 517.

⁵²⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵²⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵³⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵³¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁵³² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵³³ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates, 48.8% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 8.2%, compared to 5.9% statewide; and an estimated 18.0% of residents were living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Again, Kwethluk's small population size may have affected the ACS's ability to accurately capture economic conditions. According to 2010 ALARI estimates, the local unemployment was 25.1% based on unemployment insurance claimants.⁵³⁴

Of those employed, the 2006-2010 ACS estimated that 27.3% worked in the private sector, 69.4% worked in the public sector, and 3.3% were self-employed. By industry, most (39.9%) of employed residents were estimated to work in education, health care, and social assistance sectors; followed by public administration sectors (25.1%) and retail trade sectors (10.4%). Between 2000 and 2010 there was very little proportional variation in industry sector employment. The most significant proportional change occurred within education services, health care, and social assistance sectors (Figure 3). Another source of employment information comes from the 2010 ALARI estimates, most (71.8%) employed residents worked in local government sectors; followed by other non-specified sectors (8.2%) and trade, transportation, and utilities sectors (7.5%). No individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

Figure 3. Local Employment by Industry in 2000-2010, Kwethluk (U.S. Census).

⁵³⁴ See footnote 532.

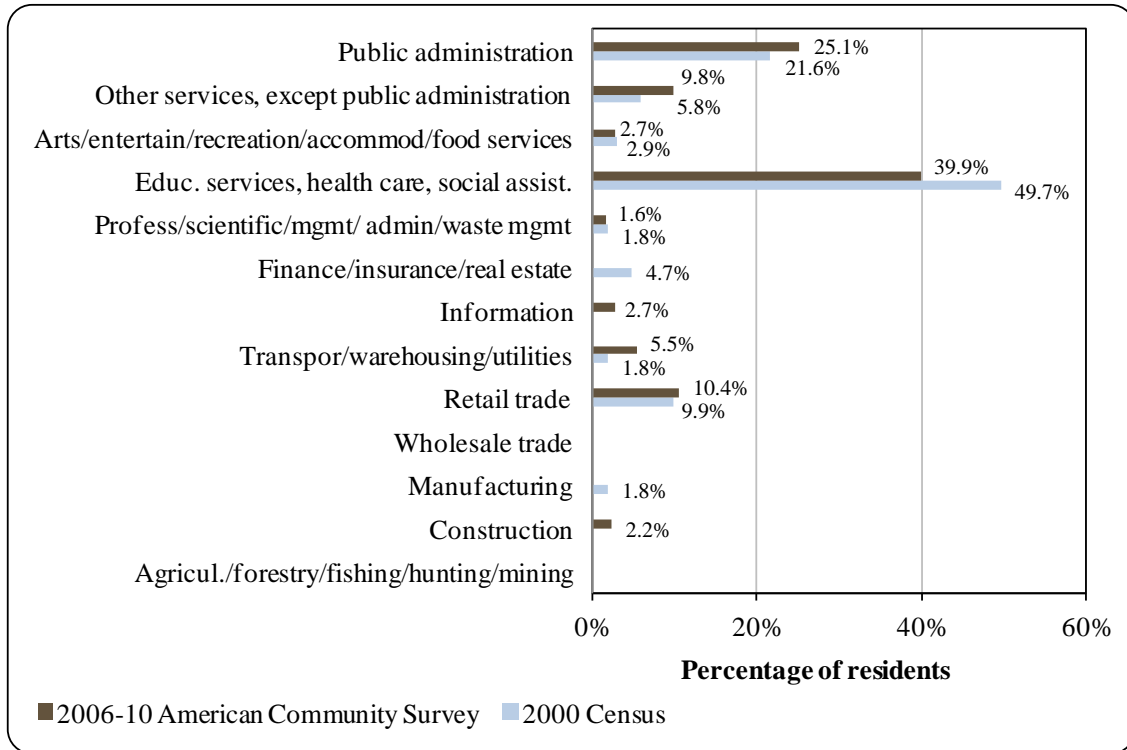
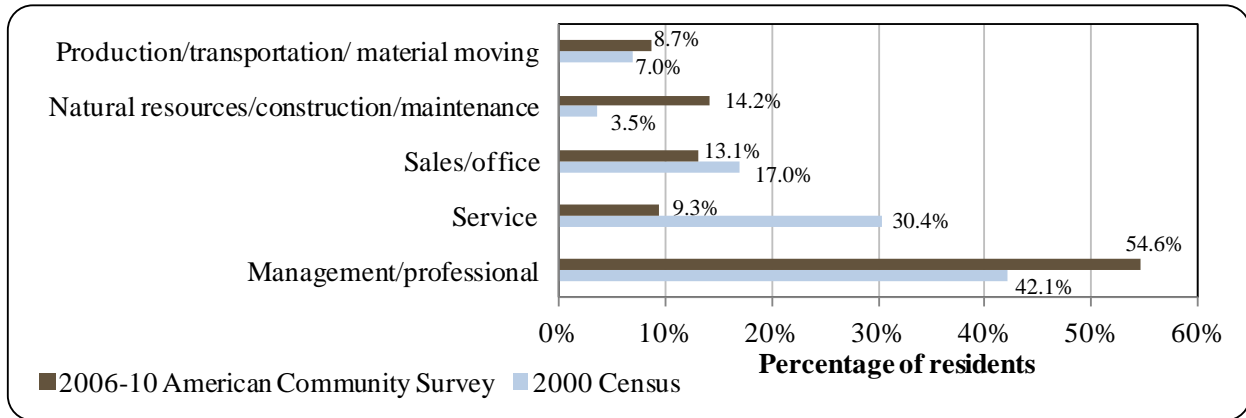


Figure 4. Local Employment by Occupation in 2000-2010, Kwethluk (U.S. Census).



By occupation type, most (54.6%) employed residents were estimated to hold management or professional positions in 2010, followed by natural resources, construction, or maintenance positions (14.2%); sales or office positions (13.1%); service positions (9.3%); and production, transportation, or material moving positions (8.7%). Between 2000 and 2010, there were significant proportional increases to the number of natural resources, construction, maintenance, management, and professional positions; and significant proportional declines to the number of service positions (Figure 4).

Governance

Kwethluk is a second-class city with a mayoral form of government. There is a seven-member city council, nine-member school board, and six municipal employees. In addition, there is a U.S. Bureau of Indian Affairs recognized tribal government. The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Kwethluk is the Calista Corporation, and the local ANCSA chartered non-profit is the Association of Village Council Presidents. The ANCSA chartered village corporation is Kwethluk, Inc. The sale and importation of alcohol is banned in Kwethluk. The closest National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and Bureau of Citizenship and Immigration Services are all located within Bethel.

The City collected a 5% sales tax in 2010. When adjusted for inflation,⁵³⁵ municipal revenues declined by 10.3% between 2000 and 2010, from \$541,436 to \$628,239. Annual revenues varied significantly between those years, reaching their lowest point in 2005 at \$199,781 before rebounding. In 2010, most locally generated from sales tax revenues, utility rents, and rentals. Most outside revenues were generated from state revenue sharing funds, and payments in lieu of taxes. In that year, sales tax revenues accounted for 12.9% of total revenues, compared to 16.1% in 2000. In addition, state allocated Community Revenue Sharing accounted for 21.5% of total revenues, compared to 8.5% from State Revenue Sharing in 2000.

State and federal grants awarded between 2000 and 2010 included \$21,733 for dock construction and \$28,604 for a barge landing facility. Further information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kwethluk from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-related Grants (State and Federal) ⁵
2000	\$541,436	\$87,032	\$45,914	n/a
2001	\$327,524	\$94,064	\$27,172	n/a
2002	\$278,139	\$91,607	\$40,883	n/a
2003	\$272,186	\$106,538	\$26,328	n/a
2004	\$237,830	\$80,886	-	n/a
2005	\$199,781	\$81,667	-	n/a
2006	\$281,854	\$88,721	-	n/a
2007	\$601,473	\$81,374	-	n/a
2008	\$515,411	\$96,176	-	\$50,337
2009	\$471,910	\$95,174	\$133,156	n/a
2010	\$628,239	\$81,313	\$134,974	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁵³⁵ Inflation calculated using 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

Connectivity and Transportation

Kwethluk is dependent on air transportation for year-round movement of freight and passengers. A state-owned 3,199-foot long by 75-foot wide gravel airstrip and a seaplane base are available. Flights are available through a variety of companies including ERA Alaska, Ryan Air Service, and Yute Air. The price of a roundtrip ticket by plane from Kwethluk to Anchorage in early June 2012 was \$574.⁵³⁶ Barge services deliver cargo during the summer. There are no docking facilities. Snowmachines, ATVs, and skiffs are used for local travel, and the river becomes an ice road during winter. Air taxi and ice road taxi services are available. Winter trails are marked to Eek (45 miles), Three Step Mountain (55 miles), and Columbia Creek (49 miles).

Facilities

Electricity in Kwethluk is provided by a diesel powerhouse owned by Kwethluk, Inc., the ANCSA-chartered village corporation. The community currently has plans to develop alternative energy sources and plans to complete this within the next 10 years. The City of Kwethluk provides water treatment, honeybucket haul, and refuse services. The City also operates a washeteria. None of the 147 homes have complete plumbing, but many residents have steambaths. Residents haul water for household use. There are sewage container disposal bins; these are hauled to the sewage lagoon. The school and teachers' housing operate individual systems.

In a survey conducted by the AFSC in 2011, community leaders reported that Kwethluk is currently in the process of building a barge landing area, constructing new dock facilities, building roads to the dock spaces, and installing pilings. These projects are all slated to be completed within the next 10 years. Currently, there are no docking facilities in Kwethluk, and only riverfront mooring exists on Kwethluk River exists at this time. However, community leaders report haul out facilities and an Environmental Protection Agency (EPA)-certified boat cleaning station already exist in the community. In addition, Kwethluk has plans to build dry dock facilities within the next 10 years. Community leaders indicated no boat repair services, infrastructure, or other fisheries-related businesses are available in Kwethluk, and residents typically travel to Bethel or Anchorage, Alaska and Seattle, Washington to access fisheries-related businesses and services that are not available locally.

The nearest village public safety officer is stationed in Kwethluk,⁵³⁷ and the nearest state trooper post is in Bethel.⁵³⁸ The City also maintains its own police force and fire department. In a survey conducted by the AFSC in 2011, community leaders reported that Kwethluk also has a post office, telephone service is in place, and broadband internet access is currently being established.

⁵³⁶ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

⁵³⁷ Alaska Department of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁵³⁸ Alaska Department of Public Safety. (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

Medical Services

The Betty Guy Memorial Clinic provides residents with basic medical services and is operated by the Yukon-Kuskokwim Health Corporation. Emergency Services have river air and floatplane access. Emergency service is provided by a health aide. The nearest hospital is located in Bethel.

Educational Opportunities

Ket'acik/Aapalluk Memorial School offers preschool through 12th grade instruction. As of 2011, there were 247 students enrolled and 15 teachers employed.⁵³⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Fisheries participation in the Lower Kuskokwim Delta dates back thousands of years to the original Central Yup'ik occupants. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. During early years, local salmon were cured and salted and by 1920, the largest commercial season to date took place on the Kuskokwim River, with five operators processing approximately 35,000 Chinook salmon that year. In 1922, there were four salteries operating near the mouth of the Kuskokwim, processing Chinook and sockeye salmon. The Kuskokwim area was closed to all fishing for export from 1926 through 1929. In 1930, regulations were modified to allow commercial fishing in part of Kuskokwim Bay. A floating cannery operated for that year, and by 1932, three companies engaged in commercial fishing. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. Information on commercial fishing during the late 1930s through the 1950s is limited. However in 1952, poor salmon runs prompted the closure of the Kuskokwim River and Bay. Management was finally shifted to the State of Alaska in 1960, and commercial fishing resumed.⁵⁴⁰

At the time of statehood in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on

⁵³⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁵⁴⁰ Pennoyer, S.; Middleton, K. R.; & Morris, M. E. (1968). *Arctic-Yukon-Kuskokwim Area Salmon Fishing History*. Retrieved April 11, 2012 from: <http://www.sf.ADFG.state.ak.us/fedaidpdfs/afrbIL.070.pdf>.

sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.⁵⁴¹

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁵⁴²

On the lower Kuskokwim River, subsistence sockeye, chum, and Chinook harvesting typically begins by June 1st, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based from either a fish camp or from a home village. Drift gill nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the Lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{543,544}

Kwethluk has a long subsistence fishing tradition dating back to pre-European contact. Historically, the Yup'ik of the Yukon-Kuskokwim Delta region relied on many species of anadromous and freshwater fish. In more recent years, commercial and subsistence fishing have become an important part of the local economy and culture. While the community lacks the infrastructure needed for commercial landings, many residents possess commercial fishing licenses. Harvests by Kwethluk residents are landed in other communities within the region possessing harbor and processing facilities.

Kwethluk is located in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. The community is not eligible for the Community Quota Entity program given its distance from the Gulf of Alaska. In addition, Kwethluk is not eligible to participate in the Community Development Quota program. In a survey conducted by the AFSC in 2011, community leaders reported that Kwethluk participates in the fisheries management process in Alaska through a representative who sits on regional fisheries advisory and/or working groups run by ADF&G and a representative that participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process.

⁵⁴¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. Kuskokwim Commercial Salmon Fishery."In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁵⁴² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁵⁴³ Coffing, M. 1991. *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River*. Retrieved July 12, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>

⁵⁴⁴ Andrews, E., and M. Coffing 1986. *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Kwethluk does not have a registered shoreside processing plant. The closest shoreside processor is located in Bethel.

Fisheries-Related Revenue

Between 2000 and 2010, known fisheries-related revenues totaled \$7,698 has come from the Shared Fisheries Business Tax, raw fish taxes, and the Fisheries Resource Landing Tax. Earnings have stayed relatively stable; however, they have not totaled more than \$1,000 in a given year since 2001. In addition, 2010 was the first year for which revenue was reported from the Fisheries Resource Landing Tax. For more information on known fisheries-related revenues for Kwethluk between 2000 and 2010, see Table 3.

Commercial Fishing

Information on commercial fishing activity in Kwethluk is limited to that provided by community leaders in a survey conducted by the AFSC in 2011. Community leaders reported that the commercial salmon season typically runs from June 27th through August 20th. Drift gill nets are the gear type commonly used locally.

In 2000, 63 residents held 70 permits issued by the Commercial Fisheries Entry Commission (CFEC), which was also the year in which the number of permits held in the community peaked. In 2010, 60 residents, or 8.3% of the population, held 62 CFEC permits. Of the CFEC permits held in 2010, 89% were for salmon, compared to 81% in 2000; and 11% were for herring, compared to 19% in 2000. Of the CFEC permits held in 2010, 58% were actively fished, compared to 71% in 2000. This varied by species from 65% of salmon permits, to 0% of herring permits. Permit activity peaked in 2000 at 82% of salmon permits and 23% of herring permits. Kuskokwim gillnet salmon was the only fishery prosecuted by Kwethluk residents in 2010.⁵⁴⁵

Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits. In addition, residents did not participate in federal halibut, sablefish, or crab catch share programs between 2000 and 2010.

Residents held 27 commercial crew licenses in 2010, compared to 57 in 2000; when the number of commercial crew licenses peaked locally. In addition, residents held majority ownership of 5 vessels in 2010, compared to 25 in 2000. Both the number of commercial crew licenses, and the number of vessels owned by residents significantly declined between 2000 and 2010.

There were no fish buyers registered in Kwethluk and no shoreside processors that filed fish tickets between 2000 and 2010. Given this, there were no recorded landings made in Kwethluk during this time period. In addition, any landings made by residents during this time period are considered confidential and may not be reported.

⁵⁴⁵ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kwethluk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$300	\$840	\$677	\$813	\$150	\$138	\$340	\$350	\$350	\$147	\$147
Shared Fisheries Business Tax ¹	\$840	\$677	\$136	\$173	\$138	\$340	\$379	\$204	\$147	\$124	\$136
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$152
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$1,140	\$1,517	\$813	\$986	\$288	\$478	\$719	\$554	\$497	\$271	\$435
Total municipal revenue⁵	\$541,436	\$327,524	\$278,139	\$272,186	\$237,830	\$199,781	\$281,854	\$601,473	\$515,411	\$471,910	\$628,239

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Kwethluk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	1	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	1	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	13	11	6	7	6	7	7	6	6	6	7
	Fished permits	3	1	0	1	0	0	0	0	0	0	0
	% of permits fished	23%	9%	0%	14%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	14	11	6	7	6	7	7	6	6	6	7

Table 4 cont'd. Permits and Permit Holders by Species, Kwethluk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	1	1	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	1	1	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	57	55	51	48	49	51	55	53	54	54	55
	Fished permits	47	45	32	30	34	31	34	31	28	17	36
	% of permits fished	82%	82%	63%	63%	69%	61%	62%	58%	52%	31%	65%
	Total permit holders	58	57	51	48	50	51	55	54	55	56	57
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>70</i>	<i>66</i>	<i>58</i>	<i>57</i>	<i>55</i>	<i>58</i>	<i>62</i>	<i>59</i>	<i>60</i>	<i>60</i>	<i>62</i>
	<i>Fished permits</i>	<i>50</i>	<i>46</i>	<i>32</i>	<i>31</i>	<i>34</i>	<i>31</i>	<i>34</i>	<i>31</i>	<i>28</i>	<i>17</i>	<i>36</i>
	<i>% of permits fished</i>	<i>71%</i>	<i>70%</i>	<i>55%</i>	<i>54%</i>	<i>62%</i>	<i>53%</i>	<i>55%</i>	<i>53%</i>	<i>47%</i>	<i>28%</i>	<i>58%</i>
	<i>Permit holders</i>	<i>63</i>	<i>59</i>	<i>53</i>	<i>52</i>	<i>52</i>	<i>53</i>	<i>57</i>	<i>56</i>	<i>57</i>	<i>58</i>	<i>60</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kwethluk: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kwethluk ²	Total Net Pounds Landed in Kwethluk ^{2,5}	Total Ex-vessel Value of Landings in Kwethluk ^{2,5}
2000	57	0	0	25	21	0	0	\$0
2001	47	0	0	19	19	0	0	\$0
2002	29	0	0	13	15	0	0	\$0
2003	26	0	0	8	11	0	0	\$0
2004	21	0	0	7	9	0	0	\$0
2005	27	0	0	6	7	0	0	\$0
2006	31	0	0	6	5	0	0	\$0
2007	20	0	0	6	3	0	0	\$0
2008	20	0	0	6	3	0	0	\$0
2009	8	0	0	5	3	0	0	\$0
2010	27	0	0	5	3	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kwethluk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kwethluk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kwethluk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kwethluk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kwethluk Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Like other communities in the Yukon-Kuskokwim Delta, Kwethluk’s proximity to Bethel attracts many private anglers to the area. Community leaders reported in 2011 that a lot more private boats owned by outfitters from Bethel were operating in the area than 5 years previously. In 2010, residents held 130 sportfishing licenses, compared to 64 in 2000. Between 2000 and 2010, no sportfishing licenses were sold in the community. In addition, there were no registered sport fish guides or charter businesses operating during those years. However, the community’s lack of accommodations and recreational fishing services limit visitations by non-Alaska resident anglers. Because of this, most sportfishing in the area by non-residents is likely based out of Bethel.

Kwethluk is located within Alaska Sport Fishing Survey Area V –Kuskokwim River and Bay. This area includes all drainages flowing into Kuskokwim Bay as well as saltwater from Cape Newenham north to Naskonat Peninsula. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. The majority of sportfishing targets freshwater fisheries and in 2010, resident and non-Alaska resident angler days fished totaled 19,455, compared to 19,990 in 2000. In that year, non-Alaska residents accounted for 72% of total angler days fished, compared to 67% in 2000. The Kuskokwim River’s popularity among non-Alaska residents and the fact that most local residents typically engage in subsistence fishing likely contributed to the high ratio of non-Alaska resident to resident anglers between 2000 and 2010. According to ADF&G’s Harvest Survey data between 2000 and 2010, local private anglers target king and coho salmon, rainbow trout, and Dolly Varden char. Trends regarding recreational fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Kwethluk: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Kwethluk²
2000	0	0	64	0
2001	0	0	84	0
2002	0	0	81	0
2003	0	0	73	0
2004	0	0	72	0
2005	0	0	78	0
2006	0	0	63	0
2007	0	0	53	0
2008	0	0	74	0
2009	0	0	81	0
2010	0	0	130	0

Table 11 cont'd. Sport Fishing Trends, Kwethluk: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Kuskokwim Area subsistence salmon fisheries rank as one of the largest in the State of Alaska, accounting for over 50% of the state’s Chinook salmon harvests. More than 2,000 households in the Kuskokwim Area annually harvest salmon for subsistence use. ADF&G Division of Subsistence studies indicate that wild fish account for 85% of the total subsistence-harvested fish and wildlife resource in Kuskokwim River communities; with salmon accounting for up to 53% of the total annual subsistence harvest.⁵⁴⁶

Interviews of subsistence users conducted in 2008 indicated that fishing effort was concentrated during the week ending June 15, and extends through the week ending July 6. This period typically coincides with Chinook abundance. The majority of subsistence harvesters use gillnets and to a lesser degree, rod and reel gear types.⁵⁴⁷

Subsistence activities are central to Kwethluk’s lifestyle and are practiced year round. Salmon, moose and caribou are dietary staples. Most families travel to fish camps during the summer months to cut, dry, and smoke fish for food to be used during the winter and into next

⁵⁴⁶ Carroll, M. C. and E. Patton. 2010. Lower Kuskokwim River Inseason Subsistence Salmon Catch Monitoring, 2008. Fishery Management Report No. 10-09. Retrieved August 16, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/06-3062008.pdf>.

⁵⁴⁷ Ibid.

year.⁵⁴⁸ In 1987, household subsistence harvests averaged 3,860 pounds of edible weight. Per capita harvests averaged 800 pounds of edible weight. In addition, 70% of households were involved in harvesting or processing salmon for subsistence use. Throughout 1986, there were 52 salmon fishing camps being used for processing and preserving salmon. Salmon comprised 53% of the total community harvest of wildlife, and salmon harvests that year totaled 229,063 pounds of edible weight. Non-salmon fish contributed 32% of the total edible pounds of wildlife harvested in 1986. Species included northern pike, whitefish, sheefish, Dolly Varden, trout, blackfish, smelt, Arctic grayling, and burbot.⁵⁴⁹

An area that used to harbor one of the largest concentrations of Kwethluk salmon camps was located along the west bank of the Kuskokuak Slough; however, the area has since eroded into the Slough. From the late 1950s to early 1980s, at least 14 camps were located along the Kwethluk River. Erosion and stream migration typically plagues many fish camp sites, at times forcing relation. Popular subsistence fishing areas in 1986 included the Kuskokwim River proper, between Kwethluk and Akiachak, the mouth of the Gweek River, Kuskokuak Slough, Napaskiak Slough, and the Kwethluk and Akulikutak rivers. Historically, salmon were harvested using traps, spears, dipnets, and gillnets. Fish traps are no longer favored, and spears are typically used in swift, clear water tributary streams. Rod and reel and setnets are popular today.⁵⁵⁰

Data pertaining to household participation in subsistence activities is unavailable, as is data pertaining to marine mammal and halibut harvests. Of the species reported by ADF&G in Table 13, residents reported harvest Chinook salmon the most often, followed by chum, sockeye, coho, and pink salmon. In 2008, residents reported harvesting 26,777 salmon on 33 subsistence salmon permits, compared to 16,929 on 109 permits in 2000. In that year, reported salmon harvests peaked thanks to significant increases in both Chinook and coho salmon harvests. In addition, harvest effort was more concentrated as significantly less subsistence salmon permits were returned compared to other years.

According to ADF&G *Community Subsistence Information System* data, species Kwethluk residents historically harvested or used include: ringed seal, spotted seal, blackfish, burbot, Dolly Varden, Arctic grayling, lake trout, northern pike, rainbow trout, sheefish, smelt, and whitefish. In a survey conducted by the AFSC in 2011, community leaders reported that important subsistence resources include all five species of Pacific salmon, local non-salmon fish, moose, bear, caribou, birds, berries, roots, and other plants. Information regarding subsistence trends can be found in Table 12 through 15.

⁵⁴⁸ Zerbetz, M. 1998. Organized Village of Kwethluk Comprehensive Community Long Range Plan 1998-2003. The Arcturus Group. Retrieved August 15, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Kwethluk-CP-1998.pdf>.

⁵⁴⁹ Coffing, M. W. 1991. Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of a Lower Kuskokwim River Area Community. Technical Paper No. 157. Retrieved August 16, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>.

⁵⁵⁰ Ibid.

Table 12. Subsistence Participation by Household and Species, Kwethluk: 2000-2010.

Year	% Households using Salmon	% Households using Halibut	% Households using Marine Mammals	% Households using Marine Inverts	% Households using Non- Salmon Fish	Per capita Subsistence harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kwethluk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non- Salmon Fish ²
2000	144	109	4,925	5,048	3,271	n/a	3,685	n/a	n/a
2001	146	115	6,127	4,365	1,688	n/a	3,960	n/a	n/a
2002	156	113	6,429	7,434	2,515	n/a	1,993	n/a	n/a
2003	159	104	4,938	2,348	1,933	n/a	1,776	n/a	n/a
2004	164	113	6,119	3,597	2,907	n/a	2,741	n/a	n/a
2005	163	123	5,402	3,897	2,584	74	2,177	n/a	n/a
2006	160	92	5,581	5,337	980	114	2,134	n/a	n/a
2007	167	97	4,924	4,517	1,186	63	2,630	n/a	n/a
2008	158	33	8,906	5,775	7,016	n/a	5,080	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kwethluk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kwethluk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders expressed concerns over bycatch by Bering Sea trawl fisheries, and impacts it may have on salmon runs on the Kuskokwim River and its tributaries. Specifically, there is concern regarding reduced salmon runs and habitat damage. When asked about the effects that fisheries policies and management actions have had on Kwethluk, community leaders felt that the North Pacific Fishery Management Council (NPFMC) favors commercial fishing practices in the Bering Sea that disrupt local fishing practices. They also report that restrictions to local subsistence/commercial salmon fisheries are hurting the community.

When asked how past or current fisheries policy or management actions have affected Kwethluk, community leaders reported that past management actions have resulted in severely depleted Yukon and Kuskokwim River subsistence/commercial fisheries. They contend that Bering Sea fisheries need to be restricted until salmon numbers recover. Current runs are depleted and returning fish are small.

In closing, community leaders stated that Kwethluk has been involved with their tribal members, staff, and community resources, in trying to protect and facilitate salmon returns over the years though using inter-village cooperation and traditional knowledge developed over time.

Kwigillingok (kwih-GILL-in-gawk)



People and Place

*Location*⁵⁵¹

Kwigillingok, sometimes referred to as “Kwig,” is on the western shore of Kuskokwim Bay near the mouth of the Kuskokwim River on the Yukon-Kuskokwim Delta. It lies 77 miles southwest of Bethel and 388 miles west of Anchorage. The village of Kongiganak is nearby. Kwigillingok is located in the Bethel Recording District.

*Demographic Profile*⁵⁵²

In 2010, there were 321 residents, ranking Kwigillingok 158th of 352 Alaskan communities with recorded populations that year. Overall, between 1990 and 2010, the population grew by 15.5%. Between 2000 and 2009, the population increased by 8% with an average annual growth rate of 1.25%, nearly twice statewide average of 0.75%. Data from the 2010 Decennial Census indicate that the population declined slightly from 2000. However, with the exception of the spike in 2009, the estimated population has decreased every year since 2007 based on Alaska Department of Labor and Workforce Development (DOLWD) population estimates. Further information regarding population trends can be found in Table 1.

Kwigillingok is a traditional Yup'ik Eskimo village. In the 2010 Decennial Census, the vast majority of Kwigillingok residents identified themselves as American Indian and Alaska Native (95%), along with 3.4% identifying themselves as White, and 1.6% individuals identifying with two or more races. No Kwigillingok residents identified themselves as Hispanic in 2010. Those who identified themselves as White made up 1.3% more of the population in 2010 compared to 2000, and American Indian and Alaska Natives made up 2.6% less of the population, while the percentage of individuals identifying with two or more races increased between 2000 and 2010 by 1.3%. Further information regarding race and ethnicity can be found in Figure 1.

In 2010, the average household size in Kwigillingok was 3.89, a slight decrease from 4.4 in 1990 and 4.63 in 2000. Also in 2010, there were a total of 106 housing units, compared to 78 in 1990 and 78 in 2000. Of those households surveyed in 2010, 47.2% were owner-occupied, compared to 78.2% in 2000; 30.2% were renter-occupied, compared to 15.4% in 2000; 22.6% were vacant, compared to 6.4% in 2000; and 3.8% were occupied seasonally, compared to 0% in 2000. There were also 2 residents living in group quarters in 2010, compared to 0 in 2000.

⁵⁵¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁵² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

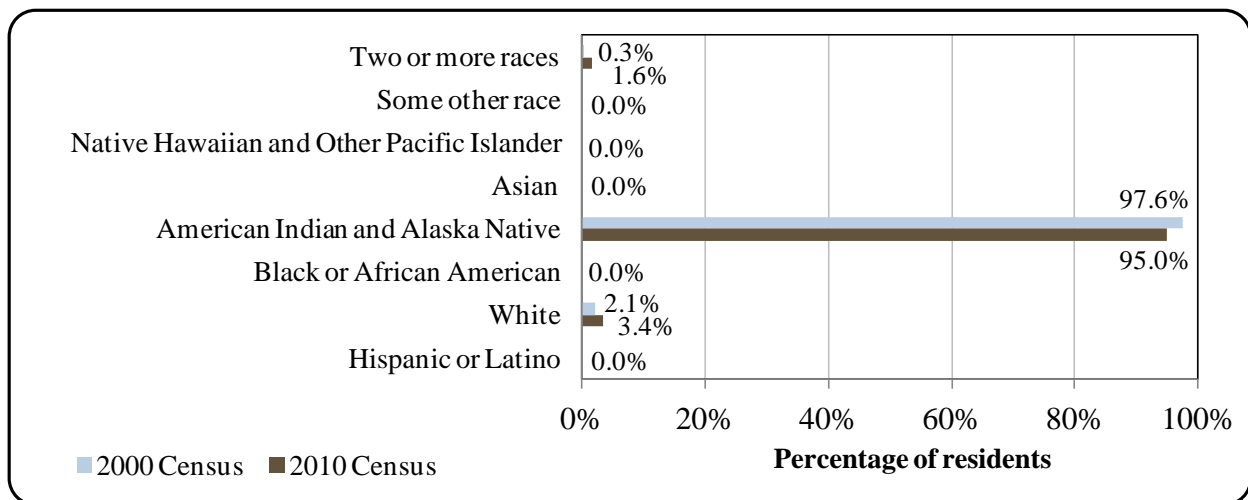
Table 1. Population in Kwigillingok from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	278	-
2000	338	-
2001	-	358
2002	-	338
2003	-	343
2004	-	363
2005	-	361
2006	-	377
2007	-	360
2008	-	352
2009	-	365
2010	321	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

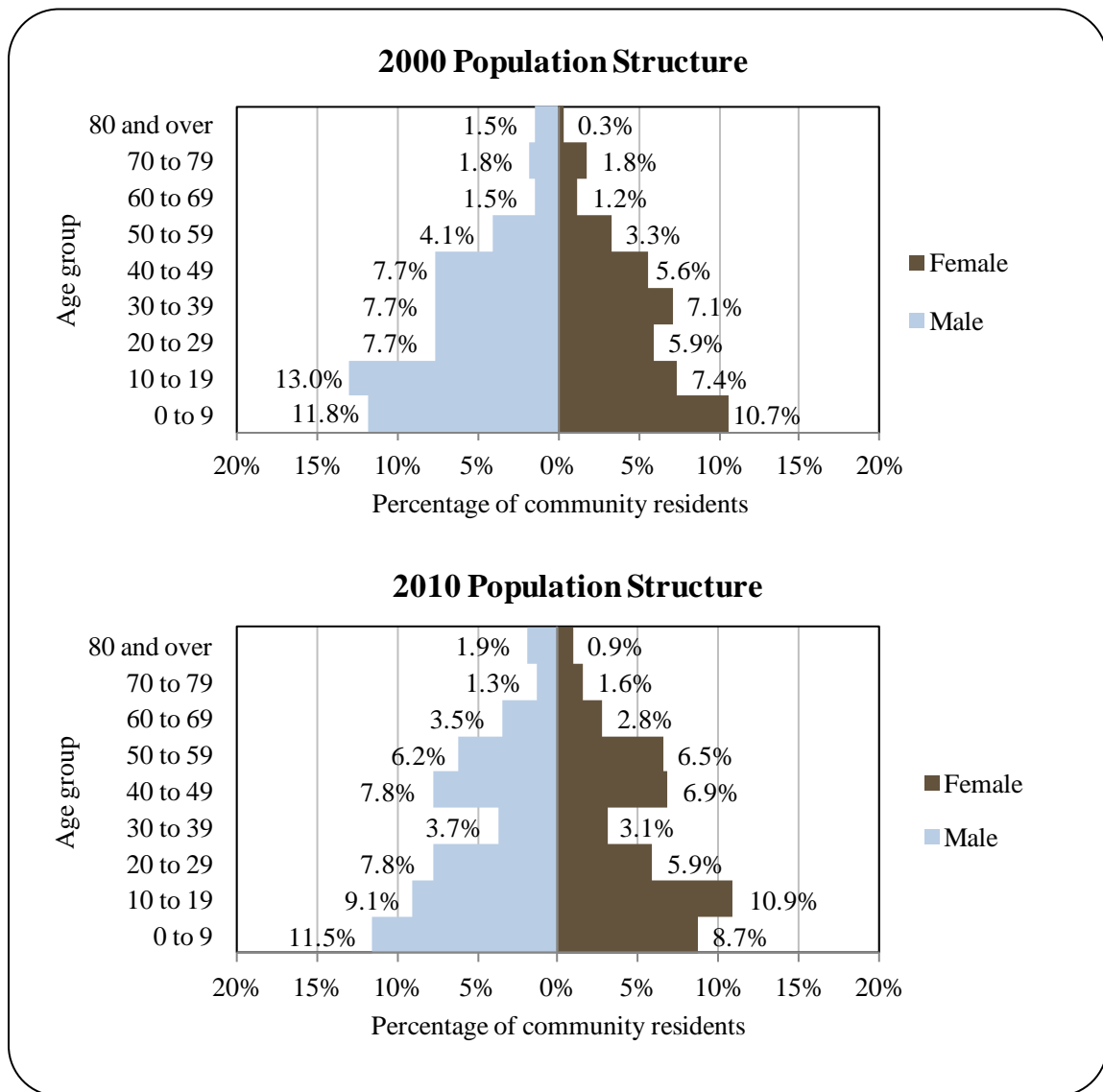
Figure 1. Racial and Ethnic Composition, Kwigillingok: 2000-2010 (U.S. Census).



There were more males than females recorded in 2010 (52.8% male, compared to 47.4% female), roughly in proportion to the gender distribution statewide (52% male, 48% female), and more evenly balanced than Kwigillingok's 2000 distribution (56.8% male, 43.2% female). The median age in 2010 was 26.9, which was younger than the statewide median of 33.8 but similar the village's median age in 2000 (26.0 years). In 2010, 40.2% of residents were under the age of 20, compared to 42.9% in 2000. Also in 2010, 11.9% of residents were over the age of 59, compared to 8.0% in 2000.

Gender distribution by age cohort was relatively even in both 2000 and 2010. In 2010, the greatest absolute gender difference occurred in the 60 to 69 range (2.7% male, 1.5% female), followed by the 20 to 29 range (9.6% male, 6.6% female) and 0 to 9 range (15.4% male, 11.4% female). Of those three, the greatest difference relative to cohort size occurred in the 0 to 9 range. In 2000, the greatest absolute gender difference also occurred in the 60 to 69 range (3.7% male, 2% female), followed by the 50 to 59 range (4% male, 2.4% female), the 30 to 39 range (9.4% male, 6.4% female), and the 10 to 19 range (13.8% male, 9.4% female). Of those four, the greatest difference relative to cohort size occurred in the 10 to 19 year old range. Further information regarding population structure trends can be found in Figure 2.

Figure 2. Population Age Structure in Kwigillingok Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey (ACS),⁵⁵³ in terms of educational attainment, an estimated 73.3% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 17% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 9.8% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 10.5% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 2.6% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 1.3% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 0.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

The first record of the village was in 1927 on the map of the Annual Report of the Governor of Alaska, when it was identified as "Quillingok." A Moravian church was established around 1920. The area has long been occupied by the Yup'ik Eskimos and is still a traditional village with an active subsistence lifestyle.^{554,555}

Natural Resources and Environment

Kwigillingok is located in a marine climate. Annual precipitation averages 22 inches, with 43 inches of snowfall annually. Summer temperatures range from 41 to 57 °F, and winter temperatures average 6 to 24 °F.⁵⁵⁶

The entire Kuskokwim River system covers approximately 52,000 square miles of southwest Alaska, or 11 % of all the land area of Alaska. The river system originates on the northwest flank of the Alaska Range, where glacial streams merge to form the meandering, silt-laden Kuskokwim River which flows southwest between the high alluvial terraces. Fast, clear tributaries enter the river from the western Alaska Range. The river courses a broad valley, laden with tundra ponds and lakes, until finally emptying into the Bering Sea, at a point nearly 40 miles southwest of Bethel, Alaska.⁵⁵⁷

Kwigillingok is part of the Lower Kuskokwim Resource Conservation and Development region which encompasses the area from the boundary of the Lower Kuskokwim Regional Educational Attendance Area (defined by the villages of Newtok on Baird Inlet, Kasigluk, and Nunapitchuk on the Johnson River and Tuluksak on the Kuskokwim River) including the villages of Chevak and Hooper Bay to the north; the Kuskokwim River downriver of Tuluksak to

⁵⁵³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁵⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁵⁵ Calista Corporation (n.d.). *Homepage*. Retrieved May 15, 2012 from <http://www.calistacorp.com/shareholders/village/kwigillingok>.

⁵⁵⁶ See footnote 554.

⁵⁵⁷ Lower Kuskokwim Economic Development Council (2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved May 16, 2012 from <http://www.lkedc.org/ARDPLAN1.pdf>.

the east; the Ahklun and Kilbuck Mountains to the south; and the Bering Sea to the west. There are 27 communities located in this portion of southwest Alaska. The regional population is over 15,000, of which approximately 6,000 live in Bethel, the regional center. No roads connect any of the communities to each other—mechanized access is by air, boat, or snowmobile only. Most communities are located along the Kuskokwim River or near the Bering Sea. The area also includes Nunivak and Nelson Islands. There are no major agricultural or industrial enterprises on the Yukon-Kuskokwim Delta due to poor soil conditions and the area's remoteness from major markets in the rest of the state. Local residents use this remote area primarily for subsistence hunting, fishing, and gathering purposes.⁵⁵⁸

Kwigillingok is located within the boundaries of the Yukon Delta National Wildlife Refuge (YDNWR). The YDNWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Most of the YDNWR is a vast, flat wetland/tundra complex dotted by countless ponds, lakes, and meandering rivers. Approximately half of the refuge is covered by water. Many streams and sloughs are former tributaries of the two major rivers. Some forest habitat is present along rivers and in the Kilbuck Mountains, located in the southeastern part of the YDNWR, to the east of Kwigillingok. Moose, caribou, brown bear and black bear can be found in this mountain range, which rises to between 2,000 and 4,000 feet in elevation.⁵⁵⁹

Kwigillingok is also approximately 50 miles across the Kuskokwim Bay from the Togiak National Wildlife Refuge (TNWR) and the Wood-Tikchik State Park. TNWR covers 4.7 million acres, of which the northern 2.3 million acres are designated as Togiak Wilderness Area. Like the YDNWR, the TNWR protects the habitat of a wide array of birds, fish and mammals. East of TNWR, Wood-Tikchik is the largest state park in the United States. The park includes a diversity of terrain and ecosystems. The Wood River and Tilchik systems host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, Arctic char, Dolly Varden and northern pike. Tilchik Lake is an important site for whitefish subsistence harvest. Moose, caribou and brown bear are common in the park, along with black bear in a limited area of the park. Small game present in the area includes beaver, muskrat, otter, fox, wolverine, mink and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.⁵⁶⁰

The Kuskokwim River generally freezes in October, and breakup is complete by mid-June. Warming temperatures have also led to thawing permafrost in the Kuskokwim area. Permafrost in the Yukon-Kuskokwim Delta varies in depth. While there is limited local data, permafrost depth in the region is known to extend to around 600 feet in some areas, with an active layer estimated to range between 1.5 and 3 feet deep depending on conditions.⁵⁶¹ Thawing permafrost can cause severe subsidence, which constrains development of resources, transportation and utility systems, and community expansion. Communities located along the

⁵⁵⁸ Ibid.

⁵⁵⁹ U.S. Fish and Wildlife Service (2011). Yukon Delta National Wildlife Refuge website. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁵⁶⁰ Alaska Dept. of Natural Resources. (n.d.) *Wood-Tilchik State Park*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

⁵⁶¹ Association of Village Council Presidents. (2000). *2000 Yukon-Kuskokwim Strategic Plan*. Retrieved January 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/YukonKuskokwimDelta-EDP-2000.pdf>

Kuskokwim River are also at high risk of flooding, erosion, and severe weather, and at low risk of wildfire and earthquakes.^{562,563}

According to the Alaska Department of Environmental Conservation,⁵⁶⁴ there were no significant environmental remediation projects active in Kwigillingok in 2010.

Current Economy⁵⁶⁵

Most employment in Kwigillingok is with the school, village government, stores, or commercial fishing. However, a local arts cooperative markets local handicrafts, and income is further supplemented by subsistence activities.⁵⁶⁶

Kwigillingok's top employers in 2010 included the Kwigillingok IRA Council; the Lower Kuskokwim School District; the Native Village of Kwigillingok; Kwik Incorporated; Yukon-Kuskokwim Health Corporation 90; the Kwig Power Co.; Coastal Villages Seafoods Inc; the Coastal Villages Region Fund; Qayanek; and the AVCP Housing Authority.⁵⁶⁷ In 2010, the per capita income in Kwigillingok was estimated at \$10,376, and the median household income was estimated at \$40,833, compared to \$7,577 and \$36,250 in 2000, respectively.⁵⁶⁸ After accounting for inflation by converting 2000 values to 2010 dollars,⁵⁶⁹ the real per capita income (\$9,964) and real median household income (\$47,668) indicate a fall in both individual and household earnings.⁵⁷⁰ In 2010, Kwigillingok ranked 249th of 305 communities from which per capita income was estimated, and 149th of 299 communities from which median household income was estimated. Although Kwigillingok's small population size may have prevented the ACS from accurately portraying economic conditions, this decrease in per capita income is confirmed by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the DOLWD. According to the ALARI database, the per capita income in Kwigillingok in 2010 was \$8,959, which also indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁵⁷¹ This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

In 2010, 46.7% of residents aged 16 or older were estimated to be in the civilian labor force, compared to 68.8% in the civilian labor force statewide. In the same year, the

⁵⁶² City of Aniak and Bechtol Planning and Development (2005). *The City of Aniak, Alaska: All-Hazards Mitigation Plan*. Retrieved February 9, 2012 from

http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Aniak_HMP.pdf.

⁵⁶³ City of Bethel. 2008. *Local Hazards Mitigation Plan*. Retrieved February 7, 2012 from http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Bethel_LHMP.pdf.

⁵⁶⁴ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

⁵⁶⁵ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁶⁶ See footnote 554.

⁵⁶⁷ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved May 17, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

⁵⁶⁸ U.S. Census and American Community Survey 2006-2010 estimates.

⁵⁶⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵⁷⁰ See footnote 553.

⁵⁷¹ See footnote 567.

unemployment rate was estimated to be 10.7% in Kwigillingok, compared to a statewide unemployment rate of 5.9%, and approximately 24.1% of local residents were estimated to be living below the poverty line in 2010, compared to 9.5% of Alaska residents overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Kwigillingok are not reflective of the value of subsistence to the local economy.

Also based on the 2006-2010 ACS, 37% of the Kwigillingok workforce was estimated to be employed in the private sector, along with an estimated 63% in the public sector. Of the 54 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number were estimated to be working in educational services, health care and social assistance (44.4%), transportation, warehousing, public administration (20.4%), retail trade (16.7%), public administration (11.1%), and information (7.4%). An estimated 0% of the civilian labor force was working in agriculture, forestry, fishing, hunting and mining; however, the number of individuals employed in farming, fishing and forestry industries is probably underestimated in census statistics (see *Commercial Fisheries* section below). Fishermen may hold another job and characterize their employment accordingly. As with income and poverty statistics, employment figures reported for Kwigillingok are not reflective of the value of subsistence to the local economy. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Kwigillingok (U.S. Census).

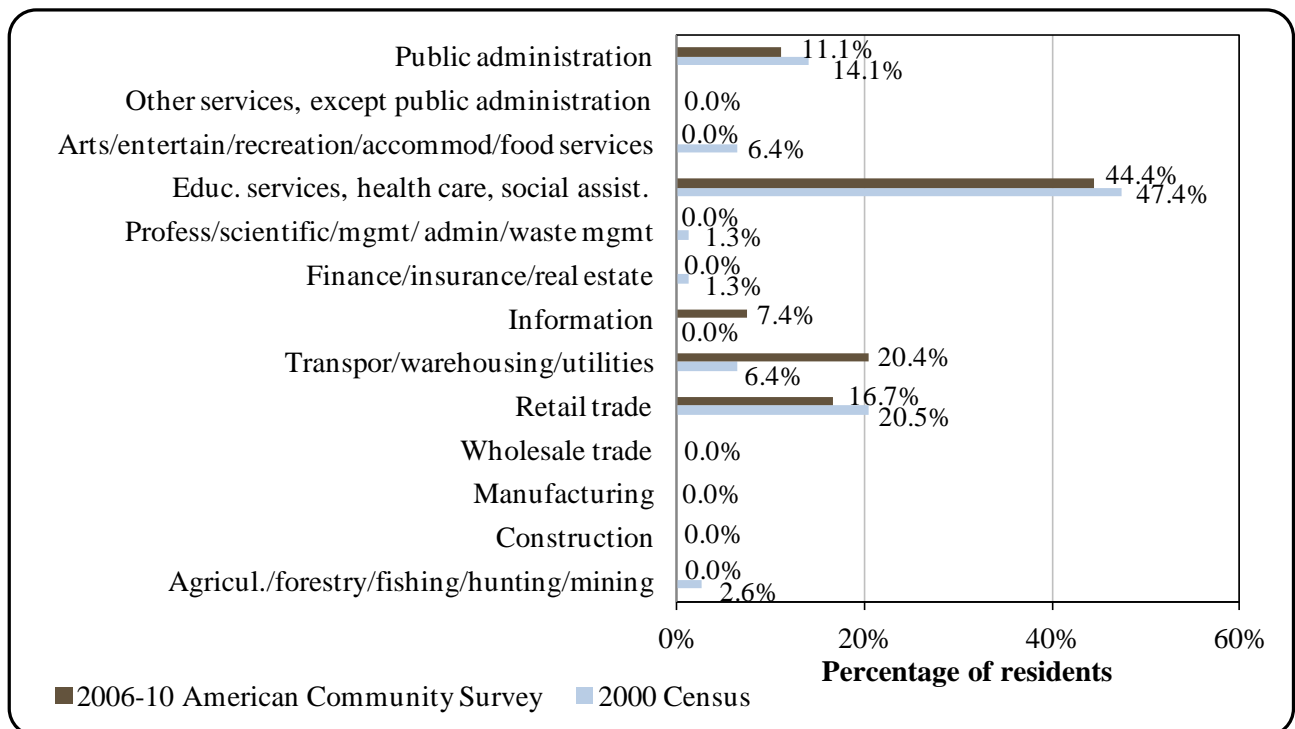
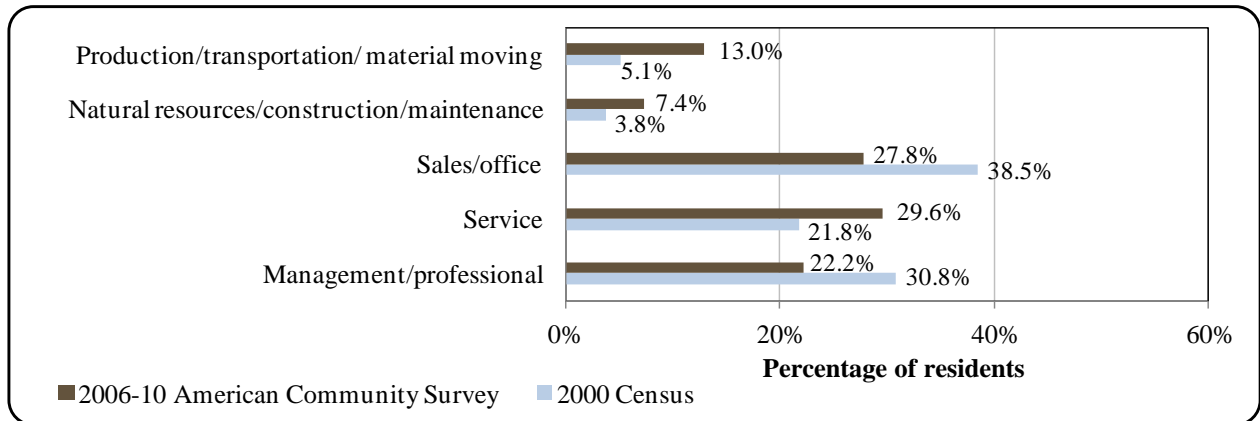


Figure 4. Local Employment by Occupation in 2000-2010, Kwigillingok (U.S. Census).



Governance

Kwigillingok is unincorporated and is not part of an organized borough. Because Kwigillingok is unincorporated, the community has no city or borough “officials,” and there is no local taxing authority. Given this, a municipal budget was not available between 2000 and 2010. The community received State Revenue Sharing between 2000 and 2003, ranging from a low of \$3,631 in 2003, to a high of \$4,170 in 2000. Kwigillingok did not receive fisheries-related state or federal grants between 2000 and 2010, nor did the village receive a Community Benefits Share from its Community Development Quota (CDQ) entity (Coastal Villages Regional Fund) in 2010. Information regarding municipal finances can be found in Table 2.

Kwigillingok was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Kwigillingok. There is also an ANCSA chartered Native Village Corporation (Kwik Incorporated); Calista Corporation is the regional ANCSA Corporation.

Kwigillingok is also a member of the Bering Sea Elders Advisory Group (BSEAG), whose mission is “to bring together elders as one voice to protect our traditional ways of life, the ocean web of life that supports the resources we rely on, and our children’s future.”⁵⁷² The BSEAG was established in 2007 due to the elders’ concerns about the proximity of bottom trawling to some of their villages in the Yukon-Kuskokwim and Bering Strait region, and the potential movement of industrial fisheries into northern Bering Sea Waters.

The closest Office of the Alaska Department of Fish and Game (ADF&G) is located in Dillingham, and the closest Alaska Department of Commerce, Community and Economic Development is located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage.

⁵⁷² Bering Sea Elders Advisory Group (n.d.). *Homepage*. Retrieved May 18, 2012 from <http://www.beringseaelders.org/>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kwigillingok from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State and Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	-	n/a
2005	n/a	n/a	-	n/a
2006	n/a	n/a	-	n/a
2007	n/a	n/a	-	n/a
2008	n/a	n/a	-	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

The Lower Kuskokwim River is a remote area of Alaska. There are no roads, except within some cities and villages on the Kuskokwim River. Kwigillingok itself has no roads.⁵⁷³ In summer, residents use skiffs and other boats for travel to Bethel and other nearby villages. Snowmobiles and all-terrain vehicles provide transportation during winter. Winter trails are marked to Kipnuk (38 miles) and Kongiganak (11.1 miles).⁵⁷⁴

There are no docking facilities in the Village, but there is a state-owned, public-use seaplane base (the Kwigillingok Seaplane Base) located in the Kwigillingok River which measures 2,000 feet long by 300 feet wide. No services of any type are provided at the base, but there is a beaching area on the river bank adjacent to the Village.⁵⁷⁵ Furthermore, there is a state-owned public-use airport (Kwigillingok Airport) with a gravel airstrip that measures 2,510 feet

⁵⁷³ Alaska Department of Fish and Game. *Kuskokwim Management Area: Overview*. Retrieved May 17, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=ByAreaInteriorKuskokwim.moreoverview>.

⁵⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁷⁵ U.S. Department of Transportation Federal Aviation Administration (n.d.). *Airport Master Record*. Retrieved May 17, 2012 from <http://www.gcr1.com>.

long by 60 feet wide.⁵⁷⁶ Improvements are currently underway for this airport to create a 3,300 foot gravel runway, taxiway, apron, airport lighting system, and two single bay snow removal equipment buildings.⁵⁷⁷ Airline services are provided by Era Aviation, Alaska Grant Aviation, Ryan Air Service, and Yute Air.⁵⁷⁸ The price of round-trip airfare between Anchorage and Kwigillingok in June 2012 was \$714,⁵⁷⁹ and the price of round-trip airfare between Bethel and Kwigillingok was \$328.⁵⁸⁰

*Facilities*⁵⁸¹

Water is currently derived from snow melt and a lake reservoir and is treated and hauled by residents from the washeteria which is operated by the Village Council. The school operates its own surface water treatment facility but shares a sewage lagoon with the washeteria. Homes are not plumbed. Honeybuckets are disposed of by residents. Electricity is provided by the Kwig Power Company. Refuge collection services are unavailable, and the Village Council operates the landfill. Public safety services are provided by the Village Public Safety Officers (VPSO), the Native Village Police Department, and troopers in Bethel. Fire and rescue services are provided by the State VPSO Fire Department.⁵⁸² Public services available in Kwigillingok include medical services, job placement services, publicly subsidized housing, a community hall, and school library. Communications services include cable television and internet, radio, local television, and local and long distance telephone.⁵⁸³

*Medical Services*⁵⁸⁴

One health clinic, the Kwigillingok Health Clinic, is located in the community. The nearest hospital (Yukon-Kuskokwim Delta Regional Hospital) is located in Bethel.⁵⁸⁵ Emergency services have coastal and air access. Emergency service is provided by a health aide.⁵⁸⁶

⁵⁷⁶ See footnote 574.

⁵⁷⁷ State of Alaska Department of Transportation & Public Facilities (n.d.). *Kwigillingok Airport Improvements*. Retrieved May 17, 2012 from <http://dot.alaska.gov/creg/kwigillingok/>.

⁵⁷⁸ See footnote 574.

⁵⁷⁹ Airfare was calculated using lowest fare from <http://www.travelocity.com/>. Retrieved May 18, 2012.

⁵⁸⁰ Grant Aviation. *Website*. Retrieved May 17, 2012 from <http://www.flygrant.com/schedule-bethel.php#kwigillingok>.

⁵⁸¹ See footnote 574.

⁵⁸² Ibid.

⁵⁸³ Ibid.

⁵⁸⁴ Ibid.

⁵⁸⁵ Alaska Department of Health and Social Services (n.d.). *Emergency Medical Services Directory*. Retrieved April 11, 2012 from http://hss.state.ak.us/dph/emergency/ems/assets/EMS_Directory3_Norton_Sound.pdf.

⁵⁸⁶ See footnote 574.

*Educational Opportunities*⁵⁸⁷

The Kwigillingok School, part of the Lower Kuskokwim School District, accommodates grades kindergarten through 12th grade and is the only school in the community. In 2011, there were approximately 119 students enrolled and 7 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Harvest of marine resources has been important to residents of the Kwigillingok area since prehistory. Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁵⁸⁸ Subsistence salmon harvest continues to be a primary economic activity along the Kuskokwim River. In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs is an important subsistence resource for coastal Alaskan communities.⁵⁸⁹

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s, commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current state dictated management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.⁵⁹⁰

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s.⁵⁹¹ Between 2000 and 2010, Kwigillingok residents held permits in the roe and gillnet herring fisheries of Cape Avinof and Bristol Bay.^{592,593} (For more information see the *Commercial Fisheries* section of this profile.) The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the village of Togiak. Spawning herring are harvested using purse seines and gillnets in the Togiak sac roe fishery. A

⁵⁸⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁵⁸⁸ Alaska Native Heritage Center (n.d). *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/Yup'ik/.

⁵⁸⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁵⁹⁰ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). Kuskokwim Commercial Salmon Fishery. In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁵⁹¹ See footnote 589.

⁵⁹² Alaska Dept. of Fish and Game (2010). *2010 Permit & Fishing Activity by Year, State, Census Area, or City*. Retrieved December 13, 2011 from <http://www.cfec.state.ak.us/gpbycen/2010/mnu.htm>.

⁵⁹³ Alaska Dept. of Fish and Game (n.d.). *Current CFEC Fishery Codes Description Table*. Retrieved December 13, 2011 from <http://www.cfec.state.ak.us/misc/FshyDesC.htm>.

spawn-on-kelp harvest is also taken, primarily by local residents. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁵⁹⁴

Kwigillingok is located in Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. The Village is a member of the Coastal Villages Regional Fund, a CDQ group that promotes training and employment opportunities for residents, community and development programs for member villages, and offers loans to facilitate involvement of locals in Bering Sea crab and groundfish fisheries. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.⁵⁹⁵ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Kwigillingok. The closest processing plants are in Bethel and Dillingham.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received from taxes or fees in Kwigillingok (Table 3). However, in a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the village did receive an unspecified amount of state and federal funding during 2010.

Commercial Fishing

Between 2000 and 2010, Kwigillingok residents participated in commercial fisheries as crew members, vessel owners and permit holders. In 2010, 24 Kwigillingok residents held a total of 26 Commercial Fisheries Entry Commission (CFEC) permits, including 16 salmon permits in the Kuskokwim gillnet fishery, and 3 herring permits in the Cape Avinof roe and gillnet herring fishery.⁵⁹⁶ These permit numbers decreased steadily overall between 2000 and 2010 (from 55 permits in 2000 to 26 permits in 2010), and the number of permits fished dropped considerably over that period. In 2000, 35% of the 20 herring permits held were actively fished. However, herring permit activity declined significantly in years following, falling to 0% by 2004. No herring permits were actively fished between 2004 and 2010. Halibut permit activity remained low between 2000 and 2010, with no more than one permit active in any given year. No halibut permit activity was recorded between 2005 and 2010. In terms of total CFEC permits held in Kwigillingok, salmon accounted for not only most of the permits held, but most of the permits actively fished as well. In 2010, salmon permits accounted for 88.5% of permits held locally,

⁵⁹⁴ See footnote 589.

⁵⁹⁵ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

⁵⁹⁶ See footnotes 592 and 593.

compared to 50.6% in 2000. In that year 30% of the 23 salmon permits held were actively fished, compared to 46% of the 28 held in 2000. Permit ownership remained steady, although activity declined early in the decade. Between 2000 and 2010, no Kwigillingok residents held either Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP). Information about permits held by Kwigillingok residents is presented in Table 4. Likewise, no Kwigillingok residents participated in the federal halibut, sablefish or crab catch share fisheries between 2000 and 2010 (Tables 6, 7 and 8).

In 2010, a total of 20 Kwigillingok residents held commercial crew licenses and 11 fishing vessels were primarily owned by Kwigillingok residents. The number of crew license holders fluctuated during the decade, with 26 in 2000 falling to between seven and 12 in 2002-2004, and climbing again to 20 in 2010. The number of vessels owned by Kwigillingok residents declined substantially from 2000, when 31 vessels were owned. The number of vessels homeported in Kwigillingok followed a similar pattern, with 25 in 2000 and only eight in 2010. According to a survey conducted by the AFSC in 2011, community leaders indicated that the only vessels using Kwigillingok as a base of operations during the fishing season were gillnet and longline boats under 35 ft in length. Information about the commercial fishing sector in Kwigillingok is presented in Table 5.

No landings or ex-vessel revenue were recorded in Kwigillingok (Tables 5 and 9), given the lack of fish buyers in the community (Table 5). Information about landings and ex-vessel revenue generated by vessels owned by Kwigillingok residents is largely considered confidential between 2000 and 2010, with the exception of herring harvest data for 2000 and salmon harvest data in 2000, 2001, 2005, 2006 and 2009. In the 2000, Kwigillingok vessel owners landed over 210,000 pounds of salmon, nearly twice as much as the amount landed the next year. Furthermore, in 2000, the ex-vessel value of the catch for salmon was \$138,691, while it was only worth \$44,710. Even when compensating for the smaller harvest, this total reflects lower prices and possibly a different species catch composition. Salmon landings rose again in 2009, with a total harvest of 165,185 pounds for an ex-vessel value of \$129,955. This higher catch is significant given the fewer total vessels owned by Kwigillingok residents in 2009 (11) compared to 31 vessels owned in 2000. Information about commercial harvest and ex-vessel revenue earned by vessel owners residing in Kwigillingok is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kwigillingok: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

*Reported by community leaders in a survey conducted by the AFSC in 2011.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Kwigillingok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	7	3	1	1	1	0	5	4	0	0	0
	Fished permits	1	1	0	0	1	0	0	0	0	0	0
	% of permits fished	14%	33%	0%	0%	100%	-	0%	0%	-	-	-
	Total permit holders	6	2	1	1	1	0	5	4	0	0	0
Herring (CFEC) ²	Total permits	20	11	7	5	3	1	1	1	1	0	3
	Fished permits	7	1	2	1	0	0	0	0	0	0	0
	% of permits fished	35%	9%	29%	20%	0%	0%	0%	0%	0%	-	0%
	Total permit holders	19	11	7	5	3	1	1	1	1	0	3

Table 4 cont'd. Permits and Permit Holders by Species, Kwigillingok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	28	27	26	27	25	24	24	23	22	24	23
	Fished permits	13	8	4	5	5	6	7	5	4	6	7
	% of permits fished	46%	30%	15%	19%	20%	25%	29%	22%	18%	25%	30%
	Total permit holders	31	28	27	28	25	25	24	22	22	23	23
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>55</i>	<i>41</i>	<i>34</i>	<i>33</i>	<i>29</i>	<i>25</i>	<i>30</i>	<i>28</i>	<i>23</i>	<i>24</i>	<i>26</i>
	<i>Fished permits</i>	<i>21</i>	<i>10</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>7</i>	<i>5</i>	<i>4</i>	<i>6</i>	<i>7</i>
	<i>% of permits fished</i>	<i>38%</i>	<i>24%</i>	<i>18%</i>	<i>18%</i>	<i>21%</i>	<i>24%</i>	<i>23%</i>	<i>18%</i>	<i>17%</i>	<i>25%</i>	<i>27%</i>
	<i>Permit holders</i>	<i>41</i>	<i>33</i>	<i>30</i>	<i>29</i>	<i>27</i>	<i>26</i>	<i>26</i>	<i>24</i>	<i>22</i>	<i>23</i>	<i>24</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kwigillingok: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Kwigillingok ²	Total Net Pounds Landed In Kwigillingok ^{2,5}	Total Ex-Vessel Value Of Landings In Kwigillingok ^{2,5}
2000	26	0	0	31	25	0	0	\$0
2001	18	0	0	22	17	0	0	\$0
2002	12	0	0	16	12	0	0	\$0
2003	9	0	0	13	11	0	0	\$0
2004	7	0	0	10	9	0	0	\$0
2005	12	0	0	9	8	0	0	\$0
2006	14	0	0	9	7	0	0	\$0
2007	10	0	0	9	8	0	0	\$0
2008	13	0	0	7	6	0	0	\$0
2009	10	0	0	8	6	0	0	\$0
2010	20	0	0	11	8	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Kwigillingok: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kwigillingok: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kwigillingok: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kwigillingok: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kwigillingok Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	58,639	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	210,213	108,620	--	--	--	178,403	171,065	--	--	165,185	--
<i>Total²</i>	<i>268,852</i>	<i>108,620</i>	--	--	--	<i>178,403</i>	<i>171,065</i>	--	--	<i>165,185</i>	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$5,453	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$138,691	\$44,710	--	--	--	\$107,998	\$107,668	--	--	\$129,955	--
<i>Total²</i>	<i>\$144,144</i>	<i>\$44,710</i>	--	--	--	<i>\$107,998</i>	<i>\$107,668</i>	--	--	<i>\$129,955</i>	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010 there were no active sport fish guide businesses or licensed sport fish guides in Kwigillingok. However, according to a survey conducted by the AFSC in 2011, community leaders indicated that residents of Kwigillingok did participate in sportfishing. Between 2000 and 2010, the number of Kwigillingok residents who purchased sportfishing licenses varied between 0 and 31 in any given year. Also, starting in 2010, sportfishing licenses were sold in the community. In that year, Kwigillingok residents purchased 18 sportfishing licenses (irrespective of point of sale) and 9 of those were sold in the community. According to the 2011 AFSC survey, community leaders noted that gear or tackle stores were also present in the community. The Alaska Statewide Harvest Survey,⁵⁹⁷ conducted by ADF&G between 2000 and 2010, noted the following species as targeted by private anglers in Kwigillingok: pink salmon, chum salmon, Chinook salmon, coho salmon, sockeye salmon, halibut, shrimp, and clam.

Kwigillingok is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,625 – 17,582 angler days per year) than Alaska resident anglers (4,236 – 9,152 angler days per year). This information about the sportfishing sector in and near Kwigillingok is displayed in Table 11.

Table 11. Sport Fishing Trends, Kwigillingok: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kwigillingok ²
2000	0	0	0	0
2001	0	0	11	0
2002	0	0	7	0
2003	0	0	10	0
2004	0	0	11	0
2005	0	0	13	0
2006	0	0	7	0
2007	0	0	19	0
2008	0	0	22	0
2009	0	0	31	0
2010	0	0	18	9

⁵⁹⁷ Alaska Department of Fish and Game 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Kwigillingok: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010.

ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

In a survey conducted by the AFSC in 2011, Kwigillingok community leaders indicated that salmon, halibut, clams, herring, marine mammals, and white fish are some of the most important subsistence resources utilized by local residents. No information is available from ADF&G regarding the percentage of households using different subsistence resources between 2000 and 2010, or about per capita subsistence harvest (Table 12).

However, data are available through 2008 regarding subsistence salmon permits (Table 13). Between 2000 and 2008, the number of individuals in Kwigillingok who were issued subsistence salmon permits varied between 71 and 95 individuals per year. Specific harvest amounts were only available in 2004, and in that year Chinook, chum and sockeye salmon were harvested. No information was reported regarding subsistence harvest of marine invertebrates and non-salmon fish (not including halibut.)

Between 2005 and 2010, Kwigillingok residents participated in the Subsistence Halibut Registration Certificates (SHARC) program, although in a limited capacity. During that time, between 45 and 48 residents were issued SHARC, and between 10 and 42 SHARC were fished. In 2009, 31 of 45 SHARC were fished, although no harvest information is available. In 2010, the number of SHARC issued declined significantly to three, and none were reported active that year (Table 14). In terms of marine mammal harvests, an estimated seven walrus were harvested between 2000 and 2010 (Table 15).

Additional Information

According to legend passed down by elders, the Village was at a spot where there was no river, but over time one was formed when a man dug a trench to retrieve a necklace lost by his daughter at the edge of a lake.⁵⁹⁸

Table 12. Subsistence Participation by Household and Species, Kwigillingok: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁵⁹⁸ Calista Corporation (n.d.). *Homepage*. Retrieved May 15, 2012 from <http://www.calistacorp.com/shareholders/village/kwigillingok>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kwigillingok: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	95	2	345	160	55	n/a	70	n/a	n/a
2005	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	71	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kwigillingok: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	45	10	1,472
2006	48	21	2,906
2007	48	31	590
2008	46	42	1,764
2009	45	31	n/a
2010	3	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kwigillingok: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	3	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	1	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	1	n/a	n/a	n/a	n/a
2005	n/a	n/a	1	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	1	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Lower Kalskag (Lower KAL-skag)



People and Place

*Location*⁵⁹⁹

Lower Kalskag is located on the north bank of the Kuskokwim River, 2 miles downriver from Upper Kalskag. It lies 26 miles west of Aniak, 89 miles northeast of Bethel, and 350 miles west of Anchorage. The community is located in the Bethel Census Area and Kuskokwim Recording District. The City of Lower Kalskag encompasses 1.3 square miles of land and 0.4 square miles of water.

*Demographic Profile*⁶⁰⁰

In 2010, there were 282 inhabitants in Lower Kalskag, making it the 167th largest of 352 total Alaskan communities with recorded populations that year. The town did not appear in U.S. Census records until the 1940s. Overall between 1990 and 2010, the population of Lower Kalskag remained relatively stable, decreasing by only 3.1%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents fell by 6%, with an average annual growth rate of -0.98%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Lower Kalskag's population has a yearly peak during summer months, between June and September. They said that approximately 28 seasonal workers are present in the community during this period. According to the survey, seasonal population fluctuations are not driven by employment in fishing sectors.

In 2010, a majority of Lower Kalskag residents identified themselves as American Indian and Alaska Native (92.2%), along with 2.5% that identified as White, and 5.0% identifying with two or more races. None of Lower Kalskag's residents identified themselves as Hispanic in 2010. Individuals identifying as White made up 1.1% more of the population in 2010 compared to 1990, although the overall percentage of White residents decreased from 4.5% in 2000 to 2.5% in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Lower Kalskag was 3.76, a decline from 4.05 persons per household in 2000 and 4.3 persons per household in 1990. The number of households in Lower Kalskag has increased over time, from 67 occupied households in 1990 and 66 in 2000, to 75 in 2010. Of the 82 housing units surveyed for the 2010 U.S. Decennial Census, 64.6% were owner-occupied, 26.8% were rented, and 8.5% were vacant or used only seasonally. Between 1990 and 2010, no residents of Lower Kalskag lived in group quarters.

⁵⁹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁰⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

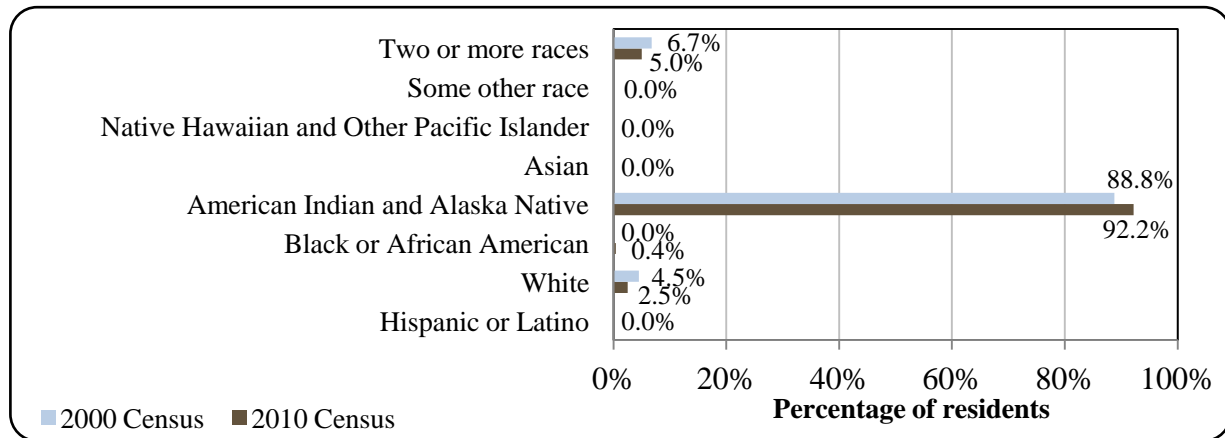
Table 1. Population in Lower Kalskag from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	291	-
2000	267	-
2001	-	256
2002	-	263
2003	-	267
2004	-	263
2005	-	252
2006	-	267
2007	-	251
2008	-	255
2009	-	251
2010	282	-

¹ (1) U.S. Census Bureau 1990. CP-1: General Population Characteristics of all places within Alaska. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Lower Kalskag: 2000-2010 (U.S. Census).

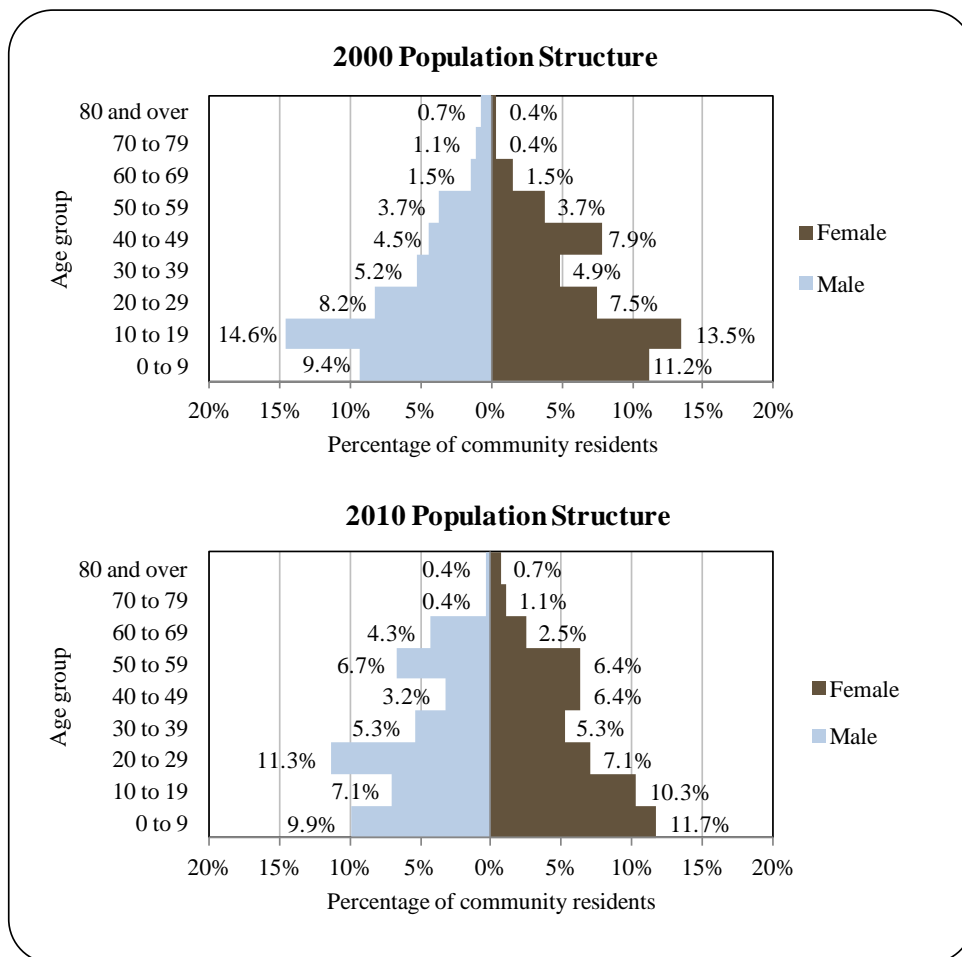


In 2010, the gender makeup of Lower Kalskag’s population was more heavily female than most Alaskan communities (51.4% female and 48.6% male). In contrast, the state population as a whole was 52% male and 48% female that year. The median age of Lower Kalskag residents was 25.8 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, there was a relatively even spread of males and females across age categories in Lower Kalskag. In 2010, the age groups most heavily skewed toward females were 0 to 19 and 40 to 49 years, while there were more men in age groups 20 to

29 and 60 to 69. Only 9.2% of Lower Kalskag’s population was age 60 or older in 2010. The overall population structure of Lower Kalskag in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to American Community Survey (ACS) estimates,⁶⁰¹ 78.3% of Lower Kalskag residents aged 25 and over held a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 14.7% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 7% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 10.9% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 0% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 14.7% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Lower Kalskag Based on the 2000 and 2010 U.S. Decennial Census.



⁶⁰¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

The site of Lower Kalskag was originally used as a fish camp for families from Kalskag, 2 miles to the northeast. In 1930, people began to establish year-round homes. The Russian Orthodox residents of Upper Kalskag, a predominantly Roman Catholic village, moved to Lower Kalskag in the 1930s because of religious differences. The Russian Orthodox Chapel of St. Seraphim was built in 1940. A school was built in 1959, followed by a post office in 1962, a sawmill in 1965, and a power plant in 1969. A new church was built in the late 1970s. The City of Lower Kalskag was incorporated in 1969.⁶⁰² The sale and importation of alcohol are banned in the community.⁶⁰³

Natural Resources and Environment

The climate of Lower Kalskag is semi-arctic with maritime influences from the Bering Sea. Annual precipitation averages 19 inches, with 60 inches of snowfall. Temperatures range between -55 and 87 °F. The Kuskokwim River is ice-free from mid-June through October.⁶⁰⁴

The community is located less than 100 miles from the boundary of Wood-Tikchik State Park, the largest state park in the United States. The State Park includes a diversity of terrain and ecosystems. The Wood River and Tilchik systems host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, Arctic char, Dolly Varden char and northern pike. Tilchik Lake is an important site for whitefish subsistence harvest. Moose, caribou, and brown bear are common in the park, along with black bear in a limited area of the park. Small game present in the area includes beaver, muskrat, otter, fox, wolverine, mink, and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.⁶⁰⁵

There are many gold deposits along the Kuskokwim River. Donlin Gold, approximately 70 miles northeast of the Lower Kalskag, is one of the largest gold deposits in the world, with probable reserves estimated at 33.6 million oz of gold. In March 2010, Donlin Creek LLC renegotiated its lease with Calista Corporation, securing additional land to allow for future expansion and extending the lease to 2031.⁶⁰⁶ Other smaller mine sites are scattered around the area, including Stuyahok and Arnold Kako to the north of Lower Kalskag, and Bogus Creek and Nyac to the south.⁶⁰⁷ A majority of the surface land in proposed mining areas is owned by the Kuskokwim Corporation, the local Native village corporation, and the subsurface land is owned by the regional Native corporation, Calista Corporation.⁶⁰⁸

⁶⁰² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁰³ Alaska Dept. of Public Safety (2011). *Local Option Restrictions*. Retrieved May 31, 2012 from <http://dps.alaska.gov/abc/restrictions.aspx>.

⁶⁰⁴ See footnote 602.

⁶⁰⁵ Alaska Dept. of Natural Resources. (n.d.) *Wood-Tilchik State Park*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

⁶⁰⁶ Alaska Dept. of Natural Resources (2010). *Alaska's Mineral Industry 2010, Special Report 65*. Accessed December 8, 2011 from <http://www.dggs.dnr.state.ak.us/pubs/minerals>.

⁶⁰⁷ Alaska Dept. of Commerce. (n.d.) *Mineral Resources of Alaska Map*. Retrieved December 2, 2011 from <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁶⁰⁸ Donlin Gold. (n.d.). *Our Plan: The Project*. Retrieved December 7, 2011 from <http://www.donlingold.com/our-plan>.

Natural hazards identified in the Lower Kalskag area include high risk of flooding, erosion, and severe weather, and low risk of wildfire and earthquakes.⁶⁰⁹

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Lower Kalskag as of May 2012.⁶¹⁰

Current Economy⁶¹¹

Lower Kalskag's economy is predominantly based on subsistence activities. Salmon, moose, black bear, porcupine, and waterfowl are utilized.⁶¹² In 2010, top employers in the community in 2010 were the Lower Kalskag Traditional Council, the Cities of Lower Kalskag and Upper Kalskag, the school district, the Tuluksak Native Store, the Association of Village Council Presidents (AVCP), the Yukon-Kuskokwim Health Corporation, and several private companies.⁶¹³ The Alaska Department of Natural Resources and U.S. Bureau of Land Management firefighting also provide some seasonal income.⁶¹⁴ In a survey conducted by the AFSC in 2011, community leaders reported that a majority of Lower Kalskag residents rely primarily on subsistence fishing, and a few also engage in commercial fishing activities.

Based on household surveys conducted for the 2006-2010 ACS,^{615,616} in 2010, the per capita income in Lower Kalskag was estimated to be \$11,966, and the median household income was estimated to be \$44,250. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$7,654 and \$25,625, respectively). This is true even when accounting for inflation by converting the 2000 values to 2010 dollars,⁶¹⁷ revealing a real per capita income in 2000 of \$10,065, and a real median household income of \$33,697. In 2010, Lower Kalskag ranked 240th of 305 Alaskan communities with per capita income data that year, and 165th in median household income, out of 299 Alaskan communities with household income data.

Lower Kalskag's small population size may have prevented the ACS from accurately portraying economic conditions.⁶¹⁸ A potentially more accurate understanding of per capita income is obtained from economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development

⁶⁰⁹ City of Aniak and Bechtol Planning and Development (2005). *The City of Aniak, Alaska: All-Hazards Mitigation Plan*. Retrieved February 9, 2012 from

http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Aniak_HMP.pdf.

⁶¹⁰ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁶¹¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁶¹² See footnote 602.

⁶¹³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶¹⁴ See footnote 602.

⁶¹⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶¹⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶¹⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶¹⁸ See footnote 616.

(DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Lower Kalskag in 2010 is \$5,609,⁶¹⁹ which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000. This decline in income is reflected in the fact that the community was recognized as “distressed” by the Denali Commission,⁶²⁰ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Lower Kalskag residents were estimated to be in the civilian labor force (63.5%) than the civilian labor force statewide (68.8%). In the same year, approximately 16% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 22%, compared to a statewide unemployment rate of 5.9%. An alternative estimate of unemployment is based on the ALARI database, which indicates that the 2010 unemployment rate in Lower Kalskag was 26.6%, more than two times the ALARI statewide unemployment rate estimate of 11.5%.⁶²¹

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers were estimated to be employed in the public sector (54.5%), and the remaining 45.5% were estimated to be working in the private sector. Of the 66 people aged 16 and over that were estimated to be employed in the civilian labor force, the majority worked in educational services, health care and social assistance sector (63.6%), while 15.2% were estimated to be working in public administration, and 4.5% each in retail trade and in transportation, warehousing and utilities. The occupations in which the greatest percentages of the workforce were estimated to be employed were service (51.5%), production, transportation, and material moving (25.8%), and management, business, science, and arts occupations (18.2%). No Lower Kalskag residents were estimated to be working in fishing-related industries or occupations in 2010. The number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 135 employed residents in Lower Kalskag in 2010, of which 74.8% were employed in local government, 5.2% were employed in education and health services, 3.7% in natural resources and mining, 3.7% in construction, 3% in professional and business services, 2.2% in trade, transportation, and utilities, 1.5% in financial activities, and 5.9% in other industries.⁶²² As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

⁶¹⁹ See footnotes 613 and 615.

⁶²⁰ Denali Commission 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from www.denali.gov.

⁶²¹ See footnote 613.

⁶²² Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Lower Kalskag (U.S. Census).

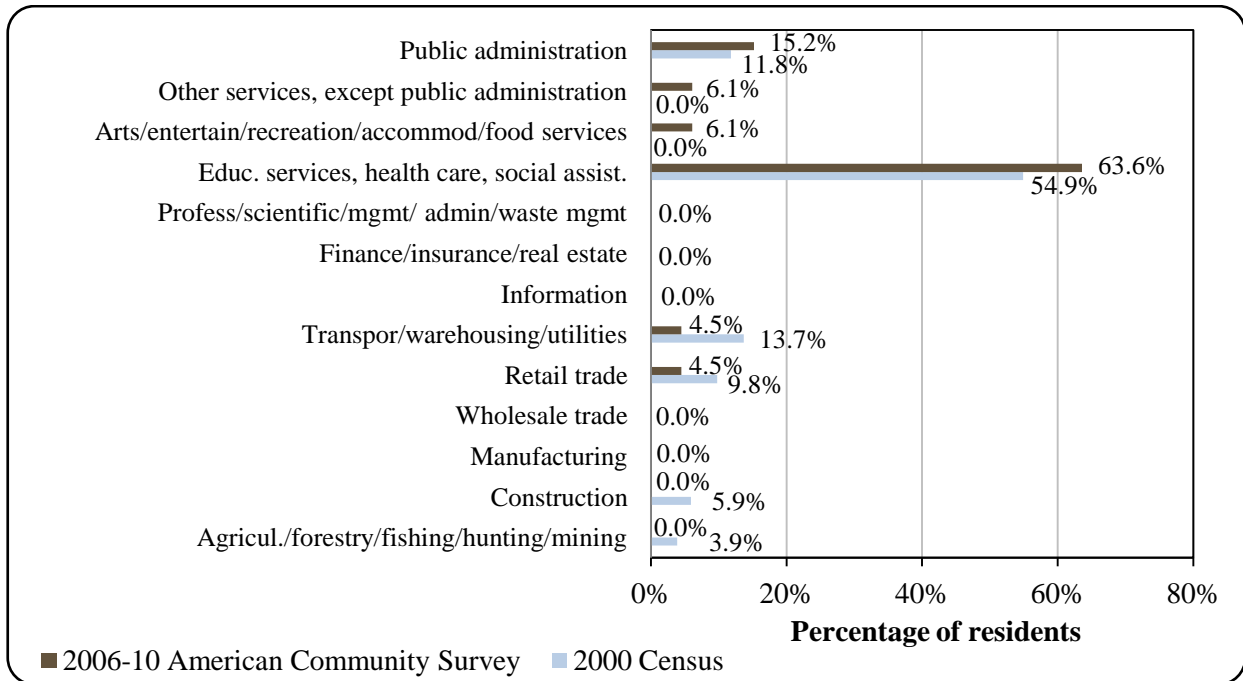
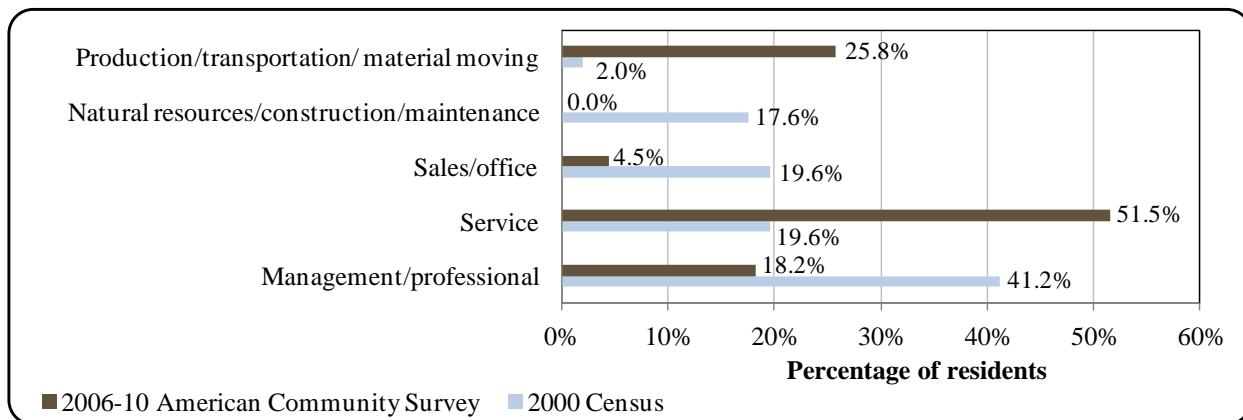


Figure 4. Local Employment by Occupation in 2000-2010, Lower Kalskag (U.S. Census).



Governance

Lower Kalskag is a 2nd Class City, and is not part of an organized borough. The City was incorporated in 1969 and has a Strong Mayor form of government, which includes a seven-person city council, including the mayor, a seven-person advisory school board, and several municipal employees.⁶²³ The City of Lower Kalskag did not administer any local taxes, and no sales tax revenue was reported between 2000 and 2010. Annual community revenue initially declined from \$161,689 in 2000 to a low of \$46,000 in 2006, but rebounded to \$174,052 by

⁶²³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

2010. The City received State Revenue Sharing contributions of between \$26,000 and \$37,500 per year from 2000 to 2003, and Community Revenue Sharing contributions of just over \$100,000 per year in 2009 and 2010. Locally generated revenues included lease fees from federal and state facilities on city lands and bingo/pull tab sales. In addition to the State and Community Revenue Sharing programs, other outside revenue sources included job training, community policing grants, and suicide prevention grants, as well as funds from the Payment In Lieu of Taxes program. No state or federal fisheries-related grants were reported to contribute to community revenue between 2000 and 2010. Information about selected aspects of Lower Kalskag’s municipal revenue is presented in Table 2.

Lower Kalskag was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Village of Lower Kalskag. The Native village corporation is The Kuskokwim Corporation, which manages 92,160 acres of land and represents numerous villages in the Lower Kuskokwim area. The regional Native corporation to which Lower Kalskag belong is the Calista Corporation.⁶²⁴

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Lower Kalskag from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$161,689	n/a	\$31,336	n/a
2001	\$173,757	n/a	\$31,339	n/a
2002	\$130,321	n/a	\$26,647	n/a
2003	\$49,593	n/a	\$37,593	n/a
2004	\$65,896	n/a	n/a	n/a
2005	\$85,926	n/a	n/a	n/a
2006	\$46,000	n/a	n/a	n/a
2007	\$61,189	n/a	n/a	n/a
2008	\$108,816	n/a	n/a	n/a
2009	\$147,584	n/a	\$109,122	n/a
2010	\$174,052	n/a	\$109,122	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community and Economic Development . (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

⁶²⁴ Ibid.

Lower Kalskag is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁶²⁵ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁶²⁶ AVCP is made up of 56 villages and 45 village corporations.⁶²⁷

The closest office of the Alaska Department of Fish and Game (ADF&G), Alaska Department of Commerce, Community and Economic Development, and a field office of the National Marine Fishery Service (NMFS) are located in Bethel, 89 miles to the southwest. A main office of NMFS is located 350 miles to the east in Anchorage, along with the closest offices of the Bureau of Citizenship and Immigration Services and Alaska Department of Natural Resources.

Infrastructure

Connectivity and Transportation

A state-maintained 4.2-mile gravel road connects the Cities of Lower and Upper Kalskag, although the communities are not connected to a wider road network. Commercial barge lines deliver fuel and other bulk supplies in the summer. Passengers and other freight arrive by air through year-round scheduled daily air services. The state-owned 3,172-ft-long by 75-ft-wide gravel airstrip is shared by Upper Kalskag and Lower Kalskag. The price of a roundtrip ticket by plane from the Kalskag Airport to Anchorage in early June 2012 was \$464.⁶²⁸ Winter trails exist to Russian Mission (40 miles) and Aniak (26 miles).⁶²⁹

Facilities

An 85-ft well provides water, which is treated and piped to most homes and the school. The school, clinic, and over 40% of homes use individual septic tanks and have complete plumbing. A 10,000-gallon community septic tank allows for piped sewage collection in part of the village. Refuse is burned or buried at a landfill located between Upper Kalskag and Lower Kalskag. A diesel powerhouse provides electricity to the village, operated by AVEC (the Alaska Village Electric Cooperative). Police services are provided by state troopers stationed in Aniak,

⁶²⁵ Association of Village Council Presidents. (n.d.). AVCP homepage. Retrieved December 6, 2011 from www.avcp.org.

⁶²⁶ U.S. Government Accountability Office (2005). Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁶²⁷ Calista Corporation (2011). Our Communities: The Villages of the Calista Region. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

⁶²⁸ This price was calculated on November 21, 2011 using [kayak.com](http://www.kayak.com).

⁶²⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

and local fire and rescue services are provided by volunteers in the village. Lower Kalskag has a community hall, a school gymnasium that is closed during the summer, and a school library.⁶³⁰

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that no dock space is available for permanent or public moorage. However, a barge landing area was completed in August 2011 to receive fuel, gravel and freight barges. Community leaders also reported that the community currently has a U.S. post office, full telephone service and broadband internet access, and that improvements are underway on water and sewer pipelines and water treatment. In addition, they noted that affordable housing, job placement services, and disability home care are provided in Lower Kalskag. Community leaders indicated that residents typically travel to nearby villages of Upper Kalskag, Aniak, and Bethel to access fisheries-related businesses and services not available in Lower Kalskag.

Medical Services

Health services in Lower Kalskag are provided by the Crimet Phillips Sr. Clinic, which is operated by the Yukon Kuskokwim Health Corporation and owned by the Village Council. Emergency Services have river and air access. Local emergency service is provided by a health aide.⁶³¹ The closest hospital is located in Bethel.

Educational Opportunities

There are two schools located in Lower Kalskag: George Morgan Sr. High School (grades 6-12) and Zackar Levi Elementary School (grades 1-8). In 2010 the high school had 6 teachers and was attended by 49 students, while the elementary school had 4 teachers and enrollment of 61 students.⁶³²

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Lower Kalskag was originally utilized as a summer fish camp by residents of Upper Kalskag. Subsistence fishing for salmon, along with subsistence hunting for birds and land mammals, has historically formed basis of the local economy.⁶³³ According to the 2011 AFSC survey, community leaders reported that subsistence fishing remains one of the most important sources of food for local residents, while a few residents also participate in commercial and sportfishing activities.

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s, commercial salmon

⁶³⁰ Ibid.

⁶³¹ Ibid.

⁶³² Alaska Department of Education and Early Development. 2012. Statistics and Reports. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶³³ See footnote 629.

fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.⁶³⁴

In Alaska, commercial catch of herring for human consumption began in 1878, commercial harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gill net sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁶³⁵

Lower Kalskag is located along the Kuskokwim River, in District 2 of the Kuskokwim salmon fishery. The Kuskokwim River empties into Kuskokwim Bay and the Bering Sea. Although Lower Kalskag is over 100 miles inland, it is worth noting that the nearest marine area is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Lower Kalskag is not eligible to participate in the CQE (Community Quota Entity) program, and because the community is located more than 50 miles inland from the ocean, it is not eligible to participate in the CDQ (Community Development Quota) program.

According to the 2011 AFSC survey, community leaders reported that Lower Kalskag participates in fisheries management processes in Alaska. The two primary ways in which the community is engaged in management processes are through 1) sending a representative to sit on a regional fisheries advisory and/or working group run by ADF&G, and 2) sending a representative to participate in the Federal Subsistence Board of Federal Subsistence Regional Advisory Council process. They also reported that one of the primary concerns of local officials is that salmon escapement be managed effectively to allow sufficient volume of salmon upriver for subsistence harvest by inland communities such as Lower Kalskag.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Lower Kalskag does not have a registered processing plant. In the 2011 AFSC survey, community leaders reported that commercial fishermen must deliver their catch to processing facilities downriver in Bethel.

Fisheries-Related Revenue

Between 2000 and 2010, no information was reported regarding fisheries-related revenue sources in Lower Kalskag (Table 3). Although not specifically related to fishing, it is worth noting that Lower Kalskag's municipal revenue did include money from fuel sales: in the year

⁶³⁴ Clark, McGregor, Mecum, Krasnowski and Carroll 2006. Kuskokwim Commercial Salmon Fishery. In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁶³⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

2000 the City received \$110,550 from sale of fuel, \$1,398 in 2008, \$4,250 in 2009 and \$28,000 in 2010.⁶³⁶ Additionally, in a survey conducted by the AFSC in 2011, community leaders reported that in 2010, Lower Kalskag received \$373,035 in funding or grants and \$161,800 in special allocations from the Coastal Villages Regional Fund (CVRF), one of six CDQ entities. CVRF represents 20 member communities within 50 miles of the Bering Sea coast, ranging from Platinum in the south to Scammon Bay in the north.

Commercial Fishing

Lower Kalskag is located over 100 miles up the Kuskokwim River. Even though it is not a coastal community, the local economy depends on fisheries resources, especially the runs of chum, Chinook, coho, and sockeye salmon that return to the Kuskokwim River each year. In a survey conducted by the AFSC in 2011, community leaders reported that a majority of local residents rely heavily on subsistence hunting and fishing, and that a few residents also participate in commercial fisheries.

There were no shore-side processors or fish buyers in Lower Kalskag between 2000 and 2010, and as a result there were no direct landings of fisheries resources and no ex-vessel revenue was generated in Lower Kalskag during this period (Tables 5 and 9). Community leaders noted in the 2011 AFSC survey that commercial fishermen from Lower Kalskag deliver their catch in Bethel. From 2000 to 2010, between three and five residents of Lower Kalskag held Commercial Fisheries Entry Commission (CFEC) each year. A majority were salmon permits, held in the Kuskokwim and Lower Yukon gill net fisheries, and one permit was also held each year in the Goodnews Bay roe herring gill net fishery. The number of Kuskokwim salmon gill net permits declined from three held in 2000 to two held each year from 2001 and 2010. None of these permits were actively fished between 2000 and 2010. One gill net permit was also held in the Lower Yukon salmon fishery during four years of the 2000-2010 period, and the permit was actively fished in 2000 and 2004-2005 (Table 4).

Over the same period, no Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to residents of Lower Kalskag (Table 4), and no quota share accounts were held by Lower Kalskag residents in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 to 8).

Several Lower Kalskag residents were reported to be involved in commercial fisheries as crew and vessel owners between 2000 and 2010. In 2000, 2003, and 2010, one resident per year held a commercial fishing crew license. From 2000 to 2004, one Lower Kalskag resident per year was the primary owner of a fishing vessel. Also from 2000 to 2004, one vessel per year was homeported in Lower Kalskag. According to the 2011 AFSC survey, community leaders reported that commercial fishing boats using Lower Kalskag as a base of fishing operations were all under 35 ft in length, and were gillnetters primarily involved in the salmon fishery. These characteristics of the Lower Kalskag fishing sector are presented in Table 5. Information about landings and ex-vessel revenue earned by Lower Kalskag vessel owners is considered confidential between 2000 and 2004 due to the small number of participants, and after 2004 no landings and revenue were attributable to vessels from Lower Kalskag. This information is presented in Table 10.

⁶³⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). Financial Documents Delivery System. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Lower Kalskag: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries											
Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource											
Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$161,689</i>	<i>\$173,757</i>	<i>\$130,321</i>	<i>\$49,593</i>	<i>\$65,896</i>	<i>\$85,926</i>	<i>\$46,000</i>	<i>\$61,189</i>	<i>\$108,816</i>	<i>\$147,584</i>	<i>\$174,052</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development . (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Lower Kalskag: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1

Table 4 cont'd. Permits and Permit Holders by Species, Lower Kalskag: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	4	2	2	2	3	2	2	3	2	2	2
	Fished permits	1	0	0	0	1	1	0	0	0	0	0
	% of permits fished	25%	0%	0%	0%	33%	50%	0%	0%	0%	0%	0%
	Total permit holders	4	2	2	2	3	2	2	3	2	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	5	3	3	3	4	3	3	4	3	3	3
	<i>Fished permits</i>	1	0	0	0	1	1	0	0	0	0	0
	<i>% of permits fished</i>	20%	0%	0%	0%	25%	33%	0%	0%	0%	0%	0%
	<i>Permit holders</i>	5	3	3	3	4	3	3	4	3	3	3

¹National Marine Fisheries Service. 2011. *Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Lower Kalskag: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Lower Kalskag ²	Total Net Pounds Landed In Lower Kalskag ^{2,5}	Total Ex-Vessel Value Of Landings In Lower Kalskag ^{2,5}
2000	1	0	0	1	1	0	0	\$0
2001	0	0	0	1	1	0	0	\$0
2002	0	0	0	1	1	0	0	\$0
2003	1	0	0	1	1	0	0	\$0
2004	0	0	0	1	1	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	1	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Lower Kalskag: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Lower Kalskag: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Lower Kalskag: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Lower Kalskag: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Lower Kalskag Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	0	0	0	0	0	0
Finfish	-	-	-	-	-	0	0	0	0	0	0
Halibut	-	-	-	-	-	0	0	0	0	0	0
Herring	-	-	-	-	-	0	0	0	0	0	0
Other Groundfish	-	-	-	-	-	0	0	0	0	0	0
Other Shellfish	-	-	-	-	-	0	0	0	0	0	0
Pacific Cod	-	-	-	-	-	0	0	0	0	0	0
Pollock	-	-	-	-	-	0	0	0	0	0	0
Sablefish	-	-	-	-	-	0	0	0	0	0	0
Salmon	-	-	-	-	-	0	0	0	0	0	0
<i>Total²</i>	-	-	-	-	-	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Herring	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	-	-	-	-	-	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$0	\$0	\$0	\$0	\$0	\$0

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses located in Lower Kalskag. One licensed sport fish guide did reside in Lower Kalskag in 2000 and 2001, but starting in 2002 no licensed sport fish guides were present in the community. In 2010, Lower Kalskag residents purchased 44 sportfishing licenses (irrespective of point of sale), although no licenses were sold in the City of Lower Kalskag itself.⁶³⁷ In a survey conducted by the AFSC in 2011, community leaders reported that both Alaska resident and non-Alaska resident sport fishermen fish out of Lower Kalskag using private boats, and target chum, Chinook, coho, and sockeye salmon, whitefish, rainbow trout, and Arctic grayling. The Alaska Statewide Harvest Survey,⁶³⁸ conducted by ADF&G between 2000 and 2010, noted the following species targeted by sport fishermen in Lower Kalskag: coho salmon, whitefish, and northern pike. No kept/release log book data were reported for fishing charters out of Lower Kalskag between 2000 and 2010.⁶³⁹

Lower Kalskag is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 28 non-Alaska resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 to 17,582 angler days per year) than Alaska resident anglers (5,166 to 9,152 angler days per year). This information about the sportfishing sector in and near Lower Kalskag is displayed in Table 11.

Table 11. Sport Fishing Trends, Lower Kalskag: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Lower Kalskag ²
2000	0	1	34	0
2001	0	1	9	0
2002	0	0	16	0
2003	0	0	16	0
2004	0	0	8	0
2005	0	0	22	0
2006	0	0	33	0
2007	0	0	42	0
2008	0	0	47	0
2009	0	0	16	0
2010	0	0	44	0

⁶³⁷ Alaska Department of Fish and Game (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁶³⁸ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁶³⁹ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11, cont'd. Sport Fishing Trends, Lower Kalskag: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence hunting and fishing forms the basis of the economy in Lower Kalskag.⁶⁴⁰ In a survey conducted by the AFSC in 2011, Lower Kalskag community leaders reported that a greater portion of the community is engaged in subsistence fishing for consumption than commercial fishing, and the most important marine resources harvested by residents include chum salmon, Chinook salmon, and whitefish. No information is available from ADF&G regarding the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010, or the per capita consumption of subsistence resources in the community (Table 12).

However, data are available from 2000 and 2008 regarding subsistence salmon permits held in Lower Kalskag. Between 2000 and 2008, the number of Lower Kalskag households that were issued subsistence salmon permits varied between 62 and 89 per year. Chinook, chum, and sockeye were the three most heavily harvested salmon species, with an average of 1,744 Chinook, 1,528 chum, and 728 sockeye reported harvested per year. In addition, an average of 371 coho salmon was also harvested each year in Lower Kalskag (Table 13). No information was

⁶⁴⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

reported by management agencies regarding subsistence harvest of marine invertebrates and non-salmon fish (Table 13) or marine mammals (Table 15) between 2000 and 2010.

Although Lower Kalskag is located over 100 miles from the ocean, several residents did participate in the subsistence fishery for Pacific halibut. Three Subsistence Halibut Registration Certificates (SHARC) were issued to Lower Kalskag residents in 2004, and two were issued in 2005. However, no information was reported about how many of these SHARC cards were fished or how many lb of halibut were harvested by these individuals in these years (Table 14).

Table 12. Subsistence Participation by Household and Species, Lower Kalskag: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Lower Kalskag: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	63	51	1,822	1,641	428	n/a	885	n/a	n/a
2001	62	52	2,181	1,316	539	n/a	824	n/a	n/a
2002	69	56	1,210	1,187	241	n/a	247	n/a	n/a
2003	73	47	2,016	1,569	375	n/a	714	n/a	n/a
2004	67	51	1,918	1,225	295	n/a	673	n/a	n/a
2005	81	52	1,387	954	293	n/a	409	n/a	n/a
2006	82	27	2,227	2,821	759	n/a	926	n/a	n/a
2007	83	57	1,043	1,461	337	n/a	531	n/a	n/a
2008	89	17	1,893	1,574	73	n/a	1,346	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Lower Kalskag: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	3	n/a	n/a
2005	2	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Lower Kalskag: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. “Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006.” *J. Cetacean Res. Manage.* 11(3): 293–299.

Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear.* Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008.* Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Mekoryuk (ma-KOR-ee-yuck)



People and Place

Location

Mekoryuk is situated at the mouth of Shoal Bay, on the north shore of Nunivak Island in the Bering Sea. The Island lies 30 miles off the mainland coast. The community is located about 149 air miles west of Bethel and 553 miles west of Anchorage. The Island's 1.1 million acres are included in the 20-million-acre Yukon Delta National Wildlife Refuge (NWR), and the southern half of the Island has been designated as the Nunivak Wilderness Area. The City of Mekoryuk encompasses 7.4 square miles of land and 0.1 square miles of water, all of which is located within the boundaries of the NWR. Mekoryuk is in the Bethel Census Area and Cape Nome Recording District.^{641,642}

*Demographic Profile*⁶⁴³

In 2010, there were 191 residents in Mekoryuk, making it the 191st largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Mekoryuk rose by 7.9%. According to Alaska Department of Labor estimates, the population of permanent residents peaked at 220 individuals in 2006, and then declined again to 174 residents by 2009 (Table 1). The population decline in the last years of the decade is reflected in a negative average annual growth rate between 2000 and 2009 of -1.2% (Table 1).

In 2010, the majority of the population of Mekoryuk identified themselves as American Indian and Alaska Native (93.2%), along with 3.3% who identified as White, and 6.2% identifying with two or more races. In addition, 0.5% of Mekoryuk's population identified themselves as Hispanic in 2010. The percentage of the population identifying as White increased between 1990 and 2000, from 0.6% to 3.3%, and remained stable in 2010 at 3.1% (Figure 1).

The number of households in Mekoryuk increased between 1990 and 2000, from 63 to 73, followed by a slight decrease to 70 occupied housing units in 2010. The average household size in Mekoryuk was 2.73 in 2010, a slight decrease from 2.88 persons per household in 2000 and 2.8 persons per household in 1990. Of the 86 housing units surveyed for the 2010 Decennial Census, 40.7% were owner-occupied, 40.7% were rented, and 18.6% were vacant or used only seasonally. Between 1990 and 2010, no residents of Mekoryuk lived in group quarters.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the population of Mekoryuk reaches its peak during the summer, in August. They reported that approximately 70 seasonal workers or transients are

⁶⁴¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁴² Wilderness.net website. (n.d.) *Nunivak Wilderness*. Retrieved December 12, 2011 from <http://www.wilderness.net>.

⁶⁴³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

present during summer months, and that population fluctuations are not driven by employment in the commercial fishing sector.

In 2010, the gender makeup of Mekoryuk’s population was more heavily weighted toward males (56.7% male and 43.3% female) than the state population as a whole, which was 52% male and 48% female. The median age of Mekoryuk residents was 40.5 years, older than the national average of 36.8 years and the median age for Alaska of 33.8 years. In 2010, the age groups most skewed toward males were 40 to 49 and 50 to 59, while there was a relatively even spread of males and females across other age categories in Mekoryuk, and slightly more females in the 20 to 29 age group. Approximately 16.2% of Mekoryuk’s population was age 60 or older in 2010. The overall population structure of Mekoryuk in 2000 and 2010 is shown in Figure 2.

Table 1. Population in Mekoryuk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	177	-
2000	210	-
2001	-	214
2002	-	204
2003	-	204
2004	-	199
2005	-	192
2006	-	220
2007	-	207
2008	-	195
2009	-	174
2010	191	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Mekoryuk: 2000-2010 (U.S. Census).

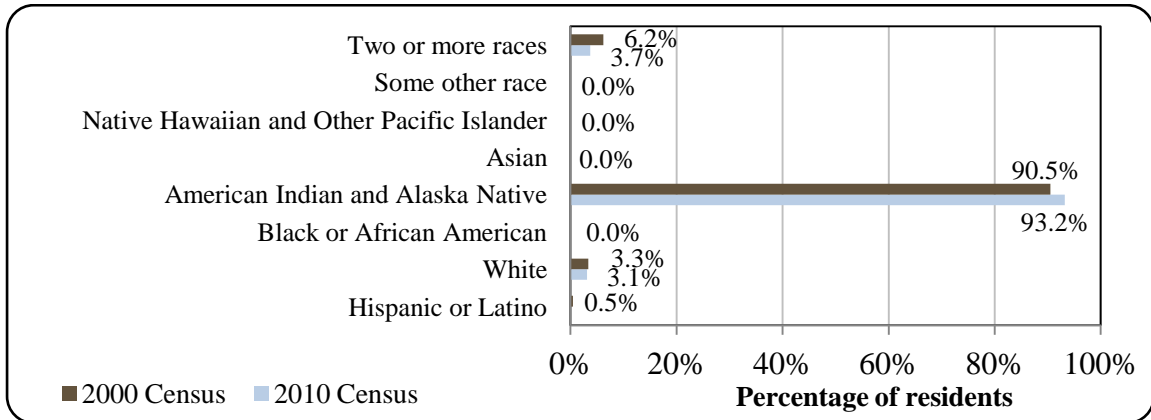
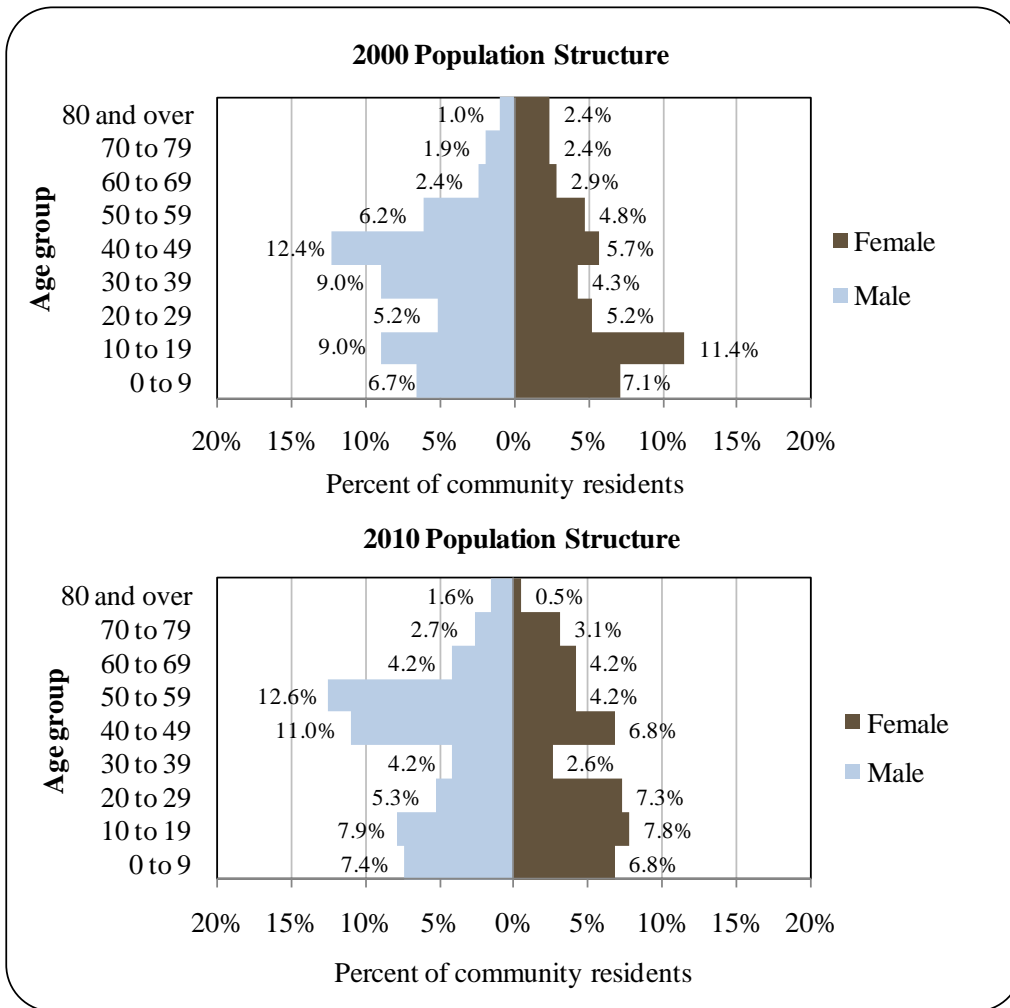


Figure 2. Population Age Structure in Mekoryuk Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to 2006-2010 American Community Survey (ACS) estimates,⁶⁴⁴ 75.4% of Mekoryuk residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 17.7% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 6.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 23.8% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 3.1% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 7.7% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 3.8% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Historically, the Native Eskimo people present in the area of Mekoryuk have been the Yup'ik peoples, specifically the Nuniwarmiut people who are Cup'ig Eskimos. Nunivak Island itself has been peopled for at least 2,000 years. In 1821, the first outside contact occurred with the Russian American Company. The Company documented 400 people living in 16 villages on the Island. In 1874 a summer village camp by the name of "Koot" was noted at the modern day site of Mekoryuk. There was an epidemic in 1900 which decimated the population. Only four families in the village survived. An Eskimo missionary built the Evangelical Covenant Church in the 1930s in the village, and a Bureau of Indian Affairs (BIA) school was built in 1939. The school attracted people to relocate from other parts of the Island to the village.⁶⁴⁵

An Eskimo-Russian trader introduced reindeer for commercial purposes in 1920. In the 1940s, the operation was purchased by the BIA, and in 1945 a slaughterhouse was constructed. The reindeer were bred with caribou from Denali Park, resulting in animals that are larger and more difficult to handle than other reindeer in the State of Alaska. In 1934, 34 musk oxen from Greenland were brought to Nunivak Island in an effort to save the animal from extinction. Presently the herd numbers at around 500 musk oxen, not including calves from the herd that have been relocated to start herds in other areas of Alaska. In 1940, a U.S. post office opened in the village. During this time period, traditional ceremonies and beliefs were still practiced by the Native people. Women lived in semi-subterranean sod houses and men lived in one or more men's community houses.⁶⁴⁶ Extensive change came to the Island in the 1950s and 1960s. In 1957, an airstrip was built and the Territorial Guard was formed, which caused men from Nunivak Island to go to Fort Richardson in Anchorage for training. By 1957, the only permanent community left on the Island was Mekoryuk, and around this time many of the families moved to the community of Bethel to be closer to a high school. Families returned seasonally to Mekoryuk for fishing and sea mammal hunting in the late spring. The City of Mekoryuk was incorporated

⁶⁴⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁴⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁴⁶ *Ibid.*

in 1969. In 1978, a high school was constructed in the community.⁶⁴⁷ The sale, importation, and possession of alcohol are banned in the community.⁶⁴⁸

Natural Resources and Environment

The Bering Sea, which surrounds Nunivak Island, strongly influences the local climate. Foggy and stormy weather are frequent. Average annual precipitation is 15 inches, and annual snowfall averages 57 inches. In the summer, high temperatures average 48 to 54 °F, and winter high temperatures range from 37 to 44 °F. Extremes have been recorded from 76 to -48 °F.⁶⁴⁹

The entirety of Nunivak Island (1.1 million acres) is included in the Yukon Delta NWR. The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskox, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Nunivak Island is characterized by 100 to 450-ft-high coastal bluffs and immense sand dunes (up to more than 100 ft) backing sandy beaches along the southern coast, and rocky shores, saltwater lagoons, and eelgrass beds in other areas. The shores are frequented by migratory birds and sea mammals.^{650,651}

Nunivak Island is of volcanic origin. The interior of the island contains lava flows and craters, some holding deep lakes. The famous herds of Nunivak reindeer and great shaggy musk oxen reside on the large upland plateau, a landscape dominated by tundra rising 500 to 800 ft above sea level. The reindeer, a cross between reindeer and caribou from Denali National Park, are owned and managed by the Village of Mekoryuk. The musk oxen were introduced from Greenland in 1935, following the extinction of the Alaskan musk ox around 1865.^{652,653} Today, the herd numbers around 500,⁶⁵⁴ and a permit system is used to determine which hunters will be allowed to shoot a few each year.⁶⁵⁵

According to the Coastal Management Plan for the Ceñaliulriit Coastal Resource Services Area, which includes Nunivak Island, high risk natural hazards in the area include flooding, erosion, storm surges, sea ice, and thawing of permafrost.⁶⁵⁶

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Mekoryuk as of May 2012.⁶⁵⁷

⁶⁴⁷ Ibid.

⁶⁴⁸ Alaska Dept. of Public Safety (2011). *Local Option Restrictions*. Retrieved May 31, 2012 from <http://dps.alaska.gov/abc/restrictions.aspx>.

⁶⁴⁹ See footnote 645.

⁶⁵⁰ U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge website*. Retrieved December 12, 2011 from <http://yukondelta.fws.gov/>.

⁶⁵¹ Wilderness.net website. (n.d.) *Nunivak Wilderness*. Retrieved December 12, 2011 from <http://www.wilderness.net>.

⁶⁵² Ibid.

⁶⁵³ See footnote 650.

⁶⁵⁴ See footnote 645.

⁶⁵⁵ Alaska Dept. of Fish and Game (2008). *Muskox – Wildlife Notebook Series*. Retrieved December 15, 2011 from <http://www.adfg.alaska.gov/static/education/wns/muskox.pdf>.

⁶⁵⁶ Ceñaliulriit Coastal Resource Service Area (2008). *Coastal Management Plan: Final Plan Amendment*. Retrieved February 9, 2012 from http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

Current Economy⁶⁵⁸

In Mekoryuk, major employers include the school, local and regional government and non-profit organizations, commercial fishing, construction, and service industries. Reindeer herding and value-added processing is an important source of local employment, as is Coastal Villages Seafoods, Inc., which processes halibut and salmon in Mekoryuk.^{659,660} Many families earn income from trapping and Native crafts, such as spinning and knitting qiviut (musk ox underwool).⁶⁶¹ According to a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing is the primary resource-based industry on which the economy depends. In addition, most families in Mekoryuk engage in subsistence fishing, and most have fish camps. Subsistence activities focus on salmon, reindeer, and seal meat and oil.⁶⁶² In the AFSC survey, community leaders noted that halibut is also an important subsistence resource.

Based on household surveys for the 2006-2010 ACS,⁶⁶³ in 2010, the per capita income in Mekoryuk was estimated to be \$23,827 and the median household income was estimated to be \$34,792. This represents a sizeable increase from the per capita income reported in the year 2000 (\$11,958), but only a slight increase from the median household income reported in 2000 (\$30,833). If inflation is taken into account by converting the 2000 values to 2010 dollars,⁶⁶⁴ the 2010 median household income estimate is revealed to in fact be lower than the real median household income in 2000 (\$40,545), while the 2010 per capita income estimate remains significantly higher than the real per capita income in 2000 of \$15,725. In 2010, Mekoryuk ranked 120th of 305 Alaskan communities with per capita income data that year, and 214th in median household income, out of 299 Alaskan communities with household income data.

Although Mekoryuk's small population size may have prevented the ACS from accurately portraying economic conditions,⁶⁶⁵ the 2010 ACS per capita income estimate is supported by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Mekoryuk

⁶⁵⁷ Alaska Dept. of Environmental Conservation (n.d.). *List of contaminated sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁶⁵⁸ Unless otherwise noted, all monetary data are reported in nominal values.

⁶⁵⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁶⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁶¹ See footnote 655.

⁶⁶² See footnote 659.

⁶⁶³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁶⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁶⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

in 2010 is \$10,150.⁶⁶⁶ This is slightly lower than the 2006-2010 ACS estimate, and provides additional evidence that per capita income declined slightly in Mekoyruk from 2000 to 2010. This decline is reflected in the fact that the community was recognized as “distressed” by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁶⁶⁷ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a similar percentage of Mekoryuk residents was estimated to be in the civilian labor force (67.3%) as in the civilian labor force statewide (68.8%). In the same year, 22.4% of local residents were estimated to be living below the poverty line, compared to an estimated 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 13%, compared to a statewide unemployment rate of 5.9%. An alternative estimate of unemployment is based on the ALARI database, which indicates that the 2010 unemployment rate in Mekoryuk was 32%, compared to a statewide unemployment rate estimate of 11.5%.⁶⁶⁸

Also based on the 2006-2010 ACS, the greatest number of workers were estimated to be employed in the private sector (56.8%), while 36.4% were employed in the public sector and 6.8% were self-employed. Of the 88 people aged 16 and over that were estimated to be employed in the civilian labor force, the industries in which the greatest numbers were estimated to be working included public administration (18.2%), transportation, warehousing, and utilities (15.9%), other services except public administration (14.8%), educational services, health care, and social assistance (12.5%), and manufacturing (11.4%). The occupations in which the greatest percentages of the workforce were estimated to be employed were management/professional (36.4%), sales/office (18.2%), and natural resource/construction/maintenance (18.2%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. Although 16 workers were estimated to be employed in natural resource/construction/maintenance occupations (18.2%), a breakdown of this category reveals that 0 individuals were employed in farming, fishing, and forestry occupations. Likewise, 0% of the civilian labor force was estimated to be employed in agriculture agriculture, forestry, and fishing industries in 2010.

⁶⁶⁶ See footnotes 660 and 663.

⁶⁶⁷ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁶⁶⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 3. Local Employment by Industry in 2000-2010, Mekoryuk (U.S. Census).

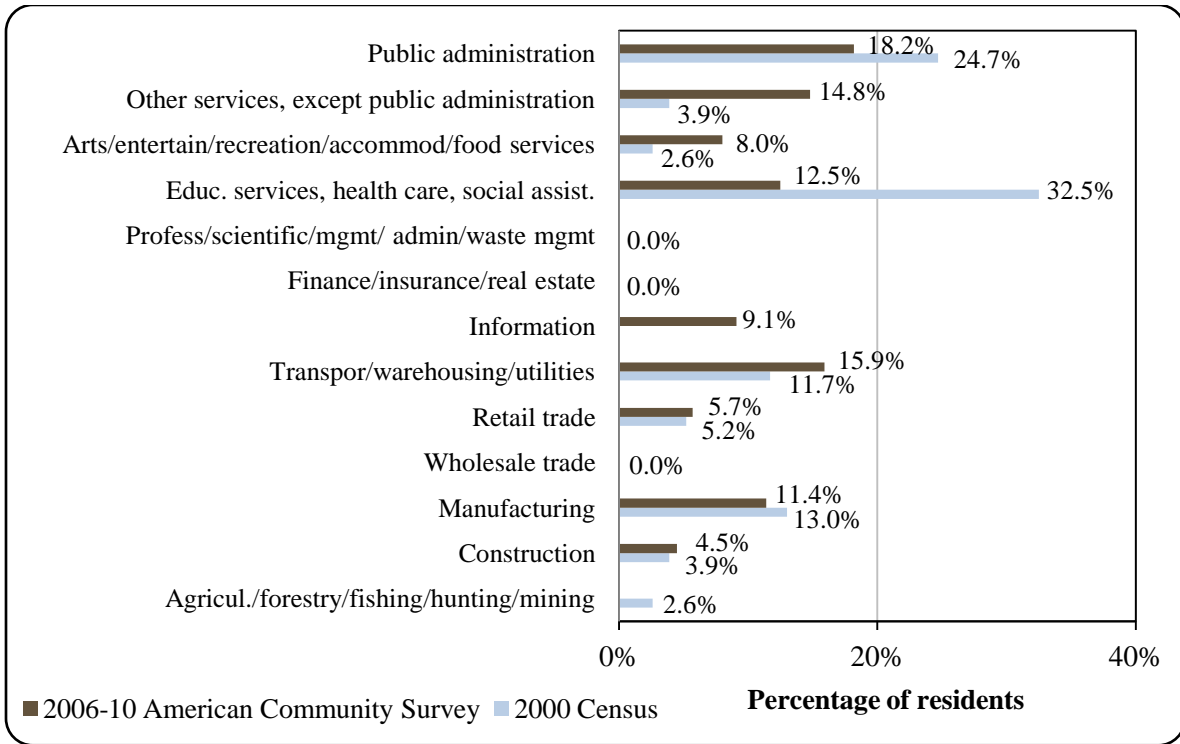
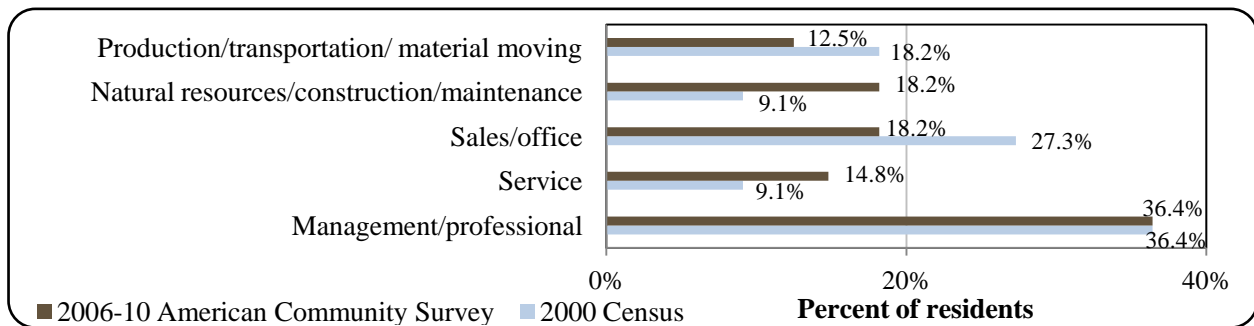


Figure 4. Local Employment by Occupation in 2000-2010, Mekoryuk (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 122 employed residents in Mekoryuk in 2010, of which 41.8% were employed in local government, 22.1% in financial activities, 16.4% in trade, transportation, and utilities, 8.2% in manufacturing, 3.3% in education and health services, 3.3% in natural resources and mining, 0.8% in information, 0.8% in professional and business services, and 3.3% in other industries.⁶⁶⁹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

⁶⁶⁹ Ibid.

Governance

Mekoryuk was incorporated as a 2nd Class City in 1969. The City has a Strong Mayor form of government, which includes a seven-person city council, including the mayor, a nine-person advisory school board, and several municipal employees. The City is not part of an organized borough. The City enforces a 4% sales tax, but administers no other taxes.⁶⁷⁰ In addition to sales tax revenues, other locally-generated revenue sources during the 2000-2010 period included state and federal lease fees, equipment rentals, and revenues from water/sewer service fees, the washeteria,⁶⁷¹ and cable TV service. Outside revenue sources included various state revenue sharing programs, including State Revenue Sharing program contributions from 2000 to 2003 (approximately \$25,000 each year) and a \$105,000 Community Revenue Sharing program contribution in 2010. The City also received state revenue sharing funding from other sources, including the Shared Fisheries Business Tax and raw fish tax refunds (see the *Fisheries-Related Revenue* section of this profile), and federal revenue sharing from the Payment In Lieu of Taxes program. Grants were also received by the City in some years, including grants for job training, community policing, suicide prevention, and infrastructure development, including funds for a washeteria upgrade, equipment purchases, and for the library. It is also important to note that Mekoryuk received state and federal fisheries-related grants in some years to assist with design, construction, and dredging of the small boat harbor. Information about selected revenue streams in Mekoryuk is presented in Table 2.

Mekoryuk was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the BIA, is the Native Village of Mekoryuk. The Native village corporation is the Nunivak Island Mekoryuk Alaska (NIMA) Corporation, which manages 115,200 acres of land. The regional Native corporation to which Mekoryuk belongs is the Calista Corporation.⁶⁷²

The non-profit cultural heritage office of the Village of Mekoryuk, Nuniwarmit Piciryarata Tamaryalkuti, offers cultural program and undertakes projects to “strengthen our peoples’ (Cup’ig Eskimo) cultural identity – especially young people – through the development of specific cultural resources relating to Cup’ig history and Native language.”⁶⁷³

⁶⁷⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁷¹ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

⁶⁷² See footnote 670.

⁶⁷³ Nuniwarmit Piciryarata Tamaryalkuti (2008). *Organization Mission Statement*. Retrieved June 1, 2012 from <http://www.nunivakisland.org/>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Mekoryuk from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$263,146	\$15,955	\$27,332	n/a
2001	\$296,868	\$15,995	\$26,349	n/a
2002	\$243,317	\$12,774	\$23,104	\$800,000
2003	\$294,574	\$13,554	\$26,349	\$5,000,000
2004	\$291,453	\$15,640	n/a	n/a
2005	\$144,371	\$18,000	n/a	n/a
2006	\$221,417	\$15,300	n/a	n/a
2007	\$262,016	\$30,222	n/a	\$571,450
2008	\$307,394	\$39,672	n/a	n/a
2009	\$333,022	\$49,544	\$n/a	n/a
2010	\$382,596	\$37,487	\$105,948	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Mekoryuk is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁶⁷⁴ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁶⁷⁵ AVCP is made up of 56 villages and 45 village corporations.⁶⁷⁶

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a

⁶⁷⁴ Association of Village Council Presidents (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

⁶⁷⁵ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁶⁷⁶ Calista Corporation. 2011. *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

main office is located in Anchorage. The nearest U.S. Bureau of Citizenship and Immigration Services and Alaska Department of Natural Resources offices are in Anchorage.

Infrastructure

Connectivity and Transportation

The community is very dependent upon air transport for cargo, mail, and passenger services. A 3,070-ft state-owned gravel runway provides year-round access to Mekoryuk.⁶⁷⁷ The approximate cost to travel by air roundtrip to Anchorage from Mekoryuk in early June 2012 was \$726.⁶⁷⁸ Goods are delivered to the community either once or twice a year from Bethel by barges. The shoreline is protected from the extreme waves of the Bering Sea by a breakwater. Local residents use ATVs, boats, and snowmobiles for travel within the community.⁶⁷⁹

Facilities

A diesel powerhouse operated by the Alaska Village Electric Cooperative provides electricity to the Village.⁶⁸⁰ In 2010, two wind turbines were erected along the road between the Village and the airport, and a new control module was installed next to the existing AVEC powerhouse. The new turbines are expected to generate up to 50% of the energy normally generated by the diesel fuel in the community.⁶⁸¹ Water is provided to Mekoryuk residents by the City, with the exception of the school, which has its own well.⁶⁸² The City draws water from the Mekoryuk River using a submersible pump laid on the bottom. The water is stored in an earth-lined impoundment and is then distributed to two watering points near the water treatment plant. Approximately 90% of homes receive water through a flush tank haul system operated by the City. Wastewater is discharged to a newly permitted, two-cell sewage lagoon.⁶⁸³ The community washeteria, operated by the City, has piped disposal directly to the sewage lagoon. The landfill in the community is also operated by the City.⁶⁸⁴ Police services are provided by the City Public Safety Office and the VPSO (Village Public Safety Officer) stationed in Mekoryuk.^{685,686} The nearest state trooper post is located in Emmonak.⁶⁸⁷ Additional facilities located in Mekoryuk include a City Hall, City Volunteer Fire Department, City Public Safety Office holding cell, a

⁶⁷⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁷⁸ This price was calculated on November 21, 2011 using kayak.com.

⁶⁷⁹ See footnote 677.

⁶⁸⁰ Ibid.

⁶⁸¹ Mekoryuk Community Development (n.d.) *Community Infrastructure*. Retrieved December 12, 2011 from <http://mekoryuk.org/>.

⁶⁸² See footnote 677.

⁶⁸³ See footnote 681.

⁶⁸⁴ See footnote 677.

⁶⁸⁵ Dept. of Public Safety, Alaska State Troopers. *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁶⁸⁶ See footnote 677.

⁶⁸⁷ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

school gymnasium, and a library. Phone, internet, and cable services are all available in Mekoryuk.⁶⁸⁸

With regard to fisheries-related infrastructure, in 2009, improvements were completed to the small boat harbor in Mekoryuk. The project involved dredging the shoreline to improve moorage and navigation, and reinforcement of the side slope of the harbor.⁶⁸⁹ However, according to a survey conducted by the AFSC in 2011, community leaders reported that no dock space is currently available for moorage of permanent, transient, or public vessels. They also reported that a breakwater and fish cleaning station have been present in Mekoryuk since the 1990s, and that the open beach is used for boat haul-outs and barge access. A site for a potential deep-water port facility on the northeast side of Nunivak Island has also been identified. The U.S. Army Corps of Engineers is currently studying the feasibility of building a port and barge landing facility at the site. The Village of Mekoryuk has identified a route through NIMA (Nunivak Island Mekoryuk Alaska) Corporation lands for potential construction of a port access road.⁶⁹⁰

Medical Services

Health care is available at the Mekoryuk Health Clinic, which is owned by the City and operated by the Yukon-Kuskokwim Health Corporation. Emergency Services have coastal and air access. Emergency service is provided by a health aide.⁶⁹¹ The nearest hospital is located in Bethel.

Educational Opportunities

There is one school in the City, Nuniwarmiut School, which teaches Kindergarten through 12th grade. As of 2011, the school had a total of 31 students and 5 teachers.⁶⁹² Nuniwarmiut School is a Cup'ig language immersion school, offering a bilingual education, and involves elders in teaching the youth about culture and language.⁶⁹³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on Nunivak Island and surrounding areas of the Yukon-Kuskokwim Delta. Today almost all local families continue to engage in subsistence activities, and most have fish camps. Salmon and seal meat and oil are some of the most important marine resources

⁶⁸⁸ Ibid.

⁶⁸⁹ See footnote 681.

⁶⁹⁰ Ibid.

⁶⁹¹ See footnote 677.

⁶⁹² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶⁹³ Mekoryuk Community Development website (n.d.) *Current Services and Providers*. Retrieved December 12, 2011 from <http://mekoryuk.org/>.

utilized by residents.⁶⁹⁴ In a survey conducted by the AFSC in 2011, community leaders also noted the importance of halibut as a subsistence resource. Subsistence activities are combined with employment in commercial fishing and processing.⁶⁹⁵

Between 2000 and 2010, a majority of commercial fishing permits held by Mekoryuk residents were for halibut and herring fisheries (Table 4). Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁶⁹⁶ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Commercial catch of herring for human consumption began in Alaska in 1878, harvest for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon-Kuskokwim coast there are six commercial gill net sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁶⁹⁷ Mekoryuk is located in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Mekoryuk participates in the Community Development Quota (CDQ) program. In 1995, management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). In the Bering Sea – Aleutian Islands (BSAI) region, quota shares are also allocated to six CDQ non-profit organizations representing 65 communities in Western Alaska.⁶⁹⁸ The CDQ non-profit representing the Native Village of Mekoryuk is the Coastal Villages Region Fund (CVRF), which promotes employment opportunities for residents as well as participation in the Bering Sea crab and groundfish fisheries. In 2010, the CVRF received an allocation of 348,000 lb of CDQ halibut quota. Seventy percent of this quota was allocated for harvest within Area 4E, and the remaining 30% was allocated for harvest within Area 4D.⁶⁹⁹ Total BSAI sablefish CDQ allocations in 2009 and 2011 were 5.3 million lb in each year. No sablefish CDQ report was available from NOAA for the 2010 season.⁷⁰⁰ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the CDQ allocations.⁷⁰¹

⁶⁹⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁹⁵ Ibid.

⁶⁹⁶ Thompson, W. F. and N. L. Freeman. 1930. History of the Pacific Halibut Fishery. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://ww.iphc.int/publications/scirep/Report0005.pdf>.

⁶⁹⁷ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁶⁹⁸ Fina, Mark. 2011. Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

⁶⁹⁹ NOAA National Marine Fisheries Service. 2010. *Memorandum: 2010 Community Development Quota (CDQ) Halibut Allocations*. Retrieved January 8, 2013 from <http://www.fakr.noaa.gov/ram/10ifqcdqtac.pdf>.

⁷⁰⁰ NOAA National Marine Fisheries Service. (n.d.). *IFQ Halibut/Sablefish Reports and CDQ Halibut Program Reports*. Retrieved February 22, 2013 from <http://www.fakr.noaa.gov/ram/ifqreports.htm>.

⁷⁰¹ International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved October 16, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

CVRF is also active at the local level, operating a fish processing plant in Mekoryuk.^{702,703} The community is not eligible to participate in the Community Quota Entity (CQE) program. According to the 2011 AFSC survey, community leaders reported that Mekoryuk does not actively participate in fisheries management processes in Alaska.

Processing Plants

Coastal Villages Seafood, LLC, a subsidiary of CVRF, currently operates a halibut processing facility in Mekoryuk. The plant was first constructed in the 1980s and operated by Bering Sea Reindeer Products, Inc., which also operated a reindeer processing plant. It was purchased in 1999 by Coastal Villages Seafood. In 2004, with CDQ grant funding, a new processing plant was constructed. The presence of a plant provides the opportunity for fishermen to sell their catch to a local market. Processed halibut are flown to Bethel for air transport to the fresh market.⁷⁰⁴

The Mekoryuk facility processes halibut from June through August. CVRF maintains a local community service center that helps fishing families maintain, repair, service, and modify their boats, motors, and fishing gear. The local plant provides free room and board to its fish processing workers, as well as transportation to and from the plant site and a cash bonus for all those who complete their contracts.⁷⁰⁵

Fisheries-Related Revenue

According to information provided in Mekoryuk's annual municipal budget between 2000 and 2010, the primary sources of fisheries-related revenue in Mekoryuk were a raw fish tax and Shared Fisheries Business Tax. In 2010, Mekoryuk received \$82 in raw fish tax and \$85 from the Shared Fisheries Business Tax, as well as \$96 from the Fisheries Resource Landing Tax. 2010 was the only reported year in which revenue was earned from the Fisheries Resource Landing Tax. Information about selected fisheries-related revenue sources is found in Table 3.⁷⁰⁶

It is also important to note that the CVRF uses fisheries revenue from the CDQ program to provide grants, scholarships and training, and other financial assistance to fishermen and residents of member villages.⁷⁰⁷ In the 2011 AFSC survey, community leaders reported receiving \$16,120 in funding or grants and \$5,960 in special allocations from CVRF in 2010.

Commercial Fishing

According to the 2011 AFSC survey, community leaders reported that commercial fishing is the natural resource-based industry upon which Mekoryuk's economy is most dependent. In 2010, there were 58 Mekoryuk residents holding a total of 100 Commercial

⁷⁰² Coastal Villages Region Fund (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

⁷⁰³ Mekoryuk Community Development website (n.d.) *Current Services and Providers*. Retrieved December 12, 2011 from <http://mekoryuk.org/>.

⁷⁰⁴ Ibid.

⁷⁰⁵ Coastal Villages Seafoods (n.d.). Retrieved August, 2011 from <http://coastalvillages.org/>.

⁷⁰⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

⁷⁰⁷ See footnote 702.

Fisheries Entry Commission (CFEC) permits, including 40 halibut permits (12 statewide hand troll and 28 statewide longline) and 60 permits in the Nelson Island, Nunivak Island, Goodnews Bay, and Norton Sound herring gill net fisheries. In prior years, several halibut fisherman also used mechanical jig gear. Of the total 100 permits held in 2010, only 30 were actively fished that year, all of which were halibut permits; none of the 60 herring permits held by Mekoryuk in 2010 were actively fished. The use of herring permits declined steeply during the first half of the 2000-2010 period. In 2000, 58% of the 64 herring permits were actively fished, declining to 2% actively fished in 2005, and 0% fished between 2006 and 2010. The total number of CFEC halibut permits also declined slightly over the period, from 48 of 52 permits (92%) fished in 2000, to 30 of 40 total permits (75%) fished in 2010.

It is important to note that Mekoryuk residents also occasionally held CFEC permits in other fisheries during this period, including one salmon permit held in 2000 in the Bristol Bay drift gill net fishery, and one held in 2007 and 2008 in the Kuskokwim River gill net fishery. The Bristol Bay permit was actively fished in 2000, but the Kuskokwim permits were not actively fished in either 2007 or 2008. One groundfish permit was held in 2000 and 2004 (longline vessel under 60 ft in length, statewide), but was not actively fished in either year. No residents of Mekoryuk held Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) between 2000 and 2010. Information about state and federal fisheries permits held by Mekoryuk residents is presented in Table 4.

In addition to CFEC permits, several Mekoryuk residents held quota share accounts in the federal halibut catch share fishery between 2000 and 2010. In 2000 and 2001, two accounts were held, with a total of 210,470 halibut quota shares. The number of quota shares held generally increased during the 2000-2010 period, although the number of quota share accounts held fell to one in 2006. The annual halibut individual fishing quota (IFQ) allotment increased slightly in the first half of the decade, and then decreased starting in 2007. Between 2000 and 2010, no residents of Mekoryuk held quota share accounts in federal catch share fisheries for sablefish or crab. Information about federal catch share participation is presented in Tables 6 through 8.

In 2010, a total of 38 Mekoryuk residents held commercial crew licenses, 35 fishing vessels were primarily owned by residents, and 31 vessels landed catch in Mekoryuk. With the exception of the number of vessels landing catch in the community, these numbers represent a decline in fishing activity since 2000, when 50 Mekoryuk residents held crew licenses and 47 vessels were owned by residents. Information about the commercial fishing sector in Mekoryuk is presented in Table 5. According to the 2011 AFSC survey, community leaders reported that commercial fishing boats using Mekoryuk as a base of fishing operations were longliners under 35 ft in length. When asked to describe changes in the fleet over time, they noted that fishing boats have been increasing in capacity. It is also important to note that, in addition to longline fishing gear, community leaders identified “fishing poles” as a common gear type used in Mekoryuk.

Although a fish processing plant was registered in the Mekoryuk each year from 2000 to 2010, a fish buyer was only reported to be present in 2009 and 2010 (Table 5). The only species landed in Mekoryuk in 2009 and 2010 was halibut, and landings volume and ex-vessel revenue information is considered confidential due to the small number of participants (Table 9). Mekoryuk ranked 51st in landings and 49th in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings in 2010. Table 10 presents information about landings and ex-vessel revenue earned by vessel owners residing in Mekoryuk, including all delivery locations. In 2010, Mekoryuk vessel owners landed 125,491 net lb of halibut, valued at

\$395,219 in ex-vessel revenue. In 2005, the last year that Mekoryuk vessel owners participated in the herring fishery, 209,656 net lb of herring were landed, generating \$11,112 in ex-vessel revenue. Herring landings and ex-vessel revenue are considered confidential beginning in 2006, and information about other fisheries is considered confidential in all years between 2000 and 2010.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Mekoryuk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	\$554	\$400	\$500	\$2,100	\$2,100	\$222	\$222	\$222	n/a	\$82
Shared Fisheries Business Tax ¹	\$555	\$537	\$4,035	\$2,123	\$2,660	\$1,847	\$2,154	\$4,111	\$3,943	\$6,794	\$85
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$96
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$555	\$1,091	\$4,435	\$2,623	\$4,760	\$3,947	\$2,376	\$4,333	\$4,165	\$6,794	\$263
Total municipal revenue⁵	\$263,146	\$296,868	\$243,317	\$294,574	\$291,453	\$144,371	\$221,417	\$262,016	\$307,394	\$333,022	\$382,596

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Mekoryuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	52	65	53	46	47	47	43	45	41	39	40
	Fished permits	48	45	38	34	36	35	33	37	32	31	30
	% of permits fished	92%	69%	72%	74%	77%	74%	77%	82%	78%	79%	75%
	Total permit holders	43	50	43	39	39	39	36	40	37	35	35
Herring (CFEC) ²	Total permits	64	63	61	59	57	56	57	59	59	60	60
	Fished permits	37	6	10	8	4	2	0	0	0	0	0
	% of permits fished	58%	10%	16%	14%	7%	4%	0%	0%	0%	0%	0%
	Total permit holders	45	44	43	44	43	42	44	46	46	46	46

Table 4 cont'd. Permits and Permit Holders by Species, Mekoryuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	0	0	0	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	-	-	-	0%	-	-	-	-	-	-
	Total permit holders	1	0	0	0	1	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	0	0	0	0	0	0	1	1	0	0
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	-	-	-	-	-	-	0%	0%	-	-
	Total permit holders	1	0	0	0	0	0	0	1	1	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>118</i>	<i>128</i>	<i>114</i>	<i>105</i>	<i>105</i>	<i>103</i>	<i>100</i>	<i>105</i>	<i>101</i>	<i>99</i>	<i>100</i>
	<i>Fished permits</i>	<i>86</i>	<i>51</i>	<i>48</i>	<i>42</i>	<i>40</i>	<i>37</i>	<i>33</i>	<i>37</i>	<i>32</i>	<i>31</i>	<i>30</i>
	<i>% of permits fished</i>	<i>73%</i>	<i>40%</i>	<i>42%</i>	<i>40%</i>	<i>38%</i>	<i>36%</i>	<i>33%</i>	<i>35%</i>	<i>32%</i>	<i>31%</i>	<i>30%</i>
	<i>Permit holders</i>	<i>58</i>	<i>62</i>	<i>59</i>	<i>58</i>	<i>57</i>	<i>55</i>	<i>55</i>	<i>61</i>	<i>61</i>	<i>58</i>	<i>58</i>

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Mekoryuk: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Mekoryuk ²	Total Net Lb Landed In Mekoryuk ^{2,5}	Total Ex-Vessel Value Of Landings In Mekoryuk ^{2,5}
2000	50	0	1	47	45	0	0	\$0
2001	31	0	1	46	48	0	0	\$0
2002	29	0	1	42	44	0	0	\$0
2003	34	0	1	37	39	0	0	\$0
2004	29	0	1	39	38	0	0	\$0
2005	31	0	1	37	39	0	0	\$0
2006	32	0	1	37	39	0	0	\$0
2007	34	0	1	39	40	0	0	\$0
2008	40	0	1	34	34	0	0	\$0
2009	39	1	1	38	37	30	-	-
2010	38	1	1	35	34	31	-	-

Note: Cells showing “–” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Mekoryuk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	2	210,470	19,968
2001	2	210,470	23,741
2002	2	387,772	46,225
2003	2	387,772	46,207
2004	2	387,772	51,014
2005	2	387,772	51,763
2006	1	474,672	63,023
2007	1	374,106	51,275
2008	1	374,106	47,400
2009	1	374,106	42,468
2010	1	374,106	39,122

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Mekoryuk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Mekoryuk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Mekoryuk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	-	-
Finfish	0	0	0	0	0	0	0	0	0	-	-
Halibut	0	0	0	0	0	0	0	0	0	-	-
Herring	0	0	0	0	0	0	0	0	0	-	-
Other Groundfish	0	0	0	0	0	0	0	0	0	-	-
Other Shellfish	0	0	0	0	0	0	0	0	0	-	-
Pacific Cod	0	0	0	0	0	0	0	0	0	-	-
Pollock	0	0	0	0	0	0	0	0	0	-	-
Sablefish	0	0	0	0	0	0	0	0	0	-	-
Salmon	0	0	0	0	0	0	0	0	0	-	-
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-</i>	<i>-</i>
	<i>Ex-vessel value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>-</i>	<i>-</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Mekoryuk Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	160,876	99,069	139,557	79,530	116,424	101,976	86,123	161,894	145,603	133,435	125,491
Herring	265,564	114,137	663,515	627,544	172,695	209,656	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>426,440</i>	<i>213,206</i>	<i>803,072</i>	<i>707,074</i>	<i>289,119</i>	<i>311,632</i>	<i>86,123</i>	<i>161,894</i>	<i>145,603</i>	<i>133,435</i>	<i>125,491</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$363,668	\$124,938	\$294,167	\$102,642	\$145,118	\$225,517	\$320,676	\$696,080	\$436,809	\$314,430	\$395,219
Herring	\$24,102	\$5,707	\$40,477	\$32,055	\$18,306	\$11,112	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>\$387,770</i>	<i>\$130,645</i>	<i>\$334,644</i>	<i>\$134,697</i>	<i>\$163,424</i>	<i>\$236,629</i>	<i>\$320,676</i>	<i>\$696,080</i>	<i>\$436,809</i>	<i>\$314,430</i>	<i>\$395,219</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses in Mekoryuk, although one licensed sport fish was present in 2000 and again in 2003. In 2010, Mekoryuk residents purchased 32 sportfishing licenses (irrespective of point of sale), although no licenses were sold in the City of Mekoryuk itself.⁷⁰⁸ In a survey conducted by the AFSC in 2011, community leaders reported that few non-Alaska residents fish recreationally out of Mekoryuk, and sportfishing by local residents primarily targets pink, chum, and coho salmon, and Pacific halibut. The Alaska Statewide Harvest Survey,⁷⁰⁹ conducted by ADF&G between 2000 and 2010, did not provide further information about species targeted by private anglers in Mekoryuk. No kept/release log book data were reported for fishing charters out of Mekoryuk between 2000 and 2010.⁷¹⁰

Mekoryuk is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Mekoryuk is displayed in Table 11.

Table 11. Sport Fishing Trends, Mekoryuk: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Mekoryuk²
2000	0	1	45	0
2001	0	0	44	0
2002	0	0	37	0
2003	0	1	36	0
2004	0	0	41	0
2005	0	0	35	0
2006	0	0	44	0
2007	0	0	30	0
2008	0	0	27	0
2009	0	0	12	0
2010	0	0	32	0

⁷⁰⁸ Alaska Department of Fish and Game (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁷⁰⁹ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁷¹⁰ Alaska Department of Fish and Game (2011). Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11, cont'd. Sport Fishing Trends, Mekoryuk: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler days fished –Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Almost all families in Mekoryuk engage in subsistence and hunting activities, in combination with employment in commercial fishing and processing and other industries. Salmon, reindeer, and seal meat and oil are all important staples.⁷¹¹ In a survey conducted by the AFSC in 2011, Mekoryuk community leaders said that halibut is also one of the most important subsistence resources utilized by local residents.

No information is available from ADF&G regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, a 1990 subsistence survey previously found that 59% of Mekoryuk households were involved in harvest of herring and herring sac roe. The survey also found that 100% of households used these resources, indicated the presence of a sharing network in Mekoryuk.⁷¹²

⁷¹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷¹² Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Between 2000 and 2008, subsistence salmon permits were issued to between 63 and 95 households per year in Mekoryuk. Of harvests that were reported, chum was the most heavily harvested salmon species over time, with an average of 1,062 chum harvested per year. No information was reported regarding subsistence harvest of marine invertebrates and non-salmon fish during the 2000-2010 period. This information about subsistence fisheries is presented in Table 13.

Mekoryuk residents were very active in the Subsistence Halibut Registration Certificates (SHARC) program. Between 2003 and 2005, 15 permits were issued to Mekoryuk residents each year, declining to 5 or 6 permits issued per year from 2008 to 2010. The largest volume of halibut was reported harvested in 2005 (2,966 lb), when 15 SHARC cards were issued and 13 were returned. In 2010, two of the six SHARC cards were fished, and 410 lb of halibut were harvested. This information about the subsistence halibut fishery is presented in Table 14.

According to data from the U.S. Fish and Wildlife Service, residents of Mekoryuk also participated in subsistence hunting of walrus and beluga between 2000 and 2010. The greatest number of walrus were reported harvested in 2004 (6 animals), along with one or two walrus harvested in 6 other years during the period. Beluga harvest was also reported in 2007 and 2010. It is of note that beluga harvest numbers reported here represent a combined harvest by the communities of Mekoryuk and Tununak. No information was available from management agencies regarding harvest of sea otter, polar bear, Steller sea lion, harbor seal, or spotted seal during the 2000-2010 period. Information about subsistence harvest of marine mammals is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Mekoryuk: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Mekoryuk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	89	18	2	2,120	78	n/a	7	n/a	n/a
2001	88	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	95	19	13	1,292	114	n/a	213	n/a	n/a
2003	94	17	10	1,484	112	n/a	2	n/a	n/a
2004	79	8	3	881	126	n/a	8	n/a	n/a
2005	79	5	2	460	58	n/a	n/a	n/a	n/a
2006	79	1	n/a	n/a	14	n/a	n/a	n/a	n/a
2007	79	1	n/a	134	n/a	n/a	n/a	n/a	n/a
2008	63	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Mekoryuk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	15	9	1,779
2004	15	13	2,966
2005	15	9	1,964
2006	14	10	1,538
2007	14	10	1,786
2008	5	5	1,019
2009	6	6	1,359
2010	5	2	410

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Mekoryuk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	1	n/a	n/a	n/a	n/a
2002	n/a	n/a	2	n/a	n/a	n/a	n/a
2003	n/a	n/a	1	n/a	n/a	n/a	n/a
2004	n/a	n/a	3	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	8	n/a	1	n/a	n/a	n/a	n/a
2008	n/a	n/a	1	n/a	n/a	n/a	n/a
2009	n/a	n/a	1	n/a	n/a	n/a	n/a
2010	1	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

⁴ Note that Beluga harvest numbers reported here represent a combined harvest total for the communities of Mekoryuk and Tununak.

Additional Information⁷¹³

The Alaska Department of Fish and Game compiled the following history of the extinction and reintroduction of muskoxen to Alaska. Nunivak Island plays an important role in their reintroduction:

“The return of muskoxen to Alaska is an important success story in wildlife conservation. The original Alaska muskoxen disappeared in the mid-or late 1800s as they had much earlier in Europe and Asia. Overhunting likely contributed to their demise, at least in some areas. By the 1920s, muskox distribution was reduced to arctic Canada and East Greenland where a high take by whalers, hide hunters, and Natives continued. Concern over the impending extinction of the species worldwide led to a move to restore a protected population to Alaska. In 1930, 34 muskoxen captured in East Greenland were brought to Fairbanks. In 1935 and 1936, all survivors and their calves were transported from Fairbanks to Nunivak Island and released. Muskoxen thrived on Nunivak Island and increased from 31 in 1936 to an estimated 750 by 1968.

Muskoxen from Nunivak Island were intended to provide stock for relocating animals to formerly occupied ranges. Nunivak Island muskoxen have been transplanted to the Arctic National Wildlife Refuge, Cape Thompson, the Seward Peninsula, Nelson Island, and to Wrangel Island and the Taimyr Peninsula in Russia. Additional animals have been donated to zoos and other institutions.

Most of the transplanted animals quickly adapted to their new surroundings and increased. Further transplants may be considered in the future. However, dispersal from previously translocated herds will be the primary method by which future range expansion occurs.

By 2000, the muskox population in Alaska had grown to approximately 3,800: 650 on Nunivak Island, 250 on Nelson Island, 550 in north-central and northeastern Alaska, 450 in northwestern Alaska, 1,800 on the Seward Peninsula, 100 on the Yukon-Kuskokwim Delta, and an additional 105 animals in captivity in domestic herds, research herds, and the Alaska Zoo in Anchorage. The Nunivak Island and Nelson Island populations have been stabilized by hunting. Between 2000 and 2006, the population in northcentral and northeastern Alaska declined to about 200 muskoxen. Causes of the decline are currently under investigation. The other wild populations are expected to continue to increase and to expand their range.

Hunting of muskoxen under a limited permit system is conducted on Nunivak Island and Nelson Island. Muskoxen are considered a unique and valuable trophy. Muskox meat is highly valued among those who have tried it. This hardy survivor of the ice ages is an important attraction to tourists, photographers, researchers, and students of wildlife.

The soft brownish wool-like underhair, or “qiviut,” has been called the rarest fiber in the world. A domestic muskox herd at Palmer is farmed exclusively for the production of qiviut, but Eskimos on Nunivak Island collect the naturally shed wool clinging to bushes and tundra plants, and spin it by hand.”

⁷¹³ See footnote 661.

Napakiak (nuh-PAH-key-ack)



People and Place

Location

Napakiak is located at the mouth of the Kuskokwim River, 9 miles southwest of Bethel.⁷¹⁴ It is on an island between the Kuskokwim River and Johnson's Slough. The City encompasses 4.7 square miles of land and 0.3 square miles of water. Napakiak is in the Bethel Census Area and the Bethel Recording District.⁷¹⁵

*Demographic Profile*⁷¹⁶

In 2010, there were 354 inhabitants in Napakiak, making it the 148th largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in U.S. Census records in 1900. Between 1990 and 2010, the population of Napakiak remained relatively stable, with an overall increase of 11.3%. According to Alaska Department of Labor population estimates, the population of permanent residents decreased by 4.5% between 2000 and 2009, with an average annual growth rate of -0.68%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Napakiak's population remains constant throughout the year, and is not at all driven by employment in fishing sectors. They also reported that Napakiak does not see seasonal workers.

In 2010, a majority of Napakiak residents identified themselves as American Indian and Alaska Native (97.2%), along with 2.8% that identified themselves as White. Both of these groups made up a greater percentage of the population in 2010 than in 2000, when 96% of residents identified themselves as American Indian and Alaska Native, 1.4% identified as White, and several other ethnicities were also represented in Napakiak, including 1.7% of the population that identified as Black or African American and 0.8% identifying with more than one race (0.8%). In 2000, 0.3% of the population also identified as Hispanic. These groups no longer appeared to be present in Napakiak in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Napakiak was 3.69, a slight decrease from 3.9 persons per household in 1990 and 3.92 in 2000. The total number of households in Napakiak increased steadily over time, from 81 in 1990 to 90 in 2000, and 96 occupied housing units by 2010. Of the 114 housing units surveyed for the 2010 Decennial Census, 68.4% were owner-occupied, 15.8% were renter-occupied, and 15.8% of all housing units were vacant or used only

⁷¹⁴ Napakiak residents and leaders (2010). *Napakiak Community Plan*. Retrieved December 26, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Plans_Search1.cfm.

⁷¹⁵ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷¹⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

seasonally. Between 1990 and 2010, no residents of Napakiak were reported to be living in group quarters.

In 2010, the gender makeup of Napakiak’s population (54% male and 46% female) was more weighted toward males than the population of the state as a whole, which was 52% male and 48% female. The median age of Napakiak residents was 24.6 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the age group most heavily skewed toward males was 20 to 29 years, while there was a relatively even spread of males and females across other age categories in Napakiak. In 2010, 11.8% of Napakiak’s population was age 60 or older. The overall population structure of Napakiak in 2000 and 2010 is shown in Figure 2.

Table 1. Population in Napakiak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	318	-
2000	353	-
2001	-	370
2002	-	352
2003	-	379
2004	-	361
2005	-	374
2006	-	374
2007	-	377
2008	-	348
2009	-	337
2010	354	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Napakiak: 2000-2010 (U.S. Census).

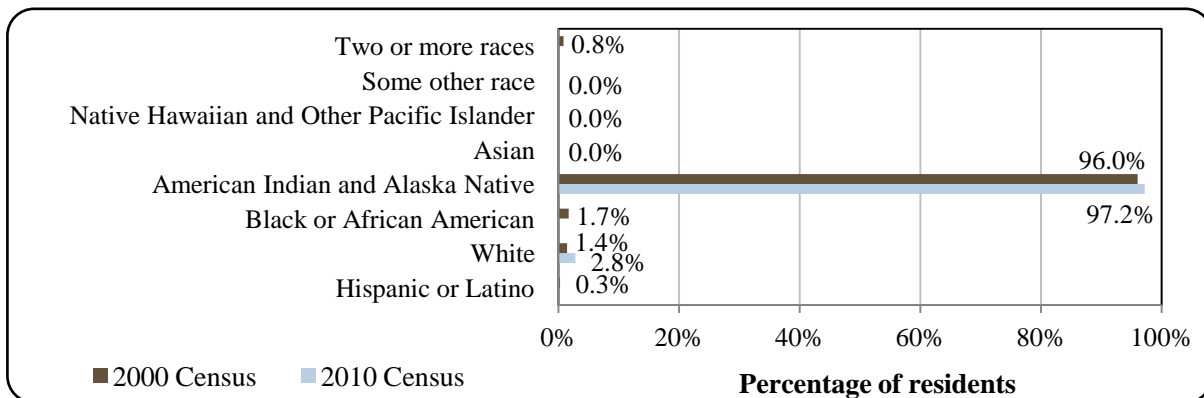
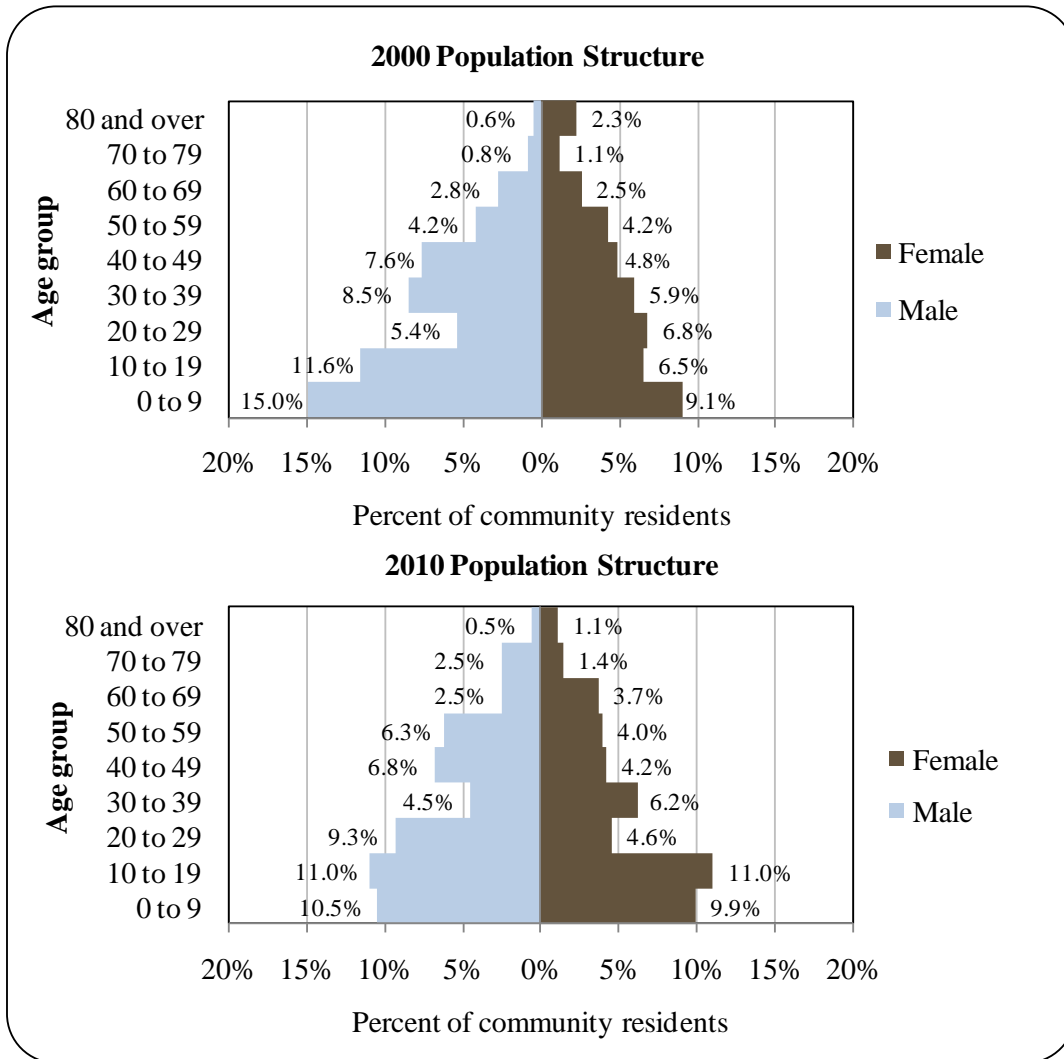


Figure 2. Population Age Structure in Napakiak Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁷¹⁷ 58.2% of Napakiak residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 24.9% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 16.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 24.3% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 4.2% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 3.7% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 2.1% were

⁷¹⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Yup'ik Eskimos have inhabited the Yukon-Kuskokwim area for thousands of years. Historically, the Yup'ik people were very mobile, traveling with the migration of game, fish and plants. The ancient settlements and seasonal camps contained small populations, with numerous settlements throughout the region consisting of extended families or small groups of families.⁷¹⁸ The first European report of the village of Napakiak was in 1878 by an employee of the U.S. Coast and Geodetic Survey named E.W. Nelson, although at that time the village was located downriver at the mouth of the Johnson River. The Moravian Church constructed a chapel in Napakiak in the 1920s.⁷¹⁹ In 1939, a Bureau of Indian Affairs school began operating in Napakiak. In 1946 the first store was opened. The National Guard Armory was built in 1960, and the following year the first post office was established.⁷²⁰ Napakiak was incorporated as a 2nd Class City in 1970. In 1973, the first airstrip was constructed, enabling year-round access to the community. Today, Napakiak remains a predominantly Yup'ik village with a strong sense of Native identity. Subsistence practices remain foundational to the local economy and culture.⁷²¹ The sale, importation, and possession of alcohol are banned in the community.⁷²²

Natural Resources and Environment

Napakiak is influenced by storms in the Bering Sea and also by inland continental weather. Average annual precipitation is 16 inches, with 50 inches of snowfall. Summer high temperatures average 59 to 62 °F, and winter highs average 11 to 19 °F. Extremes from 86 to -46 °F have been recorded. The Kuskokwim River is typically ice-free from June through October.⁷²³ Erosion from the Kuskokwim River has forced a number of buildings to be relocated and currently threatens the school and additional buildings in the community. Each year riverbank erosion claims approximately 70 ft of land.⁷²⁴

Napakiak is located within the boundaries of the Yukon Delta National Wildlife Refuge (NWR). The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Most of the NWR is a vast, flat wetland/tundra complex dotted by countless ponds, lakes, and meandering rivers.

⁷¹⁸ Alaska Native Heritage Center. 2008. *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁷¹⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷²⁰ Napakiak residents and leaders (2010). *Napakiak Community Plan*. Retrieved December 26, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Plans_Search1.cfm.

⁷²¹ See footnote 719.

⁷²² Alaska Dept. of Public Safety (2011). *Local Option Restrictions*. Retrieved May 31, 2012 from <http://dps.alaska.gov/abc/restrictions.aspx>.

⁷²³ See footnote 719.

⁷²⁴ See footnote 720.

Approximately half of the NWR is covered by water. Many streams and sloughs are former tributaries of the two major rivers. Some forest habitat is present along rivers and in the Kilbuck Mountains, located in the southeastern part of the NWR, directly east of Napakiak. Moose, caribou, brown bear, and black bear can be found in this mountain range, which rises to between 2,000 and 4,000 ft in elevation.⁷²⁵

Both the Togiak NWR and Wood-Tikchik State Park are located less than 100 miles southeast of Napakiak. Togiak NWR covers 4.7 million acres, of which the northern 2.3 million acres are designated as the Togiak Wilderness Area. Like the Yukon Delta NWR, the Togiak NWR protects the habitat of a wide array of birds, fish, and mammals. East of Togiak NWR, Wood-Tikchik is the largest State Park in the country. The State Park includes a diversity of terrain and ecosystems. The Wood River and Tikchik systems host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, Arctic char, Dolly Varden char, and northern pike. Tikchik Lake is an important site for whitefish subsistence harvest. Moose, caribou, and brown bear are common in the State Park, along with black bear in a limited area. Small game present in the area includes beaver, muskrat, otter, fox, wolverine, mink, and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.⁷²⁶

According to a local hazard mitigation plan conducted by the City of Bethel in 2008, the Napakiak area is at high risk of floods, severe weather, and erosion. The threat of earthquakes is also noted. The plan addresses the role of climate change in exacerbating threats from flooding and erosion. Warming temperatures have led to thawing permafrost. This has caused severe subsidence, which constrains development of resources, transportation and utility systems, and community expansion. In addition, delayed formation of protective shore ice along the coast leaves shorelines more vulnerable to fall storms and storm surges, resulting in increased flooding and erosion.⁷²⁷

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Napakiak as of May 2012.⁷²⁸

Current Economy

Subsistence harvest activities are central to the Napakiak economy. Subsistence foods provide an estimated 50% of the local diet. Most families have fish camps. Salmon, waterfowl, moose, bear, and seals are among the most important resources.⁷²⁹ As of 2010, wage employment opportunities in Napakiak were provided by local government offices, the school district, local and regional Native corporations and non-profit organizations, the Yukon-Kuskokwim Health Corporation, Coastal Villages Seafoods (see the *Processing Plants* section of

⁷²⁵ U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁷²⁶ Alaska Dept. of Natural Resources (n.d.) *Wood-Tikchik State Park*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

⁷²⁷ City of Bethel (2008). *Local Hazards Mitigation Plan*. Retrieved February 7, 2012 from http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Bethel_LHMP.pdf.

⁷²⁸ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁷²⁹ Alaska Dept. of Comm. And Rural Affairs (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm.

this profile), and several local businesses.⁷³⁰ Seasonal commercial fishing, construction projects, trapping, and crafts also provide income.⁷³¹ In 2010, 45 residents (equivalent to 12.7% of the local population) held commercial fishing permits, primarily for herring roe and salmon gill net fisheries.

Based on household surveys conducted for the 2006-2010 ACS,⁷³² in 2010, the per capita income in Napakiak was estimated to be \$11,023 and the median household income was estimated to be \$37,250. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$7,319 and \$28,750, respectively). The increase in per capita income remains even if inflation is taken into account by converting the 2000 values to 2010 dollars,⁷³³ showing a real 2000 per capita income of \$9,624. However, the real 2000 median household income of \$37,806 suggests that household income has remained stable over the period. In 2010, Napakiak ranked 255th of 305 Alaskan communities with per capita income data that year, and 205th in median household income, out of 299 Alaskan communities with household income data.

However, Napakiak's small population size may have prevented the ACS from accurately portraying economic conditions.⁷³⁴ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Napakiak in 2010 is \$5,593.⁷³⁵ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Napakiak between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,⁷³⁶ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Napakiak residents was estimated to be in the civilian labor force (52.1%) compared to the percentage of Alaskans in the civilian labor force statewide (68.8%). That year, 34.1% of Napakiak residents were estimated to be living below the poverty line, compared to a 9.5% of Alaska residents overall, and the

⁷³⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁷³¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷³² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁷³³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁷³⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷³⁵ See footnotes 730 and 732.

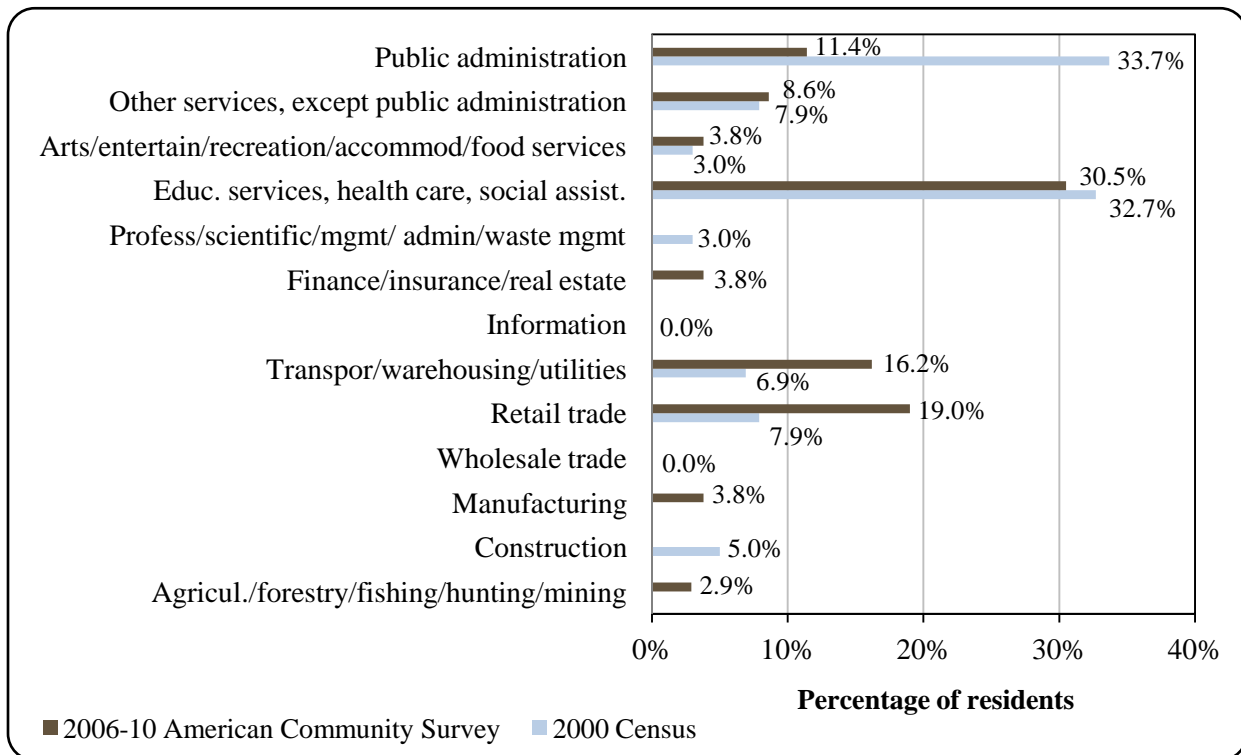
⁷³⁶ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

unemployment rate was estimated to be 15.4%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Napakiak in 2010 was 28.5%, compared to a statewide unemployment rate estimate of 11.5%.⁷³⁷

Also based on the 2006-2010 ACS, a majority of workers were estimated to be employed in the public sector (58.1%), along with 39% estimated to be employed in the private sector and 2.9% self-employed. Of the 105 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in the following industries: educational services, health care, and social assistance (30.5%), retail trade (19%), and transportation, warehousing, and utilities (16.2%). Occupations in which the greatest percentages of the workforce were employed were management/professional (30.5%), sales/office (24.8%), and service occupations (23.8%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

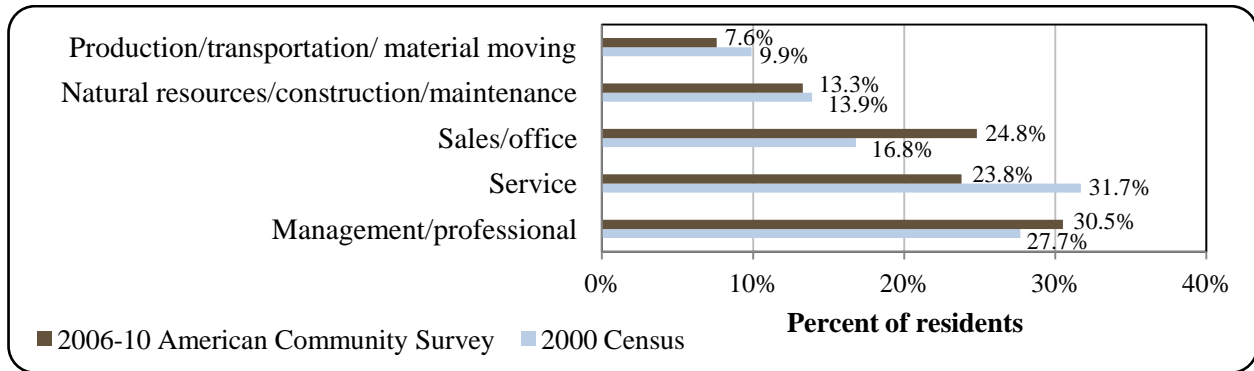
It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. In 2010, none of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining in 2010, and 13.3% of the workforce was estimated to be employed in natural resource/construction/maintenance occupations. A breakdown of this occupational category reveals that this 13.3% was employed in construction and extraction or installation and repair occupations, while 0% of the workforce was employed in farming, fishing, and forestry occupations.

Figure 3. Local Employment by Industry in 2000-2010, Napakiak (U.S. Census).



⁷³⁷ See footnote 730.

Figure 4. Local Employment by Occupation in 2000-2010, Napakiak (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 122 employed residents in Napakiak in 2010, of which 54.7% were employed in local government, 20.1% in trade, transportation, and utilities, 6.3% in financial activities, 6.3% in education and health services, 3.8% in manufacturing, 2.5% in state government, 1.9% in construction, 1.3% in natural resources and mining, and 3.1% in other industries.⁷³⁸ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

Napakiak was incorporated as a 2nd Class City in 1970, and is not located in an organized borough. The City has a Strong Mayor form of government, including a seven-person city council, including the mayor, a nine-person advisory school board, and several municipal employees. The City administers a 4% sales tax.⁷³⁹ In addition to sales tax revenues, other locally-generated revenue sources in Napakiak included water and sewer and “washeteria”/sauna⁷⁴⁰ service fees, bingo and pull tab receipts, and building and equipment rentals. Outside revenue sources included various state and federal revenue sharing programs and grants in some years, including federal salmon disaster funds received through the Magnuson Stevens Act in 2000, 2001, and 2002. The City received approximately \$25,000 per year in contributions from the State Revenue Sharing program from 2000 to 2003, and over \$100,000 per year from the Community Revenue Sharing program in 2009 and 2010. Additional revenue sharing funds were received during the 2000-2010 period from the state Safe Communities program and the federal Payment in Lieu of Taxes program.

Annual revenues reported in Certified Financial Statements were generally between \$300,000 and \$600,000 during the 2000-2010 period. The relatively high municipal revenue total reported in 2000 can partly be explained by over \$100,000 in federal salmon disaster funds received by Napakiak under the Magnuson Stevens Act. Smaller amounts of Magnuson Stevens funds were also granted in 2001 and 2002. The spike in municipal revenue in 2003 to over \$6

⁷³⁸ Ibid.

⁷³⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁴⁰ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

million can be explained by a \$5.5-million-dollar grant from the State of Alaska’s Village Safe Water program that year. Information about selected municipal revenue sources in Napakiak is presented in Table 2.

Napakiak was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Napakiak. The Native village corporation is the Napakiak Corporation, which manages 115,200 acres of land.⁷⁴¹ Napakiak belongs to the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.⁷⁴²

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Napakiak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$793,417	\$19,312	\$27,513	\$100,947
2001	\$485,763	\$21,586	\$26,499	\$20,375
2002	\$483,934	\$23,086	\$24,733	\$20,375
2003	\$6,189,828	\$26,779	\$25,745	n/a
2004	\$672,520	\$43,770	n/a	n/a
2005	\$600,230	\$41,056	n/a	n/a
2006	\$634,737	\$42,147	n/a	n/a
2007	\$348,740	\$46,962	n/a	n/a
2008	\$271,462	\$37,061	n/a	n/a
2009	\$363,754	\$48,949	\$113,753	n/a
2010	\$350,728	\$66,157	\$112,901	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). Community Funding Database. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

⁷⁴¹ See footnote 739.

⁷⁴² Calista Corporation (n.d.). *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

Napakiak is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁷⁴³ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁷⁴⁴ AVCP is made up of 56 villages and 45 village corporations.⁷⁴⁵

The closest office of the Alaska Department of Fish and Game (ADF&G) to the community is located in Bethel. A National Marine Fisheries Service (NMFS) field office is located in Bethel and a main office is located in Anchorage. The nearest offices of the Alaska Department of Natural Resources, the Alaska Department of Commerce, Community, and Economic Development, and the Bureau of Citizenship and Immigration Services are located in Anchorage.

Infrastructure

Connectivity and Transportation

Access to Napakiak is primarily by air. The state owns and operates a 3,269-ft by 60-ft lighted gravel runway in the community.⁷⁴⁶ As of April 2012, roundtrip airfare between Bethel and Napakiak with Yute Air was \$162,⁷⁴⁷ and the approximate cost of roundtrip airfare from Bethel to Anchorage in early June 2012 was \$368.⁷⁴⁸ In addition, seaplane landing areas are located on the Kuskokwim River and Johnson Slough. The Kuskokwim River is used as a transportation thoroughfare throughout the year. In summer months, the River provides water access to the community. There are no docking facilities, but barges deliver cargo from Bethel during the summer months,⁷⁴⁹ and a hovercraft is used year-round to bring cargo and mail to Napakiak.⁷⁵⁰ In winter months the River is used as an ice road for travel to surrounding villages.⁷⁵¹ In addition to the ice road, a 9-mile winter trail is marked overland between Napakiak and Bethel.⁷⁵²

⁷⁴³ Association of Village Council Presidents (n.d.). *AVCP homepage*. Retrieved December 6, 2011 from www.avcp.org.

⁷⁴⁴ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁷⁴⁵ Calista Corporation (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

⁷⁴⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁴⁷ Personal communication with a Yute Air reservation agent, April 11, 2012.

⁷⁴⁸ This price was calculated on November 21, 2011 using kayak.com.

⁷⁴⁹ See footnote 746.

⁷⁵⁰ Napakiak residents and leaders (2010). *Napakiak Community Plan*. Retrieved December 26, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Plans_Search1.cfm.

⁷⁵¹ See footnote 746.

⁷⁵² See footnote 750.

Facilities

Water in Napakiak is derived from a well and is chlorinated and filtered. The community does not have a piped water system. The City operates a central hauling point for water distribution as well as a water truck for delivery. The school has its own well. The City also operates the sewer system. As of 2010, 54 households used a flush/haul system, including plumbing for sinks and low-flush toilets. Other households use “honeybuckets”.⁷⁵³ A sewage lagoon is used for sewage treatment. The City operates a landfill and provides refuse collection services. Electricity is transmitted by overhead lines from Bethel Utilities and purchased and distributed locally by Ircinraq Power Company.⁷⁵⁴ In 2006, Napakiak was awarded \$3,000,000 from the U.S. Department of Agriculture to upgrade these power lines from a single to a triple line system. A back-up generator is also present in Napakiak in the event of a blackout in Bethel.⁷⁵⁵ Napakiak is also equipped with a back-up generator in case of emergencies or a blackout in Bethel.⁷⁵⁶ Public safety services are provided by two VPSOs (Village Public Safety Officers)⁷⁵⁷ and four Tribal Public Officers.⁷⁵⁸ The nearest state trooper post is located in Bethel.⁷⁵⁹

Community buildings include a fire station used by the Volunteer Fire Department and a city Public Safety Building which hosts office space for the Tribal Court, social services, and houses a public safety jail with four cells.⁷⁶⁰ The Village Council is in the process of constructing a community hall. Currently a school gymnasium and library are available. The City operates a washeteria.⁷⁶¹ According to a survey conducted by the AFSC in 2011, community leaders reported that Napakiak also has a U.S. post office and telephone service, and that broadband internet access, road improvements, and a new landfill are in progress.

With regard to fishing-related infrastructure, no docking facilities are available in Napakiak.⁷⁶² In the 2011 AFSC survey, community leaders reported that fuel is available for sale in the community, but no other fishing related businesses or services are located in Napakiak. They noted that a barge landing area will be completed in the next 10 years.

Medical Services

A local health clinic is owned by the City and operated in conjunction with the Yukon-Kuskokwim Health Corporation. The Napakiak Health Clinic is a Community Health Aide Program site. Emergency Services have river and air access. Emergency service is provided by a health aide.⁷⁶³ The nearest hospital is located in Bethel.

⁷⁵³ A “honeybucket” is an indoor bucket used as a toilet in houses without plumbing.

⁷⁵⁴ See footnote 746.

⁷⁵⁵ See footnotes 746 and 750.

⁷⁵⁶ See footnote 746.

⁷⁵⁷ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁷⁵⁸ See footnote 750.

⁷⁵⁹ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁷⁶⁰ See footnote 750.

⁷⁶¹ See footnote 746.

⁷⁶² Ibid.

⁷⁶³ Ibid.

Educational Opportunities

There is one school in the community, which offers Kindergarten through 12th grade instruction. As of 2011, the William N. Miller School had a total of 110 students and 7 teachers.⁷⁶⁴ The school building received renovations in 2009. River erosion threatens to damage the school building in the near future. The school owns seven storage buildings and seven teacher housing units.⁷⁶⁵

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Napakiak area for thousands of years.^{766,767} Subsistence salmon harvest continues to be a primary economic activity along the Kuskokwim River. In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs is an important subsistence resource for coastal Alaskan communities.⁷⁶⁸

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s, commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels, and salmon prices decreased.⁷⁶⁹ A fishery disaster was declared in 2012, following severe declines in Chinook salmon returns on the Kuskokwim River, as well as to the Yukon River and Cook Inlet river systems. That year, commercial and subsistence fisheries on the Kuskokwim River were substantially restricted to meet Chinook conservation goals. ADF&G, the Alaska Board of Fisheries, and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundant species, including gear and other management restrictions.⁷⁷⁰

⁷⁶⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁷⁶⁵ Napakiak residents and leaders (2010). *Napakiak Community Plan*. Retrieved December 26, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Plans_Search1.cfm.

⁷⁶⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁶⁷ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁷⁶⁸ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁷⁶⁹ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). Kuskokwim Commercial Salmon Fishery. In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁷⁷⁰ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalChinookdisaster>.

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.⁷⁷¹ Between 2000 and 2010, Napakiak residents held permits in the Goodnews Bay roe and food/bait herring fishery and the Bristol Bay spawn on kelp, hand pick herring fishery. (For more information see the *Commercial Fisheries* section of this profile.) The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the village of Togiak. Spawning herring are harvested using purse seines and gill nets in the Togiak sac roe fishery. A spawn-on-kelp harvest is also taken, primarily by local residents. Along the Yukon/Kuskokwim coast there are six commercial gill net sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁷⁷²

Napakiak is located in the Lower Kuskokwim salmon fishing district (District 1). The closest marine area to Napakiak, Kuskokwim Bay, is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Napakiak is a member of the Coastal Villages Region Fund (CVRF), a Community Development Quota (CDQ) group that promotes employment opportunities for residents as well as participation in the Bering Sea crab and groundfish fisheries.⁷⁷³ Napakiak is not eligible to participate in the Community Quota Entity (CQE) program. According to a survey conducted by the AFSC in 2011, community leaders reported that Napakiak is not directly involved in fisheries management processes in Alaska.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Napakiak. In Napakiak's 2010 Community Plan, one of the current economic objectives is to explore the possibility of opening a fish processing plant in the community with the assistance of the CVRF board.⁷⁷⁴

The 2010 Intent to Operate list does list *a small processing facility in nearby Bethel. The plant, run by Kuskokwim Seafoods LLC*, was started in 2010 to provide a market to local salmon fishers to help them sell their catch closer to home. Kuskokwim Seafoods processes four salmon species: Chinook, sockeye, chum, and coho.⁷⁷⁵ As of 2012, Coastal Village Seafoods, a subsidiary of CVRF, also operated a fish-buying operation along the Kuskokwim, with a tender often located upriver at Napaskiak.⁷⁷⁶

Fisheries-Related Revenue

According to information provided in annual municipal budgets between 2000 and 2010, the primary sources of fisheries-related revenue in Napakiak were a raw fish tax and the Shared

⁷⁷¹ See footnote 768.

⁷⁷² Ibid.

⁷⁷³ Coastal Villages Region Fund (n.d.). *Home page*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

⁷⁷⁴ Napakiak residents and leaders (2010). *Napakiak Community Plan*. Retrieved December 26, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Plans_Search1.cfm.

⁷⁷⁵ Kuskokwim Seafoods LLC. (n.d.). *Homepage*. Retrieved August 2011 from <http://kuskokwimseafoods.com/>.

⁷⁷⁶ Personal communication, Nick Souza, Coastal Village Seafoods, April 27, 2012.

Fisheries Business Tax. In 2010, Napakiak received \$0 in raw fish tax and \$99 from the Shared Fisheries Business Tax. In addition, \$111 was earned in 2010 from the Shared Fisheries Business Tax, the only year in which revenue was reported from this revenue source (Table 3).⁷⁷⁷

It is also important to note that CVRF uses fisheries revenue from their CDQ revenue to provide grants, scholarships and training, and other financial assistance to fishermen and residents of member villages.⁷⁷⁸ However, in a survey conducted by the AFSC in 2011, community leaders reported that Napakiak did not receive funding or grants from CVRF in 2010.

Commercial Fishing

Between 2000 and 2010, Napakiak residents participated in commercial fisheries as crew members, vessel owners, and permit holders. In 2010, there were 45 Napakiak residents holding a total of 52 Commercial Fisheries Entry Commission (CFEC) permits, including 39 salmon permits in the Kuskokwim gill net fishery, and 13 herring permits in the Goodnews Bay roe and food/bait fishery and the Bristol Bay spawn on kelp, hand pick fishery. These permit numbers were stable between 2000 and 2010, although the percentage of permits that was actively fished varied considerably over the period. Three out of 10 herring permits (30%) were fished in 2000, but between 2001 and 2010, none were actively fished. After 2000, when 80% of salmon permits were actively fished, the number fell to five permits fished (14%) in 2002. By 2005 the number of salmon permits actively fished rebounded to greater than 50% and stayed consistent through the remainder of the 2000-2010 period. It is important to note that, between 2001 and 2003, one halibut permit (vessel under 60 ft, statewide) was also held by a Napakiak resident. However, the halibut permit was not fished in any of these 3 years. Between 2000 and 2010, no Napakiak residents held either Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP). Information about permits held by Napakiak residents is presented in Table 4. Likewise, no Napakiak residents held quota share accounts or quota shares in federal halibut, sablefish, or crab catch share fisheries between 2000 and 2010 (Tables 6 through 8).

In 2010, a total of 31 Napakiak residents held commercial crew licenses and 6 fishing vessels were primarily owned by Napakiak residents. This represents a substantial decline in vessel ownership from 2000, when 21 vessels were primarily owned by Napakiak residents. The number of crew license holders fluctuated during the decade, beginning with 47 in 2000, falling to between 1 and 5 in 2002-2004, and climbing again to 31 in 2010. The number of vessels homeported in Napakiak followed a similar pattern to vessel ownership, with 22 homeported in Napakiak in 2000, and only 7 in 2010 (Table 5). According to a survey conducted by the AFSC in 2011, community leaders indicated that the only vessels using Napakiak as a base of operations during the fishing season were gill net boats under 35 ft in length.

No landings or ex-vessel revenue were recorded in Napakiak between 2000 and 2010 (Table 9), given the lack of fish buyers in the community during this period (Table 5). Information about landings and ex-vessel revenue generated by vessels owned by Napakiak residents is largely considered confidential between 2000 and 2010 due to the small number of participants, with the exception of salmon harvest data in 2000, 2001, and 2009 (Table 10). In the first 2 years, Napakiak vessel owners landed over 57,000 net lb of salmon per year. In 2000,

⁷⁷⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

⁷⁷⁸ Coastal Villages Region Fund website. (n.d.). *Home page*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

the ex-vessel value of the catch was \$31,107, while it was only valued at \$20,904 in 2001, reflecting lower prices and possibly a different species makeup of the catch. Salmon landings were much lower in 2009, with a harvest of 15,311 net lb and an ex-vessel value of \$6,807. This lower catch reflects the fewer total vessels owned by Napakiak residents in 2009 (7) compared to 21 vessels owned in 2000 and 2001.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Napakiak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	\$15,616	\$500	n/a	\$103	\$103	\$293	\$290	\$113	\$113	n/a
Shared Fisheries Business Tax ¹	\$663	\$513	\$99	\$130	\$103	\$261	\$293	\$157	\$113	\$96	\$99
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$111
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$663	\$16,129	\$599	\$130	\$205	\$364	\$586	\$447	\$226	\$209	\$210
Total municipal revenue⁵	\$793,417	\$485,763	\$483,934	\$6,189,828	\$672,520	\$600,230	\$634,737	\$348,740	\$271,462	\$363,754	\$350,728

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development.. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Napakiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	1	1	1	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	0%	0%	0%	-	-	-	-	-	-	-
	Total permit holders	0	1	1	1	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	10	12	12	15	14	14	12	11	11	13	13
	Fished permits	3	0	0	0	0	0	0	0	0	0	0
	% of permits fished	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	10	12	12	13	13	14	12	11	11	13	13

Table 4 cont'd. Permits and Permit Holders by Species, Napakiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	41	40	36	35	32	36	36	35	35	39	39
	Fished permits	33	26	5	19	18	27	24	24	21	23	28
	% of permits fished	80%	65%	14%	54%	56%	75%	67%	69%	60%	59%	72%
	Total permit holders	44	42	36	36	32	39	40	37	36	40	39
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>51</i>	<i>53</i>	<i>49</i>	<i>51</i>	<i>46</i>	<i>50</i>	<i>48</i>	<i>46</i>	<i>46</i>	<i>52</i>	<i>52</i>
	<i>Fished permits</i>	<i>36</i>	<i>26</i>	<i>5</i>	<i>19</i>	<i>18</i>	<i>27</i>	<i>24</i>	<i>24</i>	<i>21</i>	<i>23</i>	<i>28</i>
	<i>% of permits fished</i>	<i>71%</i>	<i>49%</i>	<i>10%</i>	<i>37%</i>	<i>39%</i>	<i>54%</i>	<i>50%</i>	<i>52%</i>	<i>46%</i>	<i>44%</i>	<i>54%</i>
	<i>Permit holders</i>	<i>47</i>	<i>47</i>	<i>41</i>	<i>43</i>	<i>39</i>	<i>45</i>	<i>45</i>	<i>42</i>	<i>41</i>	<i>45</i>	<i>45</i>

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Napakiak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Napakiak ²	Total Net Lb Landed In Napakiak ^{2,5}	Total Ex-Vessel Value Of Landings In Napakiak ^{2,5}
2000	47	0	0	21	22	0	0	\$0
2001	39	0	0	21	21	0	0	\$0
2002	1	0	0	10	12	0	0	\$0
2003	5	0	0	8	10	0	0	\$0
2004	2	0	0	8	11	0	0	\$0
2005	22	0	0	9	10	0	0	\$0
2006	9	0	0	10	11	0	0	\$0
2007	23	0	0	8	9	0	0	\$0
2008	22	0	0	6	7	0	0	\$0
2009	24	0	0	6	7	0	0	\$0
2010	31	0	0	6	7	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Napakiak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Napakiak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Napakiak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Napakiak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Napakiak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	57,644	57,631	-	-	-	-	-	-	-	15,311	-
<i>Total²</i>	<i>57,644</i>	<i>57,631</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>15,311</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$ 31,107	\$ 20,904	-	-	-	-	-	-	-	\$ 6,807	-
<i>Total²</i>	<i>\$31,107</i>	<i>\$ 20,904</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$ 6,807</i>	<i>\$0</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to a survey conducted by the AFSC in 2011, community leaders indicated that very little sportfishing takes place in Napakiak. No active sport fish guide businesses were present in Napakiak between 2000 and 2010, and no licensed sport fish guides resided in the community. However, residents of Napakiak did participate in sportfishing. Between 2000 and 2010, the number of Napakiak residents that purchased sportfishing licenses varied between 13 and 74 per year. Sportfishing licenses were not sold in the City of Napakiak. According to the 2011 AFSC survey, community leaders noted that no gear or tackle stores were present in the community, so residents need to travel to other cities in the region to purchase both sportfishing gear and licenses. The Alaska Statewide Harvest Survey,⁷⁷⁹ conducted by ADF&G between 2000 and 2010, noted the following species as targeted by private anglers in Napakiak: Dolly Varden char, northern pike, and whitefish. No kept/release log book data were reported for fishing charters out of Napakiak between 2000 and 2010.⁷⁸⁰

Napakiak is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 28 non-Alaska resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Napakiak is displayed in Table 11.

Table 11. Sport Fishing Trends, Napakiak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Napakiak ²
2000	0	0	18	0
2001	0	0	22	0
2002	0	0	33	0
2003	0	0	22	0
2004	0	0	13	0
2005	0	0	38	0
2006	0	0	20	0
2007	0	0	39	0
2008	0	0	33	0
2009	0	0	50	0
2010	0	0	74	0

⁷⁷⁹ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁷⁸⁰ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Napakiak: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Almost all families in Napakiak engage in subsistence and hunting activities in combination with employment in commercial fishing and at the local school and government offices. Subsistence foods provide an estimated 50% of the local diet.⁷⁸¹ In a survey conducted by the AFSC in 2011, Napakiak community leaders indicated that Chinook, sockeye, and chum salmon are some of the most important subsistence resources utilized by local residents.

No information is available from ADF&G regarding the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010, or about per capita subsistence harvest (Table 12). However, data are available through 2008 regarding subsistence salmon permits. Between 2000 and 2008, the number of Napakiak households issued subsistence salmon permits varied from 75 to 97 per year. Chinook, chum, and sockeye salmon were the most heavily harvested species over time, with the top harvested species varying from year to year. There were also a large number of coho salmon harvested, with increasing harvest in the second half of the decade. Some pink salmon were also harvested. No information was reported regarding subsistence harvest of marine invertebrates and non-salmon fish (not

⁷⁸¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

including halibut). Information about subsistence salmon permits, marine invertebrates, and non-salmon fish is presented in Table 13.

Between 2003 and 2007, several Napakiak residents participated in the Subsistence Halibut Registration Certificates (SHARC) program. Three residents were issued SHARC cards each year between 2003 and 2006, and two residents were issued cards in 2007. However, no information was reported about the number of SHARC cards that were returned or the total lb of subsistence halibut harvested by Napakiak residents during these years. This information about the subsistence halibut fishery is presented in Table 14. No information is available from management agencies about subsistence harvest of marine mammals by Napakiak residents between 2000 and 2010 (Table 15).

Table 12. Subsistence Participation by Household and Species, Napakiak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Napakiak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	75	63	2,178	2,987	502	n/a	2,026	n/a	n/a
2001	78	68	2,290	1,723	644	n/a	1,861	n/a	n/a
2002	90	66	1,931	2,391	578	n/a	1,201	n/a	n/a
2003	93	56	2,105	1,384	1,098	n/a	1,223	n/a	n/a
2004	85	58	2,060	1,746	1,259	n/a	1,068	n/a	n/a
2005	91	55	2,695	2,726	628	102	1,803	n/a	n/a
2006	97	51	4,109	6,781	1,258	691	1,202	n/a	n/a
2007	100	53	2,318	2,537	906	n/a	1,152	n/a	n/a
2008	90	32	3,941	3,026	2,488	n/a	2,540	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Napakiak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	3	n/a	n/a
2004	3	n/a	n/a
2005	3	n/a	n/a
2006	3	n/a	n/a
2007	2	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Napakiak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Napaskiak (nuh-PASS-key-ack)



People and Place

*Location*⁷⁸²

Napaskiak is located along Napaskiak Slough, on the east bank of the Kuskokwim River, seven miles south of Bethel. The City encompasses 3.5 square miles of land and 0.4 square miles of water. Napaskiak is located in the Bethel Census Area and Bethel Recording District.

*Demographic Profile*⁷⁸³

In 2010, there were 405 inhabitants in Napaskiak, making it the 137th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population of Napaskiak has increased by 23.5%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 9.7%, with an average annual growth rate of 0.89%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that approximately 30 seasonal workers are present in Napaskiak between April and October, and the population reaches its annual peak in August. They also indicated that this population peak is not at all driven by employment in fishing sectors.

In 2010, a majority of Napaskiak residents identified themselves as American Indian and Alaska Native (96.5%), and 3.0% identified as White. Compared to 2000, individuals identifying as American Indians and Alaska Natives made up 1% less of the population in 2010, while those identifying as White made up 1.5% more of the population. In 2000, there were several other ethnicities represented in Napaskiak, including individuals identifying as Asian (0.3%) and with two or more races (0.8%). In addition, in 2000, 0.3% of the population identified as Hispanic. These additional ethnic groups no longer appeared to be present in Napaskiak in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Napaskiak was 4.31, similar to the 1990 household size of 4.4 persons per household, but a decline from 4.76 persons per household in 2000. The number of households in Napaskiak increased over time, with 74 in 1990, 82 in 2000, and 94 occupied housing units in 2010. Of the 135 housing units surveyed for the 2010 U.S. Census, 55.5% were owner-occupied, 14.1% were rented, and 30.4% were vacant or used only seasonally. Between 1990 and 2010, no residents of Napaskiak lived in group quarters.

⁷⁸² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁸³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

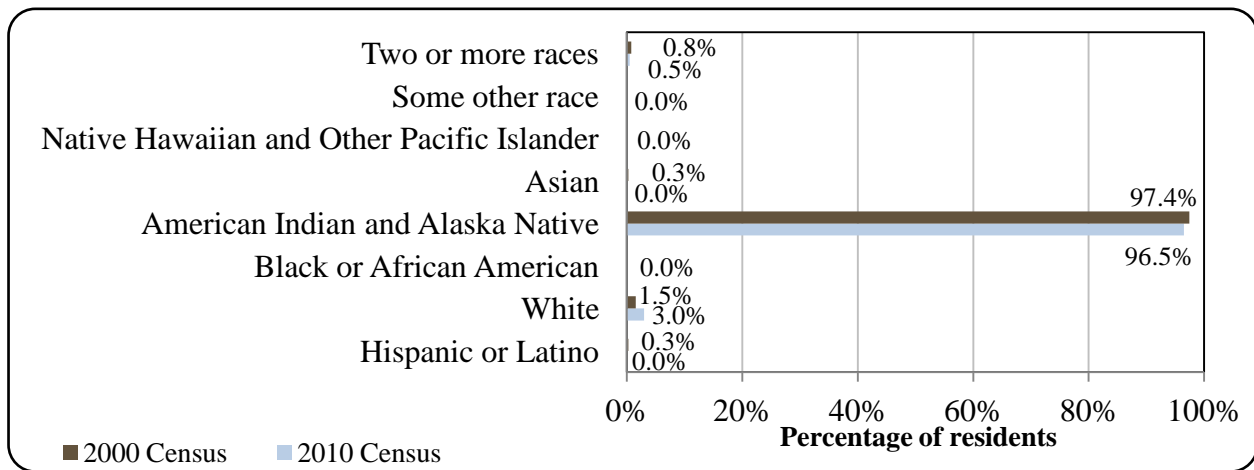
Table 1. Population in Napaskiak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	328	-
2000	390	-
2001	-	419
2002	-	419
2003	-	424
2004	-	440
2005	-	426
2006	-	452
2007	-	425
2008	-	424
2009	-	428
2010	405	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

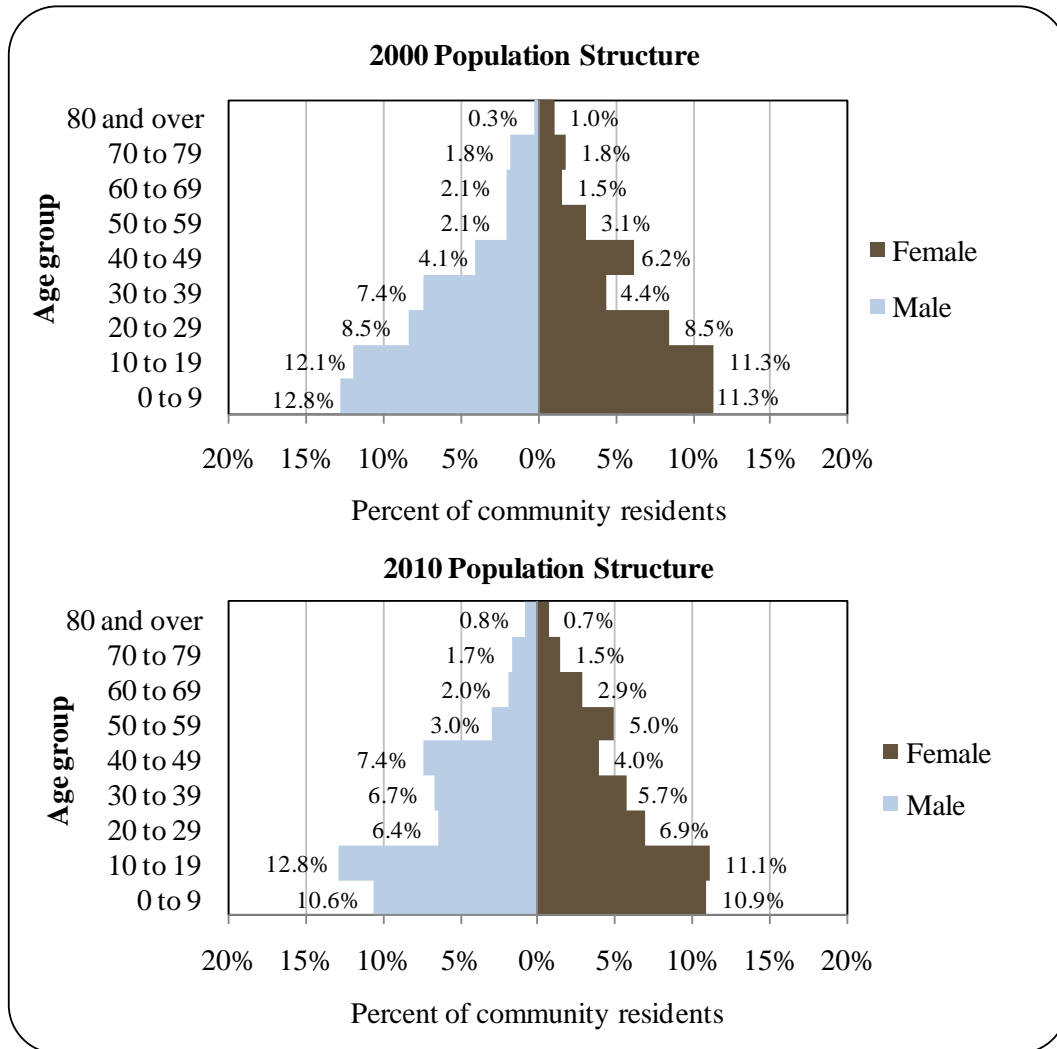
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Napaskiak: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Napaskiak’s population (51.5% male and 48.6% female) was more gender balanced than the state population as a whole, which was 52% male and 48% female. The median age of Napaskiak residents was 22.6 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 9.5% of Napaskiak’s population was age 60 or older. The overall population structure of Napaskiak in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Napaskiak Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁷⁸⁴ 64.8% of Napaskiak residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 22.8% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 12.3% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 9.9% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 5.6% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 1.9% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 4.9% were

⁷⁸⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Yup'ik Eskimos have inhabited the Kuskokwim area for thousands of years. Historically, Yup'ik people were very mobile, traveling with the migration of game, fish and plants. Ancient settlements and seasonal camps contained small populations, with numerous settlements throughout the region consisting of extended families or small groups of families.⁷⁸⁵ Today, subsistence practices remain important to the way of life in Napaskiak.⁷⁸⁶

The site of Napaskiak was traditionally used as a fish camp by residents of the winter village of Oovingiyuk, located a mile upstream on the same side of the river. Napaskiak was chosen as a camp because a sandbar was present in front of the village that facilitated dip net harvest of smelt. When the course of the river began to erode the area of Oovingiyuk, residents moved permanently to Napaskiak. Residents of Eekchuk, another village one mile downstream, also relocated to Napaskiak at that time.⁷⁸⁷

The village of Napaskiak was first reported by the U.S. Coast & Geodetic Survey in 1867. The 1880 U.S. Census reported a population of 196.⁷⁸⁸ Moravian missionaries established a mission in nearby Bethel in 1885 and began spending time in Napaskiak. They intended to build a mission school in the village, but the plans did not materialize. Napaskiak residents were noted as being unreceptive to mission workers when they were stationed in the village in the late 1890s. The people of Napaskiak built a Russian Orthodox church in 1931, and the Bureau of Indian Affairs opened a school in the village in 1939.⁷⁸⁹ The City was incorporated in 1971.⁷⁹⁰ The sale and importation of alcohol are banned in the community.⁷⁹¹

Natural Resources and Environment

Napaskiak is strongly influenced by storms and patterns in the Bering Sea and also by inland continental weather. Average annual precipitation is 16 inches, with 50 inches of snowfall. Summer temperatures range from 42 to 62 °F, and winter temperatures average -2 to 19 °F. The Kuskokwim River is typically ice-free from June through October.⁷⁹²

Napaskiak is located within the boundaries of the Yukon Delta National Wildlife Refuge (NWR). The Yukon Delta NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for

⁷⁸⁵ Alaska Native Heritage Center (n.d). *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁷⁸⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁸⁷ Oswald, W. 1963. *Napaskiak: An Alaskan Eskimo Community*. University of Arizona Press, Tucson.

⁷⁸⁸ See footnote 786.

⁷⁸⁹ See footnote 787.

⁷⁹⁰ See footnote 786.

⁷⁹¹ Alaska Dept. of Public Safety 2011. *Local Option Restrictions*. Retrieved May 31, 2012 from <http://dps.alaska.gov/abc/restrictions.aspx>.

⁷⁹² See footnote 786.

continued subsistence uses; and to ensure water quality and necessary water quantity.” Most of the Yukon Delta NWR is a vast, flat wetland/tundra complex dotted by countless ponds, lakes, and meandering rivers. Approximately half of the NWR is covered by water. Many streams and sloughs are former tributaries of the two major rivers. Some forest habitat is present along rivers and in the Kilbuck Mountains, located in the southeastern part of the Yukon Delta NWR, directly east of Napaskiak. Moose, caribou, brown bear, and black bear can be found in this mountain range, which rises to between 2,000 and 4,000 ft in elevation.⁷⁹³

Togiak NWR and Wood-Tikchik State Park are both located less than 100 miles southeast of Napaskiak. Togiak NWR covers 4.7 million acres, of which the northern 2.3 million acres are designated as Togiak Wilderness Area. Like the Yukon Delta NWR, Togiak NWR protects the habitat of a wide array of birds, fish, and mammals. East of Togiak NWR, Wood-Tikchik is the largest State Park in the country. The State Park includes a diversity of terrain and ecosystems. The Wood River and Tikchik systems host all five species of Pacific salmon, along with rainbow trout, Arctic grayling, lake trout, Arctic char, Dolly Varden char, and northern pike. Tikchik Lake is an important site for whitefish subsistence harvest. Moose, caribou, and brown bear are common in the State Park, along with black bear in limited area. Small game present in the area includes beaver, muskrat, otter, fox, wolverine, mink, and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.⁷⁹⁴

According to a local hazard mitigation plan conducted by the City of Bethel in 2008, the Napaskiak area is at high risk of floods, severe weather, and erosion. The threat of earthquakes is also noted. The plan addresses the role of climate change in exacerbating threats from flooding and erosion. Warming temperatures have led to thawing permafrost. This has caused severe subsidence, which constrains development of resources, transportation and utility systems, and community expansion. In addition, delayed formation of protective shore ice along the coast leaves shorelines more vulnerable to fall storms and storm surges, resulting in increased flooding and erosion.⁷⁹⁵

According to the Alaska Department of Environmental Conservation (DEC), there are no notable active environmental cleanup sites located in Napaskiak as of May 2012.⁷⁹⁶

Current Economy⁷⁹⁷

The economy of Napaskiak is largely based on traditional subsistence harvest practices.⁷⁹⁸ According to a survey conducted by the AFSC in 2011, community leaders reported that the community also depends on commercial fishing. In 2000, the number of Napaskiak residents holding state Commercial Fisheries Entry Commission (CFEC) permits was equivalent

⁷⁹³ U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁷⁹⁴ Alaska Dept. of Natural Resources (n.d.) *Wood-Tikchik State Park*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

⁷⁹⁵ City of Bethel (2008). *Local Hazards Mitigation Plan*. Retrieved February 7, 2012 from http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Bethel_LHMP.pdf.

⁷⁹⁶ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁷⁹⁷ Unless otherwise noted, all monetary data are reported in nominal values.

⁷⁹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

to 11.5% of the total local population, declining to 8% by 2010 (see *Commercial Fishing* section). Community leaders reported that the local Chinook salmon fishery takes place between May and July, the chum salmon fishery between June and August, the sockeye salmon fishery between June and September, and the coho salmon fishery between August and September. They also indicated that recreational fishing is not an important sector in Napaskiak.

In addition to fishing, top employers in Napaskiak in 2010 included the school district, local city and tribal government offices, local and regional Native corporations and non-profit organizations, the Yukon Kuskokwim Health Corporation, the Kuskokwim-area Community Development Quota (CDQ) group (see *History and Evolution of Fisheries* section), the DEC's Village Safe Water program, and the Rural Alaska Community Action Program (RurAL CAP).⁷⁹⁹

Based on household surveys conducted for the 2006-2010 ACS,⁸⁰⁰ in 2010, the per capita income in Napaskiak was estimated to be \$15,263 and the median household income was estimated to be \$57,917. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$8,162 and \$31,806, respectively). This is true even when accounting for inflation by converting the 2000 values to 2010 dollars,⁸⁰¹ revealing the real per capita income in 2000 to be \$10,733 and the real median household income to be \$41,824. In 2010, Napaskiak ranked 202nd of 305 Alaskan communities with per capita income data that year, and 84th in median household income, out of 299 Alaskan communities with household income data.

However, Napaskiak's small population size may have prevented the ACS from accurately portraying economic conditions.⁸⁰² An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Napaskiak in 2010 is \$8,762.⁸⁰³ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Napaskiak between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,⁸⁰⁴ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based

⁷⁹⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸⁰⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸⁰¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸⁰² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸⁰³ See footnotes 799 and 800.

⁸⁰⁴ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

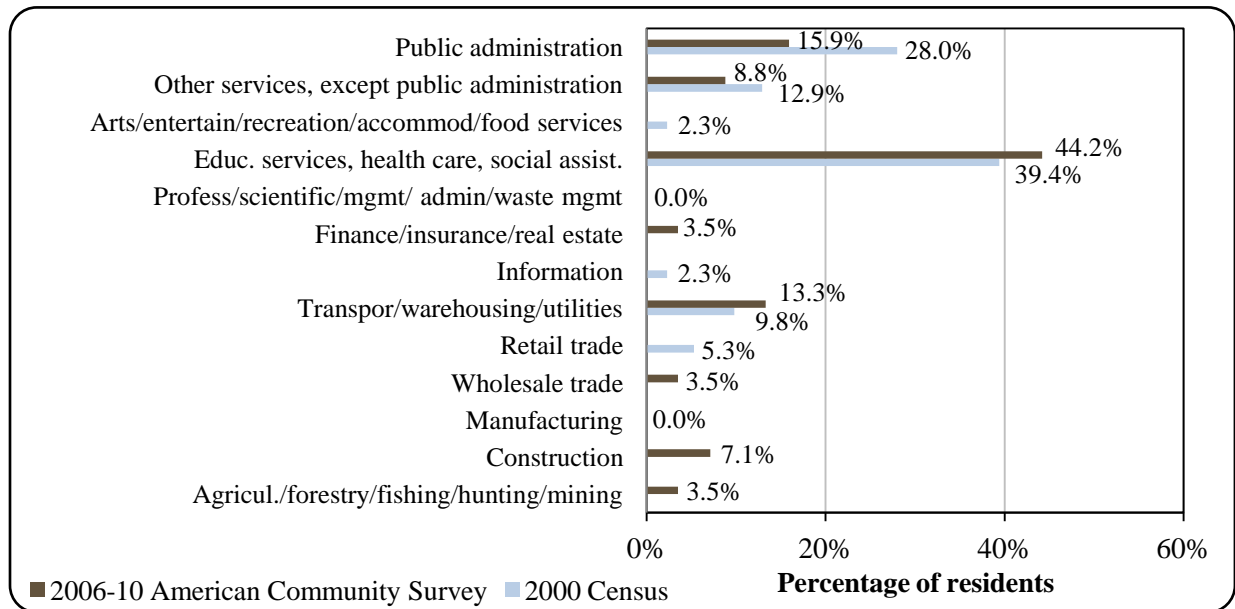
on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

In 2010, a lower percentage of Napaskiak residents were estimated to be in the civilian labor force (58.6%) than were in the civilian labor force statewide (68.8%). In the same year, 10.8% of local residents were estimated to be living below the poverty line, compared to a 9.5% of Alaska residents, and the unemployment rate was estimated to be 7.7%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Napaskiak in 2010 was 18.2%, compared to a statewide unemployment rate estimate of 11.5%.⁸⁰⁵

Also based on the 2006-2010 ACS, a majority of workers were estimated to be employed in the public sector (53.1%), and the remaining 46.9% in the private sector. Of the 113 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number were estimated to be working in the following industries: educational services, health care, and social assistance (44.2%), public administration (15.9%), and transportation, warehousing, and utilities (13.3%). Occupations in which the greatest percentages of the workforce were employed were management/professional (35.4%) and sales/office occupations (27.4%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

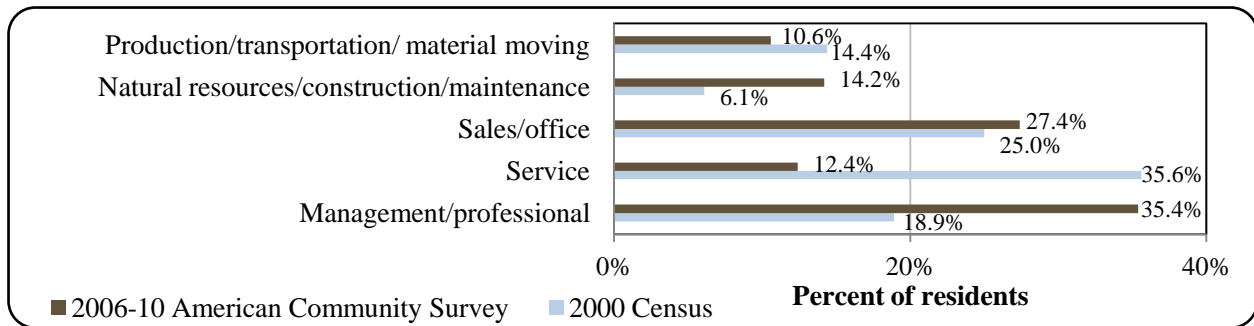
It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. In 2010, only 3.5% of the civilian labor force was estimated to be working in farming, fishing, and forestry-related industries and occupations. (Note that a breakdown of the natural resource/construction/maintenance occupation category reveals that 4 workers, or 3.5% of the total civilian labor force, were employed in farming, fishing, and forestry occupations).

Figure 3. Local Employment by Industry in 2000-2010, Napaskiak (U.S. Census).



⁸⁰⁵ See footnote 799.

Figure 4. Local eEmployment by Occupation in 2000-2010, Napaskiak (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 199 employed residents in Napaskiak in 2010, of which 50.8% were employed in local government, 13.1% in education and health services, 12.6% in financial activities, 5% in state government, 4% in trade, transportation, and utilities, 3% in manufacturing, 1% in natural resources and mining, 0.5% in information, 0.5% in leisure and hospitality, and 9.5% in other industries.⁸⁰⁶ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

Napaskiak is a 2nd Class City and is not part of an organized borough. The City was incorporated in 1971 and has a Strong Mayor form of government, which includes a seven-person city council, including the mayor, a nine-person advisory school board, and several municipal employees. As of 2010, the City of Napaskiak did not administer any local taxes.⁸⁰⁷ Local revenue sources during the 2000-2010 period included electric utility service fees, clinic lease payments from the Indian Health Service, and other building rentals. Outside revenue sources included state revenue sharing payments, including approximately \$25,000 per year from the State Revenue Sharing Program in the first part of the decade, and almost \$120,000 per year from the Community Revenue Sharing program in 2009 and 2010. The City also received revenue sharing from the federal Payment In Lieu of Taxes program in most years, as well as from state raw fish tax refund payments (see the *Fisheries-Related Revenue* section of this profile for more information). No state or federal fisheries-related grants were reported to contribute to city revenue between 2000 and 2010. Total municipal revenues were much higher in 2009 and 2010 than in previous years during the decade. According to Certified Financial Statements for these years, this was in primarily due to a jump in total local enterprise revenues. Information about selected aspects of Napaskiak’s municipal revenue is presented in Table 2.

⁸⁰⁶ Ibid.

⁸⁰⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Napaskiak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$189,739	n/a	\$26,943	n/a
2001	\$416,898	n/a	\$25,440	n/a
2002	\$416,342	n/a	\$26,950	n/a
2003	\$347,576	n/a	\$26,950	n/a
2004	\$394,901	n/a	\$26,108	n/a
2005	\$380,280	n/a	n/a	n/a
2006	\$59,181	n/a	n/a	n/a
2007	\$615,487	n/a	n/a	n/a
2008	\$183,486	n/a	n/a	n/a
2009	\$1,504,862	n/a	\$118,366	n/a
2010	\$1,212,520	n/a	\$118,191	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Napaskiak was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Napaskiak. The Native village corporation is Napaskiak, Incorporated, which manages 115,200 acres of land.⁸⁰⁸ Napaskiak belongs to the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.⁸⁰⁹

Napaskiak is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁸¹⁰ The AVCP is one of the 12

⁸⁰⁸ Ibid.

⁸⁰⁹ Calista Corporation website. *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

⁸¹⁰ Association of Village Council Presidents (n.d.). *AVCP homepage*. Retrieved December 6, 2011 from www.avcp.org.

regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁸¹¹ AVCP is made up of 56 villages and 45 village corporations.⁸¹²

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is located in Bethel and a main office is located in Anchorage. The nearest offices of the Alaska Department of Natural Resources and the U.S. Bureau of Citizenship and Immigration Services are also in Anchorage.

Infrastructure

Connectivity and Transportation

A state-owned 3,000-ft-long by 60-ft-wide gravel airstrip and seaplane landing area west of the village provide charter and general aviation access year-round.⁸¹³ Service from Bethel to Napaskiak is provided daily by Grant Aviation⁸¹⁴ and Yute Air.⁸¹⁵ Ryan Air Service also provides air freight delivery services three days per week.⁸¹⁶ The price of a roundtrip ticket between Bethel and Napaskiak on Grant Aviation or Yute Air as of March, 2012 was approximately \$160.^{817,818} The approximate cost to travel by air roundtrip to Anchorage from Bethel in early June 2012 was \$368.⁸¹⁹ Many residents have fishing boats, and skiffs are used in the summer for subsistence fishing and travel to Bethel and other nearby villages. Snow machines and ATVs are used in winter. Barges deliver goods during the summer months. In winter months the river is used as an ice road for travel to surrounding villages. A winter trail is marked along the River to Bethel.⁸²⁰

Facilities

Napaskiak's water system is operated by the Village Council. Water is derived from a well, filtered, and chlorinated. The school has its own well but needs a new water treatment system. Some households utilize a flush/haul service, while other residents haul treated water from one of two watering points. Occasional water shortages require residents to haul water from ponds or rivers or to collect rainwater. Some homes have tanks with running water for the kitchen, but very few have complete plumbing. The sewer system is also operated by the Village

⁸¹¹ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁸¹² Calista Corporation (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

⁸¹³ Ibid.

⁸¹⁴ Information retrieved from <http://www.flygrant.com/schedule-bethel.php#pka> on March 28, 2012.

⁸¹⁵ Information retrieved from <http://www.yuteair.net/Schedule.html> on March 28, 2012.

⁸¹⁶ Information retrieved from http://www.ryanalaska.com/servlet/content/flight_schedules.html on March 28, 2012.

⁸¹⁷ See footnote 814.

⁸¹⁸ Personal communication, Yute Air reservation agent, March 28, 2012.

⁸¹⁹ This price was calculated on November 21, 2011 using kayak.com.

⁸²⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Council. “Honeybuckets”⁸²¹ are utilized by a majority of residents. Honeybuckets are disposed of by residents in bunkers at various locations. Sewage is then pumped from the bunkers and transported to the sewage lagoon. Some households also use outhouses.⁸²² In a survey conducted by the AFSC in 2011, community leaders reported that work is under way to construct water and sewer pipelines.

The City of Napaskiak operates a landfill and provides refuse collection services. A diesel powerhouse provides electricity, operated by Napaskiak Electric Utility.⁸²³ Public safety services are provided by two VPSOs (Village Public Safety Officers).⁸²⁴ The nearest state trooper post is located in Bethel.⁸²⁵ A volunteer fire department is also present in the community. Facilities also include a holding cell, a city office building, a “washeteria”⁸²⁶ operated by the City, and a library at the school.⁸²⁷ In the 2011 AFSC survey, community leaders noted that Napaskiak has a U.S. post office. Telephone, cable, and broadband internet services are available in the Village.⁸²⁸

With regard to fisheries-related infrastructure, community leaders reported in the AFSC survey in 2011 that 1,000 ft of dock space is available for transient vessels to moor, but no dock space is available for public or permanent vessels. They also noted that boat fuel and tackle are available for sale in Napaskiak. They said that residents travel to Bethel to access fisheries-related businesses and services not available in Napaskiak.

Medical Services

A local health clinic is owned by the City and operated in conjunction with the Yukon-Kuskokwim Health Corporation. The Elena Alexis Memorial Clinic is a Community Health Aide Program site. Emergency Services have river and air access. Emergency service is provided by a health aide.⁸²⁹ The nearest hospital is located in Bethel.

Educational Opportunities

There is one school in the community, which offers preschool through 12th grade instruction. As of 2011, the Z. John Williams Memorial School had a total of 152 student and 11 teachers.⁸³⁰ In addition, RurAL CAP runs a Head Start program in Napaskiak that serves children aged 3 to 5 years.⁸³¹

⁸²¹ A “honeybucket” is an indoor bucket used as a toilet in houses without plumbing.

⁸²² See footnote 820.

⁸²³ Ibid.

⁸²⁴ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁸²⁵ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁸²⁶ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

⁸²⁷ See footnote 820.

⁸²⁸ Ibid.

⁸²⁹ Ibid.

⁸³⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁸³¹ Rural Alaska Community Action Program, Inc. (2011). *2010 Head Start Report*. Retrieved on December 20, 2011 from <http://www.ruralcap.com/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Napaskiak area for thousands of years.⁸³² Subsistence salmon harvest continues to be a primary economic activity along the Kuskokwim River.⁸³³ In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs is an important subsistence resource for coastal Alaskan communities.⁸³⁴

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels, and salmon prices decreased.⁸³⁵ A fishery disaster was declared in 2012, following severe declines in Chinook salmon returns on the Kuskokwim River, as well as to the Yukon River and Cook Inlet river systems. That year, commercial and subsistence fisheries on the Kuskokwim River were substantially restricted to meet Chinook conservation goals. ADF&G, the Alaska Board of Fisheries, and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundant species, including gear and other management restrictions.⁸³⁶

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gill net sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁸³⁷ Between 2000 and 2010, Napaskiak residents held permits in the Goodnews Bay and Nelson Island roe and food/bait herring fisheries. (For more information see the *Commercial Fisheries* section of this profile.)

Napaskiak is located in the Lower Kuskokwim salmon fishing district (District 1). The closest marine area to Napaskiak, Kuskokwim Bay, is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Napaskiak is a member of the Coastal Villages Region Fund (CVRF), a CDQ

⁸³² Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁸³³ See footnote 820.

⁸³⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁸³⁵ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). Kuskokwim Commercial Salmon Fishery. In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁸³⁶ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalChinookdisaster>.

⁸³⁷ See footnote 834.

group that promotes employment opportunities for residents, as well as participation in the Bering Sea crab and groundfish fisheries.⁸³⁸ Napaskiak is not eligible to participate in the Community Quota Entity (CQE) program.

In a survey conducted by the AFSC in 2011, community leaders noted local concern about ineffective salmon bycatch management in ocean fisheries. They also indicated that rising fuel prices present a challenge to the local fishing economy, and local fishermen are negatively impacted by increasing regulation of local fisheries and subsistence closures.

Processing Plants

The 2010 ADF&G Intent to Operate list does not list a registered processing plant in Napaskiak. The 2010 Intent to Operate list does list a small processing facility in nearby Bethel. The plant, run by Kuskokwim Seafoods LLC, was started in 2010 to provide a market to local salmon fishers to help them sell their catch closer to home. Kuskokwim Seafoods processes four salmon species: Chinook, sockeye, chum, and coho.⁸³⁹ As of 2012, Coastal Village Seafoods, a subsidiary of CVRF, also operated a fish-buying operation along the Kuskokwim, with a tender often located at Napaskiak.⁸⁴⁰

Fisheries-Related Revenue

According to information provided in Napaskiak's annual municipal budget between 2000 and 2010, fisheries-related revenue sources in the community included a raw fish tax and Shared Fisheries Business Tax. The City also received funding from the Fisheries Resource Landing tax in one year during the 2000-2010 period. In 2010, Napaskiak received \$107 from the Shared Fisheries Business Tax and \$120 from the Fisheries Resource Landing tax, and no revenue was reported from a raw fish tax. Information about selected fisheries-related revenue sources is presented in Table 3.⁸⁴¹

It is also important to note that CVRF uses fisheries revenue from the CDQ program to provide grants, scholarships and training, and other financial assistance to fishermen and residents of member villages.⁸⁴² In a survey conducted by the AFSC in 2011, community leaders reported that Napaskiak received funding or grants from CVRF in 2010. However, the amount of funding or grants was not reported.

Commercial Fishing

Between 2000 and 2010, Napaskiak residents participated in commercial fisheries as crew members, vessel owners, and permit and quota share account holders. In 2010, there were 36 Napaskiak residents holding a total of 35 Commercial Fisheries Entry Commission (CFEC)

⁸³⁸ Coastal Villages Region Fund (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

⁸³⁹ Kuskokwim Seafoods LLC. (n.d.). *Homepage*. Retrieved August 2011 from <http://kuskokwimseafoods.com/>.

⁸⁴⁰ Personal communication, Nick Souza, Coastal Village Seafoods, April 27, 2012.

⁸⁴¹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

⁸⁴² Coastal Villages Region Fund website. (n.d.). *Home page*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

permits, including 33 salmon permits and 2 herring permits. That year, 1 salmon permit was held in the Bristol Bay drift gill net fishery, and the remaining 32 were held in the Kuskokwim gill net fishery. One of the 2010 herring permits was held in the Goodnews Bay roe and food/bait gill net fishery, and the other was held in the Nelson Island roe and food/bait gill net fishery. In 2010, 74% of salmon permits and 0% of herring permits were actively fished. It is important to note that one salmon permit was also held from 2000 to 2004 in the statewide power gurdy troll fishery, and was actively fished from 2000 to 2002. Earlier in the 2000-2010 period, Napaskiak residents also held herring permits in the Cape Avinof roe herring fishery (2000-2005). One of seven Cape Avinof herring permits was actively fished in 2000.

In addition to salmon and herring fisheries, several Napaskiak residents also held CFEC halibut permits in some years between 2000 and 2010, with a peak of three halibut permits held in 2005. That year, two of the halibut permits were held in the statewide hand-troll halibut fishery and one was held in the statewide longline vessel under 60 ft fishery. Two out of three halibut permits were actively fished in 2005. No halibut permits were held by Napaskiak residents in 2010 (Table 4).

Salmon CFEC permit numbers were relatively stable between 2000 and 2010, although the number of permits fished declined by over a third between 2000 and the middle of the decade, then rebounded by 2009 and 2010. The number of herring permits held and actively fished declined over the decade. Nine herring permits were held in 2000, declining to two by 2010. One herring permit was actively fished in the year 2000, but no herring permits were fished by Napaskiak residents from 2001 to 2010. Halibut permits were held in 2000 and 2001 and again between 2003 and 2007. There were 4 years between 2000 and 2007 in which at least one halibut permit was actively fished (Table 4).

Between 2000 and 2010, no Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were held by Napaskiak residents. During the same period, 103 quota shares were consistently held by Napaskiak residents in the federal halibut catch share fishery, although no quota share account holders were reported. No Napaskiak residents held quota share accounts or quota shares in federal sablefish or crab catch share fisheries between 2000 and 2010. Information about state and federal fisheries permits held by Napaskiak residents is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

In 2010, a total of 22 Napaskiak residents held commercial crew licenses and 3 fishing vessels were primarily owned by Napaskiak residents. The number of crew license holders fluctuated during the decade, with a low of 14 in 2002 and a high of 30 in 2000. The number of vessels owned by Napaskiak residents in 2010 (3) represents a substantial decline from the year 2000, when 13 vessels were owned. The number of vessels homeported in Napaskiak also declined over the period, from eight in 2000 to only one in the middle of the decade, and two between 2007 and 2010. According to a survey conducted by the AFSC in 2011, community leaders indicated that the only vessels using Napaskiak as a base of operations during the fishing season were gill net boats under 35 ft in length. Information about the commercial fishing sector in Napaskiak is presented in Table 5.

No fish buyers or shore-side processors were present in Napaskiak between 2000 and 2010 (Table 5), and no local landings or ex-vessel revenue were recorded during the period (Table 9). Information about landings and ex-vessel revenue generated by vessels owned by Napaskiak residents is considered confidential between 2000 and 2010 due to the small number of participants. This information is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Napaskiak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$250	\$674	\$300	\$325	\$134	n/a	n/a	\$365	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$674	\$533	\$103	\$134	\$108	\$270	\$312	\$164	\$122	\$100	\$107
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	120
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$924	\$1,207	\$403	\$459	\$242	\$270	\$312	\$529	\$122	\$100	\$226
Total municipal revenue⁵	\$431,342	\$192,405	\$275,304	\$275,835	\$362,862	\$393,649	\$380,978	\$615,487	\$778,069	\$751,094	\$1,455,023

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Napaskiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	1	0	1	1	3	2	1	0	0	0
	Fished permits	1	0	0	0	0	2	2	1	0	0	0
	% of permits fished	100%	0%	-	0%	0%	67%	100%	100%	-	-	-
	Total permit holders	1	1	0	1	1	3	2	1	0	0	0
Herring (CFEC) ²	Total permits	9	7	5	5	3	3	2	2	2	2	2
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	9	7	5	5	3	3	2	3	2	2	2

Table 4 cont'd. Permits and Permit Holders by Species, Napaskiak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	38	38	38	38	34	34	33	34	33	34	33
	Fished permits	30	24	18	22	18	19	20	20	20	25	26
	% of permits fished	79%	63%	47%	58%	53%	56%	61%	59%	61%	74%	79%
	Total permit holders	39	39	38	40	34	35	34	35	34	34	35
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>48</i>	<i>46</i>	<i>43</i>	<i>44</i>	<i>38</i>	<i>40</i>	<i>37</i>	<i>37</i>	<i>35</i>	<i>36</i>	<i>35</i>
	<i>Fished permits</i>	<i>32</i>	<i>24</i>	<i>18</i>	<i>22</i>	<i>18</i>	<i>21</i>	<i>22</i>	<i>21</i>	<i>20</i>	<i>25</i>	<i>26</i>
	<i>% of permits fished</i>	<i>67%</i>	<i>52%</i>	<i>42%</i>	<i>50%</i>	<i>47%</i>	<i>53%</i>	<i>59%</i>	<i>57%</i>	<i>57%</i>	<i>69%</i>	<i>74%</i>
	<i>Permit holders</i>	<i>45</i>	<i>41</i>	<i>39</i>	<i>41</i>	<i>35</i>	<i>38</i>	<i>37</i>	<i>36</i>	<i>35</i>	<i>35</i>	<i>36</i>

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Napaskiak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Napaskiak ²	Total Net Lb Landed In Napaskiak ^{2,5}	Total Ex-Vessel Value Of Landings In Napaskiak ^{2,5}
2000	30	0	0	13	8	0	0	\$0
2001	20	0	0	10	6	0	0	\$0
2002	14	0	0	7	3	0	0	\$0
2003	17	0	0	6	2	0	0	\$0
2004	18	0	0	5	1	0	0	\$0
2005	16	0	0	6	1	0	0	\$0
2006	15	0	0	6	1	0	0	\$0
2007	19	0	0	4	2	0	0	\$0
2008	20	0	0	4	2	0	0	\$0
2009	24	0	0	4	2	0	0	\$0
2010	22	0	0	3	2	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Napaskiak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	n/a	103	n/a
2001	n/a	103	n/a
2002	n/a	103	n/a
2003	n/a	103	n/a
2004	n/a	103	n/a
2005	n/a	103	n/a
2006	n/a	103	n/a
2007	n/a	103	n/a
2008	n/a	103	n/a
2009	n/a	103	n/a
2010	n/a	103	n/a

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Napaskiak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Napaskiak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Napaskiak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Napaskiak Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to a survey conducted by the AFSC in 2011, community leaders indicated that very little sportfishing takes place in Napaskiak. No active sport fish guide businesses were present in Napaskiak between 2000 and 2010, and no licensed sport fish guides resided in the community. However, some residents of Napaskiak did participate in sportfishing. Between 2000 and 2010, the number of Napaskiak residents that purchased sportfishing licenses varied between 17 and 93 per year. No sportfishing licenses were sold in the City of Napaskiak. According to the 2011 AFSC survey, community leaders noted that fishing tackle was available for purchase in the community, but licenses and other gear must be purchased elsewhere. The Alaska Statewide Harvest Survey,⁸⁴³ conducted by ADF&G between 2000 and 2010, noted the following species as targeted by private anglers in Napaskiak: coho salmon in freshwater and Pacific halibut in saltwater. Given the lack of charter businesses, no kept/release log book data were reported for fishing charters out of Napaskiak between 2000 and 2010.⁸⁴⁴

Napaskiak is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 28 non-Alaska resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Napaskiak is displayed in Table 11.

Table 11. Sport Fishing Trends, Napaskiak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Napaskiak ²
2000	0	0	17	0
2001	0	0	60	0
2002	0	0	58	0
2003	0	0	70	0
2004	0	0	60	0
2005	0	0	67	0
2006	0	0	46	0
2007	0	0	42	0
2008	0	0	73	0
2009	0	0	72	0
2010	0	0	93	0

⁸⁴³ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁸⁴⁴ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Napaskiak: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Almost all families in Napaskiak engage in subsistence and hunting activities in combination with employment in commercial fishing, at the school, and at local businesses.⁸⁴⁵ In a survey conducted by the AFSC in 2011, Napaskiak community leaders said that all five salmon species and seal are some of the most important marine subsistence resources utilized by local residents.

No information is available from ADF&G regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, data are available from 2000 to 2008 regarding subsistence salmon permits. During this period, between 79 and 103 households per year in Napaskiak were issued subsistence salmon permits. Chinook were the most heavily harvested salmon species over time, followed by chum and sockeye, and several dozen pink salmon in some years. No information was reported regarding subsistence harvest of marine invertebrates and non-salmon fish (not including halibut). Information about subsistence salmon permits, marine invertebrates, and non-salmon fish is presented in Table 13.

⁸⁴⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

No information was reported by management agencies regarding participation by Napaskiak residents in the Subsistence Halibut Registration Certificate (SHARC) program (Table 14) or subsistence harvest of marine mammals between 2000 and 2010 (Table 15).

Although very little information was available regarding subsistence activities in Napaskiak in recent decades, a study was conducted in the nearby village of Kwethluk in 1986. The study found that, in addition to salmon, residents harvested the following fish species: whitefish, Dolly Varden char, Arctic grayling, smelt, blackfish, rainbow trout, northern pike, burbot, and sheefish. Kwethluk residents also harvested several marine mammal species, including spotted seal, bearded seal, ringed seal, and walrus. These resources were shared between households and between communities, including Napaskiak. Resources specifically noted as received from Napaskiak residents to Kwethluk included whitefish, bearded seal, walrus, and seal oil, while cranberries and brown bear were gifted from Kwethluk residents to Napaskiak.⁸⁴⁶

Table 12. Subsistence Participation by Household and Species, Napaskiak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁸⁴⁶ Coffing, M. 1991. Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of a Lower Kuskokwim River Area Community. Alaska Dept. of Fish and Game, Technical Paper No. 157. Retrieved December 30, 2011 from <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Napaskiak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	79	71	4,309	2,848	889	n/a	2,611	n/a	n/a
2001	86	80	4,662	2,399	466	n/a	3,428	n/a	n/a
2002	83	60	3,856	3,720	716	n/a	1,292	n/a	n/a
2003	88	59	5,012	2,893	1,522	n/a	2,420	n/a	n/a
2004	85	52	3,220	2,569	613	n/a	883	n/a	n/a
2005	89	56	4,262	1,931	598	35	1,286	n/a	n/a
2006	95	52	3,983	2,989	1,171	21	1,170	n/a	n/a
2007	90	47	4,965	2,489	521	n/a	1,346	n/a	n/a
2008	103	29	7,703	4,737	884	n/a	4,020	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Napaskiak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Napaskiak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Newtok (NOO-tock)



People and Place

Location

Newtok is located on the Ninglick River, north of Nelson Island in the Yukon-Kuskokwim Delta. It is located 94 miles northwest of Bethel, in the Bethel Census Area and Bethel Recording District. The community encompasses 6.1 square miles of land and 2.3 square miles of water.⁸⁴⁷ As a result of progressing erosion problems, the Newtok Traditional Council is in the process of relocating the Village to a new location on the end of Nelson Island. The new site is called Mertarvik.⁸⁴⁸

*Demographic Profile*⁸⁴⁹

In 2010, there were 354 inhabitants in Newtok, making it the 148th largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in U.S. Census records in the 1950s with 69 inhabitants. Overall between 1990 and 2010, the population of Newtok increased by 71%. A majority of this growth occurred between 1990 and 2000, although the population continued to increase after 2000. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 10.6%, with an average annual growth rate of 0.79%.

In 2010, a majority of Newtok residents identified themselves as American Indian and Alaska Native (96%), while 2.8% identified as White, 0.3% as Asian, and 0.8% identified with two or more races. Also in 2010, 0.3% of Newtok residents identified themselves as Hispanic. Those who identified themselves as White made up 0.3% less of the population in 2010 compared to 2000, those identifying as American Indian and Alaska Natives in 2010 made up 0.7% more of the population, and those identifying with two or more races decreased by 0.8% over the decade. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010 the average household size in Newtok was 5.06, a decrease from 5.96 persons per household in 2000, but an overall slight increase from 4.9 in 1990. The total number of households in Newtok increased from 42 in 1990 to 63 in 2000, and 70 occupied housing units in 2010. Of the 72 housing units surveyed for the 2010 U.S. Census, 81.9% were owner-occupied, 15.3% were renter-occupied, and only 2.7% were vacant or used only seasonally. Between 1990 and 2010, no residents of Newtok lived in group quarters.

⁸⁴⁷ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁴⁸ Climate Adaptation Knowledge Exchange (CAKE) (2011). *Relocating the Village of Newtok, Alaska due to Coastal Erosion*. Retrieved January 19, 2012 from <http://www.cakex.org>.

⁸⁴⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

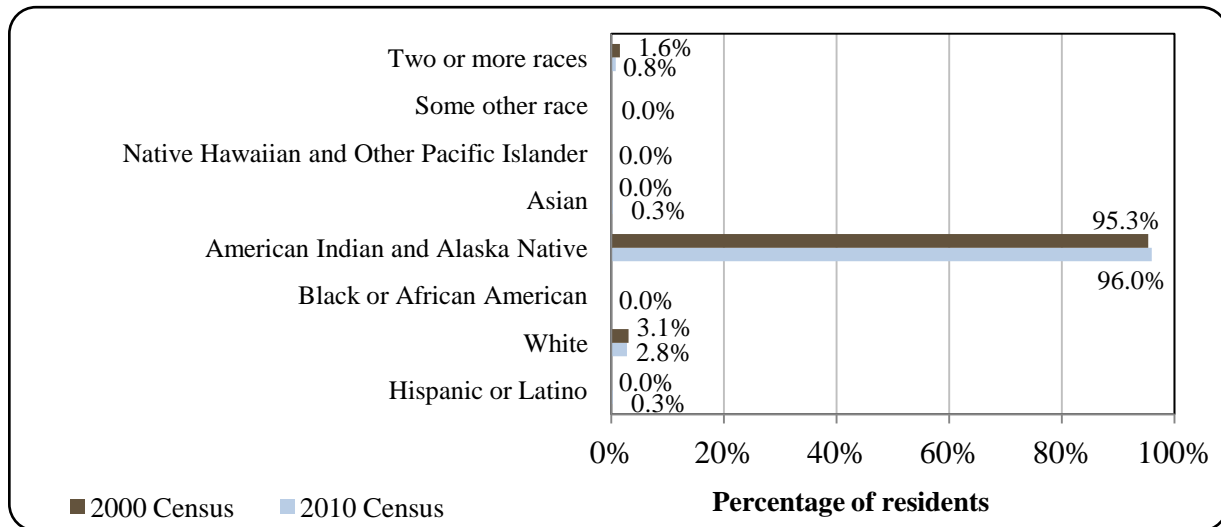
Table 1. Population in Newtok from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	207	-
2000	321	-
2001	-	321
2002	-	326
2003	-	330
2004	-	309
2005	-	315
2006	-	336
2007	-	352
2008	-	357
2009	-	355
2010	354	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Newtok: 2000-2010 (U.S. Census).

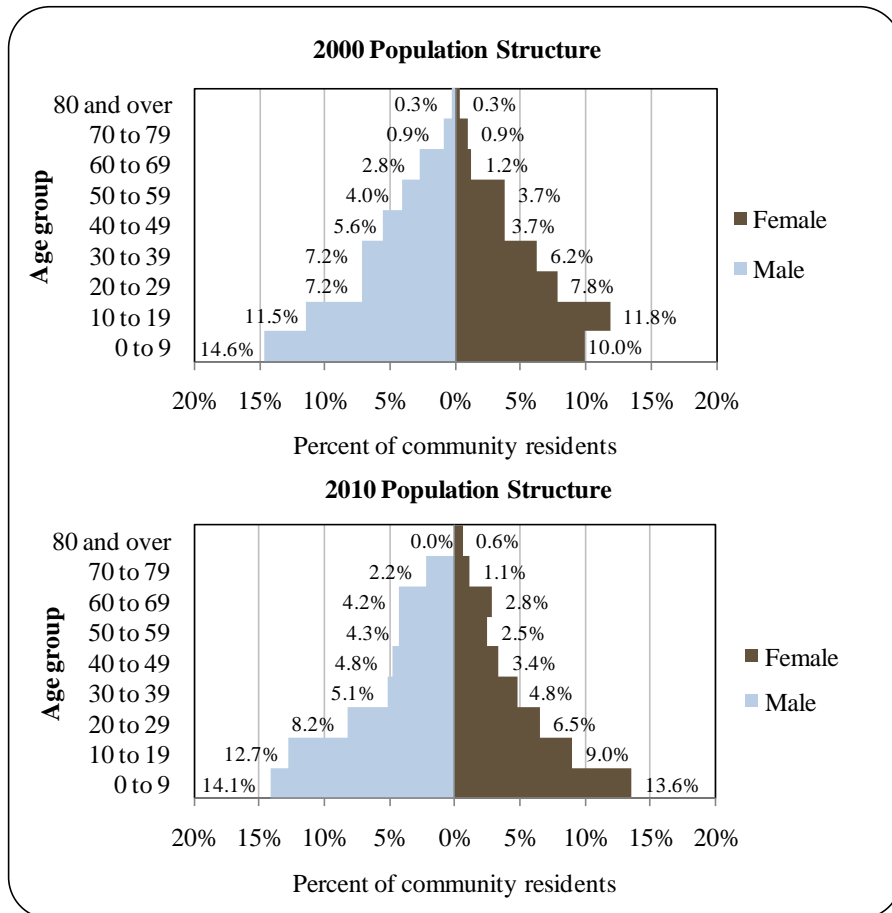


In 2010, the gender makeup in Newtok was 55.6% male and 44.4% female, even more skewed toward males than the population of Alaska as a whole in 2010, which was 52% male and 48% female. The median age in Newtok was 20.4 years in 2010, much lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The age of residents between 2000 and 2010 was highly biased towards people under the age of 20. In 2010, there were more males than females in all age groups, except 80 and over. In 2010, 11% of Newtok

residents were age 60 or older in 2010. The overall population structure of Newtok in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁸⁵⁰ 73.6% of Newtok residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 18.2% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 8.2% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 13.2% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 0% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 6.3% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 4.4% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Newtok Based on the 2000 and 2010 U.S. Decennial Census.



⁸⁵⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Newtok is a Yup'ik Eskimo village. Indigenous people have lived on the Bering Sea coast for at least 2,000 years. The people of Newtok and Nelson Island are known as *Qaluyaarmiut*, or “dip net people”. The name Newtok (*Niugtag* in Yup'ik) means “rustling of grass”, appropriate for a village located on a sweeping bend of the Ninglick River.⁸⁵¹

In 1841-1842, a Russian naval officer, Lieutenant Lavrenty Zagoskin, was the first to explore the lower Yukon and briefly came into contact with the Qaluyaarmiut.⁸⁵² Russian Orthodox missionaries established a mission on the Yukon River in 1845, and Moravian missionaries arrived in Bethel in 1885.⁸⁵³ Contact with outside people and customs became more consistent during the 1950s, when the Territorial Guard began sending volunteers to Bethel for 2 weeks of training each year. During this period, the indigenous population was exposed to disease, and tuberculosis became a major health problem in the area.⁸⁵⁴

Newtok was first reported in 1949 by the U.S. Geologic Survey after residents of Old Kealavik, a site across the river, relocated to Newtok to escape seasonal flooding.⁸⁵⁵ A school was built in Newtok in 1958, serving students through middle school. High school students were required to travel to Bethel, St. Mary's, Sitka, Anchorage, or the Lower 48 to continue their educations until a high school was constructed in Toksook Bay in 1976.^{856,857} The City of Newtok was incorporated in 1976, although it was later dissolved in 1997 in favor of the traditional council government.⁸⁵⁸ Until the 1960s, Newtok had remained primarily a winter camp for residents. Starting in the 1970s, with the addition of a school, clinic, airstrip, and modern housing, Newtok's population remained in the village year-round.⁸⁵⁹ Relative isolation from outside influences has allowed Newtok to retain traditions and customs to a greater degree than in other parts of Alaska. Residents of the Village have an active subsistence lifestyle. The sale and importation of alcohol is banned in the village.⁸⁶⁰

Due to severe erosion of river and ocean shorelines in Newtok, in 1994 community leaders began considering Village relocation, and by 1996 they had selected a new site on Nelson Island, called Mertaryik, located 5 miles from the current Village. The name means “getting water from the spring” in Yup'ik. An agreement was negotiated in 2003 with the U.S. Fish and Wildlife Service (FWS) to exchange land at the new site, which was part of the Yukon Delta National Wildlife Refuge (NWR).

⁸⁵¹ Newtok Planning Group (n.d.). *A Brief History of the Settlement of Newtok and Village Relocation Efforts*. Retrieved January 19, 2012 from http://commerce.alaska.gov/dca/planning/pub/Newtok_History1.pdf.

⁸⁵² Ibid.

⁸⁵³ Fienup-Riordan, A.1994. *Boundaries and Passages: Rule and Ritual in Yup'ik Eskimo Oral Tradition*. Norman: University of Oklahoma Press.

⁸⁵⁴ See footnote 851.

⁸⁵⁵ Ibid.

⁸⁵⁶ Ibid.

⁸⁵⁷ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁵⁸ Ibid.

⁸⁵⁹ See footnote 851.

⁸⁶⁰ See footnote 857.

Natural Resources and Environment

Newtok is located in a marine climate zone. Average annual precipitation is 17 inches, and snowfall averages 22 inches per year. Temperatures range between 42 and 59 °F in the summer, and 2 and 19 °F in the winter.⁸⁶¹

The community of Newtok is within the boundaries of the Yukon Delta NWR. The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” NWR lands are open to sport and subsistence hunting and fishing. The most productive wildlife habitat is the coastal region between the Newtok area and the Askinuk Mountains to the north. Nelson Island is the second largest island within the boundaries of the NWR. The southern portion of the island is low-lying and covered with small lakes and streams, while the northern portion, near the new village site, hosts more rugged terrain, with several peaks over 1,300 feet in elevation. The Bering Sea coast at Newtok is characterized by sandy beaches that merge into active sand dunes greater than 100 feet in height. The dunes are particularly susceptible to erosion.⁸⁶²

Erosion and flooding threats from both coastal and river shorelines are the primary cause of Newtok relocation efforts. Erosion rates have been exacerbated by thawing permafrost, declining sea ice protection, increased storm surge exposure and increasing temperatures.⁸⁶³ Erosion rates on the Ninglick River averaged 68 feet per year between 1954 and 2003, with a total loss of approximately 3,320 linear feet of land in front of the village. Erosion rates are expected to increase due to the effects of climate change, as sea level rises and offshore ice pack retreats. Newtok is also susceptible to tundra fire, severe weather and earthquake hazards.⁸⁶⁴

The Alaska Department of Environmental Conservation (DEC) did not list active environmental cleanup sites located in Newtok as of May 2012.⁸⁶⁵

Current Economy⁸⁶⁶

Employment in Newtok is provided by the school, clinic, village services, and commercial fishing.^{867,868} Between 2000 and 2010, Newtok residents were most active in fisheries for halibut and herring, as well as some activity in salmon fisheries. The number of Newtok residents holding state Commercial Fisheries Entry Permits (CFEC) was equivalent to

⁸⁶¹ Ibid.

⁸⁶² U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge website*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁸⁶³ Climate Adaptation Knowledge Exchange (CAKE) (2011). *Relocating the Village of Newtok, Alaska due to Coastal Erosion*. Retrieved January 19, 2012 from <http://www.cakex.org>.

⁸⁶⁴ Village of Newtok. (2008). *Local Hazards Mitigation Plan*. Retrieved January 19, 2012 from http://www.dced.state.ak.us/dca/planning/pub/Newtok_HMP.pdf.

⁸⁶⁵ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁸⁶⁶ Unless otherwise noted, all monetary data are reported in nominal values.

⁸⁶⁷ See footnote 857.

⁸⁶⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

9% of the total local population in 2000, declining to 6% by 2010. In 2000, the number of crew license holders and fishing vessel owners were each equivalent to 9% of the local population, declining to just over 2% each by 2010 (see *Commercial Fishing* section). Subsistence fishing and trapping activities supplement income.⁸⁶⁹

Based on household surveys conducted for the 2006-2010 ACS,⁸⁷⁰ in 2010, the per capita income in Newtok was estimated to be \$9,128 and the median household income was estimated to be \$40,000. This represents an increase in the median household income reported in the year 2000 (\$32,188), and a slight decrease reported per capita income in 2000 (\$9,514). If inflation is taken into account by converting 2000 values to 2010 dollars,⁸⁷¹ both per capita income and median household income in 2010 are revealed to have decreased from real 2000 income levels (real per capita of \$12,511 and real median household income of \$42,511). In 2010, Newtok ranked 285th of 305 Alaskan communities with per capita income data that year, and 189th in median household income, out of 299 Alaskan communities with household income data.

Although Newtok's small population size may have prevented the ACS from accurately portraying economic conditions,⁸⁷² additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Newtok in 2010 is \$5,301.⁸⁷³ This decline in income between 2000 and 2010 is reflected in the fact that the community was recognized as "distressed" by the Denali Commission,⁸⁷⁴ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2000-2010 ACS, in 2010, 53.2% of residents aged 16 or older were estimated to be in the civilian labor force, compared to 68.8% in the civilian labor force statewide. In the same year, 22.8% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 5.1%, compared to a statewide unemployment rate of 5.9%. An alternative estimate of unemployment is based on the ALARI database, which indicates that the 2010 unemployment rate in Newtok was 13.4%, compared to a statewide unemployment rate estimate of 11.5%.⁸⁷⁵

⁸⁶⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁷⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸⁷¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸⁷² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸⁷³ See footnotes 868 and 870.

⁸⁷⁴ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁸⁷⁵ See footnote 868.

Also based on the 2006-2010 ACS, 63.5% of the Newtok workforce was estimated to be employed in the public sector, along with 36.5% in the private sector. Of the 104 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number were estimated to be working in educational services, health care, and social assistance (51%), retail trade (20.2%), and public administration (15.4%). Only 2.9% of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Newtok (U.S. Census).

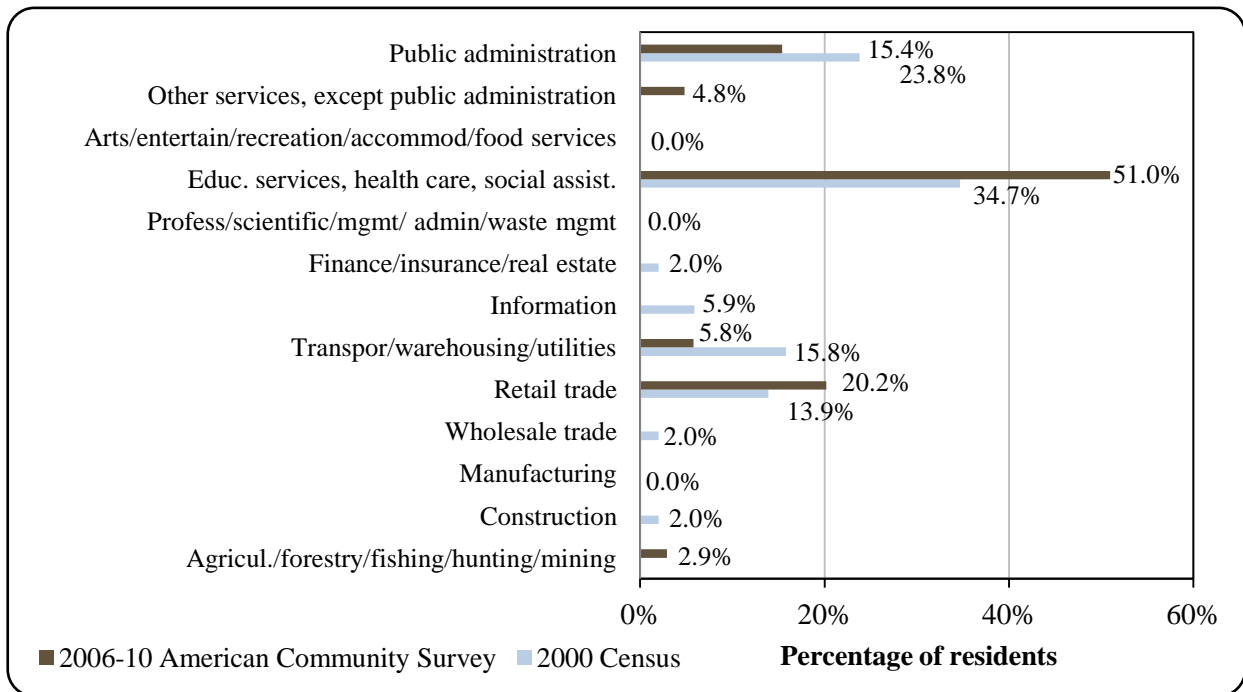
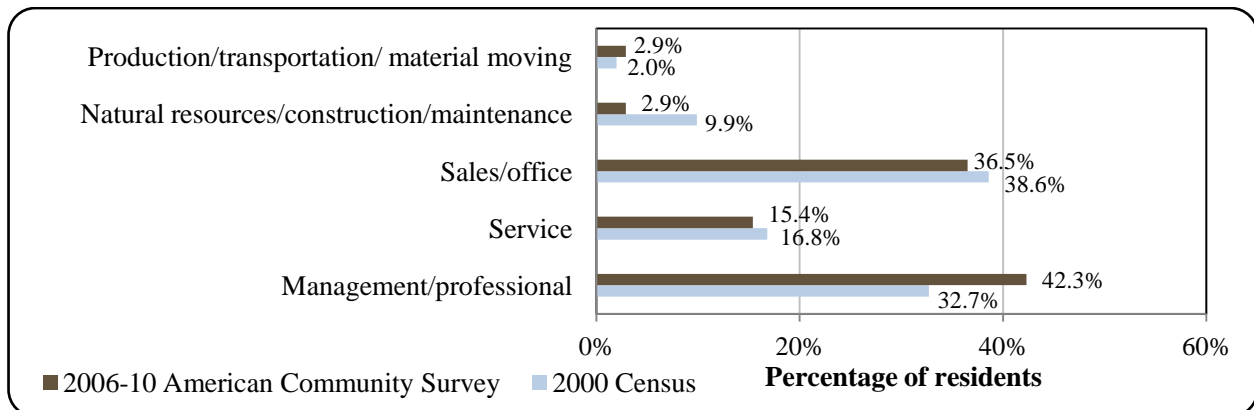


Figure 4. Local Employment by Occupation in 2000-2010, Newtok (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 158 employed residents in Newtok in 2010, of which 59.5% were employed in local government, 16.5% in trade, transportation, and utilities, 10.8% in manufacturing, 4.4% in financial activities, 4.4% in education and health services, 1.3% in natural resources and mining, 1.3% in information, 0.6% in professional and business services, 0.6% in leisure and hospitality, and 0.6% in other industries.⁸⁷⁶ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Governance

Newtok is an unincorporated community and is not located in an organized borough. A city government incorporated in 1976, but was dissolved in 1997 in favor of the traditional village council government. Newtok does not have any taxing authority, and no information was available about municipal revenue between 2000 and 2010. The community did receive \$3,000-\$4,000 per year in State Revenue Sharing contributions between 2000 and 2003. In addition, the Newtok Village Council received \$800,000 for construction of a barge ramp, dock and staging facilities in 2006 from the Economic Development Association. Construction began in 2008. This infrastructure is primarily intended to support relocation efforts.⁸⁷⁷ Information about selected aspects of Newtok's community revenue sources is presented in Table 2.

Although not reflected in Table 2 as it is not a fisheries-related grant, it is important to note that the Village also received a grant from the Denali Commission to develop a community, water and sewage layout plan for the new village site. As of 2012, construction of homes at the new site was scheduled to be underway.⁸⁷⁸

Newtok was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is Newtok Village. The Native village corporation is Newtok Native Corporation, which manages 96,160 acres of land. The regional Native corporation to which Newtok belongs is the Calista Corporation.⁸⁷⁹

Newtok is also a member of the Association of Village Council Presidents (AVCP), a tribal non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to "promote tribal self-determination and self-governance and to work to protect tribal culture and traditions."⁸⁸⁰ The AVCP is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad

⁸⁷⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸⁷⁷ Climate Adaptation Knowledge Exchange (CAKE) (2011). *Relocating the Village of Newtok, Alaska due to Coastal Erosion*. Retrieved January 19, 2012 from <http://www.cakex.org>.

⁸⁷⁸ Ibid.

⁸⁷⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁸⁰ Association of Village Council Presidents (n.d.). *AVCP homepage*. Retrieved December 6, 2011 from www.avcp.org.

range of services to villages in their regions.⁸⁸¹ AVCP is made up of 56 villages and 45 village corporations.⁸⁸²

The nearest offices of Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community, and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Newtok From 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	\$800,000
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

⁸⁸¹ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁸⁸² Calista Corporation (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

Infrastructure

Connectivity and Transportation

Newtok is not connected to the rest of Alaska by road, and is primarily accessible by air or water. A state-owned, 2,202 feet long by 35 feet wide gravel airstrip provides air access.⁸⁸³ Era Aviation provides scheduled commercial service to Newtok. The price of a roundtrip ticket from Newtok to Anchorage in early June of 2012 was \$726.⁸⁸⁴ A seaplane base is also available. Boats, skiffs, and snowmobiles are used for local transportation and subsistence activities. Winter snowmobile trails are marked to nearby villages of Chevak, Tununak, Toksook Bay, Nightmute, and Manaryarapiaq. Barges deliver cargo to Newtok during ice-free summer months.⁸⁸⁵

Facilities

A diesel power plant, owned by Ungusrag Power Company and operated by the Village Council, provides electricity to Newtok. Water is pumped from a lake into a water treatment plant. Houses are not plumbed, so individuals haul water from a storage tank that serves as a central watering point. There is also a community well source, and some individuals have wells as well. The Village Council operates a washeteria. Honeybuckets are in use throughout the Village, and a sewage lagoon is used for sewage treatment. Refuse collection services are provided by the Village Council. A landfill is available, although the Department of Transportation (DOT) has determined that it is located too close to the airport. No police are stationed in Newtok.⁸⁸⁶ The nearest state trooper posts are in Bethel, St. Mary's, and Emmonak,⁸⁸⁷ and the nearest Village Public Safety Officers (VPSO) are stationed in Chevak, Nunapitchuk, and Toksook Bay.⁸⁸⁸ Fire/rescue services in Newtok are provided by a volunteer fire department. Other community facilities include a Community Hall. The school allows public use of its library. Internet and telephone service is available in Newtok, but there is no cable provider. The community is in the process of relocating and rebuilding facilities at a site on Nelson Island.⁸⁸⁹

Medical Services

The local health clinic, the Manguan Health Clinic, is operated by the Yukon-Kuskokwim Health Corporation. The Clinic is a Community Health Aide Program site.

⁸⁸³ Ibid.

⁸⁸⁴ These prices were calculated on November 21, 2011 using kayak.com.

⁸⁸⁵ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁸⁶ Ibid.

⁸⁸⁷ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁸⁸⁸ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁸⁸⁹ See footnote 885.

Emergency Services have coastal and air access. Emergency services are provided by a health aide.⁸⁹⁰ The nearest hospital is located in Bethel.

Educational Opportunities

Newtok has one school, Ayaprun School, which offers a pre-school through 12th grade education. As of 2011, there were 8 teachers and 137 students attending the school.⁸⁹¹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Harvest of marine resources has been important to residents of the Newtok area since prehistory. Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁸⁹² Subsistence fishing and hunting continue to be an important supplement to cash employment for Newtok residents.⁸⁹³ Between 2000 and 2010, residents of Newtok were involved in commercial fisheries for herring, halibut, and salmon (Table 4).

Newtok is located near the Kuskokwim River. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.⁸⁹⁴ However, the salmon resource is not as easily accessible for communities along the Bering Sea coast as in other regions of Alaska.⁸⁹⁵

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. There are six commercial gillnet sac roe districts along the Yukon/Kuskokwim coast, including Nelson Island and Nunivak Island. However, harvests of herring have been declining in this region in recent years, in part due to lack of processing capacity in the area. A significant subsistence herring harvest also occurs at Nelson Island.⁸⁹⁶

⁸⁹⁰ Ibid.

⁸⁹¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁸⁹² Alaska Native Heritage Center (n.d.) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁸⁹³ See footnote 885.

⁸⁹⁴ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). Kuskokwim Commercial Salmon Fishery. In: *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁸⁹⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁸⁹⁶ Ibid.

Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁸⁹⁷ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

Newtok is located on the Ninglick River in the Yukon-Kuskokwim Delta. The coastal area adjacent to Newtok is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Newtok is a member of the Coastal Villages Region Fund (CVRF), a Community Development Quota (CDQ) group that promotes employment opportunities for residents as well as participation in the Bering Sea crab and groundfish fisheries.⁸⁹⁸ The Village is not eligible to participate in the Community Quota Entity program.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Newtok. However, according to the list, Coastal Villages Seafood, LLC, a subsidiary of CVRF, currently operates processing facilities in several nearby villages, including Mekoryuk, Hooper Bay, Kipnuk, and Quinhagak.

Fisheries-Related Revenue

No data were reported about fishing-related revenue received by the community of Newtok from municipal, state, or federal sources between 2000 and 2010 (Table 3).

Commercial Fishing

Between 2000 and 2010, Newtok residents were most engaged in fisheries for Pacific halibut and herring, and also participated to a lesser degree in salmon fisheries. During this period, local residents participated in State fisheries as permit holders, crew license holders, and vessel owners.

In 2010, 22 Newtok residents held a total of 29 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). These included 11 halibut permits (6 statewide hand-troll permits and 5 statewide longline permits for vessels under 60 feet in length), 15 herring permits (Nelson Island herring roe and foot/bait gillnet fishery, and Nunivak Island herring roe and foot/bait gillnet fishery), and 3 salmon permits (Bristol Bay drift gillnet and Lower Yukon gillnet). Of these, in 2010, 82% of halibut permits were fished (9 out of 11), and 0% of herring and salmon permits were fished. The last year in the 2000-2010 period in which a herring permit was actively fished by a Newtok vessel owner was 2006, and the last year a salmon permit was actively fished was 2008. The number of halibut permits and halibut permit holders decreased by almost half between 2000 and 2010, but the number of actively fished permits remained stable over the period. The number of herring permits held remained stable between 2000 and 2010, although the number that were actively fished declined precipitously

⁸⁹⁷ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁸⁹⁸ Coastal Villages Region Fund (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

starting in 2001. The number of salmon permits held decreased steadily, from six in 2000 to three in 2010, and the number of permit holders followed a similar trend. No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Newtok residents between 2000 and 2010. Information about CFEC, FFP and LLP permits is presented in Table 4. Finally, between 2000 and 2010, no quota share accounts or quota shares were held by Newtok residents in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8).

In 2010, 8 Newtok residents held crew licenses, a significant decrease from 28 licenses held in the year 2000. The number of Newtok residents that were the primary owner of a fishing vessel decreased between 2000 and 2010, from 28 in 2000 to 9 in 2010. The number of vessels homeported in Newtok followed the same trend, with 22 in 2000 and only 8 in 2010. These characteristics of the commercial fishing sector are presented in Table 5.

In 2010, Newtok vessel owners landed 7,352 net pounds of halibut, earning \$23,159 in ex-vessel revenue. Information about herring landings and revenue is considered confidential for all years except 2000 due to the small number of participants. In 2000, Newtok vessel owners landed 192,296 net pounds of herring for an ex-vessel value of \$19,037. Information about salmon landings and revenue is considered confidential between 2000 and 2010 due to the small number of participants. Information about landings and ex-vessel revenue generated by Newtok vessel owners is presented in Table 10. Since no fish buyers or shore-side processing facilities were located in Newtok, no local landings and revenue were generated in the community between 2000 and 2010 (Table 9). Newtok vessel owners delivered their catches elsewhere.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Newtok: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Newtok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	19	20	22	17	11	8	8	20	16	14	11
	Fished permits	7	7	10	5	7	4	7	18	12	8	9
	% of permits fished	37%	35%	45%	29%	64%	50%	88%	90%	75%	57%	82%
	Total permit holders	17	18	19	14	10	8	8	17	13	10	9
Herring (CFEC) ²	Total permits	16	13	13	13	14	13	15	14	13	15	15
	Fished permits	8	0	3	3	3	0	2	0	0	0	0
	% of permits fished	50%	%	23%	23%	21%	%	13%	%	%	%	%
	Total permit holders	15	13	13	14	14	13	15	14	13	15	15

Table 4 cont'd. Permits and Permit Holders by Species, Newtok: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	6	5	6	4	4	4	4	4	3	3	3
	Fished permits	5	3	3	3	3	2	2	2	1	0	0
	% of permits fished	83	60	50%	75%	75%	50%	50%	50%	33%	%	%
	Total permit holders	7	5	6	5	4	4	4	4	4	3	3
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>41</i>	<i>38</i>	<i>41</i>	<i>34</i>	<i>29</i>	<i>25</i>	<i>27</i>	<i>38</i>	<i>32</i>	<i>32</i>	<i>29</i>
	<i>Fished permits</i>	<i>20</i>	<i>10</i>	<i>16</i>	<i>11</i>	<i>13</i>	<i>6</i>	<i>11</i>	<i>20</i>	<i>13</i>	<i>8</i>	<i>9</i>
	<i>% of permits fished</i>	<i>49</i>	<i>26</i>	<i>39%</i>	<i>32%</i>	<i>45%</i>	<i>24%</i>	<i>41%</i>	<i>53%</i>	<i>41%</i>	<i>25%</i>	<i>31%</i>
	<i>Permit holders</i>	<i>28</i>	<i>25</i>	<i>26</i>	<i>22</i>	<i>20</i>	<i>18</i>	<i>20</i>	<i>27</i>	<i>22</i>	<i>22</i>	<i>22</i>

¹ National Marine Fisheries Service (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Newtok: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Newtok ²	Total Net Pounds Landed In Newtok ^{2,5}	Total Ex-Vessel Value Of Landings In Newtok ^{2,5}
2000	28	0	0	28	22	0	0	\$0
2001	8	0	0	24	20	0	0	\$0
2002	16	0	0	23	20	0	0	\$0
2003	13	0	0	17	16	0	0	\$0
2004	12	0	0	13	10	0	0	\$0
2005	9	0	0	13	11	0	0	\$0
2006	9	0	0	11	9	0	0	\$0
2007	8	0	0	18	13	0	0	\$0
2008	2	0	0	13	11	0	0	\$0
2009	7	0	0	9	8	0	0	\$0
2010	8	0	0	9	8	0	0	\$0

¹ Alaska Department of Fish and Game (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ National Marine Fisheries Service (2011). Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Newtok: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Newtok: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Newtok: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Newtok: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Newtok Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	4,338	1,996	3,755	1,588	884	1,502	3,787	17,318	9,345	4,368	7,352
Herring	192,296	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>196,634</i>	<i>1,996</i>	<i>3,755</i>	<i>1,588</i>	<i>884</i>	<i>1,502</i>	<i>3,787</i>	<i>17,318</i>	<i>9,345</i>	<i>4,368</i>	<i>7,352</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$5,426	\$2,419	\$5,883	\$1,986	\$1,092	\$2,982	\$14,090	\$74,699	\$40,026	\$10,939	\$23,159
Herring	\$19,037	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>\$24,463</i>	<i>\$2,419</i>	<i>\$5,883</i>	<i>\$1,986</i>	<i>\$1,092</i>	<i>\$2,982</i>	<i>\$14,090</i>	<i>\$74,699</i>	<i>\$40,026</i>	<i>\$10,939</i>	<i>\$23,159</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were located in Newtok. However, sportfishing licenses were sold in the community from 2007 to 2010, with between 12 and 64 licenses sold per year. Between 2000 and 2010, Newtok residents purchased between 2 and 49 sportfishing licenses (irrespective of point of sale). In some years, the number of sportfishing licenses sold in Newtok was greater than the number of licenses purchased by residents of Newtok, indicating that a small number of non-local sport fishermen may use Newtok as a base of fishing activity.

The Alaska Statewide Harvest Survey,⁸⁹⁹ conducted by ADF&G between 2000 and 2010, does not provide information about species targeted by private anglers in Newtok. No kept/release log book data were reported for fishing charters out of Newtok between 2000 and 2010.⁹⁰⁰ Newtok is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Newtok is displayed in Table 11.

Table 11. Sport Fishing Trends, Newtok: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Newtok ²
2000	0	0	2	0
2001	0	0	23	0
2002	0	0	21	0
2003	0	0	28	0
2004	0	0	43	0
2005	0	0	43	0
2006	0	0	42	0
2007	0	0	18	12
2008	0	0	40	64
2009	0	0	11	50
2010	0	0	49	49

⁸⁹⁹ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁹⁰⁰ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Newtok: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Historically, Yup'ik Eskimos along the Bering Sea coast harvested herring, marine mammals, Pacific halibut, salmon, flounder, and a variety of freshwater fish species.⁹⁰¹ Traditionally, dried herring is an important protein source for residents of Bering Sea communities, including Newtok, where salmon are not as readily available as in other regions.⁹⁰² Subsistence harvest remains a fundamental aspect of Newtok's local economy and culture today.⁹⁰³

No information was reported by ADF&G between 2000 and 2010 regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes (Table 12). However, a 1990 subsistence survey conducted by ADF&G found that 51% of Newtok households harvested herring and herring sac roe for subsistence

⁹⁰¹ Fienup-Riordan, A.1994. *Boundaries and Passages: Rule and Ritual in Yup'ik Eskimo Oral Tradition*. Norman: University of Oklahoma Press.

⁹⁰² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹⁰³ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

purposes, and 100% of Newtok households used these resources, indicating sharing of herring and sac roe between households. That year, a total of 15,865 pounds of herring were reported harvested by Newtok residents for subsistence purposes, for a per capita harvest of 77 pounds.⁹⁰⁴

Information was reported by ADF&G regarding both subsistence salmon permits and Subsistence Halibut Registration Certificates (SHARC) issued to residents of Newtok during the 2000-2010 period. Between 2000 and 2008, 79 subsistence salmon permits were issued to Newtok households each year. Subsistence salmon harvests were relatively low compared to communities along the Kuskokwim and Yukon Rivers and areas further south in Alaska. In 2000, six permits were returned, and sockeye were the most heavily harvested salmon species. This information is presented in Table 13. Between 2003 and 2010, the number of SHARC cards issued to Newtok residents varied between one and five. In 2005, one SHARC card was returned and 204 pounds of halibut were reported harvested (Table 14).

Little information was reported by management agencies about subsistence harvest of marine mammals between 2000 and 2010. According to data reported by NMFS, in 2002, one beluga whale was harvested, and according to data reported by the U.S. Fish and Wildlife Services, one walrus was harvested in 2006. No data were reported by management agencies regarding subsistence harvest of sea otter, polar bear, Steller sea lion, harbor seal, or spotted seal between 2000 and 2010. Information about marine mammal harvests is presented in Table 15. No information was reported about harvest of pounds of marine invertebrates or non-salmon fish harvested for subsistence purposes in Newtok (Table 13).

Additional Information

Nelson Island was named after Edward W. Nelson, the man who conducted the first detailed exploration of the area in 1878-1879.⁹⁰⁵

⁹⁰⁴ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁹⁰⁵ Newtok Planning Group (n.d.). *A Brief History of the Settlement of Newtok and Village Relocation Efforts*. Retrieved January 19, 2012 from http://commerce.alaska.gov/dca/planning/pub/Newtok_History1.pdf.

Table 12. Subsistence Participation by Household and Species, Newtok: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Newtok: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	79	11	19	16	64	n/a	124	n/a	n/a
2001	79	1	12	36	n/a	n/a	n/a	n/a	n/a
2002	79	5	13	20	n/a	n/a	85	n/a	n/a
2003	79	3	n/a	9	n/a	n/a	n/a	n/a	n/a
2004	79	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	79	1	n/a	9	n/a	n/a	2	n/a	n/a
2006	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Newtok: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	4	n/a	n/a
2004	4	n/a	n/a
2005	5	1	204
2006	3	n/a	n/a
2007	3	n/a	n/a
2008	1	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Newtok: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	1	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	6	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nightmute (NITE-myoot)

People and Place

*Location*⁹⁰⁶



Nightmute is located on Nelson Island, in the Yukon-Kuskokwim Delta. It is located 18 miles upriver from Toksook Bay, and 100 miles west of Bethel, in the Bethel Census Area and Bethel Recording District. The City encompasses 97 square miles of land and 4.6 square miles of water.

*Demographic Profile*⁹⁰⁷

In 2010, there were 280 inhabitants in Nightmute, making it the 168th largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in U.S. Census records in the 1940s with 78 inhabitants. Overall between 1990 and 2010, the population of Nightmute increased by 83%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 26.9%, with an average annual growth rate of 1.7%. In 2010, a majority of Nightmute residents identified themselves as American Indian and Alaska Native (94.6%), along with 5% that identified as White and 0.4% identifying with two or more races. Also in 2010, 2.5% of Nightmute residents identified themselves as Hispanic. Individuals indentifying as White made up 0.3% less of the population in 2010 compared to 2000, and those identifying as American Indian and Alaska Natives made up 2.8% more of the population, while the percentage of individuals identifying with two or more races decreased between 2000 and 2010 by 2.5%. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010 the average household size in Nightmute was 4.75, a slight increase from 4.43 persons per household in 2000, but an overall decrease from 5.2 persons per household in 1990. The total number of households in Nightmute increased over time, from 29 in 1990 to 47 in 2000, and 59 occupied housing units in 2010. Of the 61 housing units surveyed for the 2010 U.S. Census, 73.8% were owner-occupied, 30% were renter-occupied, and only 3.3% were vacant or used only seasonally. Between 1990 and 2010, no residents of Nightmute lived in group quarters.

⁹⁰⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁰⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

In 2010, the gender makeup in Nightmute was 52.5% male and 47.5% female, only slightly more skewed toward males than the population of Alaska as a whole, which was 52% male and 48% female. The median age in Nightmute was 22.9 years in 2010, much lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the age groups 0-9 and 40-49 years had notably more males than females. There were slightly more women than men in age groups 10-19 and 20-29 years. Also in 2010, 8.7% of Nightmute residents were age 60 or older. The overall population structure of Nightmute in 2000 and 2010 is shown in Figure 2.

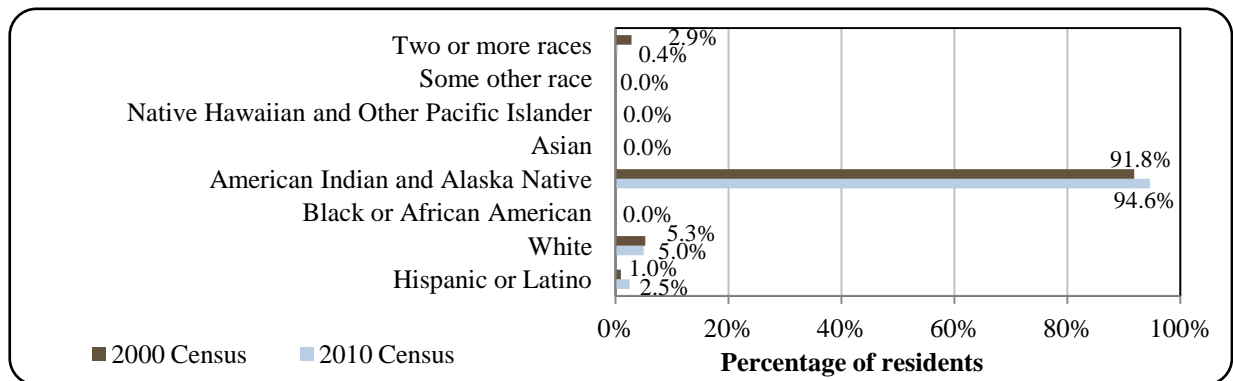
Table 1. Population in Nightmute from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	153	-
2000	208	-
2001	-	213
2002	-	224
2003	-	229
2004	-	233
2005	-	234
2006	-	238
2007	-	243
2008	-	248
2009	-	264
2010	280	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

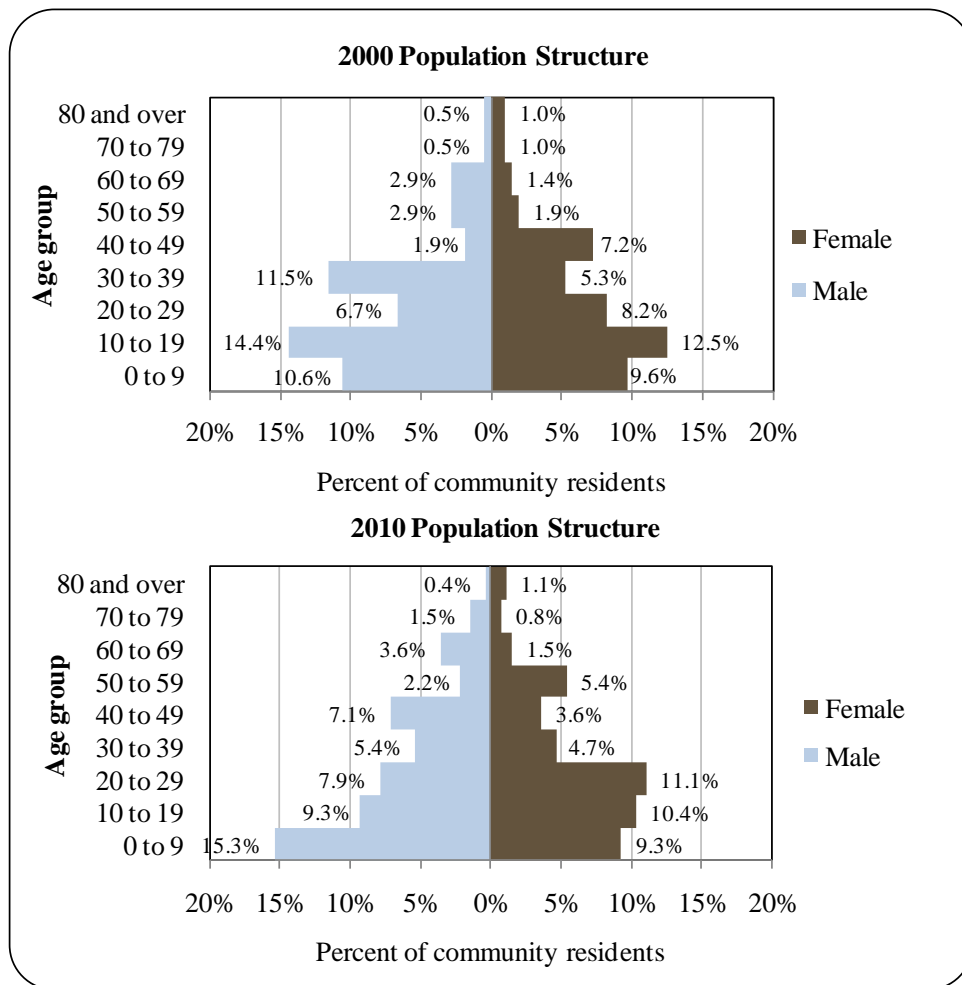
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nightmute: 2000-2010 (U.S. Census).



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁹⁰⁸ 58% of Nightmute residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 25.5% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 16.6% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 8.9% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 3.2% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 3.2% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Nightmute Based on the 2000 and 2010 U.S. Decennial Census.



⁹⁰⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Nightmute is a Yup'ik Eskimo village. The people of Nelson Island are known as *Qaluyaarmiut*, or “dip net people.” The Qaluyaarmiut have lived on the Bering Sea coast for at least 2,000 years.⁹⁰⁹ In 1841-1842, a Russian naval officer, Lieutenant Lavrenty Zagoskin, was the first to explore the lower Yukon and briefly came into contact with the Qaluyaarmiut.⁹¹⁰ Russian Orthodox missionaries established a mission on the Yukon River in 1845, and Moravian missionaries arrived in Bethel in 1885.⁹¹¹ Contact with outside people and customs became more consistent during the 1950s, when the Territorial Guard began sending volunteers to Bethel for two weeks of training each year. During this period, the indigenous population was exposed to disease, and tuberculosis became a major health problem in the area.⁹¹²

The traditional fish camp for the people of Nightmute is called Umkumiut. In 1964, many residents relocated to the present site of Toksook Bay to more easily access cost-effective goods. Those that remained make up most of the current population of Nightmute.^{913,914} Because of the Village's relative isolation from outside influences, traditions and customs have been retained in Nightmute to a greater degree than in other parts of Alaska. Residents of the Village have an active subsistence lifestyle.⁹¹⁵ The sale, importation, and possession of alcohol are banned in the community.⁹¹⁶

Natural Resources and Environment

Nightmute is located in a marine climate zone. Average annual precipitation is 22 inches, and snowfall averages 43 inches per year. Temperatures range between 41 and 57 °F in the summer, and 6 and 24 °F in the winter.⁹¹⁷

Nightmute is located on Nelson Island, the second largest island within the Yukon Delta National Wildlife Refuge (NWR). The southern portion of the Island, where Nightmute is located, is low-lying and covered with small lakes and streams. The northern portion of the Island hosts more rugged terrain, with several peaks over 1,300 feet in elevation. The Bering Sea coast along the Yukon-Kuskokwim delta is characterized by sandy beaches that merge into active sand dunes greater than 100 feet in height. The dunes are particularly susceptible to erosion.⁹¹⁸

⁹⁰⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹¹⁰ Newtok Planning Group (n.d.). *A Brief History of the Settlement of Newtok and Village Relocation Efforts*. Retrieved January 19, 2012 from http://commerce.alaska.gov/dca/planning/pub/Newtok_History1.pdf.

⁹¹¹ Fienup-Riordan, Ann (1994). *Boundaries and Passages: Rule and Ritual in Yup'ik Eskimo Oral Tradition*. Norman: University of Oklahoma Press.

⁹¹² See footnote 910.

⁹¹³ See footnote 909.

⁹¹⁴ Nightmute Traditional Council (2004). *Action Plan*. Retrieved January 20, 2012 from <http://www.commerce.state.ak/dca/plans/Nightmute-GCP-2004.pdf>.

⁹¹⁵ See footnote 909.

⁹¹⁶ Alaska Dept. of Public Safety (2011). *Local Option Restrictions*. Retrieved May 31, 2012 from <http://dps.alaska.gov/abc/restrictions.aspx>.

⁹¹⁷ See footnote 909.

⁹¹⁸ U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge website*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

The Yukon Delta NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” NWR lands are open to sport and subsistence hunting and fishing. The most productive wildlife habitat is the coastal region between Nelson Island and the Askinuk Mountains to the north.⁹¹⁹

Natural hazards that have been identified to be present in the Bethel Census Area include flooding, earthquakes, and severe weather.⁹²⁰ Communities in the region are also suffering from severe erosion of both riverbanks and coastal shorelines, and are susceptible to tundra fires.^{921,922}

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Nightmute as of May 2012.⁹²³

Current Economy⁹²⁴

Employment in Nightmute is provided by local government offices, local and regional Native corporations and non-profit organizations, the school, social services, commercial fishing, and construction.^{925,926} Between 2000 and 2010, Nightmute residents were most active in fisheries for halibut and herring, as well as some activity in salmon fisheries. The number of Nightmute residents holding state Commercial Fisheries Entry Commission (CFEC) permits was equal to 16% of the total local population in 2000, declining to 9% of the local population by 2010. Over the same period, the percentage of the local population holding crew licenses decreased from 10.5% in 2000 to 1% in 2010, and the number of local residents who were primary owners of fishing vessels decreased from 15% of the local population to 5% (see *Commercial Fisheries* section). Almost all families engage in subsistence fishing activities to supplement cash employment.⁹²⁷

Based on household surveys for the 2006-2010 ACS,⁹²⁸ in 2010, the per capita income in Nightmute was estimated to be \$12,198 and the median household income was estimated to be \$54,063. This represents an increase in per capita income, from \$9,396 reported in 2000, and an

⁹¹⁹ Ibid.

⁹²⁰ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁹²¹ Climate Adaptation Knowledge Exchange (CAKE) (2011). *Relocating the Village of Newtok, Alaska due to Coastal Erosion*. Retrieved January 19, 2012 from <http://www.cakex.org>.

⁹²² Village of Newtok (2008). *Local Hazards Mitigation Plan*. Retrieved January 19, 2012 from http://www.dced.state.ak.us/dca/planning/pub/Newtok_HMP.pdf.

⁹²³ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁹²⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁹²⁵ See footnote 909.

⁹²⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹²⁷ See footnote 909.

⁹²⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

increase in median household income, from \$35,938 reported in 2000. However, if inflation is taken into account by converting 2000 values to 2010 dollars,⁹²⁹ real per capita income in 2000 (\$12,356) is shown to be similar to the 2010 income estimate, while the 2010 median household income estimate still shows an increase from real median household income in 2000 (\$47,258). In 2010, Nightmute ranked 239th of 305 Alaskan communities with per capita income data that year, and 105th in median household income, out of 299 Alaskan communities with household income data.

Nightmute's small population size may have prevented the ACS from accurately portraying economic conditions.⁹³⁰ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nightmute in 2010 is \$6,784.⁹³¹ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, providing additional evidence that per capita income in Nightmute did not increase between 2000 and 2010. The fact that per capita income did not increase over the 2000-2010 period is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,⁹³² indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 65.6% of Nightmute residents aged 16 or older were estimated in the civilian labor force, compared to 68.8% of Alaskans estimated to be in the civilian labor force statewide. In the same year, 23.8% of local residents were estimated to be living below the poverty line in 2010, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 8%, compared to a statewide unemployment rate of 5.9%. An alternative estimate of unemployment is based on the ALARI database, which indicates that the 2010 unemployment rate in Nightmute was 18.5%, compared to a statewide unemployment rate estimate of 11.5%.⁹³³

Also based on the 2006-2010 ACS, 52.1% of the Nightmute workforce was estimated to be employed in the public sector, along with 40.3% in the private sector, 5.6% self-employed, and 2.1% unpaid family workers. Of the 144 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number were estimated to be working in public administration (30.6%), retail trade (25.7%), and educational services, health care, and social assistance (21.5%). None of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining in 2010. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This

⁹²⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁹³⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁹³¹ See footnotes 926 and 928.

⁹³² Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁹³³ See footnote 926.

information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Nightmute (U.S. Census).

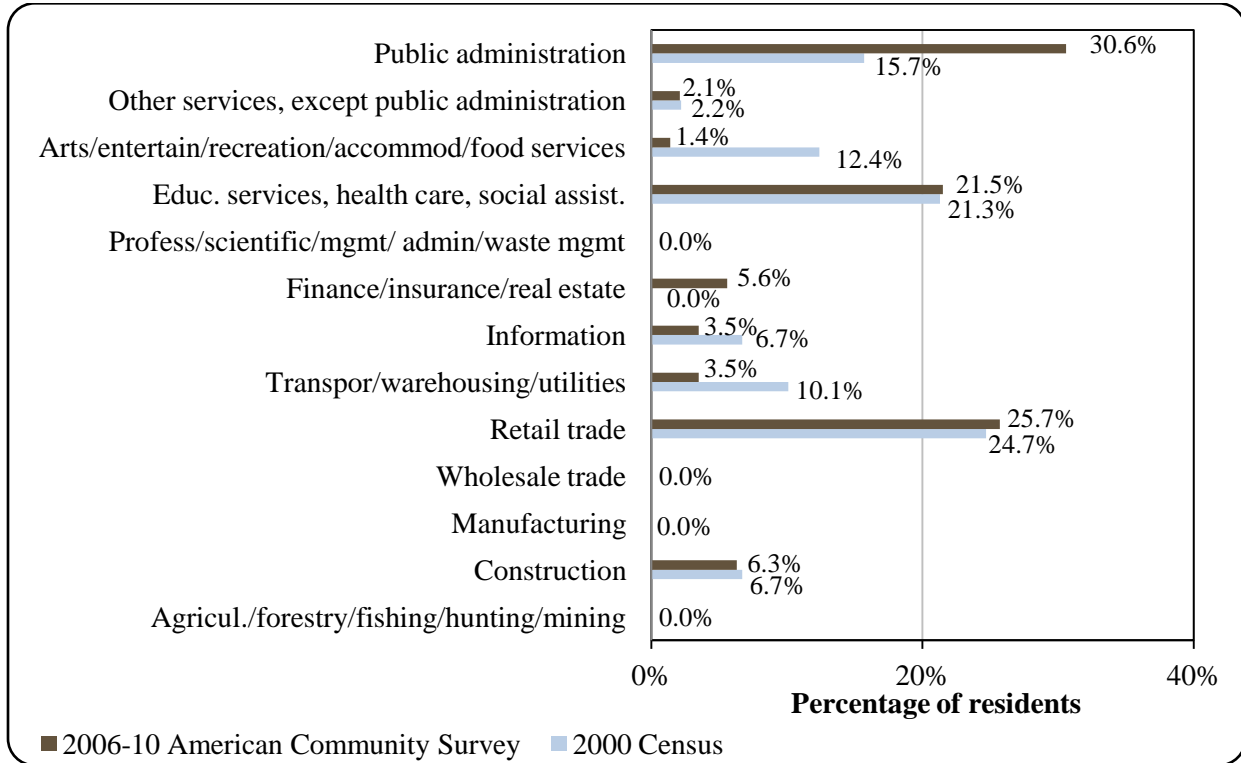
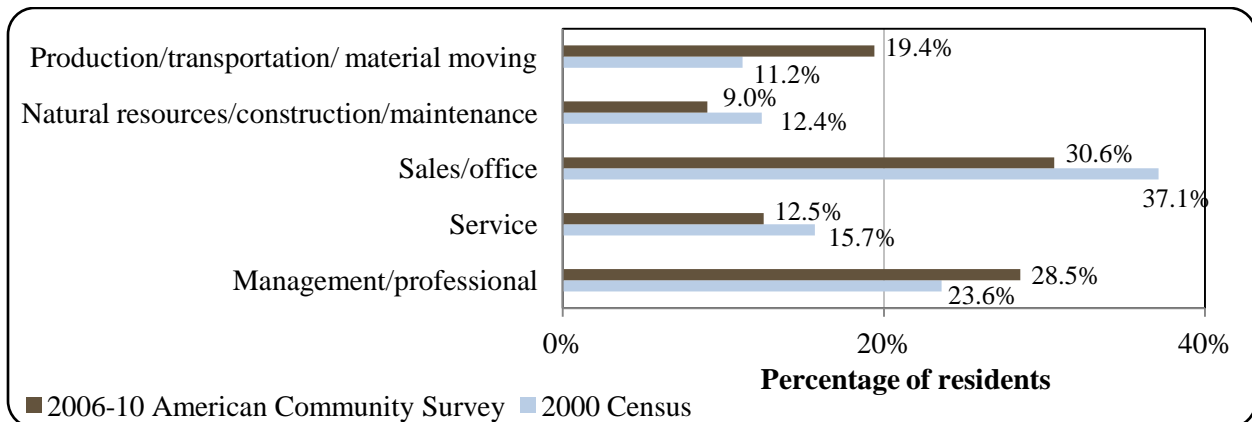


Figure 4. Local Employment by Occupation in 2000-2010, Nightmute (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 124 employed residents in Nightmute in 2010, of which 61.3% were employed in local government, 12.9% in trade, transportation, and utilities, 8.9% in financial activities, 5.6% in education and health services, 4.8% in professional and business services, 0.8% in manufacturing, 0.8% in natural resources and mining, 0.8% in leisure

and hospitality, 0.8% in state government, and 3.2% in other industries.⁹³⁴ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Governance

Nightmute was incorporated in 1974 as a 2nd Class City and is not located in an organized borough. The City has a Strong Mayor form of government, with a seven-person city council, including the mayor, a nine-person advisory school board, and several municipal employees. The City administers a 2% sales tax.⁹³⁵ In addition to sales tax revenues, other locally-generated income sources in Nightmute include building leases, building and equipment rentals, water and sewer service fees, airport maintenance contracts from the State, bingo/pull tabs receipts, and fuel sales in the last few years of the decade. Outside revenue sources during the 2000-2010 period included various shared revenues from state and federal sources, as well as small grants in some years. The community received approximately \$25,000 per year from the State Revenue Sharing program between 2000 and 2003, and just over \$100,000 per year from the Community Revenue Sharing program in 2009 and 2010. Some shared state funds were received from fisheries-related tax refunds (see the *Fisheries-Related Revenue* section). No information was reported about fisheries-related grants received by the City during the 2000-2010 period. The increase in total municipal revenues in the later years in the decade can be explained in part by the large Community Revenue Sharing contributions as well as a large increase in local fuel sales. Information about selected aspects of Nightmute's revenue sources is presented in Table 2.

Nightmute was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Nightmute. The Native village corporation is Chinuruk, Incorporated, which manages 69,120 acres of land. The regional Native corporation to which Nightmute belongs is the Calista Corporation.⁹³⁶

Nightmute is also a member of the Association of Village Council Presidents (AVCP), a tribal non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁹³⁷ The AVCP is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁹³⁸ AVCP is made up of 56 villages and 45 village corporations.⁹³⁹

⁹³⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹³⁵ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹³⁶ Ibid.

⁹³⁷ Association of Village Council Presidents (n.d.). *AVCP homepage*. Retrieved December 6, 2011 from www.avcp.org.

⁹³⁸ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁹³⁹ Calista Corporation (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

The nearest offices of Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community, and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nightmute From 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$232,429	\$11,157	\$26,566	n/a
2001	\$207,886	\$5,644	\$25,543	n/a
2002	\$254,524	\$4,929	\$25,546	n/a
2003	\$235,124	n/a	\$25,745	n/a
2004	\$360,011	\$1,628	n/a	n/a
2005	\$284,746	\$6,464	n/a	n/a
2006	\$147,514	\$2,772	n/a	n/a
2007	\$212,406	\$6,319	n/a	n/a
2008	\$419,821	\$4,866	\$108,703	n/a
2009	\$736,932	\$8,500	\$109,240	n/a
2010	\$528,577	\$4,484	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Nightmute is not connected to the rest of Alaska by road, and is primarily accessible by air or water. A state-owned, 1,600 feet long by 35 feet wide gravel airstrip provides air access.⁹⁴⁰ Era Aviation provides scheduled commercial service to Nightmute. The price of a roundtrip ticket from Nightmute to Anchorage in early June of 2012 was \$578.⁹⁴¹ A seaplane base is also available. Fishing boats, skiffs, snowmobiles, and ATVs are used for local transportation and subsistence activities. Winter trails are marked to nearby villages of Toksook Bay, Cak'caa, and

⁹⁴⁰ See footnote 935.

⁹⁴¹ These prices were calculated on November 21, 2011 using kayak.com.

Baird Inlet. Nightmute does not have docking facilities. Cargo and supplies are lightered up the Tuqsuk River during summer months.⁹⁴²

Facilities

A diesel power plant, operated by the Alaska Village Electric Cooperative (AVEC), provides electricity in Nightmute. Water is derived from a community well source and chlorinated. The City of Nightmute provides a small water facility which serves as a central watering point for the City. Honeybuckets are used in Nightmute. The City provides water and sewer haul services. A sewage pumper and sewage lagoon are used for sewage treatment. The school has its own sewage lagoon.⁹⁴³

Community facilities include a city jail and city/community hall. The school offers public use of its library. Safety services are provided by City Village Police Officers (VPO) in Nightmute and state troopers stationed in Bethel. Fire and rescue services are provided by a volunteer fire department and a city ambulance. Phone and internet service are provided in Nightmute, but cable service is not available.⁹⁴⁴

In 2004, the Nightmute Traditional Council reported that a variety of projects were underway to make improvements to facilities and services in Nightmute, including airport and road improvements, development of housing, addition of utility poles, consolidation of the AVEC tank farm, improved internet service, and feasibility studies related to solid waste and water and sewer improvements. They also noted that they were pursuing establishment of a fishery support center in partnership with the Coastal Villages Region Fund (CVRF), the Community Development Quota (CDQ) entity to which Nightmute belongs (see *History and Evolution of Fisheries* section below).⁹⁴⁵

Medical Services

Medical services are provided by the Nightmute Health Clinic, operated by the Yukon-Kuskokwim Health Corporation. The Clinic is a Community Health Aide Program site. Emergency Services have coastal and air access. Emergency services are provided by the Community Health Aide.⁹⁴⁶ The nearest hospital is located in Bethel.

Educational Opportunities

Nightmute has one school. The Nightmute School offers a pre-school through 12th grade education. As of 2011, there were 9 teachers and 102 students attending the school.⁹⁴⁷

⁹⁴² Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁴³ Ibid.

⁹⁴⁴ Ibid.

⁹⁴⁵ Nightmute Traditional Council (2004). *Action Plan*. Retrieved January 20, 2012 from <http://www.commerce.state.ak.us/dca/plans/Nightmute-GCP-2004.pdf>.

⁹⁴⁶ See footnote 942.

⁹⁴⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Harvest of marine resources has been important to residents of the Nightmute area since prehistory. Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁹⁴⁸ Subsistence fishing and hunting continue to be an important supplement to commercial fishing and other cash employment for Nightmute residents.⁹⁴⁹ Between 2000 and 2010, residents of Nightmute were involved in commercial fisheries for herring, halibut and salmon (Table 4).

Nightmute is located near the Kuskokwim River. Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.⁹⁵⁰ However, the salmon resource is not as easily accessible for communities along the Bering Sea coast as in other regions of Alaska.⁹⁵¹

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. There are six commercial gillnet sac roe districts along the Yukon/Kuskokwim coast, including Nelson Island and Nunivak Island. However, harvests of herring have been declining in this region in recent years, in part due to lack of processing capacity in the area. A significant subsistence herring harvest also occurs at Nelson Island.⁹⁵²

Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁹⁵³ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission.

The coastal area around Nelson Island is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Nightmute is a member of the Coastal Villages Region Fund (CVRF), a Community Development Quota (CDQ) group that promotes employment opportunities for residents as well as participation in the Bering Sea crab and groundfish fisheries.⁹⁵⁴ The community is not eligible to participate in the Community Quota Entity program.

⁹⁴⁸ Alaska Native Heritage Center (n.d.). *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁹⁴⁹ See footnote 942.

⁹⁵⁰ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). Kuskokwim Commercial Salmon Fishery. In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

⁹⁵¹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹⁵² Ibid.

⁹⁵³ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁹⁵⁴ Coastal Villages Region Fund (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Nightmute. However, processing facilities operated by Coastal Villages Seafood, LLC, a subsidiary of CVRF, were listed in several nearby villages, including Mekoryuk, Hooper Bay, Kipnuk, and Quinhagak.

Fisheries-Related Revenue

On average between 2000 and 2010, the City of Nightmute received \$360 per year from fisheries-related taxes and fees. These revenue sources include a raw fish tax and the Shared Fisheries Business Tax. Table 3 shows the annual revenue for these categories.⁹⁵⁵

Commercial Fishing

Between 2000 and 2010, Nightmute residents were most engaged in fisheries for halibut and herring, and also participated to a lesser degree in salmon fisheries. During this period, local residents participated in state and federal fisheries as permit and quota share holders, crew license holders, and vessel owners. The number of Nightmute residents holding state Commercial Fisheries Entry Commission (CFEC) permits was equivalent to 16% of the total local population in 2000, declining to 9% of the local population by 2010.

In 2010, 25 Nightmute residents held a total of 32 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). These included 10 halibut permits (6 statewide hand-troll permits and 5 statewide longline permits for vessels under 60 feet in length), 20 herring permits (Nelson Island herring roe and foot/bait gillnet fishery, and Nunivak Island herring roe and foot/bait gillnet fishery), and 2 salmon permits (Bristol Bay drift gillnet and Bristol Bay set gillnet). Of these, in 2010, 50% of halibut permits were actively fished (5 out of 10), 50% of salmon permits were actively fished (the drift gillnet permit was active), and 0% of herring and permits were actively fished.

The number of halibut permits and halibut permit holders decreased by half between 2000 and 2010, and the number of active permits decreased by two-thirds, from 15 in 2000 to 5 in 2010. The number of herring permits held remained stable between 2000 and 2010, although the number that were actively fished declined steadily, from 13 in 2000 to zero by 2007. The number of salmon permits held decreased steadily from six in 2000 to two in 2010, and the number of permit holders followed a similar trend. No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Nightmute residents between 2000 and 2010. This information about CFEC, FFP, and LLP permits is presented in Table 4.

In 2000 and 2001, 1,072 halibut quota shares were held by Nightmute residents in the federal halibut catch share fishery, but no information was available about number of quota share holders or the halibut individual fishing quota (IFQ) allotment associated with the quota shares. Between 2000 and 2010, no quota share accounts or quota shares were held by Nightmute residents in federal catch share fisheries for sablefish or crab. Information about federal catch share participation is presented in Tables 6 through 8.

⁹⁵⁵ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

In 2010, 2 Nightmute residents held crew licenses, a significant decrease from 22 licenses held in the year 2000. The number of Nightmute residents that were the primary owner of a fishing vessel decreased between 2000 and 2010, from 31 in 2000 to 13 in 2010. The number of vessels homeported in Nightmute followed the same trend, with 27 in 2000 and only 10 in 2010. These characteristics of the commercial fishing sector are presented in Table 5.

In 2010, Nightmute vessel owners landed 22,371 net pounds of halibut, earning \$69,869 in ex-vessel revenue. In 2006, the last year during the 2000-2010 period in which a herring permit was actively fished by a community member, Nightmute vessel owners landed 129,240 net pounds of herring with a total ex-vessel revenue of \$7,237. Information about salmon landings and revenue are considered confidential throughout the 2000-2010 period due to the small number of participants. Information about landings and ex-vessel revenue generated by Nightmute vessel owners is presented in Table 10. Since no fish buyers or shore-side processing facilities were present in Nightmute between 2000 and 2010 (Table 5), no local landings or ex-vessel revenue were reported (Table 9).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nightmute: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$573	\$500	\$102	n/a	\$91	\$100	n/a	n/a	n/a	n/a	\$277
Shared Fisheries											
Business Tax ¹	\$573	\$451	\$86	\$112	\$91	\$227	\$260	\$138	\$100	\$85	\$90
Fisheries Resource											
Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$101
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$1,146</i>	<i>\$951</i>	<i>\$188</i>	<i>\$112</i>	<i>\$182</i>	<i>\$327</i>	<i>\$260</i>	<i>\$138</i>	<i>\$100</i>	<i>\$85</i>	<i>\$468</i>
<i>Total municipal revenue⁵</i>	<i>\$232,429</i>	<i>\$207,886</i>	<i>\$254,524</i>	<i>\$235,124</i>	<i>\$360,011</i>	<i>\$284,746</i>	<i>\$147,514</i>	<i>\$212,406</i>	<i>\$419,821</i>	<i>\$736,932</i>	<i>\$528,577</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Nightmute: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	21	18	16	16	10	11	17	17	14	11	10
	Fished permits	15	12	7	7	4	8	10	10	8	7	5
	% of permits fished	71%	67%	44%	44%	40%	73%	59%	59%	57%	64%	50%
	Total permit holders	21	17	16	16	10	11	17	16	14	11	10
Herring (CFEC) ²	Total permits	18	18	18	19	18	18	19	19	19	20	20
	Fished permits	13	8	6	8	7	6	6	0	0	0	0
	% of permits fished	72%	44%	33%	42%	39%	33%	32%	0%	0%	0%	0%
	Total permit holders	19	19	18	19	18	19	19	19	19	20	21

Table 4 cont'd. Permits and Permit Holders by Species, Nightmute: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	6	6	6	6	3	3	4	2	3	2	2
	Fished permits	3	3	1	2	0	1	2	0	2	2	1
	% of permits fished	50%	50%	17%	33%	0%	33%	50%	0%	67%	100%	50%
	Total permit holders	8	6	6	6	3	3	4	2	4	3	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>45</i>	<i>42</i>	<i>40</i>	<i>41</i>	<i>31</i>	<i>32</i>	<i>40</i>	<i>38</i>	<i>36</i>	<i>33</i>	<i>32</i>
	<i>Fished permits</i>	<i>31</i>	<i>23</i>	<i>14</i>	<i>17</i>	<i>11</i>	<i>15</i>	<i>18</i>	<i>10</i>	<i>10</i>	<i>9</i>	<i>6</i>
	<i>% of permits fished</i>	<i>69%</i>	<i>55%</i>	<i>35%</i>	<i>41%</i>	<i>35%</i>	<i>47%</i>	<i>45%</i>	<i>26%</i>	<i>28%</i>	<i>27%</i>	<i>19%</i>
	<i>Permit holders</i>	<i>34</i>	<i>29</i>	<i>29</i>	<i>30</i>	<i>24</i>	<i>26</i>	<i>28</i>	<i>27</i>	<i>27</i>	<i>27</i>	<i>25</i>

¹ National Marine Fisheries Service (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nightmute: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Nightmute ²	Total Net Pounds Landed In Nightmute ^{2,5}	Total Ex-Vessel Value Of Landings In Nightmute ^{2,5}
2000	22	0	0	31	27	0	0	\$0
2001	20	0	0	21	19	0	0	\$0
2002	18	0	0	21	18	0	0	\$0
2003	18	0	0	22	17	0	0	\$0
2004	7	0	0	15	12	0	0	\$0
2005	15	0	0	18	17	0	0	\$0
2006	12	0	0	24	22	0	0	\$0
2007	5	0	0	19	18	0	0	\$0
2008	6	0	0	15	13	0	0	\$0
2009	4	0	0	12	10	0	0	\$0
2010	2	0	0	13	10	0	0	\$0

¹ Alaska Department of Fish and Game (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ National Marine Fisheries Service (2011). Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Nightmute: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	1,072	0
2001	0	1,072	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nightmute: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nightmute: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nightmute: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nightmute Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	6,514	8,689	6,705	6,073	3,091	19,207	20,902	26,855	20,597	12,353	22,371
Herring	177,456	217,350	275,163	275,972	324,071	232,149	129,240	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>183,970</i>	<i>226,039</i>	<i>281,868</i>	<i>282,045</i>	<i>327,162</i>	<i>251,356</i>	<i>150,142</i>	<i>26,855</i>	<i>20,597</i>	<i>12,353</i>	<i>22,371</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$8,143	\$10,411	\$10,162	\$7,595	\$3,824	\$40,970	\$77,918	\$116,062	\$80,538	\$26,669	\$69,869
Herring	\$17,268	\$10,868	\$14,308	\$14,903	\$34,352	\$12,304	\$7,237	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>\$25,411</i>	<i>\$21,279</i>	<i>\$24,470</i>	<i>\$22,498</i>	<i>\$38,176</i>	<i>\$53,274</i>	<i>\$85,155</i>	<i>\$116,062</i>	<i>\$80,538</i>	<i>\$26,669</i>	<i>\$69,869</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses or licensed sport fish guides in Nightmute. In 2009, five sportfishing licenses were sold in the City, but in general no licenses were sold locally between 2000 and 2010. Between 2000 and 2010, Nightmute residents purchased between 5 and 30 sportfishing licenses (irrespective of point of sale).

The Alaska Statewide Harvest Survey,⁹⁵⁶ conducted by ADF&G between 2000 and 2010, did not provide information about species targeted by private anglers in Nightmute. No kept/release log book data were reported for fishing charters out of Nightmute between 2000 and 2010.⁹⁵⁷ Nightmute is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Nightmute is displayed in Table 11.

Table 11. Sport Fishing Trends, Nightmute: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nightmute ²
2000	0	0	17	0
2001	0	0	5	0
2002	0	0	12	0
2003	0	0	6	0
2004	0	0	11	0
2005	0	0	11	0
2006	0	0	30	0
2007	0	0	19	0
2008	0	0	15	0
2009	0	0	13	5
2010	0	0	19	0

⁹⁵⁶ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁹⁵⁷ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Nightmute: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Historically, Yup'ik Eskimos along the Bering Sea coast harvested herring, marine mammals, Pacific halibut, salmon, flounder, and a variety of freshwater fish species.⁹⁵⁸ Traditional dried herring is an important protein source for residents of Bering Sea communities such as Nightmute, where salmon are not as readily available as in other regions.⁹⁵⁹ Subsistence harvest remains a fundamental aspect of Nightmute's local economy and culture today.⁹⁶⁰

No information was reported by ADF&G between 2000 and 2010 regarding per capita subsistence harvest or the percentage of Nightmute households utilizing various marine resources for subsistence purposes (Table 12). However, a 1990 subsistence survey conducted by ADF&G found that 67% of Nightmute households harvested herring and herring sac roe for subsistence purposes, and 100% of Nightmute households used these resources, indicating sharing of herring and sac roe between households. In 1990, 35,065 pounds of herring were

⁹⁵⁸ Fienup-Riordan, A.1994. *Boundaries and Passages: Rule and Ritual in Yup'ik Eskimo Oral Tradition*. Norman: University of Oklahoma Press.

⁹⁵⁹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹⁶⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

harvested by Nightmute residents for subsistence purposes, for a per capita harvest of 215 pounds.⁹⁶¹

Information was reported by ADF&G regarding both subsistence salmon permits and Subsistence Halibut Registration Certificates (SHARC) issued in Nightmute during the 2000-2010 period. Between 2000 and 2008, the number of subsistence salmon permits issued to Nightmute households varied between 46 and 68 per year. Subsistence salmon harvest was relatively low compared to communities along the Kuskokwim and Yukon Rivers, and areas further south in Alaska. In 2000, six salmon permits were returned, and sockeye were the most heavily harvested salmon species. This information is presented in Table 13. Between 2003 and 2010, the number of SHARC cards issued to Nightmute residents declined from 29 to 2. In 2003, 18 SHARC cards were fished with a total of 6,634 pounds harvested. In 2009, 1 permit was fished, and a total of 126 pounds of halibut were reported harvested (Table 14).

No information was reported by management agencies regarding subsistence harvest of marine mammals by Nightmute residents during the 2000-2010 period (Table 15). Likewise, no information was reported about total pounds of marine invertebrates or non-salmon fish harvested for subsistence purposes in Nightmute (Table 13).

Additional Information

Nelson Island was named after Edward W. Nelson, the man who conducted the first detailed exploration of the area in 1878-1879.⁹⁶²

Table 12. Subsistence Participation by Household and Species, Nightmute: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁹⁶¹ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁹⁶² Newtok Planning Group (n.d.). *A Brief History of the Settlement of Newtok and Village Relocation Efforts*. Retrieved January 19, 2012 from http://commerce.alaska.gov/dca/planning/pub/Newtok_History1.pdf.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nightmute: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	67	6	8	2	2	n/a	71	n/a	n/a
2001	67	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	68	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	68	3	4	15	n/a	n/a	20	n/a	n/a
2004	46	1	n/a	n/a	n/a	n/a	10	n/a	n/a
2005	46	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	46	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	46	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	50	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg (2011, revised). Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nightmute: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	29	18	6,634
2004	29	12	882
2005	31	23	4,496
2006	15	11	4,246
2007	15	10	1,642
2008	8	2	168
2009	7	1	126
2010	2	1	60

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nightmute: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nunapitchuk (*noo-nah-PIT-chuck*; a.k.a. *Akolmiut*)



People and Place

*Location*⁹⁶³

Nunapitchuk is located on both banks of the Johnson River, 22 miles northwest of Bethel in the Yukon-Kuskokwim Delta. Nunapitchuk is in the Bethel Recording District and Bethel Census Area. The City encompasses 7.9 square miles of land and 0.7 square miles of water.

*Demographic Profile*⁹⁶⁴

In 2010, there were 496 inhabitants in Nunapitchuk, making it the 119th largest of 352 total Alaskan communities with recorded populations that year. The community first appeared in U.S. Census records in 1920 with 134 inhabitants. Overall between 1990 and 2010, the population of Nunapitchuk increased by 31.2%. According to Alaska Department of Labor population estimates, between 2000 and 2009, the population of permanent residents increased by 15.7%, with an average annual growth rate of 1.33%. In 2010, a majority of Nunapitchuk residents identified themselves as American Indian and Alaska Native (95.8%), while 2.4% identified as White, and 1.8% identified with two or more races. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Nunapitchuk was 4.0, a slight decrease from 4.44 in 2000, but the same as the average in 1990. The total number of households in Nunapitchuk increased steadily over time, from 87 in 1990 to 110 in 2000, and 124 occupied housing units in 2010. Of the 132 housing units surveyed for the 2010 Decennial Census, 58.3% were owner-occupied, 35.6% were renter-occupied, and 6.1% of all housing units were vacant or used only seasonally. Between 1990 and 2010, no residents of Nunapitchuk were reported to be living in group quarters.

In 2010, the gender makeup of Nunapitchuk's population (53.6% male and 46.4% female) was more weighted toward males than the population of the State as a whole, which was 52% male and 48% female. That year, the median age of Nunapitchuk residents was 22.9 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the age groups most skewed toward males were ages 10-19 and 50-59 cohorts, while there was a relatively even spread of males and females across other age categories. Also in 2010, 8% of Nunapitchuk's population was age 60 or older. The overall population structure of Nunapitchuk in 2000 and 2010 is shown in Figure 2.

⁹⁶³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁶⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Nunapitchuk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	378	-
2000	466	-
2001	-	489
2002	-	512
2003	-	497
2004	-	529
2005	-	516
2006	-	547
2007	-	542
2008	-	539
2009	-	539
2010	496	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nunapitchuk: 2000-2010 (U.S. Census).

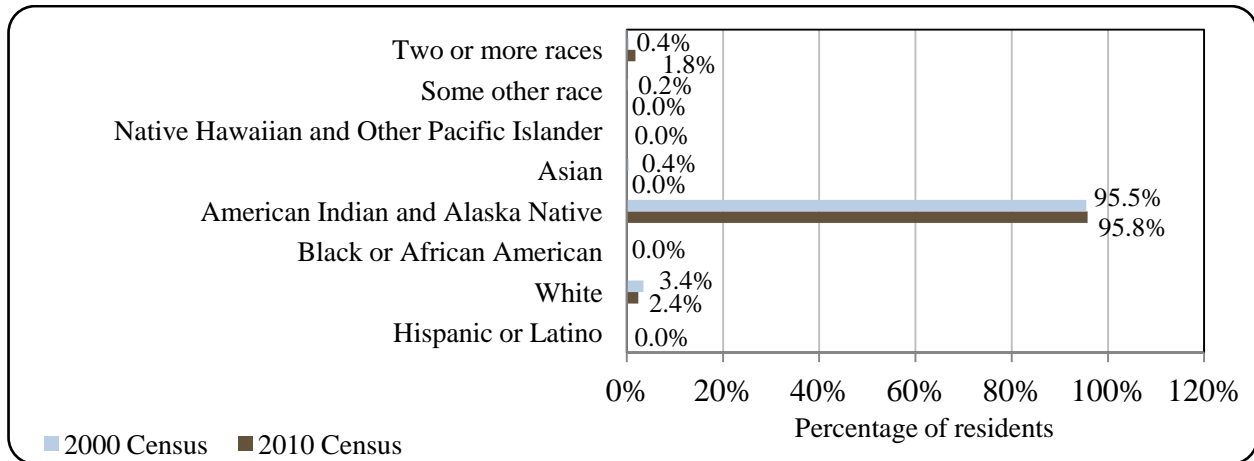
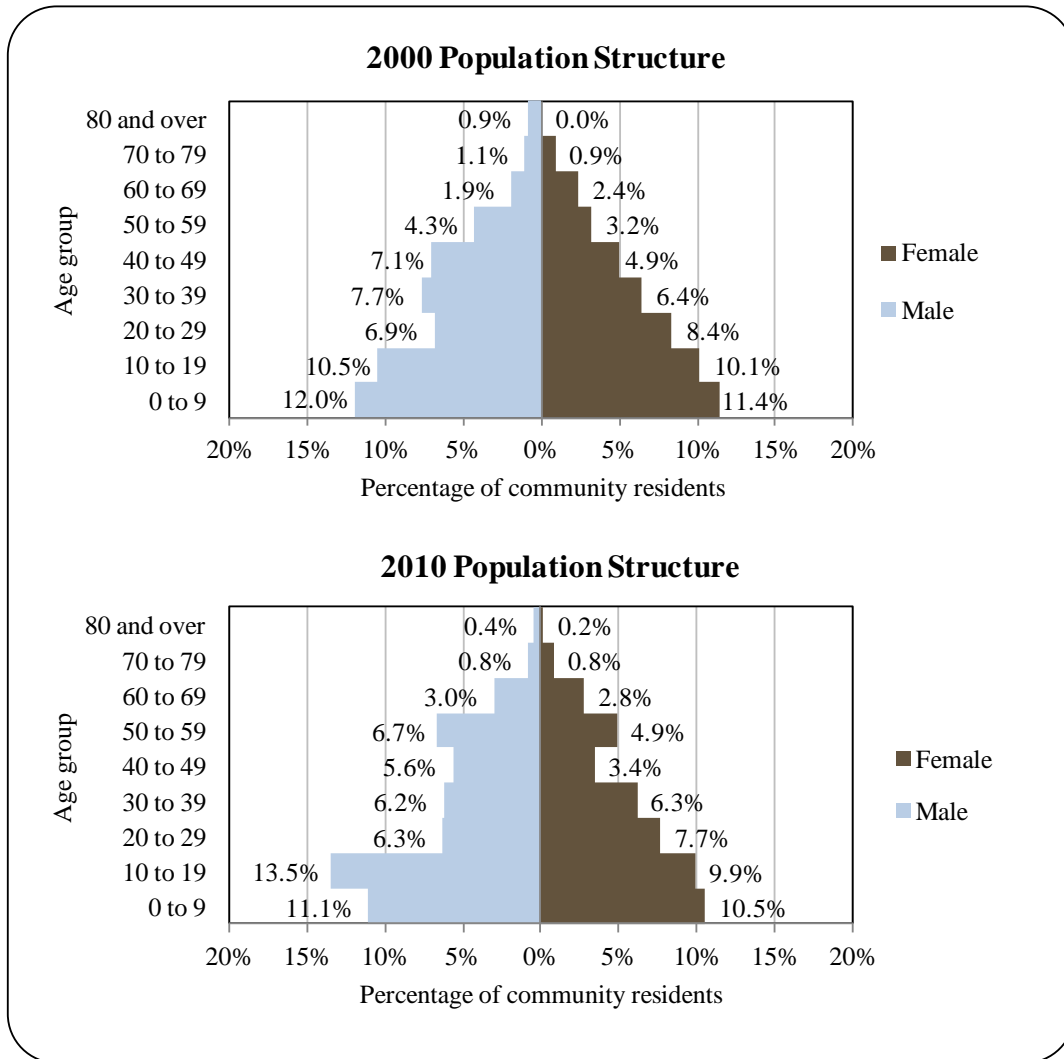


Figure 2. Population Age Structure in Nunapitchuk Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁹⁶⁵ 65.7% of Nunapitchuk residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 19.7% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 14.6% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 19.7% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 2% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 11.1% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and

⁹⁶⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

1.5% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Yup'ik Eskimos have inhabited the Yukon-Kuskokwim area for thousands of years. Historically, the Yup'ik people were very mobile, traveling with the migration of game and fish resources. Ancient settlements and seasonal camps contained small populations, with numerous settlements throughout the region consisting of extended families or small groups of families.⁹⁶⁶ Residents of Nunapitchuk and two nearby villages, Atmautluak and Kasigluk, are collectively known as the Akulmiut, a sub-group of Yup'ik Eskimo.⁹⁶⁷ Nunapitchuk was first listed in the 1920 U.S. Census with a population of 134. The community was incorporated as a 2nd Class City in 1969. During the 1970 U.S. Census, Nunapitchuk, Atmautluak, and Kasigluk were enumerated as one village, called "Akolmiut." Today, subsistence activities remain a focal point of local culture. The sale, importation, and possession of alcohol are banned in the village.⁹⁶⁸

Natural Resources and Environment

Nunapitchuk is located within a maritime climate zone. Each year, the area averages 16 inches of precipitation and 50 inches of snowfall. Summer temperatures range from 42 to 62 °F, and winter temperatures run from -2 to 19 °F.⁹⁶⁹ The terrain of the Lower Kuskokwim River region is characterized as a level to rolling delta plain crossed by many river channels, meander scars, oxbow lakes, sloughs, and thousands of lakes. The area is underlain by permafrost, preventing drainage.⁹⁷⁰

Nunapitchuk is located within the boundaries of the Yukon Delta National Wildlife Refuge (NWR). The NWR was established "to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity."⁹⁷¹

Geological formations in the Nunapitchuk area are not indicative of metallic mineral deposits. The greatest concentration of known mineral occurrences in the Lower Kuskokwim River region is located east of Nunapitchuk, in the region of the Kilbuk Mountains. In addition,

⁹⁶⁶ Alaska Native Heritage Center. (n.d.) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁹⁶⁷ Ceñaliulriit Coastal Resource Service Area. 2008. *Coastal Management Plan: Final Plan Amendment*. Retrieved February 9, 2012 from http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

⁹⁶⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁶⁹ Ibid.

⁹⁷⁰ Lower Kuskokwim Economic Development Council. 2006. *Comprehensive Economic Development Strategy & Area Plan*. Retrieved March 6, 2012 from <http://www.lkedc.org/ARDPLAN1.pdf>.

⁹⁷¹ U.S. Fish and Wildlife Service. 2011. Yukon Delta National Wildlife Refuge. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

four exploratory oil wells were drilled near Nunavakpak Lake, just southwest of Nunapitchuk. These wells were dry and have been plugged and abandoned.⁹⁷²

According to a local hazard mitigation plan published by the City of Bethel in 2008, the Nunapitchuk area is at high risk of floods, severe weather, and erosion. The threat of earthquakes is also noted. The plan addresses the role of climate change in exacerbating threats from flooding and erosion. Warming temperatures have led to thawing permafrost. This has caused severe subsidence, which constrains development of resources, transportation and utility systems, and community expansion. In addition, delayed formation of protective shore ice along the coast leaves shorelines more vulnerable to fall storms and storm surges, resulting in increased flooding and erosion.⁹⁷³

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Nunapitchuk as of July 2012.⁹⁷⁴

Current Economy⁹⁷⁵

In 2010, top employers of Nunapitchuk residents included local government offices, the Lower Kuskokwim School District, the local village Native corporation, regional health and other service providers, utilities, and the State of Alaska.⁹⁷⁶ Commercial fishing and subsistence activities are also important for local economy and culture.⁹⁷⁷ Between 2000 and 2010, the number of Nunapitchuk residents holding state Commercial Fisheries Entry Commission (CFEC) varied between 52 and 56, equivalent to between 10% and 11.5% of the total local population. A majority of CFEC permits were held in the Kuskokwim set gillnet fishery (see *Commercial Fisheries* section).

Based on household surveys for the 2006-2010 ACS,⁹⁷⁸ in 2010, the per capita income in Nunapitchuk was estimated to be \$12,321 and the median household income was estimated to be \$38,281. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$8,411 and \$29,286, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,⁹⁷⁹ real per capita income in 2000 was \$10,999 and real median household income was \$38,511, revealing that while per capita income shows a real increase, median household income remained stable over the period. In 2010, Nunapitchuk ranked 236th of 305 Alaskan communities with per capita income data that year, and 198th in median household income, out of 299 Alaskan communities with household income data.

⁹⁷² See footnote 967.

⁹⁷³ City of Bethel. 2008. *Local Hazards Mitigation Plan*. Retrieved February 7, 2012 from http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Bethel_LHMP.pdf.

⁹⁷⁴ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁹⁷⁵ Unless otherwise noted, all monetary data are reported in nominal values.

⁹⁷⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹⁷⁷ See footnote 968.

⁹⁷⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁹⁷⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

However, Nunapitchuk's small population size may have prevented the ACS from accurately portraying economic conditions.⁹⁸⁰ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nunapitchuk in 2010 is \$6,541.⁹⁸¹ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Nunapitchuk between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,⁹⁸² indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a lower percentage of Nunapitchuk residents were estimated to be in the civilian labor force (66.1%) than was in the civilian labor force statewide (68.8%). Also in 2010, 22.5% of Nunapitchuk residents were estimated to be living below the poverty line, compared to a 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 18.5%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 28.9%, compared to a statewide unemployment rate estimate of 11.5%.⁹⁸³

Also based on the 2006-2010 ACS, a majority of workers were estimated to be employed in the public sector (58.6%), along with 35.7% in the private sector, and 5.7% estimated to be self-employed. Of the 140 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in educational services, health care, and social assistance (48.6%), public administration (17.1%), and retail trade (14.3%). None of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining in 2010. However, the number of individuals employed in farming, fishing and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 226 employed residents in Nunapitchuk in 2010, of which 70.8% were employed in local government, 7.1% in education and health services, 4% in trade, transportation, and utilities, 3.1% in state government, 1.1% in financial activities, 1.3% in information, 0.4% in leisure and hospitality, 0.4% in natural resources and

⁹⁸⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁹⁸¹ See footnotes 976 and 978.

⁹⁸² Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁹⁸³ See footnote 976.

mining, 0.4% in construction, and 8.8% in other industries.⁹⁸⁴ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Nunapitchuk (U.S. Census).

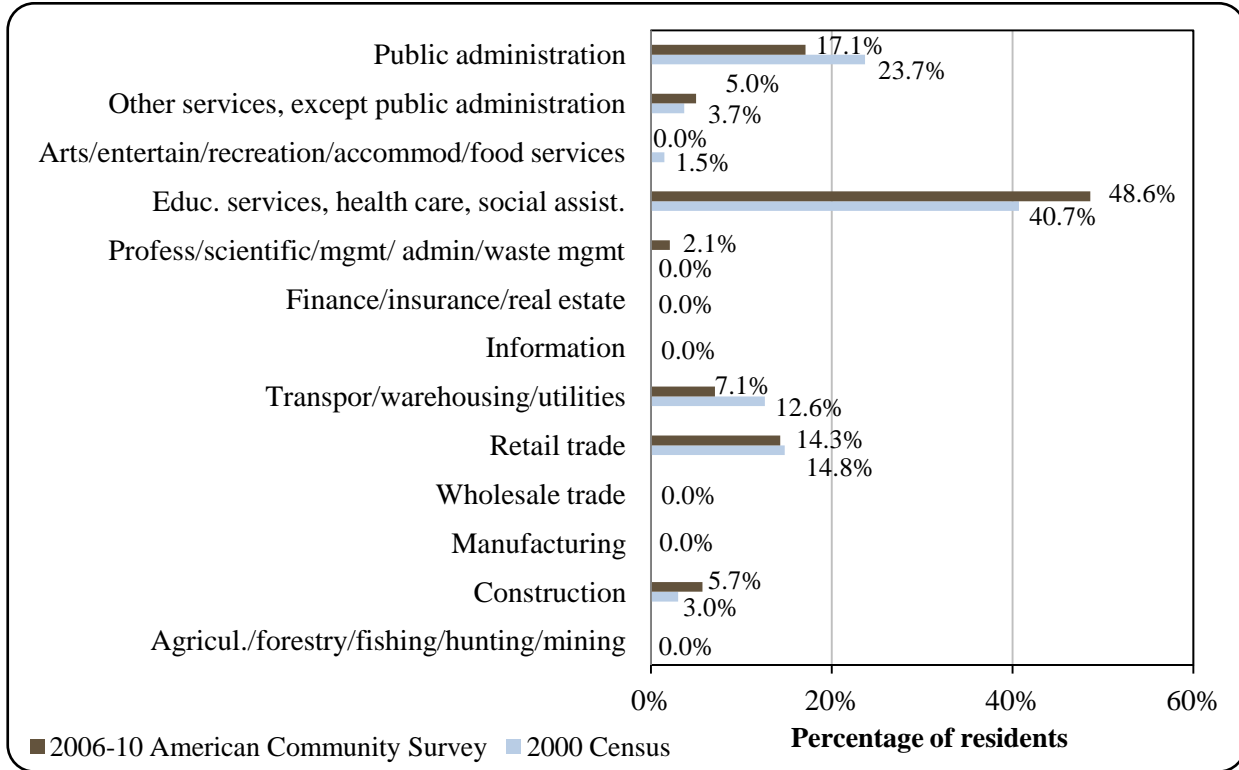
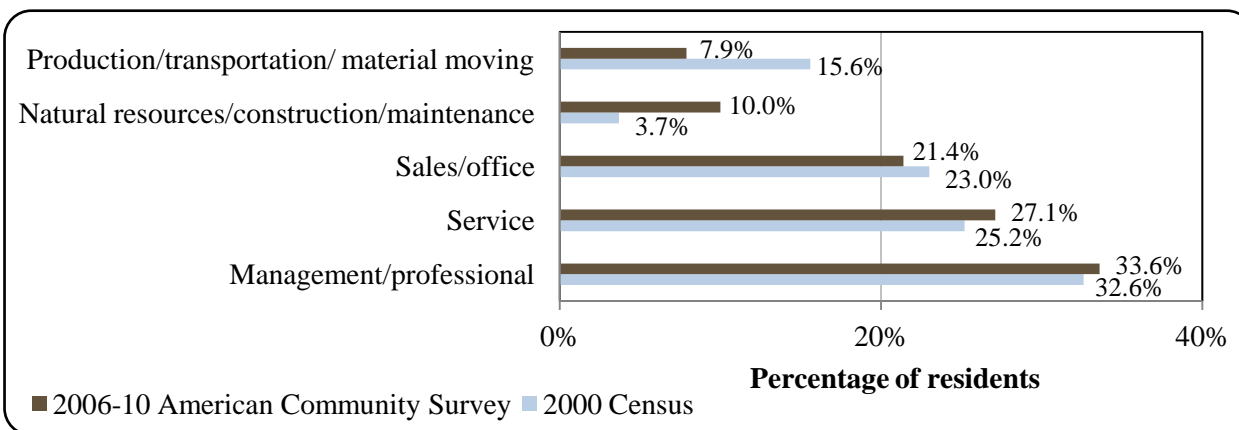


Figure 4. Local Employment by Occupation in 2000-2010, Nunapitchuk (U.S. Census).



⁹⁸⁴ Ibid.

Governance

Nunapitchuk was incorporated as a 2nd Class City in 1969 and is not part of an organized borough. A 4% sales tax is collected by the City. The City has a Strong Mayor form of government, including a seven-person city council which includes the Mayor, a nine-person advisory school board, and several municipal employees. The City administers a 4% sales tax, and no other taxes.⁹⁸⁵ In addition to sales tax revenues, other locally-generated revenue sources in Nunapitchuk include building leases, building and equipment rentals, service fees from the washeteria/sauna, water/sewer, and garbage collection, and bingo and pull tab receipts. Outside revenue sources during the 2000-2010 period included various state and federal revenue sharing programs, including state fish tax refunds (see the *Fisheries-Related Revenue* section of this profile), contributions from the federal Payment in Lieu of Taxes program, and contributions from the State Revenue Sharing and Community Revenue Sharing programs. Nunapitchuk received contributions from the State Revenue Sharing program of approximately \$30,000 per year between 2000 and 2003, and larger contributions from the state Community Revenue Sharing program in 2009 and 2010. No information was reported regarding receipt of fisheries-related grants in Nunapitchuk during this period. Information about selected aspects of Nunapitchuk’s municipal revenue is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nunapitchuk from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$414,481	\$26,091	\$31,739	n/a
2001	\$254,608	\$32,114	\$28,962	n/a
2002	\$256,068	\$26,572	\$30,740	n/a
2003	\$365,373	\$38,267	\$30,500	n/a
2004	\$420,889	\$35,752	n/a	n/a
2005	\$430,210	\$46,038	n/a	n/a
2006	\$494,398	\$100,384	n/a	n/a
2007	\$331,545	\$16,645	n/a	n/a
2008	\$510,734	\$59,582	n/a	n/a
2009	\$433,210	\$33,210	\$124,087	n/a
2010	\$403,300	\$44,281	\$123,548	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁹⁸⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Nunapitchuk was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Nunapitchuk. The Native village corporation is Nunapitchuk, Limited, which manages 115,200 acres of land.⁹⁸⁶ Nunapitchuk belongs to the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.⁹⁸⁷

Nunapitchuk is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁹⁸⁸ The AVCP is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁹⁸⁹ AVCP is made up of 56 villages and 45 village corporations.⁹⁹⁰

The closest offices of the Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community, and Economic Development (DCCED) are located in Bethel. A National Marine Fisheries Service (NMFS) field office is located in Bethel and a main office is located in Anchorage. The nearest offices of the Alaska Department of Natural Resources (DNR) and the Bureau of Citizenship and Immigration Services are located in Anchorage.

Infrastructure

Connectivity and Transportation

A state-owned 2,420 feet long by 75 feet wide gravel airstrip provides chartered or private air access year-round.⁹⁹¹ The approximate cost to travel by air roundtrip to Anchorage from Nunapitchuk in early June 2012 was \$588.⁹⁹² A dock, small boat harbor, and seaplane landing area are available on the Johnson River. Snowmobiles, ATVs, and dogsleds are used in winter months. Winter trails exist to Atmautluak (7 miles) and Akula Heights (2.5 miles).⁹⁹³

⁹⁸⁶ Ibid.

⁹⁸⁷ Calista Corporation. *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

⁹⁸⁸ Association of Village Council Presidents. (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

⁹⁸⁹ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁹⁹⁰ Calista Corporation. 2011. *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

⁹⁹¹ See footnote 985.

⁹⁹² This price was calculated on November 21, 2011 using kayak.com.

⁹⁹³ See footnote 985.

Facilities

Water in Nunapitchuk is derived from a community well and is filtered and chlorinated. Some homes have a flush/haul system, with water delivery and tank hauling services. Other households haul their own water from a central community tap, and use honeybuckets. Honeybuckets are emptied into sewage containers located throughout the City, and these are emptied into one of two sewage lagoons (one on either side of the river). Some outhouses are also in use. The City provides piped water to the school. Teachers' housing, located in the old school building, has an independent water and sewer system. The City operates a landfill and provides refuse collection services. Electricity is provided in the community by a diesel powerhouse, operated by the Rural Electrification Administration (REA) Co-op.⁹⁹⁴ With funding received from the Denali Commission, a new bulk fuel tank farm and automated, fuel-efficient power plant was built in Kasigluk in 2006, along with three 100kW wind turbines. Power is provided to Nunapitchuk via an electric intertie from Kasigluk.⁹⁹⁵

Police services are provided in Nunapitchuk by two Village Public Safety Officers (VPSO) stationed locally,⁹⁹⁶ as well as a City Village Police Officer and state troopers stationed in Bethel. Fire and rescue services are provided by the state troopers, VPSOs, the City, and a volunteer fire department. Additional community facilities include a City Recreation Center, a Community Building, and a school library. Internet, cable, and telephone service are available in Nunapitchuk.⁹⁹⁷

Medical Services

A local health clinic is owned by the City and operated in conjunction with the Yukon-Kuskokwim Health Corporation. The Eliza Maxie Memorial Clinic is a Community Health Aide Program site. Emergency Services have river, air, and floatplane access. Emergency service is provided by a health aide.⁹⁹⁸ The nearest hospital is located in Bethel.

Educational Opportunities

There is one school in the community, which offers preschool through 12th grade. As of 2011, the Anna Tobeluk Memorial School had a total of 178 students and 13 teachers.⁹⁹⁹ In addition, the Rural Alaska Community Action Program (RurAL CAP) runs Head Start (ages 3 to 5 years) and Early Head Start (birth to 3 years) programs in Nunapitchuk.¹⁰⁰⁰

⁹⁹⁴ Ibid.

⁹⁹⁵ AVEC website. 2012. *AVEC Facilities: Nunapitchuk*. Retrieved March 6, 2012 from <http://www.avec.org/communities/community.php?ID=32>.

⁹⁹⁶ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁹⁹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁹⁸ Ibid.

⁹⁹⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰⁰⁰ Rural Alaska Community Action Program, Inc (2011). *2010 Head Start Report*. Retrieved on December 20, 2011 from <http://www.ruralcap.com/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Nunapitchuk area for thousands of years.¹⁰⁰¹ Subsistence salmon harvest continues to be a primary economic activity along the Kuskokwim River. In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs is an important subsistence resource for coastal Alaskan communities.¹⁰⁰²

Commercial harvest of salmon first took place in the Kuskokwim River in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. When Alaska became a state in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s, commercial salmon fisheries in the Kuskokwim River were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels, and salmon prices decreased. Current state-dictated management is focused on sustainability of salmon runs, ensuring first that subsistence needs are met, and providing opportunity for commercial harvest of available surpluses.¹⁰⁰³

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Between 2000 and 2010, Nunapitchuk residents held permits in the Goodnews Bay roe and foot/bait herring fishery and the Bristol Bay spawn on kelp, hand pick herring fishery. (For more information see the *Commercial Fisheries* section of this profile.) The largest aggregation of herring in Alaska spawns along the northern shore of Bristol Bay, near the village of Togiak. Spawning herring are harvested using purse seines and gillnets in the Togiak sac roe fishery. A spawn-on-kelp harvest is also taken, primarily by local residents. Along the coast of the Yukon-Kuskokwim Delta there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.¹⁰⁰⁴

Nunapitchuk is located closest to the Lower Kuskokwim salmon fishing district (District 1). The closest marine area to Nunapitchuk, Kuskokwim Bay, is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Nunapitchuk is a member of the Coastal Villages Region Fund (CVRF), a Community Development Quota group that promotes employment opportunities for

¹⁰⁰¹ Alaska Native Heritage Center (n.d.). *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

¹⁰⁰² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁰⁰³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹⁰⁰⁴ See footnote 1002.

residents as well as participation in the Bering Sea crab and groundfish fisheries.¹⁰⁰⁵ Nunapitchuk is not eligible to participate in the Community Quota Entity program.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Nunapitchuk. However, the Intent to Operate list does list *a small processing facility in nearby Bethel. The plant, run by Kuskokwim Seafoods LLC, was started in 2010 to provide a market to local salmon fishers to help them sell their catch closer to home. Kuskokwim Seafoods processes four salmon species: Chinook, sockeye, chum, and coho.*¹⁰⁰⁶

Fisheries-Related Revenue

According to information provided in Nunapitchuk's annual municipal budget between 2000 and 2010, the primary sources of fisheries-related revenue in Nunapitchuk were a raw fish tax and the Shared Fisheries Business Tax. In 2010, Nunapitchuk received \$100 in raw fish tax revenues and \$116 from the Shared Fisheries Business Tax. That year, the City also received \$130 from the Fisheries Resource Landing Tax. During the 2000-2010 period, 2010 was the only year in which revenue was reported from the Shared Fisheries Business Tax. Information about fisheries-related revenue is presented in Table 3.¹⁰⁰⁷

It is also important to note that the CVRF uses fisheries revenue from CDQ revenue to provide grants, scholarships and training, and other financial assistance to fishermen and residents of member villages.¹⁰⁰⁸

Commercial Fishing

Between 2000 and 2010, Nunapitchuk residents participated in commercial fisheries as crew members, vessel owners, and permit holders. In 2010, 54 Nunapitchuk residents held a total of 56 Commercial Fisheries Entry Commission (CFEC) permits, including 46 salmon permits in the Kuskokwim River gillnet fishery, 2 salmon permits in the Bristol Bay drift gillnet fishery, 7 permits in the Goodnews Bay herring roe and foot/bait fishery, and 1 permit in the Bristol Bay herring spawn on kelp, hand pick fishery. These permit numbers were stable between 2000 and 2010, although the percentage of permits that were actively fished declined in both salmon and herring fisheries over the period. Two out of six herring permits (33%) were actively fished in 2000, but starting in 2001 none were fished. After the year 2000, when 42 out of 51 (82%) salmon permits were actively fished, the number fell to 19 out of 50 fished (38%) in 2003. By 2010, the number had climbed again to 28 out of 48 salmon permits actively fished (58%). It is important to note that, in the year 2000, one 'other finfish' CFEC permit was also held by a resident of Nunapitchuk. The permit was held for the statewide freshwater fish set gillnet fishery.

¹⁰⁰⁵ Coastal Villages Region Fund. (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

¹⁰⁰⁶ Kuskokwim Seafoods LLC. (n.d.). *Homepage*. Retrieved August 2011 from <http://kuskokwimseafoods.com/>.

¹⁰⁰⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

¹⁰⁰⁸ See footnote 1005.

Between 2000 and 2010, no Nunapitchuk residents held either Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP). Information about permits held by Nunapitchuk residents is presented in Table 4. Likewise, no Nunapitchuk residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab between 2000 and 2010. Information about federal catch share participation is presented in Tables 6 through 8.

In 2010, a total of 42 Nunapitchuk residents held commercial crew licenses and 3 fishing vessels were primarily owned by Nunapitchuk residents. The number of crew license holders fluctuated during the decade, with 61 in 2000 falling to 11 in 2003, and climbing again to 42 in 2010. The number of vessels owned by Nunapitchuk residents declined substantially from 2000, when 14 vessels were owned, to 3 owned in 2010. The number of vessels homeported in Nunapitchuk followed a similar pattern, with 12 in 2001 and only 2 in 2010.

No landings were recorded in Nunapitchuk between 2000 and 2010 (Table 9), given the lack of fish buyers in the community (Table 5). Information about landings and ex-vessel revenue generated by vessels owned by Nunapitchuk residents (irrespective of delivery locations) is largely considered confidential between 2000 and 2010 due to the small number of participants, with the exception of salmon harvest data in 2005. That year, Nunapitchuk vessel owners landed 84,540 net pounds of salmon, valued at \$31,681 in ex-vessel revenue. Information about commercial harvest and ex-vessel revenue earned by vessel owners residing in Nunapitchuk is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nunapitchuk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$276	\$250	\$400	n/a	n/a	n/a	n/a	n/a	\$130	\$130	\$100
Shared fisheries business tax ¹	\$727	\$564	\$111	\$143	\$118	\$288	\$336	\$176	\$130	\$110	\$116
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$130
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$1,003	\$814	\$511	\$143	\$118	\$288	\$336	\$176	\$260	\$240	\$346
Total municipal revenue⁵	\$414,481	\$254,608	\$256,068	\$365,373	\$420,889	\$430,210	\$494,398	\$331,545	\$510,734	\$433,210	\$403,300

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Nunapitchuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	6	6	7	8	8	8	9	9	9	9	8
	Fished permits	2	0	0	0	0	0	0	0	0	0	0
	% of permits fished	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	6	6	7	8	8	8	9	10	9	9	8

Table 4 cont'd. Permits and Permit Holders by Species, Nunapitchuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	51	51	50	50	51	49	50	50	49	50	48
	Fished permits	42	28	21	19	23	34	27	31	27	29	28
	% of permits fished	82%	55%	42%	38%	45%	69%	54%	62%	55%	58%	58%
	Total permit holders	54	54	50	51	51	51	51	55	52	51	51
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>58</i>	<i>57</i>	<i>57</i>	<i>58</i>	<i>59</i>	<i>57</i>	<i>59</i>	<i>59</i>	<i>58</i>	<i>59</i>	<i>56</i>
	<i>Fished permits</i>	<i>44</i>	<i>28</i>	<i>21</i>	<i>19</i>	<i>23</i>	<i>34</i>	<i>27</i>	<i>31</i>	<i>27</i>	<i>29</i>	<i>28</i>
	<i>% of permits fished</i>	<i>76%</i>	<i>49%</i>	<i>37%</i>	<i>33%</i>	<i>39%</i>	<i>60%</i>	<i>46%</i>	<i>53%</i>	<i>47%</i>	<i>49%</i>	<i>50%</i>
	<i>Permit holders</i>	<i>54</i>	<i>56</i>	<i>52</i>	<i>53</i>	<i>53</i>	<i>53</i>	<i>54</i>	<i>58</i>	<i>55</i>	<i>54</i>	<i>54</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nunapitchuk: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Nunapitchuk ²	Total Net Pounds Landed In Nunapitchuk ^{2,5}	Total Ex-Vessel Value Of Landings In Nunapitchuk ^{2,5}
2000	61	0	0	14	8	0	0	\$0
2001	33	0	0	16	12	0	0	\$0
2002	23	0	0	14	11	0	0	\$0
2003	11	0	0	11	8	0	0	\$0
2004	32	0	0	10	7	0	0	\$0
2005	49	0	0	11	8	0	0	\$0
2006	27	0	0	9	7	0	0	\$0
2007	28	0	0	6	4	0	0	\$0
2008	26	0	0	5	3	0	0	\$0
2009	38	0	0	4	2	0	0	\$0
2010	42	0	0	3	2	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Nunapitchuk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nunapitchuk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nunapitchuk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nunapitchuk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nunapitchuk Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	84,540	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	84,540	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	\$31,681	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	\$31,681	-	-	-	-	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were present in Nunapitchuk. However, residents of Nunapitchuk did participate in sportfishing. Between 2000 and 2010, the number of Nunapitchuk residents that purchased sportfishing licenses (irrespective of point of sale) varied between 27 and 80 per year. Between 2000 and 2003, no sportfishing licenses sold locally. However, starting in 2004, license sales were reported, varying between 34 and 100 licenses sold per year from 2004 to 2010. The fact that a greater number of licenses were sold in the City than were purchased by Nunapitchuk residents indicates that sport fisheries brought a small influx of non-locals to the community.

The Alaska Statewide Harvest Survey,¹⁰⁰⁹ conducted by ADF&G between 2000 and 2010, did not provide information regarding the species targeted by private anglers on the Johnson River near Nunapitchuk. However, the survey did note the following species as targeted by private anglers in Napakiak, located on the main stem of the Kuskokwim River: Dolly Varden char, northern pike, and whitefish. No kept/release log book data were reported for fishing charters out of Nunapitchuk between 2000 and 2010.¹⁰¹⁰

Nunapitchuk is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Nunapitchuk is displayed in Table 11.

Table 11. Sport Fishing Trends, Nunapitchuk: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nunapitchuk ²
2000	0	0	47	0
2001	0	0	52	0
2002	0	0	51	0
2003	0	0	27	0
2004	0	0	45	34
2005	0	0	45	41
2006	0	0	40	55
2007	0	0	41	42
2008	0	0	37	42
2009	0	0	68	75
2010	0	0	80	100

¹⁰⁰⁹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁰¹⁰ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11, Cont. Sport Fishing Trends, Nunapitchuk: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence activities are a focal point of Nunapitchuk culture.¹⁰¹¹ Results of a subsistence survey conducted by ADF&G in 1983 suggest that the community has a high dependence on fish resources, including all five species of Pacific salmon, as well as a variety of non-salmon fish.¹⁰¹² In the 1983 survey, 100% of households reported harvesting pike, 94% reported harvesting whitefish, 77% reported harvest of burbot, 53% reported harvest of blackfish, and 12% reported harvest of sheefish. In addition, the 1983 ADF&G survey found that 29% of households reported harvesting seal for subsistence purposes that year. No information was provided regarding the species of seal harvested.¹⁰¹³ Kuskokwim Bay is an important site for both seal and beluga whale hunts. In addition, waterfowl are an important subsistence resource

¹⁰¹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰¹² Ceñaliulriit Coastal Resource Service Area. 2008. *Coastal Management Plan: Final Plan Amendment*. Retrieved February 9, 2012 from http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

¹⁰¹³ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

during spring, late summer, and early fall. A 1989 ADF&G study of subsistence territory found that Nunapitchuk residents used an area of approximately 2,500 to 3,000 square miles for subsistence harvest of fish and wildlife resources.¹⁰¹⁴

A subsistence survey conducted by ADF&G in 2004 found that 4% of Nunapitchuk households participated in Pacific halibut subsistence and 53% of Nunapitchuk households participated in non-salmon fish subsistence (other than halibut). No information was reported regarding the species of non-salmon fish included in this harvest. Likewise, no information was reported regarding the percentage of households participating in salmon, marine mammal, or marine invertebrate subsistence that year, and no information was reported regarding per capita subsistence in the community that year (Table 12). However the total pounds of non-salmon fish harvested by Nunapitchuk residents for subsistence purposes was reported for 2004: 89,846 pounds (Table 13).

Data are available during the 2000-2010 period regarding subsistence salmon permits. From 2000 to 2008, the number of Nunapitchuk households that were issued subsistence salmon permits varied between 102 and 115 per year. On average, 4,899 chum, 3,732 Chinook, 1,905 sockeye, and 711 coho salmon were harvested per year. Between 2005 and 2007, harvest of several pink salmon per year was also reported. Information about subsistence salmon permits and harvest is presented in Table 13.

One Subsistence Halibut Registration Certificate (SHARC) was issued to a Nunapitchuk resident each year in 2004 and 2005. However, no information was reported about the number of SHARC cards that were returned or the total pounds of subsistence halibut harvested by Nunapitchuk residents during these years (Table 14). In addition, no information was reported by management agencies regarding subsistence harvest of marine mammals by Nunapitchuk residents between 2000 and 2010 (Table 15).

Table 12. Subsistence Participation by Household and Species, Nunapitchuk: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	4%	n/a	n/a	53%	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁰¹⁴ See footnote 1012.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nunapitchuk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	103	92	3,354	4,694	366	n/a	2,111	n/a	n/a
2001	104	80	3,250	4,749	392	n/a	2,583	n/a	n/a
2002	102	81	3,883	6,917	790	n/a	1,382	n/a	n/a
2003	103	77	3,763	4,139	676	n/a	2,521	n/a	n/a
2004	109	74	4,104	4,200	416	n/a	1,381	n/a	n/a
2005	115	76	3,480	3,640	716	32	1,589	n/a	89,846
2006	110	59	3,357	4,266	567	6	1,548	n/a	n/a
2007	112	65	4,664	6,588	1,765	11	2,124	n/a	n/a
2008	111	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nunapitchuk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nunapitchuk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Oscarville (a.k.a. Kuiggayagaq)



People and Place

*Location*¹⁰¹⁵

Oscarville is located on the north bank of the Kuskokwim River, directly across the river from the community of Napaskiak. It lies 6 miles southwest of Bethel and 401 miles west of Anchorage. Oscarville is located in the Bethel Recording District and Bethel Census Area.

*Demographic Profile*¹⁰¹⁶

In 2010, there were 70 inhabitants in Oscarville, making it the 280th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population of Oscarville increased by 22.8%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 78.7%, with an average annual growth rate of 7.48%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that three seasonal workers are present in Oscarville for approximately three months during the summer to work at the cannery. In addition, they estimated that three local residents also work at the shore-side processing facility. Community leaders also indicated that population fluctuations in Oscarville are mostly driven by activity and employment in fishing sectors.

In 2010, a majority of Oscarville residents identified themselves as American Indian and Alaska Native (91.4%), while 2.9% identified themselves as White, 1.4% identified themselves as Asian, and 4.3% identified with two or more races. No residents of Oscarville identified themselves as Hispanic in 2000 or 2010. The percentage of the community identifying themselves as White fluctuated substantially in recent decades, with 8.8% in 1990, 0% in 2000, and 2.9% in 2010. The percentage of the community that identified as American Indian or Alaska Native increased from 91.2% to 98.4% in 2000, then declined to 91.4% by 2010. It is important to note that, if counting individuals who identified themselves as Native and those who identified as Native in combination with one or more races, 100% of the Oscarville population identified themselves as Native in the year 2000. In addition, a small Asian population appears to have come to Oscarville between 2000 and 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹⁰¹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰¹⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Between 1990 and 2010, the number of occupied households in Oscarville remained constant at 15. Over the same period, the average household size increased, from 3.8 persons per household in 1990 to 4.07 in 2000, and 4.67 in 2010. Of the 30 housing units surveyed for the 2010 U.S. Census, 40% were owner-occupied, 10% were rented, and 50% were vacant or used only seasonally. Between 1990 and 2010, no residents of Oscarville were estimated to be living in group quarters.

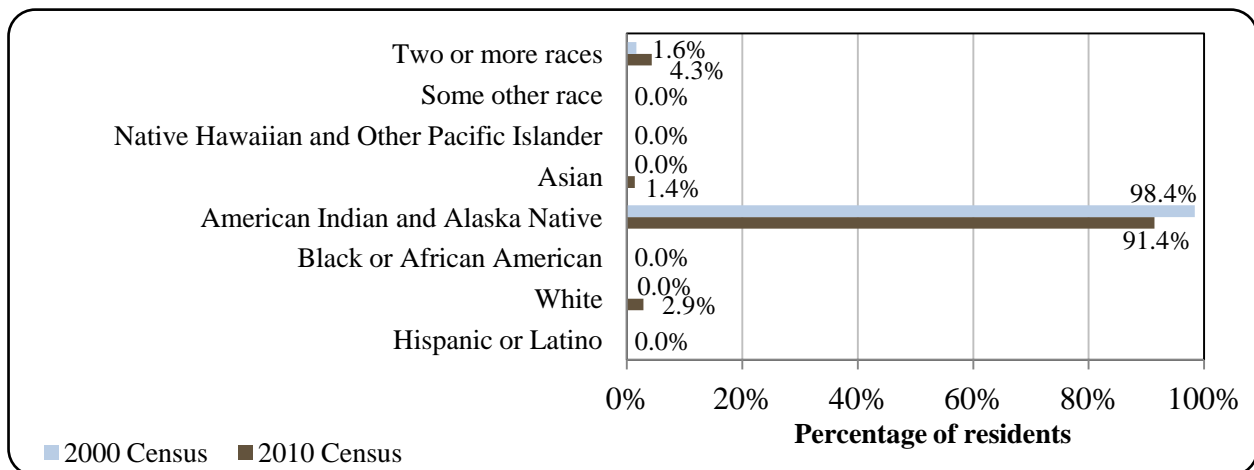
Table 1. Population in Oscarville from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	57	-
2000	61	-
2001	-	67
2002	-	62
2003	-	62
2004	-	57
2005	-	62
2006	-	83
2007	-	97
2008	-	116
2009	-	109
2010	70	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

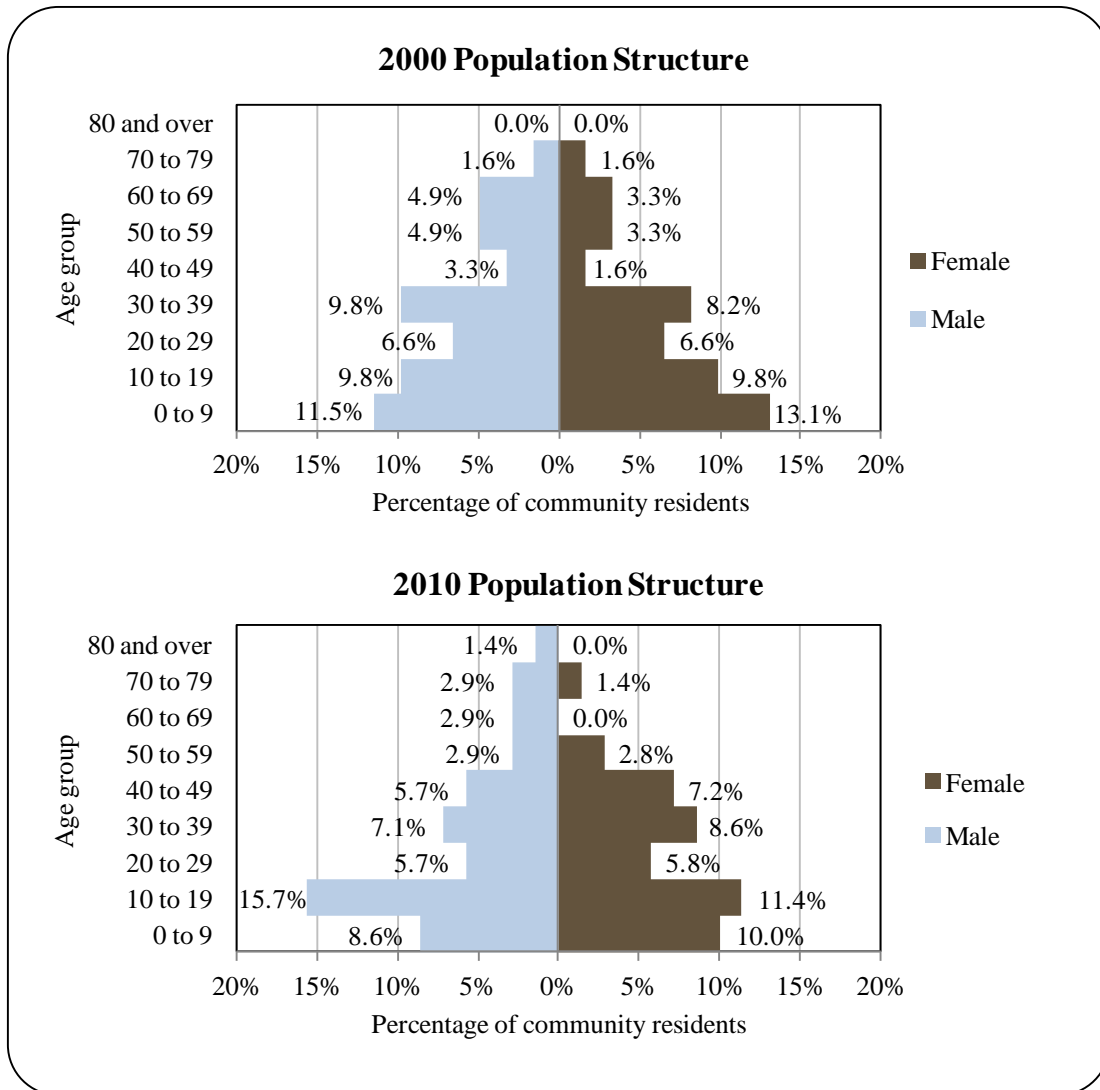
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Oscarville: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Oscarville’s population (52.8% male and 47.2% female) was slightly less gender balanced than the state population as a whole, which was 52% male and 48% female. That year, the median age of Oscarville residents was 22.5 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 8.6% of Oscarville’s population was 60 or older. The overall population structure of Oscarville in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Oscarville Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁰¹⁷ 58.1% of Oscarville residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 21% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 21% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 19.4% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 0% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 0% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Yup'ik Eskimos have inhabited the Kuskokwim area for thousands of years. Historically, Yup'ik people were very mobile, traveling with the migration of game and fish resources. Ancient settlements and seasonal camps contained small populations, with numerous settlements throughout the region consisting of extended families or small groups of families.¹⁰¹⁸ Today, Oscarville residents continue to practice a subsistence lifestyle, along with some commercial fishing.¹⁰¹⁹

The village of Oscarville was first reported in the U.S. Census in 1940 with a population of 11. The community was founded in 1908 when Oscar Samuelson and his wife, a Yup'ik from the Nushagak region, moved from Napaskiak across the river and opened a trading post. A few Native families settled nearby and the site came to be known as Oscarville. Samuelson managed the store for 45 years, until his death in 1953. By 1955, there were 13 homes and two warehouses in the village. The Samuelsons continued to operate the store until 1975 when it was sold. The store finally closed in the early 1980s. A school was built by the Bureau of Indian Affairs (BIA) in 1964.¹⁰²⁰

Natural Resources and Environment

Oscarville is strongly influenced by storms and patterns in the Bering Sea and also by inland continental weather. Average annual precipitation is 16 inches, with 50 inches of snowfall. Summer temperatures range from 42 to 62 °F, and winter temperatures average -2 to 19 °F. The Kuskokwim River is typically ice-free from June through October.¹⁰²¹

Oscarville is located within the boundaries of the Yukon Delta National Wildlife Refuge (NWR). The Yukon Delta NWR was established “to conserve fish and wildlife populations and

¹⁰¹⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰¹⁸ Alaska Native Heritage Center (n.d). *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

¹⁰¹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰²⁰ Ibid.

¹⁰²¹ Ibid.

habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Most of the Yukon Delta NWR is a vast, flat wetland/tundra complex dotted by countless ponds, lakes, and meandering rivers. Approximately half of the NWR is covered by water. Many streams and sloughs are former tributaries of the two major rivers. Some forest habitat is present along rivers and in the Kilbuck Mountains, located in the southeastern part of the Yukon Delta NWR, directly east of Oscarville. Moose, caribou, brown bear, and black bear can be found in this mountain range, which rises to between 2,000 and 4,000 feet in elevation.¹⁰²²

Both Togiak NWR and Wood-Tikchik State Park are located less than 100 miles southeast of Oscarville. Togiak NWR covers 4.7 million acres, of which the northern 2.3 million acres are designated as Togiak Wilderness Area. Like the Yukon Delta NWR, the Togiak NWR protects the habitat of a wide array of birds, fish and mammals. East of Togiak NWR, Wood-Tikchik State Park is the largest state park in the United States. The park includes a diversity of terrain and ecosystems. The Wood River and Tikchik systems host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, Arctic char, Dolly Varden, and northern pike. Tikchik Lake is an important site for whitefish subsistence harvest. Moose, caribou, and brown bear are common in the park, along with black bear in limited area of the park. Small game present in the area includes beaver, muskrat, otter, fox, wolverine, mink, and porcupine. Ground squirrels and marmots are abundant, along with a variety of resident and migratory waterfowl and land birds.¹⁰²³

According to a local hazard mitigation plan conducted by the City of Bethel in 2008, the Oscarville area is at high risk of floods, severe weather, and erosion. The threat of earthquakes is also noted. The plan addresses the role of climate change in exacerbating threats from flooding and erosion. Warming temperatures have led to thawing permafrost. This has caused severe subsidence, which constrains development of resources, transportation and utility systems, and community expansion. In addition, delayed formation of protective shore ice along the coast leaves shorelines more vulnerable to fall storms and storm surges, resulting in increased flooding and erosion.¹⁰²⁴

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Oscarville as of May 2012.¹⁰²⁵

Current Economy¹⁰²⁶

In a survey conducted by the AFSC in 2011, community leaders reported that the Oscarville economy is highly dependent on fishing. Subsistence harvest provides most food sources in Oscarville. Important subsistence resources include salmon, waterfowl, moose, bear,

¹⁰²² U.S. Fish and Wildlife Service. 2011. *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

¹⁰²³ Alaska Dept. of Natural Resources. (n.d.) *Wood-Tikchik State Park website*. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

¹⁰²⁴ City of Bethel. 2008. *Local Hazards Mitigation Plan*. Retrieved February 7, 2012 from http://www.dced.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Bethel_LHMP.pdf.

¹⁰²⁵ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁰²⁶ Unless otherwise noted, all monetary data are reported in nominal values.

and seals.¹⁰²⁷ Between 2000 and 2009, one state fishery permit was held each year in the Kuskokwim salmon gillnet fishery. Community leaders reported in the AFSC survey that the local salmon fishery takes place in August and September. In addition to fishing activity, top local employers in Oscarville in 2010 included the school, regional health care and social service providers, and the regional Community Development Quota (CDQ) group, the Coastal Villages Region Fund (CVRF).¹⁰²⁸ Trapping and handicrafts also provide some income.¹⁰²⁹

Based on household surveys conducted for the 2006-2010 ACS,¹⁰³⁰ in 2010, the per capita income in Oscarville was estimated to be \$9,973 and the median household income was estimated to be \$57,813. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$5,824 and \$8,125, respectively). The increase in income remains substantial even if inflation is taken into account by converting the 2000 values to 2010 dollars,¹⁰³¹ revealing a real per capita income in 2000 of \$7,658 and a real median household income of \$10,684. In 2010, Oscarville ranked 276th of 305 Alaskan communities with per capita income data that year, and 85th in median household income, out of 299 Alaskan communities with household income data.

Although Oscarville's small population size may have prevented the ACS from accurately portraying economic conditions,¹⁰³² the 2010 ACS per capita income estimate is supported by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Oscarville in 2010 is \$8,182.¹⁰³³ This is very close to the 2006-2010 ACS estimate, and provides additional evidence that per capita income increased in Oscarville between 2000 and 2010. Despite this apparent increase in per capita income, in 2010, the community was recognized as "distressed" by the Denali Commission in 2011,¹⁰³⁴ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Oscarville residents were estimated to be in the civilian labor force (58.5%) than were estimated to be in the civilian labor

¹⁰²⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁰²⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁰²⁹ See footnote 1027.

¹⁰³⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁰³¹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁰³² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰³³ See footnotes 1028 and 1030.

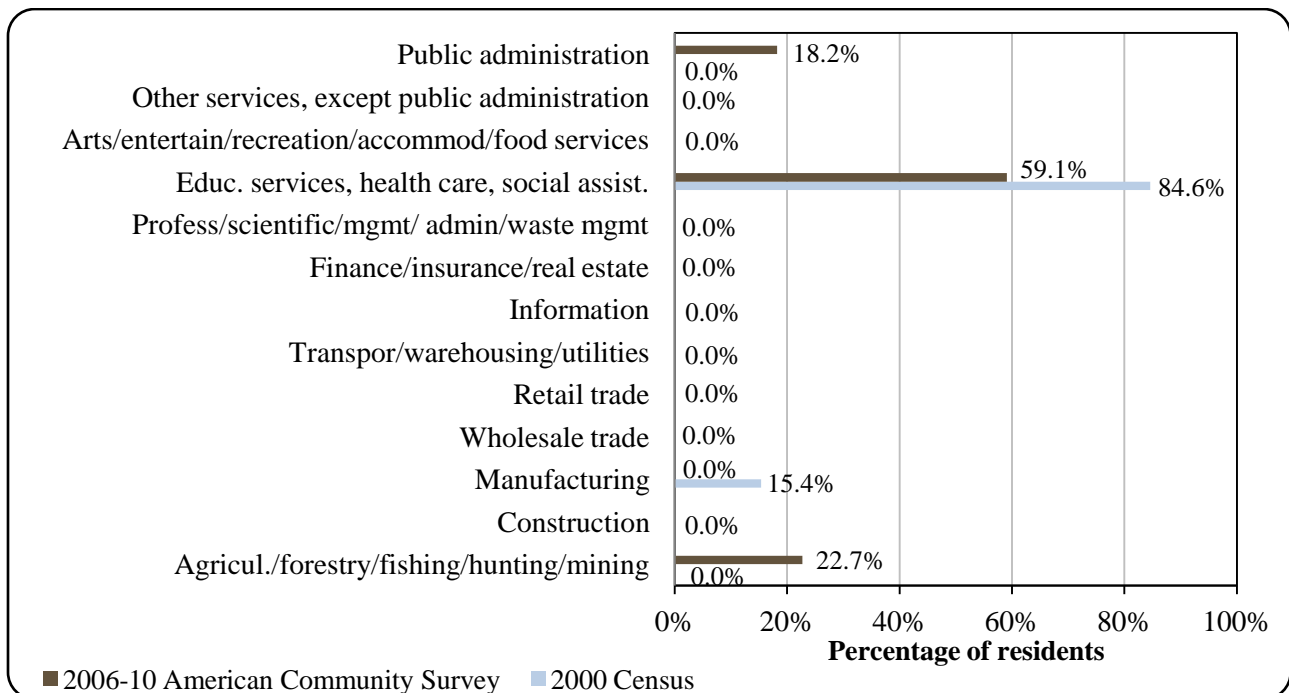
¹⁰³⁴ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

force statewide (68.8%). In the same year, 54.7% of local residents were estimated to be living below the poverty line, compared to a 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 24.6%, compared to a statewide unemployment rate of 5.9%. A very different picture of unemployment is provided by data compiled on the ALARI database, which indicates that a very low percentage of the Oscarville population was unemployed in 2010 (5.7%), compared to a statewide unemployment rate estimate of 11.5%.¹⁰³⁵

Also based on the 2006-2010 ACS, a majority of Oscarville workers were estimated to be employed in the public sector (59.1%), with the remaining 40.9% in the private sector. Of the 22 people aged 16 and over that were estimated to be employed in the civilian labor force, 59.1% were estimated to be working in educational services, health care, and social assistance, 22.7% in agriculture, forestry, fishing, hunting, and mining, and 18.2% in public administration. No Oscarville residents were estimated to be working in agriculture, forestry, fishing, hunting, and mining in 2010. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 26 employed residents in Oscarville in 2010, of which 38.5% were employed in local government, 19.2% in financial activities, 15.4% in educational and health services, and 26.9% in other industries.¹⁰³⁶ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

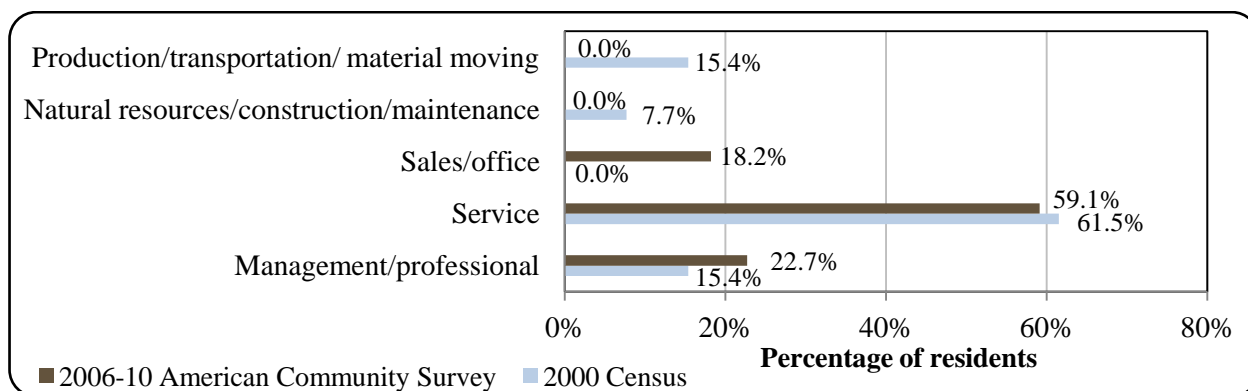
Figure 3. Local Employment by Industry in 2000-2010, Oscarville (U.S. Census).



¹⁰³⁵ See footnote 1028.

¹⁰³⁶ Ibid.

Figure 4. Local Employment by Occupation in 2000-2010, Oscarville (U.S. Census).



Governance

Oscarville is an unincorporated community, and is not part of an organized borough.¹⁰³⁷ No taxes are collected in the community.¹⁰³⁸ Because it is not incorporated and there is no taxing authority, no municipal revenue or sales tax revenue was reported for Oscarville between 2000 and 2010. The community did not receive State or Community Revenue Sharing contributions between 2000 and 2010, and no state or federal fisheries-related grants were reported during the period. Information about selected revenue sources in Oscarville is presented in Table 2.

Oscarville was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the BIA, is the Oscarville Traditional Village. The Native village corporation is the Oscarville Native Corporation, which manages 69,120 acres of land.¹⁰³⁹ Oscarville belongs to the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.¹⁰⁴⁰

Oscarville is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”¹⁰⁴¹ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these

¹⁰³⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰³⁸ Alaska Dept. of Comm. And Rural Affairs. (n.d.). *Community Information Summaries*. Retrieved December 27, 2011 from http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm.

¹⁰³⁹ See footnote 1037.

¹⁰⁴⁰ Calista Corporation (n.d.). *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

¹⁰⁴¹ Association of Village Council Presidents. (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹⁰⁴² AVCP is made up of 56 villages and 45 village corporations.¹⁰⁴³

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is located in Bethel and a main office is located in Anchorage. The nearest offices of the Alaska Department of Natural Resources and the U.S. Bureau of Citizenship and Immigration Services are also in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Oscarville from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Oscarville relies on Napaskiak for passenger, mail, and cargo services throughout the year. During the summer residents use skiffs to pick up mail in Napaskiak or to shop in Bethel. Snow machines and ATVs are used in winter, when the river serves as an ice road. A winter trail is marked along the river to Bethel. The community can be periodically isolated during breakup

¹⁰⁴² U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹⁰⁴³ Calista Corporation. 2011. *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

and freezeup.¹⁰⁴⁴ Commercial air service from Bethel to Napaskiak is provided daily by Grant Aviation¹⁰⁴⁵ and Yute Air.¹⁰⁴⁶ Ryan Air Service also provides air freight delivery services three days per week.¹⁰⁴⁷ The price of a roundtrip ticket between Bethel and Napaskiak on Grant Aviation or Yute Air as of March 2012 was approximately \$160.¹⁰⁴⁸ The approximate cost to travel by air roundtrip to Anchorage from Bethel in early June 2012 was \$368.¹⁰⁴⁹ Barge services deliver goods directly to Oscarville once a year.¹⁰⁵⁰

Facilities

Water in Oscarville is retrieved from a community well operated by the Village Council. The water is filtered and chlorinated and stored at the washeteria. No water delivery services are available, and local residents haul water from the washeteria. There is no piped water or sewer system. Residents use honeybuckets and outhouses, and a sewage lagoon is also located near the community. The Village Council operates a landfill in Oscarville, but no refuse collection services are provided. Bethel Utilities Corporation provides electricity via a diesel powerhouse. There are no police, fire, or rescue services stationed in Oscarville.¹⁰⁵¹ Two Village Public Safety Officers¹⁰⁵² and a volunteer fire department are located across the river in Napaskiak, and a state trooper post is located nearby in Bethel. Few community facilities or services are located in Oscarville. Residents travel across the river to Napaskiak to use the post office. Additional community facilities available in Napaskiak include a library at the school, a city office building, and a holding cell. Telephone service is available in Oscarville, but no internet or cable providers offer service locally.¹⁰⁵³

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that no dock space is available in Oscarville. They indicated that the only boats present in Oscarville are up to 24 feet in length. Community leaders also indicated that no fisheries-related businesses and services are available locally, and community members travel to Napaskiak, Napaskiak, or Bethel to access necessary services.

Medical Services

A local health clinic is owned by the Village Council and operated in conjunction with the Yukon-Kuskokwim Health Corporation. The Oscarville Health Clinic is a Community Health Aide Program site. Emergency Services have river and helicopter access. Emergency service is provided by a health aide.¹⁰⁵⁴ The nearest hospital is located in Bethel.

¹⁰⁴⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁴⁵ Information retrieved from <http://www.flygrant.com/schedule-bethel.php#pka> on March 28, 2012.

¹⁰⁴⁶ Information retrieved from <http://www.yuteair.net/Schedule.html> on March 28, 2012.

¹⁰⁴⁷ Information retrieved from http://www.ryanalaska.com/servlet/content/flight_schedules.html on March 28, 2012.

¹⁰⁴⁸ Personal communication, Yute Air reservation agent, March 28, 2012.

¹⁰⁴⁹ This price was calculated on November 21, 2011 using kayak.com.

¹⁰⁵⁰ See footnote 1044.

¹⁰⁵¹ Ibid.

¹⁰⁵² Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

¹⁰⁵³ See footnote 1044.

¹⁰⁵⁴ Ibid.

Educational Opportunities

There is one school in the community, which offers preschool through 12th grade. As of 2011, the Qugcuun Memorial School had a total of 28 student and 7 teachers.¹⁰⁵⁵

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Oscarville area for thousands of years.¹⁰⁵⁶ Subsistence salmon harvest continues to be a primary economic activity along the Kuskokwim River.¹⁰⁵⁷ In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs is an important subsistence resource for coastal Alaskan communities.¹⁰⁵⁸

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood in 1959, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.¹⁰⁵⁹

Oscarville is located in the Lower Kuskokwim salmon fishing district (District 1). The closest marine area to Oscarville, Kuskokwim Bay, is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Oscarville is a member of the CVRF, a CDQ group that promotes employment opportunities for residents, as well as participation in the Bering Sea crab and groundfish fisheries.¹⁰⁶⁰ Oscarville is not eligible to participate in the Community Quota Entity (CQE) program. In a survey conducted by the AFSC in 2011, community leaders indicated that Oscarville does not actively participate in fisheries management processes in Alaska.

¹⁰⁵⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰⁵⁶ Alaska Native Heritage Center (n.d). *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

¹⁰⁵⁷ See footnote 1044.

¹⁰⁵⁸ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁰⁵⁹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹⁰⁶⁰ Coastal Villages Region Fund (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

Processing Plants

The 2010 ADF&G Intent to Operate list does not list a registered processing plant in Oscarville. According to a survey of processing plants conducted by the AFSC in 2011, a small processing facility is located in nearby Bethel. The plant, run by Kuskokwim Seafoods LLC, was started in 2010 to provide a market to local salmon fishers to help them sell their catch closer to home. Kuskokwim Seafoods processes four salmon species: Chinook, sockeye, chum and coho.¹⁰⁶¹ As of 2012, Coastal Village Seafoods, a subsidiary of CVRF, also operated a fish-buying operation along the Kuskokwim River, with a tender often located across from Oscarville at Napaskiak.¹⁰⁶²

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Oscarville (Table 3).¹⁰⁶³ It is also important to note that CVRF uses fisheries revenue from their CDQ revenue to provide grants, scholarships and training, and other financial assistance to fishermen and residents of member villages.¹⁰⁶⁴ However, in the 2011 AFSC survey, community leaders reported that Oscarville did not receive funding or grants from CVRF in 2010.

Commercial Fishing

Between 2000 and 2009, one Commercial Fisheries Entry Commission (CFEC) permit was held by an Oscarville resident each year, and no CFEC permits were held in 2010 (Table 4). In addition, during the 2000-2010 period, no Oscarville residents held commercial crew licenses, and no residents were the primary owner of a fishing vessel. However, one fishing vessel was reported to be homeported in Oscarville from 2000 to 2003. According to a survey conducted by the AFSC in 2011, community leaders indicated that the only fishing vessels based out of Oscarville were 24 feet in length or shorter, and the most common gear type used was gillnet. No fish buyers or shore-side processors were located in the community during this period (Table 5).

For all years between 2000 and 2009, the CFEC permit was held in the Kuskokwim salmon gillnet fishery (Table 4). The permit was actively fished in 4 years during this period, including 2001 and 2007-2009. During the 2000-2010 period, no Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were held by Oscarville residents in federal crab or groundfish fisheries, and no quota share accounts or quota shares were held in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8).

Given that no fish buyers or processors were present in the community of Oscarville from 2000 to 2010 (Table 5), no landings or ex-vessel revenue were recorded during the period (Table 9). In addition, since no fishing vessels were primarily owned by Oscarville residents, no information was reported about landings and ex-vessel revenue generated by Oscarville vessel owners (Table 10).

¹⁰⁶¹ Kuskokwim Seafoods LLC. (n.d.). *Homepage*. Retrieved August 2011 from <http://kuskokwimseafoods.com/>.

¹⁰⁶² Personal communication, Nick Souza, Coastal Village Seafoods, April 27, 2012.

¹⁰⁶³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

¹⁰⁶⁴ Coastal Villages Region Fund website. (n.d.). *Home page*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Oscarville: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Oscarville: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Oscarville: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	0
	Fished permits	0	1	0	0	0	0	0	1	1	1	0
	% of permits fished	0%	100%	0%	0%	0%	0%	0%	100%	100%	100%	-
	Total permit holders	1	1	1	1	1	1	1	1	1	1	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>
	<i>% of permits fished</i>	<i>0%</i>	<i>100%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>-</i>
	<i>Permit holders</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Oscarville: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Oscarville ²	Total Net Pounds Landed In Oscarville ^{2,5}	Total Ex-Vessel Value Of Landings In Oscarville ^{2,5}
2000	0	0	0	0	1	0	0	\$0
2001	0	0	0	0	1	0	0	\$0
2002	0	0	0	0	1	0	0	\$0
2003	0	0	0	0	1	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Oscarville: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Oscarville: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Oscarville: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Oscarville: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Oscarville Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to a survey conducted by the AFSC in 2011, community leaders indicated that very little sportfishing takes place in Oscarville. No active sport fish guide businesses were present in Oscarville between 2000 and 2010, and no licensed sport fish guides resided in the community. Given the lack of charter businesses, no kept/release log book data were reported for fishing charters out of Oscarville between 2000 and 2010.¹⁰⁶⁵ Further, no Oscarville residents were reported to have purchased sportfishing licenses between 2000 and 2010, and no fishing licenses were sold in Oscarville (Table 11). However, when asked to identify species targeted by local sportfishing activity, community leaders indicated in the AFSC survey that chum, Chinook, coho, and sockeye salmon are local sport species. The Alaska Statewide Harvest Survey,¹⁰⁶⁶ conducted by ADF&G between 2000 and 2010, did not report any information about species targeted by recreational fishermen in Oscarville. However, the survey noted the following species targeted by private anglers in nearby Napaskiak and Napakiak: coho salmon, Dolly Varden char, whitefish, and northern pike in freshwater, and Pacific halibut in saltwater.

Oscarville is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 28 non-Alaska resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Oscarville is displayed in Table 11.

Table 11. Sport Fishing Trends, Oscarville: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Oscarville ²
2000	0	0	0	0
2001	0	0	0	0
2002	0	0	0	0
2003	0	0	0	0
2004	0	0	0	0
2005	0	0	0	0
2006	0	0	0	0
2007	0	0	0	0
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0

¹⁰⁶⁵ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁰⁶⁶ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11, cont'd. Sport Fishing Trends, Oscarville: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest activities are an integral part of the Oscarville lifestyle and provide most of the food sources for local families.¹⁰⁶⁷ Salmon is the primary subsistence fish for most Kuskokwim River communities. Whitefish are also an important resource that are primarily harvested in spring and fall, but are available year-round.¹⁰⁶⁸ Waterfowl, moose, bear, and seals are also utilized by Oscarville residents.¹⁰⁶⁹

Based on an ADF&G subsistence survey, in 2010, 95% of Oscarville households participated in salmon subsistence, 66% participated in marine mammal subsistence, and 87% participated in non-salmon fish subsistence (not including halibut). No information was reported regarding participation in halibut or marine invertebrate subsistence. The ADF&G subsistence

¹⁰⁶⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁰⁶⁸ Brown, R, Brown, C, Braem, N.M., Carter III, W.K., Legere, N., and Slayton, L. 2011. *Whitefish and Whitefish Fisheries in the Yukon and Kuskokwim River Drainages in Alaska: a Status Review with Recommendations for Future Research Directed Towards Sustainable Management*. U.S. Fish and Wildlife Service and Alaska Dept. of Fish and Game. Retrieved April 26, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/08-2062011sr.pdf>.

¹⁰⁶⁹ See footnote 1067.

survey estimated per capita annual subsistence harvest of land and sea-based resources in Oscarville to be 2,140 that year (Table 12).

Additional data are available from ADF&G regarding subsistence salmon permits and total subsistence harvest by Oscarville households from 2000 through 2008 regarding subsistence salmon permits. Between 2000 and 2008, the number of Oscarville households that were issued subsistence salmon permits varied from 13 to 20 per year. Chinook and chum were the most heavily harvested species during this period, with an average of 1,202 Chinook and 1,063 chum harvested per year. In addition, an average of 682 sockeye were harvested per year, along with over 100 coho and over 50 pink salmon per year. No information was reported regarding total subsistence harvest of marine invertebrates and non-salmon fish (not including halibut) (Table 13).

No information was reported regarding participation by Oscarville residents in the Subsistence Halibut Registration Certificate (SHARC) program during the 2000-2010 period (Table 14). Likewise, no data were reported by management agencies regarding subsistence harvest of marine mammals between 2000 and 2010 (Table 15).

In addition to the information reported here regarding Oscarville subsistence harvest patterns, a study conducted in the nearby village of Kwethluk in 1986 provides some insight into area subsistence practices. The study found that, in addition to salmon, Kwethluk residents harvested the following fish species: whitefish, Dolly Varden char, Arctic grayling, smelt, blackfish, rainbow trout, northern pike, burbot, and sheefish. Kwethluk residents also harvested several marine mammal species, including spotted seal, bearded seal, ringed seal, and walrus. These resources were shared between households, and between communities in the region.¹⁰⁷⁰

Table 12. Subsistence Participation by Household and Species, Oscarville: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	95%	n/a	66%	n/a	87%	2,141

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁰⁷⁰ Coffing, Michael. 1991. *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of a Lower Kuskokwim River Area Community*. Alaska Dept. of Fish and Game, Division of Subsistence. Technical Paper No. 157.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Oscarville: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	14	11	1,753	2,097	42	n/a	1,620	n/a	n/a
2002	13	12	953	1,121	119	n/a	377	n/a	n/a
2003	14	11	1,073	704	27	n/a	700	n/a	n/a
2004	13	8	998	855	306	n/a	354	n/a	n/a
2005	13	8	987	633	86	2	257	n/a	n/a
2006	16	10	825	873	232	116	545	n/a	n/a
2007	16	10	1,048	725	134	n/a	537	n/a	n/a
2008	20	8	1,980	1,495	65	n/a	1,068	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	63,265

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Oscarville: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Oscarville: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Platinum

People and Place

*Location*¹⁰⁷¹



Platinum is located on the Bering Sea coast, below Red Mountain on the south spit of Goodnews Bay. It lies 11 miles from the City of Goodnews Bay, 123 miles southwest of Bethel, and 440 miles west of Anchorage. Platinum is located in the Bethel Recording District and Bethel Census Area. The City encompasses 44.6 square miles of land and 0.1 square miles of water.

*Demographic Profile*¹⁰⁷²

In 2010, there were 61 residents in Platinum, making it the 188th largest of 352 Alaskan communities with populations recorded that year. Overall between 1990 and 2010, the population of Platinum stayed relatively stable, decreasing by three residents (4.7%). However, it is important to note that the population declined by more than one-third between 1990 and 2000, and rebounded in population between 2000 and 2010. According to Alaska Department of Labor estimates, the population continued to decline between 2000 and 2007, with a population decrease of 14.6%, before increasing by 62.9% from 2007 to 2009. The average annual growth rate between 2000 and 2009 was 4.92%, reflecting this large population rebound in the final years of the decade.

According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that an additional 200 seasonal workers or transients are present each year in Platinum. They indicated that these workers are generally present during summer months, between June and September, and also reported that population fluctuations in Platinum are entirely driven by employment in fishing sectors.

In 2010, a majority of the population of Platinum identified themselves as American Indian or Alaska Native (88.5%), while 4.9% identified as White, 1.6% as Asian, and 4.9% identified with two or more races. In addition, 4.9% of Platinum residents identified as Hispanic in 2010. The percentage of the population identifying as White increased slightly between 1990 and 2000, from 6.3% to 7.3%, and then declined to 4.9% in 2010. The percentage of the population identifying as American Indian and Alaska Natives decreased over time, from 92.2% in 1990 and 90.2% in 2000, to 88.5% in 2010. Over the same period, the percentage of the population identifying with two or more races increased slightly. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹⁰⁷¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁷² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

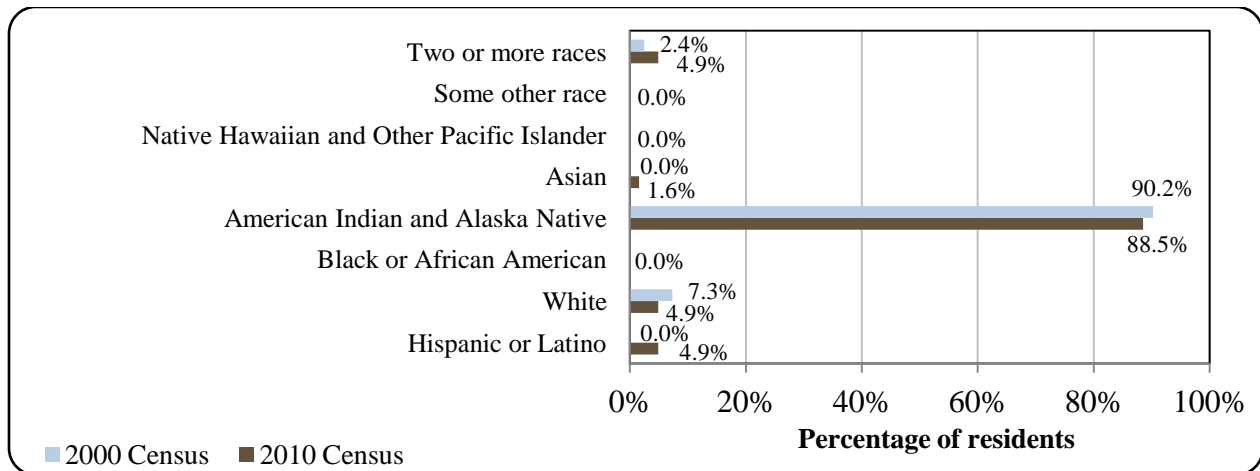
Table 1. Population in Platinum from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	64	-
2000	41	-
2001	-	44
2002	-	38
2003	-	40
2004	-	39
2005	-	38
2006	-	38
2007	-	35
2008	-	47
2009	-	57
2010	61	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

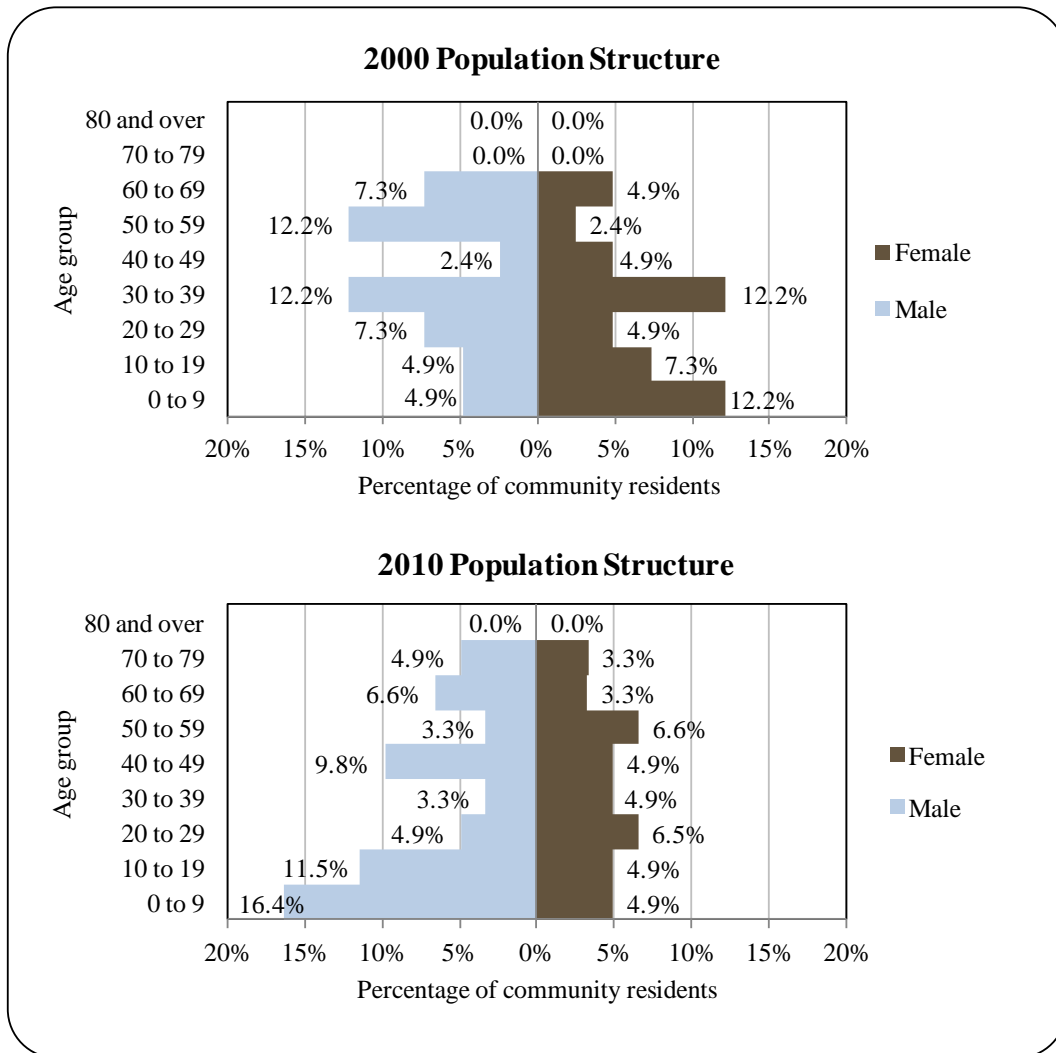
Figure 1. Racial and Ethnic Composition, Platinum: 2000-2010 (U.S. Census).



In 2010, the average household size in Platinum was 3.21 persons per household, an increase from household size in 1990 (2.9 persons per household) and 2000 (2.41 per household). The number of households in Platinum decreased slightly from 22 in 1990 to 17 in 2000, and then increased to 19 by 2010. Of the 31 housing units surveyed for the 2010 Decennial Census, 16.1% were owner-occupied, 45.2% were rented, and 38.7% were vacant or used only seasonally. Between 1990 and 2010, no residents of Platinum lived in group quarters.

In 2010, the gender makeup of Platinum’s population was much more weighted toward males (60.7% male, 30.3% female) than the population of Alaska as a whole, which was 52% male and 48% female. The age groups that were particularly heavily skewed toward males in Platinum were ages 0 to 9, 10 to 19, and 40 to 49. The percentage of the population in each of these age groups appears unusually high, but is important to note that a low total population can inflate percentages. For example, there were 10 boys between the ages of 0 and 9 living in Platinum in 2010. Out of a total of 61 individuals in the community, they made up 16.4%, which seems more substantial than the number of individual themselves. It is important to note that the population was more gender balanced in the year 2000, with 51.2% males and 48.8% females that year. In 2010, the median age of Platinum residents was 31.3 years, younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. That year, 18% of Platinum’s population was between 60 and 79 years of age, and no residents were 80 or older. The overall population structure of Platinum in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Platinum Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁰⁷³ 57.9% of Platinum residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 21.1% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 21.1% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 0% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 0% were estimated to have an Associate's degree, compared to 8% of Alaska residents overall; 0% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Archaeological evidence indicates the Platinum/Goodnews Bay area has been occupied continuously for at least 2,000 years. One site, south of Platinum at Security Cove, shows evidence of possible habitation dating to 4,000 or 5,000 years ago. Historical inhabitants of the region utilized fish and marine mammal resources, as well as caribou.¹⁰⁷⁴ The original inhabitants of the coastal area between the Kuskokwim River mouth and Chavgan Bay were known as the Kukowogamiut, and the Platinum area may also have been used by the Togiagamiut, who historically populated the Togiak/Dillingham area from Nanvak Bay east to Cape Constantine.¹⁰⁷⁵ The present City of Platinum is located near a traditional Yup'ik Eskimo village site called Arviq,¹⁰⁷⁶ meaning 'bowhead whale.'¹⁰⁷⁷

Captain James Cook was the first European to make contact with the Native peoples of this region, when his expedition encountered Natives in kayaks north of Cape Newenham on July 16, 1778. Russians established fur trading in the region in the following century. Gold was discovered in the 1890s in Alaska. By the turn of the century, mineral discoveries in the Goodnews Bay area brought a flood of miners to the Platinum region.¹⁰⁷⁸ The modern community of Platinum was established shortly after traces of platinum were discovered by an Eskimo named Walter Smith in 1926 in the Salmon River valley.¹⁰⁷⁹

Platinum grew alongside the developing of mining operations in the area. Between 1927 and 1934, several small placer mines¹⁰⁸⁰ were operating on creeks in the area. Approximately

¹⁰⁷³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁷⁴ U.S. Fish and Wildlife Service. (n.d.). *Togiak National Wildlife Refuge Overview*. Retrieved April 11, 2012 from <http://www.fws.gov/refuges/profiles/index.cfm?id=74535>.

¹⁰⁷⁵ Alaska Department of Natural Resources. 2005. Bristol Bay Area Plan for State Lands. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹⁰⁷⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁷⁷ Polarlife website. (n.d.). *Arviq – Bowhead Whale*. Retrieved April 12, 2012 from http://www.polarlife.ca/Traditional/traditional/puijiit_frame.htm.

¹⁰⁷⁸ See footnote 1075.

¹⁰⁷⁹ See footnotes 1075 and 1076.

¹⁰⁸⁰ A "placer" mineral deposit is a deposit of sand or gravel in the bed of a river or lake, containing particles of valuable minerals. (Source: Merriam-Webster dictionary online.)

3,000 ounces of platinum were mined over that period, with a value of about \$48 per ounce. A post office opened in 1935. The “big strike” occurred in October of 1936, which brought a stampede of prospectors for “white gold.” The potential resource claims proved to be too deep for hand-mining methods and were eventually extracted by larger companies. The largest, Goodnews Mining Company, eventually acquired title to over 150 claims. In 1937, a large dredge was built at the mining site, about 10 miles from the Village of Platinum. The company also constructed bunkhouses, a recreation hall, offices, shops, and a cafeteria. Platinum developed as a “company town,” with the store, water, and electricity supplied by the mine. A school opened in 1960. By 1975, 545,000 ounces of platinum had been mined at the site, and a city government was formed. The mine was later sold to Hanson Properties, who estimated reserves of over 500,000 ounces of platinum. The mine ceased operations in 1990.¹⁰⁸¹

Because the community was founded as a commercial center and has always seen an influx of outsiders, local traditions have not been retained as much as in other villages in the region. Platinum is one of the few Eskimo villages in the region in which the first language of the children is English. However, subsistence activities remain important in the community alongside the cash economy. The sale and importation of alcohol is banned in the village.¹⁰⁸²

Natural Resources and Environment

Platinum has a marine climate. Average annual precipitation is 22 inches, with 43 inches of snowfall. Summer highs range from 53 to 57 °F, and winter highs average 6 to 9 °F. Extremes have been measured from -34 to 82 °F.¹⁰⁸³ Platinum is situated on the southern spit at the entrance to Goodnews Bay. The landscape in Platinum and north of Goodnews Bay is characterized by flat tundra and wetlands. South of Platinum, the coast is characterized by sea cliffs. The ground is underlain either by discontinuous permafrost or ground with isolated masses of permafrost.¹⁰⁸⁴

Protected areas in the Platinum area include the Togiak National Wildlife Refuge (NWR), Cape Newenham State Game Refuge, and Wood-Tikchik State Park. The Alaska National Interest Lands Conservation Act (ANILCA) of 1980 expanded the existing Cape Newenham NWR and renamed it Togiak NWR. The City of Platinum is located less than 5 miles from the boundary of the Togiak NWR. In addition, ANILCA designated the northern 2.3 million acres of the 4.7 million-acre NWR as the Togiak Wilderness Area. The NWR is home to 31 land mammal and 17 marine mammal species. Land mammals include two caribou herds (the Nushagak Peninsula and the Mulchatna herds), wolves, moose, brown and black bears, wolverines, red foxes, marmots, beavers, and porcupines. The coastline is home to seals, sea lions, walrus, and whales. In addition, the NWR provides habitat for at least 201 bird species.¹⁰⁸⁵

The boundary of the Cape Newenham State Game Refuge is located less than 10 miles southeast of Platinum. The Game Refuge was established in 1972.¹⁰⁸⁶ One of the most important natural features of the Game Refuge is Chavgan Bay. Herring spawn on eelgrass in the Bay, and

¹⁰⁸¹ See footnote 1076.

¹⁰⁸² Ibid.

¹⁰⁸³ Ibid.

¹⁰⁸⁴ See footnote 1075.

¹⁰⁸⁵ See footnote 1074.

¹⁰⁸⁶ Alaska Dept. of Fish and Game Comprehensive Wildlife Conservation Planning Team. 2006. *Our Wealth Maintained: A Strategy for Conserving Alaska's Diverse Wildlife and Fish Resources*. Retrieved April 11, 2012 from http://www.adfg.alaska.gov/static/species/wildlife_action_plan/cwcs_full_document.pdf.

hundreds of thousands of ducks, geese and shorebirds stop there during migrations to and from nesting grounds in the Arctic. Platinum residents use the Cape Newenham State Game Refuge area for subsistence harvest. The Game Refuge provides habitat for a similar array of land and marine mammals found in the Togiak NWR.¹⁰⁸⁷

Wood-Tikchik State Park is located approximately 100 miles east of Platinum. It is the largest state park in the United States, covering 1.6 million acres. The park includes a diversity of terrain and ecosystems, including a series of alpine lakes. The Wood River and Tilchik systems host all five species of Pacific salmon, along with rainbow trout, grayling, lake trout, arctic char, Dolly Varden, and northern pike. Tikchik Lake is an important site for whitefish subsistence harvest.¹⁰⁸⁸

The Goodnews Bay region is rich in mineral deposits. From 1928 to 1975, the Platinum area was the U.S.'s only primary producer of platinum, producing at least 650,000 ounces of platinum group metals and 72,600 ounces of gold. Most of this came from placer deposits in the Salmon River south of Platinum.¹⁰⁸⁹ Indeed, Platinum received its name from this mining activity and developed as a mining company town.¹⁰⁹⁰ In addition to land-based mining exploration, a number of Offshore Prospecting Permit applications have been filed for exploration in Goodnews Bay and outside waters with interest in exploring platinum and gold potential in marine sediments.¹⁰⁹¹

Reserves of oil and natural gas are also thought to be present on the outer continental shelf in the Bristol Bay Basin, which runs along the northern edge of the Aleutian Islands and Alaska Peninsula.¹⁰⁹² However, given the importance of Bristol Bay fisheries to the nation and the proximity of the Bristol Bay Basin to a number of protected areas, in March 2010 Secretary of the Interior Ken Salazar removed the area from oil and gas leasing for the 2007-2012 program.¹⁰⁹³ The Platinum Traditional Village submitted a resolution to show its opposition to opening Bristol Bay to offshore oil and gas development, "because of high risk for harm to the marine resources and way of life."¹⁰⁹⁴ On March 31, 2010, President Obama withdrew the Bristol Bay area of the North Aleutian Basin from oil and gas leasing, whether for exploratory or production purposes, through 2017.¹⁰⁹⁵

¹⁰⁸⁷ Alaska Dept. of Fish and Game. 2012. *Cape Newenham State Game Refuge*. Retrieved April 11, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=capenewenham.main>.

¹⁰⁸⁸ Alaska Dept. of Natural Resources. (n.d.) Wood-Tikchik State Park website. Retrieved December 6, 2011 from <http://dnr.alaska.gov/parks/units/woodtik.htm>.

¹⁰⁸⁹ Alaska Department of Natural Resources. 2005. Bristol Bay Area Plan for State Lands. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹⁰⁹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁹¹ See footnote 1089.

¹⁰⁹² Ibid.

¹⁰⁹³ U.S. Dept. of the Interior, Minerals Management Service. March 2010. *Preliminary Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/PRP2007-2012.pdf>.

¹⁰⁹⁴ U.S. Dept. of the Interior, Minerals Management Service. December 2010. *Revised Program Outer Continental Shelf Oil and Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/5-year/PDFs/RP.pdf>.

¹⁰⁹⁵ The White House, Office of the Press Secretary. March 31, 2010. Memorandum for the Secretary of the Interior: Withdrawal of Certain Areas of the United States Continental Shelf from Leasing Disposition. Retrieved January 6, 2012 from <http://www.doi.gov/whatwedo/energy/ocs/upload/2010alaska-mem-rel.pdf>.

Natural hazard risks in the Platinum area include flooding, wildfire, earthquakes, volcanic activity, and severe weather.¹⁰⁹⁶ According to the Alaska Department of Environmental Conservation, no active environmental cleanup sites are located in Platinum as of July 2012.¹⁰⁹⁷

Current Economy¹⁰⁹⁸

As stated previously, the community of Platinum originally grew around development of nearby platinum mining operations. The platinum mine ceased operations in 1990. Today, Platinum is a major supplier of gravel to communities in the region.¹⁰⁹⁹ In 2010, top local employers included local government offices, the Lower Kuskokwim School District, seafood processing, the Native village corporation, construction, and health services.¹¹⁰⁰ Subsistence activities are also important in Platinum, including harvest of marine mammals, salmon, and waterfowl.¹¹⁰¹

Based on household surveys conducted for the 2006-2010 ACS,¹¹⁰² in 2010, the per capita income in Platinum was estimated to be \$14,100 and the median household income was estimated to be \$17,500. This was an increase compared to the per capita income reported in 2000 (\$7,632), but a decrease from the reported median household income (\$21,250 in 2000). If inflation is taken into account by converting the 2000 values to 2010 dollars,¹¹⁰³ the real per capita income in 2000 is shown to have been \$10,036 and the real median household income was \$27,943, revealing an even greater decrease in household income between 2000 and 2010. In 2010, Platinum ranked 213th of 305 Alaskan communities with per capita income data that year, and 284th in median household income, out of 299 Alaskan communities with household income data.

Platinum's small population size may have prevented the ACS from accurately portraying economic conditions.¹¹⁰⁴ An alternative estimate of 2010 per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Platinum in

¹⁰⁹⁶ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

¹⁰⁹⁷ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁰⁹⁸ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰⁹⁹ See footnote 1090.

¹¹⁰⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹⁰¹ See footnote 1089.

¹¹⁰² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹⁰³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹¹⁰⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

2010 is \$10,958.¹¹⁰⁵ This estimate is lower than the ACS estimate, suggesting that caution is warranted when citing an increase in per capita income in Platinum between 2000 and 2010. However, the ALARI estimate is similar to the real per capita income reported in 2000, providing evidence that per capita income may have remained stable over this period. In 2010, Platinum did not meet the Denali Commission’s criteria of a “distressed” community.¹¹⁰⁶ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a lower percentage of Platinum residents was estimated to be in the civilian labor force (44.4%) than in the civilian labor force statewide (68.8%). In the same year, 55.6% of local residents were estimated to be living below the poverty line, compared to a 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 29.6%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment based on the ALARI database indicates that the unemployment rate in 2010 was 26.2%, compared to a statewide unemployment rate estimate of 11.5%.¹¹⁰⁷

Also based on the 2006-2010 ACS, four people aged 16 and older were estimated to be employed in the civilian labor force. Compared to 2000, this represents a substantial decline in the workforce, from 22 to 4. In addition, it is important to note that many fewer industries and occupations were represented in 2010 than in 2000. In 2010, all four individuals in the civilian labor force (100% of the workforce) were estimated to be working in the private sector, in educational services, health care, and social assistance industries and management/professional occupations. While the concentration of the workforce in fewer industries and occupations may be due to a real population decline in Platinum, it is also important to note that the sampling methods utilized by the U.S. Census Bureau were altered between 2000 and 2010. The shift in sampling methods may also account for some of the differences observed in employment estimates.¹¹⁰⁸ It is also important to note that, while none of the civilian labor force was estimated to be working in fishing-related industries or occupations in 2010, the number of individuals employed by fishing may be underestimated in census statistics. For example, in 2010, 15 Platinum residents (equivalent to approximately 25% of the total local population) held state commercial fishing permits, almost four times the number of residents estimated by the Census Bureau to be employed in the civilian labor force that year. It is important to note that high unemployment rates may not capture fishing employment given the seasonal nature of commercial fishing activity. ACS employment estimates by industry are presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 31 employed residents in Platinum in 2010, of which 45.2% were employed in local government, 19.4% in trade, transportation, and utilities, 12.9% in manufacturing, 9.7% in education and health services, 6.5% in construction, 3.2% in state government, and 3.2% in other industries.¹¹⁰⁹ As with income statistics, it should be noted that ACS and DOLWD employment statistics do not reflect activity in the subsistence economy.

¹¹⁰⁵ See footnotes 1100 and 1102.

¹¹⁰⁶ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹¹⁰⁷ See footnote 1100.

¹¹⁰⁸ See footnote 1104.

¹¹⁰⁹ See footnote 1100.

Figure 3. Local Employment by Industry in 2000-2010, Platinum (U.S. Census).

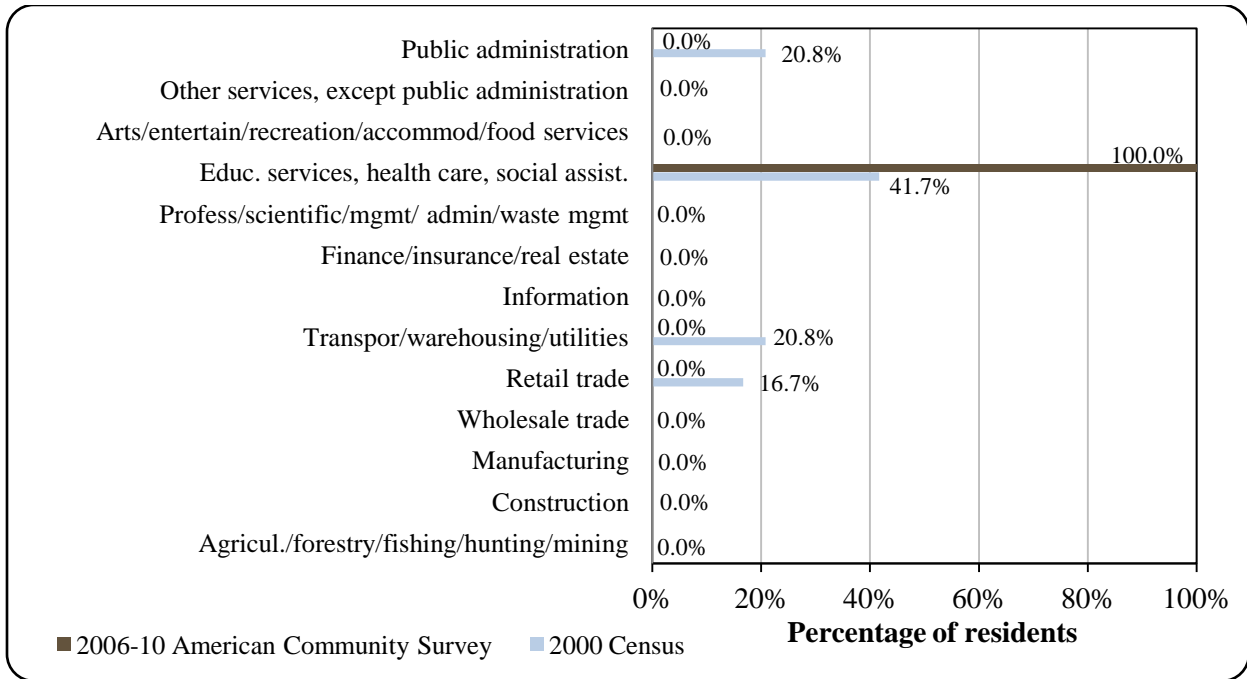
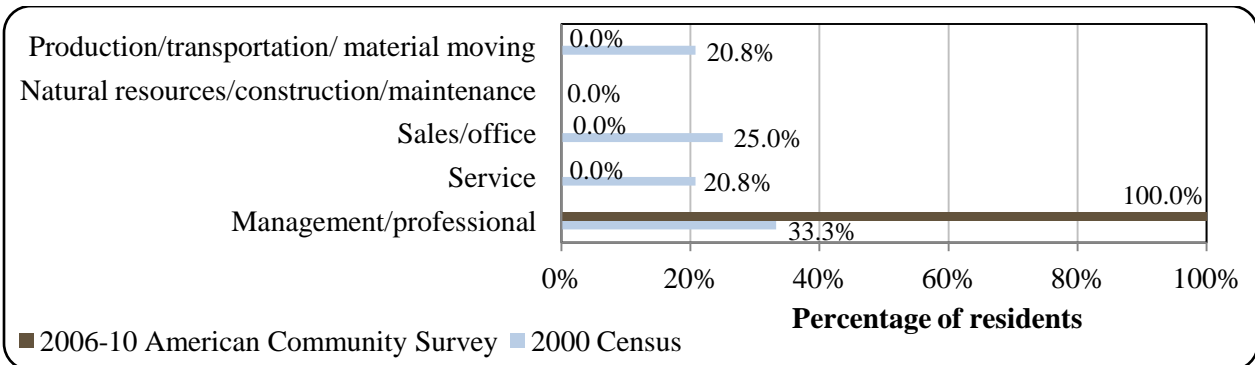


Figure 4. Local Employment by Occupation in 2000-2010, Platinum (U.S. Census).



Governance

Platinum is a 2nd Class City and is not part of an organized borough. The City was incorporated in 1975 and has a Strong Mayor form of government, which includes a seven-person city council including the Mayor, a nine-person advisory school board, and a City Clerk. As of 2010, the City did not administer any taxes.¹¹¹⁰ Locally-generated revenue sources in Platinum between 2000 and 2010 included land leases, equipment rental, electric utility service fees, electric utility subsidy, and state-contracted services in some years. Outside revenue sources included shared funds from revenue sharing

¹¹¹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

programs and grants in some years. From 2000 to 2002, Platinum received State Revenue Sharing contributions of just over \$25,000 per year, and in 2009 and 2010 received Community Revenue Sharing contributions of just under \$100,000 per year. Some shared funds were received from state fish tax refunds (see the *Fisheries-Related Revenue* section of this profile). Small grants were received in some years from the State of Alaska for infrastructure projects including upgrades to the community facility, washeteria, and electric utility. No fisheries-related grant revenue was reported between 2000 and 2010. Refer to Table 2 for details on selected community finances from 2000 to 2010.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Platinum from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$94,289	n/a	\$27,627	n/a
2001	n/a	n/a	\$26,616	n/a
2002	n/a	n/a	\$26,613	n/a
2003	\$63,639	n/a	n/a	n/a
2004	\$84,341	n/a	n/a	n/a
2005	\$48,277	n/a	n/a	n/a
2006	\$112,037	n/a	n/a	n/a
2007	\$174,358	n/a	n/a	n/a
2008	\$148,869	n/a	n/a	n/a
2009	\$168,363	n/a	\$98,398	n/a
2010	\$167,318	n/a	\$98,859	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Platinum was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Platinum Traditional Village. The Native village corporation is Arviq Incorporated, which manages 69,120 acres of land. Platinum belongs to the Calista Corporation, the regional Native corporation of the lower Yukon River, the central and lower Kuskokwim River, and the Bering Sea coast from the mouth of the Yukon River south to Cape Newenham.¹¹¹¹

Platinum is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the

¹¹¹¹ Calista Corporation (n.d.). *Region/Land Description*. Retrieved December 6, 2011 from http://www.calistacorp.com/about/region_description.html.

Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”¹¹¹² The AVCP is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹¹¹³ AVCP is made up of 56 villages and 45 village corporations.¹¹¹⁴

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Bethel and Dillingham. Anchorage offers the closest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Natural Resources, and U.S. Bureau of Citizenship and Immigration Services.

Infrastructure

Connectivity and Transportation

Platinum relies heavily on air transportation for passengers and mail and cargo service. There are two gravel airstrips. One is state-owned and 3,300 feet long by 75 feet wide, with a 1,924 feet long by 40 feet wide crosswind runway. The second is a private, gravel airstrip at the platinum mine site which is 2,000 feet long by 75 feet wide.¹¹¹⁵ As of April 2012, the cost of roundtrip airfare on Yute Air between Platinum and Bethel was \$410.¹¹¹⁶ The price of a roundtrip ticket by plane from Bethel to Anchorage in early June of 2012 was \$368.¹¹¹⁷ A seaplane landing site is also available near Platinum, and barge services deliver goods twice a year. Boats, snowmobiles, and ATVs are used for local travel and subsistence activities.¹¹¹⁸

A 6.8-mile road to the south connects Platinum to the platinum ore fields of the Salmon River, but there is no road connection between Platinum and other areas of the State. A coastal trail connects Platinum with Goodnews Bay and Quinhagak and extends northward to Bethel. Additional trails connect Goodnews Bay southeast to Togiak, and north to Carter Creek, Indian River, and Jacksmith Creek, and to the Faro and Keno Creek area of the Arolik River.¹¹¹⁹

Facilities

Water in Platinum is derived from a surface water source as well as a community well and individual wells. There is no piped water or sewer system in Platinum. During the summer,

¹¹¹² Association of Village Council Presidents. (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

¹¹¹³ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹¹¹⁴ Calista Corporation. 2011. *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

¹¹¹⁵ Alaska Department of Natural Resources. 2005. Bristol Bay Area Plan for State Lands. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹¹¹⁶ Personal communication, Yute Air reservation agent, April 11, 2012.

¹¹¹⁷ This price was calculated on November 21, 2011 using kayak.com.

¹¹¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹¹⁹ See footnote 1115.

untreated water is hauled from approximately fifteen watering points throughout the Village. During winter, residents dig holes in the ice to draw water. Seven U.S. Department of Housing and Urban Development housing units have individual water wells, septic systems, and complete plumbing. Other homes use outhouses or honeybuckets, the latter of which are disposed of in seepage pits. The City of Platinum operates a landfill and provides refuse collection services. The City also operates the electric service that was originally operated by the mining company. Electricity is generated by a diesel powerhouse. Broadband internet, telephone, and cable services are available in Platinum. Internet is only available at the school. A volunteer fire department operates in Platinum.¹¹²⁰ Police services are provided by Village Public Safety Officers (VPSO) stationed in both Platinum and Goodnews Bay.¹¹²¹ The nearest state trooper post is in Bethel.¹¹²² According to a survey conducted by the AFSC in 2011, community leaders reported that a post office is also present in Platinum. Community leaders also indicated that improvements in water treatment and water and sewer pipelines are planned to be completed within the next 10 years.

With regard to fishing-related infrastructure, community leaders reported in the 2011 AFSC survey that a fish processing plant is located in Platinum (see *Processing Plants* section below). They also noted the presence of a barge landing area and dock, although they indicated that no dock space is available for permanent or transient vessel moorage. Since 2008, the dock has been served by electricity and water. Community leaders reported that Platinum can receive fuel barges and gravel haulers, but does not have the capacity to handle other regulated vessels. In addition, community leaders noted that a fish cleaning station was completed in 2008, and boat fuel sales are available in Platinum. For fisheries-related businesses and services not available in Platinum, community leaders indicated that local residents most commonly travel to Goodnews Bay, Quinhagak, or Bethel.

Medical Services

A local health clinic is owned by the City and operated by the Bristol Bay Area Health Corporation. The Platinum Village Clinic is a Community Health Aide Program site. Emergency Services have coastal and air access. Emergency service is provided by a health aide.¹¹²³ The nearest hospital is located in Bethel.

Educational Opportunities

There is one school in the community, which offers Kindergarten through 12th grade. As of 2011, the Arviq School had a total of 12 student and 2 teachers.¹¹²⁴

¹¹²⁰ See footnote 1118.

¹¹²¹ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

¹¹²² Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

¹¹²³ See footnote 1118.

¹¹²⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Platinum-Goodnews Bay area for thousands of years.¹¹²⁵ In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs was an important subsistence resource for coastal people in this region.¹¹²⁶

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.¹¹²⁷

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.¹¹²⁸ Coastal Villages Seafood (CVS), a subsidiary of the Community Development Quota (CDQ) group for the area, opened a new processing facility in Platinum in 2009 (see *Processing Plants* section). CVS considered reviving the Cape Newenham herring fishery and processing herring at a new facility. However, the herring fishery planned for Coastal Villages' districts was cancelled in 2010 due to expectation of large financial losses,¹¹²⁹ and does not appear to be financially viable in the near future.¹¹³⁰

Platinum is located in District 5 of the Kuskokwim salmon fishery (Goodnews Bay district), Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Platinum is a member of the Coastal Villages Region Fund (CVRF), the CDQ group for Kuskokwim Delta and Bering Sea communities from Cape Newenham to Scammon Bay. CVRF promotes employment opportunities for residents, as

¹¹²⁵ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

¹¹²⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹¹²⁷ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹¹²⁸ See footnote 1126.

¹¹²⁹ Coastal Villages Region Fund. 2010. *Herring Fishery Cancelled*. Retrieved April 11, 2012 from <http://coastalvillages.org/current-issues/herring-fishery-cancelled>.

¹¹³⁰ Personal communication, Nick Souza, Coastal Villages Seafoods, April 16, 2012.

well as participation in the Bering Sea crab and groundfish fisheries.¹¹³¹ Platinum is not eligible to participate in the Community Quota Entity (CQE) program. In a survey conducted by the AFSC in 2011, community leaders indicated that Platinum does not actively participate in fisheries management processes in Alaska.

Processing Plants

ADF&G's 2010 Intent to Operate List does not list a registered processing plant in Platinum, and no fish buyers or shore-side processing facilities were recorded in Platinum on ADF&G fish tickets or NMFS Weekly Production Reports. However, according to a survey conducted by the AFSC in 2011, community leaders in Platinum reported that a new shore-side processing facility is present in Platinum. The CVRF reports that construction was completed on the new Coastal Villages Seafood (CVS) processing facility in Platinum in 2009.¹¹³² CVS is a subsidiary of the CVRF, the CDQ group for the Yukon-Kuskokwim region.¹¹³³

This new "Goodnews Bay Regional Processing Plant" reportedly housed 125 workers in 2009, and had 225 employees in 2010.¹¹³⁴ The Platinum facility currently processes salmon between June and August.¹¹³⁵ In 2010, herring processing was planned at the Platinum facility, but the herring fishery planned for CVSS' districts was canceled that year and is not expected to resume in the near future.¹¹³⁶ As of 2011, the Platinum facility also started processing halibut.¹¹³⁷ CVS processing facilities process halibut in June and July.¹¹³⁸ CVS has additional processing facilities in Quinhagak, Toksook Bay, Mekoryuk, Tununak, Cheforak, Kipnuk, and Hooper Bay.¹¹³⁹

Fisheries-Related Revenue

According to information provided in Platinum's annual municipal budget, between 2000 and 2010, Platinum received revenue from a raw fish tax and the Shared Fisheries Business Tax. In 2010, Platinum received \$90 from raw fish tax and \$72 from the Shared Fisheries Business Tax. Information about fisheries-related revenue is presented in Table 3.¹¹⁴⁰

According to a survey conducted by the AFSC in 2011, these revenue sources are used in part to help fund the City Office. It is also important to note that the CVRF uses fisheries revenue from the CDQ program to provide grants, scholarships and training, and other financial

¹¹³¹ Coastal Villages Region Fund website. (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

¹¹³² Coastal Villages Region Fund. 2011. *2011 Benefits Catalog: Coastal Villages Region Fund*. Retrieved April 11, 2012 from http://www.coastalvillages.org/sites/www.coastalvillages.org/files/documents/benefits_catalog_2011.pdf.

¹¹³³ See footnote 1131.

¹¹³⁴ Coastal Villages Region Fund website. 2010. *Commercial Fishing*. Retrieved April 11, 2012 from <http://coastalvillages.org/commercial-fishing-1>.

¹¹³⁵ See footnote 1132.

¹¹³⁶ See footnotes 1129 and 1130.

¹¹³⁷ See footnote 1130.

¹¹³⁸ Coastal Villages Region Fund. 2010. *Halibut Commercial Fishing*. Retrieved April 11, 2012 from <http://coastalvillages.org/commercial-fishing/halibut>.

¹¹³⁹ Alaska Seafood Marketing Institute. 2005. *Suppliers Directory*. Retrieved April 11, 2012 from <http://alaskaseafood.org/industry/suppliers/>.

¹¹⁴⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

assistance to fishermen and residents of member villages.¹¹⁴¹ However, in the 2011 AFSC survey, community leaders did not specifically report receipt of funding or grants from CVRF in 2010.

Commercial Fishing

Between 2000 and 2010, Platinum residents participated in commercial fisheries as permit holders, vessel owners, and crew license holders. According to a survey conducted by the AFSC in 2011, community leaders indicated that the most important local commercial fishery is for salmon, with a season running between June and August.

In 2010, 15 Platinum residents (equivalent to 25% of the local population) held a total of 21 Commercial Fisheries Entry Commission (CFEC) permits, including 9 salmon permits, 10 herring permits, and 2 halibut permits. That same year, seven fishing vessels were primarily owned by Platinum residents and one resident held a commercial crew license. While the number of permit holders and CFEC permits held increased between 2000 and 2010 (Table 4), vessel ownership and the number of crew licenses held in Platinum decreased over the period. The number of vessels homeported in Platinum also declined, from 10 in 2000 to 5 in 2010 (Table 5). According to the 2011 AFSC survey, community leaders indicated that vessels using Platinum as a base of operation were typically between 60 and 125 feet in length, and the most common gear type was gillnet.

Of nine total salmon CFEC permits held by Platinum residents in 2010, six were for the Kuskokwim drift gillnet fishery, two were held in the Bristol Bay drift gillnet fishery, and one was held in the Bristol Bay set gillnet fishery. Six salmon permits were actively fished that year (66%), including four Kuskokwim drift gillnet permits, one Bristol Bay drift gillnet permit, and the Bristol Bay set gillnet permit.

Of the herring CFEC permits held in 2010, all 10 were for the Goodnews Bay district herring roe and food/bait gillnet fishery. No herring permits were actively fished in 2010. The last year during the 2000-2010 period in which a herring permit was actively fished by a Platinum resident was 2006, when one of seven herring permits was fished. The number of herring permits held decreased from 10 in the year 2000 to 7 held from 2004 to 2008. The subsequent rebound in permit numbers to 10 in 2010 may reflect expectations that herring fisheries would reopen in the district, although the fishery planned for 2010 was cancelled.¹¹⁴²

Halibut CFEC permits were held by Platinum residents in 2003, 2004, 2009, and 2010. All of these permits were held in the statewide longline fishery using vessels under 60 feet in length. The only year during the 2000-2010 period in which a Platinum permit holder actively fished a halibut permit was 2009. In 2010, two Platinum residents held halibut permits, but neither was actively fished (Table 4).

Between 2000 and 2010, no Federal Fisheries Permits (FFP) or License Limitation Program permits (LLP) were held by Platinum residents in federal crab or groundfish fisheries. In addition, no federal quota share accounts were held by Platinum residents in federal catch share fisheries for halibut, sablefish, or crab during this period. Information about federal permits is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

¹¹⁴¹ See footnote 1131.

¹¹⁴² Coastal Villages Region Fund. 2010. *Herring Fishery Cancelled*. Retrieved April 11, 2012 from <http://coastalvillages.org/current-issues/herring-fishery-cancelled>.

According to Alaska Processors' Weekly Production Reports, no fish buyers or shore-side processors were present in Platinum between 2000 and 2010 (Table 5). This is contrary to information provided on the CVRF website and by Platinum community leaders in the 2011 AFSC survey, which a new processing facility reportedly began operating in Platinum in 2009 (see the *Processing Plants* section). Despite the presence of a processor in the community, no landings or ex-vessel revenue data are available between 2000 and 2010 (Table 9).

Most information about landings and ex-vessel revenue generated by vessels owned by Platinum residents is considered confidential between 2000 and 2010 due to the small number of participants, with the exception of salmon landings in the year 2000. That year, Platinum vessel owners landed a 70,836 net pounds of salmon (irrespective of delivery location). These landings were valued at \$31,620 in ex-vessel revenue. Information about commercial harvest and ex-vessel revenue earned by vessel owners residing in Platinum is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Platinum: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$210	\$112	\$112	\$80	\$90
Shared Fisheries Business Tax ¹	\$464	\$364	\$70	\$92	\$74	\$184	\$210	\$112	\$80	\$67	\$72
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$464	\$364	\$70	\$92	\$74	\$184	\$420	\$224	\$192	\$148	\$162
Total municipal revenue⁵	\$94,289	n/a	n/a	\$63,639	\$84,341	\$48,277	\$112,037	\$174,358	\$148,869	\$168,363	\$167,318

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Platinum: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	1	1	0	0	0	0	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	1	0
	% of permits fished	-	-	-	0%	0%	-	-	-	-	50%	0%
	Total permit holders	0	0	0	1	1	0	0	0	0	2	2
Herring (CFEC) ²	Total permits	10	8	8	8	7	7	7	7	7	8	10
	Fished permits	2	2	0	0	0	0	1	0	0	0	0
	% of permits fished	20%	25%	0%	0%	0%	0%	14%	0%	0%	0%	0%
	Total permit holders	9	8	8	8	7	7	7	7	7	8	10

Table 4 cont'd. Permits and Permit Holders by Species, Platinum: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	7	7	5	6	7	7	6	6	5	7	9
	Fished permits	6	6	3	2	3	2	3	2	1	6	6
	% of permits fished	86%	86%	60%	33%	43%	29%	50%	33%	20%	86%	67%
	Total permit holders	7	7	5	7	8	7	7	6	5	8	11
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>17</i>	<i>15</i>	<i>13</i>	<i>15</i>	<i>15</i>	<i>14</i>	<i>13</i>	<i>13</i>	<i>12</i>	<i>17</i>	<i>21</i>
	<i>Fished permits</i>	<i>8</i>	<i>8</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>2</i>	<i>4</i>	<i>2</i>	<i>1</i>	<i>7</i>	<i>6</i>
	<i>% of permits fished</i>	<i>47%</i>	<i>53%</i>	<i>23%</i>	<i>13%</i>	<i>20%</i>	<i>14%</i>	<i>31%</i>	<i>15%</i>	<i>8%</i>	<i>41%</i>	<i>29%</i>
	<i>Permit holders</i>	<i>10</i>	<i>10</i>	<i>8</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>9</i>	<i>12</i>	<i>15</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Platinum: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Platinum ²	Total Net Pounds Landed In Platinum ^{2,5}	Total Ex-Vessel Value Of Landings In Platinum ^{2,5}
2000	7	0	0	12	10	0	0	\$0
2001	4	0	0	8	9	0	0	\$0
2002	2	0	0	7	5	0	0	\$0
2003	4	0	0	5	5	0	0	\$0
2004	3	0	0	5	4	0	0	\$0
2005	3	0	0	3	2	0	0	\$0
2006	1	0	0	3	3	0	0	\$0
2007	1	0	0	3	3	0	0	\$0
2008	5	0	0	3	3	0	0	\$0
2009	8	0	0	5	4	0	0	\$0
2010	1	0	0	7	5	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Platinum: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Platinum: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Platinum: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Platinum: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Platinum Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	70,836	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>70,836</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$31,620	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>\$31,620</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses were present in Platinum and no licensed sport fish guides resided in the community. However, several Platinum residents did participate in sportfishing activities. Between 2000 and 2010, the number of Platinum residents that purchased sportfishing licenses varied from 0 to 12 per year (irrespective of point of sale), and the number of sportfishing licenses sold in Platinum varied from 0 to 8 per year. The fact that the number of local residents purchasing sportfishing licenses was generally higher than the number of licenses sold in the community each year indicates that sportfishing is not a tourism draw to Platinum.

This conclusion is echoed by results of a survey conducted by the AFSC in 2011. In the survey, community leaders indicated that sportfishing activity in the Platinum area consists primarily of local residents fishing from private boats or from riverbanks. Community leaders also reported that the species most commonly targeted by sport fishermen in Platinum are Chinook, coho, and sockeye salmon, halibut, and clams.

The Alaska Statewide Harvest Survey,¹¹⁴³ conducted by ADF&G between 2000 and 2010, did not report information regarding species targeted by Platinum sport fishermen. However, the survey did list species targeted in freshwater by sport fishermen in nearby Quinhagak: Chinook, coho and sockeye salmon, and Dolly Varden. Given the lack of charter businesses, no kept/release log book data were reported for fishing charters out of Platinum between 2000 and 2010.¹¹⁴⁴

Platinum is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between 0 and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Platinum is displayed in Table 11.

¹¹⁴³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹¹⁴⁴ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Platinum: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Platinum ²
2000	0	0	0	3
2001	0	0	1	0
2002	0	0	1	0
2003	0	0	1	0
2004	0	0	2	2
2005	0	0	8	8
2006	0	0	5	6
2007	0	0	4	2
2008	0	0	12	3
2009	0	0	8	8
2010	0	0	6	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest has been important to Yup'ik Eskimos living in the Platinum area for thousands of years.¹¹⁴⁵ Today, subsistence activities remain an important part of the lifestyle.¹¹⁴⁶ Local subsistence harvest activity targets marine mammals, salmon, and some waterfowl and eggs. Pacific walrus, spotted seals, ringed seals, and Pacific bearded seals are hunted on the ice during the spring, and some seal hunting continues during summer months in bays and estuaries.¹¹⁴⁷

No information is available from ADF&G regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, data are available from ADF&G regarding total annual subsistence harvest of salmon between 2000 and 2008. During this period, subsistence salmon permits were issued to between 15 and 17 Platinum households per year. On average, coho and sockeye salmon were the most heavily harvested species, with small but consistent Chinook and chum harvests in these years as well. A small pink salmon harvest was reported for only 2 years between 2000 and 2008. No information was reported regarding subsistence harvest of marine invertebrates and non-salmon fish (not including halibut). Additional information about subsistence salmon permits and harvest of marine invertebrates and non-salmon fish is presented in Table 13.

Several Platinum residents participated in the Subsistence Halibut Registration Certificates (SHARC) program during the 2000-2010 period. From 2003 to 2007, one or two SHARC cards were issued to Platinum residents per year. No information was reported regarding the number of SHARC cards returned or the total pounds of halibut harvested for subsistence purposes in those years (Table 14).

Limited information was reported by management agencies regarding marine mammal harvest in Platinum between 2000 and 2010. The U.S. Fish and Wildlife Service reported harvest of one walrus by Platinum residents in 2001. No information was reported in any other year regarding walrus, beluga whale, sea otter, polar bear, Steller sea lion, harbor seal, or spotted seal (Table 15).

Although little information was available from ADF&G regarding subsistence activities in Platinum in recent decades, a survey was conducted by ADF&G in the nearby village of Quinhagak regarding subsistence harvest of marine mammals and non-salmon fish (not including halibut) during the 1982 season. The species of non-salmon fish harvested by the greatest percentage of Quinhagak households that year included: Dolly Varden (100% of households reported harvesting), cod (100%), smelt (75%), cisco (50%), and blackfish (8%). Marine mammal species reported to be harvested by the greatest number of Quinhagak households included: ringed seal (50% of household reported harvest), spotted seal (50%), bearded seal (25%), and Steller sea lion (17%).¹¹⁴⁸

¹¹⁴⁵ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

¹¹⁴⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹¹⁴⁷ Alaska Department of Natural Resources. 2005. Bristol Bay Area Plan for State Lands. Retrieved January 4, 2012 from <http://dnr.alaska.gov/mlw/planning/areaplans/bristol/index.htm>.

¹¹⁴⁸ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Platinum: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Platinum: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	17	15	102	84	103	n/a	177	n/a	n/a
2001	16	13	36	44	108	n/a	53	n/a	n/a
2002	16	12	154	95	95	n/a	256	n/a	n/a
2003	16	15	88	50	209	n/a	111	n/a	n/a
2004	16	13	103	36	206	n/a	155	n/a	n/a
2005	15	14	74	22	224	12	90	n/a	n/a
2006	16	12	46	104	112	31	60	n/a	n/a
2007	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	17	10	45	113	121	n/a	166	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Platinum: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	2	n/a	n/a
2004	2	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	2	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Platinum: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	1	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Quinhagak (QUINN-uh-hawk)

People and Place

*Location*¹¹⁴⁹



Quinhagak, also known as Kwinhagak, is on the Kanektok River on the east shore of Kuskokwim Bay, less than a mile from the Bering Sea coast. It lies 71 miles southwest of Bethel. Quinhagak is located in the Bethel Recording District, the Bethel Census Area, and is not located within an organized Borough. The community encompasses 4.7 square miles of land and 0.6 square miles of water.

*Demographic Profile*¹¹⁵⁰

Based on the 2010 U.S. Decennial Census, there were 669 residents in Quinhagak, making it the 94th largest of 352 total Alaskan communities with recorded populations that year. Overall, between 1990 and 2010, the population has increased by 22.5%. The Quinhagak annual growth rate between 2000 and 2009 was 1.47%, indicating a slow rate of population growth. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, the majority of the residents of Quinhagak identified themselves as American Indian or Alaska Native (93.4%), with the remaining racial composition as follows: two or more races (3.7%), White (2.2%), Native Hawaiian or Other Pacific Island (0.4%), and some other race (0.1%). In addition, 0.4% of the residents of Quinhagak identified themselves as Hispanic or Latino. The percentage of Quinhagak residents identifying themselves as American Indian or Alaska Native decreased by 2.6% between 2000 and 2010, with corresponding increases in the percentage of the population identifying themselves as two or more races, Native Hawaiian or Other Pacific Islander, and some other race. The change in racial and ethnic composition in Quinhagak from 2000 to 2010 is provided in Figure 1.

Based on household surveys conducted for the U.S. Census, the average household size was estimated to be 4.05, a figure that remained the same in 2010 (4.05), but is slightly larger than the average household size in 1990 (3.90). There has been an increase in the number of households in Quinhagak from 127 in 1990 to 137 in 2000 to 165 in 2010. Of the 187 housing units surveyed for the 2010 Decennial Census, 134 were owner-occupied, 31 were renter-occupied, and 22 housing units were vacant. In 2010, no residents of Quinhagak were reported to be living in group quarters.

¹¹⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁵⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Quinhagak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	501	-
2000	555	-
2001	-	544
2002	-	573
2003	-	578
2004	-	615
2005	-	643
2006	-	650
2007	-	641
2008	-	659
2009	-	680
2010	669	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Quinhagak: 2000-2010 (U.S. Census).

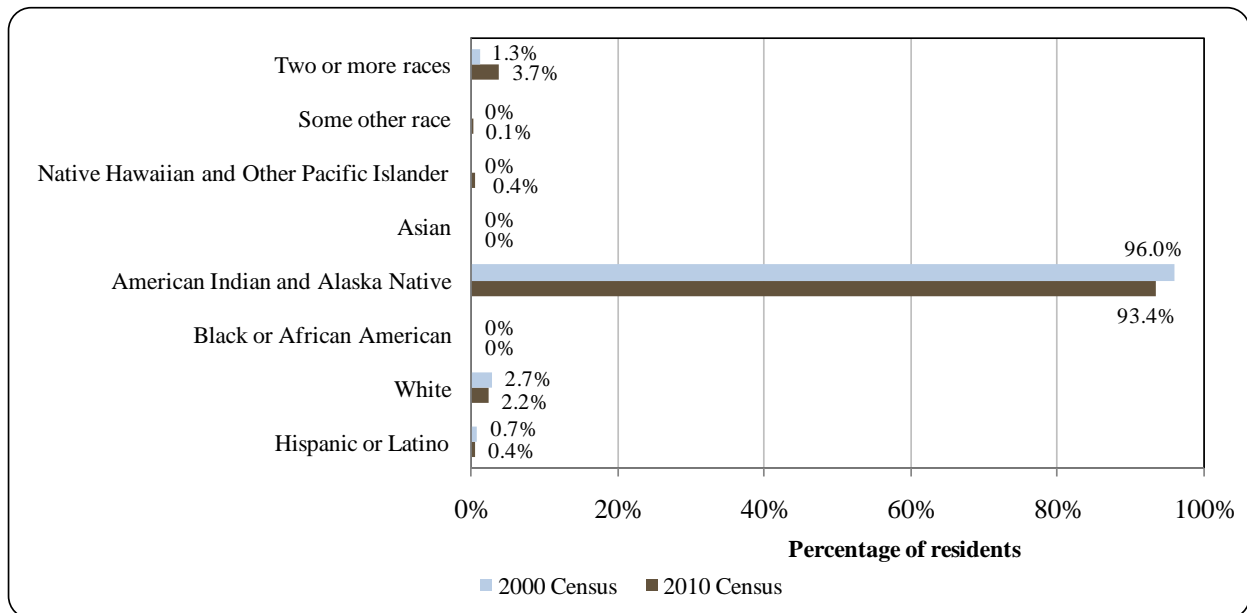
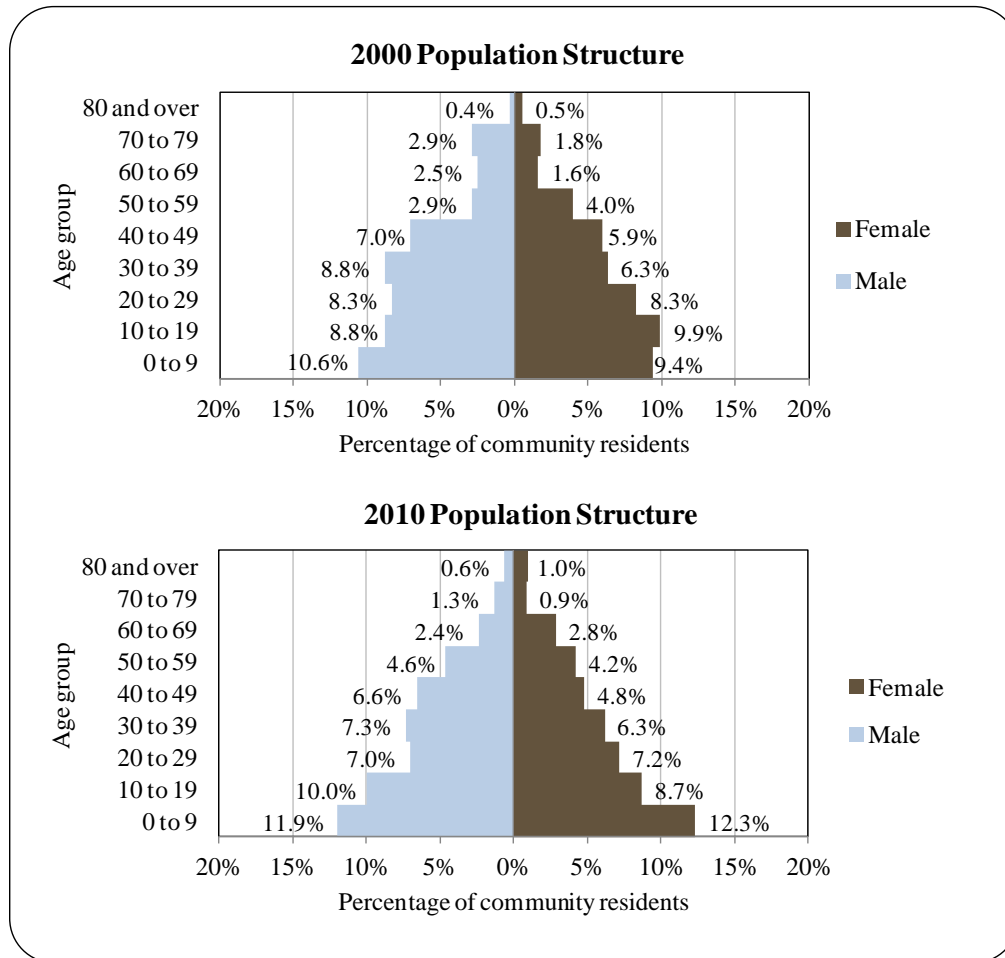


Figure 2. Population Age Structure in Quinhagak Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup was fairly even, at 52% male and 48% female, identical to the gender makeup of the state as a whole. The median age in Quinhagak was 24.0 years, lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 0-29 years old, with the percentages decreasing steadily with age. Relatively few people were 60 or older. The overall population structure of Quinhagak in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹¹⁵¹ an estimated 54.3% of residents aged 25 or older held a high school diploma or higher degree, compared with 90.7% of Alaska residents overall. Also in 2010, an estimated 17.9% of the population had a less than ninth grade education, compared to 3.5% of Alaska residents overall; an estimated 27.7% had a 9th to 12th grade education but no diploma, compared

¹¹⁵¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

to 5.8% of Alaska residents overall; an estimated 40.3% had a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; an estimated 11.2% had some college but no degree, compared with 27.8% of Alaska residents overall; an estimated 0.8% held an Associate's degree, compared with 8% of Alaska residents overall; an estimated 0.8% held a Bachelor's degree, compared to 17.4% of Alaska residents overall; and an estimated 1.1% had a graduate or professional degree, compared to 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹¹⁵²

The Yup'ik name for Quinhagak is Kuinerraq, meaning “new river channel.” Quinhagak is a long-established village whose origin has been dated to 1000 AD. It was the first village on the lower Kuskokwim to have sustained contact with Europeans. Gavril Sarichev reported the village on a map in 1826. After the purchase of Alaska in 1867, the Alaska Commercial Company sent annual supply ships to Quinhagak with goods for Kuskokwim River trading posts. Supplies were brought to shore from the ship and stored in a building on Warehouse Creek. A Moravian mission was built in 1893. There were many non-Natives in the village at that time; most were waiting for boats to go upriver. In 1904, a mission store opened, followed by a post office in 1905 and a school in 1909. Between 1906 and 1909, over 2,000 reindeer were brought in to the Quinhagak area. They were managed for a time by the Native-owned Kuskokwim Reindeer Company, but the herd had scattered by the 1950s. In 1915, the Kuskokwim River was charted, so goods were barged directly upriver to Bethel. In 1928, the first electric plant opened; the first mail plane arrived in 1934. The City was incorporated in 1975.

The community is primarily Yup'ik Eskimos who fish commercially and are active in subsistence food gathering. The sale, importation, and possession of alcohol are banned in the village.

Natural Resources and Environment¹¹⁵³

Quinhagak is located in a marine climate. Precipitation averages 22 inches a year, with 43 inches of snowfall. Summer temperatures average 41 to 57 °F (5 to 14 °C), and winter temperatures average 6 to 24 °F (-14.4 to -4.4 °C). Extreme temperatures have been measured from -34 °F to 82 °F (-37 to 27.8 °C).

Quinhagak is located near the Togiak National Wildlife Refuge (Refuge), an area that is managed by the U.S. Fish and Wildlife Service (FWS). The following information is from the FWS.¹¹⁵⁴ The Refuge totals 4.7 million acres - an area about the size of the states of Connecticut and Rhode Island combined. Almost half of these lands, the northern 2.3 million acres, are designated as the Togiak Wilderness Area. This constitutes the second largest contiguous Wilderness Area within the National Wildlife Refuge System. The Refuge was established to conserve fish and wildlife populations and habitats in their natural diversity including salmon, marine birds and mammals, migratory birds, and large mammals, to fulfill international treaty obligations; to provide for continued subsistence use; and to ensure necessary water quality and

¹¹⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁵³ Ibid.

¹¹⁵⁴ U.S. Fish and Wildlife Service. 2011. *Togiak National Wildlife Refuge*. Retrieved from <http://togiak.fws.gov/> on April 9, 2012.

quantity. Special values of the Refuge include the Togiak Wilderness Area, the Kanektok, Goodnews and Togiak river drainages, and sportfishing. The wild lands of the refuge, including the Togiak Wilderness Area, provide valuable and diverse habitat for the fish and wildlife that make the area their home. The conservation of freshwater streams and rivers, wetland and alpine tundra, boreal forests, and coastal cliffs and beaches allow an amazing diversity of species to find suitable homes here. The lands also offer amazing opportunities for recreation and education.¹¹⁵⁵

The Refuge protects habitat that produces nearly 3 million Chinook, sockeye, chum, pink and coho salmon, and 27 other fish species. These fish species are the primary subsistence resource for residents of seven local villages. Fishery resources in this area of Alaska are economically important for commercial fisheries valued at over 8 million dollars, as well as a 6 million dollar sport fishery. Ensuring that adequate numbers of each fish species are allowed to spawn in each drainage is key to this region's aquatic and terrestrial ecosystems. The Refuge also contains prime habitat for several other fish species, including rainbow trout, Arctic grayling, Dolly Varden, and Arctic char. Anglers come from around the world for an opportunity to pursue these prized fish species.

The Refuge is working to further our understanding of these fish species. The Refuge conserves habitat for at least 201 staging, migrating, or breeding bird species. Bird species groups include landbirds, shorebirds, seabirds, raptors, and waterfowl. Birds from the North American Pacific Flyway and several Asiatic routes funnel through the area. It is home to more than 30 species of terrestrial mammals. With a wide variety of habitats, the Refuge supports brown bear, moose, caribou, wolves, and many smaller mammals. The Nushagak Peninsula, in the southeastern portion of the Refuge, was the site of a 1988 caribou reintroduction, and the caribou population continues to grow. Moose populations on the refuge have increased substantially in recent years as well, much to the delight of local people. Lynx and wolverines continue their elusive ways, seldom seen except for tracks they leave in the snow. In addition, 17 species of marine mammals are found along the coastline. The Refuge has haulout sites that provide animals a place to rest after feeding forays in the Bering Sea. Cape Peirce, on the southwestern tip of the Refuge, is one of only two regularly used land-based haulouts for Pacific walrus in North America. Up to 12,000 male walrus may haul out here at one time. Endangered Steller sea lions use haulouts within the Refuge, as do harbor and spotted seals. Marine and terrestrial mammals are important food resources for local village residents, and are important in the local tourism economy as well.¹¹⁵⁶

Current Economy¹¹⁵⁷

Most of the employment in Quinhagak is with the school, government services, or commercial fishing. Trapping, basket weaving, skin sewing, and ivory carving also provide income. Subsistence remains an important part of residents' livelihoods; seal and salmon are staples of the diet. Coastal Villages Seafood LLC processes halibut and salmon in Quinhagak.¹¹⁵⁸

¹¹⁵⁵ U.S. Fish and Wildlife Service. 2011. *Togiak National Wildlife Refuge: Wildlands*. Retrieved from <http://togiak.fws.gov/wildland.htm> on April 9, 2012.

¹¹⁵⁶ U.S. Fish and Wildlife Service. 2011. *Togiak National Wildlife Refuge: Wildlife*. Retrieved from <http://togiak.fws.gov/wildlife.htm> on April 9, 2012.

¹¹⁵⁷ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁵⁸ See footnote 1152.

According to the 2006-2010 ACS,¹¹⁵⁹ the per capita income in Quinhagak in 2010 was estimated at \$10,422, and the median household income in 2010 was estimated at \$30,833, compared to \$8,127 and \$25,156 in 2000, respectively. After accounting for inflation by converting the 2000 values to 2010 dollars,¹¹⁶⁰ the real per capita income (\$10,687) and the real median household income in 2000 (\$33,080) indicate that per capita income stayed relatively stable between 2000 and 2010, while median household income decreased during that same period. However, Quinhagak's small population size may have prevented the ACS from accurately portraying economic conditions.¹¹⁶¹ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Quinhagak in 2010 was \$6,863, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.¹¹⁶² This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹¹⁶³ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

In 2010, Quinhagak ranked 266th out of 305 Alaskan communities with per capita income that year, and 241st out of 299 Alaskan communities with household income data. Based on the ACS, in that same year, 58.9% of the civilian population aged 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 25.8%, compared to the statewide unemployment rate of 5.9%. Approximately 38.9% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Quinhagak are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Quinhagak. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 30.7%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was employed in the public sector (56.4%), while 43.6% were employed in the private sector in 2010. Out of 181 people aged 16 and over that were employed in the civilian labor force in 2010, the greatest percentage worked in public administration (27.8%), education services, health care, and social assistance (22.2%), retail trade (14.1%), transportation, warehousing, and utilities (11.6%), and construction (11.6%). Only 6.6% of the labor force worked in arts, entertainment, recreation, accommodations, and food services, 2.5% worked in

¹¹⁵⁹ See footnote 1151.

¹¹⁶⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹¹⁶¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹¹⁶² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹⁶³ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

other services, except public administration, 2.0% worked in manufacturing, and 1.5% worked in agriculture, forestry, fishing, hunting, and mining. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Quinhagak (U.S. Census).

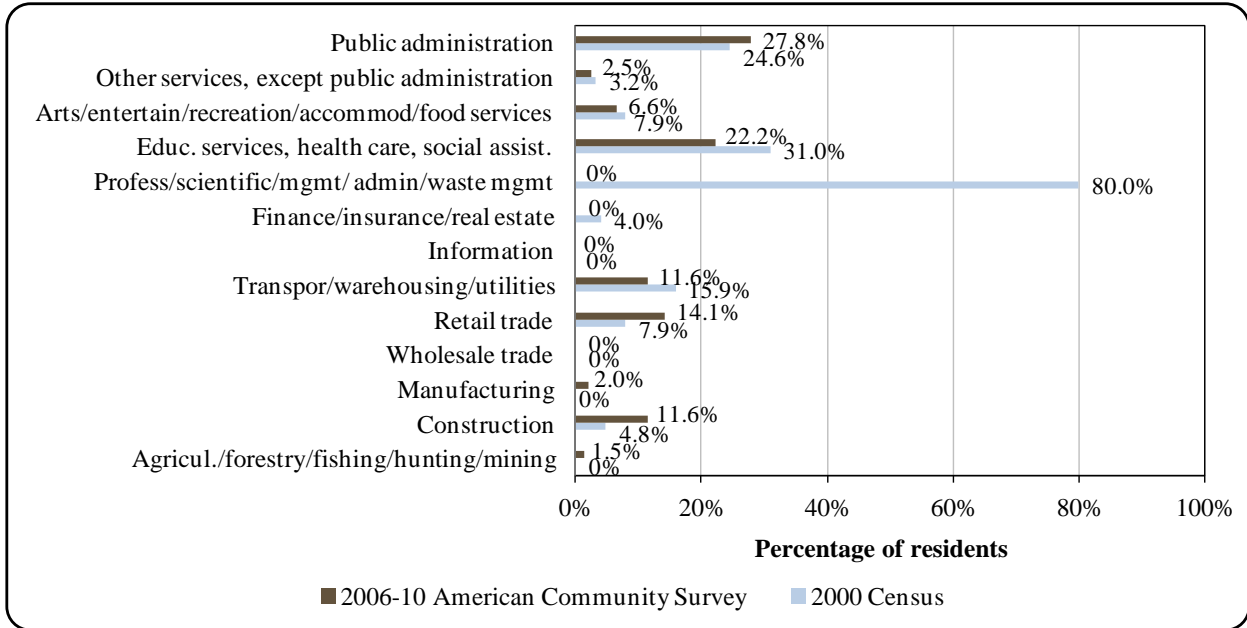
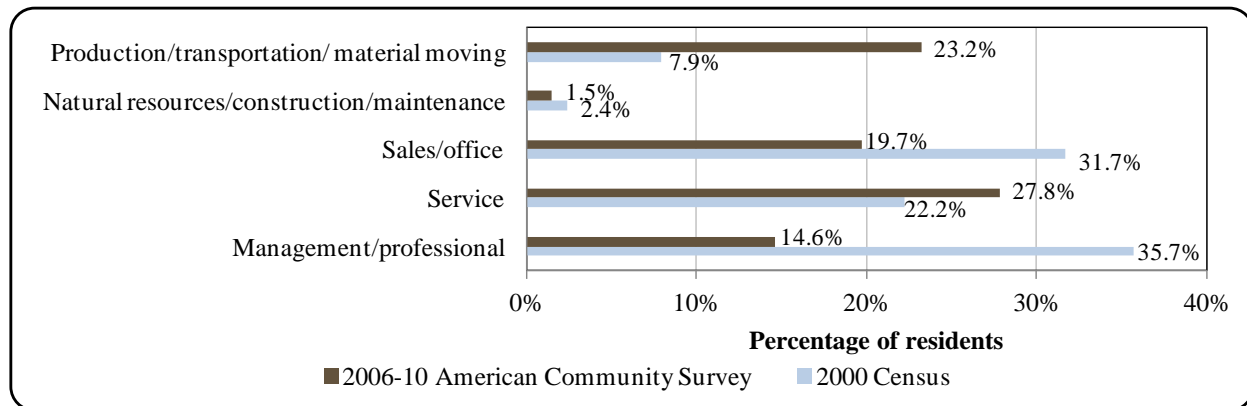


Figure 4. Local Employment by Occupation in 2000-2010, Quinhagak (U.S. Census).



Governance

Quinhagak is a Second-class city, governed by a mayor and city council, and is not located within an organized Borough. Quinhagak was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native Village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Kwinhagak. The Native village corporation is Qanirtuuq, Incorporated, which manages 115,200 acres of land received under ANCSA. Quinhagak is also a member of the Calista Corporation, the regional Native corporation.¹¹⁶⁴

The City of Quinhagak administered a 3% sales tax in 2010.¹¹⁶⁵ When adjusted for inflation,¹¹⁶⁶ total municipal revenues declined by 48.3% between 2000 and 2010 from \$5.45 million, to \$3.64 million. However, local revenues were heavily influenced by outside revenue sources between those years, which contributed to yearly variability. In contrast, inflation adjusted general fund revenues remained relatively constant. In 2010 general fund revenues were collected predominately from state revenue sharing sources, sales tax revenues, and other sources. However, general fund revenues accounted for only 22.3% of total municipal revenues that year. Most (33.1%) municipal revenues came from Federal Housing and Urban Development grants. Other sources included BIA, Indian Health Services, and Indian Community Development Block Grant renovation funds.¹¹⁶⁷

Sales tax revenues accounted for 15.0% of total general fund revenues in 2010, compared to 8.6% in 2000. Also in that year, state allocated Community Revenue Sharing accounted for 16.0% of general fund revenues, compared to 4.1% from State Revenue Sharing in 2000.

In 2000, Quinhagak received \$200,000 in fisheries-related grants for work on the salmon processing plant. In 2002, Quinhagak received a \$50,000 grant for harbor feasibility and design and a \$750,000 grant for harbor pre-construction.

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Bethel. The nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Natural Resources (DNR), Bureau of Citizenship and Immigration Services (BCIS), and U.S. Immigration and Customs Enforcement are located in Anchorage.

¹¹⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁶⁵ Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm

¹¹⁶⁶ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

¹¹⁶⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Quinhagak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$5,445,975	\$57,828	\$27,430	\$200,000
2001	\$5,319,962	\$66,712	\$26,417	n/a
2002	\$7,254,061	\$70,150	\$26,415	\$800,000
2003	\$7,894,321	\$81,826	\$26,805	n/a
2004	\$5,189,834	\$77,506	-	n/a
2005	\$5,347,418	\$84,913	-	n/a
2006	\$3,380,866	\$79,618	-	n/a
2007	\$2,261,699	\$88,290	-	n/a
2008	\$2,783,727	\$103,683	-	n/a
2009	\$2,511,300	\$117,206	\$129,720	n/a
2010	\$3,642,115	\$121,380	\$130,103	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/comddb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

*Connectivity and Transportation*¹¹⁶⁸

Quinhagak relies on air transportation for passenger mail and cargo service. A state-owned 4,000 foot long by 75 foot wide gravel airstrip is available. Float planes land on the Kanektok River. A harbor and dock serves barge deliveries of heavy goods at least twice per year. Boats, all-terrain vehicles, snowmobiles, and some vehicles are used for local transportation. Quinhagak is not connected to the state of Alaska road system. Winter trails are marked to Eek (39 miles) and Goodnews (39 miles). In June 2012, roundtrip airfare to Anchorage was approximately \$680.¹¹⁶⁹

*Facilities*¹¹⁷⁰

All services are provided by the Native Village of Kwinhagak, under an agreement with the City. Services include water, sewage collection, and operation of the Class 3 landfill. Water

¹¹⁶⁸ See footnote 1164.

¹¹⁶⁹ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹¹⁷⁰ See footnote 1164.

is derived from a well near the Kenektok River. Forty homes are served by a flush/haul system. An old Bureau of Indian Affairs (BIA) building has been renovated as a new washeteria and health clinic. The school and washeteria are connected directly to the water plant. Eighty-nine households still haul water and use honeybuckets, a 5-gallon form of an outhouse. The Village also operates a community center, and the school has a portable pool and a library. A City Village Police Officer and two Village Public Safety Officers provide law enforcement services locally, along with state troopers stationed in Bethel.

*Medical Services*¹¹⁷¹

The Quinhagak (Kwinhagak) Clinic provides medical care and is operated by the Native Village of Kwinhagak and owned by the Village Council. The facility is a Community Health Aid Program site. Alternate health care is available through the Quinhagak Emergency Medical Services (EMS) Quick Response Team. Emergency services have coastal air and floatplane access. Emergency service is provided by a health aide. The nearest hospital is located in Bethel.

*Educational Opportunities*¹¹⁷²

There is one school in Quinhagak that provides instruction for students from pre-school through 12th grade. In 2011, Kuinerrarmiut Elitnaurviat had 13 teachers and 225 students.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest has been important to residents of the Kuskokwim Bay area for thousands of years.¹¹⁷³ In addition to salmon, spring harvest of herring roe on kelp or hemlock boughs was an important subsistence resource for coastal people in this region.¹¹⁷⁴ Today, subsistence remains an important part of residents' livelihoods. Salmon and seal are both staples of the local diet.¹¹⁷⁵ In addition, between 2000 and 2010, Quinhagak residents participated in commercial fisheries for salmon, halibut, and herring.

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest

¹¹⁷¹ Ibid.

¹¹⁷² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹¹⁷³ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

¹¹⁷⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹¹⁷⁵ See footnote 1164.

levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management by ADF&G is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.¹¹⁷⁶ Quinhagak is located in District 4 of the Kuskokwim salmon fishery (the Quinhagak fishing district, a marine fishing district that encompasses five miles of shoreline adjacent to the village of Quinhagak).

Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹¹⁷⁷ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission. Quinhagak is located in Pacific Halibut Fishery Regulatory Area 4E.

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.¹¹⁷⁸

The community is also located in Federal Statistical and Reporting Area 514 and the Bering Sea Sablefish Regulatory Area. Quinhagak is a member of the Coastal Villages Region Fund (CVRF), the Community Development Quota (CDQ) group for Kuskokwim Delta and Bering Sea communities from Cape Newenham to Scammon Bay. CVRF promotes employment opportunities for residents, as well as participation in the Bering Sea crab and groundfish fisheries.¹¹⁷⁹ Quinhagak is not eligible to participate in the Community Quota Entity program. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Quinhagak received \$20,000 in funding or grants and \$10,000 in special allocations from CVRF in 2010.

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Coastal Villages Seafoods (CVS), a subsidiary of the CVRF, one seafood processing plant was located in Quinhagak. However, CVS ceased operation of the plant in 2010 due to various reasons, including the strain the facility placed on local water supply and the short window of time available to make deliveries each day due to fast-changing tides. The closure of the Quinhagak plant coincided with the opening of a new processing facility in Platinum, located approximately 50 miles to the south.¹¹⁸⁰

¹¹⁷⁶ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹¹⁷⁷ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹¹⁷⁸ See footnote 1174.

¹¹⁷⁹ Coastal Villages Region Fund. (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

¹¹⁸⁰ Coastal Villages Region Fund. 2010. "Fishing Season 2010." *The Sound of Fishermen Newsletter*, Volume 12, Issue 2. Retrieved July 17, 2012 from <http://www.coastalvillages.org/sites/www.coastalvillages.org/files/documents/Spring%202010.pdf>.

This new facility in Platinum, known as the “Goodnews Bay Regional Processing Plant,” currently processes salmon between June and August.¹¹⁸¹ CVS also has processing facilities in Toksook Bay, Mekoryuk, Tununak, Chefnak, Kipnuk, and Hooper Bay. Many of these facilities process halibut in June and July.^{1182,1183} In 2010, herring processing was planned at the Platinum facility, but the herring fishery planned for CVSs’ districts was canceled that year and is not expected to resume in the near future.^{1184,1185}

Fisheries-Related Revenue

In 2010, Quinhagak received \$39,807 from fisheries-related taxes and fees (Table 3).¹¹⁸⁶ These revenue sources include the Shared Fisheries Business Tax and a marine fuel sales tax. Revenue from fisheries-related taxes and fees varied between 2000 and 2010, increasing from \$807 in 2000 to \$39,807 in 2010. Table 3 shows the historical annual revenue for each of these categories.

In a survey conducted by the AFSC in 2011, community leaders reported that harbor maintenance, hospital/medical clinic/emergency response, educational scholarships, roads, and police/enforcement/fire protection are all at least partially funded by fisheries-related revenue sources.

Commercial Fishing

In 2010, 94 Quinhagak residents held 109 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Salmon permits made up 82% of the CFEC permits issued in 2010, compared with 62% in 2000. Residents of Quinhagak also held CFEC permits for halibut and herring in 2010, though none of the herring permits were fished in that year. There were no Quinhagak residents holding Federal Fisheries Permits between 2000 and 2010. Overall, 72% of the commercial fishing permits issued to Quinhagak residents were actively fished, including 85% of the salmon permits recorded as fished and 25% of the halibut permits fished. In 2010, salmon CFEC permits were issued for the Bristol Bay drift gill net and set gill net fisheries and the Kuskokwim gill net fishery. Halibut CFEC permits were issued in 2010 for the statewide hand troll and mechanical jig fisheries. Twelve residents held herring CFEC permits in 2010, though none of those permits were recorded as fished. All herring CFEC permits issued in 2010 were for the Goodnews Bay roe herring gill net fishery. Information on permits and permit holders by species is presented in Table 4.

Also in 2010, 15 vessels landed catch in Quinhagak and there were 46 registered crew license holders. In 2009, eight vessels landed catch in Quinhagak and there were 60 registered

¹¹⁸¹ Coastal Villages Region Fund. 2011. *2011 Benefits Catalog: Coastal Villages Region Fund*. Retrieved April 11, 2012 from http://www.coastalvillages.org/sites/www.coastalvillages.org/files/documents/benefits_catalog_2011.pdf.

¹¹⁸² Alaska Seafood Marketing Institute. 2005. *Supplier Information: Coastal Villages Seafoods, LLC*. Retrieved April 11, 2012 from <http://alaskaseafood.org/>.

¹¹⁸³ Coastal Villages Region Fund. 2010. *Halibut Commercial Fishing*. Retrieved April 11, 2012 from <http://coastalvillages.org/commercial-fishing/halibut>.

¹¹⁸⁴ Coastal Villages Region Fund. (n.d.). *Herring Fishery Cancelled*. Retrieved April 11, 2012 from <http://coastalvillages.org/current-issues/herring-fishery-cancelled>.

¹¹⁸⁵ Personal communication, Nick Souza, Coastal Villages Seafoods, April 16, 2012.

¹¹⁸⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

crew license holders. Between 2000 and 2008, there were no vessels recorded as landing catch in Quinhagak. During that same period, the number of crew license holders varied from 38 to 56. Information on characteristics of the commercial fishing sector in Quinhagak is presented in Table 5. There were no Quinhagak residents holding Individual Fishing Quota (IFQ) account shares between 2000 and 2010 for halibut (Table 6) or sablefish (Table 7) and no Quinhagak residents holding IFQ account shares for crab between 2005 and 2010 (Table 8).

Between 2000 and 2008, no landings were recorded in Quinhagak. In 2009 and 2010, data regarding total pounds landed and ex-vessel value of 2010 landings were considered confidential due to the small number of participants (Table 9). In 2010, Quinhagak ranked 35th in total landings out of 67 communities that received landings in that year and 37th overall for the total ex-vessel revenue earned in the community. Landings recorded by Quinhagak residents were considered confidential between 2000 and 2010 due to a small number of participants, with the exception of halibut landings between 2000-2004 and 2006-2009, herring landings in 2000, and salmon landings in 2000-2001 and 2003-2010. Landings and ex-vessel revenue for these species varied considerably during the years for which data were available. Information on landings and ex-vessel revenue reported by Quinhagak residents is presented in Table 10.

In a survey conducted by the AFSC in 2011, community leaders reported that Quinhagak is home to a lot more commercial fishing boats compared to five years prior.

Table 3. Known Fisheries-Related Revenue (in U.S. dollars) Received by the Community of Quinhagak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	\$807	\$622	\$3,711	\$5,671	\$3,985	\$7,789	\$18,165	\$14,389	\$16,611	\$15,570	\$34,807
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	\$7,000	\$1,600	\$1,600	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$5,000
Total fisheries-related revenue⁴	\$807	\$622	\$3,711	\$5,671	\$3,985	\$7,789	\$25,165	\$15,989	\$18,211	\$15,570	\$39,807
Total municipal revenue⁵	\$5.45 M	\$5.32 M	\$7.25 M	\$7.89 M	\$5.19 M	\$5.35 M	\$3.38 M	\$2.26 M	\$2.78 M	\$2.51 M	\$3.64 M

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Quinhagak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	44	37	21	17	15	10	11	12	11	10	8
	Fished permits	18	11	4	4	4	3	5	6	10	6	2
	% of permits fished	41%	30%	19%	24%	27%	30%	45%	50%	91%	60%	25%
	Total permit holders	38	32	18	15	13	9	11	12	11	10	8
Herring (CFEC) ²	Total permits	9	14	14	14	14	14	14	14	14	13	12
	Fished permits	4	2	0	0	1	1	0	0	0	0	0
	% of permits fished	44%	14%	-	-	7%	7%	-	-	-	-	-
	Total permit holders	9	14	14	14	15	14	14	14	14	13	12

Table 4 cont'd. Permits and Permit Holders by Species, Quinhagak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	86	87	88	88	91	91	91	88	92	92	89
	Fished permits	70	62	67	66	70	74	71	63	72	77	76
	% of permits fished	81%	71%	76%	75%	77%	81%	78%	72%	78%	84%	85%
	Total permit holders	89	91	98	93	97	93	95	91	97	96	91
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>139</i>	<i>138</i>	<i>123</i>	<i>119</i>	<i>120</i>	<i>115</i>	<i>116</i>	<i>114</i>	<i>117</i>	<i>115</i>	<i>109</i>
	<i>Fished permits</i>	<i>92</i>	<i>75</i>	<i>71</i>	<i>70</i>	<i>75</i>	<i>78</i>	<i>76</i>	<i>69</i>	<i>82</i>	<i>83</i>	<i>78</i>
	<i>% of permits fished</i>	<i>66%</i>	<i>54%</i>	<i>58%</i>	<i>59%</i>	<i>63%</i>	<i>68%</i>	<i>66%</i>	<i>61%</i>	<i>70%</i>	<i>72%</i>	<i>72%</i>
	<i>Permit holders</i>	<i>103</i>	<i>100</i>	<i>102</i>	<i>100</i>	<i>103</i>	<i>97</i>	<i>99</i>	<i>96</i>	<i>101</i>	<i>100</i>	<i>94</i>

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Quinhagak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Quinhagak ²	Total Net Pounds Landed In Quinhagak ^{2,5}	Total Ex-Vessel Value Of Landings In Quinhagak ^{2,5}
2000	55	0	1	57	82	0	0	\$0
2001	39	0	1	55	85	0	0	\$0
2002	38	0	1	48	78	0	0	\$0
2003	49	0	1	43	70	0	0	\$0
2004	40	0	1	43	73	0	0	\$0
2005	54	0	1	32	31	0	0	\$0
2006	53	0	1	27	26	0	0	\$0
2007	56	0	1	34	34	0	0	\$0
2008	51	0	1	40	39	0	0	\$0
2009	60	1	2	36	33	8	--	--
2010	46	1	1	33	32	15	--	--

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Total only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Quinhagak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Quinhagak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Quinhagak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Quinhagak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	--	--
Finfish	0	0	0	0	0	0	0	0	0	--	--
Halibut	0	0	0	0	0	0	0	0	0	--	--
Herring	0	0	0	0	0	0	0	0	0	--	--
Other Groundfish	0	0	0	0	0	0	0	0	0	--	--
Other Shellfish	0	0	0	0	0	0	0	0	0	--	--
Pacific Cod	0	0	0	0	0	0	0	0	0	--	--
Pollock	0	0	0	0	0	0	0	0	0	--	--
Sablefish	0	0	0	0	0	0	0	0	0	--	--
Salmon	0	0	0	0	0	0	0	0	0	--	--
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>--</i>	<i>--</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Quinhagak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	7,409	2,946	1,504	636	587	--	954	2,200	5,175	908	--
Herring	6,084	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	115,918	119,608	--	50,238	224,611	187,603	248,516	228,965	225,552	173,759	54,827
<i>Total²</i>	<i>129,411</i>	<i>122,554</i>	<i>1,504</i>	<i>50,874</i>	<i>225,198</i>	<i>187,603</i>	<i>249,470</i>	<i>231,165</i>	<i>230,727</i>	<i>174,667</i>	<i>54,827</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$9,264	\$3,709	\$1,530	\$796	\$734	--	\$3,362	\$9,384	\$16,026	\$2,378	--
Herring	\$516	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$53,465	\$42,146	--	\$23,100	\$88,001	\$89,553	\$114,184	\$111,089	\$122,363	\$109,916	\$48,473
<i>Total²</i>	<i>\$63,244</i>	<i>\$45,855</i>	<i>\$1,530</i>	<i>\$23,895</i>	<i>\$88,735</i>	<i>\$89,553</i>	<i>\$117,546</i>	<i>\$120,473</i>	<i>\$138,389</i>	<i>\$112,295</i>	<i>\$48,473</i>

Note: Not Reported indicates that no data were reported for that year. Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Based on estimates reported in the ADF&G Statewide Harvest Survey, Chinook salmon, coho salmon, sockeye salmon, and Dolly Varden are caught by private anglers in Quinhagak.¹¹⁸⁷ In addition, according to survey conducted by the AFSC in 2011, community leaders indicated that the following saltwater species are targeted by recreational fishermen that use boats based in Quinhagak: chum salmon, Chinook/king salmon, coho/silver salmon, sockeye/red salmon, and halibut.

A total of 20 sportfishing licenses were sold to residents of Quinhagak (irrespective of the location of the point of sale) in 2010. In comparison, a total of 16 sportfishing licenses were sold in Quinhagak. No sportfishing licenses were sold locally between 2000 and 2004. Sportfishing licenses sales remained relatively high until 2010, when sales declined significantly. The number of sportfishing licenses sold to residents remained relative stable between 2000 and 2010, with the exception of 2005, when sales peaked at 48. No locally registered sport fish guide businesses were active between 2000 and 2010.

Quinhagak is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Quinhagak is displayed in Table 11.

Table 11. Sport Fishing Trends, Quinhagak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Quinhagak ²
2000	0	7	21	0
2001	0	9	14	0
2002	0	12	18	0
2003	0	12	25	0
2004	0	5	28	0
2005	0	5	48	70
2006	0	9	27	58
2007	0	7	17	72
2008	0	11	23	61
2009	0	17	22	71
2010	0	10	20	16

¹¹⁸⁷ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey Results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Quinhagak: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence remains an important part of residents' livelihoods. Seal and salmon are staples of the diet.¹¹⁸⁸ While data were not available for 2000-2010 in terms of the percentage of households utilizing various marine resources for subsistence purposes or per capita subsistence harvest (Table 12), other data clearly indicate a reliance of Quinhagak residents on subsistence resources (Tables 13 and 14). There is considerable annual harvest of salmon by Quinhagak households holding subsistence salmon permits (Table 13).

In 2008, the last year for which data are available regarding subsistence salmon permits, the total subsistence harvest of salmon appeared to increase from previous years even though the number of subsistence salmon permits returned in that year was less than the number of permits returned in previous years. The most important salmon species recorded by permit holders included Chinook, sockeye, and coho salmon, in order of importance. Halibut harvests were extremely variable between 2003 and 2010. Years when reported harvests were significant included 2003 (an estimated 1,164 pounds on 12 SHARC), and 2005 (an estimated 2,907 pounds on 10 SHARC). All other years were significantly lower, and no harvests were reported in 2009 or 2010. Permit ownership and activity also significantly declined between 2003 and 2010.

¹¹⁸⁸ See footnote 1149.

Finally, an estimated 7 walrus and 4 beluga whales were harvested between 2000 and 2010 (Table 15).

According to a survey conducted by the AFSC in 2011, community leaders reported that fur seals, salmon, and beluga whales are the three most important subsistence marine or aquatic resources for residents of Quinhagak. Although no data were reported during the 2000-2010 period, a survey conducted by the ADF&G Division of Subsistence in the early 1980s provides some information about species harvested for subsistence purposes by Quinhagak residents. In 1982, Quinhagak households reported harvesting several species of marine mammal (bearded seal, ringed seal, spotted seal, and Steller sea lion. Species of non-salmon fish (not including halibut) that were harvested for subsistence purposes by Quinhagak households in 1982 included blackfish, cisco, cod, Dolly Varden, and smelt.¹¹⁸⁹ According to the ADF&G *Community Subsistence Information System*,¹¹⁹⁰ “other” (non-salmon, non-halibut) species which Quinhagak residents harvest or acquire through other means include bearded seal, ringed seal, spotted seal, Steller sea lion, blackfish, cisco, cod, Dolly Varden, and smelt.

¹¹⁸⁹ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹¹⁹⁰ Ibid.

Table 12. Subsistence Participation by Household and Species, Quinagak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Quinagak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	130	107	3,106	912	1,088	n/a	1,341	n/a	n/a
2001	131	101	2,923	747	1,525	n/a	914	n/a	n/a
2002	139	101	2,475	1,839	1,099	n/a	855	n/a	n/a
2003	143	104	3,898	1,129	2,047	n/a	1,622	n/a	n/a
2004	147	96	3,726	1,112	1,209	n/a	1,086	n/a	n/a
2005	144	102	3,083	915	1,443	32	1,633	n/a	n/a
2006	152	81	3,521	1,865	1,019	109	2,177	n/a	n/a
2007	152	81	3,521	1,865	1,019	109	2,177	n/a	n/a
2008	177	44	4,204	1,579	2,320	n/a	2,649	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Quinhagak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	15	12	1,164
2004	14	8	936
2005	16	10	2,907
2006	14	8	791
2007	14	3	158
2008	7	3	44
2009	6	4	n/a
2010	5	2	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Quinhagak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	5	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	2	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	1	n/a	n/a	n/a	n/a
2009	n/a	n/a	1	n/a	n/a	n/a	n/a
2010	2	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Red Devil



People and Place

*Location*¹¹⁹¹

Red Devil is located on both banks of the Kuskokwim River, at the mouth of Red Devil Creek. It lies 75 air miles northeast of Aniak, 161 miles northeast of Bethel, and 250 miles west of Anchorage. Red Devil is located in the Kuskokwim Recording District and the Bethel Census Area, but is not located within an organized Borough. The total area of Red Devil is 26.4 square miles, of which 24.2 square miles is land and 2.2 square miles is water.

*Demographic Profile*¹¹⁹²

In 2010, there were 23 residents in Red Devil, making it the 324th largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population decreased by 57%. Between 2001 and 2009, the population fell by 8.3%;¹¹⁹³ however, according to the U.S. Census the population fell by 48% between 2009 and 2010. The Red Devil average annual growth rate between 2000 and 2009 was -1.56%, indicating a slow rate of decline. The change in population from 1990 to 2010 is shown in Table 1.

The majority of residents of Red Devil in 2010 identified themselves as American Indian or Alaska Native (43.5%), with 39.1% of the population identifying themselves as two or more races, and 17.4% of the population identifying themselves as White. There were no residents of Red Devil that identified themselves as Hispanic in 2010. The percentage of the population identifying themselves as American Indian or Alaska Native remained relatively stable between 2000 and 2010, with the percentage of residents identifying themselves as White experiencing a large decline. The percentage of residents identifying themselves as two or more races experienced a large increase during this same period. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size was estimated to be 1.92, a decrease from 2.82 in 2000 and 2.9 in 1990. The number of estimated households also decreased from 18 in 1990 to 17 in 2000 to 12 in 2010. Of the 23 housing units surveyed for the 2010 Decennial Census, nine were owner-occupied and three were renter-occupied, with 11 housing units that were vacant. Throughout this period no residents of Red Devil were reported to be living in group quarters.

¹¹⁹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁹² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹⁹³ Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

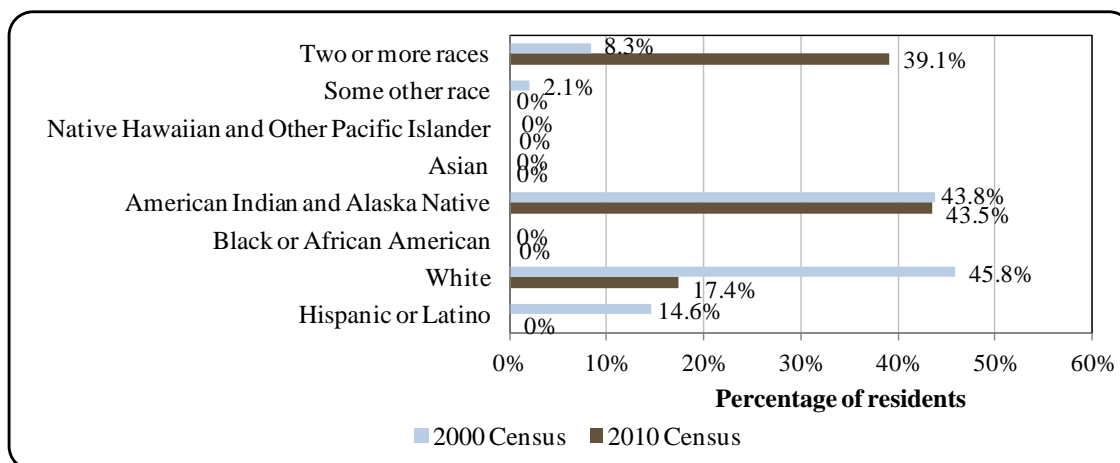
Table 1. Population in Red Devil from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	53	-
2000	48	-
2001	-	31
2002	-	32
2003	-	41
2004	-	35
2005	-	36
2006	-	29
2007	-	34
2008	-	48
2009	-	44
2010	23	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

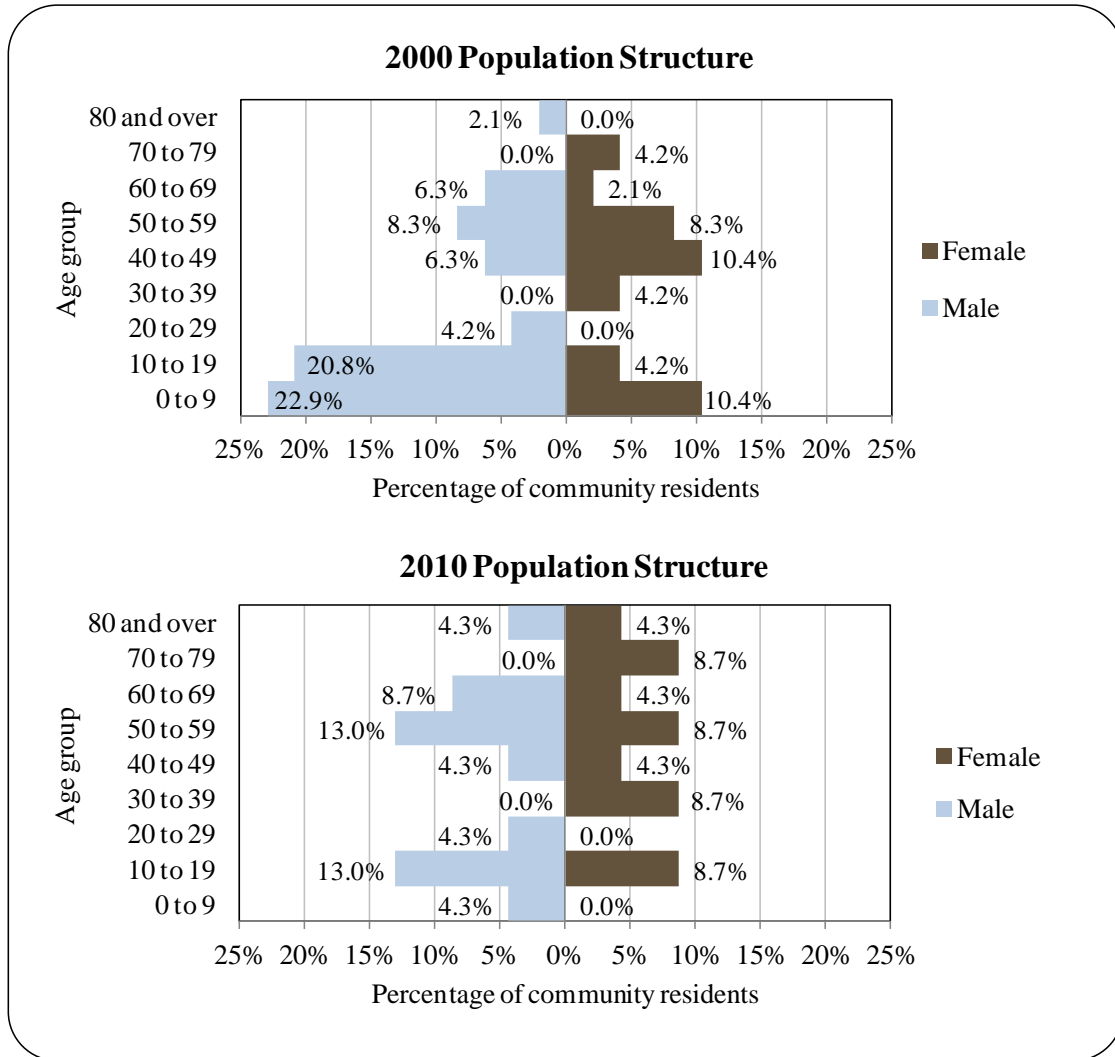
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/poppest.htm>.

Figure 1. Racial and Ethnic Composition, Red Devil: 2000-2010 (U.S. Census).



In 2010, the gender makeup was very slightly skewed, at 52% male and 48% female, exactly the same as that of the state as a whole. The median age in Red Devil was 50.5 years, higher than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 50-69 years old, with the next largest percentage for the age category 10-19 years old. Relatively small percentages of residents made up the remaining age categories. The population age structure of Red Devil in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Red Devil Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, in 2010, according to the 2006-2010 American Community Survey (ACS),¹¹⁹⁴ an estimated 37.5% of residents aged 25 and over held a high school diploma or higher degree, compared to 90.7% of Alaska residents overall. Also in 2010, 62.5% of residents were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; and 37.5% of residents were estimated to hold a high school diploma or equivalent, compared to 27.4% of Alaska residents overall.

¹¹⁹⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*¹¹⁹⁵

The village was named after the Red Devil Mine, established in 1921 by Hans Halverson when numerous mercury (quicksilver) deposits were discovered in the surrounding Kilbuck-Kuskokwim Mountains. By 1933, the mine was producing substantial quantities of mercury. Although the mine changed ownership twice over the years, it continued to operate until 1971. The mine produced some 2.7 million pounds of mercury during its operation. A post office was established in 1957, and a state school opened in 1958. Red Devil is a mixed population of Yup'ik Eskimos, Tanaina Athabascans, and non-Natives. Subsistence activities are prevalent. The sale of alcohol is prohibited, although importation and possession are allowed.

Natural Resources and Environment

The climate in Red Devil is continental with temperatures ranging between -58 and 90 °F (-50 to 32.2 °C). Annual snowfall averages 85 inches, with total precipitation of 20 inches. High winds often cause flight delays in fall and winter. The Kuskokwim River is ice-free from mid-June through October.¹¹⁹⁶

The Bureau of Land Management (BLM) began addressing hazardous materials and physical safety hazards resulting from the mining operations at the Red Devil Mine in 1987. The following information was obtained from the BLM information page on the Red Devil Mine.¹¹⁹⁷ Initial efforts focused on removing the remaining processing chemicals, polychlorinated biphenyls (PCBs) in transformers, and backfilling open mine shafts and adits. In 2002, the derelict mine buildings and mercury production facilities were demolished and disposed in on-site one-time use landfills. From 2003 through 2006, BLM focused available funding on cleanup of spilled fuel from the mine's large above ground storage tanks. With funds provided under the American Recovery and Reinvestment Act, the petroleum cleanup advanced into final stages during 2009-2010.

Less visible, but perhaps more impacting, is the potential long-term environmental effect metals mining and processing left behind after the mine played out. The primary metals of concern at the Red Devil Mine include mercury, arsenic, antimony, and lead. Metals may leach from the tailings and enter ground and surface waters. Flooded underground mine works allow groundwater to come in contact with remaining ore and host rock, which in turn can then enter surface water and/or impact drinking water quality. The metals and their bio-available decomposition products can bio-accumulate in the food web, potentially affecting human health and the environment.

In 2008, the BLM, in cooperation with the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (DEC), began a Remedial Investigation and Feasibility Study of the site. The purpose of this investigation is to characterize the site, determine what potential risks the mine site may have on human health and the environment, and determine what needs to be done to mitigate those risks.

¹¹⁹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁹⁶ Ibid.

¹¹⁹⁷ Bureau of Land Management (n.d.). *Red Dog Mine*. Retrieved December 9, 2011 from http://www.blm.gov/ak/st/en/fo/ado/hazardous_materials/red_devil_mine.html.

A mining explosives storage magazine (powder house) was discovered during fieldwork at the site in July 2010. Contracted ordnance technicians investigated the partially collapsed structure for explosives and residue. The powder house did not contain explosives, so it was dismantled and the wood burned.

Current Economy¹¹⁹⁸

Since the closure of the mercury mine in 1971, employment opportunities have been limited. Income is supplemented by subsistence activities, BLM firefighting, or work in the commercial fishing industry. Salmon, bear, moose, caribou, rabbit, waterfowl, and berries are harvested in season.¹¹⁹⁹

Based on the 2006-2010 ACS,¹²⁰⁰ the per capita income and median household income in Red Devil in 2010 were not available. In 2000, the per capita income in Red Devil was \$5,516 and the median household income was \$10,938. After accounting for inflation by converting the 2000 dollars to 2010 dollars,¹²⁰¹ the real per capita income in 2000 was \$7,253 and the real median household income in 2000 was \$14,383. However, Red Devil's small population size may have prevented the ACS from accurately portraying economic conditions.¹²⁰² A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Red Devil in 2010 was \$3,671, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.¹²⁰³ This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹²⁰⁴ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy. In addition, an estimate based on the ALARI database indicates that the unemployment rate in 2010 was 4.3%.

Based on the 2006-2010 ACS, data regarding the percentage of the civilian population age 16 and over in the civilian labor force were not available. However, according to the ACS, an estimated 70% of the civilian employed population was employed in education services, health care, and social assistance. The remaining 30% of the civilian employed population was estimated to be employed in transportation, warehousing, and utilities. No individuals characterized themselves as working in natural resource based occupations or industries that include fishing (Figures 3 and 4). However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

¹¹⁹⁸ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁹⁹ See footnote 1195.

¹²⁰⁰ See footnote 1194.

¹²⁰¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²⁰² See footnote 1194.

¹²⁰³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari>.

¹²⁰⁴ Denali Commission. 2011. *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Figure 3. Local Employment by Industry in 2000-2010, Red Devil (U.S. Census).

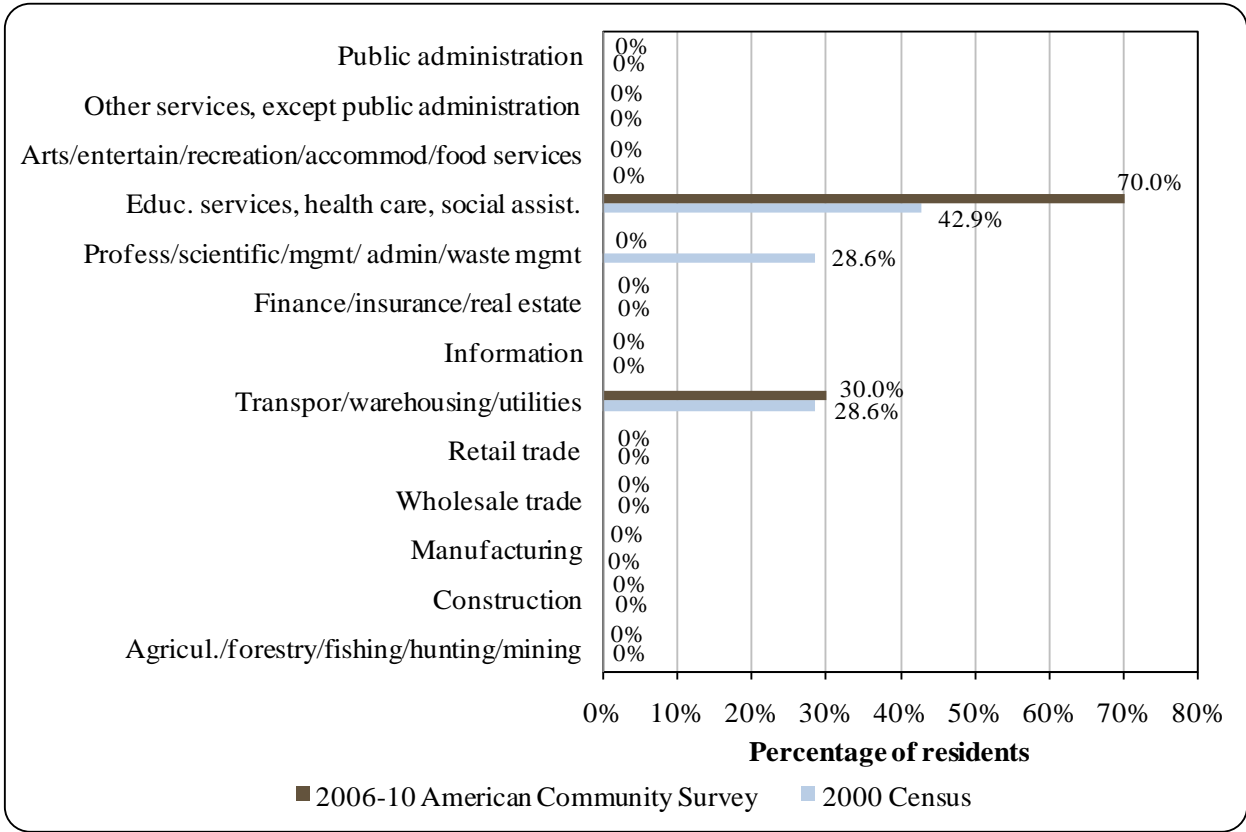
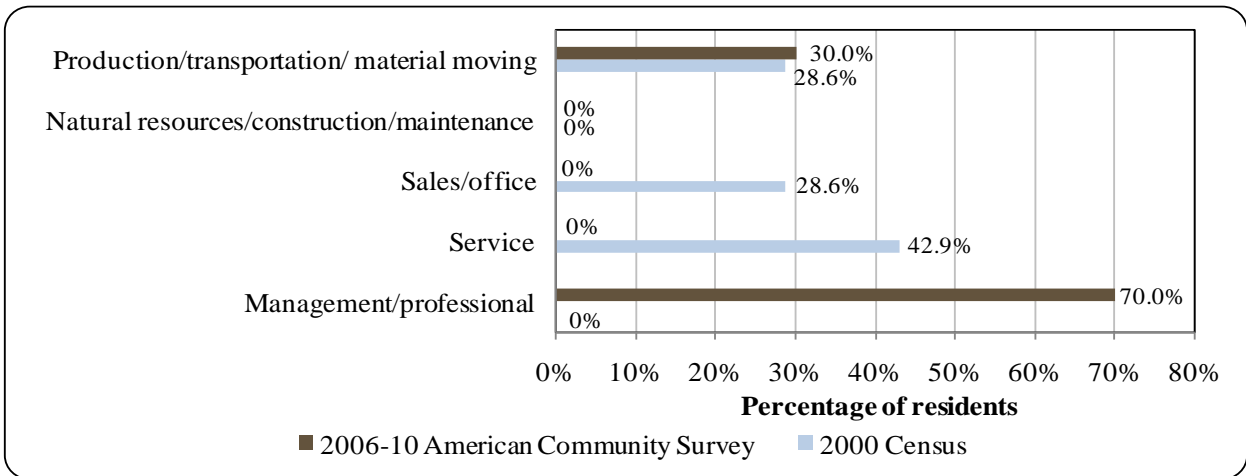


Figure 4. Local Employment by Occupation in 2000-2010, Red Devil (U.S.Census).



Governance

Red Devil is an unincorporated community that is not part of an organized borough. Red Devil was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Red Devil Traditional Council. The Native village corporation is the Kuskokwim Corporation, which manages 69,120 acres of land and represents numerous villages in the Lower Kuskokwim area. The regional Native corporation to which Red Devil belong is the Calista Corporation.¹²⁰⁵

Since Red Devil is unincorporated, it does not administer any sales tax or maintain a municipal budget with community revenue and expenditures. In addition, Red Devil is not part of an organized borough, so there is no borough sales tax. Between 2000 and 2010, Red Devil did not receive any revenue from State or Community Revenue Sharing contributions or from fisheries-related grants (Table 2).

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and the Department of Commerce, Community, and Economic Development are located in Bethel. The nearest office of the Alaska Department of Natural Resources is located in McGrath, and the nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Red Devil from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

¹²⁰⁵ Ibid.

Infrastructure

Connectivity and Transportation

Red Devil is not accessible by road. The Kuskokwim River serves as a major transportation link and supply route for bulk supplies and fuel oil during the summer. In the winter, the frozen river is used as an ice road by snowmobiles for travel to neighboring villages. A 4,801 feet long by 75 feet wide gravel airstrip provides year-round access. It is owned and operated by the state. Scheduled weekday service is available.¹²⁰⁶ In June 2012, roundtrip airfare to Anchorage was \$916.¹²⁰⁷

*Facilities*¹²⁰⁸

Water is derived from individual wells or hauled from the school well. Four of the 17 occupied homes are fully plumbed. Sewage is disposed of on an individual basis, city-wide refuse collection is not available. The school and teacher's housing uses individual septic tanks and drain fields; others use pit privies. Electricity is provided by the Middle Kuskokwim Electric Cooperative and is produced by a diesel generator. Police services are provided by state troopers stationed downriver in Aniak, and fire fighting services are provided by a Volunteer Fire Department.

*Medical Services*¹²⁰⁹

Health care is provided by the Red Devil Clinic – Clara Morgan Sub-Regional Clinic in Aniak. The clinic is operated by the Yukon Kuskokwim Health Corporation and owned by the village council. Alternate health care is available at the Sleetmute Health Clinic. Emergency services have river and air access. The nearest hospitals are located in Bethel and Dillingham.

*Educational Opportunities*¹²¹⁰

There is one school in Red Devil that provides instruction to students from pre-school through 12th grade. However, as of 2011, the school did not have any students or teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Red Devil is located some distance up the Kuskokwim River (161 miles northeast of Bethel, Alaska). The community is located along the Kuskokwim River, in District 3 of the

¹²⁰⁶ Ibid.

¹²⁰⁷ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹²⁰⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁰⁹ Ibid.

¹²¹⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Kuskokwim salmon fishery. The Kuskokwim River empties into Kuskokwim Bay and the Bering Sea. Although Red Devil is an inland river community, it is worth noting that this Kuskokwim Bay is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Red Devil is not eligible to participate in the Community Quota Entity program, and because the community is located more than 50 miles inland from the ocean, it is not eligible to participate in the Community Development Quota program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Red Devil does not have a registered processing plant. The nearest processing plant is located in Bethel.

Fisheries-Related Revenue

Given that Red Devil had no taxing authority and did not manage a community budget, Red Devil did not receive any revenue from fisheries-related taxes and fees between 2000 and 2010 (Table 3).¹²¹¹

Commercial Fishing

Between 2000 and 2010, there were no fish buyers or shore-side processors, and no vessels recorded landings in Red Devil (Table 5). No Federal Fisheries Permit holders or Commercial Fisheries Entry Commission (CFEC) permit holders resident in Red Devil (Table 4). In addition, no residents of Red Devil held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab between 2000 and 2010 (Tables 6, 7, and 8).

¹²¹¹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Red Devil: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal revenue</i> ⁵	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Red Devil: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Red Devil: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

Note: n/a indicates that no data were reported for that year.

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Red Devil: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Red Devil ²	Total Net Pounds Landed In Red Devil ^{2,5}	Total Ex-Vessel Value Of Landings In Red Devil ^{2,5}
2000	0	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Red Devil: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Red Devil: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Red Devil: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Red Devil: 2000-2010.

Species	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Species	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Red Devil Residents: 2000-2010.

Species	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Species	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

There were no charter fishing businesses or guides active in Red Devil between 2000 and 2010, though there was one sport fish guide business registered in the community in 2000 and in 2001. A total of four sportfishing licenses were sold to residents of Red Devil in 2010 (irrespective of the location of the point of sale). In comparison, there were no sportfishing licenses sold in Red Devil in 2010, indicating that Red Devil residents likely traveled elsewhere to participate in recreational fishing (Table 11).

Red Devil is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Red Devil is displayed in Table 11.

Table 11. Sport Fishing Trends, Red Devil: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Red Devil ²
2000	0	2	11	0
2001	0	2	7	0
2002	0	0	11	0
2003	0	0	9	0
2004	0	0	8	0
2005	0	0	4	0
2006	0	0	7	0
2007	0	0	5	0
2008	0	0	9	0
2009	0	0	8	0
2010	0	0	4	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Red Devil is a mixed population of Yup'ik Eskimos, Tanaina Athabascans, and non-Natives. Subsistence activities are prevalent. Red Devil residents supplemented their income through subsistence activities, BLM firefighting, or work in the commercial fishing industry. Salmon, bear, moose, caribou, rabbit, waterfowl, and berries are harvested in season.¹²¹² Data were not available regarding the percentage of households utilizing various marine resources for subsistence purposes or per capita subsistence harvest between 2000 and 2010 (Table 12), nor were data available from management agencies regarding subsistence halibut fishing participation (Table 14), subsistence harvest of various marine mammal species (Table 15).

However, some data were available regarding annual subsistence salmon harvest. In 2008, the most recent year in which data were reported, 18 subsistence salmon permits were issued to Red Devil households, of which seven were reported as fished (Table 13). Harvest was reported for Chinook, chum, coho, and sockeye salmon. Between 2000 and 2008, the number of subsistence salmon permits issued varied between 12 and 18, with 7 to 15 of those subsistence salmon permits were returned in those years. The amount of each species of salmon harvested for subsistence purposes varies from year to year. Subsistence harvest participation data for salmon, marine invertebrates, and non-salmon fish (not including halibut) are presented in Table 13.

Table 12. Subsistence Participation by Household and Species, Red Devil: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹²¹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Red Devil: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	14	11	94	53	158	n/a	107	n/a	n/a
2001	15	15	175	335	427	n/a	361	n/a	n/a
2002	14	10	248	325	413	n/a	92	n/a	n/a
2003	16	12	74	49	209	n/a	339	n/a	n/a
2004	13	11	165	103	54	n/a	97	n/a	n/a
2005	12	9	191	232	345	8	283	n/a	n/a
2006	13	10	197	35	290	3	432	n/a	n/a
2007	13	10	197	35	290	3	432	n/a	n/a
2008	18	7	158	178	348	n/a	394	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Red Devil: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Red Devil: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Toksook Bay (TOOK-sook or TUCK-sook)



People and Place

*Location*¹²¹³

Toksook Bay, also known as Nunakauyak, is one of several villages located on Nelson Island, which lies 115 miles northwest of Bethel. The community is on Kangirlvar Bay, across the water from Nunivak Island. The community of Tununak is about 8 miles to the northwest. Toksook Bay is located in the Bethel Recording District and the Bethel Census Area, but is not located within an organized Borough. The community encompasses 33.1 square miles of land and 40.9 square miles of water.

*Demographic Profile*¹²¹⁴

In 2010, there were 590 inhabitants in Toksook Bay, making it the 101st largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Toksook Bay grew by 12.03% with an average annual growth rate of 0.73%, indicating a slow rate of growth. The change in population between 1990 and 2010 is presented in Table 1.

Almost all of Toksook Bay residents identified themselves as American Indian and Alaska Native in 2010 (92%). Other ethnic groups present in Toksook Bay in that year included: White (4.4%), two or more races (2%), some other race (1%), Hispanic or Latino (1%), Black or African American (0.3%), and Asian (0.2%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaska Native decreased by 2.4%, with another decrease in the percentage of the population identifying themselves as two or more races. During this period there were corresponding increases in the percentage of the population identifying themselves as White, some other race, Asian, Black or African American, and Hispanic or Latino. Changes in racial and ethnic composition between 2000 and 2010 are presented in Figure 1.

The average household size in Toksook Bay in 2010 was 4.72, an increase from 4.7 persons per household in 1990 and a decrease from 5.02 in 2000. The total number of households in Toksook Bay increased from 88 in 1990 to 106 in 2000 to 125 occupied housing units by 2010. Of the 135 housing units surveyed for the 2010 Decennial Census, 79 were owner-occupied, 46 were renter-occupied, and 10 were vacant or used only seasonally. Throughout this period no residents of Toksook Bay were reported to be living in group quarters.

¹²¹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²¹⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

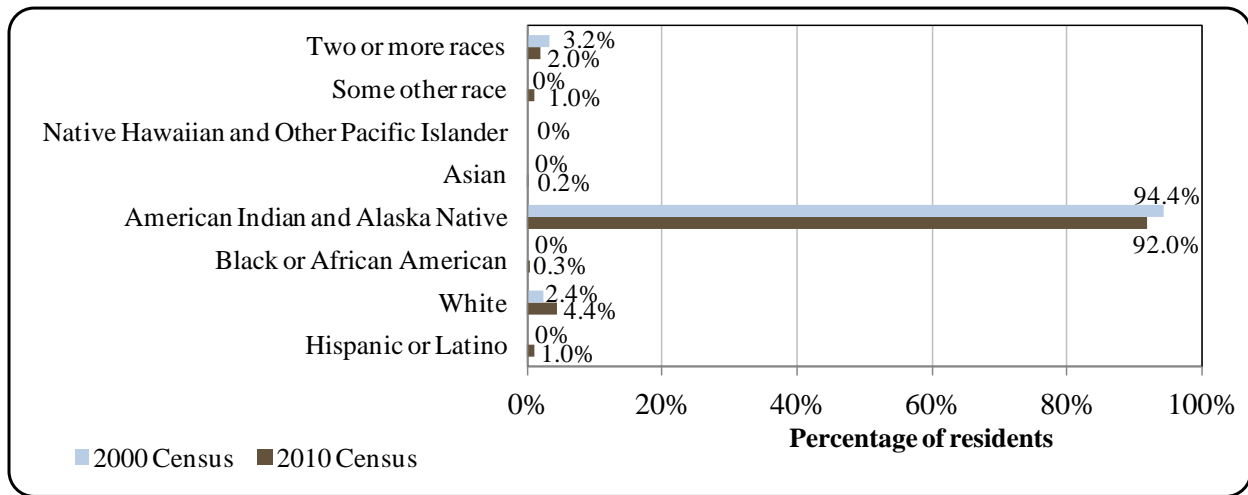
Table 1. Population in Toksook Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	420	-
2000	532	-
2001	-	547
2002	-	549
2003	-	571
2004	-	563
2005	-	596
2006	-	601
2007	-	608
2008	-	603
2009	-	596
2010	590	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

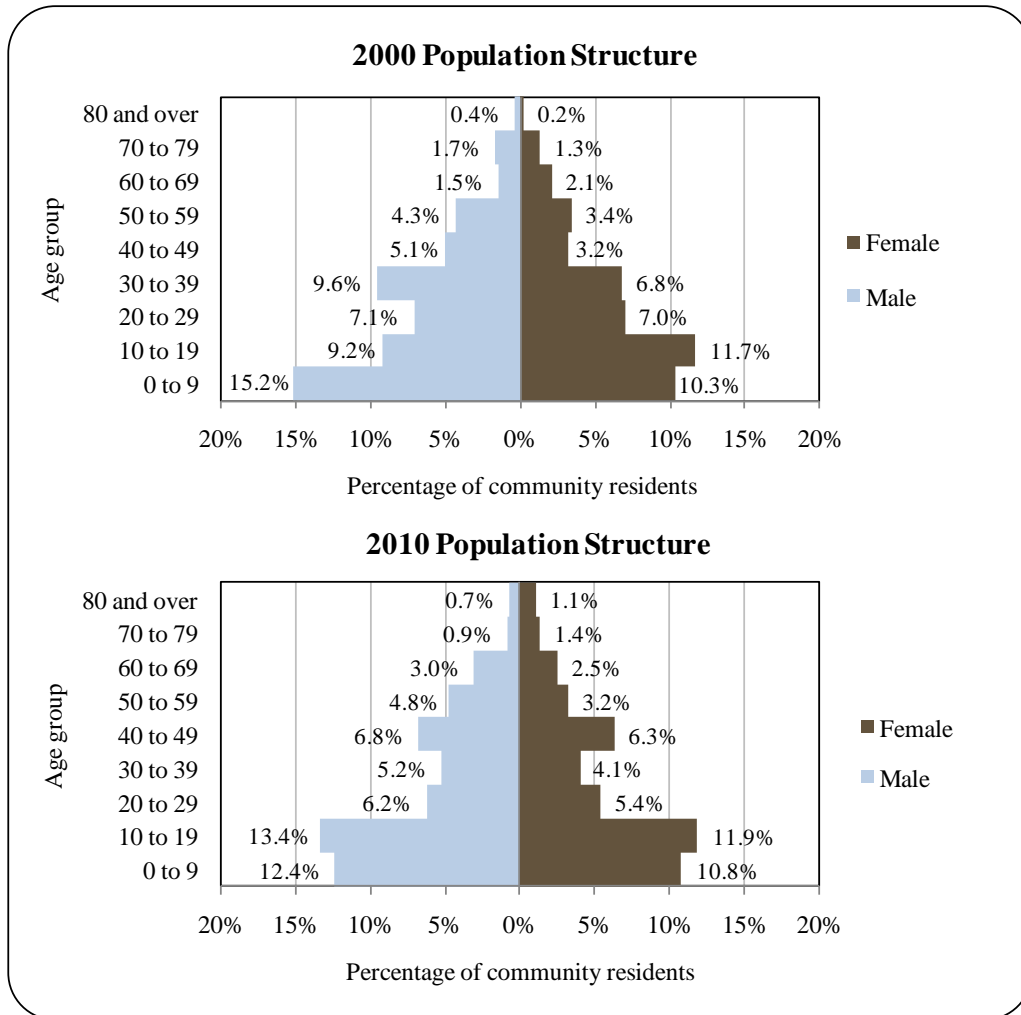
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Toksook Bay: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Toksook Bay was 53.4% male and 46.6% female, slightly more skewed than the state as a whole (52% male, 48% female). The median age was estimated to be 21.1 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of the population fell within the age category 0-19 years old, with the next largest percentage falling in the age category 30-49 years old. Relatively few individuals were age 70 or older in 2010. The overall population structure of Toksook Bay in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Toksook Bay Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey,¹²¹⁵ in terms of educational attainment, 68.3% of Toksook Bay residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 26.7% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; 5% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 31.7% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; 23.3% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 3.4% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 3.7% were estimated to have a Bachelor’s degree, compared to 17.4% of

¹²¹⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Alaska residents overall; and 6.3% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture^{1216,1217}

The Nelson Island area has been inhabited and utilized by Yup'iks for thousands of years. Contact was first made with Russian fur traders in the Nushagak area in 1818. Toksook Bay was established in 1964 along the Tuqsuk River by residents of Nightmute. Cyril Chanar, Tom Sunny, and Nasgauq Tangaq were the earliest inhabitants. Toksook Bay was settled to be more accessible to the annual freighter ship, the North Star. The city was incorporated in 1972. Today, Toksook Bay is a traditional Yup'ik Eskimo community with a reliance on fishing and subsistence activities. The sale and importation of alcohol is banned in the village. Yup'ik is the primary language spoken in Toksook Bay, with English as secondary.

Natural Resources and Environment

Toksook Bay is located in a marine climate. Annual precipitation averages 22 inches, with 43 inches of snowfall. Summer temperatures range from 41 to 57 °F (5 to 13.9 °C), and winter temperatures run 6 to 24 °F (-14.4 to -4.4 °C).¹²¹⁸

Toksook Bay is located on Nelson Island, the second largest island within the Yukon Delta National Wildlife Refuge (Refuge). The southern portion of the island, where Toksook Bay is located, is low-lying and covered with small lakes and streams. The northern portion of the island hosts more rugged terrain, with several peaks over 1,300 feet in elevation. The Bering Sea coast along the Yukon-Kuskokwim River delta is characterized by sandy beaches that merge into active sand dunes greater than 100 feet in height. The dunes are particularly susceptible to erosion.¹²¹⁹

The Refuge was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Refuge lands are open to sport and subsistence hunting and fishing. The most productive wildlife habitat is the coastal region between Nelson Island and the Askinuk Mountains to the north.¹²²⁰

Natural hazards that have been identified to be present in the Bethel Census Area include flooding, earthquakes, and severe weather.¹²²¹ Communities in the region are also suffering from

¹²¹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²¹⁷ Rural Alaska Community Action Program. (2008). *Toksook Bay Community Plan*. Retrieved July 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ToksookBay-CP-2008.pdf>.

¹²¹⁸ Ibid.

¹²¹⁹ U.S. Fish and Wildlife Service. 2011. Yukon Delta National Wildlife Refuge website. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

¹²²⁰ Ibid.

¹²²¹ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

severe erosion of both riverbanks and coastal shorelines, and are susceptible to tundra fires.^{1222,1223}

Current Economy¹²²⁴

Commercial fishing and the school, city, and tribal council are the primary income producers. Subsistence activities supplement income and provide essential food sources. In 2010, 77 residents held commercial fishing permits for herring roe and salmon net fisheries. Coastal Villages Seafood, Inc., processes halibut and salmon in Toksook.¹²²⁵ Top employers in 2010¹²²⁶ included Nunakuiak Yup'ik Corp., Lower Kuskokwim School District, Nunakuyak Traditional Council, Coastal Villages Seafoods Inc., AVCP Housing Authority, Yukon Kuskokwim Health Corp. 90, City of Toksook Bay, Bayview General Merchandise, Coastal Villages Region Fund, and Association of Village Council Presidents.

In 2010, per capita income in Toksook Bay was estimated to be \$15,326 and the median household income was estimated to be \$53,750, compared to \$8,761 and \$30,208 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹²²⁷ the real per capita income in 2000 is shown to have been \$11,521 and the real 2000 median household income was \$39,723. This shows that there was a real increase in both per capita and median household income during this period. In 2010, Toksook Bay ranked 201st of 305 Alaskan communities with per capita income that year, and 110th of 299 Alaskan communities with household income data. However, Toksook Bay's small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹²²⁸ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Toksook Bay in 2010 was \$7,463, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000. This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹²²⁹ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

Based on the 2006-2010 American Community Survey, in the same year, 63.4% of the population age 16 and older was estimated to be in the civilian labor force, compared to the

¹²²² Climate Adaptation Knowledge Exchange (CAKE). 2011. Relocating the Village of Newtok, Alaska due to Coastal Erosion. Retrieved January 19, 2012 from <http://www.cakex.org>.

¹²²³ Village of Newtok, Alaska. March 12, 2008. Local Hazards Mitigation Plan. Retrieved January 19, 2012 from http://www.dced.state.ak.us/dca/planning/pub/Newtok_HMP.pdf.

¹²²⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹²²⁵ See footnote 1216.

¹²²⁶ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²²⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²²⁸ See footnote 1215.

¹²²⁹ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

statewide rate of 68.8%. The local unemployment rate was 21.7%, compared to the statewide unemployment rate of 5.9%. Approximately 13% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Toksook Bay are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Toksook Bay. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 20.3%.

Based on household surveys conducted for the 2006-2010 American Community Survey, the greatest percentage of workers was employed in the public sector (57%), while 35.1% were employed in the private sector, 4.1% were self-employed, and 3.7% were unpaid family workers. Out of 242 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (40.2%), public administration (18.9%), and retail trade (18.5%). Smaller percentages of the workforce were employed in other services except public administration (5.8%), arts, entertainment, recreation, accommodation, and food service (4.6%), information (1.2%), transportation, warehousing, and utilities (6.2%), and construction (4.6%). No individuals indicated that they work in natural resource based industries or occupations that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Toksook Bay (U.S. Census).

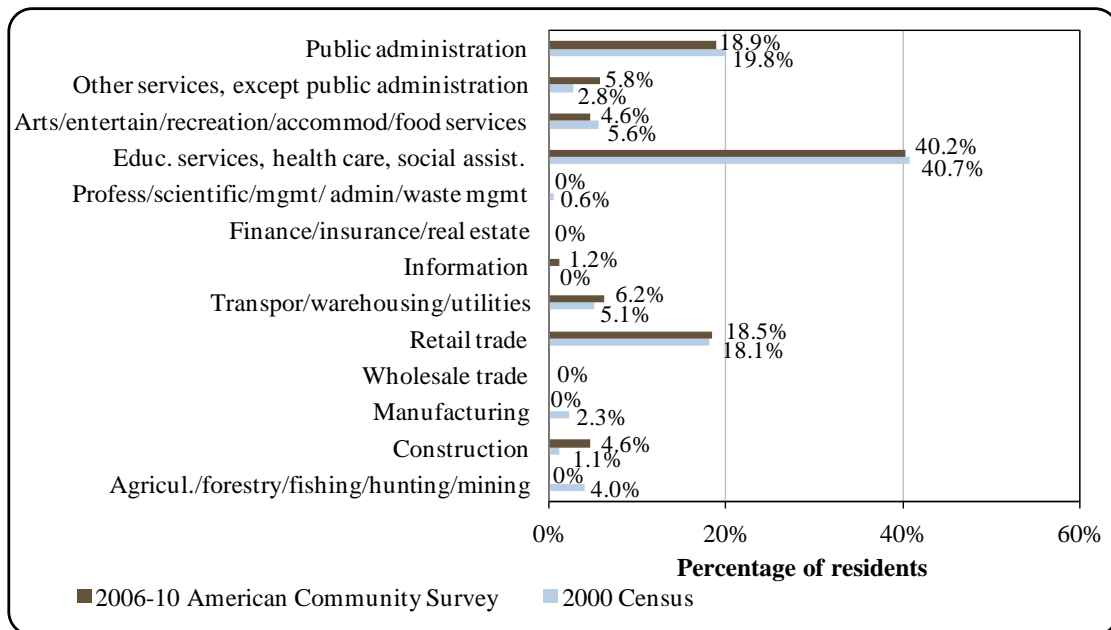
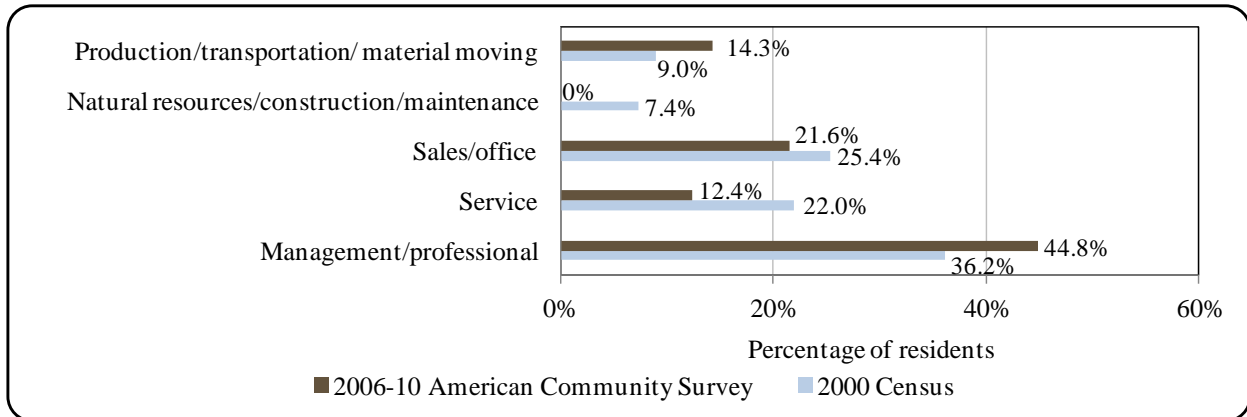


Figure 4. Local Employment by Occupation in 2000-2010, Toksook Bay (U.S. Census).



Governance

Toksook Bay administers a 2% sales tax. With the exception of 2006, municipal revenue figures for 2000 through 2010 were taken from *Community Financial Statements* (CFS).¹²³⁰ In that year, no CFS was available. When adjusted for inflation,¹²³¹ total municipal revenues increased by 7.1% between 2000 and 2010 from \$656,785, to \$909,555. In 2010, locally generated funds accounted for 77.2% of the total municipal budget. Most (64.3%) locally generated revenues came from enterprise services including gaming (\$374,658), and utilities (\$76,789); followed by contracted services (9.0%); and sales tax revenues (5.9%). “Other” contributions accounted for 18.2% of locally generated revenues. Most (61.0%) outside revenues were collected from state allocated Community Revenue Sharing. Payments in lieu of taxes accounted for the remainder of outside revenues. Overall, sales tax revenues accounted for 4.6% of total municipal revenues in 2010, compared to 4.3% in 2000. Also in that year, Community Revenue Sharing accounted for 13.8% of total municipal revenues, compared to 4.1% from State Revenue Sharing in 2000. In addition, Toksook Bay received two fisheries-related grants between 2000 and 2010 for a seawall and trash bins. Information about selected aspects of Toksook Bay’s community revenue is presented in Table 2.

Toksook Bay is a Second-class city that is not located within an organized borough. In addition, the community was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is Nunakuiak Yup’ik Corporation. The regional native corporation to which Toksook Bay belongs is the Calista Corporation. The region Calista Corporation serves is a vast and beautiful corner of the world. Tucked between two of Southwest Alaska’s mightiest rivers – the Yukon and the Kuskokwim – this unique isolated area is the traditional home of the state’s indigenous Yup’ik, Cup’ik and Athabascan people, Calista Corporation’s shareholders. The Calista Region encompasses 57,000 square miles and is the second largest ANCSA region in land size. The land entitlement to Calista, however, is only 6.5 million acres - less than 20 % of the land area. Approximately 75 % of the land within the

¹²³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

¹²³¹ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Region is owned by the U.S. Fish and Wildlife Service. Most of the remaining lands are owned by federal and state governments, with a very small amount privately owned. Surrounded by mostly federally owned lands, the Region is about the size of New York State. It encompasses nearly 10 % of Alaska’s land area and is comprised of 56 federally recognized tribes. There are no roads that connect the region with the rest of Alaska. Because everything must be flown or barged to each community, the cost of food, fuel, transportation and energy are extraordinarily high. Calista Corporation works hard and partners with many to improve and enrich the way of life for its Shareholders and Descendants.¹²³²

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Toksook Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$656,785	\$28,065	\$26,943	\$44,000
2001	\$489,872	\$23,689	\$25,543	\$9,227
2002	\$656,822	\$22,963	\$25,546	n/a
2003	\$564,011	\$22,365	\$25,745	n/a
2004	\$749,704	\$30,000	-	n/a
2005	\$465,635	\$24,182	-	n/a
2006	\$903,542	\$37,566	-	n/a
2007	\$613,446	\$45,421	-	n/a
2008	\$749,821	\$37,013	-	n/a
2009	\$925,222	\$44,979	\$126,864	n/a
2010	\$909,555	\$41,428	\$125,890	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

The nearest offices of Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources (DNR), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement offices are located in Anchorage.

¹²³² Calista Corporation (2011). *Shareholder Overview: Our History*. Retrieved on May 11, 2012 from <http://www.calistacorp.com/shareholders/shareholder-overview>.

Infrastructure

Connectivity and Transportation

A state-owned 3,218 foot long by 60 foot wide gravel airstrip provides year-round scheduled and chartered service. Fishing boats, skiffs, snowmobiles, and all-terrain vehicles (ATVs) are used by residents for local travel. Winter trails with markers exist to Nightmute (20 miles), Tununak (8 miles), Newtok (40 miles), and Chefnak (50 miles). There are no docking facilities, but boat haul-out services are available. Barges deliver goods during the summer months.¹²³³ The cost of round-trip airfare between Toksook Bay and Anchorage in June 2012 was \$756.¹²³⁴

*Facilities*¹²³⁵

Water is derived from a well and infiltration gallery and is treated and stored in a 212,000-gallon tank, then piped throughout the community. A gravity piped sewer system also serves most households. Most occupied homes have complete plumbing. However, several homes have failed plumbing and haul water and honeybuckets. The city collects refuse and maintains the unpermitted landfill. The traditional council operates the washeteria.

Law enforcement services are provided by a Village Public Safety Officer, tribal police officers, and state troopers located in Bethel, which is approximately 105 miles away. Fire and rescue services are provided by the state/city Village Public Safety Officer and volunteer fire department. The city hall houses a multi-purposes community facility, and the Yukon-Kuskokwim Health Corporation provides home care to some local elders. There is also a school library in Toksook Bay.

*Medical Services*¹²³⁶

Medical care is provided by the Toksook Bay Subregional Clinic, which is owned by the Village Council and operated by the Yukon Kuskokwim Health Corporation. The clinic is a Community Health Aid Program site. Emergency services have coastal and air access and are provided by a health aide. The nearest Acute Care Facility and Emergency Care Center is located in Bethel.

¹²³³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²³⁴ Airfare was calculated on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹²³⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²³⁶ Ibid.

Educational Opportunities

The Nelson Island Area School provides instruction to students from pre-school through 12th grade. In 2011 the school had 225 students and 13 teachers.¹²³⁷ Toksook Bay is also a Head Start site.¹²³⁸

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Toksook Bay is located on Nelson Island and is on Kangirivar Bay, across the water from Nunivak Island.¹²³⁹ The area is located in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Toksook Bay participates in the Community Development Quota (CDQ) program through the Coastal Villages Region Fund (CVRF). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹²⁴⁰ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. The community is located in Federal Reporting Area 508, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. The mission of CVRF is to provide the means for development of its member communities by sensibly creating tangible, long-term opportunities for all residents who want to fish and work. On behalf of the 20 member communities, CVRF has grown to be the largest seafood owner/operator headquartered in Alaska. CVRF is now able to take a broader and more balanced approach to managing the Kuskokwim Delta and Bering Sea seafood resources. For its residents, CVRF must continue to protect its fisheries and its investments in these fisheries, grow in a strategic and sustainable manner, and remain adaptable to take advantage of all positive opportunities. CVRF's investments in the Bering Sea, particularly the pollock fishery, enables CVRF to provide fishing opportunities in salmon, halibut, and herring in the region.¹²⁴¹

In 2003, a halibut processing plant was built and a Fisheries Support Center was constructed in 2006. Coastal Villages Seafoods, a CVRF subsidiary, hired 36 residents of Toksook Bay in 2007. In that year, Toksook Bay was the second top producing halibut plant in Alaska. Halibut, herring, salmon, and numerous mammals including seal and musk-ox are

¹²³⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹²³⁸ Rural Alaska Community Action Program (2010). *2010 Annual Report*. Retrieved December 20, 2011 from www.ruralcap.com.

¹²³⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹²⁴⁰ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹²⁴¹ Coastal Villages Region Fund. 2010. CVRF: Who We Are. Retrieved on May 11, 2012 from <http://www.coastalvillages.org/>.

harvested for subsistence purposes. The nearby community of Nightmute maintains historical subsistence fish camps on the edges of Toksook Bay.¹²⁴²

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there was one processing plant operating in Toksook Bay in 2010. The Coastal Villages Seafoods, LLC fish processing plant in Toksook Bay is a CDQ operation, a subsidiary of the CVRF. The Toksook Bay facility processes halibut in June and July. CVRF maintains a local community service center that helps local fishing families maintain, repair, service, and modify their boats, motors, and fishing gear. The local plant provides free room and board to its fish processing workers, as well as transportation to and from the plant site and a cash bonus for all those who complete their contracts.¹²⁴³

Fisheries-Related Revenue

Between 2000 and 2010, Toksook Bay received fisheries-related revenue from the raw fish tax and the Shared Fisheries Business Tax. Amounts of revenue received from these sources varied widely from year to year. In all years except 2000 and 2010, the total revenue received from fisheries-related sources was minimal compared to total municipal revenue.¹²⁴⁴ Information on known fisheries-related revenue received by Toksook Bay between 2000 and 2010 is presented in Table 3.

Commercial Fishing

In 2010, Toksook Bay ranked 54th in landings and 52nd in ex-vessel value out of 67 communities that received commercial fisheries landings. That year, the total amount of pounds landed and the associated ex-vessel value was considered confidential due to a small number of participants.

A total of 87 Toksook Bay residents held 114 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for other shellfish, halibut, herring, groundfish, and salmon. Of these, 42 permits were reported as fished, the majority in the halibut fishery. The majority of halibut CFEC permits issued in 2010 were for the statewide longline fishery using vessels under 60 feet, with the remainder issued for the statewide hand troll fishery and the statewide mechanical jig fishery. Overall between 2000 and 2010, the number of CFEC permits, permit holders, and permits reported as fished has decreased. While there were 61 herring permits and one groundfish permit in 2010, none of those permits were reported as fished in that year. Nearly all the herring CFEC permits issued in 2010 were for the Nelson Island gill net fishery, with the remainder issued for the Nunivak Island gill net fishery. The groundfish CFEC permit was issued for the statewide miscellaneous saltwater finfish longline fishery using vessels under 60 feet. For both the halibut and salmon CFEC fisheries, the number of permits, permits held, and permits reported as fished decreased between 2000 and 2010. Salmon CFEC

¹²⁴² Rural Alaska Community Action Program. (2008). *Toksook Bay Community Plan*. Retrieved July 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ToksookBay-CP-2008.pdf>.

¹²⁴³ Coastal Villages Seafoods. (n.d.). Company website. Retrieved April 15, 2012 from <http://coastalvillages.org/>.

¹²⁴⁴ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

permits issued in 2010 were for the Bristol Bay drift gill net fishery. There was one Federal Fisheries Permit held in Toksook Bay in both 2009 and 2010, though that permit was not reported as fished. Information on permits and permit holders by species between 2000 and 2010 is presented in Table 4.

The number of crew license holders in Toksook Bay varied between 19 and 82 between 2000 and 2010, with 33 crew license holders in 2010. During this period, the number of fish buyers in Toksook Bay varied between one and five, with one fish buyer in Toksook Bay in 2010. Throughout this period, there has been one shore-side processing facility located in Toksook Bay. Both the number of commercial fishing vessels owned by community residents and the number of vessels homeported in the community decreased between 2000 and 2010. The number of vessels landing catch in Toksook Bay varied between 2000 and 2010, but decreased overall during this period. The total net pounds landed in Toksook Bay and the ex-vessel value of those landings was considered confidential between 2000 and 2010 due to a small number of participants, with the exception of landings and ex-vessel value in 2003 and 2004. Both landings and ex-vessel value were more than twice as large in 2003 as they were in 2004. Information on characteristics of the commercial fishing sector in Toksook Bay between 2000 and 2010 is presented in Table 5.

Between 2000 and 2010, an average of 49,545 halibut quota shares were held by residents of Toksook Bay; however, there was no Individual Fishing Quota (IFQ) allotment associated with those shares during this period. Information on halibut quota and IFQ between 2000 and 2010 is presented in Table 6. There were no sablefish quota shares held between 2000 and 2010 (Table 7) and no crab quota shares held between 2005 and 2010 (Table 8) in Toksook Bay.

As stated previously, information on landed pounds and ex-vessel revenue in Toksook Bay between 2000 and 2010 is considered confidential for all species in all years with the exception of crab between 2000 and 2010 (though there were no landings of crab recorded during this period) and halibut in 2003 and 2004. Information on landed pounds and ex-vessel revenue by species in Toksook Bay between 2000 and 2010 is presented in Table 9. Landings recorded by Toksook Bay residents are also considered confidential during this period with the exception of halibut and salmon between 2000 and 2010 and herring between 2000 and 2006. Landings and ex-vessel revenue of all three species were variable during this period. Information on landed pounds and ex-vessel revenue by community residents between 2000 and 2010 is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Toksook Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	\$115	\$150	\$3,000	n/a	\$3,000	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$5,116	\$1,717	\$1,779	\$4,357	\$1,123	\$1,567	\$983	\$2,325	\$4,166	\$7,105	\$121
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$5,116	\$1,717	\$1,894	\$4,507	\$4,123	\$1,567	\$3,983	\$2,325	\$4,166	\$7,105	\$121
Total municipal revenue⁵	\$656,785	\$489,872	\$656,822	\$564,011	\$749,704	\$465,635	\$903,542	\$613,446	\$749,821	\$925,222	\$909,555

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Toksook Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	0%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	1	1
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	1	1	0	0	0
	Fished permits	0	0	0	0	0	0	1	1	0	0	0
	% of permits fished	-	-	-	-	-	-	100%	100%	-	-	-
	Total permit holders	0	0	0	0	0	0	1	1	0	0	0
Halibut (CFEC) ²	Total permits	69	71	67	53	44	45	42	59	47	44	42
	Fished permits	53	58	45	47	24	35	34	47	36	36	33
	% of permits fished	77%	82%	67%	89%	55%	78%	81%	80%	77%	82%	79%
	Total permit holders	57	62	56	46	40	42	40	53	44	41	41
Herring (CFEC) ²	Total permits	68	62	59	56	55	53	57	58	58	61	61
	Fished permits	36	21	23	16	17	17	10	0	0	0	0
	% of permits fished	53%	34%	39%	29%	31%	32%	18%	%	%	%	%
	Total permit holders	65	62	59	55	55	55	56	56	57	62	60

Table 4 cont'd. Permits and Permit Holders by Species, Toksook Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	2	2	2	2	2	2	1	1	1	1	1
	Fished permits	0	0	0	0	1	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	1	1	1	1	1
Other Finfish (CFEC) ²	Total permits	1	1	1	1	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	-	-	-	-	-	-
	Total permit holders	1	1	1	1	1	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	15	14	15	14	14	12	13	12	12	10	10
	Fished permits	14	12	7	8	10	10	11	10	10	8	9
	% of permits fished	93%	86%	47%	57%	71%	83%	85%	83%	83%	80%	90%
	Total permit holders	16	16	15	15	15	13	15	13	12	11	10
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>155</i>	<i>150</i>	<i>144</i>	<i>126</i>	<i>116</i>	<i>112</i>	<i>114</i>	<i>131</i>	<i>118</i>	<i>116</i>	<i>114</i>
	<i>Fished permits</i>	<i>103</i>	<i>91</i>	<i>75</i>	<i>71</i>	<i>52</i>	<i>62</i>	<i>56</i>	<i>58</i>	<i>46</i>	<i>44</i>	<i>42</i>
	<i>% of permits fished</i>	<i>66%</i>	<i>61%</i>	<i>52%</i>	<i>56%</i>	<i>45%</i>	<i>55%</i>	<i>49%</i>	<i>44%</i>	<i>39%</i>	<i>38%</i>	<i>37%</i>
	<i>Permit holders</i>	<i>96</i>	<i>99</i>	<i>92</i>	<i>78</i>	<i>79</i>	<i>79</i>	<i>82</i>	<i>89</i>	<i>85</i>	<i>87</i>	<i>87</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Toksook Bay: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Toksook Bay ²	Total Net Pounds Landed in Toksook Bay ^{2,5}	Total Ex-Vessel Value of Landings in Toksook Bay ^{2,5}
2000	82	3	1	88	81	108	--	--
2001	58	2	1	85	78	104	--	--
2002	45	2	1	79	72	87	--	--
2003	36	4	1	71	65	116	99,082	\$124,215
2004	41	5	1	65	57	67	43,578	\$53,652
2005	47	3	1	69	60	79	--	--
2006	44	2	1	61	55	82	--	--
2007	29	2	1	68	59	117	--	--
2008	19	2	1	65	54	85	--	--
2009	20	1	1	53	48	40	--	--
2010	33	1	1	56	53	43	--	--

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Total only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Toksook Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	47,054	0
2001	0	48,829	0
2002	0	49,901	0
2003	0	49,901	0
2004	0	49,901	0
2005	0	49,901	0
2006	0	49,901	0
2007	0	49,901	0
2008	0	49,901	0
2009	0	49,901	0
2010	0	49,901	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Toksook Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Toksook Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Toksook Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	99,082	43,578	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	0	0	0	99,082	43,578	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	\$124,215	\$53,652	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	\$0	\$0	\$0	\$124,215	\$53,652	\$0	\$0	\$0	\$0	\$0	\$0

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Toksook Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	43,450	85,631	46,776	52,281	15,012	53,761	73,420	101,153	106,869	113,864	118,755
Herring	492,876	670,409	893,109	633,933	856,559	764,526	226,538	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	643,731	491,826	183,866	457,196	635,102	694,857	579,433	655,459	623,947	567,140	596,935
<i>Total²</i>	<i>1,180,057</i>	<i>1,247,866</i>	<i>1,123,751</i>	<i>1,143,410</i>	<i>1,506,673</i>	<i>1,513,144</i>	<i>879,391</i>	<i>756,612</i>	<i>730,816</i>	<i>681,004</i>	<i>715,690</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$54,340	\$105,650	\$93,673	\$65,521	\$18,521	\$115,744	\$274,375	\$434,342	\$438,710	\$250,632	\$373,869
Herring	\$48,626	\$33,520	\$46,442	\$34,232	\$90,795	\$40,520	\$12,686	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$423,532	\$191,408	\$81,811	\$213,220	\$302,883	\$388,180	\$350,626	\$406,817	\$440,034	\$421,433	\$541,355
<i>Total²</i>	<i>\$526,498</i>	<i>\$330,578</i>	<i>\$221,926</i>	<i>\$312,973</i>	<i>\$412,199</i>	<i>\$544,444</i>	<i>\$637,688</i>	<i>\$841,158</i>	<i>\$878,744</i>	<i>\$672,065</i>	<i>\$915,224</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

There were no Toksook Bay residents holding sport fish guide licenses or active sport fish guide business in Toksook Bay between 2000 and 2010. In 2010, there were 82 sportfishing licenses sold to Toksook Bay residents (irrespective of the location of the point of sale), representing 13.8% of the population, an increase from 16 licenses sold in 2000. In most years between 2000 and 2010, the number of sportfishing licenses sold in the community was greater than the number of licenses sold to community residents, indicating the potential that visitors to Toksook Bay pursue recreational fishing activities.

The Alaska Statewide Harvest Survey,¹²⁴⁵ conducted by ADF&G between 2000 and 2010, did not provide information about species targeted by private anglers in Toksook Bay. In addition, since no sportfishing businesses were present in town, no kept/released log book data were reported for fishing charters out of Toksook Bay between 2000 and 2010.¹²⁴⁶ However, information is available about both saltwater and freshwater sportfishing activity at a regional scale. Toksook Bay is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Between 2000 and 2010, saltwater sportfishing activity in this region was minimal, with between 0 and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Toksook Bay is displayed in Table 11.

Table 11. Sport Fishing Trends, Toksook Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Toksook Bay ²
2000	0	0	16	34
2001	0	0	25	43
2002	0	0	35	73
2003	0	0	43	31
2004	0	0	46	51
2005	0	0	39	34
2006	0	0	44	64
2007	0	0	41	53
2008	0	0	52	66
2009	0	0	84	96
2010	0	0	82	134

¹²⁴⁵ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹²⁴⁶ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Toksook Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Toksook Bay is a traditional Yup'ik Eskimo community with a reliance on fishing and subsistence activities. Subsistence activities supplement income and provide essential food sources.¹²⁴⁷ Data were not reported between 2000 and 2010 for subsistence participation by household and species or per capita subsistence harvest (Table 12).

In years for which data were reported between 2000 and 2010, an average of 121 subsistence salmon permits was issued to Toksook Bay households, with an average of 21 permits returned each year. Chum salmon were the primary species harvested for subsistence (an average of 553 chum per year), along with several hundred Chinook, coho, pink, and sockeye salmon each year (Table 13). Data were not reported during this period for subsistence harvest of marine invertebrates or non-salmon fish (not including halibut).

Between 2003 and 2010, the number of Subsistence Halibut Registration Certificate (SHARC) cards issued to Toksook Bay residents decreased substantially, from an average of 530 per year between 2003 and 2007 to an average of 33 in 2008 and 2010. The number of permits fished each year varied significantly between 2000 and 2010, from 9 to 206 in any given year. In

¹²⁴⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

2010, 32 SHARC were issued, 10 were fished, and 1,250 pounds of halibut were reported as harvested. This is a large decline from 2003, when 532 SHARC were issued, 54 were fished, and 24,500 pounds of halibut were reported as harvested. Information about subsistence halibut harvest is presented in Table 14.

Information about subsistence harvest of marine mammals was reported between 2000 and 2010. In those years, beluga whales and walrus were among the marine mammals harvested by Toksook Bay residents. This is of note as Toksook Bay is one of only a few communities where walrus are reported to be harvested. In terms of marine mammal harvests, an estimated 49 beluga whales and 38 walrus were harvested between 2000 and 2010. While walrus harvests were spread out over the years, beluga harvests were concentrated on 2007, when 20 were harvested (Table 15). Finally, the ADF&G Division of Subsistence reported that herring (food and sac roe) are harvested or used for subsistence in Toksook Bay.¹²⁴⁸

Table 12. Subsistence Participation by Household and Species, Toksook Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹²⁴⁸ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Toksook Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	132	11	58	217	112	n/a	253	n/a	n/a
2001	132	3	130	234	16	n/a	12	n/a	n/a
2002	136	8	54	657	74	n/a	32	n/a	n/a
2003	136	3	51	133	58	n/a	n/a	n/a	n/a
2004	115	70	327	938	661	n/a	359	n/a	n/a
2005	115	1	8	27	11	n/a	5	n/a	n/a
2006	106	70	667	2,092	365	376	1,438	n/a	n/a
2007	106	1	16	125	n/a	4	5	n/a	n/a
2008	114	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Toksook Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	532	54	24,500
2004	529	56	8,794
2005	522	206	14,842
2006	533	113	36,481
2007	533	112	7,921
2008	34	9	2,143
2009	33	10	1,055
2010	32	10	1,250

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Toksook Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	10	n/a	n/a	n/a	n/a
2001	n/a	n/a	5	n/a	n/a	n/a	n/a
2002	3	n/a	4	n/a	n/a	n/a	n/a
2003	n/a	n/a	2	n/a	n/a	n/a	n/a
2004	n/a	n/a	9	n/a	n/a	n/a	n/a
2005	n/a	n/a	2	n/a	n/a	n/a	n/a
2006	8	n/a	3	n/a	n/a	n/a	n/a
2007	20	n/a	3	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	5	n/a	n/a	n/a	n/a	n/a	n/a
2010	13	n/a	n/a	n/a	n/a	n/a	n/a

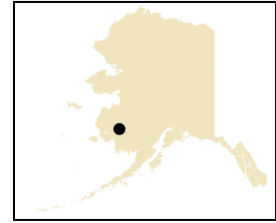
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Tuluksak (too-LOOK-sack)



People and Place

*Location*¹²⁴⁹

Tuluksak lies on the south bank of the Tuluksak River at its junction with the Kuskokwim River. The village is 35 miles northeast of Bethel. Tuluksak is located in the Bethel Recording District and the Bethel Census Area, but is not located within an organized Borough.

*Demographic Profile*¹²⁵⁰

In 2010, there were 373 inhabitants in Tuluksak, making it the 145th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Tuluksak grew by 10.05% and had an average annual growth rate of 0.48%, indicating a slow rate of annual growth. The change in population from 1990 to 2010 is provided in Table 1.

Almost all Tuluksak residents identified themselves as American Indian and Alaska Native in 2010 (94.9%). Other ethnic groups present in Tuluksak that year included two or more races (0.8%), Black or African American (0.3%), and White (4%). The percentage of the population identifying themselves as American Indian and Alaska Native, Black or African American, and as two or more races increased between 2000 and 2010, with corresponding decreases in the percentages of the population identifying themselves as Asian and White during this period. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Tuluksak increased from 4.8 in 1990 to 4.98 in 2000, then decreased to 4.05 persons per household in 2010. The total number of households in Tuluksak increased from 74 in 1990 to 86 in 2000 to 92 occupied housings units in 2010. Of the 99 housing units surveyed for the 2010 Decennial Census, 63 were owner-occupied, 29 were renter-occupied, and seven were vacant or used only seasonally. Throughout this period no residents of Tuluksak were reported to be living in group quarters.

In 2010, the gender makeup in Tuluksak was 53.6% male and 46.4% female, slightly more skewed than the state as a whole (52% male, 48% female). The median age was estimated to be 26.6 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of the population fell within the age category zero to 9 years old, with the next largest percentage falling within the category 10 to 19 and 20 to 29 age groups (both of which comprised 16.9% of the population). Relatively few individuals were age 70 or older. The overall population structure of Tuluksak in 2000 and 2010 is shown in Figure 2.

¹²⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁵⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Tuluksak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	358	-
2000	428	-
2001	-	438
2002	-	463
2003	-	461
2004	-	472
2005	-	467
2006	-	489
2007	-	485
2008	-	499
2009	-	471
2010	373	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Tuluksak: 2000-2010 (U.S. Census).

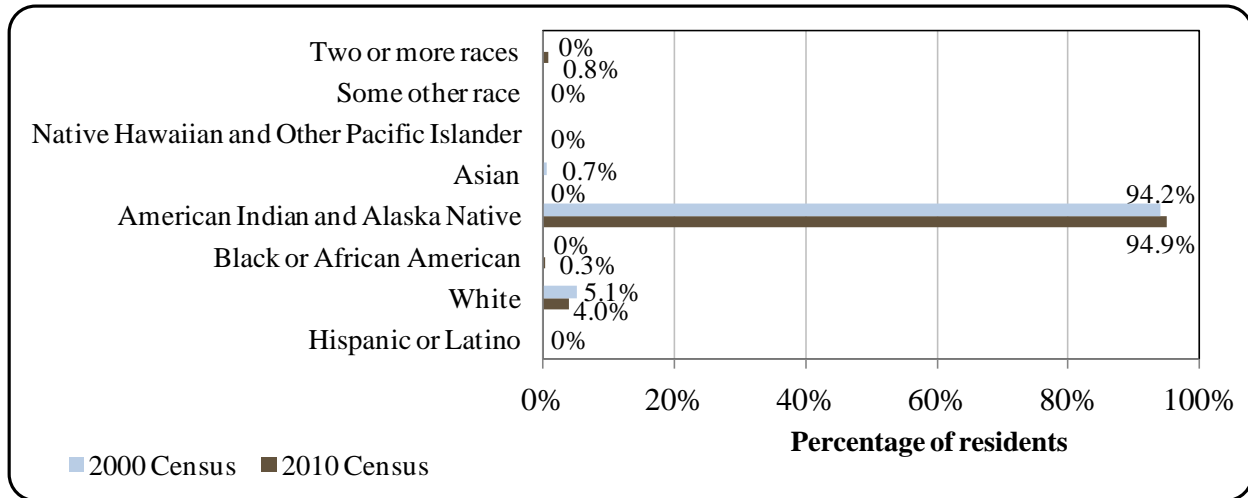
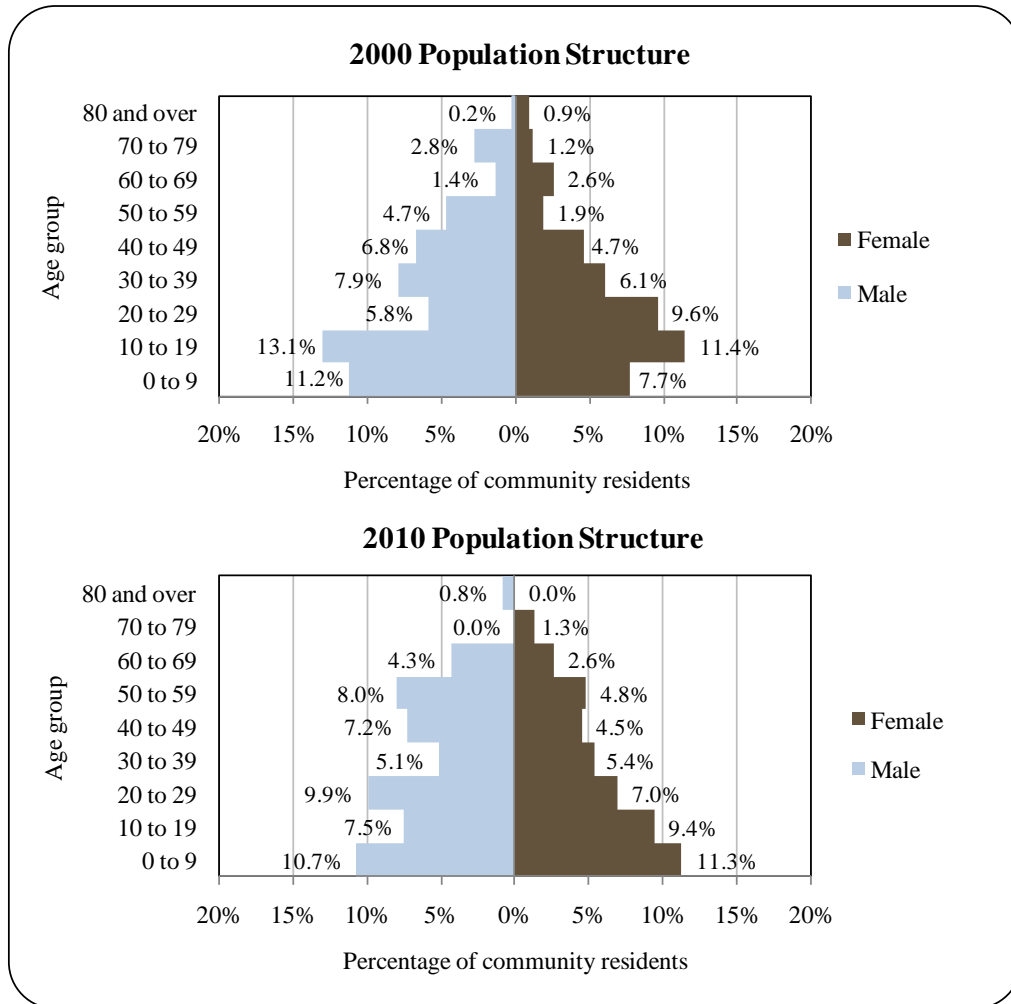


Figure 2. Population Age Structure in Tuluksak Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey,¹²⁵¹ in terms of educational attainment, 74.6% of Tuluksak residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 16.7% of residents aged 25 and over were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; 8.8% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 59.6% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; and 15% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall. There were no Tuluksak residents estimated to have earned an Associate’s degree, Bachelor’s degree, or graduate or professional degree in 2010.

¹²⁵¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*¹²⁵²

The name was first published in 1861 as "Tul'yagmyut," an Eskimo word meaning "related to loon". The 1880 U.S. Census noted a population of 150 living in the village. A city government was formed in 1970 but was dissolved on March 7, 1997. Tuluksak is a traditional Yup'ik Eskimo village with a fishing and subsistence livelihood. The sale, importation, and possession of alcohol is banned in the village.

Natural Resources and Environment

Annual precipitation averages 16 inches in this area, with 50 inches of snowfall. Summer temperatures range from 62 to 42 °F (16.7 to 5.6 °C); winter temperatures range from 19 to -2 °F (-7.2 to -18.9 °C).¹²⁵³

The lower Yukon-Kuskokwim River Delta (Y-K Delta), where Tuluksak is located, is an area of low elevation and shallow relief. The terrain is mostly made up of flat and low rolling plains crossed with low gradient streams, tributaries, sloughs, floodplains, wetlands, and shallow lakes. Most of the lower Y-K Delta was ice-free during the last major Ice Age. Sediments in the area are loamy or sandy textured fluvial and alluvial deposits. Soils are poorly drained and typically overlay a layer of permafrost.¹²⁵⁴

Tuluksak is located on Calista Corporation land encompassed by the Yukon Delta National Wildlife Refuge, which provides spawning, rearing, feeding, and wintering habitat for a range of terrestrial and aquatic wildlife.¹²⁵⁵ Terrestrial wildlife of economic and cultural importance include: waterfowl and gamebirds, moose, wolf, wolverine, bear, mink, beaver, muskrat, otter, fox, beaver, muskrat, muskox, hares, voles, ermines, squirrels, lemmings, shrews, and weasels.¹²⁵⁶ Aquatic resources include Chinook, chum, pink, sockeye, and coho salmon, whitefish, burbot, northern pike, blackfish, smelt, lamprey, char, grayling, trout, sculpin, stickleback, and longnose sucker.¹²⁵⁷

Regional mineral resources include zinc, gold, silver, lead, antimony, tungsten, tin, copper, nickel, mercury, and platinum.¹²⁵⁸ Upriver from Tuluksak, Calista Corporation is undertaking several mineral and oil and gas projects near Red Devil. Downriver, Platinum and Goodnews Bay are sites of more mineral projects.¹²⁵⁹

There are several natural hazards affecting the Y-K Delta region.¹²⁶⁰ These hazards include flooding, river bank erosion and destabilization, brush fire, and soil destabilization due to permafrost melt. Spring flooding is a major factor contributing to natural hazards in the area. As

¹²⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁵³ Ibid.

¹²⁵⁴ LKEDC. (2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved February 1, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel%20Region-SAP-2006.pdf>.

¹²⁵⁵ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved November 22, 2011 from: <http://www.fws.gov/refuges/profiles/recEdMore.cfm?ID=74540>.

¹²⁵⁶ Bethel Coastal District et al.(2006). *Bethel Coastal Management Plan*. Retrieved November 22, 2011 from: http://www.alaskacoast.state.ak.us/District_Pages/NW_Region/Bethel/.

¹²⁵⁷ Ibid.

¹²⁵⁸ Alaska Dept. of Trans. and Pub. Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf

¹²⁵⁹ Calista Corporation (n.d.). *Homepage*. Retrieved November 22, 2011 from: <http://www.calistacorp.com>.

¹²⁶⁰ See footnote 1256.

melt-off and ice jamming occurs during spring break-up, flooding and erosion occur and climate change is thought to be a continuing factor in the seasonality and severity of flooding in the region. In addition, variation in the active permafrost layer caused by climate change and urban development further compound impacts from flood events.¹²⁶¹

Current Economy¹²⁶²

The primary employers in Tuluksak are the school, and village government and services. Some commercial fishing also occurs. Subsistence activities provide most food sources for local residents. There is also a village store.¹²⁶³ Top employers in 2010¹²⁶⁴ included Tuluksak Native Company, Yupiit School District, Knik Construction Inc., Tuluksak Native Store, Association of Village Council Presidents Housing Authority, Association of Village Council Presidents, Yukon Kuskokwim Health Corp. 90, Early Childhood Leadership Team Inc., Kwikpak Fisheries LLC, and Village Safe Water Tuluksak Project.

In 2010, per capita income in Tuluksak was estimated to be \$7,767 and the median household income was estimated to be \$35,417, compared to \$7,132 and \$31,563 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹²⁶⁵ the real per capita income in 2000 is shown to have been \$9,378 and the real 2000 median household income was \$41,505. This shows that both per capita income and median household income decreased between 2000 and 2010. In 2010, Tuluksak ranked 299th of 305 Alaskan communities with per capita income that year, and 212th out of 299 Alaskan communities with household income data. Although Tuluksak's small population size may have prevented the American Community Survey from accurately portraying economic conditions, this decrease in per capita income is confirmed by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Tuluksak in 2010 was \$7,570. This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

Based on the 2006-10 American Community Survey, 53.8% of the population age 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 48.2%, compared to the statewide unemployment rate of 5.9%. Approximately 32.8% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Tuluksak are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of

¹²⁶¹ See footnote 1254.

¹²⁶² Unless otherwise noted, all monetary data are reported in nominal values.

¹²⁶³ See footnote 1252.

¹²⁶⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²⁶⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Tuluksak. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 34.2%.

Based on household surveys conducted for the 2006-2010 American Community Survey, the greatest percentage of workers was employed in the public sector (78.8%), while 16.2% were employed in the private sector and 5.1% were self-employed. Out of 99 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (37.9%), other services, except public administration (15.2%), and retail trade (17.4%). Smaller percentages of the workforce were employed in public administration (9.8%), arts, entertainment, recreation, accommodations, and food services (9.1%), information (3%), transportation, warehousing, and utilities (3.8%), and construction (3.8%). No individuals reported themselves to be working in natural resource based industries or occupations that include fishing. However, given the data reported in *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Tuluksak (U.S. Census).

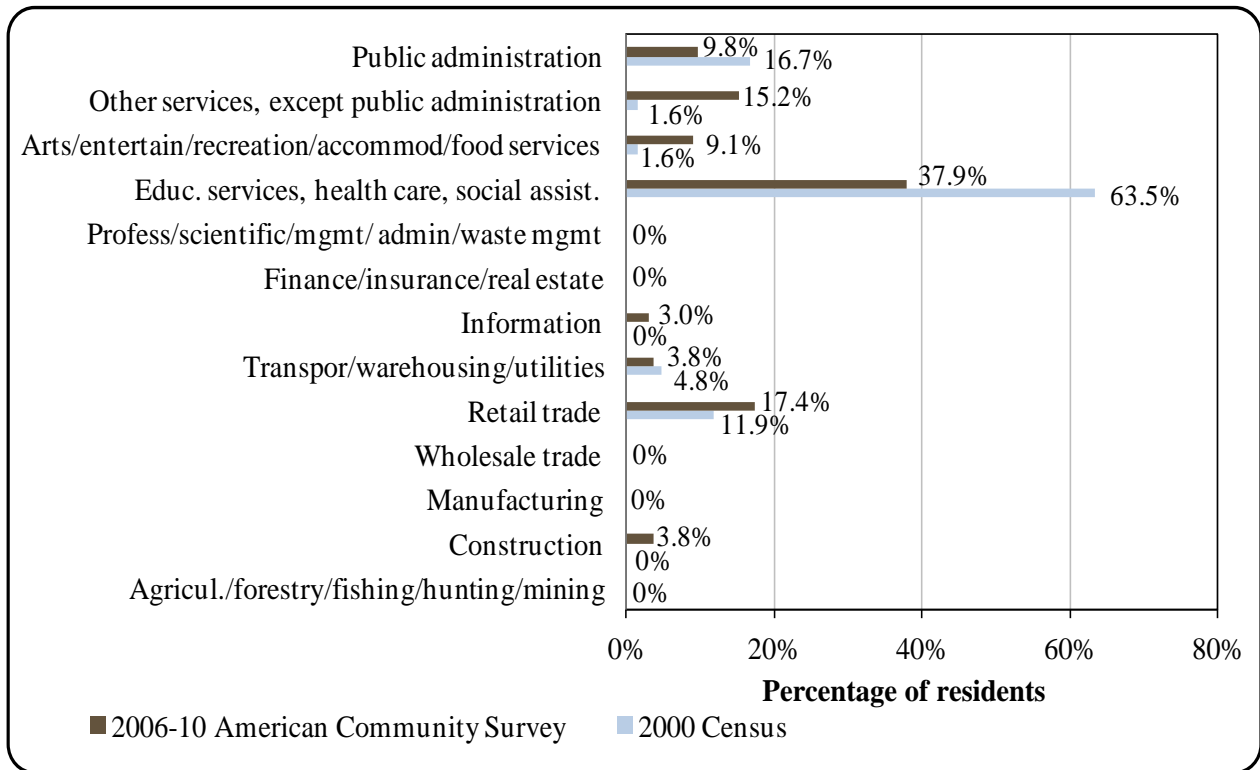
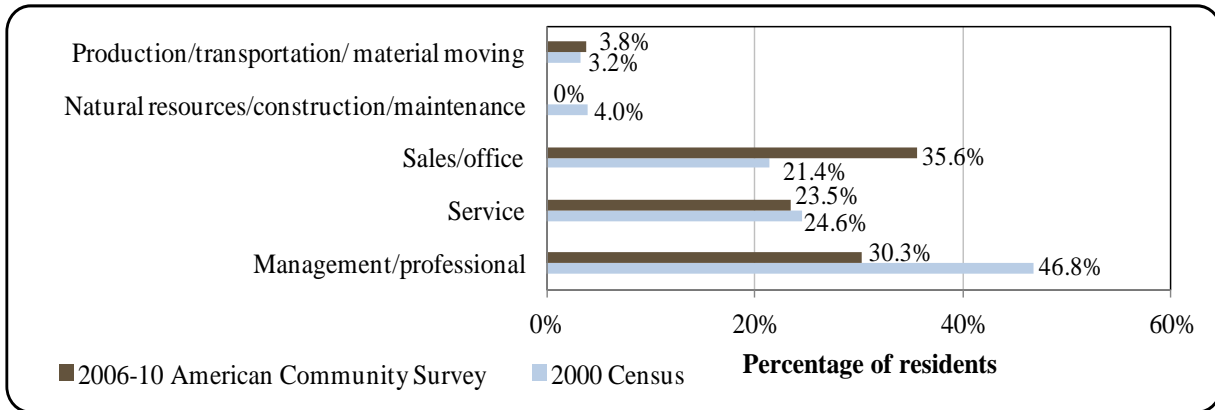


Figure 4. Local Employment by Occupation in 2000-2010, Tuluksak (U.S. Census).



Governance

Tuluksak is an unincorporated community that is not located within an organized Borough. Because of Tuluksak’s unincorporated status, no municipal taxes were administered between 2000 and 2010 (Table 2). However, Tuluksak did not receive any Community Revenue Sharing contributions between 2000 and 2010. Tuluksak also did not receive any known fisheries-related grants during this period.

Tuluksak was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is Tulkisarmute, Incorporated. The regional Native corporation to which Tuluksak belongs is the Calista Corporation. The region Calista Corporation serves is a vast and beautiful corner of the world. Tucked between two of Southwest Alaska’s mightiest rivers – the Yukon and the Kuskokwim – this unique isolated area is the traditional home of the state’s indigenous Yup’ik, Cup’ik and Athabascan people, Calista Corporation’s shareholders. The Calista Region encompasses 57,000 square miles and is the second largest ANCSA region in land size. The land entitlement to Calista, however, is only 6.5 million acres - less than 20% of the land area. Approximately 75 % of the land within the Region is owned by the U.S. Fish and Wildlife Service. Most of the remaining lands are owned by federal and state governments, with a very small amount privately owned. It encompasses nearly 10 % of Alaska’s land area and is comprised of 56 federally recognized tribes. There are no roads that connect the region with the rest of Alaska. Because everything must be flown or barged to each community, the cost of food, fuel, transportation and energy are extraordinarily high. Calista Corporation works hard and partners with many to improve and enrich the way of life for its Shareholders and Descendants.¹²⁶⁶

The nearest offices of Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources, Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement offices are located in Anchorage.

¹²⁶⁶ Calista Corporation (2011). *Shareholder Overview: Our History*. Retrieved on May 11, 2012 from <http://www.calistacorp.com/shareholders/shareholder-overview>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Tuluksak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commmfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Tuluksak can be accessed by a state-owned 2,461 foot long by 30 foot wide gravel airstrip year-round. There are no docking facilities, although cargo barges deliver during the summer. Residents use fishing boats, skiffs, snowmobiles, and ATVs for local transportation. Tuluksak is not connected to the state road system.¹²⁶⁷ Round-trip airfare between Tuluksak and Anchorage in June 2012 was \$618.¹²⁶⁸

*Facilities*¹²⁶⁹

Treated well water is hauled by residents. Only one watering point, with storage capacity of less than 7,000 gallons, serves the entire community, washeteria, clinic, and school. The washeteria was rehabilitated in 1996, but water shortages limit its use. Residents have a honeybucket collection service and a central honeybucket disposal facility - no homes are plumbed. Law enforcement is provided by state troopers in Bethel and fire and rescue services

¹²⁶⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁶⁸ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹²⁶⁹ See footnote 1267.

are provided by volunteers. Tuluksak has a community hall, a high school gym, and a public/school library.

*Medical Services*¹²⁷⁰

Health care is provided by the Tuluksak Clinic, which is owned by the Village Council and operated by the Yukon Kuskokwim Health Corporation. The clinic is a Community Health Aid Program (CHAP) site. Emergency services have river and air access and are provided by a health aide. The nearest Acute Care facility and Emergency Care Center is located in Bethel.

*Educational Opportunities*¹²⁷¹

The Tuluksak School provides instruction to students from pre-school through 12th grade. In 2011 the school had 162 students and 15 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.¹²⁷²

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.¹²⁷³

On the lower Kuskokwim, subsistence sockeye, chum, and Chinook harvesting typically begins by June 1st, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based from either a fish camp or from a home village. Drift gill

¹²⁷⁰ Ibid.

¹²⁷¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹²⁷² Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹²⁷³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{1274,1275}

Tuluksak lies on the south bank of the Tuluksak River at its junction with the Kuskokwim River. The village is 35 miles northeast (inland) of Bethel. Due to its inland location, Tuluksak is not located within any Federal Statistical and Reporting Area, Pacific Halibut Fishery Regulatory Area, or Sablefish Regulatory Area. Tuluksak is located closest to Federal Statistical and Reporting Area 514, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. Because of its inland location in Western Alaska, Tuluksak is also not eligible for the Community Quota Entity or Community Development Quota programs.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Tuluksak does not have a registered processing plant. The nearest registered processing plant is located in Bethel.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Tuluksak (Table 3).

Commercial Fishing

In 2010, there were 31 Tuluksak residents holding 31 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for the halibut, herring, and salmon fisheries. While the total number of CFEC permits and permit holders remained relatively stable between 2000 and 2010, the number of permits reported as fished each year varied widely, from two in 2009 to 24 in 2000. In 2010, 11 CFEC permits were reported as fished. The majority of permits held (29) were for the salmon fishery, which maintained a stable number of permits and permit holders during this period, with the number of permits reported as fished varying from year to year. The majority of salmon CFEC permits in 2010 were for the Kuskokwim gill net fishery, with the remainder issued for the Bristol Bay drift gill net fishery and the Lower Yukon gill net fishery. There was one halibut CFEC permit and one herring CFEC permit held in 2010, but neither of those permits was reported as fished. The halibut permit was issued for the statewide longline fishery using vessels under 60 feet and the herring permit was issued for the

¹²⁷⁴ Coffing, M. (1991). *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River*. Retrieved July 12, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>

¹²⁷⁵ Andrews, E.; and Coffing, M. (1986). *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

Bristol Bay herring spawn on kelp hand-picking fishery. There were no Tuluksak residents holding Federal Fisheries Permits or License Limitation Program (LLP) permits during this period. Information about permits and permit holders by species is presented in Table 4.

There were 21 crew license holders in Tuluksak in 2010. Between 2000 and 2010, the number of crew license holders in the community varied considerably, with four crew license holders in 2002 and 48 in 2000. There were no fish buyers or shore-side processing facilities located in Tuluksak between 2000 and 2010. During this period, an average of eight vessels were primarily owned by Tuluksak residents each year, while between three and five vessels were homeported in the community each year between 2000 and 2010. There were no vessels landing catch in the community during this period, thus there were no landings reported between 2000 and 2010. Information on characteristics of the commercial fishing sector in Tuluksak is presented in Table 5.

There were no community residents holding quota share accounts for halibut (Table 6) or sablefish (Table 7) between 2000 and 2010, and no residents holding quota share accounts for crab between 2005 and 2010 (Table 8). As previously stated there are no landings or associated ex-vessel revenue reported in Tuluksak between 2000 and 2010 (Table 9). Landings recorded by Tuluksak residents are considered confidential due to a small number of participants between 2000 and 2010 for all species, with the exception of salmon landings in 2001 (48,223 pounds landed bringing \$18,007 in ex-vessel revenue). Information on landings and ex-vessel revenue by Tuluksak residents is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Tuluksak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Total municipal revenue⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Tuluksak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	1	0	1	1	1	1	1	2	1
	Fished permits	0	0	1	0	0	0	0	0	0	0	0
	% of permits fished	-	-	100%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	1	0	1	1	1	1	1	1	1
Herring (CFEC) ²	Total permits	2	2	2	1	1	0	0	0	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	-	-	-	0%	0%	0%
	Total permit holders	1	1	1	1	1	0	0	0	1	1	1

Table 4 cont'd. Permits and Permit Holders by Species, Tuluksak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	1	0	0	0	0	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	-	-	-	-	0%	-	-	-	-	-
	Total permit holders	1	0	0	0	0	1	0	0	0	0	0
Salmon (CFEC) ²	Total permits	28	28	29	30	30	28	29	29	30	30	29
	Fished permits	24	18	16	15	14	13	8	9	10	2	11
	% of permits fished	86%	64%	55%	50%	47%	46%	28%	31%	33%	7%	38%
	Total permit holders	29	30	31	32	31	29	31	31	31	31	30
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>31</i>	<i>30</i>	<i>32</i>	<i>31</i>	<i>32</i>	<i>30</i>	<i>30</i>	<i>30</i>	<i>32</i>	<i>33</i>	<i>31</i>
	<i>Fished permits</i>	<i>24</i>	<i>18</i>	<i>17</i>	<i>15</i>	<i>14</i>	<i>13</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>2</i>	<i>11</i>
	<i>% of permits fished</i>	<i>77%</i>	<i>60%</i>	<i>53%</i>	<i>48%</i>	<i>44%</i>	<i>43%</i>	<i>27%</i>	<i>30%</i>	<i>31%</i>	<i>6%</i>	<i>35%</i>
	<i>Permit holders</i>	<i>30</i>	<i>30</i>	<i>32</i>	<i>32</i>	<i>31</i>	<i>30</i>	<i>31</i>	<i>31</i>	<i>31</i>	<i>32</i>	<i>31</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Tuluksak: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Tuluksak ²	Total Net Pounds Landed in Tuluksak ^{2,5}	Total Ex-Vessel Value of Landings in Tuluksak ^{2,5}
2000	48	0	0	6	3	0	0	\$0
2001	19	0	0	8	3	0	0	\$0
2002	4	0	0	9	3	0	0	\$0
2003	32	0	0	8	3	0	0	\$0
2004	13	0	0	9	3	0	0	\$0
2005	15	0	0	10	5	0	0	\$0
2006	15	0	0	10	4	0	0	\$0
2007	13	0	0	8	3	0	0	\$0
2008	7	0	0	9	3	0	0	\$0
2009	10	0	0	8	4	0	0	\$0
2010	21	0	0	8	4	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Tuluksak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Tuluksak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Tuluksak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Tuluksak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Tuluksak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	48,223	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	48,223	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	\$18,007	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	\$18,007	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses located in Tuluksak, and no community residents held sport fish guide licenses. Given this, no kept/released log book data were reported for sportfishing charters out of Tuluksak between 2000 and 2010.¹²⁷⁶ The number of sportfishing licenses sold to community residents (irrespective of the location of the point of sale) increased substantially from seven in 2000 to 99 in 2010. There were no sportfishing licenses sold within the community between 2000 and 2009, indicating the potential that Tuluksak residents traveled to other areas or nearby communities if they want to participate in sportfishing activities. However, in 2010, there were 86 sportfishing licenses sold in Tuluksak.

Further indicating the potential of residents to participate in sportfishing in other communities, the Alaska Statewide Harvest Survey,¹²⁷⁷ conducted by ADF&G between 2000 and 2010, reported that Chinook salmon and coho salmon are targeted by private anglers residing in Tuluksak. Tuluksak is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Tuluksak is displayed in Table 11.

Table 11. Sport Fishing Trends, Tuluksak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Tuluksak ²
2000	0	0	7	0
2001	0	0	14	0
2002	0	0	35	0
2003	0	0	24	0
2004	0	0	30	0
2005	0	0	35	0
2006	0	0	29	0
2007	0	0	46	0
2008	0	0	31	0
2009	0	0	22	0
2010	0	0	99	86

¹²⁷⁶ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹²⁷⁷ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Tuluksak: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Tuluksak is a traditional Yup'ik Eskimo village with a fishing and subsistence livelihood. Subsistence activities provide most food sources for local residents.¹²⁷⁸ Data on subsistence participation by household and species and per capita subsistence harvest were not reported between 2000 and 2010 (Table 12).

In years for which data were reported between 2000 and 2010, an average of 81 subsistence salmon permits was issued to Tuluksak households, with an average of 49 permits returned to ADF&G each year. Chinook salmon and chum salmon were the primary species harvested under returned subsistence permits (an average of 2,710 Chinook and 2,455 chum per year), along with sockeye salmon and coho salmon (Table 13). Data were not reported on the per capita harvest of marine invertebrates or non-salmon fish during this period. Data were not reported on the subsistence harvest of marine invertebrates, halibut or other fish (Tables 13 and 14), or subsistence harvest of marine mammals between 2000 and 2010 (Table 15).

¹²⁷⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 12. Subsistence Participation by Household and Species, Tuluksak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Tuluksak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	76	63	2,432	2,504	523	n/a	2,207	n/a	n/a
2001	72	58	2,451	1,862	971	n/a	1,759	n/a	n/a
2002	84	57	2,364	3,042	1,181	n/a	1,011	n/a	n/a
2003	80	45	3,678	1,555	1,523	n/a	1,333	n/a	n/a
2004	81	58	3,117	2,017	870	n/a	1,397	n/a	n/a
2005	83	58	2,498	2,108	465	n/a	935	n/a	n/a
2006	88	30	830	1,058	180	n/a	941	n/a	n/a
2007	88	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	80	24	4,311	5,492	876	n/a	2,836	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Tuluksak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Tuluksak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Tuntutuliak (*tun-too-TOO-lee-ack*)



People and Place

*Location*¹²⁷⁹

Tuntutuliak is on the Qinaq River, approximately three miles from its confluence with the Kuskokwim River and about 40 miles from the Bering Sea coast. It lies 40 miles southwest of Bethel and 440 miles west of Anchorage. Tuntutuliak is located in the Bethel Recording District, the Bethel Census Area, and is not located within an organized Borough.

*Demographic Profile*¹²⁸⁰

In 2010, there were 408 inhabitants in Tuntutuliak, making it the 136th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Tuntutuliak grew by 3.78% with an average annual growth rate of 0.32%, indicating a slow rate of growth during the period. The change in population from 1990 to 2010 is provided in Table 1.

Almost all Tuntutuliak residents identified themselves as American Indian and Alaska Native (95.8%). Other ethnic groups present in Tuntutuliak in that year included White (2.9%) and two or more races (1.2%). The percentages of the population identifying themselves as American Indian and Alaska Native and Hispanic or Latino decreased between 2000 and 2010, with corresponding increases in the percentages of the population identifying themselves as White and as two or more races. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Tuntutuliak increased from 4.2 persons per household in 1990 to 4.4 in 2000, then decreased to 4.25 in 2010. The total number of households increased from 70 in 1990 to 84 in 2000 to 96 occupied housing units in 2010. Of the 106 housing units surveyed for the 2010 Decennial Census, 59 were owner-occupied, 37 were renter-occupied, and 10 units were vacant or used only seasonally. Throughout this period no residents of Tuntutuliak were reported to be living in group quarters.

In 2010, the gender makeup in Tuntutuliak was 52.9% male and 47.1% female, similar to the state as a whole (52% male, 48% female). The median age was estimated to be 21.4 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of the population fell within the age category 0 to 19 years in 2010, with the next largest percentage of the population in the age group 20 to 39 years. Relatively few individuals were age 60 or older in both 2000 and 2010. The overall population structure of Tuntutuliak in 200 and 2010 is shown in Figure 2.

¹²⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁸⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Tuntutuliak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	300	-
2000	370	-
2001	-	376
2002	-	378
2003	-	380
2004	-	400
2005	-	399
2006	-	407
2007	-	420
2008	-	416
2009	-	384
2010	408	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Tuntutuliak: 2000-2010 (U.S. Census).

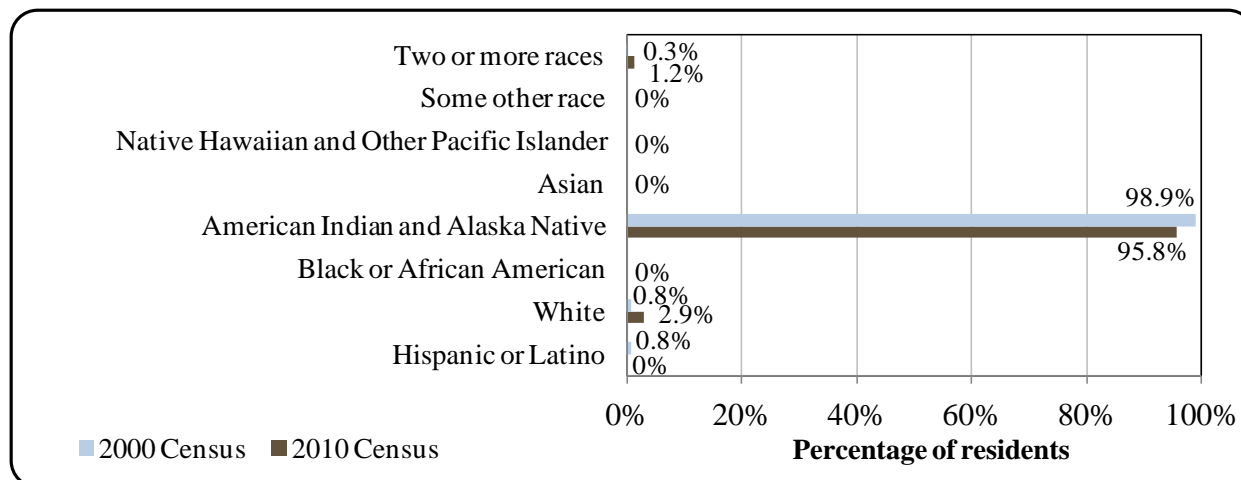
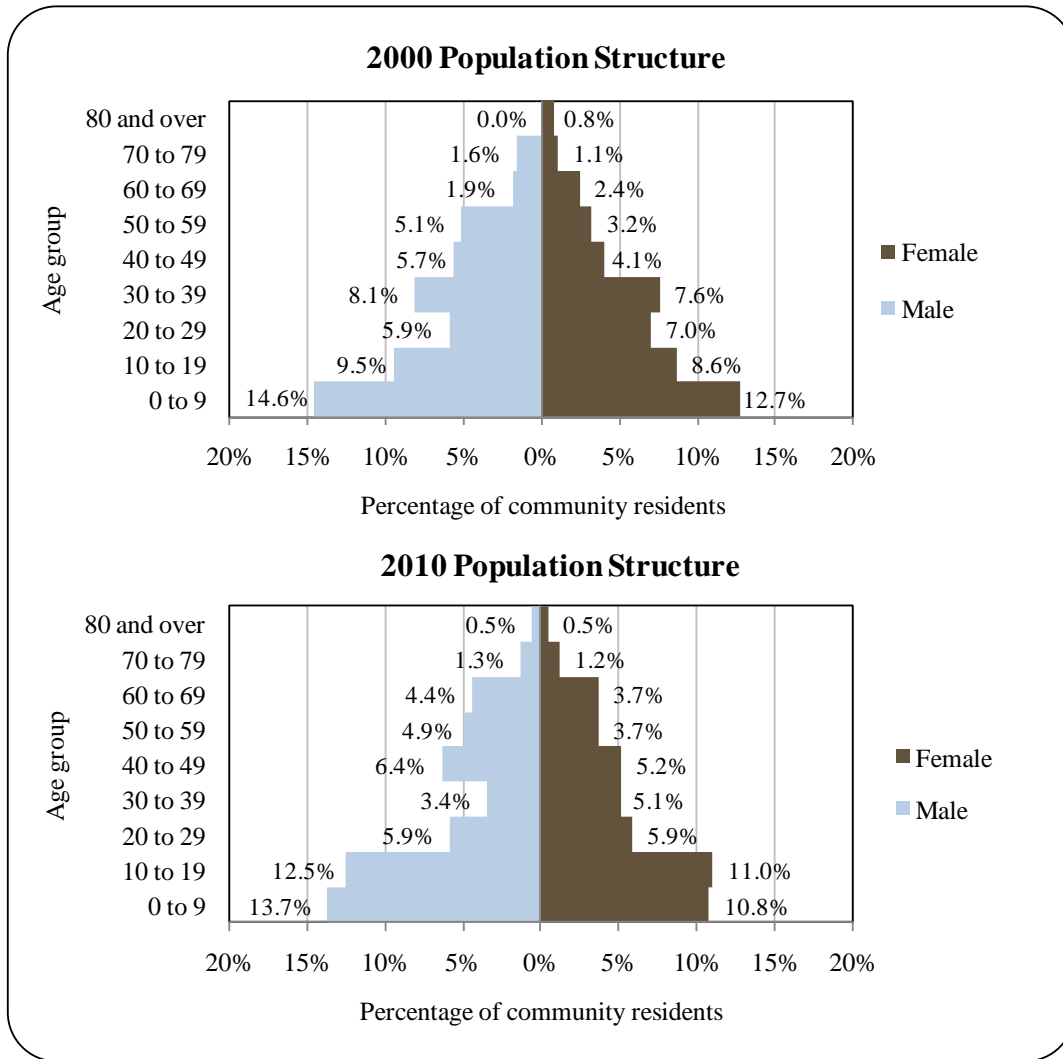


Figure 2. Population Age Structure in Tuntutuliak Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey,¹²⁸¹ in terms of educational attainment, 56.2% of Tuntutuliak residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 32% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; 11.8% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 37.3% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; and 19% were estimated to have some college but no degree, compared to

¹²⁸¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

28.3% of Alaska residents overall. No residents of Tuntutuliak were estimated to have an Associate's degree, Bachelor's degree, or graduate or professional degree in 2010.

*History, Traditional Knowledge, and Culture*¹²⁸²

The village's Yup'ik name is Tuntutuliaq, meaning "place of many reindeer." It was originally located four miles to the east and called Qinaq, as noted in 1879 by Edward Nelson, who noted 175 residents at that time. In 1908, a Moravian missionary visited the village and reported 130 people living there. In 1909, a Bureau of Indian Affairs school was built, and the first teacher was well-liked in the community. Due to lack of confidence in the subsequent teachers, the school was closed in 1917, and was moved to the village of Eek. It is thought that some Qinaq villagers may have moved to Eek so their children could attend school. In 1923, the first Moravian chapel was built with lumber and other support from Eek. In the late 1920s, a trading post and store was opened by John Johnson. The community moved to its present site on higher ground and was renamed Tuntutuliak in 1945. The Bureau of Indian Affairs built a new school in the community in 1957. A post office opened in 1960.

Tuntutuliak is a traditional Yup'ik Eskimo village with a fishing and subsistence lifestyle. Salmon and seal are important food sources. Children are taught in Yup'ik until the third grade and then classes are taught in English. The sale, importation, and possession of alcohol is banned in the village.

Natural Resources and Environment¹²⁸³

Tuntutuliak's summer temperatures average from 42 to 62 °F (5.6 to 16.7 °C), and winter temperatures average -2 to 19 °F (-18.9 to -7.2 °C). Extremes have been recorded from 86 to -46 °F (30 to -43.3 °C). Annual precipitation averages 16 inches, with 50 inches of snow.

The lower Yukon-Kuskokwim River Delta (Y-K Delta), where Tuntutuliak is located, is an area of low elevation and shallow relief. The terrain is mostly made up of flat and low rolling plains crossed with low gradient streams, tributaries, sloughs, floodplains, wetlands, and shallow lakes. Most of the lower Y-K Delta was ice-free during the last major Ice Age. Sediments in the area are loamy or sandy textured fluvial and alluvial deposits. Soils are poorly drained and typically overlay a layer of permafrost.¹²⁸⁴

Tuntutuliak is located on Calista Corporation land encompassed by the Yukon Delta National Wildlife Refuge, which provides spawning, rearing, feeding, and wintering habitat for a range of terrestrial and aquatic wildlife.¹²⁸⁵ Terrestrial wildlife of economic and cultural importance include: waterfowl and gamebirds, moose, wolf, wolverine, bear, mink, beaver, muskrat, otter, fox, beaver, muskrat, muskox, hares, voles, ermines, squirrels, lemmings, shrews, and weasels.¹²⁸⁶ Aquatic resources include Chinook, chum, pink, sockeye, and coho salmon,

¹²⁸² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁸³ Ibid.

¹²⁸⁴ LKEDC. (2006). *Comprehensive Economic Development Strategy & Area Plan*. Retrieved February 1, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Bethel%20Region-SAP-2006.pdf>.

¹²⁸⁵ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved November 22, 2011 from: <http://www.fws.gov/refuges/profiles/recEdMore.cfm?ID=74540>.

¹²⁸⁶ Bethel Coastal District et al. (2006). *Bethel Coastal Management Plan*. Retrieved November 22, 2011 from: http://www.alaskacoast.state.ak.us/District_Pages/NW_Region/Bethel/.

whitefish, burbot, northern pike, blackfish, smelt, lamprey, char, grayling, trout, sculpin, stickleback, and longnose sucker.¹²⁸⁷

Regional mineral resources include zinc, gold, silver, lead, antimony, tungsten, tin, copper, nickel, mercury, and platinum.¹²⁸⁸ Upriver from Tuntutuliak, Calista Corporation is undertaking several mineral and oil and gas projects near Red Devil. Downriver, Platinum and Goodnews Bay are sites of more mineral projects.¹²⁸⁹

There are several natural hazards affecting the Yukon-Kuskokwim Delta region.¹²⁹⁰ These hazards include flooding, river bank erosion and destabilization, brush fire, and soil destabilization due to permafrost melt. Spring flooding is a major factor contributing to natural hazards in the area. As melt-off and ice jamming occurs during spring break-up, flooding and erosion occur and climate change is thought to be a continuing factor in the seasonality and severity of flooding in the region. In addition, variation in the active permafrost layer caused by climate change and urban development further compound impacts from flood events.¹²⁹¹

Current Economy¹²⁹²

The school, various services, commercial fishing, and fish processing provide most of the income. Trapping, basket weaving, skin-sewn products, and other Native handicrafts also provide cash. Subsistence foods comprise a majority of the diet, and about one-half of families go to a fish camp each summer.¹²⁹³ Top employers in 2010¹²⁹⁴ included Lower Kuskokwim School District, Qinarmit Corp., Association of Village Council Presidents, AVCP Housing Authority, TTC/EPA, Yukon Kuskokwim Health Corp. 90, Tuntutuliak Traditional Council, Paul Andrews Trading Post, Tuntutuliak Community Services Association, and Pavila Store.

According to the 2006-10 American Community Survey (ACS),¹²⁹⁵ per capita income in Tuntutuliak was estimated to be \$10,349 and the median household income was estimated to be \$34,464, compared to \$7,918 and \$25,500 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹²⁹⁶ the real per capita income in 2000 is shown to have been \$10,412 and the real 2000 median household income was \$33,532. This shows that, while per capita income decreased slightly between 2000 and 2010, there was a slight increase in household income during this period. In 2010, Tuntutuliak ranked 270th of 305 Alaskan communities with per capita income that year, and 216th out of 299 Alaskan communities with household income data. Although Tuntutuliak's small population size may have prevented the American Community Survey from accurately portraying economic conditions, this decrease in per capita income is confirmed by economic data compiled by the Alaska Local and Regional

¹²⁸⁷ Ibid.

¹²⁸⁸ Alaska Dept. of Trans. and Pub. Facilities. (2002). *Yukon-Kuskokwim Delta Transportation Plan*. Retrieved November 22, 2011 from http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_Plan_final.pdf

¹²⁸⁹ Calista Corporation (n.d.). *Homepage*. Retrieved November 22, 2011 from: <http://www.calistacorp.com>.

¹²⁹⁰ See footnote 1286.

¹²⁹¹ See footnote 1284.

¹²⁹² Unless otherwise noted, all monetary data are reported in nominal values.

¹²⁹³ See footnote 1282.

¹²⁹⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²⁹⁵ See footnote 1281.

¹²⁹⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Tuntutuliak in 2010 was \$6,335, significantly less than the ACS estimates. This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

Based on the American Community Survey, in the same time frame, 49.8% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 30.8%, compared to the statewide unemployment rate of 5.9%. Approximately 36.6% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Tuntutuliak are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Tuntutuliak. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 26.7%.

Based on household surveys conducted for the 2006-2010 American Community Survey, the greatest percentage of workers was employed in the private sector (56.8%), while 43.2% were employed in the public sector. Out of 74 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (38%), transportation, warehousing, and utilities (17%), and public administration (16%). Smaller percentages of the population were employed in finance, insurance, and real estate (5%), information (8%), retail trade (5%), construction (4%), and agriculture, forestry, fishing, hunting, and mining (5%). However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry and occupation are presented in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Tuntutuliak (U.S. Census).

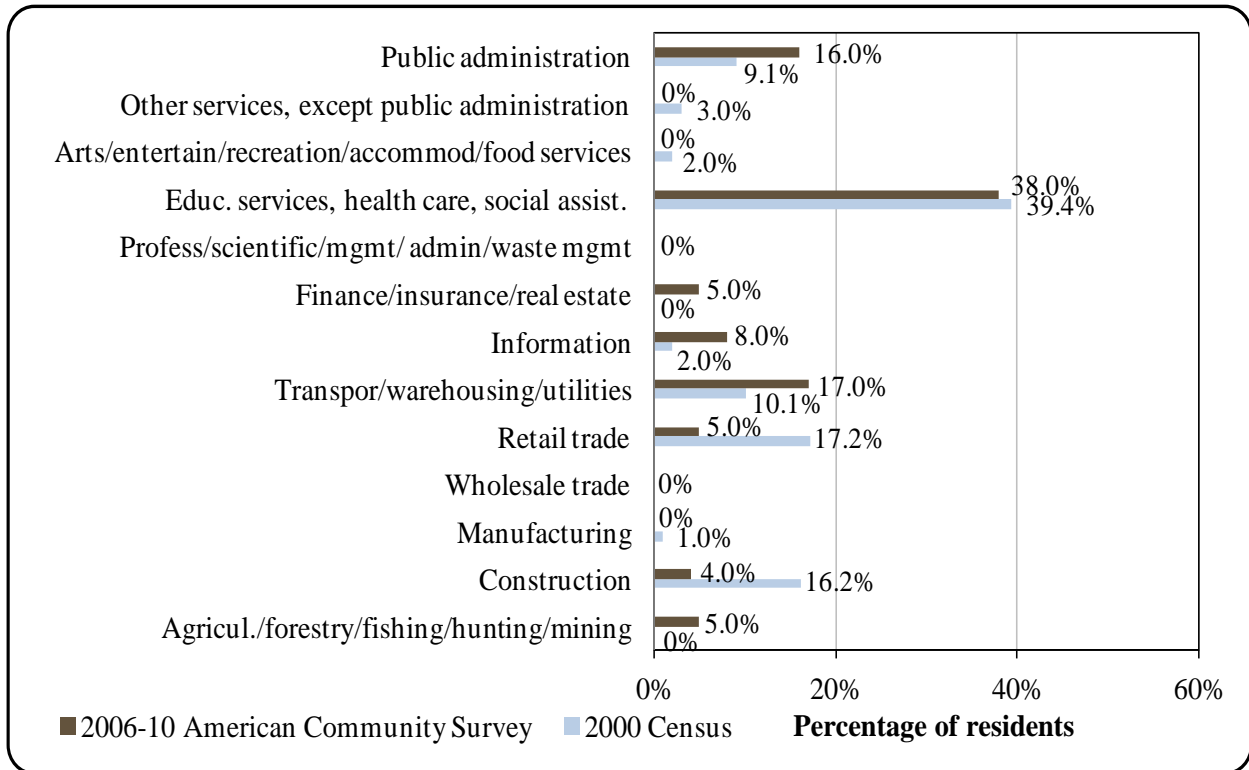
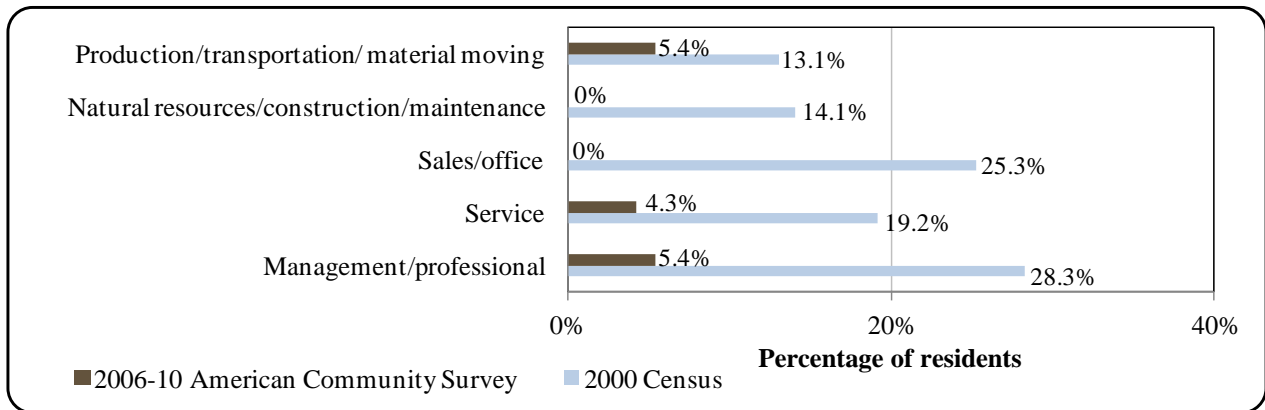


Figure 4. Local Employment by Occupation in 2000-2010, Tuntutuliak (U.S. Census).



Governance

Tuntutuliak is an unincorporated community that is not located within an organized Borough. Because of Tuntutuliak’s unincorporated status, no municipal taxes were administered between 2000 and 2010. Tuntutuliak did receive State Revenue Sharing contributions in 2000, 2001, and 2003 ranging from approximately \$3,600 to approximately \$4,100. Tuntutuliak did not receive any fisheries-related grants between 2000 and 2010. Information about selected aspects of Tuntutuliak’s community revenue is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Tuntutuliak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Funding Database. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Tuntutuliak was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is Tuntutuliak Land, Limited. The regional Native corporation to which Tuntutuliak belongs is the Calista Corporation. The region Calista Corporation serves is a vast and beautiful corner of the world. Tucked between two of Southwest Alaska’s mightiest rivers – the Yukon and the Kuskokwim – this unique isolated area is the traditional home of the state’s indigenous Yup’ik, Cup’ik and Athabascan people, Calista Corporation’s shareholders. The Calista Region encompasses 57,000 square miles and is the second largest ANCSA region in land size. The land entitlement to Calista, however, is only 6.5 million acres - less than 20 % of the land area. Approximately 75 % of the land within the Region is owned by the U.S. Fish and Wildlife Service. Most of the remaining lands are owned by federal and state governments, with a very small amount privately owned. Surrounded by mostly federally owned lands, the Region is about the size of New York State. It encompasses nearly 10 % of Alaska’s land area and is comprised of 56 federally recognized tribes. There are no roads that connect the region with the rest of Alaska. Because everything must be flown or barged to each community, the cost of food, fuel, transportation and energy are extraordinarily high. Calista Corporation works hard and partners with many to improve and enrich the way of life for its Shareholders and Descendants.¹²⁹⁷

¹²⁹⁷ Calista Corporation. 2011. *Shareholder Overview: Our History*. Retrieved on May 11, 2012 from <http://www.calistacorp.com/shareholders/shareholder-overview>.

The nearest offices of Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community and Economic Development (DCCED) are located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources (DNR), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement offices are located in Anchorage.

Infrastructure

Connectivity and Transportation

Tuntutuliak relies on air transportation for passengers, mail, and cargo service. A state-owned 3,025 foot long by 75 foot wide gravel runway and a public seaplane base on the Qinaq River are available. Barge services deliver goods approximately six times a year. Boats and snowmobiles are used for local travel. Winter trails are marked to Kipnuk (77 mi), Toundra (60 mi), and Kongiganak (29 mi).¹²⁹⁸ In June 2012, round-trip airfare between Tuntutuliak and Anchorage was \$626.¹²⁹⁹

*Facilities*¹³⁰⁰

A flush/haul system, unpermitted landfill, sewage lagoon, and 4-mile sanitation boardwalk are available. The school has its own well and sewage lagoon. Law enforcement services are provided by a Village Public Safety Officer (VPSO) and by state troopers in Bethel. Fire and rescue services are provided by a state VPSO, and a volunteer fire department with Project Code Red Equipment. There is a Village Council jail, a community hall, and a school library in Tuntutuliak.

*Medical Services*¹³⁰¹

Medical care is provided by the Kathleen Daniel Memorial Clinic, which is owned by the Village Council and operated by the Yukon Kuskokwim Health Corporation. The clinic is a Community Health Aid Program site. Emergency services have coastal and air access and are provided by a health aide. The closest Acute Care facility and qualified Emergency Care Center is located in Bethel.

¹²⁹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁹⁹ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹³⁰⁰ See footnote 1298.

¹³⁰¹ Ibid.

*Educational Opportunities*¹³⁰²

The Lewis Angapak Memorial School provides instruction to students from pre-school through 12th grade. The first 3 years of instruction are entirely in Yup'ik, with remaining years primarily in English. In 2011 the school had 155 students and 10 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial harvest of salmon first took place in the Kuskokwim area in 1913, although in the early years it was a quasi-commercial fishery with limited distribution. Catch was dried and sold as food for sled dogs during the 1930s when dog teams were the primary means of hauling freight to villages in Western Alaska. At the time of statehood, commercial fishing districts were defined along the Kuskokwim River. In the 1960s and 1970s commercial salmon fisheries in the Kuskokwim were still considered experimental, and management efforts focused on increasing commercial use while ensuring continued supply for subsistence use. Harvest levels continued to increase until the mid-1990s, after which time fishing effort, harvest levels and salmon prices decreased. Current management is focused on sustainability of salmon runs, ensuring subsistence needs are met, and with a precautionary approach, providing opportunity for commercial harvest of available surpluses.¹³⁰³

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.¹³⁰⁴

On the lower Kuskokwim, subsistence sockeye, chum, and Chinook harvesting typically begins by June 1st, and is concluded by mid-July. Coho and pink salmon are harvested in August and September. Fishing effort is based from either a fish camp or from a home village. Drift gill nets, fish wheels, and rods and reels are used for harvesting. Soon after river ice breaks up in May, smelt move into the lower Kuskokwim area. Residents use fine-meshed nets to catch smelt, and thread them through willow sticks before drying and smoking them. Whitefish, sheefish, Arctic grayling, and northern pike are harvested year-round. Blackfish and burbot are harvested during fall and winter months. Dolly Varden are typically harvested from June through December; while trout are typically harvested in the early spring and summer, and again in the

¹³⁰² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹³⁰³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "Kuskokwim Commercial Salmon Fishery." In *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹³⁰⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

late summer and early fall. Spotted seal, bearded seal, ringed seal, and walrus are harvested in the late spring.^{1305,1306}

Tuntutuliak is on the Qinaq River, approximately three miles from its confluence with the Kuskokwim River and about 40 miles from the Bering Sea coast.¹³⁰⁷ Tuntutuliak is adjacent to Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Tuntutuliak participates in the Community Development Quota (CDQ) Program through the Coastal Villages Region Fund (CVRF). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹³⁰⁸ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. The community is located in Federal Reporting Area 508, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. The mission of CVRF is to provide the means for development of its member communities by sensibly creating tangible, long-term opportunities for all residents who want to fish and work. On behalf of the 20 member communities, CVRF has grown to be the largest seafood owner/operator headquartered in Alaska. CVRF is now able to take a broader and more balanced approach to managing the Kuskokwim Delta and Bering Sea seafood resources. For its residents, CVRF must continue to protect its fisheries and its investments in these fisheries, grow in a strategic and sustainable manner, and remain adaptable to take advantage of all positive opportunities. CVRF's investments in the Bering Sea fisheries enables CVRF to provide fishing opportunities in salmon, halibut, and herring in the region.¹³⁰⁹ The community is not eligible for the Community Quota Entity program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Tuntutuliak does not have a registered processing plant. The nearest processing plant is located in Bethel.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Tuntutuliak (Table 3).

¹³⁰⁵ Coffing, M. (1991). *Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of the Lower Kuskokwim River*. Retrieved July 12, 2012 from: <http://www.subsistence.ADFG.state.ak.us/TechPap/tp157.pdf>

¹³⁰⁶ Andrews, E.; and Coffing, M. (1986). *Kuskokwim River Subsistence Chinook Fisheries: An Overview*. Retrieved July 12, 2012 from: <http://www.nativeknowledge.org/db/files/tp146.htm>.

¹³⁰⁷ Ibid.

¹³⁰⁸ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹³⁰⁹ Coastal Villages Region Fund (2010). *CVRF: Who We Are*. Retrieved on May 11, 2012 from <http://www.coastalvillages.org/>.

Commercial Fishing

In 2010, 54 community residents held 65 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for salmon net, herring roe, and halibut fisheries. Overall between 2000 and 2010, the total number of CFEC permits issued to community residents declined while the number of permit holders remained relatively stable. The number of permits reported as fished decreased during this period. The majority of the CFEC permits issued between 2000 and 2010 were for the salmon fishery (an average of 44 per year), and the number of salmon permits and permit holders remained relatively stable during this period. The number of salmon CFEC permits reported as fished each year was variable. In 2010, the majority of the salmon CFEC permits issued were for the Kuskokwim gill net fishery, with the remainder issued for the Bristol Bay drift gill net fishery. The number of herring CFEC permits declined slightly during the period while the number of permit holders remained relatively stable, though herring CFEC permits were only reported as fished in 2000 and 2003. In 2010, permits were issued for the Goodnews Bay and Cape Avinof roe herring gill net fisheries. The number of halibut CFEC permits declined substantially between 2000 and 2010, as did the number of permit holders. One halibut CFEC permit was reported as fished in each of the following years: 2003, 2004, and 2009. In 2010, one CFEC permit was issued for the statewide long line fishery using vessels under 60 feet. There were no Tuntutuliak residents holding Federal Fisheries Permits or License Limitation Program (LLP) permits during this period. Information on commercial fishing permits and permit holders by species between 2000 and 2010 is presented in Table 4.

The number of crew license holders decreased from 47 to 4 between 2000 and 2003, then increased again to a total of 53 crew license holders in Tuntutuliak in 2010, representing 12.9% of the population. There were no fish buyers or shore-side processing facilities located in Tuntutuliak between 2000 and 2010. Both the number of commercial fishing vessels owned primarily by Tuntutuliak residents and the number of vessels homeported in Tuntutuliak decreased between 2000 and 2010. There were no vessels landing catch in the community between 2000 and 2010, and thus there are no commercial landings or ex-vessel values to report during this period. Information on characteristics of the commercial fishing sector in Tuntutuliak is presented in Table 5.

There were no Tuntutuliak residents holding quota shares for halibut or sablefish between 2000 and 2010 (Tables 6 and 7), and no community residents holding crab quota shares between 2005 and 2007 (Table 8). As previously stated there were no commercial landings or associated ex-vessel revenue recorded in the community between 2000 and 2010 (Table 9). Commercial landings by Tuntutuliak residents were considered confidential between 2000 and 2010 for all species due to a small number of participants, with the exception of herring landings in 2000 and salmon landings in 2000, 2004, 2005, and 2007. Information on landings and associated ex-vessel revenue by community residents between 2000 and 2010 is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Tuntutuliak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Tuntutuliak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	11	13	7	6	4	2	1	3	1	1	1
	Fished permits	0	0	0	1	1	0	0	0	0	1	0
	% of permits fished	0%	0%	0%	17%	25%	0%	0%	0%	0%	100%	0%
	Total permit holders	11	12	7	6	4	2	1	3	1	1	1
Herring (CFEC) ²	Total permits	22	21	19	20	20	19	18	18	17	15	17
	Fished permits	9	0	0	1	0	0	0	0	0	0	0
	% of permits fished	41%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	17	18	17	18	19	18	17	17	17	15	16

Table 4 cont'd. Permits and Permit Holders by Species, Tuntutuliak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	44	45	44	44	43	41	44	42	44	43	47
	Fished permits	43	24	27	29	31	36	37	34	40	39	42
	% of permits fished	98%	53%	61%	66%	72%	88%	84%	81%	91%	91%	89%
	Total permit holders	50	48	48	46	47	43	46	46	46	44	50
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>77</i>	<i>79</i>	<i>70</i>	<i>70</i>	<i>67</i>	<i>62</i>	<i>63</i>	<i>63</i>	<i>62</i>	<i>59</i>	<i>65</i>
	<i>Fished permits</i>	<i>52</i>	<i>24</i>	<i>27</i>	<i>31</i>	<i>32</i>	<i>36</i>	<i>37</i>	<i>34</i>	<i>40</i>	<i>40</i>	<i>42</i>
	<i>% of permits fished</i>	<i>68%</i>	<i>30%</i>	<i>39%</i>	<i>44%</i>	<i>48%</i>	<i>58%</i>	<i>59%</i>	<i>54%</i>	<i>65%</i>	<i>68%</i>	<i>65%</i>
	<i>Permit holders</i>	<i>57</i>	<i>56</i>	<i>53</i>	<i>54</i>	<i>54</i>	<i>50</i>	<i>53</i>	<i>52</i>	<i>51</i>	<i>49</i>	<i>54</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Tuntutuliak: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Tuntutuliak ²	Total Net Pounds Landed in Tuntutuliak ^{2,5}	Total Ex-Vessel Value of Landings in Tuntutuliak ^{2,5}
2000	47	0	0	38	34	0	0	\$0
2001	25	0	0	38	33	0	0	\$0
2002	5	0	0	27	22	0	0	\$0
2003	4	0	0	27	22	0	0	\$0
2004	17	0	0	25	22	0	0	\$0
2005	34	0	0	26	24	0	0	\$0
2006	26	0	0	22	18	0	0	\$0
2007	31	0	0	17	14	0	0	\$0
2008	35	0	0	13	14	0	0	\$0
2009	47	0	0	10	11	0	0	\$0
2010	53	0	0	19	20	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Tuntutuliak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Tuntutuliak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Tuntutuliak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Tuntutuliak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Tuntutuliak Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	19,843	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	77,980	--	--	--	48,634	46,789	--	25,971	--	--	--
<i>Total²</i>	<i>97,823</i>	--	--	--	<i>48,634</i>	<i>46,789</i>	--	<i>25,971</i>	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$1,812	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$41,423	--	--	--	\$14,694	\$17,528	--	\$11,921	--	--	--
<i>Total²</i>	<i>\$43,235</i>	--	--	--	<i>\$14,694</i>	<i>\$17,528</i>	--	<i>\$11,921</i>	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no Tuntutuliak residents holding sport fish guide licenses and there were no sport fish guide businesses located in Tuntutuliak. Given this, no kept/released log book data were reported for fishing charters out of Tuntutuliak between 2000 and 2010.¹³¹⁰ The number of sportfishing licenses sold to community residents (irrespective of the location of the point of sale) varied considerably during this period, with 9 licenses issued in 2004 and 74 licenses issued in 2009. The number of sportfishing licenses sold within the community also varied from 0 between 2002 and 2004 to 73 in 2009. In 2010, there were 24 sportfishing licenses sold to Tuntutuliak residents and 20 sportfishing licenses were sold in the community. In most years, the number of licenses sold in the community was only slightly lower than the number sold to community residents, indicating the potential that a few community residents may travel to other communities to participate in sportfishing activities.

The Alaska Statewide Harvest Survey,¹³¹¹ conducted by ADF&G between 2000 and 2010, did not report any species as targeted by private anglers in Tuntutuliak. Tuntutuliak is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Tuntutuliak is displayed in Table 11.

Table 11. Sport Fishing Trends, Tuntutuliak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Tuntutuliak ²
2000	0	0	24	18
2001	0	0	34	20
2002	0	0	11	0
2003	0	0	13	0
2004	0	0	9	0
2005	0	0	30	20
2006	0	0	27	18
2007	0	0	24	19
2008	0	0	44	42
2009	0	0	74	73
2010	0	0	24	20

¹³¹⁰ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹³¹¹ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Tuntutuliak: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Tuntutuliak is a traditional Yup'ik Eskimo village with a fishing and subsistence lifestyle. Salmon and seal are important food sources. Subsistence foods comprise a majority of the diet for community residents.¹³¹²

In 2005, the only year that a subsistence survey was conducted by ADF&G in the community of Tuntutuliak between 2000 and 2010, 23% of households were recorded as using halibut for subsistence, while 52% of households were using non-salmon fish (other than halibut). Information on subsistence participation for other species and per capita subsistence harvest was not reported during this period. Information on subsistence participation by household and species is presented in Table 12.

In years for which data were reported between 2000 and 2010, an average of 83 subsistence salmon permits was issued to Tuntutuliak residents, with an average of 61 of those permits returned (Table 13). Chinook salmon were the primary species harvested under subsistence permits (an average of 3,401 Chinook per year), followed closely by chum salmon (an average of 2,917 per year), along with sockeye salmon (an average of 1,479 per year), coho

¹³¹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

salmon (an average of 1,352 per year), and pink salmon (an average of 72 per year). In 2005, the per capita harvest of non-salmon fish was 100,681 pounds in Tuntutuliak (Table 13). Data were not reported on the subsistence harvest of marine invertebrates (Table 13), halibut (Table 14), or subsistence harvest of marine mammals (Table 15).

The ADF&G Division of Subsistence reported that the following species of non-salmon fish were used for subsistence in Tuntutuliak during this period: Arctic char, Bering cisco, blackfish, broad whitefish, burbot, Dolly Varden, grayling, herring, humpback whitefish, lamprey, least cisco, Pacific tom cod, pike, rainbow trout, rockfish, round whitefish, sheefish, smelt, stickleback (needlefish), and sucker.¹³¹³

Table 12. Subsistence Participation by Household and Species, Tuntutuliak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	23%	n/a	n/a	52%	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹³¹³ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Tuntutuliak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	74	63	2,939	2,735	3,435	n/a	1,236	n/a	n/a
2001	77	62	2,993	2,621	337	n/a	1,701	n/a	n/a
2002	76	64	3,632	3,845	1,153	n/a	972	n/a	n/a
2003	79	66	3,095	2,514	2,329	n/a	1,555	n/a	n/a
2004	82	66	3,402	2,262	1,205	n/a	1,446	n/a	n/a
2005	86	54	4,508	3,525	1,132	163	2,102	n/a	100,681
2006	95	64	3,341	3,410	778	45	1,447	n/a	n/a
2007	88	46	3,295	2,421	443	7	1,374	n/a	n/a
2008	92	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Tuntutuliak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Tuntutuliak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Tununak (too-NOO-nuck)



People and Place

*Location*¹³¹⁴

Tununak is located in a small bay on the northeast coast of Nelson Island, 115 miles northwest of Bethel and 519 miles northwest of Anchorage. Tununak is located in the Bethel Recording District and the Bethel Census Area and is not located within an organized Borough.

*Demographic Profile*¹³¹⁵

In 2010, there were 327 inhabitants in Tununak, making it the 155th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Tununak grew by 1.54%, with an average annual growth rate of 0.79%, indicating a slow rate of population growth (Table 1).

Table 1. Population in Tununak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	316	-
2000	325	-
2001	-	326
2002	-	323
2003	-	307
2004	-	329
2005	-	328
2006	-	332
2007	-	340
2008	-	332
2009	-	330
2010	327	-

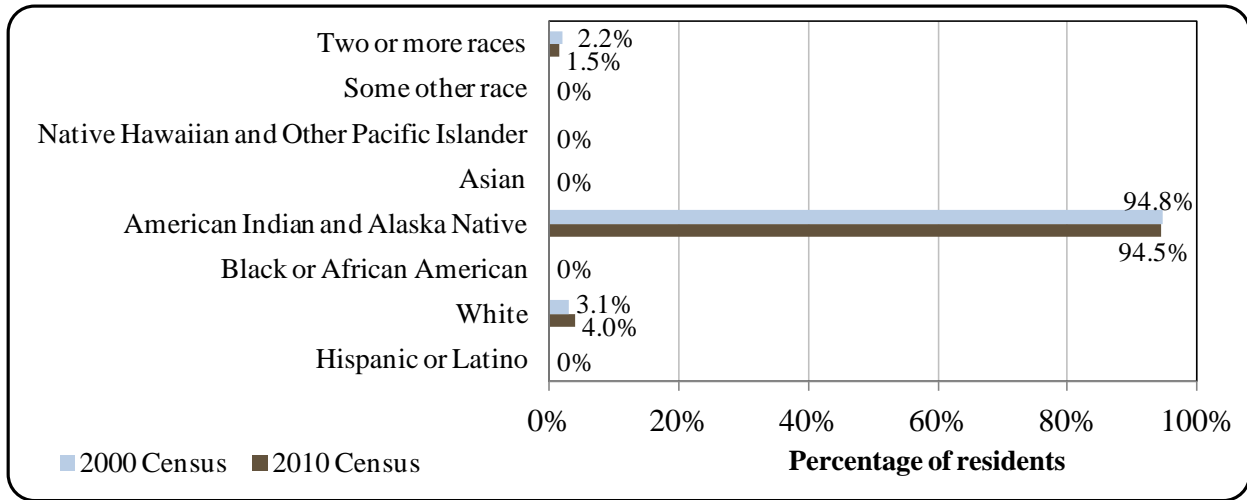
¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

¹³¹⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³¹⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Figure 1. Racial and Ethnic Composition, Tununak: 2000-2010 (U.S. Census).



Most Tununak residents identified themselves as American Indian and Alaska Native in 2010 (94.5%). Other ethnic groups present in Tununak in that year included White (4%) and two or more races (1.5%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaska Native decreased by 0.3%, while the percentage of the population identifying themselves as two or more races also decreased. There was a corresponding increase in the percentage of the population identifying themselves as White during this period (Figure 1).

The average household size in Tununak in 2010 was 3.89, a decrease from 4 persons per household in 1990 and 3.96 in 2010. The total number of households in Tununak increased from 78 in 1990 to 82 in 2000 to 84 occupied housing units in 2010. Of the 90 housing units surveyed for the 2010 Decennial Census, 64 were owner-occupied, 20 were renter occupied, and six were vacant. Throughout this period no residents of Tununak were reported to be living in group quarters.

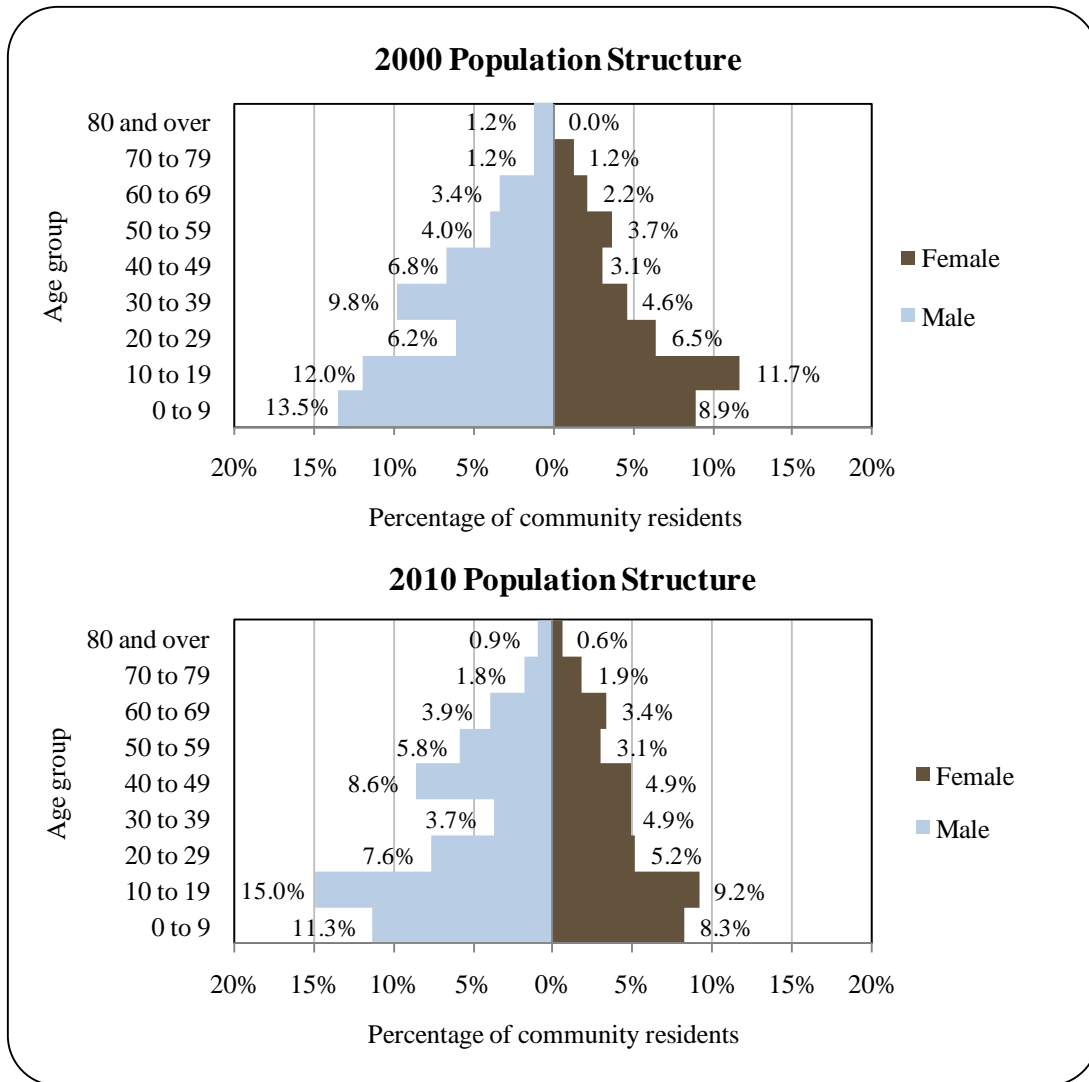
In 2010, the gender makeup in Tununak was 58.7% female and 41.3% male, slightly more skewed than the state as a whole (52% male, 48% female). The median age was estimated to be 24.6 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of the population fell within the age category 10 to 19 years old, with the next largest percentage falling within the age category 0 to 9 years old. Relatively few individuals were age 70 or over in 2010. The overall population structure of Tununak in 2000 and 2010 is shown in Figure 2.

According to the 2006-10 American Community Survey,¹³¹⁶ in terms of educational attainment, 78.1% of Tununak residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 18.4% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; 3.6% were estimated to have a ninth to 12th grade

¹³¹⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

education but no diploma, compared to 5.8% of Alaska residents overall; 45.4% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; 25.5% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 1.5% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; and 5.6% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall.

Figure 2. Population Age Structure in Tununak Based on the 2000 and 2010 U.S. Decennial Census.



*History, Traditional Knowledge, and Culture*¹³¹⁷

In 1878, Nelson Island was named after Edward Nelson, a Smithsonian naturalist who noted six people, including one non-Native trader, living in Tununak. In 1889, the Jesuits opened a small chapel and school. They found the villagers difficult to convert due to the migratory nature of their traditional culture and because the shamans were still quite powerful. The mission closed in 1892. In 1925 a government school was built, and a Northern Commercial Company store was opened in 1929. From 1934 to 1962, a missionary named Father Deshout lived on Nelson Island. His long-standing relationship and work with the people in the area had a great influence. The 1950s brought great changes to the islanders' lifestyle, through their involvement with the Territorial Guard and work in fish canneries, high schools, and healthcare treatment for tuberculosis. For many, this was their first exposure outside the community. By the 1970s, snowmobiles were replacing dog-sled teams, and the last qasgiq (men's community house) was abandoned. The city was incorporated in 1975, but it was dissolved on February 28, 1997, in favor of traditional council governance.

Tununak is a traditional Yup'ik Eskimo village, with an active fishing and subsistence lifestyle. The sale and importation of alcohol is banned in the village.

Natural Resources and Environment¹³¹⁸

The village is located in a marine climate. Average annual precipitation is 17 inches, with 28 inches of snowfall. Summer temperatures can range from 42 to 59 °F (5.6 to 15 °C), and winter temperatures average 2 to 19 °F (-16.7 to -7.2 °C). Extremes have been recorded from 80 to -35 °F (26.7 to -37.2 °C).

Tununak is located on Nelson Island, the second largest island within the Yukon Delta National Wildlife Refuge (Refuge). The southern portion of the island is low-lying and covered with small lakes and streams. The northern portion of the island hosts more rugged terrain, with several peaks over 1,300 feet in elevation. The Bering Sea coast along the Yukon-Kuskokwim River delta is characterized by sandy beaches that merge into active sand dunes greater than 100 feet in height. The dunes are particularly susceptible to erosion.¹³¹⁹

The Refuge was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Refuge lands are open to sport and subsistence hunting and fishing. The most productive wildlife habitat is the coastal region between Nelson Island and the Askinuk Mountains to the north.¹³²⁰ Natural hazards that have been identified to be present in the Bethel Census Area include flooding,

¹³¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³¹⁸ Ibid.

¹³¹⁹ U.S. Fish and Wildlife Service. 2011. Yukon Delta National Wildlife Refuge website. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

¹³²⁰ Ibid.

earthquakes, and severe weather.¹³²¹ Communities in the region are also suffering from severe erosion of both riverbanks and coastal shorelines, and are susceptible to tundra fires.^{1322,1323}

Current Economy¹³²⁴

Employment is primarily with the school district, village corporation, stores, and commercial fishing. Trapping and Native crafts also generate cash for many families, and subsistence activities are an important contributor to villagers' diets. Seal meat, seal oil, and herring are the staples of the diet. Beluga whale and walrus are also hunted. Residents participate in a lottery to hunt musk-ox on Nelson and Nunivak Islands. In 2010, 46 residents held commercial fishing permits. Coastal Villages Seafood, Inc., processes halibut and salmon in Tununak.¹³²⁵ Top employers in 2010¹³²⁶ included Lower Kuskokwim School District, Tununak IRA Traditional Council, Coastal Villages Seafoods Inc., Tununrmiut Rinit Corp., Yukon Kuskokwim Health Corp. 90, Rural Alaska Community Action Program, Coastal Villages Region Fund, Tununak Native Store, United Utilities Inc., and Association of Village Council Presidents.

In 2010, per capita income in Tununak was estimated to be \$12,364 and the median household income was estimated to be \$30,628, compared to \$7,653 and \$25,000 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹³²⁷ the real per capita income in 2000 is shown to have been \$10,064 and the real 2000 median household income was \$32,875. This shows that per capita income increased over the period, while there was a decrease in the median household income. In 2010, Tununak ranked 234th of 305 Alaskan communities with per capita income that year, and 242nd of 299 Alaskan communities with household income data. However, Tununak's small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹³²⁸ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Tununak in 2010 was \$5,794, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in

¹³²¹ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

¹³²² Climate Adaptation Knowledge Exchange (2011). *Relocating the Village of Newtok, Alaska due to Coastal Erosion*. Retrieved January 19, 2012 from <http://www.cakex.org>.

¹³²³ Village of Newtok (2008). *Local Hazards Mitigation Plan*. Retrieved January 19, 2012 from http://www.dced.state.ak.us/dca/planning/pub/Newtok_HMP.pdf.

¹³²⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹³²⁵ See footnote 1317.

¹³²⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹³²⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹³²⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

2000.¹³²⁹ This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹³³⁰ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Tununak. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 24.4%.

Based on the 2006-2010 American Community Survey, 70.2% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 28.7%, compared to the statewide unemployment rate of 5.9%. Approximately 29.9% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Tununak are not reflective of the value of subsistence to the local economy.

Based on household surveys conducted for the 2006-2010 American Community Survey, the greatest percentage of workers was employed in the public sector (63.7%), while 36.3% were employed in the private sector. Out of 124 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (32.7%), public administration (29.6%), and retail trade (15.4%). Smaller percentages of the workforce were employed in other services except public administration (8%), arts, entertainment, recreation, accommodation, and food services (2.5%), professional, scientific, management, administration, and waste management (1.9%), finance, insurance, and real estate (1.9%), transportation, warehousing, and utilities (3.1%), and construction (4.9%). However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

¹³²⁹ See footnote 1326.

¹³³⁰ Denali Commission. 2011. Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

Figure 3. Local Employment by Industry in 2000-2010, Tununak (U.S. Census).

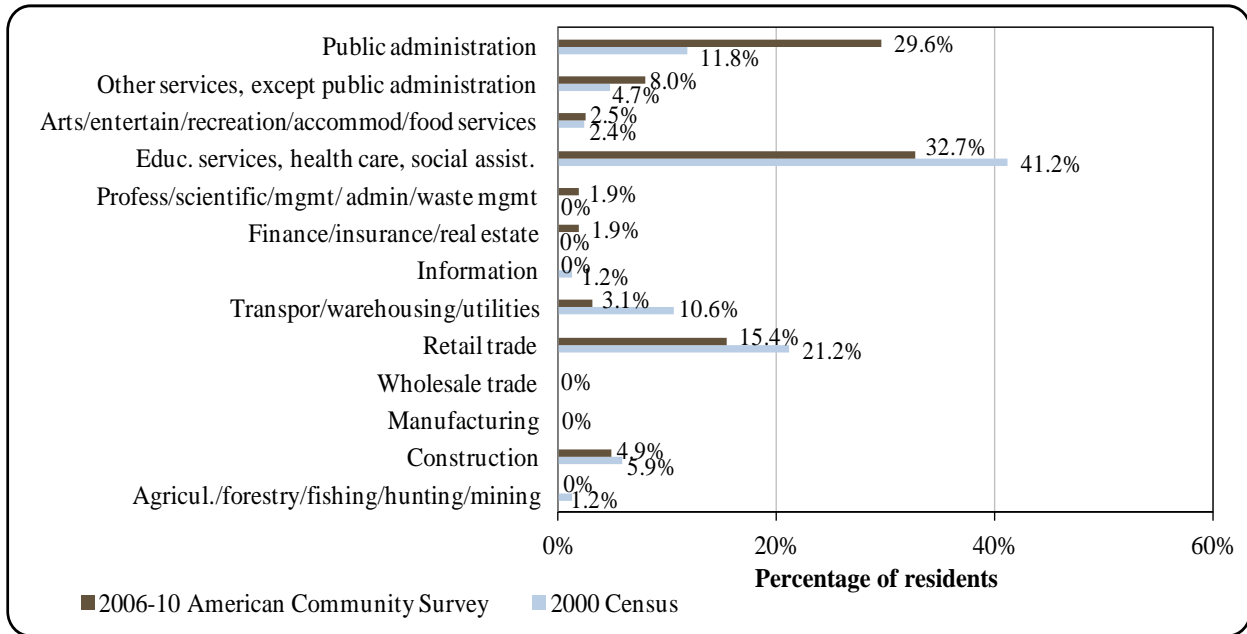
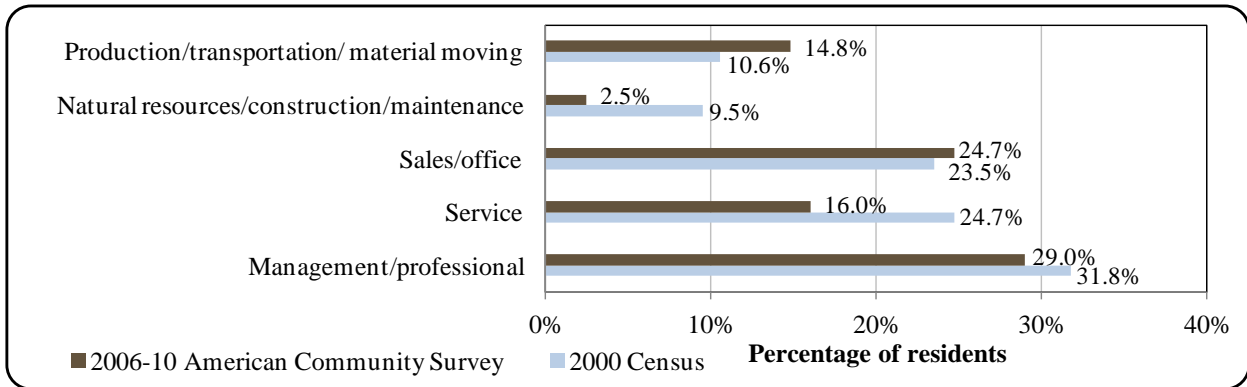


Figure 4. Local Employment by Occupation in 2000-2010, Tununak (U.S. Census).



Governance

Tununak is an unincorporated town that is not located within an organized Borough. Because of Tununak’s unincorporated status, no municipal taxes were administered between 2000 and 2010. However, Tununak did receive State Revenue Sharing contributions of approximately \$3,700 in 2001 and 2003. Tununak did not receive any fisheries-related grants between 2000 and 2010. Information about selected aspects of Tununak’s community revenue is presented in Table 2.

Tununak was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The local village Native corporation is Tununrmiut Rinit Corporation. The regional Native corporation to which Tununak belongs is the Calista Corporation. The region Calista Corporation serves is a vast and beautiful corner of the world. Tucked between two of Southwest Alaska’s mightiest rivers – the Yukon and the Kuskokwim –

this unique isolated area is the traditional home of the state’s indigenous Yup’ik, Cup’ik and Athabascan people, Calista Corporation’s shareholders. The Calista Region encompasses 57,000 square miles and is the second largest ANCSA region in land size. The land entitlement to Calista, however, is only 6.5 million acres - less than 20 % of the land area. Approximately 75 % of the land within the Region is owned by the U.S. Fish and Wildlife Service. Most of the remaining lands are owned by federal and state governments, with a very small amount privately owned. Surrounded by mostly federally owned lands, the Region is about the size of New York State. It encompasses nearly 10 percent of Alaska’s land area and is comprised of 56 federally recognized tribes. There are no roads that connect the region with the rest of Alaska. Because everything must be flown or barged to each community, the cost of food, fuel, transportation and energy are extraordinarily high. Calista Corporation works hard and partners with many to improve and enrich the way of life for its Shareholders and Descendants.¹³³¹

The nearest offices of Alaska Department of Fish and Game (ADF&G) and Alaska Department of Commerce, Community and Economic Development are located in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources (DNR), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement offices are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Tununak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹³³¹ Calista Corporation (2011). *Shareholder Overview: Our History*. Retrieved on May 11, 2012 from <http://www.calistacorp.com/shareholders/shareholder-overview>.

Infrastructure

Connectivity and Transportation

Tununak relies on air transportation for passengers, mail, and cargo service. A state-owned 1,778 ft long by 30 ft wide gravel airstrip is available. Barges deliver goods two to four times each summer, and goods are lightered to shore. Boats, snowmobiles, and ATVs are used for local travel.¹³³² Round-trip airfare between Tununak and Anchorage in June of 2012 was \$768.¹³³³

*Facilities*¹³³⁴

Water is derived from Muskox Creek. A flush/haul system provides services to some homes. Some residents currently haul water from six watering points. The community relies on the washeteria for laundry and bathing. The school provides its own piped water system, and sewage discharges to the village drainfield. Law enforcement services are provided by a Village Public Safety Officer (VPSO) and state troopers in Bethel. Tununak also has a community hall.

*Medical Services*¹³³⁵

Medical care is provided by the Tununak Clinic, which is owned by the Village Council and operated by the Yukon Kuskokwim Health Corporation. The clinic is a Community Health Aid Program (CHAP) site. Emergency services have coastal and air access and are provided by a health aide. The closest Acute Care facility and qualified Emergency Care Center is located in Bethel.

*Educational Opportunities*¹³³⁶

The Paul T. Albert Memorial School provides instruction to students in pre-school through 12th grade. In 2011 the school had 131 students and 9 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Tununak is located on Nelson Island on Tununak Bay, across the water from Nunivak Island.¹³³⁷ The area is located in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Toksook Bay

¹³³² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³³³ Airfare was calculated on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹³³⁴ See footnote 1332.

¹³³⁵ Ibid.

¹³³⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹³³⁷ Ibid.

participates in the Community Development Quota (CDQ) program through the Coastal Villages Region Fund (CVRF). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹³³⁸ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. The community is located in Federal Reporting Area 508, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. The mission of CVRF is to provide the means for development of its member communities by sensibly creating tangible, long-term opportunities for all residents who want to fish and work. On behalf of the 20 member communities, CVRF has grown to be the largest seafood owner/operator headquartered in Alaska. CVRF is now able to take a broader and more balanced approach to managing the Kuskokwim Delta and Bering Sea seafood resources. For its residents, CVRF must continue to protect its fisheries and its investments in these fisheries, grow in a strategic and sustainable manner, and remain adaptable to take advantage of all positive opportunities. CVRF's investments in Bering Sea fisheries enables CVRF to provide fishing opportunities in salmon, halibut, and herring in the region.¹³³⁹

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there was one processing plant operating in Tununak in 2010. The Coastal Villages Seafoods fish processing plant in Tununak is a CDQ operation, a subsidiary of the Coastal Villages Region Fund. The Tununak facility processes halibut in June and July. CVRF maintains a local community service center that helps local fishing families maintain, repair, service and modify their boats, motors, and fishing gear. The local plant provides free room and board to its fish processing workers, as well as transportation to and from the plant site and a cash bonus for all those who complete their contracts.¹³⁴⁰

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Tununak (Table 3).

Commercial Fishing

Tununak ranked 57th in landings and 55th in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings in 2010. In 2010, a total of 58 Tununak residents held 75 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for the halibut, herring, and salmon fisheries. There were 28 CFEC permits

¹³³⁸ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹³³⁹ Coastal Villages Region Fund (2010). *CVRF: Who We Are*. Retrieved on May 11, 2012 from <http://www.coastalvillages.org/>.

¹³⁴⁰ Coastal Villages Seafoods. (n.d.). *Company website*. Retrieved April 15, 2012 from <http://coastalvillages.org/>.

reported as fished in 2010 (37%). Between three and four salmon CFEC permits were issued each year to between three and five Tununak residents, however the only years in which salmon CFEC permits were reported as fished were 2000, 2003, and 2007. Salmon CFEC permits were issued in 2010 for the Bristol Bay drift gill net and Kuskokwim gill net fisheries. In 2010, there were 34 halibut CFEC permits issued to 30 permit holders, with 28 permits (82%) reported as fished. The majority (20) of these permits were issued for the statewide hand troll fishery, with the remainder issued for the statewide longline fishery using vessels under 60 feet and the statewide mechanical jig fishery. The number of halibut CFEC permits, permit holders, and permits reported as fished decreased between 2000 and 2010. There were 37 herring CFEC permits issued to 36 Tununak residents in 2010, though none of the permits issued that year were reported as fished. Nearly all of these permits were issued for the Nelson Island gill net fishery, with one permit issued for the Nunivak Island gill net fishery. Overall between 2000 and 2010, the number of herring CFEC permits and permit holders remained relatively stable, though there were no herring CFEC permits reported as fished in 2005 or between 2007 and 2010. Information on permits and permit holders by species is presented in Table 4.

There was only 1 crew license holder in Tununak in 2010, a substantial decline from 23 crew license holders in 2000. Though there was a shore-side processing facility located in Tununak between 2000 and 2010, the only two years in which a fish buyer was recorded in the community during this period were 2009 and 2010. The number of commercial fishing vessels owned by Tununak residents and the number of vessels homeported in the community both decreased between 2000 and 2010. There were 34 vessels recorded as landing catch in the community in 2009 and 40 vessels in 2010, though the landings and ex-vessel revenue in those years were considered confidential due to a small number of fish buyers. There were no vessels landing catch in the community between 2000 and 2008. Information on characteristics of the commercial fishing sector in Tununak is presented in Table 5.

Between 2000 and 2010, there were 4,454 halibut quota shares were held by residents of Tununak, however there was no Individual Fishing Quota allotment associated with those shares during this period. Information on halibut quota holdings between 2000 and 2010 is presented in Table 6. There were no sablefish quota shares held between 2000 and 2010 (Table 7) and no crab quota shares held between 2005 and 2010 (Table 8) in Tununak.

As stated previously, there were no commercial landings recorded in Tununak between 2000 and 2008. Landings and associated ex-vessel revenue in 2009 and 2010 was considered confidential due to a small number of participants (Table 9). Landings by Tununak residents were considered confidential for all species and all years between 2000 and 2010 except halibut between 2000 and 2010 and herring between 2000 and 2004 and in 2006. Landings and ex-vessel revenue for both species varied widely during this period. Information on landed pounds and ex-vessel revenue by Tununak residents between 2000 and 2010 is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Tununak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Tununak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	41	57	49	42	33	37	29	37	34	35	34
	Fished permits	30	45	32	26	21	30	23	31	28	28	28
	% of permits fished	73%	79%	65%	62%	64%	81%	79%	84%	82%	80%	82%
	Total permit holders	37	47	42	37	29	33	27	34	31	31	30
Herring (CFEC) ²	Total permits	38	37	37	37	36	33	34	32	32	37	37
	Fished permits	18	9	8	7	5	0	5	0	0	0	0
	% of permits fished	47%	24%	22%	19%	14%	0%	15%	0%	0%	0%	0%
	Total permit holders	38	37	37	36	37	35	34	32	32	36	36

Table 4 cont'd. Permits and Permit Holders by Species, Tununak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	1	1	0	0	0	0	0	0	0	0
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	0%	0%	-	-	-	-	-	-	-	-
	Total permit holders	1	1	1	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	4	4	4	4	3	3	3	3	3	4	4
	Fished permits	2	0	0	1	0	0	0	1	0	0	0
	% of permits fished	50%	0%	0%	25%	0%	0%	0%	33%	0%	0%	0%
	Total permit holders	5	4	4	4	3	3	3	3	3	4	5
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>84</i>	<i>99</i>	<i>91</i>	<i>83</i>	<i>72</i>	<i>73</i>	<i>66</i>	<i>72</i>	<i>69</i>	<i>76</i>	<i>75</i>
	<i>Fished permits</i>	<i>51</i>	<i>54</i>	<i>40</i>	<i>34</i>	<i>26</i>	<i>30</i>	<i>28</i>	<i>32</i>	<i>28</i>	<i>28</i>	<i>28</i>
	<i>% of permits fished</i>	<i>61%</i>	<i>55%</i>	<i>44%</i>	<i>41%</i>	<i>36%</i>	<i>41%</i>	<i>42%</i>	<i>44%</i>	<i>41%</i>	<i>37%</i>	<i>37%</i>
	<i>Permit holders</i>	<i>57</i>	<i>60</i>	<i>59</i>	<i>56</i>	<i>51</i>	<i>56</i>	<i>50</i>	<i>53</i>	<i>53</i>	<i>58</i>	<i>58</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Tununak: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Tununak ²	Total Net Pounds Landed in Tununak ^{2,5}	Total Ex-Vessel Value of Landings in Tununak ^{2,5}
2000	23	0	1	55	51	0	0	\$0
2001	13	0	1	55	50	0	0	\$0
2002	16	0	1	47	43	0	0	\$0
2003	12	0	1	41	38	0	0	\$0
2004	10	0	1	32	30	0	0	\$0
2005	2	0	1	35	32	0	0	\$0
2006	8	0	1	27	26	0	0	\$0
2007	2	0	1	35	37	0	0	\$0
2008	3	0	1	33	33	0	0	\$0
2009	4	1	1	34	33	34	--	--
2010	1	1	1	36	34	40	--	--

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Tununak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	4,454	0
2001	0	4,454	0
2002	0	4,454	0
2003	0	4,454	0
2004	0	4,454	0
2005	0	4,454	0
2006	0	4,454	0
2007	0	4,454	0
2008	0	4,454	0
2009	0	4,454	0
2010	0	4,454	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Tununak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Tununak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Tununak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	--	--
Halibut	0	0	0	0	0	0	0	0	0	--	--
Herring	0	0	0	0	0	0	0	0	0	--	--
Other Groundfish	0	0	0	0	0	0	0	0	0	--	--
Other Shellfish	0	0	0	0	0	0	0	0	0	--	--
Pacific Cod	0	0	0	0	0	0	0	0	0	--	--
Pollock	0	0	0	0	0	0	0	0	0	--	--
Sablefish	0	0	0	0	0	0	0	0	0	--	--
Salmon	0	0	0	0	0	0	0	0	0	--	--
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Tununak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	18,966	48,763	29,792	17,158	7,573	17,516	30,254	28,720	26,279	14,952	16,719
Herring	342,980	106,926	97,254	211,976	104,217	--	64,676	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>361,946</i>	<i>155,689</i>	<i>127,046</i>	<i>229,134</i>	<i>111,790</i>	<i>17,516</i>	<i>94,930</i>	<i>28,720</i>	<i>26,279</i>	<i>14,952</i>	<i>16,719</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$23,715	\$59,396	\$52,790	\$21,680	\$9,366	\$36,331	\$113,224	\$124,226	\$114,022	\$36,356	\$52,664
Herring	\$33,118	\$5,346	\$5,057	\$11,447	\$11,047	--	\$3,622	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$56,833</i>	<i>\$64,743</i>	<i>\$57,847</i>	<i>\$33,127</i>	<i>\$20,413</i>	<i>\$36,331</i>	<i>\$116,846</i>	<i>\$124,226</i>	<i>\$114,022</i>	<i>\$36,356</i>	<i>\$52,664</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

There were no residents of Tununak holding sport fish guide licenses between 2000 and 2010, and no active sport fish guide business located in Tununak during this period. Given this, no kept/released log book data were reported for fishing charters out of Tununak between 2000 and 2010.¹³⁴¹ In 2010, there were 56 sportfishing licenses sold to Tununak residents (irrespective of the location of the point of sale), an increase from 6 licenses sold to community residents in 2000. During this period there were no sportfishing licenses sold within the community, indicating the potential that Tununak residents travel to other areas or nearby communities to participate in sportfishing activities.

The Alaska Statewide Harvest Survey,¹³⁴² conducted by ADF&G between 2000 and 2010, did not provide information about species targeted by private anglers in Tununak. However, Tununak is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages and information is available about both saltwater and freshwater sportfishing activity at this regional scale. Between 2000 and 2010, saltwater sportfishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sportfishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sportfishing sector in and near Tununak is displayed in Table 11.

Table 11. Sport Fishing Trends, Tununak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Tununak ²
2000	0	0	6	0
2001	0	0	7	0
2002	0	0	19	0
2003	0	0	21	0
2004	0	0	13	0
2005	0	0	38	0
2006	0	0	12	0
2007	0	0	19	0
2008	0	0	30	0
2009	0	0	39	0
2010	0	0	56	0

¹³⁴¹ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹³⁴² Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Tununak: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Trapping and Native crafts generate cash for many families, and subsistence activities are an important contributor to villagers’ diets. Seal meat, seal oil, and herring are the staples of the diet. Beluga whale and walrus are also hunted. Residents participate in a lottery to hunt musk-ox on Nelson or Nunivak Islands.¹³⁴³

Data were not reported regarding subsistence participation at the household level or per capita subsistence harvest in Tununak between 2000 and 2010. However, data are reported on total subsistence harvests at the species level. In years for which data were reported for salmon harvests between 2000 and 2010, an average of 101 subsistence salmon permits was issued to Tununak residents, with an average of four permits returned. Coho salmon were the primary species harvested for subsistence (an average of 34 coho per year), along with Chinook salmon, chum salmon, and sockeye salmon (Table 13). Data on subsistence harvest of marine invertebrates and non-salmon fish were not reported during this period.

Between 2004 and 2008, an average of 69 Subsistence Halibut Registration Certificate (SHARC) were issued to Tununak residents, although in only 11 were issued in both 2009 and

¹³⁴³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

2010. The number of SHARC reported as fished averaged 36 between 2004 and 2007, but in 2008 there were 8 permits reported as fished and in 2009 there were 7 permits reported as fished. By 2010, only two SHARC were fished. The reported annual subsistence harvest of halibut averaged 3,520 pounds per year between 2004 and 2008, with 488 pounds of subsistence halibut harvest reported in 2009, and 190 pounds in 2010. Information about subsistence harvest of halibut is presented in Table 14.

Although anecdotal reports of seal and walrus harvests are known, only three walrus were officially reported harvested for subsistence use in 2002, but no other data reported for subsistence harvest of marine mammals between 2000 and 2010 (Table 15).

The ADF&G Division of Subsistence reported that unknown species of marine invertebrates were used for subsistence in Tununak during this period. Marine mammals reported as harvested for subsistence use included bearded seal, ribbon seal, ringed seal, spotted seal, and Steller sea lion. Non-salmon fish reported as harvested for subsistence use included: blackfish, burbot, capelin (grunion), Dolly Varden, flounder, herring, herring roe, herring sac roe, herring spawn on kelp, Pacific cod (gray), Pacific tomcod, pike, sculpin, sheefish, smelt, stickleback (needlefish), unknown smelt, whitefish, and wolf fish.¹³⁴⁴

Table 12. Subsistence Participation by Household and Species, Tununak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹³⁴⁴ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Tununak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	108	9	52	44	23	n/a	48	n/a	n/a
2001	108	2	n/a	n/a	25	n/a	n/a	n/a	n/a
2002	110	5	1	n/a	49	n/a	8	n/a	n/a
2003	110	1	5	10	n/a	n/a	5	n/a	n/a
2004	104	5	5	n/a	40	n/a	10	n/a	n/a
2005	104	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	104	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	104	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	61	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Tununak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	70	31	2,605
2005	70	43	2,654
2006	70	33	4,032
2007	69	38	7,015
2008	68	8	1,296
2009	11	7	488
2010	11	2	190

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Tununak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

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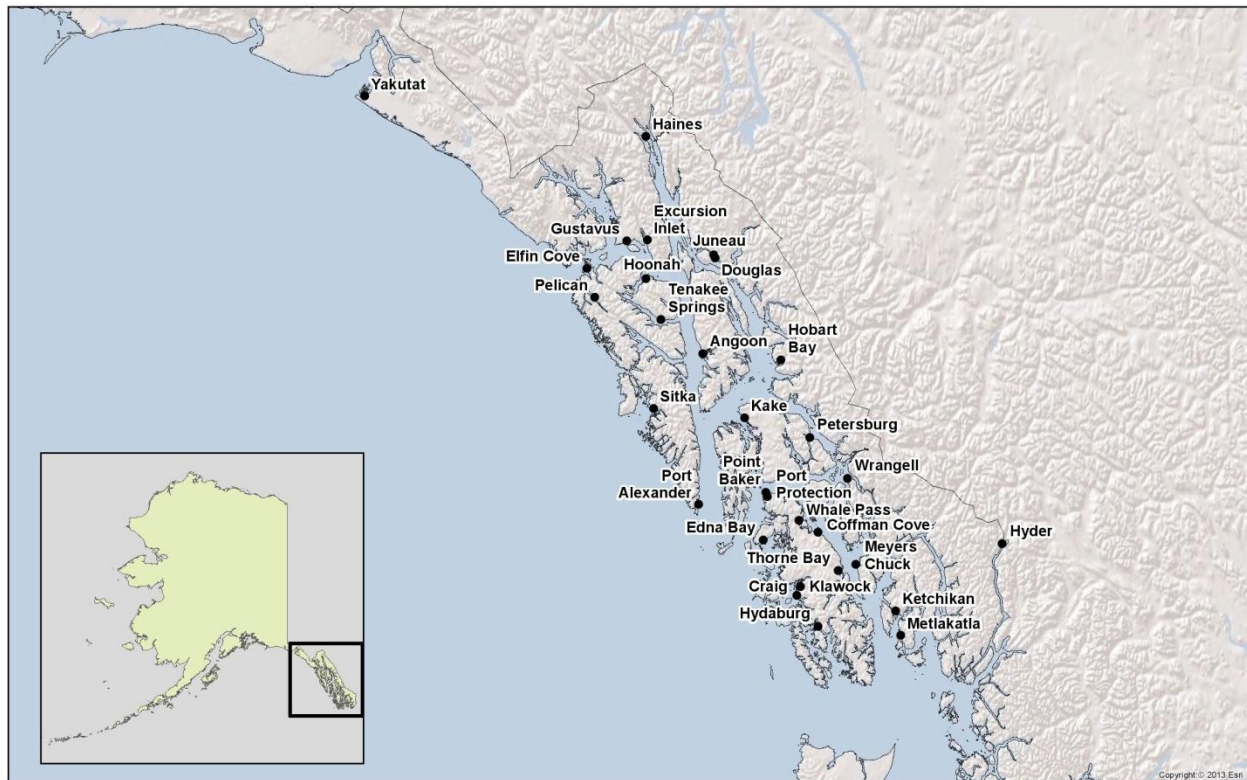
Regional Introduction: Southeast Alaska

Communities

Angoon	Hyder	Port Alexander
Craig	Juneau*	Port Protection
Edna Bay	Kake	Sitka
Elfin Cove	Ketchikan**	Tenakee Springs
Excursion Inlet	Klawock	Thorne Bay
Gustavus	Metlakatla	Whale Pass
Haines	Meyers Chuck	Wrangell
Hobart Bay	Pelican	Yakutat
Hoonah	Petersburg	
Hydaburg	Point Baker	

* Includes Juneau City and Borough, plus Douglas and Auke Bay.

** Includes Ward Cove



People and Place

Location

Occupying 35,138 square miles, the Southeast Alaska region trails in a thin coastal strip of land from Yakutat in the northwest (59.547° N Lat.) to Prince of Wales in the southeast (55.208° N Lat.), and borders the Canadian province of British Columbia and the Yukon Territory.

Demographic Profile

Southeast Alaska includes seven boroughs (Yakutat, Ketchikan Gateway, Haines, Wrangell, Sitka, Petersburg, and Juneau) and two census areas (Hoonah-Angoon and Prince of Wales-Hyder). A total of 28 communities met profiling criteria; of which 12 had populations in excess of 500, and 5 had populations in excess of 2,000 in 2010. Large population centers include the cities of Sitka, Ketchikan, and Juneau.

In 2010, Southeast Alaska has approximately 72,000 residents, most of whom are concentrated in the region's larger cities of Juneau, Sitka, and Ketchikan. Approximately 67% of the region's residents are White, while approximately 22% identified themselves as at least part American Indian or Alaska Native.¹

Juneau, the state capital, has a population of approximately 31,000² and a good share of the economic activity of the region. The backbone of the regional economy is commercial fishing. Major commercial fleets are based in the large ports of Sitka, Yakutat, Petersburg, Wrangell, and Ketchikan, but even smaller communities have sizable fleets. In addition, many communities have commercial fish processing plants and storage facilities. The timber industry also constitutes an important part of the regional economy. A growing tourist industry, bolstered by increasing cruise ship stopovers, is becoming an important source of revenue; approximately half a million tourists visit Southeast Alaska by cruise ship annually.

In general, the economy of Southeast Alaska is well developed in comparison to other regions in Alaska, owing to its proximity to the lower 48 states and its history of commercial fishing and resource extraction. In 2010, the regional per capita income was estimated to be around \$29,500 and the median household income was estimated to be around \$59,000. Of those aged 16 and over, an estimated 70.9% were considered part of the civilian labor force in 2010. Most (21.3%) were estimated to work in education service, health care, and social assistance sectors; followed by public administration (16.3%) and retail trade (12.2%) sectors. Unemployment was estimated at 7.0% in 2010.³

¹ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Ibid.

³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

History

Human occupation of Southeast Alaska is dated back to approximately 10,300 years ago according to evidence of human remains and tools found in On Your Knees cave on the northern tip of Prince of Wales Island.⁴ Traditionally, Southeast Alaska was a patchwork of territories occupied by Tlingit, Haida, and Tsimshian peoples, with Tlingit groups occupying much of the northern region. Tlingit oral history dates occupation of Bartlett Cove, in northern Southeast Alaska, to 4,500 years ago,⁵ and oral histories told by the Huna people of Chichigof Island tell of times when glaciers filled all of Glacier Bay.⁶ Fish traps found along the Chilkoot River, near Haines, are dated to approximately 2,100 years ago.⁷ Originally occupied by Tlingit peoples, Haida Indians moved into the southern portion of Southeast Alaska from Haida Gwaii (British Columbia's Queen Charlotte Islands) during the 1700s. On Prince of Wales Island they established multiple settlements, taking advantage of the Island's rich resources, including abundant sea otters.⁸ Tsimshian villages were located in southern Southeast Alaska at Hyder and Halibut Bay.⁹

In the late 18th century, Russian and English fur traders came to the area, and in 1799, a Russian trading post was built in present day Sitka. While initially embraced by the local indigenous population, Russian occupation eventually led to what would be the first of many conflicts between Russians/Americans and local Native peoples.

The late 1800s and early 1900s was a period of expansion brought on by resource extraction. The first salmon cannery in Alaska was established in Klawock in 1868, with others following shortly thereafter.¹⁰ Alaska's first halibut fishery started in 1896 in the Wrangell Narrows, and in 1900, the Icy Straits Packing Company began processing catch in Petersburg. In 1907, the Tongass National Forest was established, creating a single management unit for 6.8 million acres of forestlands.¹¹ Timber harvesting went on to become a definitive industry in several Southeast Alaska communities. Ketchikan Spruce Mills opened in 1903 in support of the local salmon cannery, and the Ketchikan Pulp Company was established in 1954.¹² Both the Wrangell Lumber Company, and Sitka's Alaska Pulp Corporation began operations in the 1950s.^{13,14} By 1915, the Treadwell Mine in Juneau was approaching the height of its

⁴ University of South Dakota. (n.d.). *On Your Knees Cave*. Retrieved February 29, 2012 from: <http://orgs.usd.edu/esci/alaska/oykc.html>.

⁵ Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan 2005: Protecting and Planning Our Future*. Retrieved June 15, 2012 from <http://cms.gustavus-ak.gov/services/planning/strategic>.

⁶ Langdon, Steve J. 2006. *Traditional Knowledge and Harvesting of Salmon by Huna and Hinyaa Tlingit: Final Report*. U.S. Fish and Wildlife Service, Fisheries Information Service Project 02-104. Retrieved October 10, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/02-104final.pdf>.

⁷ Haines Borough. (2004). *Comprehensive Plan*. Retrieved October 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/HainesBorough-CP-2004.pdf>.

⁸ Halliday, Jan. (1998). *Native Peoples of Alaska: A Traveler's Guide to Land, Art, and Culture*. Seattle: Sasquatch Books. P. 25.

⁹ Alaska Native Heritage Center (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

¹⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹ Alaska Humanities Forum.(n.d.). *Southeast Alaska*. Retrieved December 6, 2012 from: <http://www.akhistorycourse.org/articles/article.php?artID=84>.

¹² See footnote 10.

¹³ Alaska Department of Environmental Conservation. (n.d.). *Alaska Pulp Corporation, Silver Bay*. Retrieved December 6, 2012 from: <http://dec.alaska.gov/spar/csp/sites/apc.htm>

production, before it was flooded and operations largely ceased. The Alaska-Juneau mine would go on to become the largest gold mine in the world by 1920.¹⁵

During World War II, many mines shuttered due to labor shortages. Timber harvesting boomed in response to the U.S. Military's need for spruce. By the 1950s, the timber industry became more profitable than both the mining and commercial fishery industries. Lumber mills in Ketchikan, Sitka, and Wrangell operated at peak production during this time. By the 1960s, a focus on mounting economic pressures on Native Alaskans from increased regulations on fish traps and growing timber sales become part of a larger statewide narrative leading to the passage of the Alaska Native Claims Settlement Act in 1971. Following its passage, the Act allowed for the formation of regional and local Native for-profit corporations and land entitlements from which resources could be extracted.¹⁶

As a majority of land in Southeast Alaska is still managed by the federal government, land use and management disputes remain common today. Many communities continue to maintain a large aspect of their original character, despite rapid and widespread changes to the region. In part, this level of diversity is how the Southeast Alaska region has become, despite its smaller geographic extent, a dense patchwork of boroughs and census areas.

Natural Resources and Environment

Spectacular amounts of precipitation are the hallmark of weather in Southeast Alaska. The region is in the maritime climate zone, which is characterized by mild, wet weather. With some exceptions, many communities receive well over 120 inches (10 feet) of rain annually. The northern portion of the region also receives heavy snowfall. In the summer, average temperatures range from 50 to 65°, and average winter temperatures range from 29 to 40°.¹⁷

Much of Southeast Alaska lies within the vast Tongass National Forest, a coastal rain forest covering almost 17 million acres of dense Western hemlock and Sitka spruce stands. Hundreds of islands interlaced by deep fjords, straits, sounds, and channels hug Alaska's rugged Coast Mountains which range from 1,500 to 15,000 feet in height. The region's geology is complex; shaped by both volcanism and glaciation. At their maximum some 40,000 years ago, the region's extensive glaciers carved the irregular coastlines, narrow fjords and bays, and marine terraces characteristic of modern day Southeast Alaska. Today, the 1,500 square mile Juneau Icefield holds much of the remnants of the region's glaciated past. In addition, alpine glaciers still cover much of the Yakutat and Glacier Bay areas and Stikine Icefield, east of Wrangell.¹⁸

Natural resources within Southeast Alaska are both diverse and abundant. The region's geology contains highly mineralized areas supporting profitable gold, silver, platinum, zinc, and molybdenum deposits. Sources of marble, limestone, lead, and nickel are also present. Southeast's diverse network of ecosystems support over 300 species of mammals, birds,

¹⁴ Roppel, F. (2011). *Wrangell Sawmill's Golden Years and Eventual Collapse*. Capital City Weekly. Retrieved December 6, 2012 from: http://capitalcityweekly.com/stories/102611/new_905319626.shtml.

¹⁵ Alaska Humanities Forum.(n.d.). *Southeast Alaska*. Retrieved December 6, 2012 from: <http://www.akhistorycourse.org/articles/article.php?artID=84>.

¹⁶ Ibid.

¹⁷ See footnote 10.

¹⁸ Southeast Conference and Central Council Tlingit and Haida Indian Tribes of Alaska. (2006). *Southeast Alaska Comprehensive Economic Development Strategy 2006-2011*. Retrieved November 16, 2012 from: http://www.commerce.state.ak.us/dca/oedp/pubs/seconf_ceds.pdf.

amphibians, and reptiles, as well as 18 species of marine mammals, 37 freshwater or anadromous fish, and 36 species of marine invertebrates. Timber resources are extensive, with historic and cotemporary harvests occurring in Juneau, Sitka, Wrangell, Ketchikan, and Prince of Wales Island. While timber harvesting activities have been scaled back significantly since the early twentieth century, the U.S. Forest Service has in recent years begun to increase the number of timber sales on federal lands. Timber harvesting also occurs on private lands, much of which are owned by Sealaska, Southeast Alaska's regional Alaska Native Claims Settlement Act (ANCSA) chartered for-profit corporation.¹⁹

Governance

Southeast Alaska includes seven boroughs (Yakutat, Ketchikan Gateway, Wrangell, Haines, Sitka, Petersburg, and Juneau) and two census areas (Hoonah-Angoon and Prince of Wales-Hyder). As a result of this organizational structure, many communities located in census areas rather than boroughs are responsible for administrative tasks, such as tax collection and the provision of services. A notable administrative anomaly in the region is Metlakatla, a Tsimshian community located in the only federal Indian Reservation Alaska. The reservation encompasses all 86,000 acres of Annette Island.²⁰ This land is the only federal reservation for indigenous peoples in Alaska, since other groups acquired land entitlements through Native Associations during the ANCSA in 1971.²¹

Another unique aspect of Southeast Alaska's institutional framework is the Tongass National Forest, the largest in the nation, which covers much of the region and comes with federally mandated regulations governing resource extraction and conservation.²²

Despite the low proportion of Alaska Natives in the southeast relative to other regions in Alaska, Alaska Native governing bodies are an important and powerful part of regional government. The Sealaska Corporation, a regional for-profit Native Corporation organized under ANCSA, is the largest private landowner in Southeast Alaska.²³ Alaska Natives in many communities also belong to the Central Council Tlingit and Haida Tribes of Alaska, the regional non-profit Native Corporation. In addition, many communities also have Native village councils and village corporations.

Involvement in North Pacific Fisheries

Fishing has long been the backbone of the regional economy in Southeast Alaska. In fact, the rise and fall of the region's population has been correlated with the economic cycles of commercial fishing. Commercial fishing, in particular, accounts for a good portion of the

¹⁹ Ibid.

²⁰ Metlakatla Indian Community (2005). Retrieved April 23, 2012 from <http://www.metlakatla.com/community.php>.

²¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²² U.S. Forest Service. (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

²³ Southeast Conference and Central Council Tlingit and Haida Indian Tribes of Alaska. (2006). *Southeast Alaska Comprehensive Economic Development Strategy 2006-2011*. Retrieved November 16, 2012 from: http://www.commerce.state.ak.us/dca/oedp/pubs/seconf_ceds.pdf.

regional economy. Major commercial species include all five species of Pacific salmon, halibut, herring, groundfish, crab, and other shellfish.²⁴

Historically, fishing began in the region with the opening of a salmon saltery on Prince of Wales Island in 1878. By 1900, Southeast Alaska was contributing a third of Alaska's total processed salmon.²⁵ Herring oil and meal fisheries began in the 1880 and a large herring reduction facility was operated outside of Angoon until 1930.²⁶ The herring bait fishery began around 1900, and a sac roe fishery in the 1970s.²⁷ In addition, it was during the 1970s that sablefish, lingcod, and Pacific cod fisheries began to gain popularity. In recent years, geoduck and sea cucumber harvests have been increasing in reaction to increased market demand.²⁸

The larger ports in Southeast Alaska—including Yakutat, Juneau, Sitka, Wrangell, Petersburg, and Ketchikan—serve as hubs in the regional commercial fishing sector. These ports account for thousands of registered crew members, thousands of commercial permit holders, and hundreds of vessels. In addition, they act as processing centers for the majority of fish caught in the region.^{29,30,31}

The dozens of smaller communities in Southeast Alaska are by no means left out of the commercial fishing picture. They account for a significant share of the region's registered crew members, vessel owners, and permit holders. In addition, many small communities have commercial fish processing plants or small-scale processing and storage facilities.³²

Sportfishing is also a vital part of the regional economy in Southeast Alaska, and one that is growing in importance. Fishermen come from all over Alaska, as well as Canada, the lower 48 states, and around the world to fish the productive waters in the area. Major sport species include all five species of Pacific salmon, Pacific halibut, trout, steelhead, and char (Dolly Varden).³³ In 2010, approximately 147,000 sportfishing licenses total were sold in the Southeast Alaska

²⁴ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁵ Southeast Conference and Central Council Tlingit and Haida Indian Tribes of Alaska. (2006). *Southeast Alaska Comprehensive Economic Development Strategy 2006-2011*. Retrieved November 16, 2012 from: http://www.commerce.state.ak.us/dca/oedp/pubs/seconf_ceds.pdf.

²⁶ Alaska Consultants Inc. (1976). *City of Angoon Comprehensive Development Plan*. Retrieved April 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Angoon-CP-1976.pdf>.

²⁷ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.ADFG.alaska.gov/FedAidPDFs/sp05-09.pdf>.

²⁸ Ibid.

²⁹ Alaska Department of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁰ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³¹ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³² Ibid.

³³ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADFG.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

communities profiled in this section. A large portion of these (approximately 77,000) were sold in Juneau.³⁴

In addition, most communities in the region participate to some degree in subsistence fishing. Smaller communities, and those with a higher proportion of Alaska Native residents, tend to rely more heavily on subsistence resources. Salmon, and particularly sockeye salmon, is the most widely used subsistence resource.³⁵ Other resources commonly used for subsistence include Pacific halibut, shellfish, rockfish, and marine mammals.^{36,37}

Regional Challenges

The particular challenges that face Southeast Alaska are, to a large extent, the result of the region's heavy reliance on natural resources. The first challenge is posed by changing patterns of timber harvesting and timber management. Most timber harvesting takes place on land held either by the Tongass National Forest or by Sealaska, the regional Native Corporation. Overall, timber harvesting has been in decline due to increased operating costs and weak domestic demand. Foreign price for exotic woods such as spruce remains high, encouraging small export markets.³⁸

Another major challenge of the past several decades has been instability in salmon prices resulting from the rise of farmed salmon on international markets. From the years of 1990 to 2000, the number of salmon fishermen declined by 37% which also resulted in a decline in the number of opportunities for crew members. Processors in many cases have dealt with this collapse in salmon prices with plant closures and the consolidation of operations, including the ceasing of salmon operations by the Wards Cove Packing Company in 2002.³⁹ However, since 2002, salmon ex-vessel prices and value have rebounded as a result of new marketing efforts and techniques, new product forms, improved quality, and development of new markets. In addition, an increase in the price of farmed salmon on the world market after 2002 meant reduced price competition, since buyers no longer had a cheaper alternative to wild salmon.⁴⁰

³⁴ Alaska Department of Fish and Game. 2011. *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁵ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

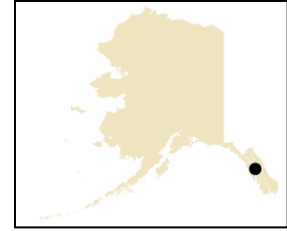
³⁶ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADFG.alaska.gov/sb/CSIS/> (Accessed February 2011).

³⁷ Fall, J.A. and D. Koster. (2011). *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³⁸ U.S. Department of Agriculture. (2007). *Status of the Tongass National Forest 2007*. Report No. 12. Retrieved November 6, 2012 from: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5349373.pdf.

³⁹ Gilbertson, Neal. (2003). The global salmon industry and its impacts in Alaska. *Alaska Economic Trends*, October 2003, 3-11.

⁴⁰ Knapp, Gunnar. (2012). *Trends in Alaska Salmon Markets*. Institute of Social and Economic Research, University of Alaska Anchorage. Power Point presentation prepared for the Northwest Fisheries Association meeting in Seattle, WA, March 7, 2012. Retrieved November 19, 2012 from http://www.iser.uaa.alaska.edu/Publications/presentations/2012_03-GunnarKnapp-TrendsInAlaskaSalmonMarkets.pdf.



Angoon (an-GOON)

People and Place

*Location*⁴¹

Angoon is the only permanent settlement on Admiralty Island, located on the southwest coast at Kootznahoo Inlet. Angoon is 55 mi southwest of Juneau and 41 mi northeast of Sitka. The area encompasses 22.5 sq mi of land and 16.1 sq mi of water. Angoon was incorporated into a Second-class city in 1963, is located in the Hoonah-Angoon Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁴²

In 2010, there were 459 residents ranking Angoon 127th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population fell by 28.1%. Between 2000 and 2009, the population fell by 22.7% with an average annual growth rate of -1.52%, which was significantly lower than the statewide average of 0.75% and indicative of a population in steady decline. Information regarding population trends can be found in Table 1.

The racial composition of Angoon is predominately Tlingit Native. In 2010, 75.8% of residents identified themselves as American Indian or Alaska Native, compared to 82.0% in 2000. Also in that year, 12.4% of residents identified themselves are two or more races, compared to 4.5% in 2000; 10.5% identified themselves as White, compared to 11.4% in 2000; 0.9% identified themselves as Black or African American, compared to 0.5% in 2000; and 0.4% identified themselves as some other race, compared to 1.4% in 2000. In addition, 7.8% of residents identified themselves as Hispanic or Latino, compared to 5.4% in 2000. Information regarding race and ethnicity in Angoon can be found in Figure 1.

In 2010, the average household size was 2.75, a decrease from 4.0 in 1990 and 3.11 in 2000. In that year, there were a total of 256 housing units, compared to 166 in 1990 and 221 in 2000. Of the households surveyed in 2010, 33% were owner-occupied, compared to 47% in 2000; 32% were renter-occupied, compared to 37% in 2000; 16% were vacant, compared to 5% in 2000; and 19% were occupied seasonally, compared to 11% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

The gender distribution in 2010 was somewhat skewed at 57.5% male and 42.5% female, which was less even than the distribution statewide (52.0% male, 48.0% female) and distribution in 2000 (52.4% male, 47.6% female). The median age that year was 39.1, which was older than the statewide median of 33.8 and 2000 median of 32.2.

⁴¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

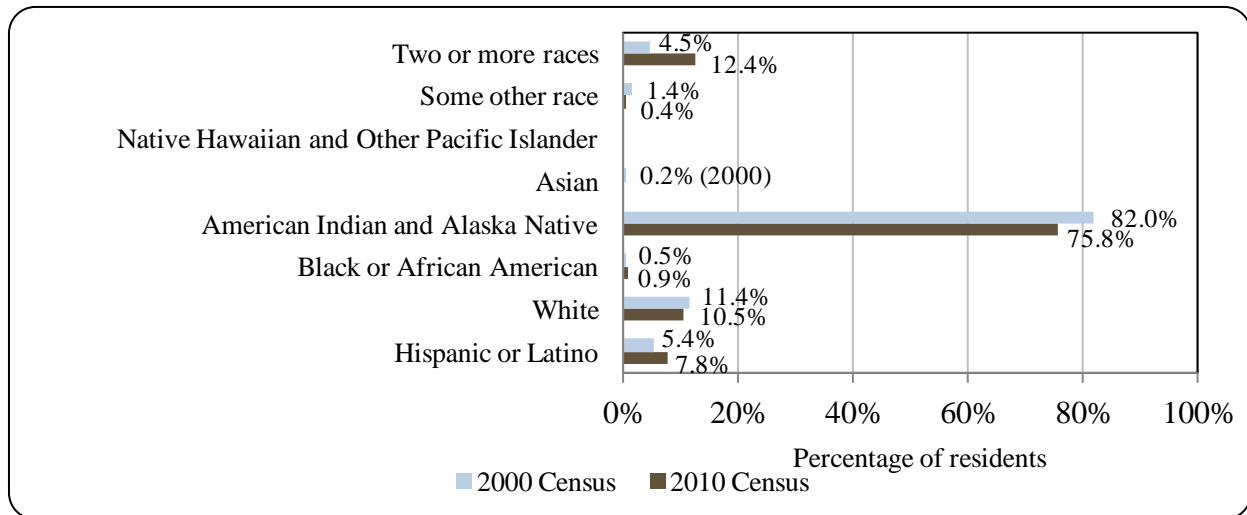
Table 1. Population in Angoon from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	638	-
2000	572	-
2001	-	555
2002	-	541
2003	-	504
2004	-	481
2005	-	495
2006	-	479
2007	-	474
2008	-	429
2009	-	442
2010	459	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Angoon: 2000-2010 (U.S. Census).



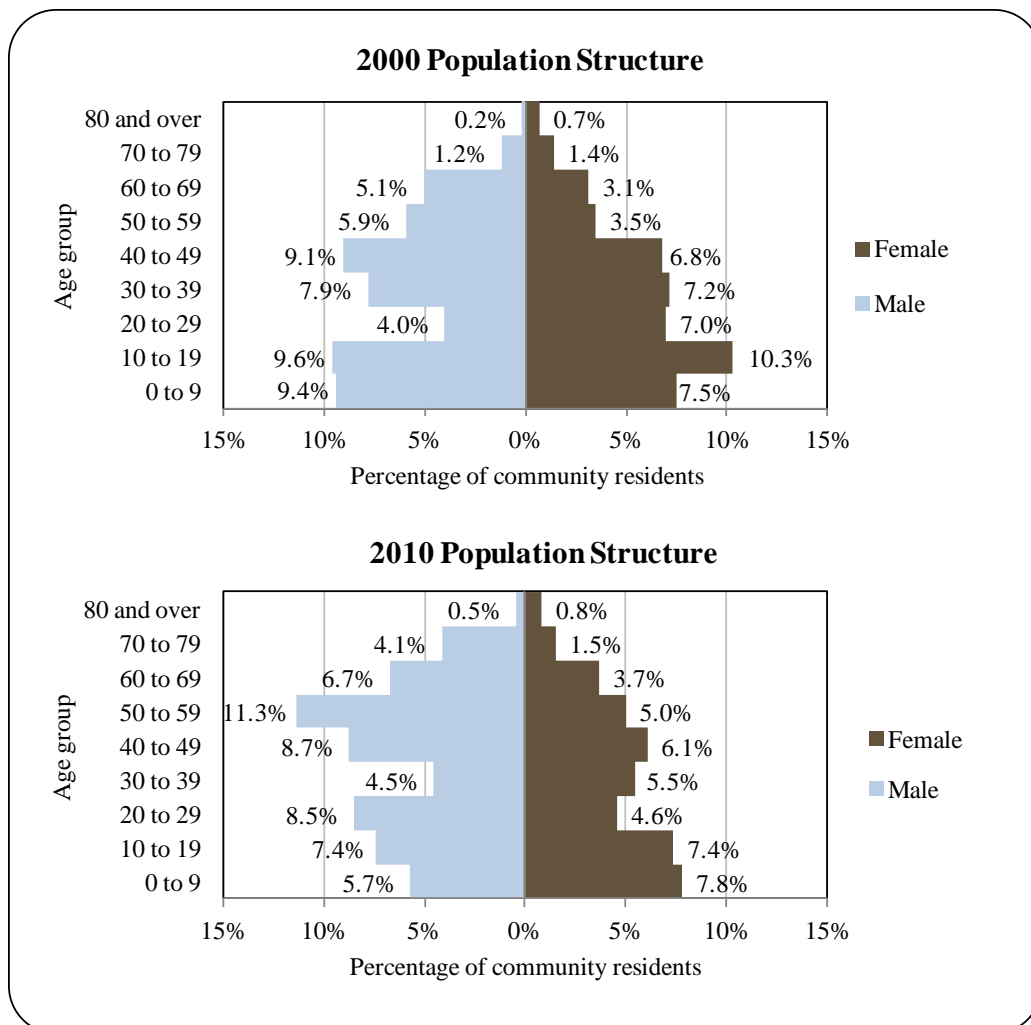
When compared with 2000, the population structure in 2010 was less expansive. In that year, 28.3% of residents were under the age of 20, compared to 36.8% in 2000; 17.3% were over the age of 59, compared to 11.7% in 2000; 41.1% were between the ages of 30 and 59, compared to 40.4% in 2000; and 13.1% were between the ages of 20 and 29, compared to 11% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000, with male biases along most age ranges. The greatest absolute gender difference that year occurred within 50 to 59

range (11.3% male, 5.0% female), followed by the 20 to 29 (8.5% male, 4.6% female) and 60 to 69 (6.7% male, 3.7% female) ranges. Of those three, the greatest relative gender difference occurred in the 50 to 59 range. Information regarding Angoon’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS) estimated that 72.3% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 2% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 25.7% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 28.2% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 5.9% held an Associate’s degree, compared to an estimated 8% of Alaska residents overall; an estimated 8.5% held a Bachelor’s degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 7.3% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Angoon Based on the 2000 and 2010 U.S. Decennial Census.



*History, Traditional Knowledge, and Culture*⁴³

The Tlingit peoples have occupied Admiralty Island for millennia. Plentiful resources supported the rich cultural and social traditions typical of Northwest Coast tribes. Prior to European and American contact, ownership over land and resources were managed by clan and house groups.

In the late eighteenth-century, Russian and English fur traders came to the area. Fur trapping and trading were major non-traditional economic activities in the Angoon area from the late 1700s to mid-1800s. During this time, the people of Angoon flourished. However, around the time of Alaska's purchase in 1867, fur resources greatly declined and were replaced by fishing and fish processing. The first salmon cannery in Alaska was established in Klawock in 1878, with others following shortly thereafter. However, during that time whaling attracted more commercial interest in the Chatham Strait than fishing. Between 1880 and 1882 The Northwest Trading Company established a trading post and whale processing plant at the nearby community of Killisnoo. Company labor was largely provided by members of the Hutsnuwu tribe, who were brought from Angoon and from the nearby village of Neltushkin. The Northwest Trading Company's venture into the whaling business proved not very successful, and tensions rose over poor working conditions and complaints of worker exploitation.

The tension took a dark turn after a Hutsnuwu man was killed following a premature whale harpoon detonation. This occurred a relatively short time after another Angoon laborer was killed by a fallen tree. A demand for payment in blankets was made by the family, as was customary in such a situation. Since the demand for such payment was ignored or misinterpreted by the company, additional crewmembers onboard the whaling vessel took two White men as hostages and threatened to hold them until payment of 200 blankets was made. The Northwest Trading Company, with backing from the U.S. Navy, rejected the demands and in turn demanded payment of 400 blankets from the village as punishment. Furthermore, they threatened that if the 400 blankets were not delivered by the following morning, the village would be destroyed. On October 26, 1882, The Navy carried out its threat and shelled Angoon after their demands were not met. In 1973, \$90,000 was paid as compensation to Angoon and a formal apology was given in 1982 by Assistant Secretary of the Navy, John Herrington. The Northwest Trading Company later switched to herring fishing and produced salted herring for food, oil, and fertilizer. However, the company went bankrupt in 1885 and was reorganized as the Alaska Oil and Guano Company, and later as the Alaska Fish Salting and By-Products Company.

In 1928, the village of Killisnoo was destroyed by fire, razing approximately 30 buildings and prompting most residents to return to Angoon. The herring processing plant shut down in 1930 as it was no longer able to operate profitably. A formal Tribal government was organized in 1939 under the 1936 Indian Reorganization Act (IRA). The city was incorporated in 1963. After the passage of the Alaska Native Claims Settlement Act (ANCSA) in 1971, Angoon formed Kootznoowoo Incorporated and was given the opportunity to select trust lands within the area. Archeological and historic sites in the area documented by the Sealaska Corporation in 1975 include several village and harbor sites located both within Angoon as well as Killisnoo Island.⁴⁴

⁴³ Alaska Consultants Inc. (1976). *City of Angoon Comprehensive Development Plan*. Retrieved April 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Angoon-CP-1976.pdf>.

⁴⁴ R&M Engineering, Inc. (2004). *Angoon Airport Reconnaissance Study*. Retrieved April 9, 2012 from: http://dot.alaska.gov/sereg/projects/angoon_airport/assets/2004_Recon_Study/2004_recon_study.pdf.

Natural Resources and Environment

Angoon's maritime climate is characterized by cool summers and mild winters. Summer temperatures range from 45 to 61 °F (7 to 16 °C). Winter temperatures range from 25 to 39 °F (-4 to 4 °C). Extremes in temperature have been recorded, ranging from a low of -6 to a high of 77 °F (-21 to 25 °C). Angoon receives much less precipitation than is typical of Southeast Alaska, averaging 43 inches annually. Annual snowfall averages 63 inches. Strong north winds during winter months cause rough seas, which at times prevent aircraft landings.⁴⁵

Angoon is located on the west coast of Admiralty Island, across the Chatham Strait from Chichagof and Baranof Islands. The city is located within the Alexander Archipelago, a large network of islands and inlets created from extensive glaciations during the last Ice Age. Admiralty Island's terrain is rugged; however, mountains located on the island are not as high as those located on the mainland or on neighboring Baranof Island. Bedrock in the area is principally marble, schist, and phyllite metamorphic rock. Overlaying soils consist mostly of gravelly loams. There is typically a 6 to 12 in duff layer on top of silt and gravel loams.⁴⁶

Angoon is located within the Tongass National Forest and is surrounded by vast mixed spruce and hemlock forests. Forest areas roughly extend from sea level to 1,500 ft of elevation, with a mix of 60% western hemlock, 30% Sitka spruce, and small amounts of red alder and yellow cedar. Thin or poorly drained soils found in alpine areas support hemlock, lodgepole pine, and Alaska yellow cedar. Basins and poorly drained areas support muskeg or bog environments. Groundcover includes a variety of mosses, berries, menziesiam, devil's club, skunk cabbage, and other shrubs.⁴⁷

Terrestrial mammals include Sitka black tail deer, brown bear, otter, beaver, mink, weasel, and other rodents. Marine mammals include seals, sea lion, whale, porpoise, killer whale, and sea otter. Freshwater or anadromous fish include Dolly Varden, rainbow and cutthroat trout, and all five species of Pacific salmon.⁴⁸ Marine fish include halibut, sablefish, rockfish, Pollock, Atka mackerel, Pacific lamprey, and herring.⁴⁹

For the most part, natural resources available to residents of Angoon include marine and freshwater fisheries and environmental services that sustain a range of resources from fisheries, to recreation and tourism. While timber leasing on much of Admiralty Island is prohibited under the Alaska National Interest Lands Conservation Act (ANILCA),⁵⁰ timber resources can still be harvested on ANCSA selected land.⁵¹ In addition, future federal land exchanges may make timber projects possible. There are no mineral projects in the vicinity of Angoon, although Greens Creek, an active silver-zinc-lead mine, is located northwest of the village.

Angoon is relatively protected from most environmental hazards with the exception of earthquakes and tsunamis. Although there is no historical precedence of damaging earthquakes

⁴⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁶ See footnote 43.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Alaska Department of Fish and Game. (n.d.). *Animals*. Retrieved April 9, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=animals.main>.

⁵⁰ U.S Forest Service. (n.d.). *Tongass National Forest*. Retrieved April 9, 2012 from: <http://www.fs.fed.us/r10/tongass/>.

⁵¹ Sealaska Corporation. (n.d.). *Timber*. Retrieved April 9, 2012 from: <http://www.sealaska.com/page/timber.html>.

in the area, the community is located within close proximity of the Chatham Strait fault.⁵²

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active in Angoon as of 2010.⁵³

Current Economy⁵⁴

Commercial fishing is a major source of income and a shellfish farm was funded by state and federal grants. The Chatham School District is the primary employer. Subsistence remains an important part of the lifestyle. Local resources include deer, salmon, bear, halibut, shellfish, geese, seaweed, and berries.⁵⁵ Timber harvesting on Prince of Wales Island provides seasonal employment, and the Greens Creek mine provides additional jobs, although employment at the mine is largely focused on nearby Juneau. Tourism is a growing industry, and Whalers Cove on Killisnoo Island employs approximately 75 seasonal employees. This destination sportfishing lodge offers attractions ranging from guided sportfishing to eco-tours. Angoon residents have expressed interest in further developing cultural and heritage tourism opportunities to complement existing sportfishing, lodging, and guiding businesses.⁵⁶ Top employers⁵⁷ in 2010 included: Chatham School District, Angoon Community Association, City of Angoon, Whalers Cove Lodge, Hecla Greens Creek Mining Company, Central Council Tlingit and Haida, Southeast Alaska Regional Health Consortium, Angoon Trading Company, Tlingit Haida Regional Housing Authority, and Catholic Community Services Inc.

In 2010,⁵⁸ the estimated per capita income was \$18,175 and the estimated median household income was \$23,350, compared to \$11,357 and \$29,861 in 2000; respectively. However, after accounting for inflation by converting 2000 values to 2010 dollars,⁵⁹ the real per capita income (\$14,934) and real median household income (\$39,267) indicate an increase in individual earnings and decrease in household earnings. In 2010, Angoon ranked 167th of 305 communities from which per capita income was estimated, and 265th of 299 communities from which household income was estimated. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Angoon are not reflective of the value of subsistence to the local economy.

Angoon's small population size may have prevented the ACS from accurately portraying economic conditions.⁶⁰ Another understanding of per capita income is obtained through

⁵² See footnote 43.

⁵³ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved July 16, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm#Southeast>.

⁵⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁵ See footnote 45.

⁵⁶ See footnote 44.

⁵⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵⁸ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (ADOLWD). According to the ALARI database, the per capita income in 2010 was \$ 8,285,⁶¹ which indicates an overall decrease in per capita income compared to the real per capita income values reported by the 2006-2010 ACS.⁶² In addition, Angoon was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁶³

According to 2006-2010 ACS estimates, 56.6% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 10.6%, compared to an estimated 5.9% statewide; and an estimated 35.3% of residents were living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 46.1% worked in the private sector, an estimated 47.2% worked in the public sector, and an estimated 6.7% were self-employed.

Angoon’s economy is relatively diverse. By industry, most (36.5%) employed residents were estimated to work in education service, health care, and social assistance sectors in 2010; followed by agriculture, forestry, fishing, hunting, and mining sectors (16.9%); transportation, warehousing, and utilities sectors (11.8%), and arts, entertainment, recreation, accommodations, and food service sectors (11.8%). By occupation type, most (35.4%) employed residents were estimated have management or professional positions, followed by service positions (19.1%); natural resources, construction, or maintenance positions (18%); sales or office positions (16.9%); and production, transportation, or material moving positions (10.7%). Employment by industry varied somewhat between 2000 and 2010, with moderate increases in transportation, warehousing, utilities, agriculture, forestry, fishing, hunting, and mining sectors. Employment by occupation type remained relatively unchanged in that time. Information regarding local employment trends can be found in Figures 3 and 4.

According to 2010 ALARI estimates,⁶⁴ most (45.5%) employed residents worked in local government sectors; followed by education and health service (14.6%); leisure and hospitality (12.6%); and trade, transportation, and utilities (10.6%) sectors.

⁶¹ Does not account for self-employed or federally employed residents.

⁶² See footnote 57.

⁶³ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

⁶⁴ See footnote 57.

Figure 3. Local Employment by Industry in 2000-2010, Angoon (U.S. Census).

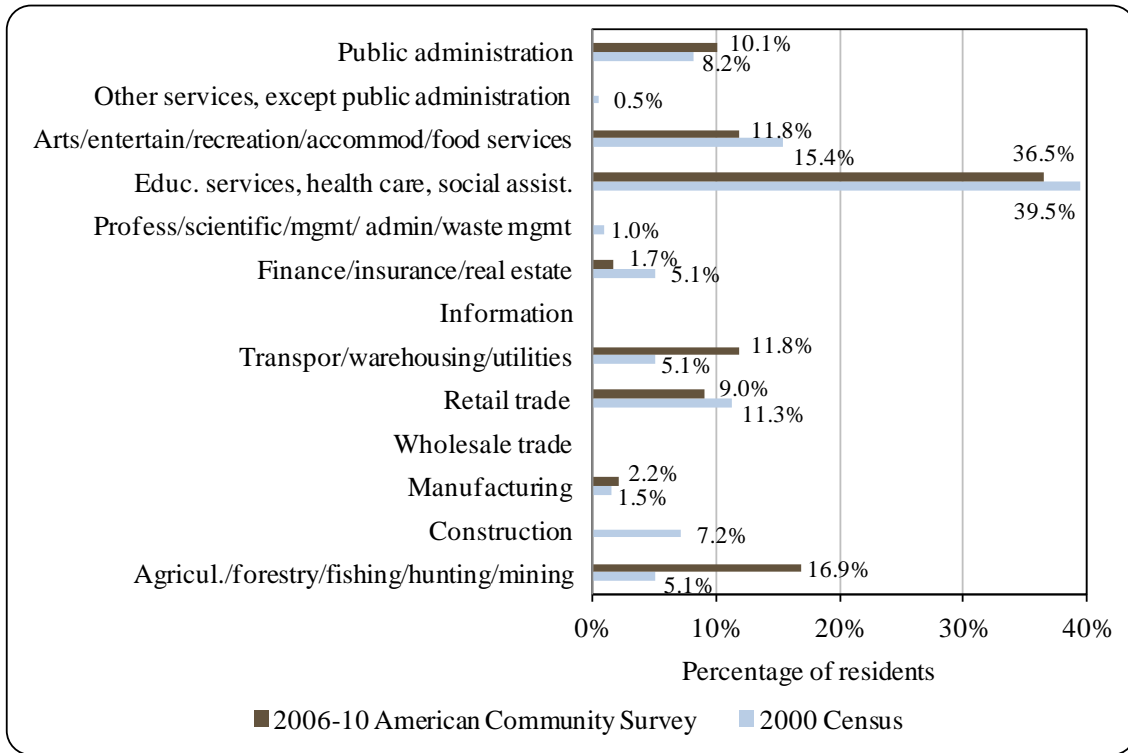
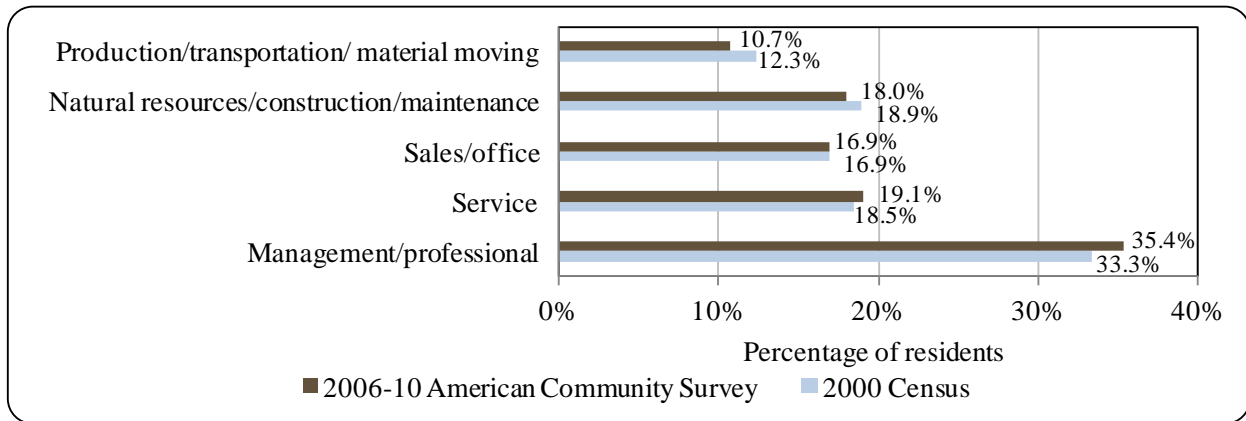


Figure 4. Local Employment by Occupation in 2000-2010, Angoon (U.S. Census).



Governance

Angoon is a Second-class city with a mayoral form of government. There is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal council, and Kootznoowoo Inc. is the ANCSA chartered Native village corporation. Sealaska is the regional ANCSA chartered Native corporation. There are Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Service (NMFS) offices located in Angoon. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Juneau, 55 mi northeast.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Angoon from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,356,957	n/a	\$20,967	n/a
2001	\$1,377,457	n/a	\$20,181	n/a
2002	\$640,157	\$69,706	\$20,182	\$47,890
2003	\$564,613	\$100,471	\$20,317	\$26,819
2004	\$483,178	\$124,648	-	n/a
2005	\$526,613	\$80,599	-	\$314,000
2006	\$410,268	n/a	-	n/a
2007	\$388,144	n/a	-	n/a
2008	\$401,684	n/a	-	n/a
2009	\$465,710	n/a	\$117,936	\$9,204
2010	\$701,154	n/a	\$118,167	\$13,817

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Angoon did not administer any municipal taxes in 2010. In that year, there was \$701,154 collected in total municipal revenues, compared to \$1.36 million in 2000. Total municipal revenues peaked in 2002 at \$1.4 million. Total municipal revenues include revenues generated locally, state/federal revenue sharing, capital/special projects, and grants. Most locally generated revenues come from sales taxes, utility rents, and interest earnings. State/federal payments primarily come in the form of state administered Community Revenue Sharing, and payments in lieu of taxes administered by the U.S. Bureau of Land Management. Angoon received \$118,167 in state allocated Community Revenue Sharing in 2010; accounting for 16.8% of the total municipal budget that year. This was a proportional increase from 2000, when \$20,967 of State Revenue Sharing accounted for 1.5% of the total municipal budget. State and federal fisheries-related grants received by Angoon between 2000 and 2010 included \$75,000 for a fish cleaning station, \$314,000 for city dock and harbor repair and expansion, and \$23,000 in general funding for fisheries. Information regarding municipal finances can be found in Table 2.

Infrastructure

*Connectivity and Transportation*⁶⁵

Angoon can be reached by sea or by air. There is an unattended floatplane float and helicopters generally land at the high school ball field or beach. Winter winds can make landing difficult in Favorite Bay, rendering the floatplane facility inaccessible at times. The floatplane dock is 200 ft long by 16 ft wide and is accessible by motor vehicle, ATV, and boat. There is an Alaska Marine Highway ferry terminal located in Angoon, and ferries serve the community two to three times per week in the summer, and weekly during winter, fall, and spring months. Goods are shipped to Angoon from Seattle or Juneau via Alaska Marine Lines and the state ferry system. Roundtrip airfare between Juneau and Angoon in June 2012 was \$260.⁶⁶

*Facilities*⁶⁷

The Tillinghast Lake reservoir provides water, which is treated and piped throughout the community. Angoon has had a piped system since 1977, and over 95% of homes have complete plumbing. Piped sewage is processed at a secondary treatment plant that directs flow to an ocean outfall. A 500,000-gal water tank has been constructed at the plant. The city collects refuse and hauls it to the landfill, located approximately 2 mi from Angoon. The Tlingit-Haida Regional Electric Authority, a non-profit subdivision of the state, operates 3 diesel-fueled generators in Angoon. Angoon's harbor facilities include a deep draft dock, a small boat harbor with 45 berths, and a state ferry terminal. Fisheries-related infrastructure includes a city-owned cold storage facility. Visitor accommodations include the Kootznahoo Inlet Lodge, Whales Cove Sportfishing Lodge, Favorite Bay Inn, Thayer Lake Lodge, and Sophie's Place Bed & Breakfast. Public safety services are provided by the City Public Safety Department and a Village Public Safety Officer (VPSO). Fire and rescue services are provided by the City Public Safety Department and Angoon Volunteer Fire Department. Additional public facilities include a youth center, community center, and library. Communications services include local and long distance telephone, internet, local and cable television, and radio.

Medical Services

Jessie Jim Health Center provides primary, dental, and behavioral health services and is a Community Health Aid Program (CHAP) site. Additional acute, long term and alternative healthcare services are provided in Juneau.

⁶⁵ R&M Engineering, Inc. (2004). *Angoon Airport Reconnaissance Study*. Retrieved April 9, 2012 from: http://dot.alaska.gov/sereg/projects/angoon_airport/assets/2004_Recon_Study/2004_recon_study.pdf.

⁶⁶ Alaska Seaplane Services.(n.d.) *Alaska Seaplane Services*. Retrieved November 22, 2011 from: <http://www.flyalaskaseaplanes.com/>.

⁶⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Educational Opportunities

Angoon School provides kindergarten through 12th grade instruction. As of 2011, there were 78 students enrolled and 9 teachers employed. Chatham Correspondence provides distance learning opportunities ranging from kindergarten through 12th grade. As of 2011 there was 1 student enrolled.⁶⁸

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Participation in fisheries began with traditional summer subsistence camps by Hutznuwu Tlingits located at Eliza Harbor on the southeast shore of Admiralty Island and extending north to Point Marsden, near Hawk Inlet. In the late nineteenth-century, commercial fishing moved into the Angoon area. After the decline of the local whaling industry, the Northwest Trading Company switched to herring, and produced salted herring for human consumption, oil, and use as fertilizer. When the company went bankrupt in 1885, it was reorganized into the Alaska Oil and Guano Company. Herring continued to be processed on Killisnoo Island until market conditions ceased operations in 1930. After the closure of the Killisnoo herring reduction plant, many residents from Angoon worked at various salmon canneries throughout the Chatham Strait area. In 1947 Angoon purchased the Hood Bay Canning Company, and plans were established to move the entire community permanently to Hood Bay in order to take advantage of the new acquisition. However, the plans never came into fruition, and the cannery was destroyed by fire in 1961. Instead, salmon caught by the Angoon seine fleet was canned at Hawk Inlet for a number of years under an annual agreement with Peter Pan Seafoods, Inc.⁶⁹

Today, the community remains heavily involved in commercial, recreational, and subsistence fisheries. The city owns a cold storage facility and the Angoon Community Association (ACA) owns seafood processing equipment within the building. However, high operating costs due to the lack of a freshwater supply and electrical power led to the plant's closure in the 1990s.⁷⁰

Angoon is located in Federal Reporting Area 659, International Pacific Halibut Commission Regulatory Area 2C, and the Eastern Gulf of Alaska (GOA) Sablefish Regulatory District. The community is eligible to participate in the Community Quota Entity (CQE) program and is represented by the Admiralty Island Community Quota Entity. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated an apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became

⁶⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶⁹ Alaska Consultants Inc. (1976). *City of Angoon Comprehensive Development Plan*. Retrieved April 6, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Angoon-CP-1976.pdf>.

⁷⁰ See footnote 65.

increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors led to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.⁷¹

As of Fall 2013, the Admiralty Island Community Quota Entity had not yet purchased any commercial halibut IFQ or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the non-profit had acquired four halibut charter permits for lease to community members.⁷²

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Angoon does not have a registered processing plant. The closest shore-based seafood processing facility is located in Juneau.

Fisheries-Related Revenue

Between 2000 and 2010, Angoon collected fisheries-related revenue from raw fish taxes, Shared Fisheries Business Taxes, and harbor usage fees. In 2010, \$18,967 was collected, compared to \$12,524 in 2000. Fisheries-related revenue peaked in 2003 at \$19,860. Information regarding fisheries-related revenue trends can be found in Table 3. It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 57 residents, or 12.4% of the population, held 57 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 75 residents held 107 CFEC permits. Of the CFEC permits held in 2010, 89% were for salmon, compared to 65% in 2000; 7% were for halibut, compared to 22% in 2000; and 4% were for crab, compared to 2% in 2000. In addition, six residents held six License Limitation Program (LLP) crab permits, although none were actively fished. Residents held 254,576 shares of halibut quota on 11 accounts in 2010, compared to 489,465 shares held on 31 accounts in 2000. A total of 155,966 shares of sablefish quota were held on one account between 2000 and 2005. No residents held crab quota share between 2010 and when the program began (Tables 6 to 8).

Residents held nine commercial crew licenses in 2010, compared to 23 in 2000. Also in that year, residents held majority ownership of 13 vessels, compared to 75 in 2000 (Table 5). Of the CFEC permits issued in 2010, 12% were actively fished, compared to 43% in 2000 (Table 4).

⁷¹ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

⁷² NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

This varied by fishery from 75% of halibut permits, to 50% of crab and 6% of salmon permits. Fisheries prosecuted by residents in 2010 included southeast Alaska pot Dungeness crab, statewide longline halibut, and statewide hand and power troll salmon.⁷³

Although no landings were made in Angoon in 2010, landings were made to local buyers between 2000 and 2009 (Tables 9 and 10). However, information on these landings are considered confidential. In 2008, residents of Angoon landed 15,644 lbs of salmon valued at \$39,055 ex-vessel, compared to 208,040 lbs valued at \$97,817 in 2000; an increase of approximately \$1.11 per pound landed after accounting for inflation⁷⁴ and without considering the species composition of landings. Also in that year, residents landed 9,857 lbs of halibut valued at \$42,829, compared to 44,097 lbs valued at \$117,771 in 2000; an increase of approximately \$0.67 per pound landed after accounting for inflation.⁷⁵

⁷³ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁷⁴ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

⁷⁵ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Angoon: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$3,767	\$5,915	\$2,056	\$4,982	\$2,267	\$2,500	\$2,499	\$2,927	n/a	\$5,050	\$5,050
Shared Fisheries Business Tax ¹	\$3,767	\$5,915	\$2,056	\$4,983	\$2,267	\$2,499	\$2,726	\$2,927	\$2,186	\$2,630	\$2,137
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$4,990	\$7,419	\$10,322	\$9,895	\$9,032	\$6,026	\$8,846	\$9,000	\$2,170	\$2,000	\$11,780
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$12,524	\$19,249	\$14,434	\$19,860	\$13,567	\$11,025	\$14,071	\$14,854	\$4,356	\$9,680	\$18,967
Total municipal revenue⁵	\$1.36 M	\$1.38 M	\$640,157	\$564,613	\$483,179	\$526,613	\$410,268	\$388,144	\$401,684	\$465,710	\$701,154

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Angoon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	6	6	6	6	6	6	6	6	6	6	6
	Active permits	3	1	3	2	1	1	1	1	0	1	0
	% of permits fished	50%	16%	50%	33%	16%	16%	16%	16%	0%	16%	0%
	Total permit holders	6	6	6	6	6	6	6	6	6	6	6
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	2	2	1	1	1	1	1	1	0	0
	Fished permits	0	0	0	1	1	1	1	0	0	0	0
	% of permits fished	0%	0%	0%	100%	100%	100%	100%	0%	0%	n/a	n/a
	Total permit holders	1	2	2	1	1	1	1	1	1	0	0
Crab (CFEC) ²	Total permits	2	3	3	4	3	2	2	1	1	1	2
	Fished permits	2	1	1	1	1	1	1	1	1	1	1
	% of permits fished	100%	33%	33%	25%	33%	50%	50%	100%	100%	100%	50%
	Total permit holders	2	3	3	3	2	2	2	1	1	1	3
Other shellfish (CFEC) ²	Total permits	1	0	0	0	0	2	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	n/a	n/a	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	0	0	0	0	1	0	0	0	0	0
Halibut (CFEC) ²	Total permits	24	23	20	22	17	14	13	12	9	8	4
	Fished permits	22	21	18	19	16	12	11	12	6	5	3
	% of permits fished	92%	91%	90%	86%	94%	86%	85%	100%	67%	63%	75%
	Total permit holders	24	23	20	22	17	14	13	12	9	8	4
Herring (CFEC) ²	Total permits	0	0	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	1	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Angoon: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	2	2	2	2	1	1	0	0	0	0	0
	Fished permits	1	1	1	1	1	1	0	0	0	0	0
	% of permits fished	50%	50%	50%	50%	100%	100%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	2	2	2	1	1	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	8	10	9	9	7	6	6	3	2	2	0
	Fished permits	1	2	0	0	0	0	0	0	0	0	0
	% of permits fished	13%	20%	0%	0%	0%	0%	0%	0%	0%	0%	n/a
	Total permit holders	4	7	5	5	4	4	4	2	1	1	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	70	68	67	68	69	66	59	56	54	51	51
	Fished permits	20	17	7	5	7	12	16	9	9	3	3
	% of permits fished	29%	25%	10%	7%	10%	18%	27%	16%	17%	6%	6%
	Total permit holders	68	66	64	67	67	65	60	55	55	51	52
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>107</i>	<i>106</i>	<i>102</i>	<i>105</i>	<i>97</i>	<i>91</i>	<i>80</i>	<i>72</i>	<i>66</i>	<i>62</i>	<i>57</i>
	<i>Fished permits</i>	<i>46</i>	<i>42</i>	<i>27</i>	<i>26</i>	<i>25</i>	<i>26</i>	<i>28</i>	<i>22</i>	<i>16</i>	<i>9</i>	<i>7</i>
	<i>% of permits fished</i>	<i>43%</i>	<i>40%</i>	<i>26%</i>	<i>25%</i>	<i>26%</i>	<i>29%</i>	<i>35%</i>	<i>31%</i>	<i>24%</i>	<i>15%</i>	<i>12%</i>
	<i>Permit holders</i>	<i>75</i>	<i>77</i>	<i>72</i>	<i>75</i>	<i>73</i>	<i>71</i>	<i>68</i>	<i>65</i>	<i>63</i>	<i>59</i>	<i>57</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Angoon: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Angoon ²	Total Net Lbs Landed In Angoon ²	Total Ex-Vessel Value Of Landings In Angoon ²
2000	23	3	0	75	73	13	--	--
2001	25	1	0	77	72	15	--	--
2002	20	2	0	56	58	12	--	--
2003	15	2	0	60	58	9	--	--
2004	12	1	0	53	53	1	--	--
2005	19	1	0	31	31	3	--	--
2006	24	2	0	31	29	7	--	--
2007	11	2	0	25	28	6	--	--
2008	12	3	0	21	22	3	--	--
2009	5	1	0	18	23	2	--	--
2010	9	0	0	13	16	0	0	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Angoon: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	31	489,465	69,036
2001	29	492,191	72,466
2002	27	375,643	53,542
2003	25	357,455	50,949
2004	20	323,693	57,067
2005	19	290,182	53,255
2006	18	348,004	62,118
2007	16	295,883	42,281
2008	15	295,883	30,854
2009	14	283,650	23,910
2010	11	254,576	18,809

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Angoon: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	1	155,966	18,501
2001	1	155,966	17,496
2002	1	155,966	16,715
2003	1	155,966	18,513
2004	1	155,966	19,605
2005	1	155,966	18,564
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Angoon: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Angoon: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	0
Halibut	--	--	--	--	--	--	--	--	--	--	0
Herring	--	--	--	--	--	--	--	--	--	--	0
Other Groundfish	--	--	--	--	--	--	--	--	--	--	0
Other Shellfish	--	--	--	--	--	--	--	--	--	--	0
Pacific Cod	--	--	--	--	--	--	--	--	--	--	0
Pollock	--	--	--	--	--	--	--	--	--	--	0
Sablefish	--	--	--	--	--	--	--	--	--	--	0
Salmon	--	--	--	--	--	--	--	--	--	--	0
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	\$0
Halibut	--	--	--	--	--	--	--	--	--	--	\$0
Herring	--	--	--	--	--	--	--	--	--	--	\$0
Other Groundfish	--	--	--	--	--	--	--	--	--	--	\$0
Other Shellfish	--	--	--	--	--	--	--	--	--	--	\$0
Pacific Cod	--	--	--	--	--	--	--	--	--	--	\$0
Pollock	--	--	--	--	--	--	--	--	--	--	\$0
Sablefish	--	--	--	--	--	--	--	--	--	--	\$0
Salmon	--	--	--	--	--	--	--	--	--	--	\$0
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Angoon Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	44,097	51,946	45,875	49,615	54,688	53,688	31,192	15,910	9,857	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	902	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	208,040	406,771	51,099	44,742	54,504	59,424	81,869	32,828	15,644	--	--
<i>Total²</i>	<i>253,039</i>	<i>458,717</i>	<i>96,974</i>	<i>94,357</i>	<i>109,192</i>	<i>113,112</i>	<i>113,061</i>	<i>48,738</i>	<i>25,501</i>	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$117,771	\$110,842	\$101,784	\$145,887	\$164,480	\$162,392	\$117,285	\$68,105	\$42,829	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$551	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$97,817	\$117,715	\$41,068	\$45,822	\$79,440	\$85,806	\$158,197	\$87,805	\$39,055	--	--
<i>Total²</i>	<i>\$216,140</i>	<i>\$228,557</i>	<i>\$142,851</i>	<i>\$191,709</i>	<i>\$243,920</i>	<i>\$248,197</i>	<i>\$275,482</i>	<i>\$155,909</i>	<i>\$81,884</i>	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is a major contributor to Angoon's economy. Whaler's Cove, a lodge on Killisnoo Island, reported that it contributed approximately \$53,000 in local taxes and about \$534,000 in payroll in 2000.⁷⁶ In 2010, there were five sport fish guide businesses operating in Angoon, compared to six in 2000. In that year, residents were sold 155 sportfishing licenses and 205 sportfishing licenses were sold in the community, compared to 176 and 863 in 2000, respectively.

Angoon is located in the Juneau ADF&G Sport Fishing Survey Area which includes all waters, including drainages, from Cape Fanshaw to Point Sherman, including all of Admiralty Island. In 2010, there were a total of 85,128 saltwater angler days fished, compared to 112,896 in 2000. In that year, non-residents accounted for 23.5% of angler days fished, compared to 28.5% in 2000. In addition, there was a total of 15,005 freshwater angler days fished in 2010, compared to 15,585 in 2000. In that year, non-residents accounted for 27.8% of angler days fished, compared to 24.9% in 2000. According to ADF&G Harvest Survey data, local private anglers target all five species of Pacific salmon, Dolly Varden char, cutthroat trout, rainbow trout, Pacific halibut, rockfish, Pacific cod, sablefish, Dungeness crab, Tanner crab, and hardshell clams. ADF&G 2010 charter log data reported that charter vessels landed 176 Chinook salmon, 2,656 coho salmon, 844 halibut, 3 lingcod, 701 rockfish, 41 sablefish, and 512 unidentified salmon. Information regarding sportfishing trends can be found in Table 11.

Subsistence Fishing

A 1996 study found that Angoon residents harvested an estimated 224 lbs of subsistence resources per capita. Subsistence resources harvested included fish, land mammals, marine mammals, birds and eggs, marine invertebrates, and local vegetation. In 1996 79.7% of households surveyed were found to be harvesting salmon, 82.4% were found to be harvesting fish other than salmon, 32.4% were found to be harvesting marine mammals, and 89.2% were found to be harvesting marine invertebrates.⁷⁷ More current data on subsistence participation is limited, and information on household participation between 2000 and 2010 is unavailable. Of the species listed by ADF&G in Table 13, sockeye salmon are harvested most often, followed by coho, pink, chum, and Chinook salmon. In 2008, residents reported harvesting 800 salmon, compared to 5,010 reported in 2000. Reported salmon harvests peaked in 2003 at 5,760 fish. In 2010, 109 residents were issued Subsistence Halibut Registration Certificates (SHARC), compared to 151 in 2003. In that year, an estimated 18,751 lbs of halibut was harvested on 47 SHARC cards, compared to an estimated 20,283 lbs on 80 in 2003. Estimated subsistence halibut harvests peaked in 2004 at 42,679. Between 2000 and 2008, an estimated 462 harbor seals were harvested. In addition, an estimated one sea lion was harvested in 2000. Information regarding subsistence trends can be found in Tables 12 through 15.

⁷⁶ R&M Engineering, Inc. (2004). *Angoon Airport Reconnaissance Study*. Retrieved April 9, 2012 from: http://dot.alaska.gov/sereg/projects/angoon_airport/assets/2004_Recon_Study/2004_recon_study.pdf.

⁷⁷ SWCA Environmental Consultants. (2011). *Subsistence Resources Existing Conditions Technical Report for Angoon Airport Environmental Impact Statement*. Retrieved April 10, 2012 from: http://www.angoonairporteis.com/Documents/TechReport_Subistence.pdf.

Table 11. Sport Fishing Trends, Angoon: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Angoon ²
2000	6	8	176	863
2001	5	7	149	888
2002	4	11	154	629
2003	4	9	151	692
2004	4	8	165	655
2005	4	7	178	766
2006	4	5	162	692
2007	5	5	177	445
2008	5	6	143	576
2009	5	7	172	460
2010	5	6	155	205

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	32,212	80,684	3,879	11,706
2001	32,150	73,209	4,957	14,530
2002	24,968	66,921	5,024	11,767
2003	28,586	73,742	3,350	10,392
2004	26,628	86,478	3,741	8,956
2005	37,754	80,680	5,154	12,124
2006	23,379	67,609	4,580	9,338
2007	23,316	75,048	3,733	11,140
2008	24,339	66,296	3,926	9,886
2009	22,970	72,576	4,634	17,504
2010	20,043	65,085	4,167	10,838

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Angoon: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Angoon: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	230	144	n/a	160	472	62	4,316	n/a	n/a
2001	234	118	4	130	824	250	4,450	n/a	n/a
2002	182	116	n/a	66	126	210	2,356	n/a	n/a
2003	204	110	n/a	8	134	22	5,596	n/a	n/a
2004	106	86	n/a	71	131	131	1,806	n/a	n/a
2005	90	32	n/a	n/a	34	70	734	n/a	n/a
2006	96	44	n/a	n/a	44	20	1,436	n/a	n/a
2007	84	15	6	n/a	134	95	146	n/a	n/a
2008	87	84	n/a	16	124	n/a	660	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Angoon: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	151	80	20,283
2004	166	90	42,679
2005	172	89	24,273
2006	173	75	16,875
2007	180	60	16,429
2008	130	56	13,476
2009	129	49	16,148
2010	107	47	18,751

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Angoon: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	1	64	n/a
2001	n/a	n/a	n/a	n/a	n/a	85	n/a
2002	n/a	n/a	n/a	n/a	n/a	73	n/a
2003	n/a	2	n/a	n/a	n/a	55	n/a
2004	n/a	n/a	n/a	n/a	n/a	47	n/a
2005	n/a	n/a	n/a	n/a	n/a	58	n/a
2006	n/a	n/a	n/a	n/a	n/a	46	n/a
2007	n/a	n/a	n/a	n/a	n/a	43	n/a
2008	n/a	n/a	n/a	n/a	n/a	41	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

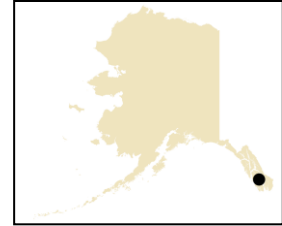
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Coffman Cove (KOFF-man)



People and Place

*Location*⁷⁸

Coffman Cove is on the northeast coast of Prince of Wales Island (POW) in Southeast Alaska. It lies 73 mi northeast of Ketchikan and 42 mi southeast of Wrangell. The area encompasses 10.4 sq mi of land and 4.5 sq mi of water. Coffman Cove was incorporated as a Second-class city in 1989, is located in the Prince of Wales-Hyder Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁷⁹

In 2010, there were 176 residents ranking Coffman Cove 209th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population fell by 5%. Between 2000 and 2009, the population fell by 23.6%, with an average annual growth rate of -1.8%, less than the statewide average of 0.75% and indicative of a slow rate of decline. However, the population recovered slightly in 2010, attributed to a 15.8% increase in population between 2009 and 2010. Information regarding population trends can be found in Table 1.

The racial composition of Coffman Cove is predominately White with 94.3% of residents indicating themselves as such in 2010, compared to 87.4% in 2000. Also in that year, 4.0% of residents identified themselves as American Indian or Alaska Native, compared to 2.5% in 2000; and 1.7% identified themselves as two or more races, compared to 4.0% in 2000. In addition, 1.1% of residents identified themselves as Hispanic or Latino, compared to 1.0% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size in Coffman Cove was 1.98, compared to 2.3 in 1990 and 2.56 in 2000. In that year, there were 168 household units total, compared to 81 in 1990 and 99 in 2000. Of the households surveyed in 2010, 44% were owner-occupied, compared to 51% in 2000; 9% were renter-occupied, compared to 13% in 2000; 14% were vacant, compared to 25% in 2000; and 33% were occupied seasonally, compared to 11% in 2000. No residents lived in group quarters between 1990 and 2010.

The gender distribution in 2010 was somewhat skewed at 59.7% male and 40.3% female. This was more skewed than the distribution statewide (52% male, 48% female), and less skewed than the distribution in 2000 (62.7% male, 37.3% female). The median age that year was 50.0 years, which was significantly higher than both the statewide median of 33.8 years and the 2000 median of 40.3 years.

⁷⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

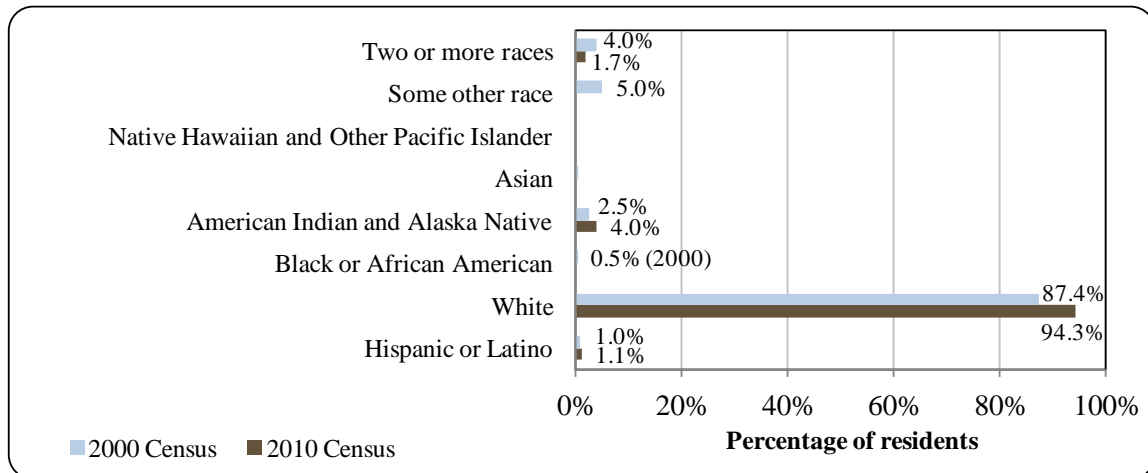
Table 1. Population in Coffman Cove from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	186	-
2000	199	-
2001	-	174
2002	-	160
2003	-	163
2004	-	176
2005	-	156
2006	-	162
2007	-	146
2008	-	141
2009	-	152
2010	176	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

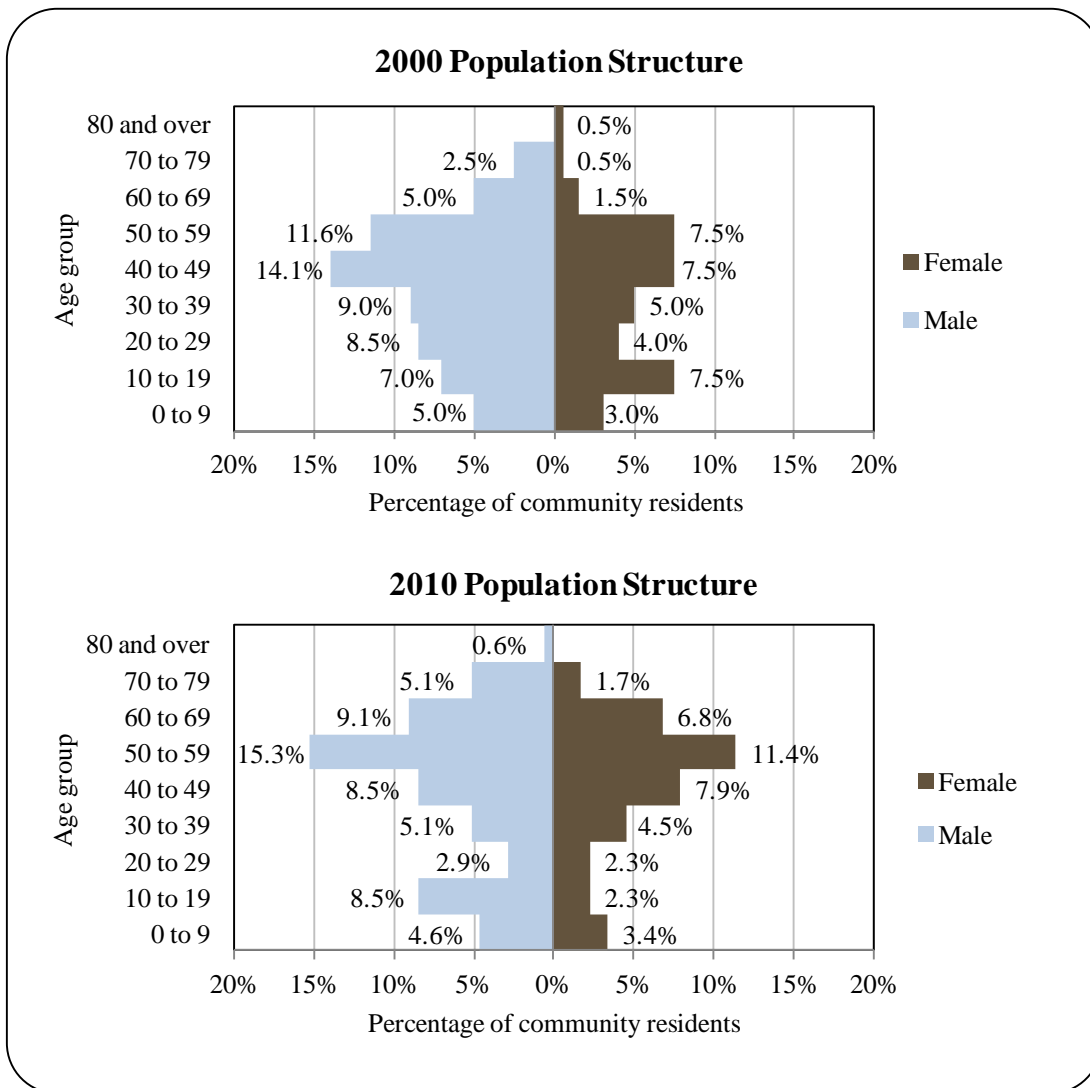
Figure 1. Racial and Ethnic Composition, Coffman Cove: 2000-2010 (U.S. Census).



The population structure was constricted in both 2000 and 2010. In 2010, 18.8% of residents were under the age of 20, compared to 22.5% in 2000; 23.3% were over the age of 59, compared to 10.0% in 2000; 52.7% were between the ages of 30 and 59, compared to 54.7% in 2000; and 5.2% were between the ages of 20 and 29, compared to 12.5% in 2000. Overall, older cohorts showed age transitions consistent with a stable population, while younger cohorts—most notably the 10 to 19 range—showed some attrition between 2000 and 2010. This may indicate a lower incidence of youth retention in Coffman Cove.

Gender distribution by age cohort was more even in 2010 than in 2000, with male biases among each age range. In that year, the greatest absolute gender difference occurred within the 10 to 19 range (8.5% male, 2.3% female), followed by the 50 to 59 (15.3% male, 11.4% female) and 70 to 79 (5.1% male, 1.7% female) ranges. Of those three, the greatest relative gender difference occurred within the 10 to 19 range. Information regarding trends in Coffman Cove’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Coffman Cove Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁸⁰ estimated that 92.6% of residents aged 25 years and over held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also during this time frame, an estimated 7.4% of residents had a 9th to 12th grade education, compared to an estimated 5.8% of Alaska residents overall; an estimated 35.2% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; and an estimated 3.7% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall. No residents were estimated to have less than a 9th grade education, an Associate's degree, or a Bachelor's degree in 2010.

*History, Traditional Knowledge, and Culture*⁸¹

The site was named in 1886 by Lt. Cdr. A.S. Snow of the U.S. Navy for Lt. Dewitt Coffman, a member of his party. Coffman Cove was first settled as a logging camp in the 1950s and was owned and operated by Mike and Leta Valentine. Land was made available for private ownership through selection under the Alaska Statehood Act. Coffman Cove's pioneer lifestyle and clean, safe environment were featured on ABC's "20/20" television program in 1984, prompting a deluge of mail from persons around the country wanting to relocate.

Natural Resources and Environment

The area is dominated by a cool maritime climate. Summer temperatures range from 46 to 70 °F (8 to 21 °C). Winter temperatures range from 32 to 42 °F (0 to 6 °C).⁸²

Coffman Cove is located in the Tongass National Forest, which covers 16.8 million acres of rainforest in southeast Alaska. Like all of southeast Alaska, POW's topography was sculpted by immense glaciation during the last ice age. Thousands of years of post-glacial ecological succession created one of the most biologically productive rainforests in the world. Vegetation is dominated by mixed spruce-hemlock stands with areas of red alder and cedar.⁸³ Muskegs are found in depressions and shallow slopes where drainage is poor. The rainforests of southeast Alaska are habitat to a wide range of wildlife. Local terrestrial wildlife include shrews, voles, marmots, ground squirrels, beaver, black bears, porcupine, Sitka black tail deer, marten, fishers, and river otter.⁸⁴ Local fish species include Pacific halibut, all five species of Pacific salmon, herring, Pacific lamprey, lingcod, Atka mackerel, Walleye pollock, black and yelloweye rockfish, sablefish, salmon sharks, smelt, cutthroat trout, steelhead trout, and Dolly Varden

⁸⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

⁸² Ibid.

⁸³ U.S. Forest Service. (n.d.). *Tongass National Forest*. Retrieved February 13, 2012 from: http://www.fs.fed.us/r10/tongass/districts/pow/projects_plans/watershed/ws_explore.shtml

⁸⁴ MacDonald, S.O. and Cook, J. A. (1996). The Land Mammal Fauna of Southeast Alaska. *The Canadian Field-Naturalist*, 110(4), 571-597.

char.⁸⁵ Marine mammals present include porpoise, Steller sea lion, harbor seals, and several species of whale.⁸⁶

Timber and minerals make up the majority of natural resources present on POW. Although the timber industry has been decline, the regional Alaska Native Claims Settlement Act (ANCSA) Native corporation, Sealaska, has active timber developments on the Island.⁸⁷ In addition, Viking Lumber acquired 3,422 acres of commercial timber from the U.S. Forest Service in 2009. Mineral developments in the area include the Niblack and Bokan Mountain mineral projects. The Niblack project is a copper-zinc-silver prospect which was in the final stages of exploration as of 2011.⁸⁸ Bokan Mountain mineral area is a source of uranium and rare earths on the southern portion of POW. Formally the site of the Ross-Adams mine, this site produced an estimated 94,500 tons of uranium ore from 1957 to 1971. Exploration for additional minerals in the area began again in 2007.⁸⁹ A final natural resource is Coffman Cove's plentiful environmental services and scenic beauty. These ecosystem services range from providing essential habitat for many forms of plants and animals, to providing recreational opportunities for residents and non-residents alike.⁹⁰

Coffman Cove's protected location reduces the impact of most natural hazards. Still, tsunami's caused by earthquakes or landslides remain a potential hazard.⁹¹ Earthquakes have been classified as a moderate risk by the U.S. Army Corps of Engineers and it is projected that an earthquake could cause major regional damage.⁹²

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active locally in 2010.⁹³

Current Economy⁹⁴

During the timber industry's peak, Coffman Cove served as a principal supplier for the Ketchikan Pulp Company's pulp mill. However, the industry's influence on the regional economy began to decline with the shuttering of sawmills in Haines, Sitka, and Wrangell in the 1990s, and finally ending with the closure of Ketchikan's pulp mill in 1997. As of 2010, the southeast timber industry was significantly reduced leaving Coffman Cove's economy in a state of transition. A community once heavily influenced by corporate and governmental policy surrounding the timber industry, now found itself in the unique position of re-inventing its

⁸⁵ Alaska Department of Fish and Game. (n.d.). Retrieved February 14, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=animals.listfish>.

⁸⁶ Ibid.

⁸⁷ Sealaska Corporation. Sealaska (n.d.). *Timber Corporation*. Retrieved February 14, 2012 from: <http://www.sealaskatimber.com/page/about-us>.

⁸⁸ Alaska Department of Natural Resources. (n.d.). Retrieved February 14, 2012 from: <http://dnr.alaska.gov/mlw/mining/largemine/niblack/>.

⁸⁹ U.S. Forest Service.(n.d.). Retrieved February 14, 2012 from: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5252645.pdf.

⁹⁰ City of Coffman Cove. (n.d.). Retrieved February 14, 2012 from: <http://ccalaska.com/>.

⁹¹ Alaska Department of Natural Resources. (n.d.). Retrieved February 14, 2012 from: http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

⁹² City of Craig. (2000). *City of Craig Comprehensive Plan*. Retrieved February 29, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Craig-CP-2000.pdf>.

⁹³ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved July 30, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm#Southeast>.

⁹⁴ Unless otherwise noted, all monetary data are reported in nominal values.

economy around commercial fishing, tourism, and entrepreneurship. This was characterized by emerging niche fisheries including geoduck and sea urchin harvesting, as well as oyster farming.⁹⁵ Top employers for 2010⁹⁶ included City of Coffman Cove, Southeast Island School District, Southeast Road Builders Inc., Papac Alaska Logging Inc., Douglas Home Builders, Carter & Carter Enterprises Inc., Alaska Power & Telephone Co., Venture Travel LLC, Colaska Inc., and State of Alaska.

In 2010,⁹⁷ the estimated per capita income in Coffman Cove was \$22,943 and the estimated median household income was \$22,045, compared to \$23,249 and \$43,750 in 2000, respectively. After accounting for inflation by converting the 2000 values to 2010 dollars,⁹⁸ the real per capita income (\$30,572) and real median household income (\$57,531) indicate significant declines in both individual and household earnings. In 2010, Coffman Cove ranked 119th of 305 communities from which per capita income was estimated, and 257th of 299 communities from which median household income was estimated.

Coffman Cove's small population size may have prevented the ACS from accurately portraying economic conditions.⁹⁹ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$2.02 million in total wages in 2010.¹⁰⁰ When matched with the population in 2010, the per capita income equals \$11,450, which was significantly less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.¹⁰¹ In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁰² However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006 to 2010 estimates,¹⁰³ 44.4% of the population aged 16 and over was part of the civilian labor force. In that year, unemployment was estimated at 0.0%, compared to an estimated 5.9% statewide; and an estimated 17.2% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in 2010, an estimated 66.7% worked in the private sector, with an estimated 33.3% in the public sector.

By industry, most (50.0%) employed residents were estimated to work in retail trade sectors in 2010; followed by transportation, warehousing, and utilities sectors (25.0%); manufacturing sectors (16.7%); and public administration sectors (8.3%). By occupation type, most (41.7%) employed residents were estimated to hold service positions that year; followed by

⁹⁵ City of Coffman Cove. (2002). *Economic Recovery Action Plan*. Retrieved February 14, 2012 from: <http://www.commerce.state.ak.us/dca/plans/CoffmanCove-EDP-2002.pdf>.

⁹⁶ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹⁷ U.S. Census. American Community Survey 2006-10 Estimates.

⁹⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁹⁹ See footnote 80.

¹⁰⁰ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁰¹ See footnote 96.

¹⁰² Denali Commission. (2011). Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

¹⁰³ See footnote 80.

natural resources, construction, or maintenance positions (25.0%); production, transportation, or material moving positions (16.7%); and sales or office positions (16.7%). Overall, there was a significant shift in employment both by industry sector and occupation type between 2000 and 2010. Those employed in agriculture, forestry, fishing, hunting, and mining sectors dropped from 50.5% in 2000, to 0% in 2010. Those reductions may reflect the decline of the local timber economy, since residents employed in commercial fishing sectors often are not captured by the U.S. Census as fishermen may hold another job and characterize their employment accordingly. In addition, the surge in retail sector employment and service positions may reflect efforts to diversify the local economy in the wake of the timber industry collapse. Information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Coffman Cove (U.S. Census).

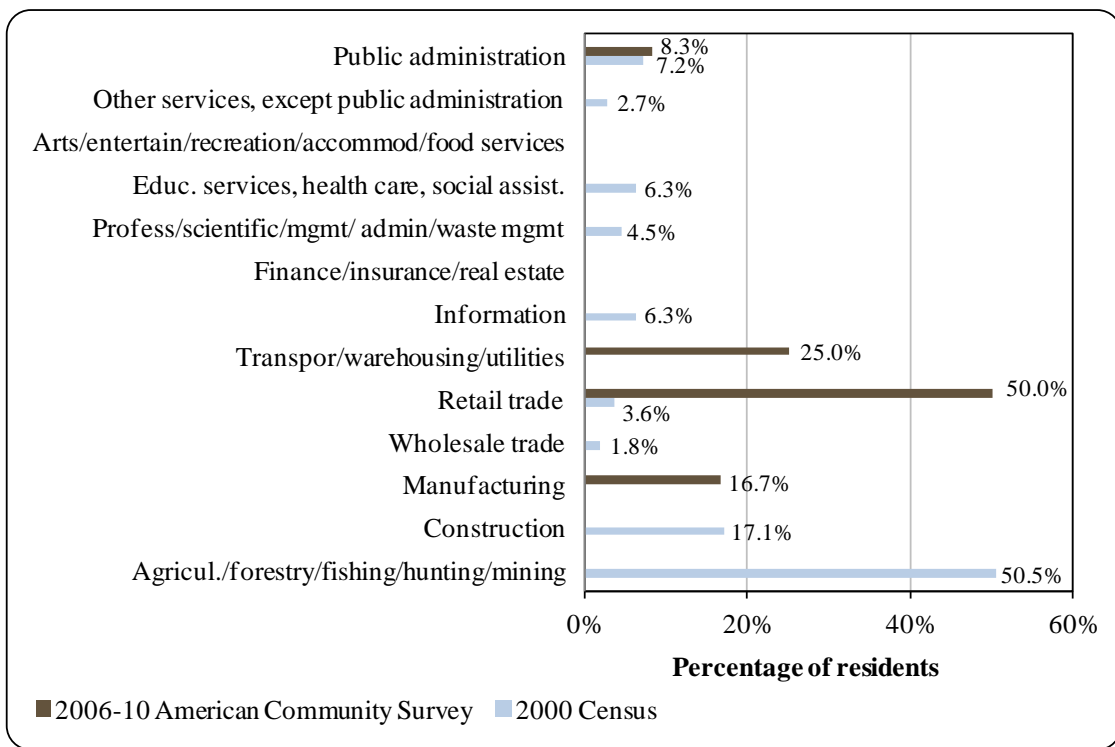
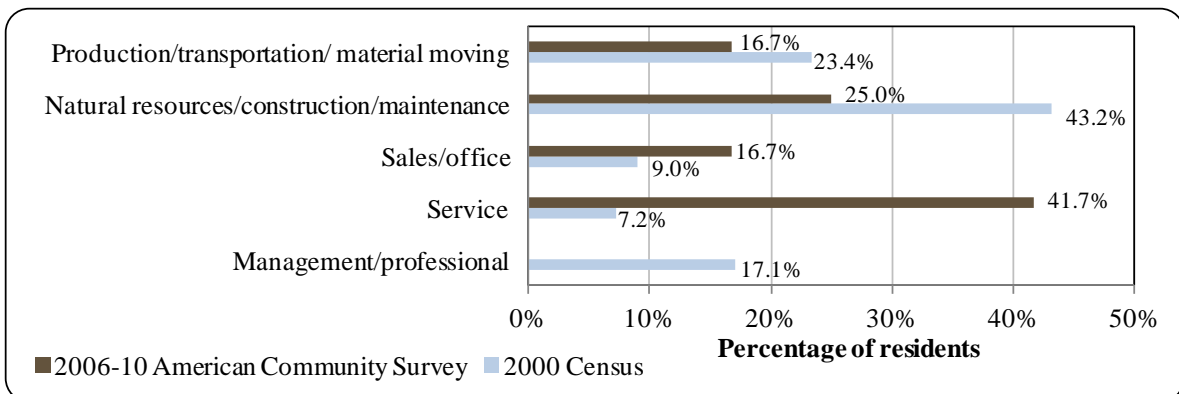


Figure 4. Local employment by occupation in 2000-2010, Coffman Cove (U.S. Census).



Governance

Coffman Cove is a Second-class city with a mayoral form of government. The city does not possess a U.S. Bureau of Indian Affairs (BIA) recognized Native village council or an ANCSA chartered Native village council. The closest Alaska Department of Fish and Game (ADF&G) office is located in Craig, 38 mi southeast. The closest National Marine Fisheries Service (NMFS) office is located in Petersburg 55 mi north. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Ketchikan, 73 mi southwest.

When adjusted for inflation,¹⁰⁴ total municipal revenues increased 267% between 2000 and 2010, from \$700,329 to \$3.32 million. It should be noted that 2010 was somewhat anomalous in that Coffman Cove received several sizable capital grants including \$1.6 million awarded from the Denali Commission, and \$750,000 from the Alaska Economic Development Administration. Most locally generated revenues that year were collected from gravel and land sales. No municipal taxes were administered that year. In terms of outside revenues, Coffman Cove received state revenues from Community Revenue Sharing and raw fish tax refunds. Federal revenues came from National Forest receipts, payments in lieu of taxes, and fish enhancement grants. Community Revenue Sharing comprised 3.1% of total municipal revenue in 2010, compared to 4.7% from State Revenue Sharing in 2000.

Fisheries-related state and federal grants received by Coffman Cove between 2000 and 2010 included \$1.6 million for construction of a harbor, \$156,236 for city float dock construction, \$1.09 million for construction of a dock, \$25,000 for a vessel storage design project, \$775,000 for dock utilities construction, and \$140,000 for harbor dock expansions. Information regarding municipal finances can be found in Table 2.

Infrastructure

*Connectivity and Transportation*¹⁰⁵

The state ferry landing at Hollis provides access to the POW road system. The Inter-Island Ferry Port Authority built a ferry terminal in Coffman Cove, but the ferry no longer runs to and from the community. A state-owned seaplane base is available with scheduled air service from Ketchikan three times a week. The nearest landing strip is in Klawock, 32 mi south. A boat launch and dock are available. Freight arrives by cargo plane, barge, and ship and by road from Craig. The price of roundtrip airfare between Ketchikan and Craig via Taquan Air was \$250 as of November 2011.¹⁰⁶ There is a local ferry planned for completion in 2013 which will connect Wrangell, Petersburg, and Coffman Cove.

¹⁰⁴ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

¹⁰⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁶ Taquan Air. (n.d.). *Homepage*. Retrieved November 22, 2011 from <http://www.taquanair.com/>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Coffman Cove from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$700,329	n/a	\$33,000	\$140,000
2001	\$635,104	n/a	\$27,540	\$31,236
2002	\$485,645	n/a	\$27,117	n/a
2003	\$458,777	n/a	\$27,000	n/a
2004	\$328,469	n/a	-	n/a
2005	\$369,828	n/a	-	n/a
2006	\$623,819	n/a	-	\$27,000
2007	\$612,417	n/a	-	\$725,000
2008	\$1,068,215	n/a	-	\$1,087,201
2009	\$687,055	n/a	\$103,576	\$125,000
2010	\$3,323,911	n/a	\$103,193	\$1,600,000

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Facilities

Coffman Cove uses a piped sewage system, surface water source, a water treatment system, and a storage tank supply the piped water system. A total of 107 homes now have complete plumbing. The city has refuse pickup service and hauls the garbage to Klawock. Local accommodations include Misty Sea Charters & Lodging, Coffman Cove Adventures, and Bearbuck Bed and Breakfast. Police services are provided by State Troopers based in Klawock. Internet services, local and long distance telecommunications, and television services are available locally.¹⁰⁷ Additional local businesses and services include an RV park, laundry and shower services, grocer, gift shops, take-out restaurant, liquor store, bar, cabin and boat rentals, vehicle rentals, and welding services.

As part of its community revitalization goals, Coffman Cove has been under a period of rapid development since 2000. Current or completed infrastructure projects outlined in the city's 2002 *Economic Recovery Action Plan*¹⁰⁸ include small boat harbor upgrades and expansion, boat launch ramp, harbormaster office, retail marine fuel facility, marine industrial park, boat haul out facility and grid, boat storage and repair, commercial welding and machine shop, marine

¹⁰⁷ See footnote 105.

¹⁰⁸ City of Coffman Cove. (2002). *Economic Recovery Action Plan*. Retrieved February 14, 2012 from: <http://www.commerce.state.ak.us/dca/plans/CoffmanCove-EDP-2002.pdf>.

bulkhead with barge ramp, highway and road access improvements, improvements to ferry and seaplane facilities, water/sewer extensions, telecommunication and electrical grid improvements, a new school and medical clinic, recreation facilities, and an updated community center.

*Medical Services*¹⁰⁹

Currently there are no medical facilities located in Coffman Cove, although limited emergency care is provided by Coffman Cove Fire and Emergency Management Services. However, the Seaview Medical Center in Craig is a qualified Emergency Care Center.

*Educational Opportunities*¹¹⁰

Howard Valentine School offers Preschool through 12th grade instruction. As of 2011, there were 12 students in enrolled and 2 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial harvest of salmon began in Southeast Alaska in the late 1870.¹¹¹ In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.¹¹² Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (e.g., sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty which was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.¹¹³

State-managed sablefish fisheries currently take place in the inside waters of Chatham and Clarence Straits, north of Meyers Chuck. Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Halibut and Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter

¹⁰⁹ See footnote 105.

¹¹⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹¹¹ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹¹² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹¹³ See footnote 111.

closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.

Shrimp trawl fisheries in Southeast Alaska primarily target northern shrimp and sidestripe shrimp, although the market for northern shrimp has declined in recent years with the closure of the primary processing facility in Petersburg in 2006.¹¹⁴ A pot fishery for spot shrimp has also grown in Southeast Alaska since the 1990s. Commercial dive fisheries for red sea cucumber and sea urchin began near Ketchikan in the early 1980s. A dive fishery for geoduck clams began around the same time, and all three fisheries are now managed by ADF&G according to Fishery Management Plans. Sea cucumbers and sea urchin are hand-picked by divers, while geoduck divers use handheld water jets to remove substrate from around the clams.

While traditionally a logging town, Coffman Cove has been rapidly developing its commercial and recreational fisheries economy in recent years. The salmon gillnet fishery is perhaps the most important local commercial fishery, with many vessels from Seattle using the community as a base of operations during seasons. Other fisheries active in the Coffman Cove area include shrimp, sea cucumber, sea urchin, and halibut.¹¹⁵ The community is located in Federal Reporting Area 659, International Pacific Halibut Commission (IHPC) Regulatory Area 2C, and the Eastern Gulf of Alaska (GOA) Sablefish Regulatory District.

Coffman Cove is eligible to participate in the Community Quota Entity (CQE) program and is represented by the Coffman Cove Community Quota Entity, its local non-profit. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.¹¹⁶

As of Fall 2013, the Coffman Cove Community Quota Entity had not yet purchased any commercial halibut IFQ or non-trawl groundfish License Limitation Program permits. However, the non-profit had acquired four halibut charter permits for lease to community members.¹¹⁷

¹¹⁴ Alaska Dept. of Fish and Game (2012). *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=northernshrimp.printerfriendly>.

¹¹⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁶ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

¹¹⁷ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

Processing Plants

Canoe Lagoon Oyster Co. processes Alaska Sterling oysters at its Coffman Cove processing plant.¹¹⁸ No other processing plants are located within the community. The nearest fish processing plant is located in Wrangell, 37 mi northeast.

Fisheries-Related Revenue

The bulk of fisheries-related revenue being collected in Coffman Cove comes from harbor usage fees. The amount collected by such fees increased steadily between 2000 and 2010, with \$22,000 collected in 2009. In addition to harbor fees, the city received funds from Shared Fisheries Business Taxes, and Fisheries Resource Landing Taxes. Data on harbor usage fees for 2010 is unavailable. Information regarding fisheries-related revenues can be found in Table 3.¹¹⁹

Commercial Fishing

In 2010, 6 residents, or 3.4% of the population, held a total of 8 permits issued by the Commercial Fisheries Entry Commission (CFEC), which was unchanged from 2000. Of the CFEC permits held that year, 50% were for salmon, compared to 75% in 2000; 13% were for halibut, compared to 0% in 2000; 25% were for “other” shellfish, compared to 13% in 2000; and 13% were for crab, compared to 13% in 2000. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) groundfish or crab permits. Residents last held halibut quota shares in 2003, when 1 account held 584 shares. No residents held sablefish or crab quota between 2010 and when the programs began.

Four residents held crew licenses, compared to 9 in 2000. In addition, residents held majority ownership of 4 commercial vessels in that year, compared to 9 in 2000. Of the CFEC permits held in 2010, 38% were actively fished, which was the same as in 2000. This varied by fishery from 100% of halibut permits, to 50% of “other” shellfish, 25% of salmon, and 0% of crab permits. Fisheries prosecuted in 2010 include southeast drift gillnet salmon and dive sea cucumber, and statewide longline halibut.¹²⁰

No landings were reported in the community between 2000 and 2010, although landings were made by residents during that time. In 2006, residents landed a total of 153,347 lbs of salmon valued at \$117,812 ex-vessel, compared to 196,173 lbs valued at \$119,449 ex-vessel in 2003. This represented an approximate \$0.03 increase in price per pound ex-vessel after adjusting for inflation¹²¹ and without taking into account the species composition of landings. All other landings are considered confidential. Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹¹⁸ Alaska Seafood Marketing Institute. (2011). *Directory of Alaska Seafood Suppliers*. Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

¹¹⁹ It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

¹²⁰ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹²¹ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Coffman Cove: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$6,095	\$5,331	\$2,445	\$4,427	\$5,594	\$11,173	\$8,305	\$6,674	\$6,187	\$7,678	\$5,710
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	\$15	n/a	\$15	\$75	\$47	\$125	\$83
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$10,900	\$11,000	\$12,000	\$10,000	\$12,000	\$15,000	\$15,000	\$19,500	\$17,500	\$22,000	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$16,995	\$16,331	\$14,445	\$14,427	\$17,609	\$26,173	\$23,320	\$26,249	\$23,734	\$29,804	\$5,794
Total municipal revenue⁵	\$700,329	\$635,104	\$485,645	\$458,777	\$328,469	\$369,828	\$623,819	\$612,417	\$1.07 M	\$687,055	\$3.32 M

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Coffman Cove: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Other shellfish (CFEC) ²	Total permits	1	5	2	2	2	3	3	3	2	2	2
	Fished permits	1	2	1	1	1	2	2	2	1	1	1
	% of permits fished	100%	40%	50%	50%	50%	66%	66%	66%	50%	50%	50%
	Total permit holders	1	3	2	2	2	3	3	3	2	2	2
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	1
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	100%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	1
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Coffman Cove: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	6	6	6	8	8	8	8	7	6	4	4
	Fished permits	2	2	2	4	3	4	5	2	2	1	1
	% of permits fished	33%	33%	33%	50%	38%	50%	63%	29%	33%	25%	25%
	Total permit holders	5	5	5	7	7	7	8	7	7	4	4
<i>Total CFEC Permits²</i>	<i>Permits</i>	8	12	9	11	11	12	12	11	9	7	8
	<i>Fished permits</i>	3	4	3	5	4	6	7	4	3	2	3
	<i>% of permits fished</i>	38%	33%	33%	45%	36%	50%	58%	36%	33%	29%	38%
	<i>Permit holders</i>	6	8	7	9	9	10	11	10	9	6	6

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Coffman Cove: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Coffman Cove ²	Total Net Pounds Landed In Coffman Cove ²	Total Ex-Vessel Value Of Landings In Coffman Cove ²
2000	9	0	1	9	13	0	0	\$0
2001	7	0	1	11	17	0	0	\$0
2002	5	0	1	10	14	0	0	\$0
2003	8	0	1	11	15	0	0	\$0
2004	6	0	1	13	16	0	0	\$0
2005	9	0	1	7	7	0	0	\$0
2006	5	0	2	9	10	0	0	\$0
2007	6	0	1	8	11	0	0	\$0
2008	5	0	1	7	9	0	0	\$0
2009	6	0	1	4	6	0	0	\$0
2010	4	0	1	4	7	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation in Coffman Cove: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	584	82
2001	1	584	85
2002	1	584	83
2003	1	584	83
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Coffman Cove: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Coffman Cove: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Coffman Cove: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Coffman Cove Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	196,173	--	160,045	153,347	--	--	--	--
<i>Total²</i>	--	--	--	<i>196,173</i>	--	<i>160,045</i>	<i>153,347</i>	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	\$119,449	--	\$133,722	\$117,812	--	--	--	--
<i>Total²</i>	--	--	--	<i>\$119,449</i>	--	<i>\$133,722</i>	<i>\$117,812</i>	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing is a growing industry in Coffman Cove. The city’s close proximity to Ketchikan makes it a popular and accessible destination for non-resident anglers. Private pleasure boats continue to increase in numbers within the Inside Passage. As Coffman Cove continues to develop its tourism infrastructure, it is expected that this trend will continue.¹²² In 2010, Coffman Cove had 4 active sport fish guide businesses registered in the community, compared to 2 in 2000. In addition, residents held five sport fish guide licenses that year, compared to one in 2000. Residents held 109 sportfishing licenses in 2010, compared to 130 in 2000, and 19 sportfishing licenses were sold in the community, compared to 387 in 2000. It should be noted that 2010 experienced a significant drop in sportfishing licenses sold in the community compared to previous years.

Coffman Cove is located in the Prince of Wales ADF&G Harvest Survey Area which includes all marine waters and drainages from Cape Chacon to Sumner Strait; and from Clarence Island westward. In 2010 there was a total of 51,312 saltwater angler days fished, compared to 49,074 in 2000. In that year, non-Alaska residents accounted for 74.4% of angler days fished, compared to 67.3% in 2000. In regards to freshwater, there were a total of 15,138 angler days fished in 2010, compared to 19,654 in 2000. In that year, non-Alaska residents accounted for 70.4% of angler days fished, compared to 45.9% in 2000. According to ADF&G Harvest Survey data, species targeted by private anglers in Coffman Cove include Chinook, coho, sockeye, and pink salmon, cutthroat trout, Pacific halibut, rockfish, lingcod, Pacific cod, other finfish, Dungeness crab, hardshell clams, and shrimp. Charter log data collected by ADF&G¹²³ showed that in 2010, 34 Chinook salmon were kept, 656 coho salmon were kept, 523 halibut were kept, 11 lingcod were kept, 216 rockfish were kept, and 4 sablefish were kept. Information regarding sportfishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Coffman Cove: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Coffman Cove ²
2000	2	1	130	387
2001	2	3	119	428
2002	3	3	106	403
2003	3	3	126	438
2004	4	4	124	471
2005	4	4	99	522
2006	3	3	96	305
2007	4	5	64	176
2008	4	4	88	118
2009	4	5	86	129
2010	4	5	109	19

¹²² City of Coffman Cove. (2002). *Economic Recovery Action Plan*. Retrieved February 14, 2012 from: <http://www.commerce.state.ak.us/dca/plans/CoffmanCove-EDP-2002.pdf>.

¹²³ Alaska Department of Fish and Game. (2011). *Alaska Sportfishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 Cont. Sport Fishing Trends, Coffman Cove: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	33,043	16,031	9,024	10,630
2001	38,248	14,090	7,299	5,922
2002	36,736	12,590	9,957	8,981
2003	37,341	16,346	10,627	11,506
2004	40,803	16,770	11,518	3,969
2005	52,135	16,333	10,100	3,527
2006	46,207	11,828	11,073	5,161
2007	49,280	13,327	11,132	6,463
2008	46,717	17,930	11,302	7,185
2009	38,164	10,829	9,918	4,124
2010	37,416	13,896	10,660	4,478

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence fishing information is limited, and data on household participation in subsistence activities are unavailable. However, according to ADF&G reports, halibut is harvested the most often by residents, followed by sockeye salmon (Tables 13 & 14). According to ADF&G's *Community Subsistence Information System*,¹²⁴ species which residents of Coffman Cove harvests or use include abalone, cockles, chitons, king crab, box crab, butter clams, Dungeness crab, geoducks, sea urchin, horse clams, limpets, octopus, oysters, littleneck clams, razor clams, scallops, shrimp, squid, Tanner crab, mussels, sea cucumber, fur seal, harbor seal, Steller sea lion, black rockfish, brook trout, buffalo sculpin, cutthroat trout, dogfish, Dolly Varden, eulachon, grayling, herring, lingcod, Pacific cod, Pacific tom cod, rainbow trout, Irish lord, red rockfish, rock greenling, sablefish, sea perch, silver smelt, skates, steelhead, flounder, shark, sole, and pollock.

In 2010, 46 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 39 in 2003. In that year, an estimated 2,678 lbs of halibut were harvested on 19

¹²⁴ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

SHARC cards, compared to an estimated 5,197 lbs on 39 SHARC cards in 2003. This represented a significant decline from previous years in the number of SHARC fished and pounds harvested. Estimated halibut harvests peaked in 2004 at 6,194 lbs. In terms of salmon harvests, residents reported that 32 sockeye salmon were harvested in 2008, compared to 287 reported in 2000. Reported salmon harvests peaked in 2001 at 560 fish. There was a significant decline in the number of subsistence salmon permits held between 2004 and 2008, when compared with 2000 through 2003. Data on subsistence marine mammal harvests between 2000 and 2010 is unavailable. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Coffman Cove: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Coffman Cove: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	70	60	n/a	n/a	n/a	n/a	287	n/a	n/a
2001	62	50	n/a	n/a	n/a	n/a	560	n/a	n/a
2002	62	58	n/a	n/a	n/a	n/a	282	n/a	n/a
2003	59	55	4	n/a	n/a	n/a	367	n/a	n/a
2004	12	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	7	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	3	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	2	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	14	11	n/a	n/a	n/a	n/a	32	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Coffman Cove: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	39	30	5,197
2004	43	24	6,914
2005	46	25	4,851
2006	44	22	3,438
2007	46	24	3,588
2008	44	30	4,509
2009	50	32	4,299
2010	46	19	2,678

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Coffman Cove: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

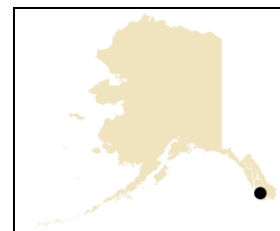
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Craig



People and Place

*Location*¹²⁵

Craig is located on a small island off the west coast of Prince of Wales Island (PWI) and is connected by a short causeway. It lies 56 mi northwest of Ketchikan, 750 mi north of Seattle, and 220 mi south of Juneau. The area encompasses 6.7 sq mi of land and 2.7 sq mi of water. Craig was incorporated as a First-class city in 1922, is located in the Prince of Wales-Hyder Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*¹²⁶

In 2010, there were 1,201 residents, ranking Craig 59th of 352 communities in terms of population size. Between 1990 and 2010 the population declined by 4.7%. Between 2000 and 2009, the population fell by 18.8% with an average annual growth rate of -1.4%, which was significantly below the statewide average of 0.75% and reflective of the steep population decline between 2000 and 2006. In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 400 seasonal or transient workers living in Craig in 2010. On average, seasonal workers live in Craig from June through August, with the population peaking in August. This peak in population is mostly driven by employment in the fishing sectors. Information regarding population trends can be found in Table 1.

The racial and ethnic composition of Craig is relatively diverse. In 2010, 65% of residents identified themselves as White, 20% as American Indian or Alaska Native, and 13.3% as two or more races. Other races represented in the community that year each made up less than one-percent of the population. Residents identifying themselves as Hispanic or Latino contributed to 3.2% of the population in 2010. Racial and ethnic composition in Craig changed little between 2000 and 2010. Overall, there were slight increases in residents identifying themselves as two or more races and Hispanic or Latino, and slight declines in those identifying themselves as White and American Indian or Alaska Native. Information regarding Craig's racial and ethnic composition is found in Figure 1.

In 2010, the average household size was 2.53, compared to 2.8 in 1990 and 2.63 in 2000. In that year, there were a total of 537 housing units, compared to 504 in 1990 and 580 in 2000. Of the households surveyed in 2010, 58% were owner-occupied, compared to 61% in 2000; 30% were renter-occupied, compared to 29% in 2000; 6% were vacant, compared to 8% in 2000; and 7% were occupied seasonally, compared to 2% in 2000. There were 13 residents living in group quarters in 2010, compared to 23 in 2000.

¹²⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

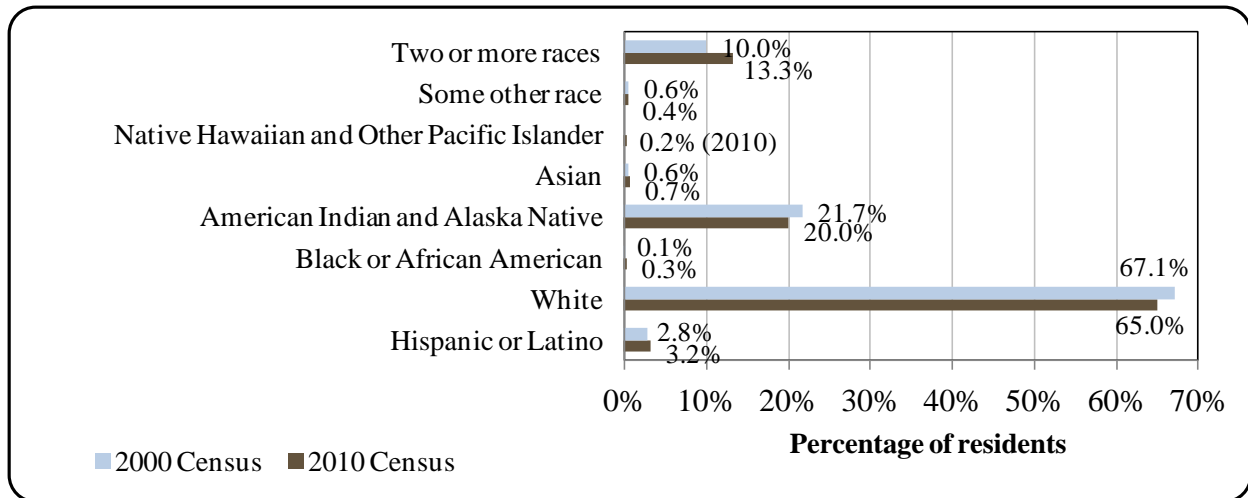
Table 1. Population in Craig from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	1,260	-
2000	1,397	-
2001	-	1,245
2002	-	1,209
2003	-	1,176
2004	-	1,134
2005	-	1,097
2006	-	1,090
2007	-	1,050
2008	-	1,118
2009	-	1,101
2010	1,201	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and ethnic composition, Craig: 2000-2010 (U.S. Census).



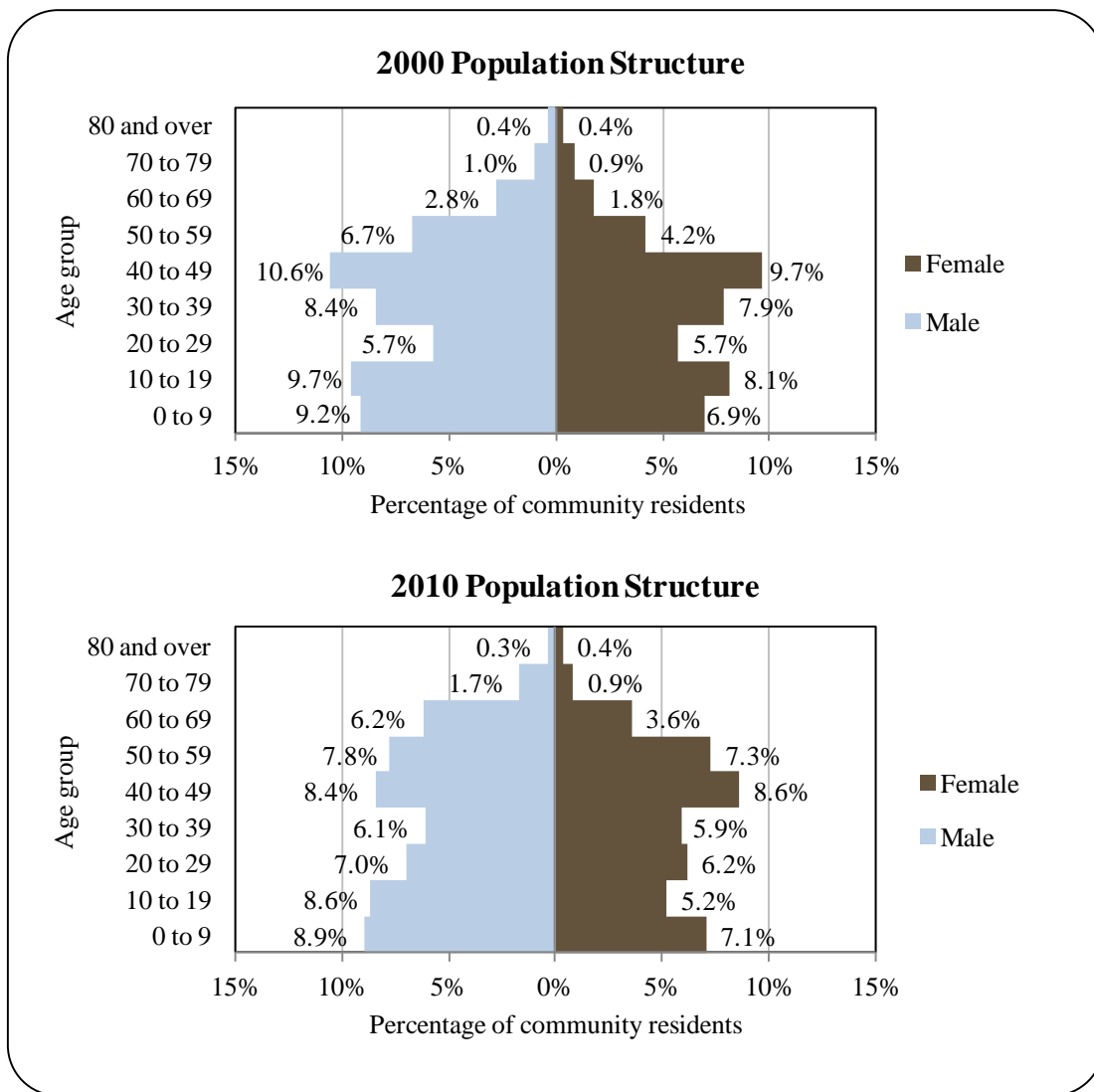
The gender distribution in 2010 was skewed at 55% male and 45% female. This was slightly less even than the distribution statewide (52% male, 48% female) and similar to the distribution in 2000 (54.5% male, 45.5% female). The median age that year was 36.4 years, which was slightly higher than the statewide and 2000 median of 33.8 years.

Compared with 2000, the 2010 population structure was slightly less expansive. Age transitions were consistent with a relatively stable population, meaning that cohorts aged while

still mostly retaining their structural character. In 2010, 29.8% of residents were under the age of 20, compared to 33.9% in 2000. Also in that year, 13.1% of residents were over the age of 59, compared to 7.3% in 2000; 44.1% were between the ages of 30 and 59, compared to 47.5% in 2000; and 13.2% were between the ages of 20 and 29, compared to 11.4% in 2000.

Overall, gender distribution by age cohort was more uneven in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 10 to 19 range (8.6% male, 5.2% female), followed by the 60 to 69 (6.2% male, 3.6% female) and 0 to 9 (8.9% male, 7.1% female) ranges. Of those three, the greatest relative gender difference occurred in the 60 to 69 range. Information regarding Craig’s population structure can be found in Figure 2.

Figure 2. Population age structure in Craig based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census 2006-2010 American Community Survey (ACS)¹²⁷ estimated that 92.9% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 0.7% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 6.4% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 31.5% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 6.4% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 15.8% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 7.4% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹²⁸

Human occupation of PWI is believed to date back around 10,300 years, according to archaeological records associated with human remains and bone tools found at On Your Knees cave on the northern tip of the island.¹²⁹ Previous to White settlement, Tlingit and Haida Natives were the sole occupants of the Craig area, taking advantage of the abundant resources in the area. In 1907, Craig Miller and eight Haida men built a fish saltery on Fish Egg Island, which consisted of several shacks and tents for workers. A permanent saltery and cold storage facility was constructed between 1908 and 1911, along with 20 to 25 houses. In 1912, a cannery was built along with a school, post office, and sawmill. World War I increased the demand for canned salmon and lumber, and seafood processing in the area peaked in 1917. Craig's economy began to decline following World War I; however, the community continued to diversify in response, becoming the center of island government and commerce. In 1922, Craig was detached from the Tongass National Forest allowing it to petition for a municipal government.

The price of salmon dropped significantly during the depression years prompting a fishermen strike in protest. In 1935, a second seafood processor was opened. During that time, Works Progress Administration and Civilian Conservation Corps projects established as part of the New Deal provided additional employment in Craig. These projects included construction of the Craig-Klawock highway as well as several U.S. Forest Service (USFS) trails. By 1939, Craig had a year-round population of 505. Many residents left Craig during World War II because of the draft and wartime industrial booms in Sitka and Seattle. By 1950, Craig's population had dipped to 374. The population continued to decline in the 1950s with the destruction of the Libby cannery to fire and a reduced fishing industry.

In 1954, the Ketchikan Pulp Company mill opened and while it had no immediate impact on Craig's economy, it did lead to increased logging and USFS personnel on the island. The 1960's saw yet another slump for Craig's economy resulting from several years of poor salmon runs. During that time, nearby Klawock maintained the only operating seafood processor on PWI

¹²⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁹ University of South Dakota. (n.d.). *On Your Knees Cave*. Retrieved February 29, 2012 from: <http://orgs.usd.edu/esci/alaska/oykc.html>.

while Craig acted as a maintenance center for the Columbia Ward Fishing fleet.

Efforts to improve economic conditions by the Craig Development Corporation and West Coast Development Association in the late 1960s and early 1970s resulted in the construction of a new cold storage facility and sawmill. During this time, Craig began to establish itself as a regional government and commercial center. Improvements to local infrastructure were made including a road to Hollis, Alaska Marine Highway System link, utilities improvements, new high school, and Klawock airport. In 1971, the Alaska Native Claims Settlement Act (ANCSA) led to the formation of Shaan-Seet, the local Native village corporation, which expanded timber activities on Tribal lands.

By 1980, Craig's population had swelled to 1,637 due to increased employment in fishing, seafood processing, logging, and timber processing. Construction increased as capital projects grew Craig as a regional center.¹³⁰ The Head Sawmill, built in 1972, was sold in the early 1990s to Viking Lumber.¹³¹

Today, Craig remains the economic and governmental center of PWI. There are many historically significant resources in the area. Petroglyphs can be found in north Shelter Cove. Saint Philip Island, Point Incarnation, and Fishegg Island all have historic villages and cemeteries. Finally, there are several historic buildings including the old cannery bunkhouses, communications office, and radio tower.¹³²

Natural Resources and Environment

PWI is dominated by a cool, moist, maritime climate. Summer temperatures range from 49 to 63 °F (9 to 17 °C). Winter temperatures range from 32 to 42 °F (0 to 6 °C). Average annual precipitation is 120 inches, and average annual snowfall is 40 inches. Gale winds are common in the fall and winter months.¹³³

Craig is located in a basin surrounded by mountains, Mt. Sunnahae being the tallest at 2,920 ft. Steep topography surrounds the community which slopes down to sea level. Most of the soils in the area are derived from a mix of volcanic rock, glacial deposits, and sandy alluvium.¹³⁴ Organic soils are mostly found in the form of muskegs which are located at various elevations, mostly around drainage basins. Vegetation is dominated by mixed stands of Sitka spruce and hemlock. Shrubs common to the area include salmonberry, thimbleberry, devil's club, blueberry, rusty menziesia, and salal. Ground cover is comprised mostly of mosses, ferns, bunchberry, twisted stalk, and deer berry. Alders are found along many stream banks and disturbed areas. Interspersed muskegs are populated with mosses, sedges, and rushes. Intertidal and subtidal areas support growths of algae, kelp beds, and eel grass.¹³⁵

Commercially important fish include pollock, Pacific halibut, Pacific ocean perch, sablefish, turbot, sole, rockfish, herring, all five species of Pacific salmon, Dolly Varden char, and cutthroat and steelhead trout. Common marine mammals include Steller sea lions, harbor

¹³⁰ City of Craig. (n.d.). *Brief history of the area's economy*. Retrieved February 29, 2012 from: <http://www.craigak.com/documents/OEDP.pdf>.

¹³¹ See footnote 128..

¹³² City of Craig. (2006). *Craig Coastal Management Plan*. Retrieved February 29, 2012 from: <http://www.craigak.com/documents/Craig%20Coastal%20Management%20Plan%20-%202007.pdf>.

¹³³ See footnote 128.

¹³⁴ City of Craig. (1987). *Community Comprehensive Plan*. Retrieved February 29, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Craig-CP-1987.pdf>.

¹³⁵ See footnote 132.

seals, Dall's and harbor porpoises, and killer whales. Terrestrial mammals include Sitka black tailed deer, wolf, marten, mink, river otter, and black bear. Birds include many species of shorebirds and marine birds.¹³⁶

Additional natural resources in the area include timber and ecosystem services derived from local habitats. The 2009 Logjam timber sale opened up 3,422 acres of the Tongass National Forest to commercial harvesting with a potential yield of 73 million board feet.¹³⁷ Sealaska, the regional ANSCA corporation for southeast Alaska, also has active timber developments within Tribal lands on the island.¹³⁸ Local estuaries, riparian areas, and eel grass beds provide important feeding and rearing habitat for a range of commercially important species.¹³⁹ In addition to important habitat, these areas provide valuable recreation resources for the community's tourism economy.¹⁴⁰ Mineral developments in the area include the Niblack and Bokan Mountain mineral projects. The Niblack project is a copper-zinc-silver prospect which was in the final stages of exploration as of 2011.¹⁴¹ Bokan Mountain mineral area is a source of uranium and rare earths on the southern portion of PWI.

Craig is protected against many natural hazards due to its sheltered position. However, earthquakes have been classified as a moderate risk by the U.S. Army Corps of Engineers and it is projected that regional damage caused by an earthquake would be major.¹⁴² Damage from earthquakes would likely come from shaking, tsunamis, seiches, and landslides.

The Alaska Department of Environmental Conservation had an active cleanup site in Craig as of 2005. The Craig Radio State, operated by the U.S. Army from 1918 to 1962, was used by the U.S. Air Force for both telephone and telegraph communications. Following a 2004 removal of fuel storage tanks, high levels of benzene and diesel organics were found in both the soil and groundwater. While the groundwater at the site was not used for drinking, the contaminants were found to be migrating off-site. Remediation measures were taken and as of 2009 remaining contaminants were contained.¹⁴³

¹³⁶ Ibid.

¹³⁷ United States Forest Service. (2009). *Logjam Timber Sale Record of Decision*. Retrieved February 29, 2012 from: http://www.fs.fed.us/r10/tongass/projects/logjamDEIS/05_rod_logjam.pdf.

¹³⁸ Sealaska Timber Corporation. (n.d.). *About Us*. Retrieved February 14, 2012 from: <http://www.sealaskatimber.com/page/about-us>.

¹³⁹ See footnote 135.

¹⁴⁰ HDR Alaska. (2000). *City of Craig Comprehensive Plan*. Retrieved February 29, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Craig-CP-2000.pdf>.

¹⁴¹ Alaska Department of Natural Resources. (n.d.). *Niblack Project*. Retrieved February 14, 2012 from: <http://dnr.alaska.gov/mlw/mining/largemine/niblack/>.

¹⁴² City of Craig. (2000). *City of Craig Comprehensive Plan*. Retrieved February 29, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Craig-CP-2000.pdf>.

¹⁴³ Alaska Department of Environmental Conservation. (n.d.) *Contaminated Sites Program*. Retrieved from: <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹⁴⁴

In a survey conducted by the AFSC in 2011, community leaders reported that Craig's economy is dependent on mining, logging, fishing, ecotourism, sportfishing and hunting, and energy. The economy of Craig has historically been dependent on the commercial fishing industry and more recently on both the fishing and timber harvest industries. A cycle of boom and bust has dominated Craig's past; however, its economy has become more stable and has actually improved with stable fisheries management, expansion of the timber industry, and increased employment in the public and private sectors serving the needs of primary industries. Economic expansion and diversification are still desired as declines in the timber industry and in state and federal spending occur.¹⁴⁵ With the expansion of Craig as a regional center, tourism and service-related industries have continued to offer opportunities for increased employment.¹⁴⁶

Craig acts as a staging area for the west PWI seine fleet, and many businesses and services associated with maintaining commercial fleets prosper in the summer months. Other businesses such as retail, accommodations, and food services, benefit indirectly as well due to increased traffic from commercial fishing and private vessels. Craig's second main resource sector, timber production, operates at a fraction of the scale it once did when Louisiana Pacific had a large presence in the area. Current timber extraction on public lands is limited; however, Sealaska continues to harvest timber on ANCSA ceded lands. Timber prices and export market demand bottomed out in 1982, and poor market conditions have continued. Many jobs in Craig are tied in one way or another to resource extraction sectors. This includes transportation, communications, utilities, retail, public administration, and construction. Craig survived the boom and bust environment of its past, and through diversification has secured a stable regional economy.¹⁴⁷ Top employers¹⁴⁸ in 2010 included: Craig City School District, City of Craig, AK Commercial Co., Community Connections Inc., Ruth Anns Restaurant, State of Alaska, AK Power & Telephone Co., Southeast Alaska Regional Health Consortium, Tribal Transportation Department, and Inter-Island Ferry Authority.

In 2010,¹⁴⁹ the estimated per capita income in Craig was \$25,263 and the estimated median household income was \$47,813, compared to \$20,176 and \$45,298 in 2000, respectively. However, after accounting for inflation by converting 2000 values to 2010 dollars,¹⁵⁰ the real per capita income (\$26,531) and real median household income (\$59,566) indicate a slight decline in individual earnings, and significant decline in household earnings. In that year, Craig ranked 105th of 305 communities from which per capita income was estimated, and 143rd of 299 communities from which median household income was estimated.

Craig's small population size may have prevented the ACS from accurately portraying

¹⁴⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁴⁵ See footnote 140.

¹⁴⁶ See footnote 134.

¹⁴⁷ Ibid.

¹⁴⁸ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹⁴⁹ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

economic conditions.¹⁵¹ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$14.85 million in total wages in 2010.¹⁵² When matched with the population in 2010, the per capita income equals \$12,366, which was significantly lower than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.¹⁵³

According to 2006-2010 ACS estimates,¹⁵⁴ 74.3% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 5.0%, compared to an estimated 5.9% statewide; and an estimated 19.7% of residents were living below the poverty line, compared to an estimated 9.6% statewide. Of those employed in the civilian labor force, an estimated 67.1% worked in the private sector, an estimated 19.5% worked in the public sector, and an estimated 13.3% were self employed. By industry, sector employment was relatively diverse in 2010. In that year, most (18.7%) employed residents were estimated to work in education services, health care, and social assistance sectors; followed by retail trade sectors (18.5%); and transportation, warehousing, and utilities sectors (17.6%) (Figure 3). Compared with 2000, significant increases occurred in retail trade, transportation, warehousing, and utilities sectors. However, there was a significant drop in the percentage of those estimated to be employed in agriculture, forestry, fishing, hunting, and mining sectors from 24.2% in 2000, to an estimated 7.6% in 2010. Causes for this drop could be related to declines in the timber industry. However, it should be noted that sampling techniques used for the American Community Survey may not have captured the true scope of industry representation. Much of Craig's resource economy is mobile and seasonal; therefore Census data may capture economic characteristics active at different times of the year.

By occupation type, most (26.1%) employed residents were estimated to be working sales or office positions in 2010; followed by service positions (21.4%); management and professional positions (20.9%); natural resources, construction, and maintenance positions (16.2%); and production, transportation, and material moving positions (15.4%) (Figure 4). Again, there was a steep decline in the percentage of residents working natural resources, construction, and maintenance positions from 25.8% in 2000.

¹⁵¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁵² ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁵³ See footnote 148.

¹⁵⁴ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Craig (U.S. Census).

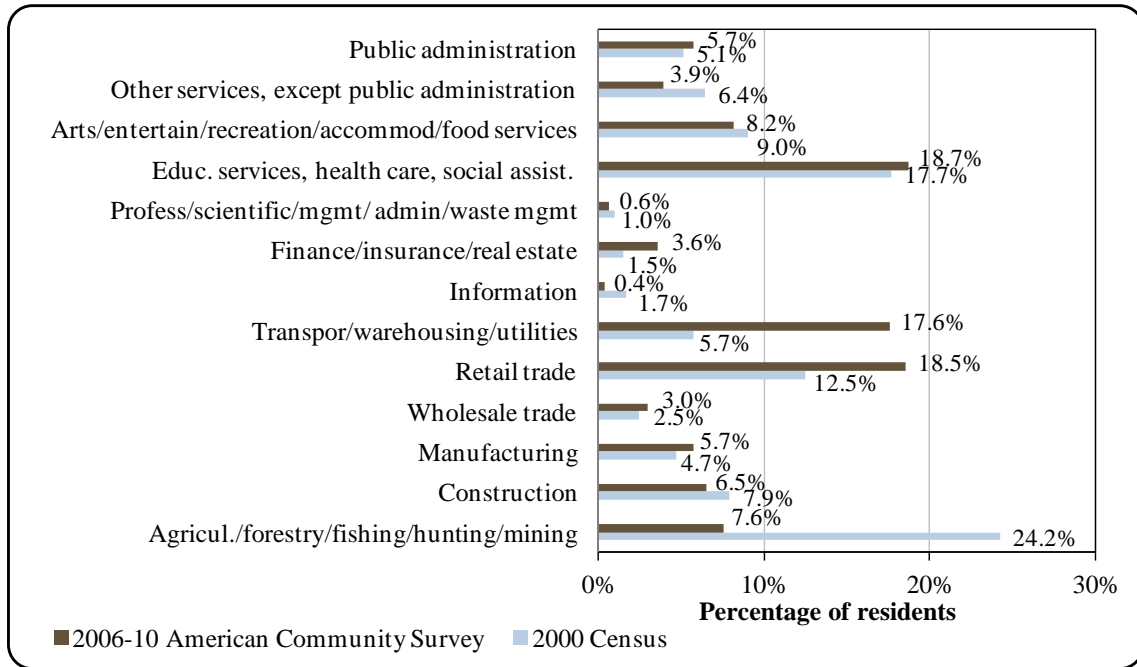
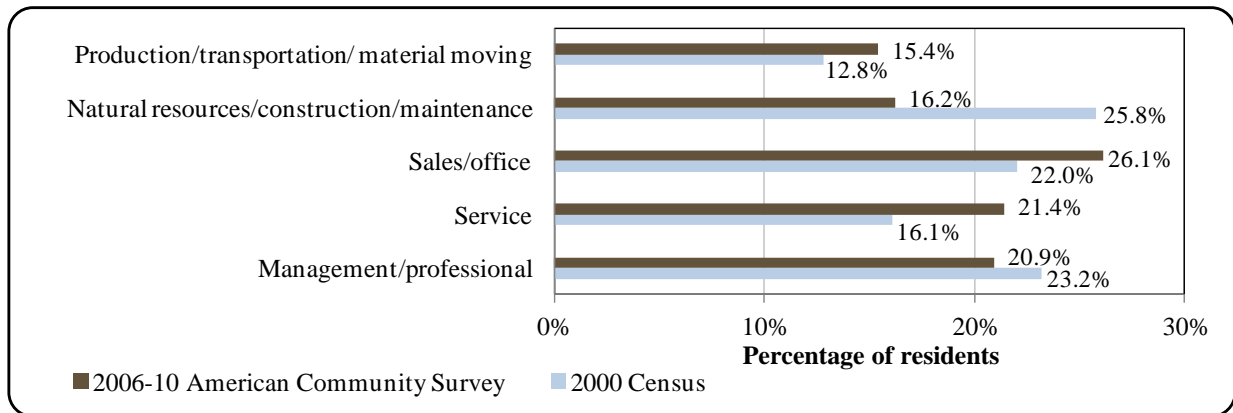


Figure 4. Local Employment by Occupation in 2000-2010, Craig (U.S. Census).



Governance

Craig is a First-class city with a mayoral form of government. There is a seven-member city council, five-member school council, five-member planning commission, and five municipal employees. There is a U.S. Bureau of Indian Affairs (BIA) recognized Native village council (Craig Community Association) and ANCSA chartered Native village corporation (Shaan-Seet Incorporated). The regional ANCSA chartered Native corporation is Sealaska. There is an Alaska Department of Fish and Game (ADF&G) office located in Craig. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services (BCIS) offices are located in Ketchikan, 56 mi southeast.

In 2010, the city administered a 5% sales tax and 6 mill property tax. When adjusted for

inflation,¹⁵⁵ total municipal revenues remained virtually unchanged between 2000 and 2010, from \$3.1 million in 2000, to \$4.0 million in 2010. Revenue years in-between were somewhat more variable, ranging from a low of \$2.4 million in 2005, to a high of \$8.1 million in 2001. Municipal revenues in 2001 were somewhat anomalous in that \$5.8 million was collected in inter-governmental revenue that year (significantly higher than other years). Most locally generated revenues come from sales and property taxes. Outside revenues are collected from Community Revenue Sharing, payments in lieu of taxes, and leases.

Craig received \$151,217 in state allocated Community Revenue Sharing in 2010, which accounted for 3.8% of municipal revenues that year. This represented a proportional increase from 2000 when \$35,774 in State Revenue Sharing accounted for 1.2% of total revenues. State and federal fisheries-related grants received by Craig between 2000 and 2010 included: \$5.8 million for harbor projects, \$2 million for cold storage construction, \$1.3 million for cannery and cold store improvements, \$250,000 for haulout facilities, \$50,000 for a hatchery project, \$51,314 for a public icehouse, and \$89,000 for acquisition of a hydraulic boat trailer. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Craig from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$3,080,645	\$1,344,493	\$35,774	n/a
2001	\$8,130,047	\$1,310,261	\$31,426	\$89,000
2002	\$3,843,230	\$1,201,047	\$32,545	\$750,000
2003	\$3,904,091	\$1,231,647	\$25,986	\$5,051,314
2004	\$3,861,966	\$1,240,569	-	n/a
2005	\$2,381,969	\$1,301,354	-	\$300,000
2006	\$2,874,199	\$1,394,532	-	\$2,300,000
2007	\$2,723,253	\$1,232,048	-	\$1,000,000
2008	\$3,014,798	\$1,440,913	-	n/a
2009	\$3,078,059	\$1,450,799	\$152,983	\$50,750
2010	\$3,993,408	\$1,398,509	\$151,217	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁵⁵ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

Connectivity and Transportation

Scheduled air transportation to Ketchikan is available from the nearby Klawock Airport. A state-owned seaplane base at Klawock Inlet and a U.S. Coast Guard heliport are maintained in Craig. Most passenger and light cargo transportation is done by float plane. Roundtrip airfare between Craig and Ketchikan is \$250 via Taquan Air.¹⁵⁶ The state ferry serves Hollis, 30 mi away, and enables transportation of passengers, cargo, and vehicles to the island. There are two small boat harbors at North Cove and South Cove, a small transient float and dock in the downtown area, and a boat launch ramp at North Cove. The J.T. Brown Marine Industrial Center was completed in 2006 and includes a dock and boat launch. Freight arrives by cargo plane, barge, and ferry in Hollis. A paved road exists between Hollis, Craig, Klawock, and the airport.¹⁵⁷

Facilities

All households are fully plumbed. Water is supplied by a dam on North Fork Lake and is then treated, stored in a tank, and piped to homes. Sewage is collected by a piped gravity system and receives primary treatment before discharge into Bucareli Bay. Refuse is collected and deposited in Klawock's landfill. The City also participates in annual hazardous waste collection events. Alaska Power & Telephone Co. owns and operates diesel power systems and a hydroelectric facility at Black Bear Lake, which provides electricity to many island communities. Public safety services are provided by city police and local state troopers. Fire and rescue services are provided by Craig EMS and PWI EMS. Additional local services include Craig Recreation Center, a city pool, three libraries, cable television, broadband internet, visitor accommodations, and a range of visitor accommodations, restaurants, and attractions.¹⁵⁸

Craig has several harbor facilities designed for a range of uses. In a survey conducted by the AFSC in 2011, community leaders reported that there is 1,500 ft of dock space available for permanent moorage, and 1,000 ft of dock space available for transient moorage. Vessels up to 150 ft in length can use moorage at one of Craig's three public docks. Types of regulated vessels of which Craig is capable of handling include rescue vessels, fuel barges, and vessels carrying hazardous materials. The Craig Coastal District contains several public and private marina facilities. These include: North Cove, which is a deep-water marina meant to meet commercial fishing needs; South Cove, which is a recreational marina; City Float, which provides commercial and recreational moorage; False Island, purposed for industrial and marine transportation; and the Ward Cove Packing Site, which provides additional commercial and recreational moorage. There are also boat launches at North Cove and False Island.¹⁵⁹

In a survey conducted by the AFSC in 2011, community reported that infrastructure projects currently in development or completed within the last 10 years include: a fish cleaning

¹⁵⁶ Taquan Air.(n.d.). Retrieved November 22, 2011 from: <http://www.taquanair.com/>.

¹⁵⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁸ Ibid.

¹⁵⁹ City of Craig. (2006). *Craig Coastal Management Plan*. Retrieved February 29, 2012 from: <http://www.craigak.com/documents/Craig%20Coastal%20Management%20Plan%20-%202007.pdf>.

station, pilings, and improvements to water and sewer systems. Fisheries-related support services and businesses located in Craig include: fish processing, fishing gear sales, fishing gear manufacturing, boat repair (electrical, welding, mechanical services, machine shop, hydraulics), haulout facilities (less than 60 tn), tidal grid, commercial fishing vessel moorage, recreational fishing vessel moorage, tackle sales, bait sales, commercial cold storage, dry dock storage, fish lodges, fishing related bookkeeping, boat fuel sales, fishing gear repair, fishing gear storage, ice sales, seaplane services, and air-taxi services. Public services available include medical services, food bank, job placement services, and publicly subsidized housing. Residents typically depend on Wrangell, Ketchikan, and Seattle for businesses and services not available locally.

*Medical Services*¹⁶⁰

Craig Medical Clinic and Prince of Wales Public Health Center provide general and emergency care for the region. Additional services include diagnostic imaging, mental health services, and a variety of health screenings. Additional health services are available in Ketchikan.

*Educational Opportunities*¹⁶¹

Craig Elementary School offers preschool through 5th grade instruction. As of 2011, there were 161 students enrolled and 12 teachers employed. Craig Middle School offers 6th through 8th grade instruction. As of 2011, there were 69 students enrolled and 6 teachers employed. Craig High School offers 9th through 12th grade instruction. As of 2011, there were 83 students enrolled and 11 teachers employed. Craig Alternative High School offers 9th through 12th grade instruction. As of 2011, there were eight students enrolled and one teacher employed. PACE Correspondence School offers kindergarten through 12th grade correspondence instruction. As of 2011 there were 319 students enrolled and 5 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Traditionally, local Tlingits had fished the PWI area for thousands of years. In the mid-seventeenth century, Haidas moved into PWI from the Queen Charlotte Islands in British Columbia. Fish and shellfish were abundant in the area and salmon, halibut, steelhead, cod, Dolly Varden, and eulachon were economically important species.¹⁶² Commercial fishing began in the late nineteenth Century with the construction of a salmon cannery in Klawock in 1878. Cannery construction expanded throughout southeast Alaska and by 1920 there were more than 100 in operation, including one in Craig built in 1912. Sockeye salmon were the major species taken and soon populations became depleted. Traps were used until the late 1950s and contributed to the steep declines in salmon stocks. While gear types were becoming increasingly

¹⁶⁰ See footnote 157.

¹⁶¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁶² Alaska History and Cultural Studies. (n.d.). *Alaska's Heritage: Tlingits settle in Southeast Alaska*. Retrieved March 5, 2012 from: <http://www.akhistorycourse.org/articles/article.php?artID=149>.

regulated following statehood, entry into fisheries was not and stocks continued to decline until record low levels in 1972. This decline helped promote limited entry permit systems.¹⁶³ Craig's participation in North Pacific fisheries continued to expand as salmon stocks recovered following the crash in 1970s.

In a survey conducted by the AFSC in 2011, community leaders reported that Craig participates in the fisheries management process in Alaska through a representative that participates in Federal Subsistence Board or Federal Subsistence Regional Advisory Council processes. In addition, Craig relies on regional organizations, such as the Southeast Conference, to provide information on fisheries management issues. Finally, Craig financially supports the Alaska Trollers Association, which is a regional industry advocacy organization. According to community leaders, current challenges facing the portion of Craig's economy based on fishing involve a reduction in available halibut stock for commercial and charter harvest, high energy/fuel prices, and cost of expanding water treatment and distribution to seafood processors. Past or current fisheries policy which has affected Craig the most includes changes to the Pacific Salmon Treaty, declining halibut stocks, and impacts on dive and commercial crab fisheries relating to sea otter management. As of 2010, sea otter management was of chief concern to Craig, specifically relating to how it was impacting commercial fishing in the area.

The City is eligible to participate in the Community Quota Entity program and is represented by the PWI Community Holding Corporation. However, as of Fall 2013, the CQE non-profit had not yet acquired commercial halibut Individual Fishing Quota (IFQ), halibut charter permits, or non-trawl groundfish License Limitation Program permits for lease to eligible community members.¹⁶⁴

The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.¹⁶⁵

Craig is located in Federal Reporting Area 659, International Pacific Halibut Commission (IPHC) Regulatory Area 2C, and the Eastern Gulf of Alaska Sablefish Regulatory District.

¹⁶³ Colt, S. (1999). *Salmon Fish Traps in Alaska*. Retrieved March 5, 2012 from: <http://www.iser.uaa.alaska.edu/people/colt/personal/FISHTRAP.PDF>.

¹⁶⁴ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

¹⁶⁵ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEreport210.pdf>.

Processing Plants

ADF&G's 2010 Intent to Operate list shows that Absolute Fresh Seafoods has a fish processing operation in both Craig and Ketchikan, but no information about an Absolute Fresh Seafoods Inc facility in either Craig or Ketchikan was available on the company website, only in Sitka. Absolute Fresh Seafoods Inc. was founded in 2003 and is a family-owned operation based in Sitka.¹⁶⁶ Absolute Fresh Seafoods as a company in general processes salmon (Chinook, coho), crab (king, Dungeness), spot prawns and scallops.¹⁶⁷

According to ADF&G's 2010 Intent to Operate list, Craig Fisheries has a seafood processing plant in Craig. Its parent company E.C. Phillips & Sons in general processes sablefish, clam, geoduck, halibut, herring, lingcod, rockfish, and all five species of Pacific salmon.¹⁶⁸ The original plant opened in 1940 and eventually burnt down. The current plant was built in 1982. The plant employs a maximum of 10 workers each year and relies on public water services, power/electricity, gas, and waste management services.¹⁶⁹

Noyes Island Smokehouse also operates a seafood processing facility in Craig. The company in general processes clam, geoduck, lingcod, rockfish, shrimp, prawns, and all five species of Pacific salmon.¹⁷⁰ Operations began in 2006 and the plant relies on public docks, water services, power/electricity, gas, and waste management services. They primarily smoke fish and employ a maximum of 15 employees each year.¹⁷¹

Finally, Silver Bay Seafoods processes salmon, crab, halibut and herring at its facility in Craig. The plant opened in 2009 employs a maximum of 200 workers during its salmon season.¹⁷² It is a predominantly fishermen-owned company, with nearly 100 Alaska fishermen comprising the majority of the ownership.¹⁷³ The plant relies on public docks, water services, power/electricity, and waste management services.¹⁷⁴

Fisheries-Related Revenue

In 2010, fisheries-related revenue was collected from raw fish taxes, Shared Fisheries Business Taxes, harbor usage fees, port/dock usage fees, and fees from fishing gear storage on public lands. Total fisheries-related revenue for that year was \$368,189, an increase from \$245,903 in 2000. Total revenues collected from raw fish taxes and Shared Fisheries Business Taxes fluctuated between 2000 and 2010, while fees collected from public harbor usage grew steadily. In a survey conducted by the AFSC in 2011, community leaders reported that \$150,000 was collected in 2010 from leasing public and tribal lands to members of the fishing industry.

¹⁶⁶ Absolute Fresh Seafoods. (n.d.). *Who we are*. Retrieved from: <http://www.absolutefreshseafoods.com/Pages/whoweare.html>.

¹⁶⁷ Ibid.

¹⁶⁸ Alaska Seafood Marketing Institute. (2011). *Directory of Alaska Seafood Suppliers*. Retrieved December 12, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

¹⁶⁹ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

¹⁷⁰ See footnote 168.

¹⁷¹ See footnote 169.

¹⁷² Ibid.

¹⁷³ Silver Bay Seafoods. (n.d.). *Homepage*. Retrieved from: <http://silverbayseafoods.com/>.

¹⁷⁴ See footnote 169.

Fisheries-related revenues collected by the city are used to support harbor maintenance and harbor waste disposal. Information regarding fisheries-related revenue trends can be found in Table 3.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that the summer troll season typically lasts from July 1st to September 15th, the summer seine season typically runs from July 5th to August 31st, the winter troll season typically lasts from October 15th to April 30th, and the Individual Fishing Quota (IFQ) season typically lasts from March 10th, to October 15th. Gear types typically used by residents include pots, long lines, gill nets, purse seines, and troll.

There were 125 residents who held commercial crew licenses in 2010, compared to 149 in 2000. In addition, residents held majority ownership of 146 vessels that year, compared to 234 in 2000. In 2010, 191 residents, or 15.9% of the population, held 332 permits issued by the Commercial Fisheries Entry Commission (CFEC). This represented 1.5% of total CFEC permit holders and 2.6% of total CFEC permits issued statewide that year. In 2000, 225 residents held 464 CFEC permits, representing 1.7% of total CFEC permit holders and 2.2% of total CFEC permits issued statewide that year. Of the CFEC permits issued in 2010, 41% were for salmon, compared to 33% in 2000; 20% were for other shellfish, compared to 16% in 2000; 16% were for herring, compared to 18% in 2000; 12% were for halibut, compared to 12% in 2000; 6% were for groundfish, compared to 10% in 2000; 3% were for crab, compared to 2% in 2000; and 3% were for sablefish, compared to 3% in 2000. Of the CFEC permits issued in 2010, 59% were actively fished, compared to 50% in 2000. This varied by fishery from 100% of sablefish permits, to 24% of groundfish. Fisheries prosecuted by Craig residents in 2010 included: southeast Alaska pot Dungeness crab, statewide longline halibut, southeast Alaska purse seine herring, southeast Alaska impounded herring roe-on-kelp, southeast Alaska longline demersal shelf rockfish, southeast Alaska dive geoduck, southeast Alaska pot shrimp, southeast Alaska dive sea cucumber, statewide longline sablefish, southeast Alaska purse seine, and drift gillnet salmon, Bristol Bay drift gillnet salmon, Kodiak set gillnet salmon, and statewide hand and power troll salmon.¹⁷⁵

Also in 2010, 23 residents held 25 License Limitation Program (LLP) groundfish permits, of which 20% were actively fished; and 27 residents held 27 Federal Fisheries Permits (FFP), of which 48% were actively fished. In 2010, 46 accounts held 1,794,208 shares of halibut quota, compared to 1,564,245 shares held by 58 accounts in 2000. A total of 11 sablefish quota share accounts held 748,766 shares in 2010, compared to 629,683 shares held by 11 accounts in 2000. No residents have held crab quota since the program began.

In 2010, 3.1 million pounds of fish was landed in Craig with a combined ex-vessel value of \$9.7 million, compared to 1.4 million pounds valued at \$1.9 million in 2000. This represented an approximate 281% increase in revenues after accounting for inflation.¹⁷⁶ In that year, Craig ranked 30th of 65 communities reporting landings, and 23rd of 65 communities in terms total ex-

¹⁷⁵ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁷⁶ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

vessel revenue. Based on non-confidential CFEC data found in Table 9, shellfish were the most profitable species landed in 2010, followed by salmon and other groundfish. In that year, 882,123 lb of shellfish were landed in Craig valued at \$5 million ex-vessel, compared to 1 million pounds valued at \$959,019 in 2000; an increase of \$4.41 per pound landed after accounting for inflation¹⁷⁷ and without considering the species composition of landings. This significant increase was likely driven by the growing geoduck fishery in Craig.¹⁷⁸ Salmon landings in 2010 totaled 1.8 million pounds and were valued at \$3.3 million ex-vessel, compared to 2.4 million pounds valued at \$3.2 million in 2004; an increase of \$0.06 per pound after adjusting for inflation¹⁷⁹ and without considering the species composition of landings. Other groundfish landings in 2010 totaled 111,445 lb valued at \$120,726 ex-vessel, compared to 63,397 lb valued at \$66,331 ex-vessel in 2003.

For landings made by residents of Craig in 2010, salmon was the most profitable. In that year, 3.3 million pounds were landed valued at \$3.7 million ex-vessel, compared to 2.3 million pounds valued at \$1.4 million in 2000; an increase of \$0.28 per pound landed after accounting for inflation¹⁸⁰ and without considering the species composition of landings. Shellfish landings totaled 330,900 lb and were valued at \$1.5 million ex-vessel, compared to 699,620 lb valued at \$1.1 million in 2000; an increase of \$2.46 per pound after accounting for inflation¹⁸¹ and without considering the species composition of landings. Finally, residents landed 173,674 lb of halibut valued at \$823,668 in 2010, compared to 360,347 lb valued \$917,331 in 2000; an increase of \$1.24 per pound after accounting for inflation.¹⁸² Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹⁷⁷ Ibid.

¹⁷⁸ Alaska Department of Fish and Game. (n.d.). Retrieved March 5, 2012 from:
http://www.adfg.alaska.gov/index.cfm?ADFG=wildlifeneews.view_article&articles_id=169&issue_id=31.

¹⁷⁹ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

¹⁸⁰ Ibid.

¹⁸¹ Ibid.

¹⁸² Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Craig: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$25,000	\$9,620	\$25,000	\$6,000	\$6,000	\$20,412	\$65,906	\$47,702	\$30,000	\$35,000	\$80,000*
Shared Fisheries Business Tax ¹	\$34,972	\$33,599	\$10,489	\$11,131	\$9,557	\$27,133	\$72,791	\$54,365	\$33,397	\$27,088	\$14,989
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$185,931	\$169,595	\$174,526	\$180,277	\$197,190	\$189,518	\$187,660	\$229,279	\$196,150	\$219,080	\$247,200
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$25,000*
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$1,000*
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$245,903	\$212,814	\$210,015	\$197,408	\$212,747	\$237,063	\$326,357	\$331,346	\$259,547	\$281,168	\$368,189
Total municipal revenue⁵	\$3.08 M	\$8.13 M	\$3.84 M	\$3.90 M	\$3.86 M	\$2.38 M	\$2.87 M	\$2.72 M	\$3.01 M	\$3.08 M	\$3.99 M

Note: n/a indicates that no data were reported for that year.

*Information collected from the 2011 AFSC Community Survey.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Craig: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	27	26	26	26	25	25	25	25	25	25	25
	Active permits	11	9	8	9	8	6	6	6	6	6	5
	% of permits fished	40%	34%	30%	34%	32%	24%	24%	24%	24%	24%	20%
	Total permit holders	25	24	24	24	23	23	23	23	23	23	23
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	25	25	25	16	17	18	22	29	31	27	27
	Fished permits	0	0	0	2	3	4	5	13	14	12	13
	% of permits fished	0%	0%	0%	13%	18%	22%	23%	45%	45%	44%	48%
	Total permit holders	24	24	24	15	16	16	21	28	30	27	27
Crab (CFEC) ²	Total permits	8	9	9	7	8	8	9	9	10	11	9
	Fished permits	4	4	4	4	4	3	4	5	3	6	4
	% of permits fished	50%	44%	44%	57%	50%	38%	44%	56%	30%	55%	44%
	Total permit holders	6	7	7	6	7	7	8	8	9	11	10
Other shellfish (CFEC) ²	Total permits	104	96	90	87	82	83	77	75	76	66	66
	Fished permits	68	55	56	59	54	52	48	40	38	36	31
	% of permits fished	65%	57%	62%	67%	65%	62%	62%	53%	50%	54%	46%
	Total permit holders	58	60	59	60	59	57	55	55	56	49	50
Halibut (CFEC) ²	Total permits	56	55	54	52	53	48	48	44	40	42	39
	Fished permits	48	46	49	44	50	45	46	39	39	36	37
	% of permits fished	86%	84%	91%	85%	94%	94%	96%	89%	98%	86%	95%
	Total permit holders	54	54	53	50	52	47	48	44	40	42	39
Herring (CFEC) ²	Total permits	84	82	75	65	62	58	63	68	64	60	53
	Fished permits	7	26	40	36	29	20	17	18	41	44	28
	% of permits fished	8%	32%	53%	55%	47%	34%	27%	26%	64%	73%	53%
	Total permit holders	75	75	71	61	55	57	56	57	55	54	53

Table 4 Cont. Permits and Permit Holders by Species, Craig: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	12	8	8	9	9	7	8	9	9	9	9
	Fished permits	8	8	8	6	6	6	8	6	6	7	9
	% of permits fished	67%	100%	100%	67%	67%	86%	100%	67%	67%	78%	100%
	Total permit holders	11	8	8	9	9	7	8	9	9	9	9
Groundfish (CFEC) ²	Total permits	48	31	28	35	31	26	19	16	23	22	21
	Fished permits	9	2	6	10	6	0	0	0	6	4	5
	% of permits fished	19%	6%	21%	29%	19%	0%	0%	0%	26%	18%	24%
	Total permit holders	26	20	21	25	22	18	15	14	18	18	17
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	152	145	138	136	137	139	149	146	143	134	135
	Fished permits	86	85	61	72	76	83	88	89	81	84	83
	% of permits fished	57%	59%	44%	53%	55%	60%	59%	61%	57%	63%	61%
	Total permit holders	143	138	134	130	132	132	138	135	135	126	130
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>464</i>	<i>426</i>	<i>402</i>	<i>391</i>	<i>382</i>	<i>369</i>	<i>373</i>	<i>367</i>	<i>365</i>	<i>344</i>	<i>332</i>
	<i>Fished permits</i>	<i>230</i>	<i>226</i>	<i>224</i>	<i>231</i>	<i>225</i>	<i>209</i>	<i>211</i>	<i>197</i>	<i>214</i>	<i>217</i>	<i>197</i>
	<i>% of permits fished</i>	<i>50%</i>	<i>53%</i>	<i>56%</i>	<i>59%</i>	<i>59%</i>	<i>57%</i>	<i>57%</i>	<i>54%</i>	<i>59%</i>	<i>63%</i>	<i>59%</i>
	<i>Permit holders</i>	<i>225</i>	<i>220</i>	<i>215</i>	<i>203</i>	<i>208</i>	<i>206</i>	<i>208</i>	<i>202</i>	<i>205</i>	<i>192</i>	<i>191</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Craig: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Craig ²	Total Net Pounds Landed in Craig ²	Total Ex-Vessel Value of Landings in Craig ²
2000	149	27	4	234	220	122	1,431,647	\$1,853,567
2001	127	20	5	234	230	92	517,188	\$1,068,730
2002	122	12	4	214	213	104	943,440	\$1,453,994
2003	121	15	5	219	216	103	799,188	\$1,600,621
2004	139	29	6	219	211	255	3,622,303	\$6,210,104
2005	135	34	5	155	156	280	3,136,328	\$5,688,829
2006	139	30	5	155	147	255	2,319,176	\$6,206,765
2007	134	35	2	153	147	268	4,855,769	\$6,368,284
2008	149	24	3	157	151	306	3,000,676	\$9,200,289
2009	137	36	5	151	148	307	4,528,938	\$7,309,078
2010	125	42	5	146	151	298	3,097,431	\$9,723,118

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Craig: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	58	1,564,245	218,284
2001	56	1,665,758	244,866
2002	58	1,756,572	250,177
2003	56	1,751,352	249,429
2004	58	1,806,550	318,099
2005	56	1,793,275	328,797
2006	55	1,916,400	342,073
2007	51	2,021,370	288,853
2008	51	1,954,989	203,863
2009	49	1,815,328	153,024
2010	46	1,794,208	132,564

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Craig: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	11	629,683	74,696
2001	9	629,319	70,598
2002	9	629,319	67,446
2003	9	629,319	74,700
2004	10	629,598	79,140
2005	10	716,430	85,277
2006	11	716,609	84,104
2007	11	748,428	84,095
2008	11	748,428	80,352
2009	11	748,766	68,555
2010	11	748,766	64,410

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Craig: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-Vessel Revenue, by Species, in Craig: 2000-2010.

	<i>Total net lb¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	217,075	231,032	333,092	344,474	--	308,412	--	--	--	--	--
Herring	--	55,069	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	63,397	79,751	41,148	--	--	59,005	79,613	111,445
Other Shellfish	1,037,408	169,165	494,601	329,610	776,066	591,619	764,561	576,029	956,859	902,005	882,123
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	2,367,226	2,163,238	1,154,498	4,000,234	1,745,588	3,385,425	1,782,934
Total²	1,254,483	455,266	827,693	737,481	3,223,043	3,104,417	1,919,059	4,576,263	2,761,452	4,367,043	2,776,502
	<i>Ex-vessel value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$562,418	\$489,929	\$724,458	\$1,008,210	--	\$924,129	--	--	--	--	--
Herring	--	\$342,245	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	\$66,331	\$89,048	\$24,921	--	--	\$73,255	\$79,472	\$120,726
Other Shellfish	\$959,019	\$112,447	\$424,978	\$338,879	\$1,729,220	\$1,466,759	\$1,949,348	\$1,921,800	\$3,153,327	\$3,437,986	\$5,009,362
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	\$3,180,477	\$3,175,092	\$2,948,916	\$3,392,678	\$4,469,242	\$3,277,896	\$3,254,984
Total²	\$1,521,437	\$944,622	\$1,149,436	\$1,413,419	\$4,998,745	\$5,590,900	\$4,898,263	\$5,314,479	\$7,695,825	\$6,795,354	\$8,385,072

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and ex-Vessel Revenue, by Species, by Craig Residents: 2000-2010.

	<i>Total net lb¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	15,551	27,391	--	45,809	51,033	36,642	--	113,974	--	58,338	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	360,347	252,918	293,853	262,205	320,353	323,763	313,245	311,042	289,241	215,506	173,674
Herring	--	121,020	19,630	--	27,634	--	--	1,095,042	1,487,232	1,173,736	50,784
Other Groundfish	65,925	56,355	69,086	68,210	76,893	42,278	43,195	39,862	69,716	83,482	101,118
Other Shellfish	699,620	424,589	408,672	621,404	736,915	533,661	617,205	389,978	327,993	376,274	330,900
Pacific Cod	351	--	--	--	--	--	--	--	--	--	1,392
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	56,215	42,294	44,588	47,644	47,046	43,614	70,445	170,424	111,172	64,635	90,892
Salmon	2,295,000	3,528,047	2,478,158	2,795,127	3,222,761	2,732,120	2,381,445	6,040,690	3,692,079	4,440,099	3,325,653
<i>Total²</i>	<i>3,493,009</i>	<i>4,452,614</i>	<i>3,313,987</i>	<i>3,840,399</i>	<i>4,482,635</i>	<i>3,712,078</i>	<i>3,425,535</i>	<i>8,161,012</i>	<i>5,977,433</i>	<i>6,412,070</i>	<i>4,074,413</i>
	<i>Ex-vessel value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$26,194	\$49,484	--	\$60,721	\$69,898	\$55,690	--	\$238,654	--	\$103,588	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$917,331	\$550,796	\$648,188	\$770,426	\$971,140	\$986,472	\$1,161,287	\$1,335,587	\$1,291,307	\$672,298	\$823,668
Herring	--	\$59,156	\$90,220	--	\$101,753	--	--	\$690,304	\$1,262,887	\$690,366	\$201,244
Other Groundfish	\$79,525	\$49,813	\$79,351	\$73,639	\$86,490	\$33,478	\$34,810	\$33,199	\$82,448	\$80,856	\$107,903
Other Shellfish	\$1,064,046	\$723,282	\$640,925	\$842,761	\$1,055,998	\$1,098,086	\$1,334,319	\$1,156,792	\$934,296	\$1,256,412	\$1,507,186
Pacific Cod	\$17	--	--	--	--	--	--	--	--	--	\$118
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$211,336	\$136,948	\$149,786	\$174,967	\$149,918	\$154,841	\$235,286	\$526,469	\$337,047	\$234,168	\$359,317
Salmon	\$1,360,262	\$1,675,870	\$1,248,575	\$1,550,970	\$2,788,363	\$2,691,093	\$3,138,550	\$4,075,635	\$4,639,591	\$3,246,903	\$3,653,251
<i>Total²</i>	<i>\$3,658,711</i>	<i>\$3,245,349</i>	<i>\$2,857,045</i>	<i>\$3,473,485</i>	<i>\$5,223,561</i>	<i>\$5,019,660</i>	<i>\$5,904,252</i>	<i>\$8,056,640</i>	<i>\$8,547,577</i>	<i>\$6,284,591</i>	<i>\$6,652,685</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Craig's relatively short distance from Ketchikan and the fact that is the economic center of PWI makes it an attractive destination for recreational anglers. The City possesses numerous visitor accommodations and attractions, including fish lodges and charter operators. In 2010, there were 19 active sport fish guide businesses registered in the city, and 37 residents had sport fish guide licenses. The number of active sport fish guide businesses remained relatively unchanged between 2000 and 2010, peaking in 2007 at 26. Compared with previous years, there was a slight decline in the number of sport fish guide licenses held by residents in 2010. The number of sportfishing licenses sold in the community has been steadily growing from 877 in 2000, to 3,179 in 2010 and the number of sportfishing licenses sold in the city peaked at 4,787 in 2007. In addition, 937 sportfishing licenses were sold to residents, compared to 1,049 in 2000.

Craig is located within the Prince of Wales ADF&G Harvest Survey Area which includes all waters and drainages from Cape Chacon to Sumner Strait and from Clarence Island westward. In 2010 there was a total of 51,312 saltwater angler days fished, compared to 49,074 in 2000. In that year, non-Alaska residents accounted for 74.4% of angler days fished, compared to 67.3% in 2000. In terms of freshwater, there was a total of 15,138 angler days fished in 2010, compared to 19,654 in 2000. In that year, non-Alaska residents accounted for 70.4% of angler days fished, compared to 45.9% in 2000.

According to ADF&G Harvest Survey data, private anglers in Craig target all five species of Pacific salmon, rainbow trout, Dolly Varden char, cutthroat trout, Pacific halibut, rockfish, lingcod, Pacific cod, steelhead trout, Dungeness crab, Tanner crab, razor clams, hardshell clams, shrimp, and other shellfish. In a survey conducted by the AFSC in 2011, community leaders reported that resident private anglers target pink, king, and coho salmon, halibut, rockfish, crab, shrimp, clams, and lingcod. Recreational fishing is typically done by charter vessel, locally owned private vessel, shore or dock, and private vessels owned by non-Alaska residents. In 2010, charter operators harvested 4,320 king salmon, 14,540 coho salmon, 6,857 halibut, 1,023 lingcod, 11,511 rockfish, 45 sablefish, 3 sharks, and 14 sockeye salmon.¹⁸³ Information regarding recreational fishing trends can be found in Table 11.

¹⁸³ Alaska Department of Fish and Game. (2011). Alaska Sportfishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Craig: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Craig²
2000	22	40	1,049	877
2001	22	44	950	987
2002	19	49	918	1,104
2003	20	41	866	1,137
2004	22	47	831	1,428
2005	22	43	831	2,987
2006	23	52	809	4,157
2007	26	49	854	4,787
2008	24	42	785	3,826
2009	23	33	850	3,550
2010	19	37	937	3,179

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Alaska Residents³	Angler Days Fished – Alaska Residents³	Angler Days Fished – Non-Alaska Residents³	Angler Days Fished – Alaska Residents³
2000	33,043	16,031	9,024	10,630
2001	38,248	14,090	7,299	5,922
2002	36,736	12,590	9,957	8,981
2003	37,341	16,346	10,627	11,506
2004	40,803	16,770	11,518	3,969
2005	52,135	16,333	10,100	3,527
2006	46,207	11,828	11,073	5,161
2007	49,280	13,327	11,132	6,463
2008	46,717	17,930	11,302	7,185
2009	38,164	10,829	9,918	4,124
2010	37,416	13,896	10,660	4,478

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Traditionally, salmon, halibut, steelhead, cod, Dolly Varden, shellfish and eulachon were all harvested by Tlingit and Haida on PWI.¹⁸⁴ Today, the city of Craig is not directly dependent on subsistence resources. However, subsistence lifestyles remain important to many members of the community. Subsistence information is limited and data is unavailable on household participation in subsistence harvesting. According to ADF&G's *Community Subsistence Information System*,¹⁸⁵ species which residents of Craig harvest or use include abalone, cockles, chitons, blue king crab, brown king crab, butter clams, Dungeness crab, geoducks, sea urchin, horse clams, limpets, octopus, oysters, Pacific littleneck clams, razor clams, red king crab, scallops, shrimp, squid, starfish, Tanner crab, mussels, sea cucumber, fur seal, harbor seal, Steller sea lion, black rockfish, brook trout, sculpin, cutthroat trout, dogfish, Dolly Varden, eulachon, grayling, herring, greenling, lingcod, Pacific cod, Pacific tom cod, rainbow trout, Irish lord, red rockfish, sablefish, sea bass, sea perch, silver smelt, skates steelhead, flounder, shark, sole, and pollock.

Of the species listed by ADF&G in Table 13, sockeye salmon are harvested most often, followed by coho salmon, pink salmon, chum salmon, and Chinook salmon. In 2008, a total of 2,010 salmon were reported harvested, a significant decline from 6,768 in 2000. Halibut make up a significant amount of subsistence harvests in Craig. In 2010, 510 residents were issued Subsistence Halibut Registration Certificates (SHARC), compared to 429 in 2003. In that year, 35,041 lb were harvested on 166 SHARC, compared to 45,658 lb harvested on 210 SHARC in 2003. Halibut harvests peaked in 2004, when an estimated 98,297 lb was harvested on 246 SHARC.

Between 2000 and 2010, an estimated 315 sea otters were harvested; between 2000 and 2008, an estimated 215 harbor seals harvested; and 2004, an estimated three sea lions were harvested. Marine mammal harvests declined significantly in 2006. Information regarding subsistence trends can be found in Tables 12 through 15.

¹⁸⁴ Alaska History and Cultural Studies. (n.d.) Retrieved March 5, 2012 from: <http://www.akhistorycourse.org/articles/article.php?artID=149>.

¹⁸⁵ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Craig: 2000-2010.

Year	% households participating in salmon subsistence	% households participating in halibut subsistence	% households participating in marine mammal subsistence	% households participating in marine invertebrate subsistence	% households participating in non-salmon fish subsistence	Per capita subsistence harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Craig: 2000-2010.

Year	Subsistence salmon permits issued ¹	Salmon permits returned ¹	Chinook salmon harvested ¹	Chum salmon harvested ¹	Coho salmon harvested ¹	Pink salmon harvested ¹	Sockeye salmon harvested ¹	Lb of marine inverts ²	Lb of non-salmon Fish ²
2000	521	417	9	218	50	310	6,151	n/a	n/a
2001	518	419	n/a	332	114	732	6,868	n/a	n/a
2002	358	295	n/a	394	36	258	4,222	n/a	n/a
2003	332	240	2	120	40	1,230	4,196	n/a	n/a
2004	168	131	3	83	56	28	1,665	n/a	n/a
2005	152	126	2	123	166	855	1,244	n/a	n/a
2006	161	118	n/a	142	15	344	1,296	n/a	n/a
2007	112	32	n/a	27	20	662	615	n/a	n/a
2008	170	119	4	37	151	80	1,738	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Craig: 2003-2010.

Year	SHARC issued	SHARC fished	SHARC halibut lb harvested
2003	429	210	45,658
2004	473	246	98,297
2005	499	231	44,055
2006	475	244	53,317
2007	514	247	50,520
2008	487	247	46,082
2009	547	284	48,930
2010	510	166	35,041

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Craig: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	35	n/a	n/a	n/a	34	n/a
2001	n/a	54	n/a	n/a	n/a	51	n/a
2002	n/a	38	n/a	n/a	n/a	46	n/a
2003	n/a	28	n/a	n/a	n/a	5	n/a
2004	3	29	n/a	n/a	n/a	26	n/a
2005	n/a	26	n/a	n/a	n/a	11	n/a
2006	n/a	1	n/a	n/a	n/a	21	n/a
2007	n/a	2	n/a	n/a	n/a	27	n/a
2008	n/a	2	n/a	n/a	n/a	9	n/a
2009	n/a	n/a	n/a	n/a	n/a	46	n/a
2010	n/a	n/a	n/a	n/a	n/a	39	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Edna Bay



People and Place

*Location*¹⁸⁶

Edna Bay is located on the southeast coast of Kosciusko Island, northwest of Prince of Wales Island (PWI), in Southeast Alaska. It lies 90 mi northwest of Ketchikan. The community occupied 10 sq mi of water and 27 sq mi of land. Located in the Prince of Wales-Hyder Census Area, Edna Bay has not been incorporated into a municipality nor is it under the jurisdiction of a borough.

*Demographic Profile*¹⁸⁷

In 2010, there were 42 residents, ranking Edna Bay 303rd of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 51.2%. Between 2000 and 2009, the population remained the same although there was an average annual growth rate of -0.73 indicating slight variation during those years. Information regarding population trends can be found in Table 1.

The racial composition of Edna Bay is predominately White. In 2010, 97.6% of residents identified themselves as White, compared 95.9% in 2000. In addition, 2.4% of residents identified themselves as Black or African American, compared to 0% in 2000. Racial and ethnic composition remained mostly unchanged between 2000 and 2010. Information regarding race and ethnicity in Edna Bay can be found in Figure 1.

In 2010, the average household size was 2.33, compared to 3.4 in 1990 and 2.58 in 2000. In that year, there were 32 total housing units in the community, compared to 29 in 1990 and 40 in 2000. Of the households surveyed in 2010, 53% were owner-occupied, compared to 40% in 2000; 3% were renter-occupied, compared to 8% in 2000; 16% were vacant, compared to 30% in 2000; and 28% were occupied seasonally, compared to 23% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

Gender distribution in Edna Bay was significantly skewed in 2010 at 61.9% male and 38.1% female, and was notably more uneven compared to the statewide distribution (52.0% male, 48.0% female) and similar to the distribution in 2000 (61.2% male, 38.8% female). The median age that year was 53, which was significantly higher than the statewide median of 33.8 and 2000 median of 36.8. Gender distribution by age cohort was more uneven in 2010 than in 2000. The greatest absolute gender difference that year occurred in the 50 to 59 range (31% male, 11.9% female), followed by the 10 to 19 (7.1% male, 0% female) and 30 to 39 (4.8% female, 0% male) ranges. However, it should be noted the because of the small and variable

¹⁸⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

population, changes in gender distribution by age cohort were somewhat erratic making it difficult to discern a trend.

When compared with 2000, the population structure in 2010 was much more constrictive. In that year, 9.5% of residents were under the age of 20, compared to 32.6% in 2000. In addition, 26.2% of residents were over the age of 59, compared to 10.2% in 2000; 54.9% were between the ages of 30 and 59, compared to 49% in 2000; and 9.5% were between the ages of 20 and 29, compared to 8.1% in 2000. Information regarding the population structure of Edna Bay can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006 to 2010 American Community Survey¹⁸⁸ (ACS) estimated that 100% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 45.8% of residents had some college but no degree, compared to an estimated 28.3% of Alaska residents overall. No residents were estimated to hold any post-secondary degrees.

Table 1. Population in Edna Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	86	-
2000	49	-
2001	-	40
2002	-	40
2003	-	45
2004	-	44
2005	-	42
2006	-	41
2007	-	42
2008	-	40
2009	-	49
2010	42	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

¹⁸⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 1. Racial and Ethnic Composition, Edna Bay: 2000-2010 (U.S. Census).

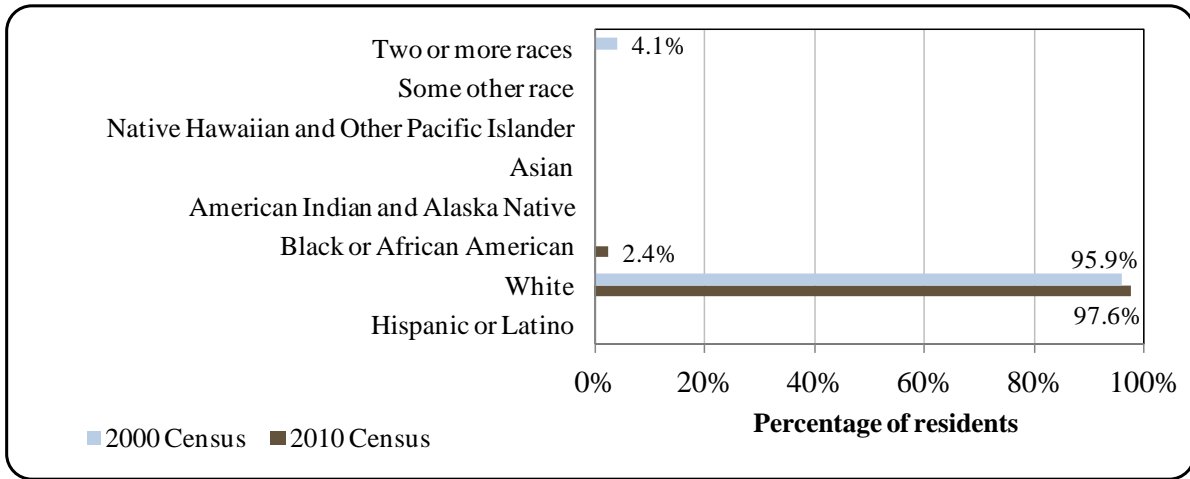
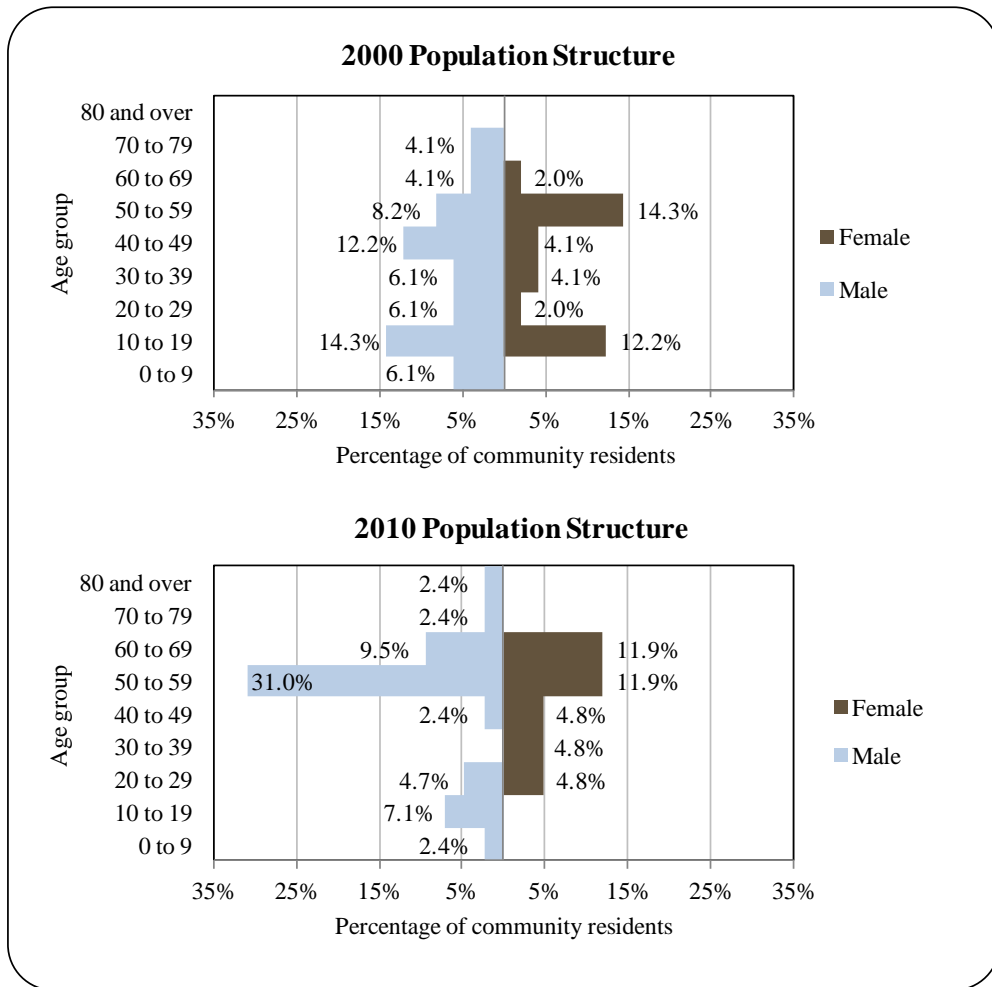


Figure 2. Population Age Structure in Edna Bay Based on the 2000 and 2010 U.S. Decennial Census.



History, Traditional Knowledge, and Culture^{189,190}

Edna Bay was originally identified in the 1904 U.S. Coast and Geodetic Survey and settlement was enabled by a state land disposal sale. Founded around fishing and timber harvesting, the community's population swelled to 135 during the timber industry's peak in the 1950s and 1960s. However, as the industry declined through the late 1970s, so did Edna Bay's population. By the 1980 Census, only six residents were documented. The community's population recovered and today, Edna Bay is characterized by its commercial fishing and subsistence culture.

Natural Resources and Environment

The area is dominated by a cool maritime climate characterized by mild winters and cool summers. Average temperatures in the summer range from 46 to 70 °F (8 to 21 °C); winter temperatures range from 32 to 42 °F (0 to 6 °C).¹⁹¹

Islands within the Prince of Wales archipelago are characterized by steep topography. Most soils are compiled from a mix of volcanic rock, glacial deposits, and sandy alluvium. Organic soils are found around drainage basins and muskegs. The area around Edna Bay is covered with a heavily forested mix of spruce and hemlock. Shrubs and groundcover include salmonberry, thimbleberry, devil's club, blueberry, rusty menziesia, salal, mosses, ferns, bunchberry, twisted stalk, and deer berry.¹⁹²

Commercially important fish within the area include pollock, Pacific halibut, Pacific ocean perch, sablefish, turbot, sole, rockfish, herring, and all five species of Pacific salmon. Common marine mammals include Steller sea lions, harbor seals, Dall and harbor porpoise, and whales. Terrestrial animals include Sitka black tailed deer, wolf, bear, mink, and marten.¹⁹³

Timber resources in the area are vast, and timber sales are beginning to increase following the industry crash of the 1970s. As of 2011, the Alaska Division of Forestry 5-year timber sales plan announced approximately 1 billion board feet available for purchase within the Southern Southeast Area (including the Ketchikan, Wrangell, Petersburg, and PWI areas) each year through 2015 in addition to larger sales planned in the Edna Bay area. Larger sales included both a proposed 119 acre sale near Naukati Bay in 2011 and a 21 billion board foot sale on Kosciusko Island in 2015.¹⁹⁴ Documented mineral deposits include a possible lead deposit near the abandoned town of Tokeen to the east of Edna Bay.¹⁹⁵

Edna Bay is protected against many natural hazards due to its sheltered position. Edna Bay lacks a hazard mitigation plan; however, Craig can be used as a proxy as conditions are very similar. Earthquakes have been classified as a moderate risk by the U.S. Army Corps of

¹⁸⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁹⁰ Poels, T. M. (2006). *Edna Bay Alaska*. Retrieved March 19, 2012 from: <http://ednabayalaska.net/>.

¹⁹¹ See footnote 189.

¹⁹² City of Craig. (2006). *Craig Coastal Management Plan*. Retrieved February 29, 2012 from: <http://www.craigak.com/documents/Craig%20Coastal%20Management%20Plan%20-%202007.pdf>.

¹⁹³ Ibid.

¹⁹⁴ Alaska Division of Forestry. (2011). *Schedule of Timber Sales (CY 2011-15)*. Retrieved March 20, 2012 from: http://forestry.alaska.gov/pdfs/ketchikan_timber/2011-2015/2011-2015_Draft%20FYSTS.pdf.

¹⁹⁵ United States Geological Survey. (n.d.). *Craig*. Retrieved March 20, 2012 from: http://ardf.wr.usgs.gov/ardf_data/Craig.pdf.

Engineers and it is projected that regional damage caused by an earthquake would be major.¹⁹⁶ Damage from earthquakes would likely be the result of ground shaking, tsunamis, seiches, and landslides.

Current Economy¹⁹⁷

The community of Edna Bay has few opportunities for wage employment and many residents are self-employed. Commercial fishing is an important local source of seasonal employment and with the prospect of future timber sales, employment in timber sectors may soon return as well. The top employer¹⁹⁸ in 2010 was Southeast Island School District.

In 2010¹⁹⁹ the estimated per capita income was \$19,619 and the estimated median household income was \$75,385, compared to \$58,967 and \$44,583 in 2000, respectively. After accounting for inflation by converting 2000 values into 2010 dollars,²⁰⁰ the real per capita income (\$77,541) and real median household income (\$58,626) indicate that declines in both individual and household earnings. It should be noted that due to Edna Bay's small population size, ACS sampling methods may not have been able to accurately capture conditions within the community. Using the ACS estimates for 2006 to 2010, Edna Bay ranked 153rd of 305 communities from which per capita income was estimated; and 34th of 299 communities from which median household income was estimated.

Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$193,203 in total wages in 2010. When matched with the population in 2010, the per capita income equals \$4,600, which was a significant decline from both the 2010 ACS estimate. However, it should be noted that ALARI estimates are based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents. In addition, Edna Bay was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²⁰¹ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,²⁰² 60.8% of residents aged 16 and over were part of the civilian labor force. In that year, unemployment was estimated at 21.6%, compared to

¹⁹⁶ City of Craig. (2000). *City of Craig Comprehensive Plan*. Retrieved February 29, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Craig-CP-2000.pdf>.

¹⁹⁷ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁹⁸ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹⁹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁰⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁰¹ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

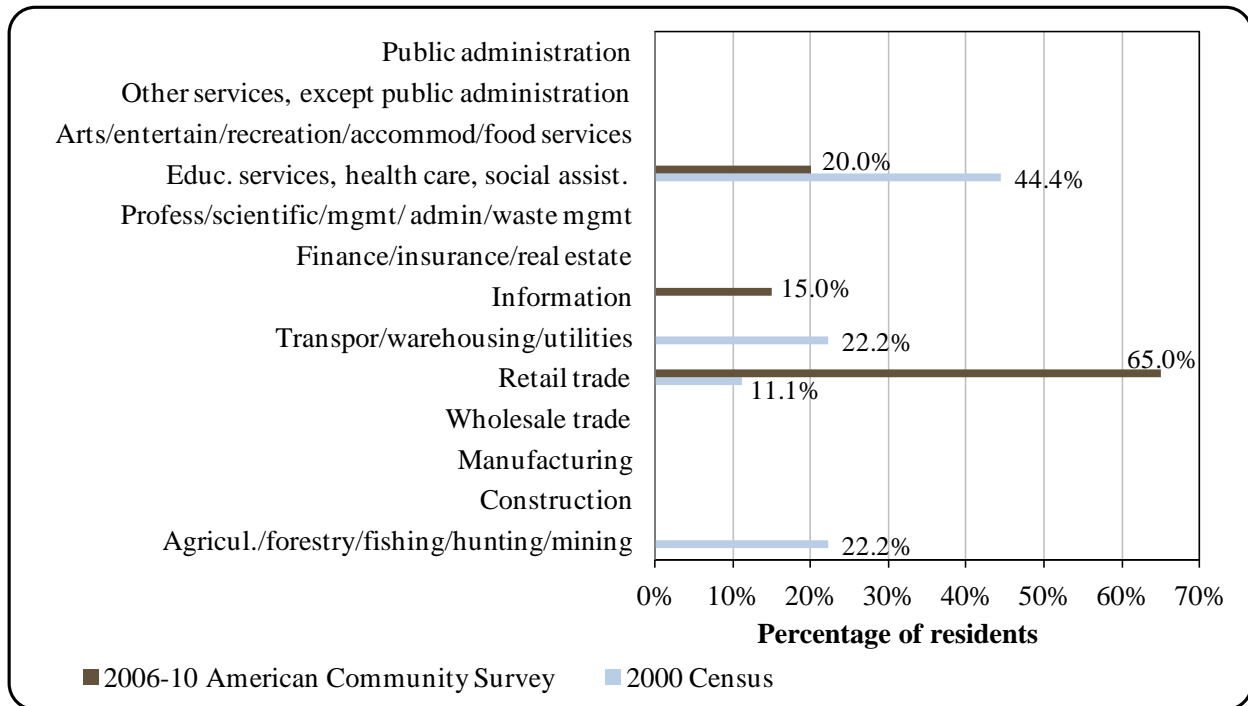
²⁰² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

an estimated 5.9% statewide; and no residents were estimated to be living under the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 15% worked in the private sector, an estimated 20% worked in the public sector, and an estimated 65% were self-employed. If accurate, ACS estimates of self-employed residents would seriously undermine the reliability of ALARI estimates for Edna Bay for reasons already mentioned.

By industry, most of those employed were estimated to work retail trade sectors in 2010 (65%); followed by education service, health care, and social assistance sectors (20%); and information sectors (15%) (Figure 3). By occupation type, most were estimated to hold sales or office positions (65%); followed by service positions (20%); and management or professional positions (15%) (Figure 4). Overall there were significant differences in representation in both industry sectors and occupation types between 2000 and 2010. Most notable were the sizable decreases in agriculture, forestry, fishing, hunting, and mining sectors; and natural resources, construction, and maintenance occupations. There was also a marked increase in the retail trade sector. It should be noted again that extreme differences could be attributed to Edna Bay’s population size and ACS sample methods. In addition, many resource based sectors, including commercial fishing, are seasonal or transient. This makes tracking them by conventional ACS survey methods difficult in some instances.

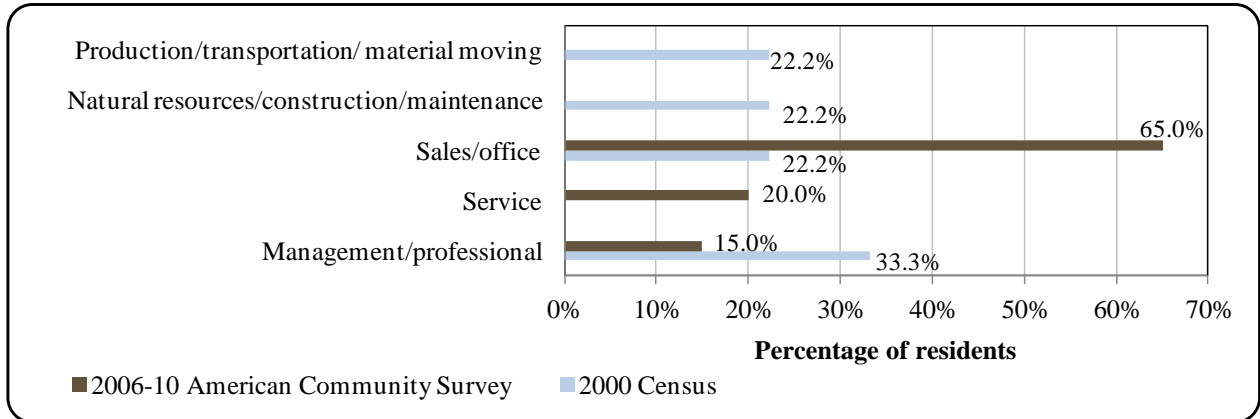
According to 2010 ALARI estimates,²⁰³ most (30%) employed residents worked in local government sectors; followed by natural resources and mining (20%); and information (20%) sectors.

Figure 3. Local Employment by Industry in 2000-2010, Edna Bay (U.S. Census).



²⁰³ See footnote 198.

Figure 4. Local Employment by Occupation in 2000-2010, Edna Bay (U.S. Census).



Governance

Edna Bay is not incorporated into a municipality or under the jurisdiction of a Borough. In addition, the community was not included in the Alaska Native Claims Settlement Act (ANCSA) nor does it possess a U.S. Bureau of Indian Affairs (BIA) recognized Tribal village council. The only governing body in the community is the Edna Bay Community Association (EBCA). Edna Bay does not collect public revenue; however, the community did receive State Revenue Sharing funds until the program ended in 2003. In addition, \$25,000 in state/federal grants was awarded that year for a dock and access project (Table 2).

The closest Alaska Department of Fish and Game (ADF&G) office is located in Craig, 40 mi southeast. The closest National Marine Fisheries Service (NMFS) office is located in Petersburg, 65 mi northeast. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) is located in Ketchikan, 90 mi southeast. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Edna Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	\$25,000
2004	n/a	n/a	-	n/a
2005	n/a	n/a	-	n/a
2006	n/a	n/a	-	n/a
2007	n/a	n/a	-	n/a
2008	n/a	n/a	-	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Transportation and cargo services are provided by float plane or boat from Craig, Ketchikan, or Petersburg. As of 2011, roundtrip airfare between Ketchikan and Edna Bay was \$354 via Taquan Air.²⁰⁴ Edna Bay is not connected to the PWI road system. A dock and harbor with breakwater are available.²⁰⁵ Naukati Bay is the closest community to Edna Bay connected to a road system. That community is approximately 30 to 45 min away by boat. Craig is an additional 30 min drive from there, and offers most services unavailable in Edna Bay.²⁰⁶ Roundtrip airfare between Anchorage and Ketchikan in June 2012 was \$461.²⁰⁷

Facilities

There are no community facilities. All residents use individual untreated water sources such as springs or rain catchment. A few houses are connected to a central septic tank; the

²⁰⁴ Taquan Air (n.d.). *Homepage*. Retrieved November, 2011 from: www.taquanair.com.

²⁰⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁰⁶ Poels, T. M. (2006). *Edna Bay Alaska*. Retrieved March 19, 2012 from: <http://ednabayalaska.net/>.

²⁰⁷ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

majority use outhouses or leach fields. Approximately half of the homes are plumbed. There is no central electric system. Visitor accommodations include the Sunrise Lodge, Edna Bay Lodge and Charters, and Richter Rentals. Public safety services are provided by state troopers based out of Ketchikan. Fire and rescue services are provided by Edna Bay Emergency Medical Services (EMS), Edna Bay Search and Rescue, and PWI Area EMS.²⁰⁸ There is a state dock system, island phone services, broadband internet, post office, local store, transport services, and a log transfer site.²⁰⁹

*Medical Services*²¹⁰

Beyond local EMS, no medical services are located in Edna Bay. Craig Medical Clinic is the closest medical facility, and Ketchikan General Hospital provides a wider range of services.

*Educational Opportunities*²¹¹

The Edna Bay School offers kindergarten through twelfth grade instruction. As of 2011, there were 10 students in enrolled and 2 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.²¹² In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.²¹³ Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (e.g., sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty which was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.

State-managed sablefish fisheries currently take place in the inside waters of Chatham and Clarence Straits, north of Meyers Chuck. Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Pacific cod and lingcod are

²⁰⁸ See footnote 205.

²⁰⁹ See footnote 206.

²¹⁰ See footnote 205.

²¹¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²¹² Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Department of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²¹³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Halibut and Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.

Shrimp trawl fisheries in Southeast Alaska primarily target northern shrimp and sidestripe shrimp, although the market for northern shrimp has declined in recent years with the closure of the primary processing facility in Petersburg in 2006.²¹⁴ A pot fishery for spot shrimp has also grown in Southeast Alaska since the 1990s. Commercial dive fisheries for red sea cucumber and sea urchin began near Ketchikan in the early 1980s. A dive fishery for geoduck clams began around the same time, and all three fisheries are now managed by ADF&G according to Fishery Management Plans. Sea cucumbers and sea urchin are hand-picked by divers, while geoduck divers use handheld water jets to remove substrate from around the clams.

While traditionally a logging town, Coffman Cove has been rapidly developing its commercial and recreational fisheries economy in recent years. The salmon gillnet fishery is perhaps the most important local commercial fishery, with many vessels from Seattle using the community as a base of operations during seasons. Other fisheries active in the Coffman Cove area include shrimp, sea cucumber, sea urchin, and halibut.²¹⁵

Following the timber industry decline, commercial fishing became an increasingly important source of income for local residents. While there is no local seafood processing facilities, several residents do hold commercial fishing permits. Subsistence fishing is also an important supplement for the limited wage economy. Edna Bay is located in Federal Reporting Area 659, International Pacific Halibut Commission (IHP) Regulatory Area 2C, and the Eastern Gulf of Alaska (GOA) Sablefish Regulatory District.

Edna Bay is eligible for participation in the Community Quota Entity (CQE) program. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the

²¹⁴ Alaska Department of Fish and Game (2012). *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=northernshrimp.printerfriendly>.

²¹⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.²¹⁶

Edna Bay participates in the CQE program through Edna Bay Community Fisheries. The CQE non-profit was established at the recommendation of the Edna Bay Community Association. As of Fall 2013, Edna Bay Community Fisheries had not yet purchased any commercial halibut IFQ or non-trawl groundfish License Limitation Program permits. However, the non-profit had acquired four halibut charter permits for lease to community members.²¹⁷

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Edna Bay does not have a registered processing plant. The closest seafood processing plant is located in Klawock.

Fisheries-Related Revenue

No fisheries-related revenue was reported in Edna Bay between 2000 and 2010 (Table 3).

Commercial Fishing

In 2010, 13 residents, or 31% of the population, held 22 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 13 residents held 25 CFEC permits. Of the CFEC permits issued in 2010, 59% were for salmon, compared to 46% in 2000; 9% were for sablefish; compared to 0% in 2000; 18% were for halibut, compared to 29% in 2000; and 9% were for shellfish, compared to 8% in 2000. In addition, three residents held three License Limitation Program (LLP) groundfish permits of which one was active. Finally, 5 accounts held 248,631 shares of halibut quota in 2010, compared to 195,861 shares held by 7 accounts in 2000. No residents have held sablefish or crab quota share since the programs began.

There were two residents who held commercial crew licenses in 2010, compared to seven in 2000. In addition, residents held majority ownership of 11 vessels that year, compared to 9 in 2000. Of the CFEC permits issued in 2010, 41% were actively fished, compared to 36% in 2000. This varied by fishery from 100% of sablefish permits, to 50% of halibut and 38% of salmon permits. Fisheries prosecuted by residents of Edna Bay in 2010 included: statewide longline halibut, northern and southern southeast longline sablefish, and statewide hand and power troll salmon. Between 2000 and 2010, given a lack of fish buyers, no landings were reported in Edna Bay. However, residents of Edna Bay reported landings in other locations during that time. In 2010, residents landed 243,007 lb of salmon valued at \$232,987 ex-vessel, compared to 75,228 lb valued at \$89,513 in 2000; a decrease of \$0.67 per pound landed after accounting for inflation²¹⁸ and without considering the species composition of fish landed. Data on additional landings in 2010 are considered confidential due to a limited number of participants. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²¹⁶ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>

²¹⁷ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

²¹⁸ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Edna Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Edna Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	2	2	2	2	2	2	2	3	3	3	3
	Active permits	1	1	1	1	1	1	1	1	1	1	1
	% of permits fished	50%	50%	50%	50%	50%	50%	50%	33%	33%	33%	33%
	Total permit holders	2	2	2	2	2	2	2	3	3	3	3
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	2	2	2	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	2	2	1	1	1	0	1	2	3	4
Crab (CFEC) ²	Total permits	0	1	0	0	0	0	0	0	0	0	0
	Fished permits	0	1	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	100%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	1	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	2	3	4	3	3	3	2	3	3	2	2
	Fished permits	1	2	1	2	1	0	0	1	1	0	0
	% of permits fished	50%	66%	25%	66%	33%	0%	0%	33%	33%	0%	0%
	Total permit holders	2	3	3	3	3	3	2	3	3	2	2
Halibut (CFEC) ²	Total permits	7	4	3	3	4	4	5	6	5	5	4
	Fished permits	3	3	2	3	4	4	5	5	5	5	2
	% of permits fished	43%	75%	67%	100%	100%	100%	100%	83%	100%	100%	50%
	Total permit holders	6	4	3	3	4	4	5	6	5	5	4
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Edna Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	2	3	2	2	2
	Fished permits	0	0	0	0	0	0	2	3	2	2	2
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	100%	100%	100%	100%	100%
	Total permit holders	0	0	0	0	0	0	2	2	1	1	1
Groundfish (CFEC) ²	Total permits	2	3	2	1	1	1	1	1	1	1	1
	Fished permits	0	1	1	0	0	0	0	0	0	0	0
	% of permits fished	0%	33%	50%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	1	1	1	1	1	1	1	1
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	14	11	11	12	12	11	11	11	12	12	13
	Fished permits	5	4	4	3	3	4	5	5	7	4	5
	% of permits fished	36%	36%	36%	25%	25%	36%	45%	45%	58%	33%	38%
	Total permit holders	13	10	11	10	11	10	8	9	10	10	11
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>25</i>	<i>22</i>	<i>20</i>	<i>19</i>	<i>20</i>	<i>19</i>	<i>21</i>	<i>24</i>	<i>23</i>	<i>22</i>	<i>22</i>
	<i>Fished permits</i>	<i>9</i>	<i>11</i>	<i>8</i>	<i>8</i>	<i>8</i>	<i>8</i>	<i>12</i>	<i>14</i>	<i>15</i>	<i>11</i>	<i>9</i>
	<i>% of permits fished</i>	<i>36%</i>	<i>50%</i>	<i>40%</i>	<i>42%</i>	<i>40%</i>	<i>42%</i>	<i>57%</i>	<i>58%</i>	<i>65%</i>	<i>50%</i>	<i>41%</i>
	<i>Permit holders</i>	<i>13</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>14</i>	<i>12</i>	<i>13</i>	<i>13</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Edna Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Edna Bay ²	Total Net Pounds Landed In Edna Bay ²	Total Ex-Vessel Value Of Landings In Edna Bay ²
2000	7	0	0	9	10	0	0	\$0
2001	9	0	0	7	13	0	0	\$0
2002	4	0	0	7	10	0	0	\$0
2003	3	0	0	6	7	0	0	\$0
2004	5	0	0	6	6	0	0	\$0
2005	5	0	0	8	9	0	0	\$0
2006	5	0	0	10	11	0	0	\$0
2007	3	0	0	9	11	0	0	\$0
2008	6	0	0	9	10	0	0	\$0
2009	5	0	0	10	10	0	0	\$0
2010	2	0	0	11	10	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation by Residents of Edna Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	7	195,861	27,625
2001	6	136,109	20,039
2002	6	133,157	18,978
2003	5	133,157	18,978
2004	5	136,542	24,057
2005	5	136,542	25,037
2006	5	120,322	21,454
2007	5	248,631	35,529
2008	5	248,631	25,926
2009	5	248,631	20,958
2010	5	248,631	18,370

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Edna Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Edna Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Edna Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Edna Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	22,039	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	1,795	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	75,288	--	--	--	--	34,325	19,162	30,310	26,543	54,715	243,007
<i>Total²</i>	<i>99,122</i>	--	--	--	--	<i>34,325</i>	<i>19,162</i>	<i>30,310</i>	<i>26,543</i>	<i>54,715</i>	<i>243,007</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$57,686	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$2,030	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$89,513	--	--	--	--	\$43,499	\$47,150	\$61,247	\$66,203	\$78,849	\$232,987
<i>Total²</i>	<i>\$149,229</i>	--	--	--	--	<i>\$43,499</i>	<i>\$47,150</i>	<i>\$61,247</i>	<i>\$66,203</i>	<i>\$78,849</i>	<i>\$232,987</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing out of Edna Bay is somewhat limited due to poor accessibility. However, PWI continues to attract more private anglers and Edna Bay has the potential to attract both Alaska residents and non-Alaska residents due to its proximity to Craig. While recreational fishing infrastructure is somewhat limited, there are visitor accommodations available. In 2010, there was one sport fish guide business active in Edna Bay. No sport fish guide businesses were active between 2000 and 2009. Also in 2010, 32 sportfishing licenses were sold in the community, compared to 13 in 2000. In addition, 28 sportfishing licenses were sold to residents, which was unchanged from 2000, although there were some interannual fluctuations between 2000 and 2010.

Edna Bay is located within the Prince of Wales ADF&G Harvest Survey Area which includes all waters and drainages from Cape Chacon to Sumner Strait and from Clarence Island westward. In 2010 there was a total of 51,312 saltwater angler days fished, compared to 49,074 in 2000. In that year, non-Alaska residents accounted for 74.4% of angler days fished, compared to 67.3% in 2000. In terms of freshwater, there was a total of 15,138 angler days fished in 2010, compared to 19,654 in 2000. In that year, non-Alaska residents accounted for 70.4% of angler days fished, compared to 45.9% in 2000.

According to ADF&G Harvest Survey data,²¹⁹ local private anglers target Chinook, coho, and pink salmon, Pacific halibut, rockfish, and hardshell clams. In 2010, there were nine charter businesses operating in Edna Bay. Number and species of fish kept by charter vessels that year included 155 Chinook salmon, 3,322 coho salmon, 1,296 halibut, 315 lingcod, 4,312 rockfish, and 5 sablefish. Information regarding sportfishing trends can be found in Table 11.

Subsistence Fishing

Although not traditionally a subsistence-based community, residents of Edna Bay still rely on subsistence resources to supplement incomes and diet. ADF&G information on subsistence activity in Edna Bay is limited, and data on subsistence participation by household is unavailable as is recent information on total harvests of salmon, non-salmon fish, and marine invertebrates by residents. According to ADF&G's *Community Subsistence Information System*,²²⁰ species which Edna Bay residents harvest or use include abalone, cockles, chitons, blue king crab, brown king crab, butter clams, Dungeness crab, geoducks, urchins, horse clams, limpets, octopus, oyster, littleneck clams, razor clams, red king crab, scallops, shrimp, squid, Tanner crab, mussels, sea cucumber, fur seal, harbor seal, Steller sea lion, black rockfish, brook trout, cutthroat trout, dogfish, Dolly Varden, eulachon, grayling, herring, lingcod, Pacific cod, Pacific tom cod, rainbow trout, Irish lord, red rockfish, greenling, sablefish, sea perch, silver smelt, skates, steelhead, flounder, sculpin, shark, sole, and pollock.

Of the species documented by ADF&G, halibut made up the majority of fish harvested

²¹⁹ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²²⁰ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

by residents. In 2010, 28 residents were issued Subsistence Halibut Registration Certificates (SHARC), compared to 17 in 2003. In that year, an estimated 1,661 lb of halibut was harvested, compared to an estimated 2,111 lb in 2003. Data on marine mammal harvesting is unavailable. Information on subsistence trends can be found in Tables 12 through 15.

Table 11. Sport Fishing Trends, Edna Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Edna Bay ²
2000	0	0	28	13
2001	0	0	24	11
2002	0	0	27	30
2003	0	0	19	51
2004	0	0	23	55
2005	0	0	26	52
2006	0	1	28	35
2007	0	1	20	53
2008	0	0	24	34
2009	0	0	23	35
2010	1	0	28	32

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	33,043	16,031	9,024	10,630
2001	38,248	14,090	7,299	5,922
2002	36,736	12,590	9,957	8,981
2003	37,341	16,346	10,627	11,506
2004	40,803	16,770	11,518	3,969
2005	52,135	16,333	10,100	3,527
2006	46,207	11,828	11,073	5,161
2007	49,280	13,327	11,132	6,463
2008	46,717	17,930	11,302	7,185
2009	38,164	10,829	9,918	4,124
2010	37,416	13,896	10,660	4,478

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Edna Bay: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Edna Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	4	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	6	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	4	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Edna Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	17	13	2,111
2004	18	15	3,779
2005	24	15	3,094
2006	25	11	1,950
2007	27	17	2,130
2008	23	14	1,871
2009	28	19	2,341
2010	28	13	1,661

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Edna Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

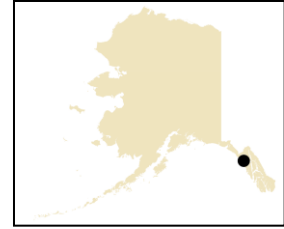
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Elfin Cove



People and Place

*Location*²²¹

Elfin Cove lies on the northern shore of Chichagof Island, approximately 33 mi west of Hoonah and 70 mi by air and 85 mi by boat west of Juneau. The community is only accessible by small seaplane or boat. The community occupies 0.13 sq mi of land. Elfin Cove is located in the Hoonah-Angoon Census Area and is not incorporated into a municipality or under the jurisdiction of a borough.

*Demographic Profile*²²²

In 2010, there were 20 residents, ranking Elfin Cove 327th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 64.9%. Between 2000 and 2009, the population dropped by 21.9% with an average annual growth rate of -3.11%; much lower than the statewide average of 0.75% and indicative of steady decline. In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 25 permanent and 290 seasonal residents living in Elfin Cove in 2010. On average, seasonal workers live in Elfin Cove from May through September. The population peaks during June through August and is entirely driven by employment in fishing sectors. Population fluctuations are tied to the commercial and recreational fishing industries. Information regarding population trends can be found in Table 1.

The racial composition of Elfin Cove was predominately White in 2010, although more diverse than it was in 2000. In that year, 70.0% of residents identified themselves as White, compared to 93.8% in 2000; 5% identified themselves as American Indian or Alaska Native, compared to 0% in 2000; and 25% identified themselves as two or more races, compared to 3.1% in 2000. Between 2000 and 2010, no residents identified themselves as Hispanic or Latino. Information regarding Elfin Cove's racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 1.54, a decrease from 2.4 in 1990 and 2.13 in 2000. In that year, there were a total of 28 housing units, compared to 44 in 1990 and 35 in 2000. Of the households surveyed in 2010, 39% were owner-occupied, compared to 37% in 2000; 7% were renter-occupied, compared to 6% in 2000; 7% were vacant, compared to 29% in 2000; and 46% were occupied seasonally, compared to 29% in 2000. Since 1990 there have been no reports of residents living in group quarters.

²²¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²²² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

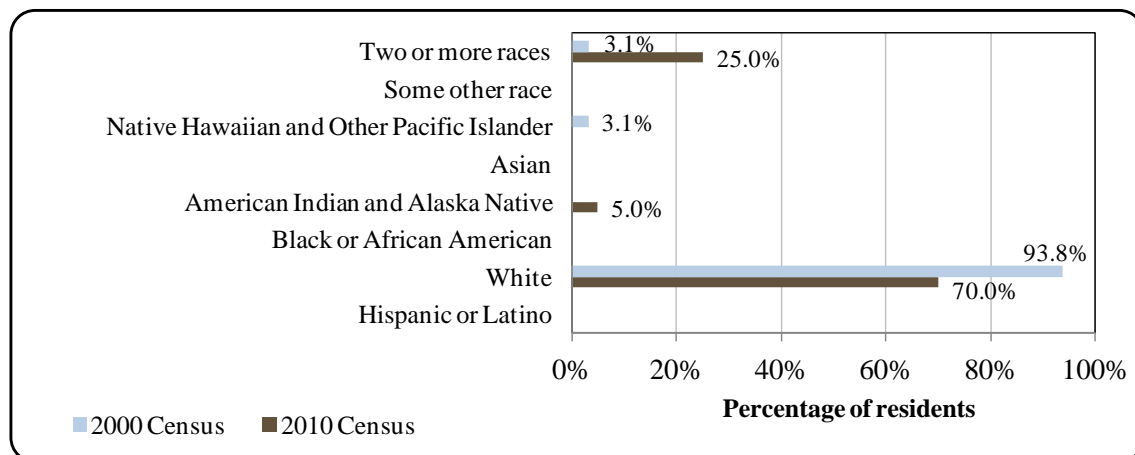
Table 1. Population in Elfin Cove from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	57	-
2000	32	-
2001	-	28
2002	-	32
2003	-	32
2004	-	26
2005	-	29
2006	-	25
2007	-	21
2008	-	22
2009	-	25
2010	20	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Elfin Cove: 2000-2010 (U.S. Census).



The gender distribution was significantly skewed in 2010 at 70.0% male and 30.0% female, and much more uneven than both the distribution statewide (52% male, 48% female) and distribution in 2000 (59.4% male, 40.6% female). The median age was 55 years, which was much older than the statewide median of 33.8 years and somewhat older than the 2000 median of 47.5 years.

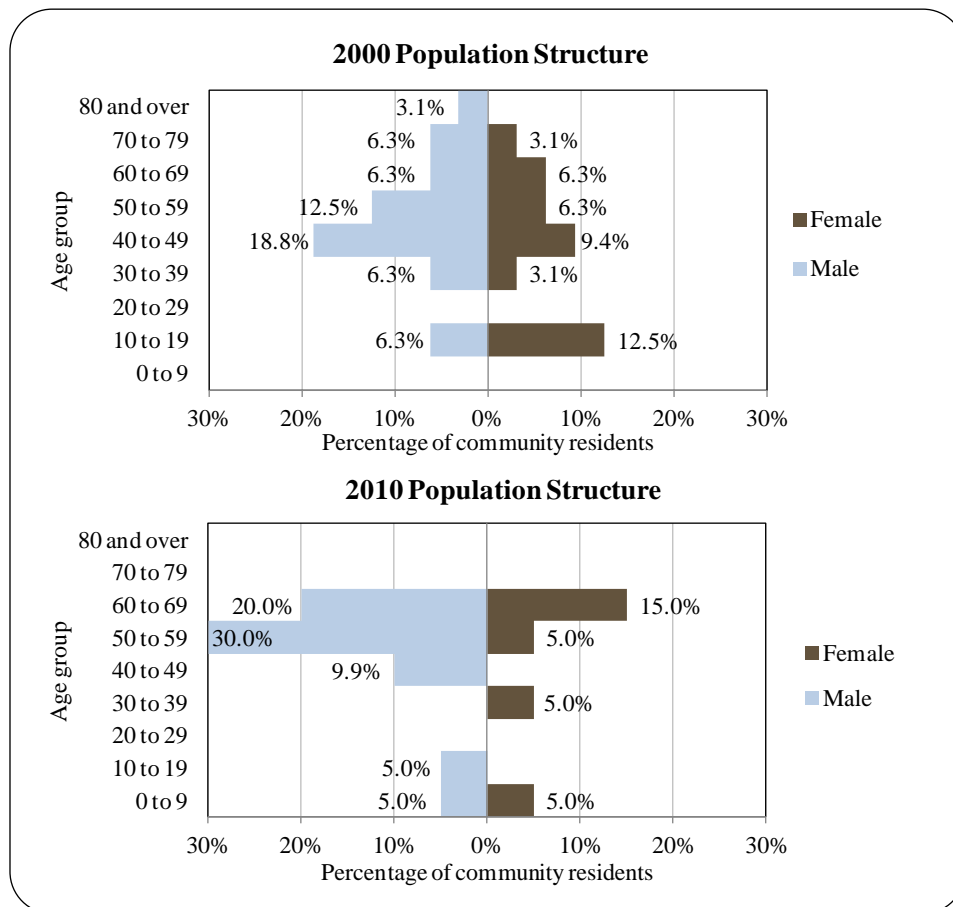
Population structures in both 2000 and 2010 were heavily influenced by the community's small population size. In 2010, 15% of residents were under the age of 20, compared to 18.8% in

2000; 35% were over the age of 59, compared to 25.1% in 2000; and 49.9% were between the ages of 30 and 59, compared to 56.4% in 2000. No residents were between the ages of 20 and 29 during either the 2000 or 2010 Decennial Census.

Gender distribution by age cohort was more uneven in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 50 to 59 range (30% male, 5% female), followed by the 40 to 49 (9.9% male, 0% female) and 30 to 39 (5% female, 0% male) ranges. Of those three, the greatest relative gender differences occurred in both the 40 to 49 and 30 to 39 ranges. It should be noted that because of Elfin Cove’s small and variable population, discerning trends in population structure is difficult. Information regarding Elfin Cove’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)²²³ estimated that 100% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. No residents were estimated to hold a post-secondary degree.

Figure 2. Population Age Structure in Elfin Cove Based on the 2000 and 2010 U.S. Decennial Census.



²²³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*²²⁴

Elfin Cove's location made it a natural choice for fishermen seeking shelter from storms. By 1909, the area had been given the name "Gunk Hole" after an East Coast term describing a good harbor with a narrow, rocky entrance.

In 1927, a fish buyer set up in the cove with two boats. Soon after, E.O. "Ernie" Swanson retired his fox farm at nearby Three-Hill Island to set up a fish buying station at the Gunk Hole. His business consisted of log floats and a small shore side warehouse. Eventually, more docks were built in the inner harbor, and in 1933 the first cabin was constructed followed by a bath house. Ernie expanded the business by starting a general store, dock, and a restaurant.

There are several accounts as to the origin of Elfin Cove's name. One story recounts that the first postmaster, Ruth Swanson, didn't want the job unless the community name was changed from "The Gunk Hole"; so in 1935 the community changed its name to Elfin Cove after Ernie's boat. Another story recounts that Ruth Swanson chose the name Elfin Cove because the misty, forested place would be an appropriate habitat for elves.

The community continued to grow, and in 1947, the official population was 75. John Lowell, another fish buyer, arrived in the 1940s and built a second dock, warehouse, store and restaurant. By 1960, the population remained around 60. At this time, the community obtained power from a diesel electric generator supplemented by hydroelectric power from a Pelton wheel. Wood and coal burners were mostly replaced by oil stoves for heat.

In the 1980s, the electric system was upgraded, a water system was installed, and a community building and school were built. However, the school was forced to close in 1998 due to low enrollment. Today, Elfin Cove is a town centered on commercial fishing, tourism, and sportfishing.

Natural Resources and Environment²²⁵

Elfin Cove has a maritime climate characterized by cool summers, mild winters and a high amount of precipitation. The average summer temperature generally ranges from 46 to 60 °F (8 to 16 °C). Average winter temperatures range from 29 to 40 °F (-2 to 4 °C). Annual precipitation is about 103 inches and average snowfall is about 99 inches.

The local topography consists of relatively gentle slopes and an irregular coastline. Elfin Cove provides easy access to the Fairweather, Cross Sound and Icy Strait fishing grounds. Located near Cross Sound at the north end of the "Inside Passage," Elfin Cove is an important area to seek shelter from storms and a refueling stop for commercial fishermen, recreational fishermen, and private boaters. The community's strategic location provides the last stop for vessels traveling north across the Gulf of Alaska and the first stop for those traveling south from the Gulf. It is also first landfall for many sailing vessels traveling from the South Pacific.

Soils in the area are typically thin. Exposed bedrock is composed of granite and greywacke. Shorelines consist of boulder and cobble beaches and unconsolidated alluvial sediments. Local vegetation is consistent with southeast Alaska temperate rain forest. Dominant conifers include Sitka spruce and western hemlock. Mountain hemlock and Alaska cedar may

²²⁴ Community of Elfin Cove Non-profit Corporation; Southeast Strategies; and Glenn Gray and Associates. (2007). *Elfin Cove Community Plan*. Retrieved March 27, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ElfinCove-CP-2007.pdf>.

²²⁵ Ibid.

also be found in area. Sitka alders typically grow along the coast and disturbed areas. Undergrowth consists of blueberries, huckleberries, devil's club, and moss. Muskegs support sedges, mosses, Labrador tea, and stunted lodgepole pines and mountain hemlock. Terrestrial mammals include brown bears, Sitka black-tailed deer, martin, mink, and otter. Marine mammals include seals, sea lions, sea otters, Dall's porpoise, and humpback whales. Fish include all five species of Pacific salmon, halibut, sablefish, rockfish, herring, flatfish, and shellfish. There is also an abundance of bird species present in the area.

The west coast of Chichagof Island supports a mineralized area known as the "Chichagof Gold Belt." Former mines in the area include the Western Chichagof Mine near Klag Bay and the Hurst-Chichigof Mine at Kimshan Cove. No oil resources have been identified in the Elfin Cove area. In addition, no timber resources are harvested on a commercial level in the area.

Elfin Cove is relatively protected from many types of environmental hazards. Localized flooding can occur; however, damage is not common. The community has been classified as a Zone 3 seismic probability, and a 6 to 8.8 magnitude earthquake is possible. Records indicate that the last large earthquake struck the area in 1958 when a magnitude 7.9 earthquake occurred in Lituya Bay, approximately 50 mi northwest of Elfin Cove. Tsunami hazards near Elfin Cove are high due to its proximity to fault lines and the Pacific Ocean. Finally, landslides can pose a threat, as proven by a 1996 slide which damaged local infrastructure.

According to the Alaska Department of Environmental Conservation, no significant environmental remediation projects were active locally in 2010.²²⁶

Current Economy²²⁷

Elfin Cove's mixed economy is largely based on commercial and recreational fishing. Most employed residents work private sector wage positions or are self-employed. While fishing is a mainstay in Elfin Cove, employment can also be found in fisheries support services as well as transportation, service, professional, and hospitality sectors. Tourism is another important industry in Elfin Cove. In 2007, there were a total of 28 stops by small cruise ships, and private pleasure craft frequent the area. In addition, there are many sportfishing lodges and charter businesses in the area which provide a seasonal boost the local economy. However, permanent residents have noted that many of the tourism related businesses are operated by seasonal residents. Because of this, the community does not benefit to the extent it would if more tourism businesses and services were owned and operated locally.²²⁸ Top employers²²⁹ in 2010 included the Community of Elfin Cove and Elfin Cove Utility.

In 2010,²³⁰ the estimated per capita income was \$19,178 and estimated median household income was \$9,375, compared to \$15,089 and \$33,750 in 2000, respectively. However, after

²²⁶ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved August 20, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

²²⁷ Unless otherwise noted, all monetary data are reported in nominal values.

²²⁸ See footnote 224.

²²⁹ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

²³⁰ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

accounting for inflation by converting 2000 values to 2010 dollars,²³¹ the real per capita income (\$19,842) and real median household income (\$44,381) indicate that while individual earnings remained unchanged, household earnings dropped significantly. In 2010, Elfin Cove ranked 161st of 305 communities from which per capita income was estimated, and last of 299 communities from which median household income was estimated.

Elfin Cove's small population size may have prevented the ACS from accurately portraying economic conditions.²³² A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$112,934 in total wages in 2010.²³³ When matched with the population in 2010, the per capita income equals \$5,647, which is significantly less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.²³⁴ In addition, community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.²³⁵ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,²³⁶ 44.4% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 16.7%, compared to an estimated 5.9% statewide; and an estimated 55.6% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 100% worked in the private sector. It is likely that these figures overestimate the proportion of residents working in the private sector, as many self-employed according to a 2007 Community Comprehensive Plan.²³⁷

By industry, 100% of residents were estimated to work in retail trade sectors, compared to 0% in 2000. By occupation type, 100% of residents were estimated to hold sales or office positions, compared to 20% in 2000. There was significant homogenization of both sector employment and occupations held between 2000 and 2010. However, those estimates conflict with both the 2010 labor analyses conducted by the DOLWD²³⁸ and with economic conditions detailed in the 2007 Community Comprehensive Plan already mentioned.²³⁹ Because of this, it is likely that 2010 ACS estimates do not accurately reflect local employment conditions. According to DOLWD, 36.4% of employed residents worked in trade, transportation or utilities sectors; 18.2% worked in professional or business sectors; 18.2% worked in state government sectors;

²³¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²³² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²³³ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²³⁴ See footnote 229.

²³⁵ Denali Commission. (2011). Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

²³⁶ See footnote 232.

²³⁷ See footnote 224.

²³⁸ See footnote 229.

²³⁹ See footnote 224.

and 27.3% worked in local government sectors. Again, it should be noted that DOLWD analyses did not account for self-employed residents or those employed by the federal government. Overall, there is not adequate information available to discern a trend in local employment. The 2007 Elfin Cove Comprehensive Plan²⁴⁰ emphasized the fact that most full-time residents are self-employed, which was not reflected in either ALARI or ACS estimates. Information regarding local employment can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Elfin Cove (U.S. Census).

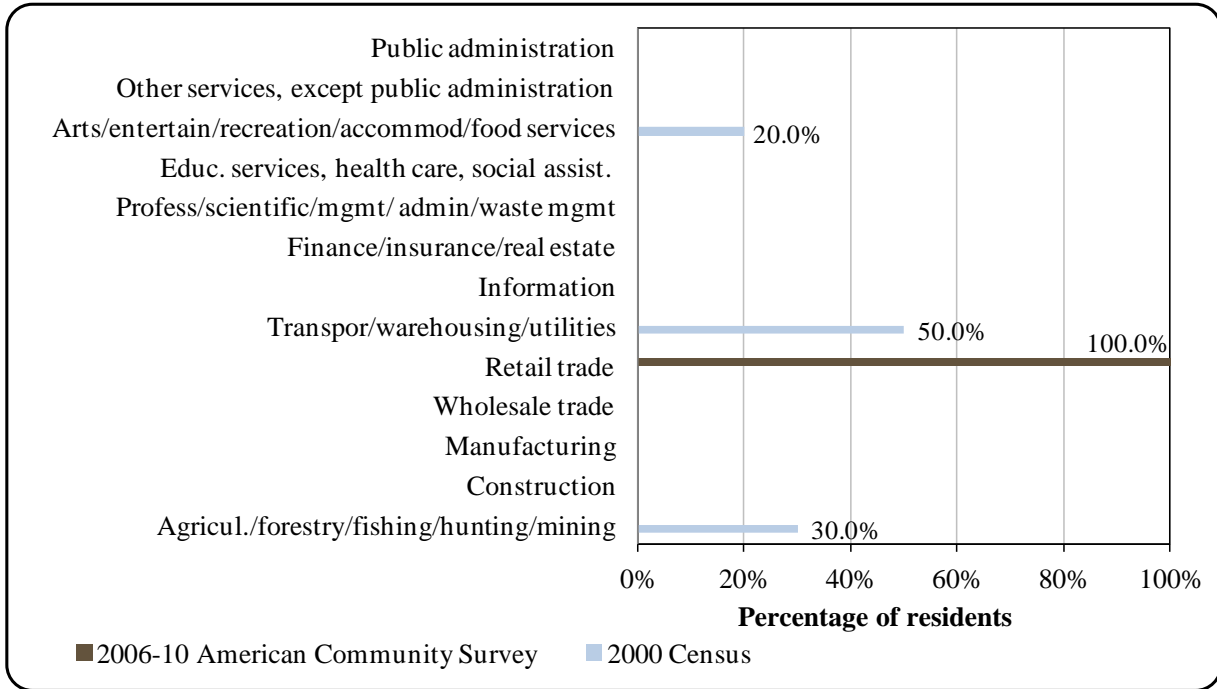
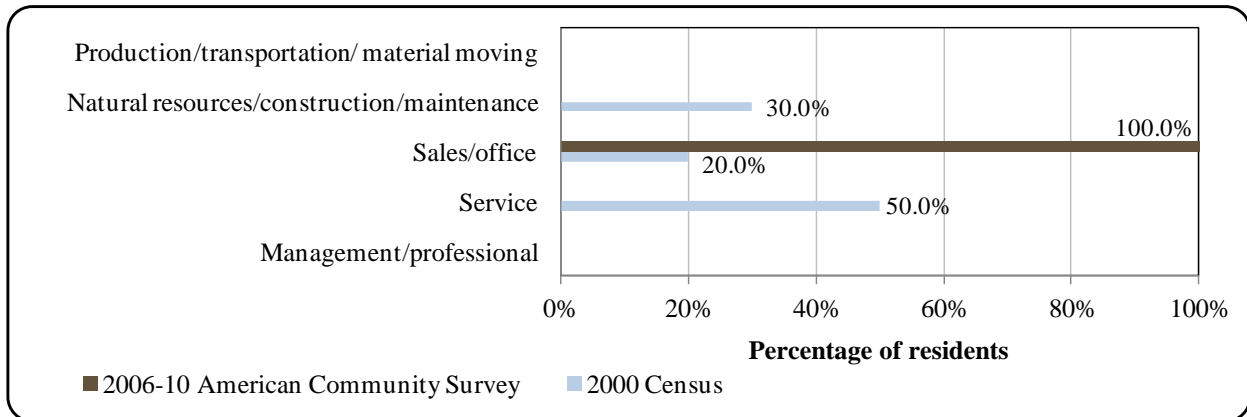


Figure 4. Local Employment by Occupation in 2000-2010, Elfin Cove (U.S. Census).



²⁴⁰ Ibid.

Governance

Elfin Cove is an unincorporated community which is not under the jurisdiction of an organized borough. For official purposes, Elfin Cove is located in the Sitka Recording District and Hoonah-Angoon Census Area. Because of Elfin Cove’s status there are no city or borough officials in the city nor are there municipal or borough finances dispersed to the community. The local governing body is the Community of Elfin Cove. Elfin Cove received State Revenue Sharing funds until 2003 when the program ceased (Table 2).

Elfin Cove was not included in the Alaska Native Claims Settlement Act (ANCSA). As such, there is not a federally recognized Native village council, nor is there an ANCSA chartered Native village corporation. The closest National Marine Fisheries Service (NMFS) and Alaska Department of Fish and Game (ADF&G) offices are located in Juneau, 70 mi east. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Ketchikan, 267 mi southeast. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Elfin Cove from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	-	n/a
2005	n/a	n/a	-	n/a
2006	n/a	n/a	-	n/a
2007	n/a	n/a	-	n/a
2008	n/a	n/a	-	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

A state-owned seaplane base is available, and is scheduled for state-funded improvements. Roundtrip airfare between Juneau and Elfin Cove in June 2012 was \$340.²⁴¹ Moorage for 25 marine vessels is available. Skiffs are the primary means of local transportation. The state ferry lands at nearby Pelican. Freight arrives by plane or boat.²⁴²

Facilities

Most of the homes are fully plumbed using individual surface water collection systems and septic tanks with leachfields or beach outfall. A tank holds captured spring water. Due to the geography of the area, a landfill does not exist and is not feasible. Residents currently use an unregulated refuse burn area on tidelands. Public safety is provided by state troopers based in Juneau. Fire and rescue services are provided by Elfin Cove Fire Department. Communications services include local and long distance telephone, and local television and radio. Additional facilities include the Elfin Cove museum.²⁴³ There are six lodges operating within Elfin Cove which offer visitor accommodations, as well as Coho's Bar and Grill and the Hobbit Hole Guest House in the Inian Islands.

In a survey conducted by the AFSC in 2011, community leaders reported that there is 1,000 ft of public dock space available for permanent and transient vessel moorage. Vessels up to 150 ft long can use moorage, including rescue vessels, cruise ships, fuel barges, and vessels containing hazardous materials. Commercial fishing vessels which use Elfin Cove as a base of operation during fishing seasons are typically 60 ft long or under. Infrastructure projects completed as of 2010 included dockside electrical services, diesel power improvements, emergency response improvements, and fire department improvements. Infrastructure projects planned as of 2010 included dock improvements, new pilings, harbor dredging, broadband internet access, water and sewer pipelines, alternative energy projects, and public safety improvements. Local fisheries-related businesses and services include: fishing gear sales, boat repair, haulout facilities, small vessel (< 60 tn) tidal grid, commercial and recreational fishing vessel moorage, tackle sales, fishing lodges, boat fuel sales, fishing gear storage, seaplane service, smoked fish processor, and shipwright. In addition, there is a local carpenter, fuel dock manager, bookkeeper, storekeeper, electrical utility manager, electrical engineer, and postmaster. Residents typically go to Sitka, Hoonah, or Juneau for services unavailable locally. The number of commercial fishing vessels that stop in Elfin Cove remained unchanged between 2005 and 2010; however, there has been a decline in the amount of supplies purchased locally. There was a slight increase in the number of charter vessels; however, it is not expected to continue due to the economy and halibut restrictions. There has been an increase in visits by large pleasure craft.

²⁴¹ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

²⁴² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁴³ Ibid.

Medical Services

There is no clinic located in Elfin Cove. Medical services are provided by Elfin Cove Emergency Medical Services. The closest hospital is located in Juneau.

Educational Opportunities

There are no schools located in Elfin Cove.²⁴⁴

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historically, commercial fishing was tied to Icy Strait, Glacier Bay, and the outer coast (including Lituya Bay). The Bartlett Cove cannery built in 1890, and Dundas Bay Cannery built in 1900 predated seafood processing in Excursion Inlet. In the 1940s, two fish traps were located in Icy Strait waters off Point Dundas and Point Gustavus. Crab and halibut fisheries were developed around the same time. The earliest report of shrimp fishing in Glacier Bay was in 1952. Salmon, halibut, crab, and shrimp fishing remained small-scale into the 1970s; however, by the 1980s fishing was intensified. In 1975 the International Pacific Halibut Commission (IPHC) reduced the halibut season from 128 days to 5 days. On opening day of halibut season in 1983, over 100 longliners were estimated to be in Glacier Bay.

During this time, the U.S. National Park Service (NPS) was reassessing its management of commercial fishing in National Parks. Friction between fishermen and the NPS intensified over an opinion in 1982 by the Interior Department Solicitor concluding that commercial fishing should not be allowed in Glacier Bay under the Alaska National Interest Lands Conservation Act (ANILCA). This was interpreted based on the prohibition of non-recreational commercial uses of wilderness areas contained under the Wilderness Act of 1964. This also created contention between the NPS and Alaska Attorney General's Office over jurisdiction of submerged lands and authority to regulate commercial fishing in park waters. Alaska's Attorney General argued that submerged lands had been transferred to the state under the Alaska Statehood Act; a claim which was rejected by the Interior Department.

Proposed rules outlining the closure of Glacier Bay to commercial fishing was submitted to the Federal Register by the NPS in 1983. Commercial fishermen argued that the proposed rules were arbitrarily targeting commercial vessels, as sportfishing was not included and the regulations initially proposed by the NPS were ultimately abandoned under political pressure. Negotiations began between the NPS, commercial fishing industry, environmental interests, and other interested parties over new regulations. It was the goal of the NPS to come to an agreement with stakeholders over which areas to exclude from the proposed wilderness area. While consensus was never reached, the negotiations did produce a foundation for the NPS's wilderness recommendation. However, regulations established that same year by the Redwood National Park Act of 1978 prohibiting commercial fishing in National Parks went unnoticed and un-contested by most NPS and Alaska officials. Although then Interior Department Solicitor Roy Spadley Jr. claimed that regulations did not apply to Glacier Bay, NPS officials were skeptical.

²⁴⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

By the late 1980s, the NPS was facing intense scrutiny by both Alaska's congressional delegation and the Reagan administration over ANILCA and humpback whale protection measures limiting vessel entrance into Glacier Bay. At that time, commercial fishing had grown to the point that the NPS felt conditions were threatening their mandate to preserve the park as an ecological reserve. In addition, defunding by congress made it difficult for the agency to fulfill its mandates while addressing the interests of stakeholders. In 1988, the NPS completed the wilderness recommendation Environmental Impact Statement (EIS) and presented it for public comment. The chosen recommendation favored a phased termination of commercial fishing for NPS waters. This was influenced by the NPS's waning political capital and the endless political difficulties and litigation that would likely result from the complex management approach born from negotiations in 1983. By 1989, residents of Hoonah were pursuing subsistence fishing rights in Glacier Bay; a tactic which non-Native fishermen from Gustavus, Hoonah, Elfin Cove, and Pelican would attempt as well. In 1990, it was decided that commercial fishing would be phased out in Glacier Bay and ending on December 31, 1997. The phase-out was implemented to lessen the economic impact on communities dependent on fisheries within the park. However, traditional and accustomed subsistence practices were still allowed within the park under ANILCA, as on all federal lands and navigable waters.²⁴⁵

The waters of Cross Sound and Icy Strait contain substantial fishery resources. Commercial fisheries in the Elfin Cove area are mostly salmon hand and power troll fisheries, with peak season running late June through September. Other fisheries include longline halibut, sablefish and other groundfish. Elfin Cove is located near a heavily traveled passage to and from the Gulf of Alaska (GOA), making it a popular location for passing vessels to stop.²⁴⁶

In a survey conducted by the AFSC in 2011, community leaders reported that Elfin Cove participates in the fisheries management process in Alaska through a representative who sits on regional fisheries advisory and/or working groups run by ADF&G. In addition, the community participates through its support of Southeast Conference as well as relies on regional organizations for advocacy. Finally, Elfin Cove is eligible for participation in the Community Quota Entity (CQE) program and is represented by the Elfin Cove Community Quota Entity. However, as of Fall 2013, the CQE non-profit had not yet acquired commercial halibut Individual Fishing Quota (IFQ), halibut charter permits, or non-trawl groundfish License Limitation Program permits for lease to eligible community members.²⁴⁷

The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease

²⁴⁵ Catton, T. (1993). *Glacier Bay Administrative History*. Retrieved May 25, 2012 from: <http://www.gustavushistory.org/articles/booksnarticles.aspx>.

²⁴⁶ Community of Elfin Cove Non-profit Corporation; Southeast Strategies; and Glenn Gray and Associates. (2007). *Elfin Cove Community Plan*. Retrieved March 27, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ElfinCove-CP-2007.pdf>.

²⁴⁷ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.²⁴⁸

Elfin Cove is located in Federal Reporting Area 659, International Pacific Halibut Commission (IPHC) Regulatory Area 2C, and the Eastern GOA Sablefish Regulatory District.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, there was one shore-based processor in Elfin Cove in 2010. Patti's FP Smokers is a small processing facility that began operating in 1996. The owner buys between 30 and 35 fish a week and only from fisherman that are close friends.²⁴⁹ In addition to the one shore side fish processor, there were nine fish buyers based in Elfin Cove in 2010.

Fisheries-Related Revenue

Between 2000 and 2010, Elfin Cove did not collect or receive any fisheries-related revenue (Table 3).

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that salmon seasons typically run from January through December, halibut and sablefish run typically from March through November, and lingcod run typically in May. Gear types generally used by residents include pots, longline, purse seines, troll, and dinglebar.

In 2010, 28 residents, held 28 permits issued by the Commercial Fisheries Entry Commission (CFEC), compared to 31 and 58 in 2000, respectively. Again, it should be noted that Elfin Cove's population is highly seasonal, which likely accounts for discrepancies between the number of resident CFEC permit holders and 2000 Decennial Census calculated population. Fisheries prosecuted in 2010 by residents of Elfin Cove included: statewide longline halibut and sablefish, statewide dinglebar troll lingcod, statewide hand troll salmon, and statewide power troll salmon.²⁵⁰ Of the CFEC permits issued in 2010, 63% were for salmon, compared to 60% in 2000; 2% were for groundfish, compared to 9% in 2000; 4% were for sablefish, compared to 5% in 2000; 27% were for halibut, compared to 21% in 2000; 2% were for crab, compared to 5% in 2000; and 2% were for shellfish, compared to 0% in 2000. In addition, eight residents held nine License Limitation Program (LLP) groundfish permits and four residents held four Federal

²⁴⁸ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEReport210.pdf>

²⁴⁹ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

²⁵⁰ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Fisheries Permits (FFP). In 2010, 12 account holders, or 60% of the 2010 Decennial Census calculated population, held 826,634 shares of halibut quota and 2 account holders held 533,480 shares of sablefish quota. No residents held crab quota share between 2010 and when the program began. The amount of locally held halibut and sablefish quota increased steadily between 2000 and 2010, with shares of both peaking in 2009.

There were 11 residents, or 55% of the 2010 Census calculated population, who held commercial crew licenses in 2010, compared to 18 in 2000. In addition, residents held majority ownership of 25 vessels, compared to 53 in 2000. In that year, 67% of permits held were fished, compared to 60% in 2000. This varied by fishery from 100% of groundfish, halibut, and sablefish permits fished, to 43% of salmon and 0% of crab and other shellfish.

In 2010, a total of 5,543 lb of fish were landed in Elfin Cove, valued at \$6,236 ex-vessel. This represented a significant decrease from 2005 when landings peaked at 23,402 lb valued at \$58,943 ex-vessel. Of the 67 Alaskan communities reporting landings, Elfin Cove ranked 62nd in terms of pounds landed and 66th in terms of total ex-vessel value of landings.

By fishery, all landings in Elfin Cove were considered confidential in 2010 with the exception of salmon. In that year, 4,543 lb were landed valued at \$4,356 ex-vessel, compared to 17,411 lb valued at \$35,853 in 2004; a decrease of \$1.76 per pound landed after accounting for inflation²⁵¹ and without considering the species composition of fish landed. Salmon prices in Elfin Cove were at their lowest in 2009 at \$0.53 per pound landed ex-vessel after accounting for inflation²⁵² and without considering the species composition landed. In addition, when ex-vessel revenues from landings in Elfin Cove peaked in 2005, only a small fraction was from salmon. Non-confidential landings by residents of Elfin Cove in 2010 included halibut, salmon, and “other” groundfish. In that year, residents landed 325,965 lb of salmon valued at \$558.830 ex-vessel, compared to 777,557 lb valued at \$515,766 in 2000; an increase of \$0.80 per pound overall after accounting for inflation²⁵³ and without considering the species composition of landings. Also in that year, 58,835 lb of halibut were landed valued at \$282,367, compared to 82,891 lb valued at \$217,781 in 2000; an increase of \$1.19 per pound overall after accounting for inflation.²⁵⁴ Finally, 17,933 lb of other groundfish were landed valued at \$30,271 total, compared to 18,827 lb valued at \$16,349 in 2000. Further information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁵¹ Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

²⁵² Ibid.

²⁵³ Ibid.

²⁵⁴ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Elfin Cove: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Elfin Cove: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	9	9	9	9	9	8	9	9	9	9	9
	Active permits	1	1	0	1	1	2	0	1	0	0	0
	% of permits fished	11%	11%	0%	11%	11%	25%	0%	11%	0%	0%	0%
	Total permit holders	8	8	8	8	8	7	8	8	8	8	8
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	4	4	4	3	3	3	3	4	4	4	4
	Fished permits	0	0	0	2	1	2	2	2	2	2	2
	% of permits fished	0%	0%	0%	67%	33%	67%	67%	50%	50%	50%	50%
	Total permit holders	4	4	4	3	3	3	3	4	4	4	4
Crab (CFEC) ²	Total permits	3	2	2	2	2	2	2	2	2	2	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	1
Halibut (CFEC) ²	Total permits	12	10	9	8	13	14	14	13	13	12	13
	Fished permits	9	7	5	6	11	12	12	11	12	11	13
	% of permits fished	75%	70%	56%	75%	85%	86%	86%	85%	92%	92%	100%
	Total permit holders	12	10	9	8	13	14	14	13	13	12	13
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Elfin Cove: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	3	3	3	3	3	3	2	2	2	2	2
	Fished permits	3	3	3	3	3	2	2	2	2	2	2
	% of permits fished	100%	100%	100%	100%	100%	67%	100%	100%	100%	100%	100%
	Total permit holders	3	3	3	3	3	3	2	2	2	2	2
Groundfish (CFEC) ²	Total permits	5	5	2	2	3	2	2	2	4	2	1
	Fished permits	2	2	0	0	0	0	0	0	2	1	1
	% of permits fished	40%	40%	0%	0%	0%	0%	0%	0%	50%	50%	100%
	Total permit holders	3	3	1	1	2	1	1	1	2	1	1
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	35	31	30	29	28	28	29	28	27	27	30
	Fished permits	21	20	18	15	17	16	16	13	13	15	16
	% of permits fished	60%	65%	60%	52%	61%	57%	55%	46%	48%	56%	53%
	Total permit holders	29	26	25	24	23	23	23	22	21	21	23
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>58</i>	<i>51</i>	<i>46</i>	<i>44</i>	<i>49</i>	<i>49</i>	<i>49</i>	<i>47</i>	<i>48</i>	<i>45</i>	<i>48</i>
	<i>Fished permits</i>	<i>35</i>	<i>32</i>	<i>26</i>	<i>24</i>	<i>31</i>	<i>30</i>	<i>30</i>	<i>26</i>	<i>29</i>	<i>29</i>	<i>32</i>
	<i>% of permits fished</i>	<i>60%</i>	<i>63%</i>	<i>57%</i>	<i>55%</i>	<i>63%</i>	<i>61%</i>	<i>61%</i>	<i>55%</i>	<i>60%</i>	<i>64%</i>	<i>67%</i>
	<i>Permit holders</i>	<i>31</i>	<i>28</i>	<i>27</i>	<i>26</i>	<i>29</i>	<i>29</i>	<i>29</i>	<i>27</i>	<i>28</i>	<i>26</i>	<i>28</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Elfin Cove: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Elfin Cove ²	Total Net Lb Landed In Elfin Cove ^{2,5}	Total Ex-Vessel Value Of Landings In Elfin Cove ^{2,5}
2000	18	0	1	53	47	0	0	\$0
2001	16	0	1	53	49	0	0	\$0
2002	11	1	2	52	51	1	--	--
2003	10	0	1	52	52	0	0	\$0
2004	19	6	1	50	54	24	17,411	\$35,853
2005	12	5	1	26	26	10	23,402	\$58,953
2006	13	5	1	26	27	7	13,605	\$13,286
2007	8	4	1	27	29	5	15,833	\$7,838
2008	8	11	1	25	31	13	15,836	\$27,537
2009	11	7	1	22	29	9	11,436	\$5,766
2010	11	9	1	25	27	9	5,543	\$6,236

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Elfin Cove: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lb)
2000	12	602,016	71,588
2001	11	551,823	73,550
2002	11	611,451	82,054
2003	11	611,451	82,044
2004	12	718,804	116,392
2005	12	718,804	120,319
2006	13	768,096	126,408
2007	13	768,096	109,454
2008	11	452,058	49,800
2009	12	826,624	78,037
2010	12	826,624	69,725

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Elfin Cove: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lb)
2000	6	351,964	41,011
2001	6	351,964	38,763
2002	5	351,876	37,002
2003	5	351,876	41,108
2004	5	351,876	43,602
2005	4	351,857	41,409
2006	3	377,601	44,314
2007	2	484,766	54,469
2008	1	87,939	9,441
2009	2	533,480	48,844
2010	2	533,480	45,891

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Elfin Cove: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Elfin Cove: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	--	0	--	--	--	--	--	--	--
Halibut	0	0	--	0	--	--	--	--	--	--	--
Herring	0	0	--	0	--	--	--	--	--	--	--
Other Groundfish	0	0	--	0	--	--	--	--	--	--	--
Other Shellfish	0	0	--	0	--	--	--	--	--	--	--
Pacific Cod	0	0	--	0	--	--	--	--	--	--	--
Pollock	0	0	--	0	--	--	--	--	--	--	--
Sablefish	0	0	--	0	--	--	--	--	--	--	--
Salmon	0	0	--	0	17,411	5,040	13,605	15,833	11,299	11,150	4,543
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>0</i>	<i>17,411</i>	<i>5,040</i>	<i>13,605</i>	<i>15,833</i>	<i>11,299</i>	<i>11,150</i>	<i>4,543</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Halibut	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Herring	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Other Groundfish	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Other Shellfish	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Pacific Cod	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Pollock	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Sablefish	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Salmon	\$0	\$0	--	\$0	\$35,853	\$3,591	\$13,286	\$7,838	\$15,512	\$5,480	\$4,356
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>--</i>	<i>\$0</i>	<i>\$35,853</i>	<i>\$3,591</i>	<i>\$13,286</i>	<i>\$7,838</i>	<i>\$15,512</i>	<i>\$5,480</i>	<i>\$4,356</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Elfin Cove Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	82,891	77,766	88,257	58,667	101,798	111,773	100,121	84,763	64,760	55,487	58,835
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	18,827	26,274	11,458	1,376	2,604	3,208	3,777	5,071	23,776	14,672	17,933
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	31,110	--	--	--	--	--	--	--	--	--	--
Salmon	777,557	998,165	632,797	758,168	509,135	420,710	357,576	345,669	195,716	255,703	325,964
<i>Total²</i>	<i>910,385</i>	<i>1,102,205</i>	<i>732,512</i>	<i>818,211</i>	<i>613,537</i>	<i>535,691</i>	<i>461,474</i>	<i>435,503</i>	<i>284,252</i>	<i>325,862</i>	<i>402,732</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$217,781	\$151,753	\$189,680	\$172,259	\$304,293	\$338,173	\$377,799	\$370,151	\$281,346	\$166,485	\$282,367
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$16,349	\$27,422	\$4,656	\$766	\$1,141	\$1,868	\$1,752	\$2,793	\$34,591	\$13,364	\$30,271
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$120,404	--	--	--	--	--	--	--	--	--	--
Salmon	\$515,766	\$652,880	\$440,256	\$412,339	\$661,222	\$534,494	\$732,185	\$525,240	\$491,566	\$366,277	\$558,830
<i>Total²</i>	<i>\$870,300</i>	<i>\$832,056</i>	<i>\$634,592</i>	<i>\$585,363</i>	<i>\$966,656</i>	<i>\$874,536</i>	<i>\$1,111,736</i>	<i>\$898,185</i>	<i>\$807,503</i>	<i>\$546,126</i>	<i>\$871,468</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing makes up a large portion of Elfin Cove's seasonal economy. Many lodges in the area offer accommodations, meals, tours, and charter fishing. A 2005 study by the University of Alaska's Institute of Social and Economic Research reports that Elfin Cove area lodges served about 1,500 clients and earned between \$4.5 to \$5.2 million in that year.²⁵⁵ In addition, there are several bed and breakfasts and guest houses located in the area, which help support the local sportfishing economy. In 2010, there were seven registered sport fish guide businesses active, compared to seven in 2000. Twelve sport fish guide licenses were issued that year, compared to nine in 2000. In addition, there were a total of 18 licensed charter operators in Elfin Cove. The number of active sport fish guide business registered in Elfin Cove peaked in 2001 at 10. In 2010, charter vessels harvested 864 Chinook salmon, 3,739 coho salmon, 2,349 halibut, 182 lingcod, 5,961 rockfish, 5 sockeye salmon, and 971 "other" salmon.

In 2010, 25 sportfishing licenses were sold to residents, compared to 53 in 2000. In addition, 1,100 sportfishing licenses were sold in the community, compared to 899 in 2000. Local sales of sportfishing licenses peaked in 2008 at 1,433 (Table 11).

Elfin Cove is located in the Glacier Bay ADF&G Harvest Survey Area which includes all waters of Alaska, including drainages, south of Cape Fairweather to and including Chichagof drainages into Icy Strait and Cross Sound, west of Point Couverden and the Haines Borough boundary. In 2010, there were a total of 29,025 saltwater angler days fished and 2,990 freshwater angler days fished, compared to 38,126 and 3,249 in 2000, respectively. In that year, non-Alaska residents accounted for 80.4% of saltwater angler days fished, compared to 57.8% in 2000. In addition, non-Alaska residents accounted for 78.5% of freshwater angler days fished, compared to 37.9% in 2000. According to ADF&G Harvest Survey data,²⁵⁶ local private anglers target king, coho, pink, and chum salmon, Dolly Varden char, cutthroat trout, Pacific halibut, rockfish, lingcod, Dungeness crab, Tanner crab, and shrimp.

In a survey conducted by the AFSC in 2011, community leaders reported that recreational fishermen on private vessels target all five species of Pacific salmon, halibut, rockfish, crab, sablefish, shrimp, clams, salmon shark, lingcod, and Pacific cod. Sportfishing is typically done by charter boats, resident and non-resident owned private boat, and by shore. Information regarding sportfishing trends can be found in Table 11.

²⁵⁵ Dugan, D., G. Fay, and S. Colt (2006). *Nature-Based Tourism in Southeast Alaska: Results from 2005 and 2006 Field Study*. Anchorage: University of Alaska Anchorage, Institute of Social and Economic Research and Eco-Systems. Retrieved December 5, 2012 from <http://www.docstoc.com/docs/53871219/Nature-Based-Tourism-in-Southeast-Alaska-Results-from-2>.

²⁵⁶ Alaska Department of Fish and Game. (2011). Alaska Sportfishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Elfin Cove: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Elfin Cove ²
2000	7	9	53	899
2001	10	9	31	923
2002	6	13	49	1,069
2003	7	11	41	905
2004	7	14	40	1,268
2005	9	16	44	1,043
2006	8	12	36	1,403
2007	9	14	25	1,433
2008	8	12	22	1,293
2009	8	13	19	970
2010	7	12	25	1,100

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	22,025	16,101	1,231	2,018
2001	20,935	18,028	1,991	1,512
2002	19,213	9,293	1,868	1,305
2003	17,403	14,706	651	1,464
2004	28,202	9,304	1,434	810
2005	30,641	16,832	1,264	1,076
2006	29,274	10,514	988	1,658
2007	33,057	14,365	1,860	3,323
2008	30,119	7,061	1,550	1,421
2009	29,042	9,744	1,253	1,118
2010	23,338	5,687	2,347	643

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence resources are important to permanent residents of Elfin Cove although the community does have opportunities for wage employment and access to general provisions. While not as dependent as some rural subsistence-based communities, residents of Elfin Cove participate in subsistence activities to help supplement both diet and income. Subsistence is part of the local culture as year-round residents take pride in the fact that they remain in the community following the commercial fishing and tourism seasons.²⁵⁷ In a survey conducted by the AFSC in 2011, community leaders reported that the three most important subsistence resources harvested by residents include halibut, deer, and shrimp.

Data regarding subsistence participation is limited. No information is available regarding subsistence participation by household or per capita subsistence harvest. Historically, few salmon harvests are reported by residents according to ADF&G records (Table 13). Between 2000 and 2010, residents reported harvesting 137 sockeye salmon, 14 pink salmon, 44 chum salmon, and 4 Chinook salmon. In 2008, six residents, or 30.0% of the population, held subsistence salmon permits. In 2000, eight residents, or 25.0% of the population, reported harvesting 54 salmon. That was also the year that reported salmon harvests peaked.

On the other hand, a significant portion of the population (14 residents) held Subsistence Halibut Registration Certificates (SHARC) in 2010. In that year, 5 SHARC holders reported harvests of 680 lb of halibut, compared to 858 harvested with 6 SHARC in 2003. Subsistence halibut harvests peaked in 2004 at 2,308 lb. No information is available regarding marine invertebrates, other fish or marine mammal harvests. Information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders expressed several concerns regarding their local fisheries-based economy. When questioned on challenges facing the portion of Elfin Cove's economy based on fishing, leaders stated that the current regulatory and economic environment is hostile to local businesses. In addition, a lack of key infrastructure including an ice machine, local fish buyer, and freight handler all increase local operating costs. There is also a lack of fisheries-related tax revenue coming into the community.

When questioned on the impacts that fisheries policies or management actions have had on Elfin Cove, leaders expressed that most actions have made it more difficult for businesses to be competitive. Specifically halibut restrictions, enforcement, and environmental regulations have created burdens which have not been offset by revenue increases.

When questioned on past or current fisheries policies or management actions that have affected Elfin Cove the most, leaders said that the implementation of quota systems resulted in increased competition for local resources from outside the community. In addition, limitations on charter halibut landings are putting strain on local charter businesses.

Overall, community leaders expressed that fisheries policy and management needs to take into account impacts on local economies, in addition to businesses. The community's economy is distressed and there is not enough support to meet management and policy requirements.

²⁵⁷ Community of Elfin Cove Non-profit Corporation; Southeast Strategies; and Glenn Gray and Associates. (2007). *Elfin Cove Community Plan*. Retrieved March 27, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ElfinCove-CP-2007.pdf>.

Table 12. Subsistence Participation by Household and Species, Elfin Cove: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Elfin Cove: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	8	8	n/a	8	4	n/a	42	n/a	n/a
2001	10	10	4	2	n/a	4	32	n/a	n/a
2002	10	10	n/a	n/a	10	n/a	30	n/a	n/a
2003	4	4	n/a	n/a	4	n/a	20	n/a	n/a
2004	3	3	n/a	n/a	n/a	n/a	2	n/a	n/a
2005	2	2	n/a	n/a	n/a	10	1	n/a	n/a
2006	2	2	n/a	n/a	n/a	n/a	10	n/a	n/a
2007	1	1	n/a	34	n/a	n/a	n/a	n/a	n/a
2008	6	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Elfin Cove: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	16	6	858
2004	21	9	2,308
2005	20	5	635
2006	18	7	910
2007	21	7	989
2008	17	3	293
2009	17	5	1,431
2010	14	5	680

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Elfin Cove: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

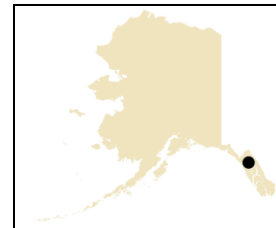
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Excursion Inlet



People and Place

*Location*²⁵⁸

Excursion Inlet is located in the Haines Borough, on the west coast of Lynn Canal, 38 mi northwest of Juneau. The area encompasses 56.8 sq mi of land and 0.1 sq mi of water. Excursion Inlet is not incorporated, although it is under the jurisdiction of the Haines Borough.

*Demographic Profile*²⁵⁹

In 2010 there were 12 residents, ranking Excursion Inlet 341st of 352 Alaskan communities in terms of population size. Between 2000 and 2009 the population grew by 10.0% with an average annual growth rate of 4.57%, which was much greater than the statewide average of 0.75%. However, it should be noted that both overall population growth and average annual growth were significantly affected by the community's small population. Information regarding population trends can be found in Table 1.

Racial and ethnic composition in 2010 was predominately White. In that year, 75% of residents identified themselves as White, compared to 100% in 2000; and 25% identified themselves as two or more races, compared to 0% in 2000. In addition, 8.3% of residents identified themselves as Hispanic or Latino in 2010, compared to 0% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 2.0, compared to 1.25 in 2000. In that year, there were a total of 71 housing units, compared to 85 in 2000. Of the households surveyed in 2010, 6% were owner-occupied, compared to 7% in 2000; 3% were renter-occupied, compared to 2% in 2000; 7% were vacant, compared to 1% in 2000; and 85% were occupied seasonally, compared to 89% in 2000. No residents were reported to be living in group quarters between 2000 and 2010.

Gender distribution in 2010 was even at 50.0% male and 50.0% female. This was more even than the statewide distribution (52.0% male, 48.0% female) and significantly more even than the distribution in 2000 (80.0% male, 20.0% female). The median age that year was 36.5 years, which was somewhat older than the statewide median of 33.8 years and significantly younger than the 2000 median of 60.0 years.

²⁵⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁵⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

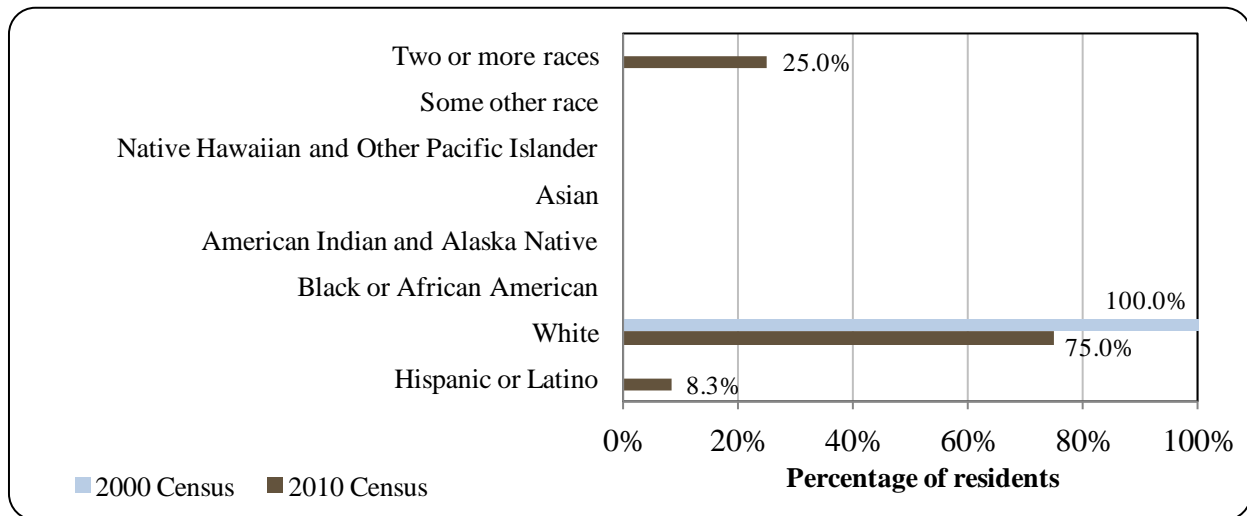
Table 1. Population in Excursion Inlet from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	n/a	-
2000	10	-
2001	-	15
2002	-	10
2003	-	12
2004	-	10
2005	-	10
2006	-	9
2007	-	13
2008	-	13
2009	-	11
2010	12	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Excursion Inlet: 2000-2010 (U.S. Census).

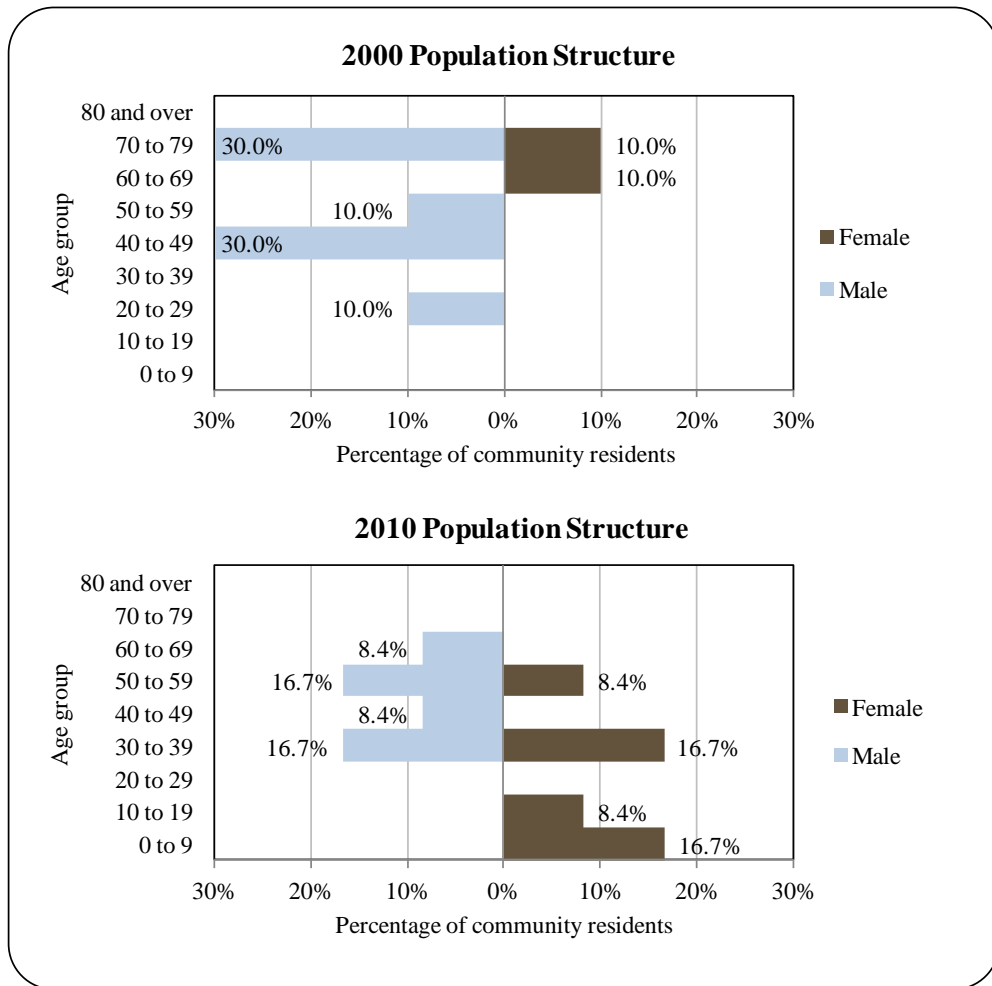


Gender distribution by age cohort was more even in 2010 than in 2000. In that year, female biases occurred in the 0 to 9 and 10 to 19 ranges, while male biases occurred in the 40 to 49, 50 to 59, and 60 to 69 ranges. Information regarding Excursion Inlet’s population structure can be found in Figure 2.

The population of Excursion Inlet is too small to discern a trend in its structure. In 2010, 25.1% of residents were under the age of 20, compared to 0.0% in 2000; 8.4% were over the age of 59, compared to 50.0% in 2000; and 66.9% were between the ages of 30 and 59, compared to 40.0% in 2000. No residents were between the ages of 20 and 29 in both 2000 and 2010.

In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS) did not report estimates for 2010.

Figure 2. Population Age Structure in Excursion Inlet Based on the 2000 and 2010 U.S. Decennial Census.



History, Traditional Knowledge, and Culture

According to oral history, the Woosh-Kee-Tawn Tlingits were the first occupants of Excursion Inlet. However, they were forced to abandon the area following a flood.²⁶⁰ This account is similar to other oral histories in the area describing a period of glacial recession and outburst flooding in the Glacier Bay region beginning around 5,800 years ago.²⁶¹

Two salmon canneries were originally built in Excursion Inlet in 1908. In 1935, Pacific American Fisheries (PAF) closed its plant. The other cannery facility burned in 1948. In 1941, the U.S. Army surveyed the area from a planned military facility. In 1942, construction of a trans-shipment point was started which would bring military supplies to Excursion Inlet. These supplies would then be transferred to military complexes in Kodiak and the Aleutians. The Army commandeered portions of the old cannery site without the permission of PAF. At peak construction, 2,760 civilians and 860 Army personnel were employed.²⁶² The military site was decommissioned in 1945 and offered land and remaining structures up for sale in 1946 and again in 1949. The Alaska Native Brotherhood and Sisterhood of Hoonah purchased one of the buildings, and repurposed it as a meeting hall. In 1948, PAFs Oregon and Puget Sound plants were destroyed in a fire. After losing those facilities, PAF converted a Landing Ship Tank vessel into a freezer and processing barge, which operated in Excursion Inlet for the 1949 and 1950 seasons. Land based seafood processing resumed in 1951.²⁶³ The site was later purchased in 1965 by Ward Cove Packing Co., a Ketchikan based company. However, Ward Cove was forced to cease Alaska salmon operations in 2002 due to market conditions. The site was then purchased by Ocean Beauty Seafoods in 2003.

Natural Resources and Environment

The area has a maritime climate characterized by cool summers and mild winters. Average summer temperatures range from 46 to 76 °F (8 to 24 °C); winter temperatures range from 13 to 36 °F (-11 to 2 °C).²⁶⁴

Excursion Inlet's topography was heavily shaped by glaciers. The Chilkat Peninsula is composed of Mesozoic greenstones, volcanic sandstones, mudstone, chert, and limestone. Soils are generally well drained, and include a thick organic layer over silts and gravels. The community itself is built on alluvial deposits. High relief topography surrounds the community. Densely forested areas comprise of a mix of Sitka Spruce and Western Hemlock. These stands dominate much of the environment, with limited concentrations of primarily birch hardwoods populating disturbed areas. Alpine tundra vegetation occurs above 3,000 ft. Understory

²⁶⁰ Fry, E. (2001). Juneau Empire. *Juneau Family Preserves Historic Land at Excursion Inlet*. Retrieved May 25, 2012 from: http://juneauempire.com/stories/052001/Loc_Preserves.shtml.

²⁶¹ Monteith, D.; Connor, C.; Streveler, G.; and Howell, W. (2007). Geology and Oral History-Complementary Views of a Former Glacier Bay Landscape, in Piatt, J.F. and Gende, S.M. (Eds.). Proceedings of the Fourth Glacier Bay Science Symposium, October 26-28, 2004: U.S. Geological Survey Scientific Investigations Report 2007-5047, p. 50-53. Retrieved May 25, 2012 from: http://nps01.origin.cdn.level3.net/glba/naturescience/upload/Monteith_etal_2007GeologyAndOralHistory.pdf.

²⁶² Roppel, P. (2010). Capital City Weekly. *Southeast History: Prisoners of War at Excursion Inlet*. Retrieved May 25, 2012 from: http://capitalcityweekly.com/stories/082510/new_700085831.shtml.

²⁶³ Roppel, P. (2010). Capital City Weekly. *Southeast History: The end of Excursion Inlet's Secret Military Base*.

²⁶⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

vegetation consist of berry bushes, devil’s club, alders, and willows.²⁶⁵

Terrestrial mammals and fur-bearers in the region include brown and black bear, mountain goat, wolf, lynx, mink, martin, muskrat, otter, weasel, and wolverine. Marine mammals include humpback and orca whales, dolphin, seals, and sea lions. Economically or culturally important fish species include all five species of Pacific salmon, halibut, Dolly Varden, cutthroat trout, rockfish, herring, cod, sablefish, shrimp, and crab.²⁶⁶

Minerals found in the greater Haines Borough include gold, zinc, lead, copper, silver, barite, iron ore, and titanium. Marble, clay, sand, and gravel are also present. Regional mineral projects include the Porcupine Mineral District, Glacier Creek, and Kensington Gold Mine. Six prospects of gold, copper, silver, zinc, barite, and cobalt are found on the Chilkat Peninsula.

Excursion Inlet is relatively protected from most environmental hazards. However, the community is susceptible to earthquakes, coastal flooding, tsunamis or seiche waves, and mass wasting (land slides).²⁶⁷

According to the Alaska Department of Environmental Conservation,²⁶⁸ there were no significant contaminated sites or environmental cleanup operations within Excursion Inlet as of 2010.

Current Economy²⁶⁹

Excursion Inlet’s economy is almost entirely focused on the Ocean Beauty Excursion Inlet Cannery, which began operations in 2003. The 2006-2010 ACS did not report employment or income estimates for 2010 nor did the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD).²⁷⁰ Because of this, trend data are unavailable. In 2000, 100% of employed residents worked in manufacturing sectors and 100% held management or professional positions. Information regarding local employment can be found in Figures 3 and 4.

²⁶⁵ Haines Borough. (2004). *Haines Borough Alaska, Comprehensive Plan*. Retrieved May 24, 2012 from: <http://www.commerce.state.ak.us/dca/plans/HainesBorough-CP-2004.pdf>.

²⁶⁶ Ibid.

²⁶⁷ Ibid.

²⁶⁸ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved May 24, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Southeast>.

²⁶⁹ Unless otherwise noted, all monetary data are reported in nominal values.

²⁷⁰ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 3. Local Employment by Industry in 2000-2010, Excursion Inlet (U.S. Census).

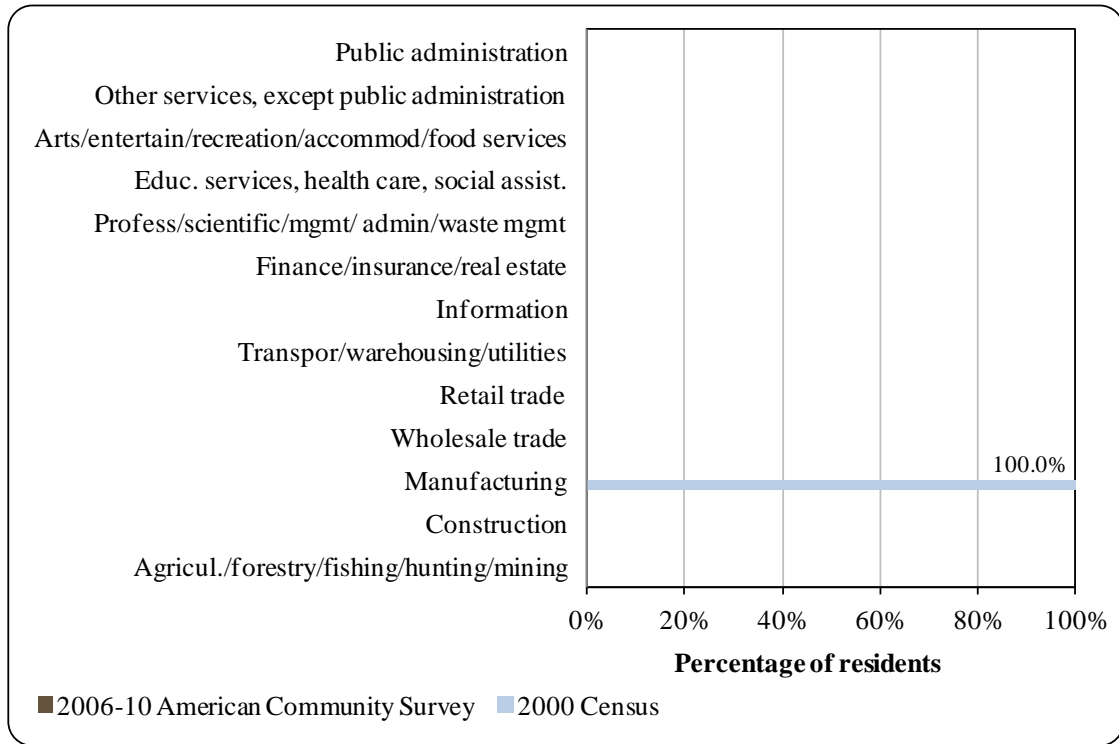
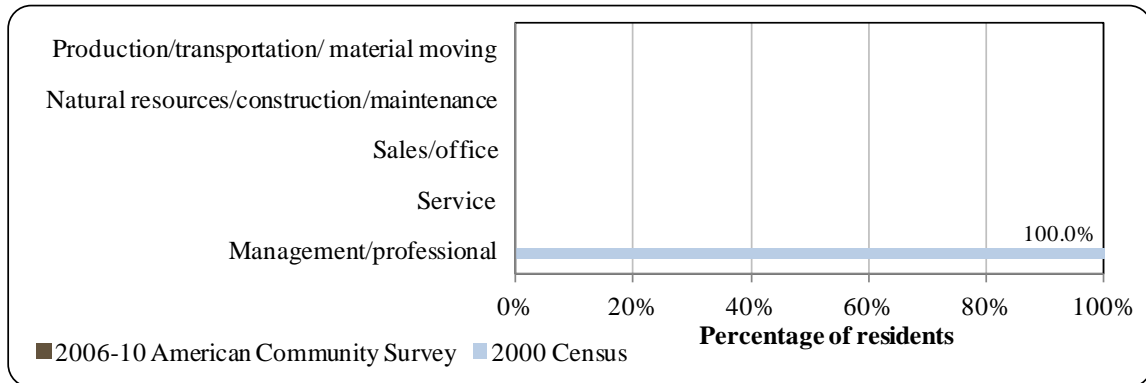


Figure 4. Local Employment by Occupation in 2000-2010, Excursion Inlet (U.S. Census).



Governance

Excursion Inlet is unincorporated, which bars it from administering any taxes or fees. In addition, the community was not included in the Alaska Native Claims Settlement Act (ANCSA) nor is it a federally recognized Native village. However, the community is under the jurisdiction of the Haines Borough, which administered a 5.5% sales tax, 11.26 mills median property tax, and 4% accommodations tax in 2010. The closest National Marine Fisheries Service, Alaska Department of Fish and Game (ADF&G), and U.S. Bureau of Citizenship and Immigration Services offices are located in Juneau, 38 mi southeast.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Excursion Inlet from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*²⁷¹

The area is not accessible by road. A public seaplane base is available. Scheduled flights are available through Wings of Alaska. Roundtrip airfare between Juneau and Excursion Inlet in June 2012 was \$150.²⁷²

*Facilities*²⁷³

No public facilities or services exist in Excursion Inlet. Less than 10% of all homes in this area are used year-round. All lack complete plumbing.

*Medical Services*²⁷⁴

No medical services are available in Excursion Inlet. The closest hospital is located in Juneau.

²⁷¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁷² Wings of Alaska. (n.d.). Retrieved November 28, 2011 from <http://www.wingsofalaska.com/>.

²⁷³ See footnote 271.

²⁷⁴ Ibid.

*Educational Opportunities*²⁷⁵

No education services are available in Excursion Inlet.

Involvement in North Pacific Fisheries

*History and Evolution of Fisheries*²⁷⁶

Historically, commercial fishing in the area was tied to Icy Strait, Glacier Bay, and the outer coast (including Lituya Bay). The Barlett Cove cannery built in 1890, and Dundas Bay Cannery built in 1900 predated seafood processing in Excursion Inlet. In the 1940s, two fish traps were located in Icy Strait waters off Point Dundas and Point Gustavus. Crab and halibut fisheries were developed around the same time. The earliest report of shrimp fishing in Glacier Bay was in 1952. Salmon, halibut, crab, and shrimp fishing remained small-scale into the 1970s; however, by the 1980s fishing was intensified. In 1975, the International Pacific Halibut Commission (IPHC) reduced the halibut season from 128 days to 5 days. On opening day of halibut season in 1983, over 100 long liners were estimated to be fishing in Glacier Bay.

During this time, the U.S. National Park Service (NPS) was reassessing its management of commercial fishing in National Parks. Friction between fishermen and the NPS intensified over an opinion in 1982 by the Interior Department Solicitor contending that commercial fishing should not be allowed in Glacier Bay under the Alaska National Interest Lands Conservation Act (ANILCA). This was interpreted based on the prohibition of non-recreational commercial uses of wilderness areas contained under the Wilderness Act of 1964. This created contention between the NPS and Alaska Attorney General's Office over jurisdiction of submerged lands and authority to regulate commercial fishing in park waters. Alaska's Attorney General argued that submerged lands had been transferred to the state under the Alaska Statehood Act; a claim which was rejected by the Interior Department.

Proposed rules outlining the closure of Glacier Bay to commercial fishing was submitted to the Federal Register by the NPS in 1983. Commercial fishermen argued that the proposed rules were arbitrarily targeting commercial vessels, as sportfishing was not included. The regulations initially proposed by the NPS were ultimately abandoned under political pressure. Negotiations began between the NPS, commercial fishing industry, environmental interests, and other interested parties over new regulations. It was the goal of the NPS to come to an agreement with stakeholders over which areas to exclude from the proposed wilderness area. While consensus was never reached, the negotiations did produce a foundation for the NPS's wilderness recommendation. However, regulations established that same year by the Redwood National Park Act of 1978 prohibiting commercial fishing in National Parks went unnoticed and un-contested by most NPS and Alaska officials. Although then Interior Department Solicitor Roy Spadley Jr. claimed that regulations did not apply to Glacier Bay, NPS officials were skeptical.

By the late 1980s, the NPS was facing intense scrutiny by both Alaska's congressional delegation and the Reagan administration over ANILCA and humpback whale protection measures limiting vessel entrance into Glacier Bay. At that time, commercial fishing had grown

²⁷⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁷⁶ Catton, T. (1993). *Glacier Bay Administrative History*. Retrieved May 25, 2012 from <http://www.gustavushistory.org/articles/booksnarticles.aspx>.

the point that the NPS felt conditions were threatening their mandate to preserve the park as an ecological reserve. In addition, defunding by a hostile congress made it difficult for the agency to fulfill its mandates while addressing the interests of stakeholders. In 1988, the NPS completed the wilderness recommendation Environmental Impact Statement and presented it for public comment. The chosen recommendation favored a phased termination of commercial fishing for NPS waters. This was influenced by the NPS's waning political capital and the endless political difficulties and litigation that would likely result from the complex management approach born from negotiations in 1983. By 1989, residents of Hoonah were pursuing subsistence fishing rights in Glacier Bay; a tactic which non-Native fishermen from Gustavus, Hoonah, Elfin Cove, and Pelican would attempt as well. In 1990, it was decided that commercial fishing would be phased out in Glacier Bay and ending on December 31, 1997. The phase-out was implemented to lessen the economic impact on communities dependent on fisheries within the park. However, traditional and accustomed subsistence practices were still allowed within the park under ANILCA, as on all federal lands and navigable waters.

The area around Excursion Inlet is located in Federal Reporting Area 659, International Pacific Halibut Commission Regulatory Area 2C, and the Eastern Gulf of Alaska (GOA) Sablefish Regulatory District.

Processing Plants

Ocean Beauty acquired the Excursion Inlet seafood processing facility in 2003. The plant itself was established in 1908 by another company. The Ocean Beauty plant generally operates from late June to mid-September and processes pink and chum salmon, as well as salmon roe, salmon caviar, halibut and black cod. The Excursion Inlet facility provides free room and board as well as free air transportation from and to Seattle to all seafood processing workers who fulfill their contractual obligations. Living accommodations include access to laundry facilities as well as free weekly linen laundry service, and shared bathroom facilities. Ocean Beauty also provides free protective work clothing to its workers.²⁷⁷

Fisheries-Related Revenue

No fisheries-related revenue was collected in Excursion Inlet between 2000 and 2010 (Table 3).

Commercial Fishing

In 2010, one resident, or 8.3% of the population, held one salmon permit issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, four residents held two salmon and two crab CFEC permits. No residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits between 2000 and 2010. In addition, no residents held halibut, sablefish, or crab quota share between 2010 and when the programs began.

No residents held commercial crew licenses in 2010, compared to one in 2000. In addition, no residents held primary ownership of any vessels that year, compared to three in 2000. Of the CFEC permits held in 2010, none were actively fished, compared to 25% in 2000.

²⁷⁷ Ocean Beauty. (n.d.). Retrieved May 2012 from <http://www.oceanbeauty.com/about/xip.htm>.

No permits were actively fished between 2004 and 2010.

In 2010, 7.73 million pounds of salmon were landed in Excursion Inlet valued at \$5.36 million, compared to 12.21 million pounds valued at \$3.71 million in 2005; an increase of \$0.35 per pound after adjusting for inflation²⁷⁸ and without considering the species composition of landings. All other years are considered confidential. Landings reported by residents of Excursion inlets are considered confidential for 2000 through 2005. No landings were reported by residents between 2006 and 2010. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁷⁸ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Excursion Inlet: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Excursion Inlet: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	2	1	2	2	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	1	2	2	1	1	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Excursion Inlet: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	1	2	2	1	1	1	1	1	1	1
	Fished permits	1	0	1	1	0	0	0	0	0	0	0
	% of permits fished	50%	0%	50%	50%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	1	2	2	1	1	1	1	1	1	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>4</i>	<i>2</i>	<i>4</i>	<i>4</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>Fished permits</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>25%</i>	<i>0%</i>	<i>25%</i>	<i>25%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>4</i>	<i>2</i>	<i>4</i>	<i>4</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Excursion Inlet: 2000-2010.

Year	Crew license holders ¹	Count of all fish buyers ²	Count of shore-side processing facilities ³	Vessels primarily owned by residents ⁴	Vessels homeported ⁴	Vessels landing catch in Excursion Inlet ²	Total net lb landed in Excursion Inlet ^{2,5}	Total ex-vessel value of landings in Excursion Inlet ^{2,5}
2000	1	3	1	3	7	2	--	--
2001	2	1	1	2	9	1	--	--
2002	2	1	1	4	9	1	--	--
2003	0	2	1	4	19	10	--	--
2004	0	2	1	2	19	112	--	--
2005	1	4	1	2	18	254	12,208,415	\$3,708,504
2006	0	2	1	0	12	99	--	--
2007	1	3	2	0	11	151	--	--
2008	0	2	1	0	10	173	--	--
2009	0	2	1	0	12	230	--	--
2010	0	5	1	0	9	234	7,731,259	\$5,363,512

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Excursion Inlet: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Excursion Inlet: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Excursion Inlet: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Excursion Inlet: 2000-2010.

	<i>Total Net Lb¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	12,070,464	--	--	--	--	7,704,191
<i>Total²</i>	--	--	--	--	--	12,070,464	--	--	--	--	7,704,191
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	\$3,314,177	--	--	--	--	\$5,308,513
<i>Total²</i>	--	--	--	--	--	\$3,314,177	--	--	--	--	\$5,308,513

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Excursion Inlet Residents: 2000-2010.

	<i>Total Net Lb¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	0	0	0	0	0
Finfish	--	--	--	--	--	--	0	0	0	0	0
Halibut	--	--	--	--	--	--	0	0	0	0	0
Herring	--	--	--	--	--	--	0	0	0	0	0
Other Groundfish	--	--	--	--	--	--	0	0	0	0	0
Other Shellfish	--	--	--	--	--	--	0	0	0	0	0
Pacific Cod	--	--	--	--	--	--	0	0	0	0	0
Pollock	--	--	--	--	--	--	0	0	0	0	0
Sablefish	--	--	--	--	--	--	0	0	0	0	0
Salmon	--	--	--	--	--	--	0	0	0	0	0
<i>Total²</i>	--	--	--	--	--	--	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Halibut	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Herring	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Groundfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Other Shellfish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Pacific Cod	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Pollock	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Sablefish	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
Salmon	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	--	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

ADF&G and CFEC. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is not an important part of Excursion Inlet's economy. Between 2000 and 2003, there was one registered sport fish guide business. In addition, there were no registered charter operators in the community between 2000 and 2010. One resident held a sportfishing license in 2010, compared to four in 2000. No sportfishing licenses were sold in the community between 2000 and 2010 (Table 11).

Excursion Inlet is located in the Glacier Bay ADF&G Harvest Survey Area which includes all waters of Alaska, including drainages, south of Cape Fairweather to and including Chichagof drainages into Icy Strait and Cross Sound, west of Point Couverden and the Haines Borough boundary. In 2010, there were at total of 29,025 saltwater angler days fished and 2,990 freshwater angler days fished, compared to 38,126 and 3,249 in 2000, respectively (Table 11). In that year, non-Alaska residents accounted for 80.4% of saltwater angler days fished, compared to 57.8% in 2000. In addition, non-Alaska residents accounted for 78.5% of freshwater angler days fished, compared to 37.9% in 2000.

Table 11. Sport Fishing Trends, Excursion Inlet: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Excursion Inlet ²
2000	1	1	4	0
2001	1	0	5	0
2002	1	0	4	0
2003	1	0	4	0
2004	0	0	2	0
2005	0	0	4	0
2006	0	0	5	0
2007	0	0	4	0
2008	0	0	3	0
2009	0	0	1	0
2010	0	0	1	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	22,025	16,101	1,231	2,018
2001	20,935	18,028	1,991	1,512
2002	19,213	9,293	1,868	1,305
2003	17,403	14,706	651	1,464
2004	28,202	9,304	1,434	810
2005	30,641	16,832	1,264	1,076
2006	29,274	10,514	988	1,658
2007	33,057	14,365	1,860	3,323
2008	30,119	7,061	1,550	1,421
2009	29,042	9,744	1,253	1,118
2010	23,338	5,687	2,347	643

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence fishing was once an important way of life for the Tlingit people who originally lived in the area. However, Excursion Inlet is not considered a subsistence based community by more recent standards. Information regarding subsistence participation is extremely limited. No data are available for household participation in subsistence activities. The only recorded data for salmon harvests comes from 2000 when residents reported harvesting 20 sockeye salmon on two subsistence salmon permits. Between 2003 and 2007, two residents held Subsistence Halibut Registration Certificates (SHARC), although no halibut was harvested in those years. No data are available regarding marine mammal harvests. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 12. Subsistence Participation by Household and Species, Excursion Inlet: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lb)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Excursion Inlet: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	2	2	n/a	106	n/a	n/a	20	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Excursion Inlet: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	2	n/a	n/a
2004	2	n/a	n/a
2005	2	n/a	n/a
2006	2	n/a	n/a
2007	2	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Excursion Inlet: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

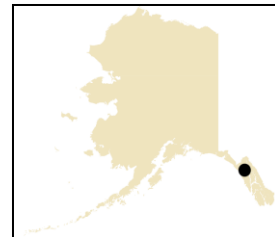
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Gustavus (*gus-TAY-vuhs*)



People and Place

*Location*²⁷⁹

Gustavus lies on the north shore of Icy Strait at the mouth of the Salmon River at the base of the St. Elias Mountains, 48 air miles northwest of Juneau. City lands are surrounded on three sides by Glacier Bay National Park and Preserve, and on one side by the waters of Icy Strait to the south. Gustavus is located in the Hoonah-Angoon Census Area and the Juneau Recording District. The area encompasses 29.2 square miles of land and 10.0 square miles of water.

*Demographic Profile*²⁸⁰

In 2010, there were 442 residents in Gustavus, ranking it the 128th of 352 communities in Alaska in terms of population size. Overall, between 1990 and 2000, the population increased by 5.8% and between 2000 and 2009 there was an average annual growth rate of 0.08%, reflecting slow growth over the decade with small declines in some years (Table 1). In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that 350 seasonal workers or transients are also present in Gustavus, primarily between the months of May and September. They also indicated that Gustavus experiences an annual population between June and August, which is somewhat driven by employment in fishing sectors.

Very few changes were seen in the racial and ethnic composition of the population between 2000 and 2010. The majority of the population in both years was White. In 2010, the majority of Gustavus residents identified themselves as White (91.4%), compared to 89.3% in 2000; 4.3% identified themselves as of two or more races in 2010, compared to 4.4% in 2000; 2.7% identified themselves as American Indian and Alaska Native, compared to 4.2% in 2000; 1.6% identified themselves as Hispanic or Latino in 2010, compared to 1.4% in 2000; 0.2% identified themselves as of some other race in 2010, compared to 1.6%; 1.1% identified themselves as Asian in 2010, compared to 0.2% in 2000; 0.2% identified themselves as Native Hawaiian and Other Pacific Islander in 2010, compared to 0.2% in 2000; and 0.0% identified themselves as Black or African American in 2010, compared to 0.0% in 2000 (Figure 1).

²⁷⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

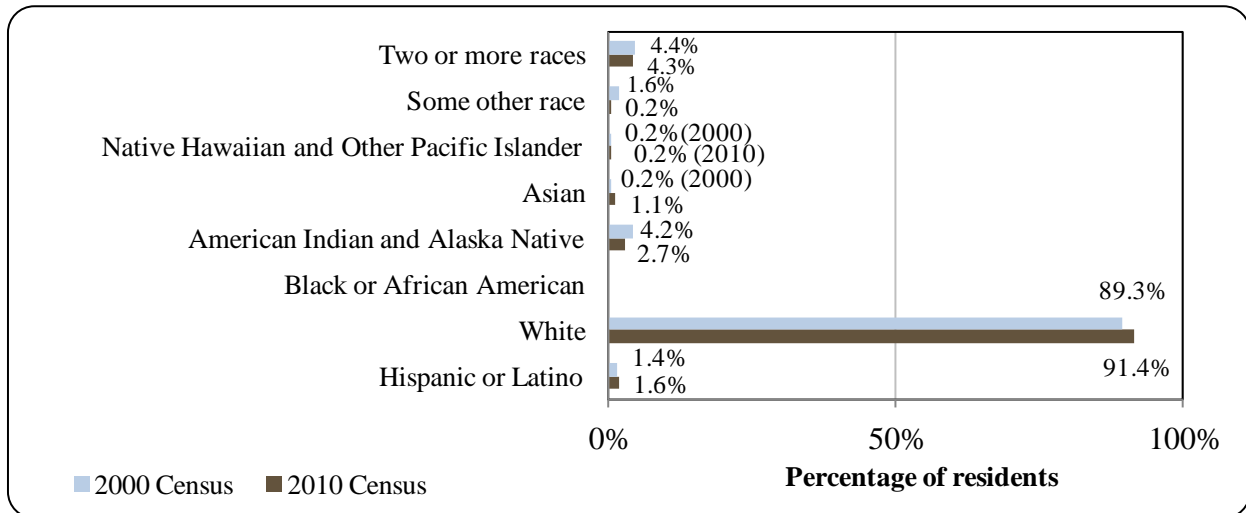
Table 1. Population in Gustavus from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	258	-
2000	429	-
2001	-	416
2002	-	420
2003	-	435
2004	-	449
2005	-	458
2006	-	439
2007	-	439
2008	-	446
2009	-	451
2010	442	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

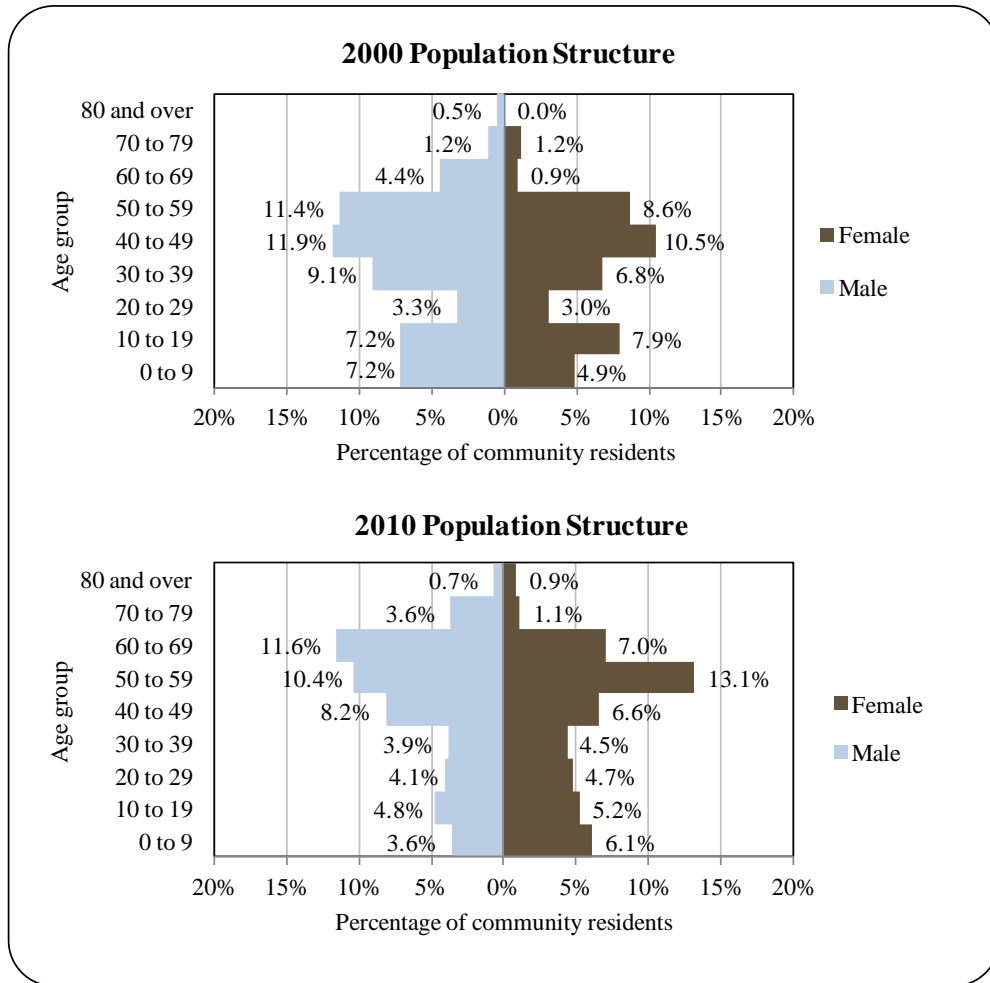
² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Gustavus: 2000-2010 (U.S. Census).



The number of households in Gustavus increased steadily with the increase in population, from 101 occupied housing units in 1990 to 199 in 2000, and 212 in 2010. Between 1990 and 2000, the average number of persons per household increased from 2.5 to 2.89, and then declined to 2.08 by 2010. Of the 488 total housing units surveyed for the 2010 U.S. Census, 36.7% were owner-occupied, 6.8% were rented, and 56.6% were vacant. Of 276 vacant housing units, 194 were vacant due to seasonal use. Between 1990 and 2000, no Gustavus residents were reported to be living in group quarters.

Figure 2. Population Age Structure in Gustavus Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup in Gustavus was 50.6% male and 49.3% female, similar to the balance of the state population as a whole (52% male, 48% female). That year, the median age was estimated to be 49.1 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, a smaller percentage of Gustavus residents were under the age of 20 (19.7%) compared to 27.3% in 2000, and a higher percentage was age 60 or older (24.9%) compared to 8.2% in 2000. The overall population structure of Gustavus in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²⁸¹ estimated that 94.4% of Gustavus residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, 2.6% had less than a 9th grade education, compared to an estimated 3.5% of

²⁸¹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Alaskan residents overall; an estimated 3.1% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 14.1% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 3.8% held an Associate's degree, compared to an estimated 8% of Alaskan residents overall; 28.2% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and 17.9% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

According to local legend, the ancestral home of the Hoonah (Huna) people was in Glacier Bay, and was destroyed by advancing glaciers. Historical accounts suggest that Tlingit people of the Huna Kaawu^{282,283} occupied the northern portion of Chichigof Island and the mainland shore of Cross Sound and Icy Strait.²⁸⁴ Oral traditions tell of times when the glaciers extended out of Glacier Bay as far as Point Adolphus, and people traveled under the ice back and forth in Icy Strait.²⁸⁵ When Captain George Vancouver visited Icy Strait in 1794, the Grand Pacific Glacier completely covered the entrance to Glacier Bay. By 1916, the glacier had retreated 65 miles from the entrance to the Bay.²⁸⁶

Tlingit oral history also tells of a village, known as “Sand Mountain Town,” that was located in Bartlett Cove before the Little Ice Age, 4,500 years ago. Just west of the City of Gustavus, the Woosh-Keetan Tlingit inhabited a clan house at Point Gustavus (“Clay Point”) until 1922. Many fish camps and summer camps were also located in the Gustavus area, between Bartlett cove and Excursion Ridge. American homesteaders first arrived in 1913. Originally, three couples settled there, and the population fluctuated between 2 and 30 people over the following three decades. A timber mill was built by the Parker family, producing between 20 and 60 thousand board feet per year during the 1930s. The family also staked a gold claim in Glacier Bay at Ptarmigan Creek and began exploration there. Early homesteaders also lived from subsistence farming, cattle ranching, trapping, and hunting.²⁸⁷

Glacier Bay National Monument was established by President Calvin Coolidge in 1925. Homesteaders appealed to keep their land, and the Gustavus area was excluded from the Monument.²⁸⁸ However, in 1939, the area of the Monument was increased from 1,820 square

²⁸² ‘Kaawu’ is a locally distinct terminology equating to the term ‘Kwaan’ used throughout the Tlingit Nation. (Source: Langdon, Steve J (2006). *Traditional Knowledge and Harvesting of Salmon by Huna and Hinyaa Tlingit: Final Report*. U.S. Fish and Wildlife Service, Fisheries Information Service Project 02-104. Retrieved October 10, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/02-104final.pdf>.)

²⁸³ ‘Kwaan’ is a Tlingit socio-geographical term meaning “inhabitants of,” literally a contraction of the Tlingit verb “to dwell.” It is most commonly used to refer to a geographic region consisting of those areas controlled by clans or house groups residing in a single winter village or several closely situated winter villages (Source: Thornton, T. 1997). *Know Your Place: The Organization of Tlingit Geographic Knowledge*. *Ethnology*, Vol. 36, No. 4.)

²⁸⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁸⁵ Langdon, S. J. 2006. *Traditional Knowledge and Harvesting of Salmon by Huna and Hinyaa Tlingit: Final Report*. U.S. Fish and Wildlife Service, Fisheries Information Service Project 02-104. Retrieved October 10, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/02-104final.pdf>.

²⁸⁶ Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan 2005: Protecting and Planning Our Future*. Retrieved June 15, 2012 from <http://cms.gustavus-ak.gov/services/planning/strategic>.

²⁸⁷ Ibid.

²⁸⁸ See footnote 284.

miles to 3,850, swallowing Gustavus, and many homesteaders moved away. New life was breathed into the community after the U.S. Army constructed a runway at Gustavus during World War II. Largely due to the presence of the Gustavus airfield, the National Park Service made nearby Bartlett Cove the headquarters of Glacier Bay National Monument in 1952. In 1955, President Eisenhower signed a proclamation that reopened 8,210 acres to homesteading. By 1958, the Gustavus School had reopened with 8 students.²⁸⁹ Glacier Bay National Monument became a National Park in 1980 with the passage of the Alaska National Interest Lands Conservation Act (ANILCA). The City of Gustavus was incorporated on April 1, 2004.²⁹⁰

In addition to its permanent residents, many Juneau residents have seasonal-use homes in Gustavus.²⁹¹ The community is known as the “Gateway to Glacier Bay National Park and Preserve,”²⁹² and offers many tourism amenities and recreation opportunities, such as sportfishing and hunting, kayak tour companies, whale watching, lodges, and a golf course. Many local residents choose to live in Gustavus because of the unique lifestyle it affords, including the natural beauty, and opportunity to live a subsistence lifestyle. As one report of the community indicates, many residents “choose Gustavus for its remoteness and simplicity while others would prefer to bring more of the modern world in.”²⁹³

Until 1998, Gustavus was located on federal land, within the boundaries of Glacier Bay National Park and Preserve. The Glacier Bay National Park Boundary Adjustment Act of 1998 provided for the exchange of federal and state lands, and allowed Gustavus to seek city status.²⁹⁴ Gustavus was incorporated as a 2nd Class City in 2004.²⁹⁵ Some National Park lands are still located within City Limits, and Gustavus receives “Payment In Lieu of Taxes” money from the federal government in exchange for its control of this land.²⁹⁶ Gustavus was named after Point Gustavus, located just west of the City.²⁹⁷

Natural Resources and Environment

Gustavus is located in a maritime climate zone characterized by cool summers and mild winters. Summer temperatures range from 52 to 63 °F and winter temperatures from 26 to 39 °F. Most of the City is located on the “Gustavus Flats,” a flat area formed by the outwash from the glacier.²⁹⁸ The Gustavus flats continue to grow due to isostatic rebound of the land after the retreat of the glaciers. The eastern portion of the City boundary climbs up Excursion Ridge, an area that was not carved by the glacier and as a result has thicker soil, old-growth hemlock-spruce forest, and muskeg ecosystems. To the west, the Bartlett Cove area was scraped clean by glaciers, and the land is in early stages of succession. Spruce forest, alder brush, and meadows

²⁸⁹ See footnote 286.

²⁹⁰ See footnote 284.

²⁹¹ Ibid.

²⁹² National Park Service (2012). *Operating Hours & Seasons and Gustavus*. Retrieved October 26, 2012 from <http://www.nps.gov/glba/planyourvisit/hours.htm>.

²⁹³ See footnote 286.

²⁹⁴ H.R. 3903 (1998). *Glacier Bay National Park Boundary Adjustment Act of 1998*. Retrieved October 25, 2012 from <http://thomas.loc.gov/cgi-bin/query/z?c105:H.R.+3903:>.

²⁹⁵ See footnote 284.

²⁹⁶ See footnote 286.

²⁹⁷ See footnote 284.

²⁹⁸ Ibid.

are characteristic of this area, and some hemlock has begun to fill breaks in the spruce forest.²⁹⁹ Inside Glacier Bay, the landscape is characterized by steep U-shaped, glacier-carved valleys. The Fairweather Mountain Range rises up steeply in the background.³⁰⁰

Gustavus is located at the southern entrance to Glacier Bay National Park and Preserve, which encompasses approximately 3,225,284 acres of mountains, ice fields, glaciers, and marine waters, including over 2.6 million acres of designated wilderness area. Glacier Bay shifted from National Monument status to a National Park and Preserve in 1980 with passage of ANILCA. The Park and Preserve begins at Gustavus and stretches north and west through the Fairweather and Saint Elias Mountain Ranges as far as Yakutat and Dry Bay. The glacier extended all the way to the mouth of Glacier Bay in 1794, when Captain George Vancouver explored the region. Today, the Bay provides a laboratory for scientists to study the way the landscape and animal and plant communities return to areas of the land and sea so recently covered by glaciers. A diversity of land and marine mammals, birds and fish are present in the Park and Preserve, including humpback, gray, and minke whales, orca whales, Dall's porpoise, harbor porpoise, Steller sea lions, harbor seals, sea otters, moose, bear, wolves, coyotes, mountain goats, smaller furbearers, 240 species of birds, and almost 200 species of fish.³⁰¹

Other protected areas near Gustavus include the West Chichigof-Yakobi Wilderness and the Pleasant/Lemesurier/Inian Islands Wilderness. In addition, a large portion the Chichigof Roadless Area, which runs north-south through the central portion of Chichigof Island, is managed under land-use designation II (LUD II), which would be “permanently managed in a roadless state to retain their wildland characteristics”.³⁰² The West Chichigof-Yakobi Wilderness Area was also designated in 1980 under the ANILCA. The Wilderness Area encompasses 265,286 acres of western Chichigof Island and Yakobi Island. The West Chichigof-Yakobi Wilderness is characterized by intricate bays, lagoons, estuaries, muskeg meadows, and natural hot springs.³⁰³ Southwest of Gustavus, a group of islands in Cross Sound make up the Pleasant/Lemesurier/Inian Islands Wilderness. This Wilderness Area, totaling 23,151 acres, was designated in 1990.³⁰⁴

Natural hazards in Gustavus include high risk of severe weather – including wind and heavy precipitation – flooding, erosion, landslides, avalanche, earthquake, and drought, as well as medium risk from wildfire and tsunami and seiche events, and low risk of impacts from volcanic activity.³⁰⁵ According to the Alaska Department of Environmental Conservation, there

²⁹⁹ Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan 2005: Protecting and Planning Our Future*. Retrieved June 15, 2012 from <http://cms.gustavus-ak.gov/services/planning/strategic>.

³⁰⁰ National Park Service (2012). *Glacier Bay National Park & Preserve: Natural History of Glacier Bay*. Retrieved October 30, 2012 from <http://www.nps.gov/glba/naturescience/natural-history-of-glacier-bay.htm>.

³⁰¹ National Park Service (2011). *Glacier Bay National Park & Preserve*. Retrieved March 16, 2012 from <http://www.nps.gov/glba/>.

³⁰² U.S. Forest Service (2003). *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume I: Final SEIS Appendix A, B, D, E*. Retrieved April 25, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_I.pdf.

³⁰³ U.S. Forest Service (n.d.). *West Chichigof- Yakobi Wilderness*. Retrieved June 28, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/chic.pdf.

³⁰⁴ U.S. Forest Service (n.d.). *Pleasant/Lemesurier/Inian Islands Wilderness*. Retrieved June 28, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/pleasant.pdf.

³⁰⁵ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

are no notable active environmental cleanup sites located in Gustavus as of October 2012.³⁰⁶

Current Economy³⁰⁷

In the 2011 AFSC survey, community leaders reported that important economic drivers in Gustavus include fishing, ecotourism, sport hunting and fishing, and some logging and timber milling. The local economy is highly seasonal, and the population of the community almost doubles in summer months. Park headquarters and a Visitor Information Center for Glacier Bay National Park are located in Bartlett Cove, 10 miles northwest of Gustavus. The community of Gustavus is known as a “Gateway to Glacier Bay National Park.”³⁰⁸ In addition to companies offering Glacier Bay tours, a number of sport fish charter, moose hunting, whale watching and kayaking companies cater to summer tourists, along with several lodges and bed and breakfasts. The City also has a 9-hole golf course. Other employment opportunities are available from the National Park Service, school, airport, and several other small businesses. A number of Gustavus residents also participate in commercial fishing, and subsistence harvest is an important part of the local lifestyle.³⁰⁹

Based on household surveys conducted for the 2006-2010 ACS,³¹⁰ in 2010, the per capita income in Gustavus was estimated to be \$34,128 and the median household income was estimated to be \$50,750. These numbers represent increase from the per capita and median household incomes reported in the year 2000 (\$21,089 and \$34,766, respectively). The increase remains after inflation is taken into account by converting the 2000 values to 2010 dollars,³¹¹ revealing a real per capita income in 2000 of \$27,732 and a real median household income of \$45,717. In 2010, Gustavus ranked 37th of 305 Alaskan communities with per capita income data that year, and 127th in median household income, out of 299 Alaskan communities with household income data.

However, Gustavus’ small population size may have prevented the ACS from accurately portraying economic conditions.³¹² An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Gustavus in 2010 is

³⁰⁶ Alaska Dept. of Environmental Conservation (2011). *List of Contaminated Site Summaries By Region*. Retrieved October 12, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³⁰⁷ Unless otherwise noted, all monetary data are reported in nominal values.

³⁰⁸ National Park Service (2012). *Operating Hours & Seasons and Gustavus*. Retrieved October 26, 2012 from <http://www.nps.gov/glba/planyourvisit/hours.htm>.

³⁰⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹⁰ U.S. Census Bureau (n.d.). *Profile of selected social and economic characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³¹¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³¹² While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

\$6,463.^{313,314} This estimate is lower than the per capita income reported by the 2000 Decennial Census, suggesting that caution is warranted when citing an increase in per capita income between 2000 and 2010 based on 2006-2010 ACS estimates. This lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as “distressed” by the Denali Commission in 2011,³¹⁵ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should also be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a similar percentage of Gustavus’ population (65.8%) was estimated to be in the civilian labor force compared to the civilian labor force statewide (68.8%). In the same year, 5.7% of Gustavus residents were estimated to be living below the poverty line, under the statewide rate of 9.5%, and the local unemployment rate was estimated to be 2%, under the statewide unemployment rate of 5.9%. An additional estimate of unemployment based on the ALARI database suggests a slightly higher unemployment rate of 14.5% in 2010, just over the ALARI statewide unemployment rate estimate of 11.5%.³¹⁶

Also based on the 2006-2010 ACS, just over half of Gustavus’ workforce was estimated to be employed in the private sector (53.2%), along with 29% in the public sector, 17.5% estimated to be self-employed, and 0.4% as unpaid family workers. Of the 252 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in arts, entertainment, recreation, accommodation, and food service industries (32.9%), along with 14.3% estimated to be employed in educational services, health care, and social assistance, 12.3% in retail trade, 11.9% in transportation, warehousing, and utilities, 8.7% in public administration, 8.3% in finance and insurance, real estate, rental, and leasing, and 7.1% in construction industries (Figure 3). The most notable shifts in employment by industry between 2000 and 2010 were a more than doubling of employment in retail trade and more than six times the employment in finance and insurance, real estate, rental, and leasing industries. Declines were observed in manufacturing, construction, and ‘other services’ (not including public administration). In 2010, 2.4% of the Gustavus workforce was also estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries. It is also important to note that the number of individuals employed in the fishing industry is likely underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

When looking at employment from the perspective of occupation, there were shifts between 2000 and 2010 toward greater employment in management and professional occupations (36% increase) and natural resource, construction, and maintenance occupations (40.2% increase), as well as a 52.7% decrease in the percentage of the workforce employed in sales and office occupations (Figure 4).

³¹³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³¹⁴ See footnote 310.

³¹⁵ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

³¹⁶ See footnote 313.

Figure 3. Local Employment by Industry in 2000-2010, Gustavus (U.S. Census).

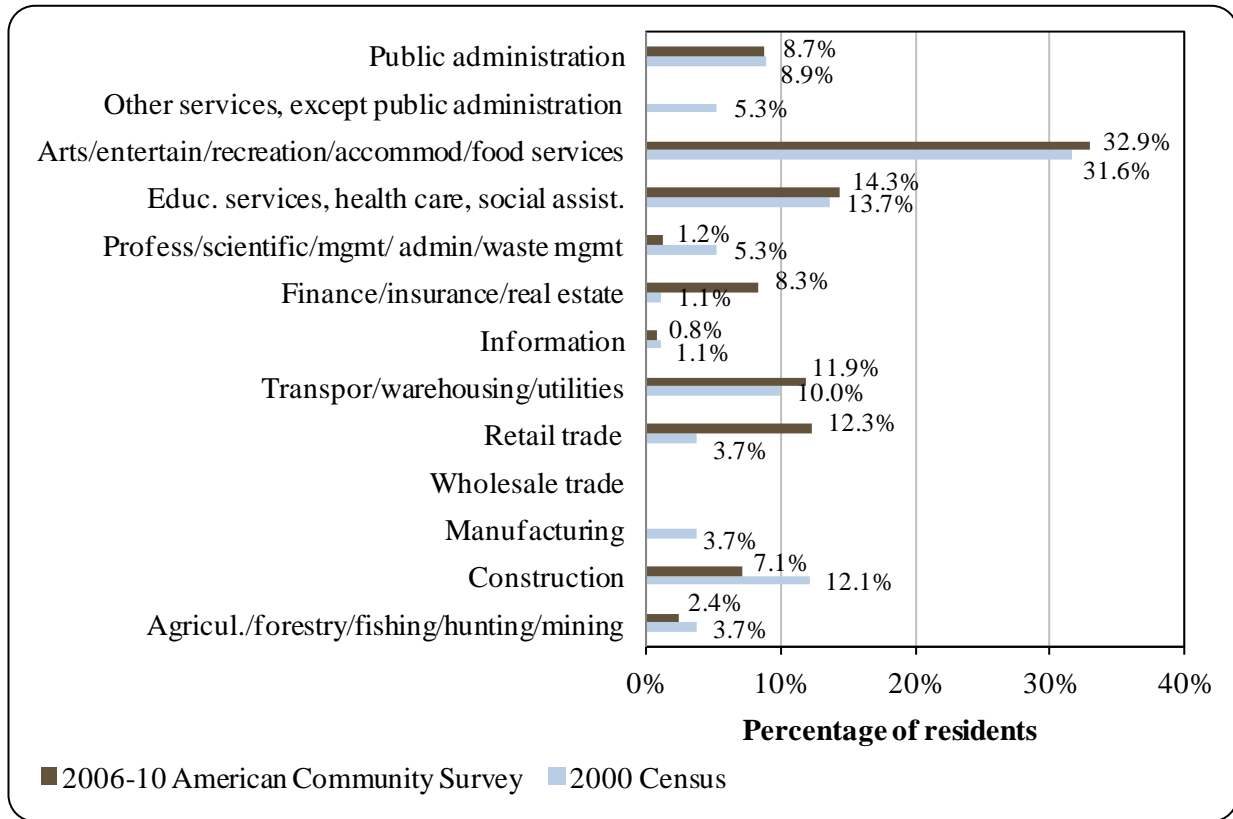
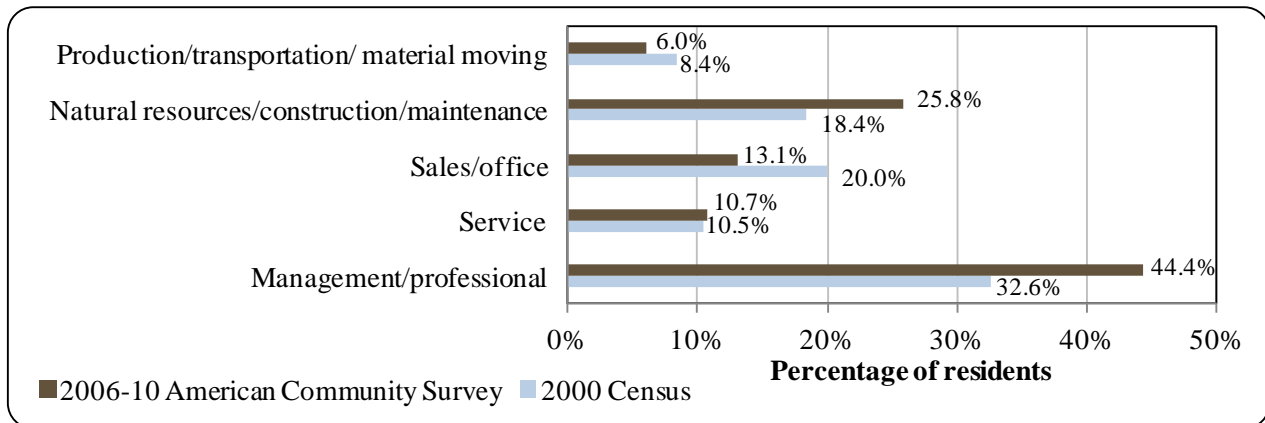


Figure 4. Local Employment by Occupation in 2000-2010, Gustavus (U.S. Census).



ALARI employment data conflict somewhat with 2006-2010 ACS estimates, showing a greater percentage of the workforce employed in trade, transportation, and utilities and government service industries. According to the ALARI database, there were 136 employed residents in Gustavus in 2010, of which 29.4% were employed in trade, transportation industries, 23.5% in local government, 11.8% in leisure and hospitality, 10.3% in construction, 8.8% in state government, 4.4% in professional and business services, 3.7% in education and health services, 2.9% in natural resources and mining, 2.2% in information, 1.5% in financial activities,

and 1.5% in other industries.³¹⁷ It is not surprising that many local residents are employed in the tourism industry given that in recent years some 400,000 tourists visit Glacier Bay annually, the great majority on cruise ships that often accommodate more than 2,000 passengers.³¹⁸ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Governance

Gustavus was incorporated in 2004 as a 2nd Class City. It has a manager, or “Strong Mayor”, form of government, with a seven-person city council including the Mayor, a five-person school board, and several municipal employees. The City is not located in an organized borough. Gustavus was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village. However, many Native residents of the area are shareholders in the regional Native corporation for Southeast Alaska, Sealaska Corporation.³¹⁹

Reporting of municipal revenue began in the last 3 months of the 2004 fiscal year, following the incorporation of the City of Gustavus. Beginning in 2005, total municipal revenues reported in Table 2 below reflect the full fiscal year. The City collects a 3% sales tax and a 4% bed tax, but no property tax is collected. The City also levies a \$10 Fishbox tax,³²⁰ which applies to “packaged fish and/or seafood caught or taken and retained by fish charter customers as part of the fish charter.”³²¹ Following incorporation of the City in 2004, annual municipal revenues followed an increasing trend through the end of the decade. In addition to local tax revenues, locally-generated revenue in Gustavus between 2004 and 2010 came from sources including building and land leases, library income, gaming income, fundraising, interest income, and from the Disposal and Recycling Center and Community Chest. The Disposal and Recycling Center accepts recyclables and also deposits items in a landfill for a fee. The Community Chest is a local second-hand store. Proceeds from the volunteer-staffed store benefit the Disposal and Recycling Center.³²²

Outside revenue sources during the 2005-2010 period included shared funds from state and federal sources, as well as grants. Federal shared funds came from the Payment in Lieu of Taxes program, and state funds came from the Community Revenue Sharing program in 2009 and 2010, as well as fish tax refunds (see the *Fisheries-Related Revenue* section for details). It is important to note that, before Gustavus was incorporated, the community received small State Revenue Sharing contributions, averaging approximately \$3,700 annually between 2000 and 2004. A number of fisheries-related grants were received by Gustavus in the second half of the

³¹⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³¹⁸ Mackovjak, James (2010). *Navigating Troubled Waters: A History of Commercial Fishing in Glacier Bay, Alaska*. U.S. Department of the Interior, National Park Service, Glacier Bay National Park and Reserve.

³¹⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³²⁰ Ibid.

³²¹ City of Gustavus (2008). *A Resolution by the Gustavus City Council Creating a Special Committee Called The Fish Box Tax Implementation Committee*. Retrieved October 26, 2012 from <http://cms.gustavus-ak.gov/government/resolutions/2008/2008-07-resolution-special-committee-for-fish-box.pdf/view>.

³²² City of Gustavus (2007). *Disposal & Recycling Center and Community Chest*. Retrieved September 11, 2013 from <http://cms.gustavus-ak.gov/services/DRC>.

decade. These included \$220,000 in 2006 from the U.S. Economic Development Administration for a ramp at the barge landing site. Also that year, the Alaska Department of Commerce, Community and Economic Development (DCCED)'s Division of Community and Regional Affairs awarded \$150,000 for planning and design of a dock and boat launch. In 2008, the Denali Commission granted a total of \$95,200 and the Alaska Department of Transportation and Public Facilities (DOT&PF) provided \$4,800 for design of a small boat float. In 2009, Gustavus received \$812,500 from the Denali Commission for a transient vessel mooring facility, and in 2010, the DOT&PF provided an additional \$2 million toward public docks and floats.

The closest offices of the Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources (DNR), National Marine Fisheries Service (NMFS), Alaska Department of Commerce, Community, and Economic Development, and U.S. Bureau of Citizenship and Immigration Services are all located in Juneau. In addition, the National Park Service maintains Glacier Bay National Park headquarters and a Visitor Information Station for boaters and campers in Bartlett Cove, 10 miles northwest of Gustavus.³²³

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Gustavus from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	\$50,024*	n/a	n/a	n/a
2005	\$286,059	\$86,965	n/a	n/a
2006	\$688,077	\$241,402	n/a	\$370,000
2007	\$970,966	\$212,116	n/a	n/a
2008	\$1,211,784	\$251,591	n/a	\$100,000
2009	\$553,146	\$223,260	\$118,854	\$812,500
2010	\$885,211	\$198,286	\$118,618	\$2,000,000

Note: * In 2004, the reported revenue reflects the last three months of the fiscal year only.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

³²³ National Park Service (2012). *Operating Hours & Seasons*. Retrieved October 26, 2012 from <http://www.nps.gov/glba/planyourvisit/hours.htm>.

Infrastructure

Connectivity and Transportation

Gustavus is accessible by air or water. The state-owned airport has two asphalt runways, one of which is 6,271 feet long and 150 feet wide, and the other which is 3,146 feet long and 60 feet wide.³²⁴ Between early June and late August, Alaska Airlines provides daily jet service to Gustavus,³²⁵ and smaller air taxis and charter flights are available year-round. In addition, float planes land at Bartlett Cove, 10 miles northwest of Gustavus by road.³²⁶ As of June 2012, roundtrip airfare on Alaska Airlines from Anchorage to Juneau was \$399.³²⁷ The lowest cost roundtrip ticket on Alaska Airlines in summer 2013 between Juneau and Gustavus was \$147,³²⁸ and as of November 2012, a roundtrip flight on a smaller air carrier between Juneau and Gustavus was \$178.³²⁹

In addition to air travel, Gustavus is accessible by private boat or ferry. As of November, 2010, the Alaska Marine Highway began providing bi-weekly summer service and weekly winter service to Gustavus.^{330,331,332} Small boats, including smaller cruise ships, often dock in Gustavus in the summer.³³³ Except for the largest cruise ships, a majority of tourists pass through the City of Gustavus on their way to tours of Glacier Bay Park and Preserve, giving Gustavus the title, “Gateway to Glacier Bay National Park.”³³⁴ Freight is primarily delivered by air or landing craft.³³⁵

Facilities

Half of the year-round homes in Gustavus are fully plumbed with individual water wells and private septic tanks. A community well source is available to provide water for remaining households. Outhouses are used by these remaining homes. Some concerns have been raised about water quality in Gustavus, given shallow wells and the presence of individual septic systems in the community. The school purchases water from the National Park Service. The City operates a landfill but does not provide refuse collection services; residents must haul their own garbage. Electricity in Gustavus is provided by a diesel powerhouse operated by the Gustavus

³²⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³²⁵ Personal communication, Alaska Airlines representative, October 30, 2012.

³²⁶ National Park Service (2012). *Glacier Bay National Park & Preserve: Directions*. Retrieved October 29, 2012 from <http://www.nps.gov/glba/planyourvisit/directions.htm>.

³²⁷ Airfare calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).

³²⁸ See footnote 325.

³²⁹ Airfare calculated using lowest fare from <http://www.wingsofalaska.com/>. (Retrieved October 30, 2012).

³³⁰ Gustavus.com (2012). *Getting to & Around Gustavus, Alaska*. Retrieved October 29, 2012 from <http://www.gustavus.com/gethere/index.html>.

³³¹ National Park Service (2012). *Glacier Bay National Park & Preserve: Ride the Ferry to Gustavus*. Retrieved October 29, 2012 from <http://www.nps.gov/glba/planyourvisit/ak-state-ferry-to-gustavus.htm>.

³³² State of Alaska (2011). *Alaska Marine Highway System*. Retrieved October 29, 2012 from <http://www.dot.state.ak.us/amhs/index.shtml>.

³³³ See footnote 326.

³³⁴ Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan 2005: Protecting and Planning Our Future*. Retrieved June 15, 2012 from <http://cms.gustavus-ak.gov/services/planning/strategic>.

³³⁵ See footnote 326.

Electric Company.³³⁶ According to the 2011 AFSC survey, community leaders indicated that improvements to the diesel powerhouse have been completed in the last 10 years, as well as the addition of a hydroelectric energy source. Construction of the Falls Creek Hydroelectric facility at Falls Creek was completed in 2009. The facility generates 800 kW of electricity, and is connected via a 5-mi long buried transmission cable to the existing diesel powerhouse.³³⁷

Police services are provided by state troopers stationed in Juneau. Fire and rescue services are provided by Gustavus Emergency Response and the Glacier Bay National Park Volunteer Fire Department. Additional community infrastructure includes a Community Building and two libraries, one public and one located at the local school. Telephone and internet service are available in Gustavus, but no cable providers offers local service.³³⁸

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that about 300 feet of dock space is available for transient vessel moorage (150 feet on either side of the float). Larger vessels of up to 400 feet in length can also access moorage at the Alaska Ferry dock. Community leaders reported that Gustavus has capacity to handle rescue vessels (i.e. Coast Guard), ferries, and fuel barges. The broad mudflats of the Salmon River are also used as an unofficial ‘boat harbor’. Skiffs can enter the River at high tide on tides of at least +8 feet. Larger vessels can enter the River during high tide, but must anchor offshore or tie up at the Gustavus dock, the National Park Service dock in Bartlett Cove, or in Hoonah.³³⁹

In the 2005 Gustavus Strategic Plan, the Gustavus dock was identified as “the lifeline of the community.” The dock was originally constructed in 1962, and although various improvements and repairs have been carried out through the years, but by the mid-2000s the dock was in poor condition.³⁴⁰ A number of grants have been received from state and federal funding sources for upgrades to public docks, floats, and barge landing areas in the last 5 years,³⁴¹ and in the 2011 AFSC survey, community leaders reported that construction of a breakwater, new dock space, and a barge landing area was expected to be completed later that year.

Community leaders also reported in the 2011 AFSC survey that a number of fisheries-related businesses and services are present in Gustavus. These include boat repair services (electrical, welding, and mechanical services), sale of bait and tackle for sportfishing and sale of boat fuel, a small cold storage facility, and a processing facility geared toward sport catch, as well as a number of fishing lodges. For fisheries-related businesses and services not available in Gustavus, community leaders indicated that residents travel to Juneau, Hoonah, or Excursion Inlet.

³³⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³³⁷ Gustavus Electric Company (n.d.). *Falls Creek Hydroelectric Project*. Retrieved October 26, 2012 from http://www.gustavuselectric.com/index.php?option=com_content&task=view&id=13&Itemid=26.

³³⁸ See footnote 336.

³³⁹ See footnote 334.

³⁴⁰ Ibid.

³⁴¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Medical Services

Local residents access medical services at the Gustavus Community Clinic, a qualified Emergency Care Center. The Clinic is owned and operated by the Gustavus Community Association. Emergency services have coastal, air, and floatplane access, as well as limited highway access. Emergency service is provided by volunteers, and alternative health care is provided by Gustavus Emergency Response.³⁴² The nearest hospital is located in Juneau.

Educational Opportunities

There is one school in Gustavus, which offers Kindergarten through 12th grade. As of 2011, the Gustavus School had 57 students and 5 teachers. Gustavus is located in the Chatham School District.³⁴³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Hoonah Tlingit historically used Glacier Bay and the Gustavus area for fish camps, and subsistence harvest of fisheries resources was a foundation of life in the region.^{344,345} Salmon were perhaps the most important resource for the Tlingit. Traditionally, fish trap, gaffs, and spears were used to catch salmon. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., ‘gumboot’ chitons), and sea plants (e.g., seaweed, beach asparagus and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas, and egg harvesting sites.^{346,347}

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.³⁴⁸ Bartlett Cove was the site of a salmon saltery in the early 1880s, and by 1889 a salmon cannery began operations at the site, owned by Bartlett Bay Packing Company. The cannery was purchased in 1897 by Icy Strait Packing Company, owned by a pioneering canneryman named Peter Buschmann. However, planned improvements to the cannery facility were abandoned in 1901, in part because of the remoteness of the location and difficulties with ice, and also because Buschmann was nearly bankrupt. Icy Strait Packing Company was sold to Pacific Packing and

³⁴² See footnote 336.

³⁴³ Ibid.

³⁴⁴ Brock, M., P. Coiley-Kenner and the Sitka Tribe of Alaska. 2009. *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

³⁴⁵ Walter R., and T. H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.

³⁴⁶ Alaska Native Heritage Center (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

³⁴⁷ See footnote 344.

³⁴⁸ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

Navigation Company, which in turn went bankrupt in 1903.³⁴⁹ No large-scale processors have operated at Bartlett Cove or at Gustavus since that time; although smaller businesses offer processing services (see the *Processing Plants* section for details).

Today, Southeast Alaska salmon fisheries utilize purse seines, drift gillnets, trolls, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seines, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty. The Treaty was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.³⁵⁰

In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska. The U.S. and Canada signed the Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean in 1923, and since the Convention took effect in 1924, Pacific halibut fisheries have been managed by the International Pacific Halibut Commission.³⁵¹ Halibut fisheries are restricted to use of hook and line gear, although a limited number of halibut can be caught and retained as incidental catch in salmon troll fisheries and sablefish trap fisheries, as well as bycatch in a variety of fisheries using diverse gear types.^{352,353} Sablefish were first harvested in Southeast Alaska as bycatch in the halibut fishery.³⁵⁴ By the 1930s, several state-managed sablefish fisheries began in Southeast inside waters, including a fishery in Chatham Strait. Sablefish are harvested using longline or pot gear, and the state fisheries that take place in inside waters are managed independently of the federal fishery.³⁵⁵

In 1995, management of Alaskan halibut and sablefish fisheries shifted from limited entry to a system of Individual Fishing Quotas (IFQ). Motivations for the shift included overcapitalization, short seasons, and the derby-style fishery that led to loss of product quality and safety concerns. As a result of program implementation, the number of shareholders and total vessels participating in the halibut and sablefish fisheries declined substantially, and product quality has improved. This shift to catch shares has been controversial, raising concerns about equity of catch share allocation, reduced crew employment needs, and loss of quota from

³⁴⁹ Mackovjak, J. 2010. *Navigating Troubled Waters: A History of Commercial Fishing in Glacier Bay, Alaska*. U.S. Department of the Interior, National Park Service. Retrieved October 26, 2012 from <http://www.nps.gov/glba/historyculture/history-of-commercial-fishing-in-glacier-bay.htm>.

³⁵⁰ See footnote 348.

³⁵¹ International Pacific Halibut Commission (2006). *History*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/pamphlet/1IPHCHistoryPage.pdf>.

³⁵² International Pacific Halibut Commission (2012). *Pacific Halibut Fishery Regulations 2012*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

³⁵³ Williams, Greg (2010). "Halibut Bycatch limits in the 2010 Alaska groundfish fishery." *IPHC Report of Assessment and Research Activities*. Retrieved September 12, 2012 from <http://www.iphc.washington.edu/publications/rara/2010/2010.299.Halibutbycatchlimitsinthe2010Alaskagroundfishfishery.pdf>.

³⁵⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

³⁵⁵ Carroll, K., and K. Green. 2012. *The Southeast Alaska Northern Southeast Inside Sablefish Fishery Information Report, With Outlook for the 2011 Fishery*. Alaska Dept. of Fish and Game, Fishery Management Report No. 08-44. Retrieved September 11, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR12-28.pdf>.

coastal communities to outside investors.³⁵⁶

Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.³⁵⁷

Crab fisheries in Southeast Alaska target red, golden and blue king crab, Tanner crab, and Dungeness crab.³⁵⁸ Glacier Bay was an important center of early Dungeness crab harvests in Southeast Alaska. Commercial harvest of Dungeness crab began in Southeast Alaska in 1909, and the first processing facility was built in Petersburg in 1921. In 1924, a Dungeness crab cannery began operating in Hoonah, and a large portion of the crab harvested came from Glacier Bay.³⁵⁹ Larger-scale commercial crab fisheries did not begin in Southeast Alaska until the 1950s.³⁶⁰

A pot-gear fishery for spot shrimp (*Pandalus platyceros*) has grown in Southeast Alaska since the 1990s, and dive fisheries for sea cucumber and sea urchin also developed in recent decades.³⁶¹ The impact of an increasing sea otter population in Southeast Alaska on stocks of Dungeness crab, sea cucumber, and sea urchin has led to significant economic losses in these fisheries in recent years.³⁶²

When President Calvin Coolidge proclaimed Glacier Bay a National Monument in February, 1925, fisheries were of little interest to the ecologists and other scientists who hoped to see the glaciers and fjords protected.³⁶³ However, concern grew about the impact of commercial fisheries on the ability of the Park Service to preserve the Park as an ecological reserve. With the passage of the Wilderness Act of 1964 and ANILCA in 1980, the National Monument became a National Park and Preserve, including In 1983, the National Park Service (NPS) proposed a rule that would close waters in the wilderness designated areas (referred to here as ‘wilderness waters’) to all forms of commercial fishing, and prohibit trawling in all areas of the Glacier Bay National Park. Local fishermen were angered and dismayed by this proposal, and NPS officials eventually discarded this original proposal. In 1983-1984, NPS officials negotiated with representatives of the State of Alaska, as well as Park employees, commercial fishermen, and environmentalists, but no agreement was reached. In 1990, a regulation was proposed to prohibit commercial fishing in wilderness waters, and to allow commercial fishing in non-wilderness

³⁵⁶ Fina, M. (2011). “Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific.” *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

³⁵⁷ See footnote 354.

³⁵⁸ Ibid.

³⁵⁹ See footnote 349.

³⁶⁰ See footnote 354.

³⁶¹ Ibid.

³⁶² McDowell Group (2011). *Sea Otter Impacts on Commercial Fisheries in Southeast Alaska*. Prepared for Southeast Alaska Regional Dive Fisheries Association. Retrieved September 11, 2012 from <http://www.scribd.com/doc/74857876/MCDOWELL-GROUP-2011-Sea-Otter-Impacts-Report>.

³⁶³ Mackovjak, J. 2010. *Navigating Troubled Waters: A History of Commercial Fishing in Glacier Bay, Alaska*. U.S. Department of the Interior, National Park Service. Retrieved October 26, 2012 from <http://www.nps.gov/glba/historyculture/history-of-commercial-fishing-in-glacier-bay.htm>.

waters of the Park until December 31, 1997. This regulation was intended to provide enough time for fishermen to plan ahead for the change.³⁶⁴ The number of Dungeness crab permits held by Gustavus residents declined significantly after fishing ceased in Glacier Bay in 1997.³⁶⁵ In addition to closure of commercial fisheries, subsistence harvest of fish and wildlife is prohibited within the boundaries of Glacier Bay National Park and Preserve.^{366,367}

Gustavus is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is “Southeast Outside.” Gustavus is eligible to participate in the Community Quota Entity (CQE) program, but as of October 2012, no CQE non-profit had been established for Gustavus.³⁶⁸ Gustavus is not eligible to participate in the Community Development Quota program.

In a survey conducted by the AFSC in 2011, community leaders reported that Gustavus community members are actively engaged in fisheries management processes in Alaska through providing comments on management practices. When asked to describe challenges facing Gustavus’ fishing economy, community leaders noted limited moorage for larger vessels, lack of a fish processor or ice availability, and the challenge of establishing sustainable harvest levels for all species. When asked about past fisheries management decisions that have had the greatest impact on the community, community leaders pointed to the closure/restrictions of fishing in Glacier Bay. Community leaders also indicated that future decisions with the potential to impact Gustavus include management of commercial charter and sportfishing activity, and also emphasized the critical importance of maintaining access to subsistence, or ‘personal use’, fishing opportunities for Gustavus residents.

Processing Plants

Based on ADF&G’s 2010 Intent to Operate List, there was one shore-side processing plant operating in Gustavus. According to a survey of plant managers conducted by the AFSC in 2011, Pep’s Packing is a family-run fish processing and smoking facility in Gustavus that began operations in 1992. Pep’s is centrally located in the community and specializes in custom processing (mostly smoking) of halibut and Chinook salmon caught during fishing charter. Pep, the owner, prides herself in being a native Gustavite who provides employment to her townspeople.³⁶⁹

³⁶⁴ Catton, T. 1993. *Glacier Bay Administrative History*. Retrieved May 25, 2012 from: <http://www.gustavushistory.org/articles/booksnarticles.aspx>.

³⁶⁵ City of Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan*. Retrieved October 25, 2012 from <http://cms.gustavus-ak.gov/services/planning/strategic/current/2005SPComplete.pdf>.

³⁶⁶ U.S. Fish and Wildlife Service (2011). *Subsistence Management Regulations for the Harvest of Fish and Shellfish on Federal Public Lands and Waters in Alaska*. Retrieved October 29, 2012 from <http://alaska.fws.gov/asm/pdf/fishregs11/entire.pdf>.

³⁶⁷ U.S. Fish and Wildlife Service, Federal Subsistence Management Program (2010). *Maps: Wildlife Management Units and Fisheries Management Areas*. Retrieved October 31, 2012 from <http://alaska.fws.gov/asm/maps.cfm?maps=4>.

³⁶⁸ NOAA Fisheries, Alaska Regional Office (2012). *Name and Contact Information of Community Quota Entities*. Retrieved August 20, 2012 from <http://www.fakr.noaa.gov/ram/daily/cqenamescontacts.pdf>.

³⁶⁹ Black Rock Charters (n.d.). *Pep’s Packing and Fish Processing*. Retrieved August 22, 2012 from http://www.blackrockcharters.com/content/gustavus_alaska/peps_packing.asp

Fisheries-Related Revenue

Following its incorporation in 2004, the City began receiving fisheries-related revenue in 2006. Sources of fisheries-related revenues received between 2006 and 2010 included the Shared Fisheries Business Tax, harbor usage fees, the City Fishbox tax, and launch ramp fees. In 2010, known fisheries-related revenue totaled \$1,207,546. Information about selected fisheries-related revenue sources in Gustavus between 2000 and 2010 is presented in Table 3.³⁷⁰

Commercial Fishing

Between 2000 and 2010, Gustavus residents were engaged in commercial fishing as state and federal permit holders, quota share account holders, vessel owners, and crew license holders. According to the 2011 AFSC survey, community leaders indicated that salmon and halibut are two of the most important commercial fisheries for local fishermen, with emphasis on salmon troll and halibut longline fisheries. They reported that salmon trolling takes place almost all year, and the halibut season is generally March through November. In addition to these important fisheries, Gustavus residents also held permits in crab, groundfish fisheries (lingcod, sablefish, demersal shelf rockfish, and miscellaneous saltwater finfish), and ‘other shellfish’ fisheries (shrimp, sea cucumber, sea urchin, and geoduck) between 2000 and 2010 (Table 4).

The total number of state and federal permits held by Gustavus residents remained relatively stable between 2000 and 2010 (Table 4), as did the number of crew license holders. In contrast, the number of vessels that were primarily owned by Gustavus residents showed a decreasing trend over the period, from 50 in 2000 to 26 in 2010. The number of vessels homeported in Gustavus also decreased, from 43 in 2000 to 25 in 2010. In the 2011 AFSC survey, community leaders echoed this decrease, indicating there were fewer commercial fishing boats in Gustavus compared to five years earlier. The number of commercial vessels delivering landings in Gustavus varied widely, ranging from a high of 18 in 2000 to a low of 3 in 2003. While the number of shore-side processors operating in the community between 2000 and 2010 remained relatively stable (1 in all years except 2002, when 2 processors were present) (Table 5).

Of 65 Commercial Fisheries Entry Commission (CFEC) permits held by Gustavus permit holders in 2010, 34 (52.3%) were held in salmon fisheries, 11 (16.9%) in halibut fisheries, 11 (16.9%) in crab fisheries, 6 (9.2%) in shellfish fisheries, 2 (3.1%) in sablefish fisheries, and 1 (1.5%) in other groundfish fisheries. Permit numbers are presented in Table 4, and more details regarding permit types and trends are provided below.

Of 34 salmon CFEC permits held in 2010, a majority (21) were statewide troll permits, 11 were statewide power gurdy troll permits, 1 was for the Southeast drift gillnet, and 1 was held in the Yakutat set gillnet fishery. That year, 47 (50%) of these salmon permits were actively fished. The number of salmon permit holders and the total number of permits held increased slightly between 2000 and 2010, and the percentage of permits actively fished also stayed stable or increased slightly. Troll permits were held in all years during the period, while the Yakutat set gillnet permit was held from 2002 to 2010, and the Southeast drift gillnet permit was held from 2007 to 2010.

In 2010, all of the 11 halibut CFEC permits held by Gustavus residents were for the statewide longline fishery, using vessels under 60 feet in length. In 2000 and 2001, several

³⁷⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

halibut permits were also held in the statewide longline fishery using vessels greater than 60 feet in length. Both the number of permit holders and the total number of permits held increased in the first half of the 2000-2010 period, and then declined to close to 2000 levels by 2010. The percentage of halibut permits actively fished varied between 77% and 100%, with a slightly increasing trend over time.

Of the 11 crab CFEC permits held in 2010, 6 were held for Southeast Dungeness crab, 4 for Southeast Tanner crab, and 1 for Southeast brown king/Tanner crab. The Dungeness and king/Tanner permits were associated with pot gear, while the strictly Tanner crab permits were for ring net gear. The number of Dungeness crab permits decreased slightly, from eight in 2000 to six in 2010, while the number of Tanner crab permits decreased from seven to four. Other than 2010, the only years in which combined king/Tanner crab permits were held were 2000, 2008, and 2009. The number of permit holders and total crab permits held declined slightly over the period, and the percentage of crab permits that were actively fished was variable, with a low of 11% in 2007 and a high of 44% in 2008.

In 2000, five sablefish CFEC permits were held in Gustavus, including three in the statewide longline fishery using vessels over 60 feet in length, one in the statewide fishery (not including Southeast or Prince William Sound) using vessels under 60 feet in length, and one in the Northern Southeast longline fishery. The number of sablefish permits declined steadily to one by 2010, which was held in the statewide longline fishery (not including Southeast or Prince William Sound). The percentage of sablefish permits that were actively fished was high in all years, varying from 75% to 100%.

Like sablefish, the number of other groundfish permits decreased between 2000 and 2010, 11 in 2000 to 1 in 2010, and the number of groundfish permit holders decreased from five to one over this period. Groundfish permits held in 2000 included three demersal rockfish permits (one Southeast permit associated with longline gear for use on vessels under 60 feet in length, one Southeast permit for longline on vessels over 60 feet, and one statewide mechanical jig permit), two lingcod permits (one statewide longline and one statewide mechanical jig), and six ‘miscellaneous saltwater finfish’ permits (three statewide longline permits for use on vessels under 60 feet in length, two statewide longline for use on vessels over 60 feet, and one statewide mechanical jig). In 2010, the only groundfish permit was held in the statewide lingcod fishery, and was associated with dinglebar troll gear.

In 2010, Gustavus residents also held ‘other shellfish’ permits in the Southeast sea cucumber and geoduck dive fisheries and the Southeast pot gear shrimp fishery. The number of shrimp permits held increased from one between 2000 and 2007 to two from 2008-2010. One shrimp permit was actively fished from 2008 to 2010. The number of sea cucumber permits increased from two in 2000 to three between 2001 and 2010, and two of these permits were actively fished in each year during the period. One geoduck permit was held in 2000 and 2001 and from 2006 to 2010, but was not actively fished in any of these years. In addition to these fisheries, two permits were held in 2000 in the Southeast dive fishery for sea urchin, but were not actively fished that year. Overall, there was a slight increasing trend in shellfish permit holders, while the total number of shellfish permits remained even at six, after a slight decrease in the middle of the decade. CFEC permit numbers are presented in Table 4.

In addition to CFEC permit, Gustavus residents also held federal License Limitation Program (LLP) permits and Federal Fisheries Permits (FFP) between 2000 and 2010. In 2010, seven Gustavus residents held a total of 7 LLP permits in federal groundfish fisheries. Of these, two were actively fished that year (28%). The number of groundfish LLPs held remained very

stable over the decade. No crab LLPs were held in Gustavus between 2000 and 2010. Also in 2010, four Gustavus residents held a total of four FFPs, of which one was actively fished (25%). Information about federal fisheries permits is also presented in Table 4.

In the year 2000, 15 Gustavus residents held quota share accounts in the federal halibut catch share fishery. This number increased to a high of 20 in 2007, and then declined to 13 by 2010. Total quota shares rose from 519,800 in 2000 to a peak of 713,421 in 2004, and then declined to a low of 475,093 in 2009. The annual halibut individual fishing quota (IFQ) allotment increased by approximately 8% higher than 2000 levels by 2004, and then decreased to approximately 36% below 2000 levels in 2010. Sablefish catch share participation was more stable, with three quota share account holders in all years except 2005 and 2009, when two Gustavus residents held accounts. Total sablefish quota shares also remained stable, increasing slightly from 478,951 in 2000 to 499,356 in 2010. Sablefish IFQ allotment increased to 20% above 2000 levels in 2004 before decreasing to 16% below 2000 levels by 2010. No quota share accounts or quota shares were held by Gustavus residents in federal crab catch share fisheries between 2005 and 2010. Further information about federal catch share participation is presented in Tables 6 through 8.

Gustavus also had one shore-side processor throughout the decade and a second processor in 2002. The number of fish buyers present each year in Gustavus fluctuated between a high of five and low of one. The greatest volume of landings, for those years in which data can be reported, was delivered in 2006. That year, 95,918 net pounds were delivered for a total ex-vessel revenue of \$71,304. Information about local landings and revenue is considered confidential in six years during the period due to the small number of fish buyers present in Gustavus in those years. In 2010, when four fish buyers were present, 3,257 net pounds were delivered in Gustavus, for a total ex-vessel revenue of \$13,187. That year, Gustavus ranked 64th in landings and 62nd in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings that year. Further information about the commercial fishing sector in Gustavus is presented in Table 5.

At the species level, a majority of landings and ex-vessel revenue information in Gustavus is considered confidential due to the small number of participants in these fisheries. Salmon landings can be reported in 2006, 2007, and 2010, with the greatest landings volume reported in 2006 with 89,142 net pounds of salmon valued at \$46,651 in ex-vessel revenue (Table 9).

More information can be reported regarding landings delivered by Gustavus vessel owners, including all delivery locations. Landings of salmon and halibut can be reported for all years, while ‘other groundfish’ landings can be reported in eight years, and crab landings can be reported in 2000 only. On average between 2000 and 2010, Gustavus vessel owners landed 181,223 net pounds of salmon and 79,411 net pounds of halibut. These landings were valued, respectively, at \$273,576 and \$250,112 in ex-vessel revenue, on average. For those years in which information can be reported for ‘other groundfish’, an average of 4,756 net pounds was landed, with an average ex-vessel revenue of \$2,990. In 2000, 16,505 net pounds of crab were landed, with total ex-vessel revenue of \$39,124. Further information about landings and ex-vessel revenue generated by Gustavus vessel owners is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Gustavus: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	\$2,722	\$3,185	\$2,733	\$2,971	\$2,546
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$70,000	\$739,600	\$12,000	\$1,205,000
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
City fish box tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$18,000
Launch ramp fees ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$1,500
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$2,722</i>	<i>\$73,185</i>	<i>\$742,333</i>	<i>\$14,971</i>	<i>\$1,207,546</i>
<i>Total municipal revenue</i> ⁵	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$50,024*</i>	<i>\$286,059</i>	<i>\$688,077</i>	<i>\$970,966</i>	<i>\$1,211,784</i>	<i>\$553,146</i>	<i>\$885,211</i>

Note: n/a indicates that no data were reported for that year.

Note: * In 2004, the reported municipal revenue reflects the last three months of the fiscal year only, following City incorporation that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Gustavus: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	7	7	7	7	7	6	6	7	7	7	7
	Active permits	2	4	4	2	1	1	1	2	2	1	2
	% of permits fished	28%	57%	57%	28%	14%	16%	16%	28%	28%	14%	28%
	Total permit holders	7	7	7	7	7	6	6	7	7	7	7
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	4	4	4	2	2	2	2	4	4	4	4
	Fished permits	0	0	0	1	1	1	1	1	1	1	1
	% of permits fished	0%	0%	0%	50%	50%	50%	50%	25%	25%	25%	25%
	Total permit holders	3	3	3	2	2	2	2	4	4	4	4
Crab (CFEC) ²	Total permits	16	12	12	10	8	8	9	9	9	8	11
	Fished permits	4	4	5	2	3	3	2	1	4	2	3
	% of permits fished	25%	33%	42%	20%	38%	38%	22%	11%	44%	25%	27%
	Total permit holders	14	10	9	8	6	7	8	8	8	7	8
Other shellfish (CFEC) ²	Total permits	6	5	4	4	4	4	5	5	6	6	6
	Fished permits	2	2	1	0	2	2	2	2	2	3	2
	% of permits fished	33%	40%	25%	0%	50%	50%	40%	40%	33%	50%	33%
	Total permit holders	3	4	4	4	4	4	5	4	5	5	5
Halibut (CFEC) ²	Total permits	10	13	13	15	15	15	15	14	14	12	11
	Fished permits	8	10	12	13	14	15	12	12	12	10	10
	% of permits fished	80%	77%	92%	87%	93%	100%	80%	86%	86%	83%	91%
	Total permit holders	10	13	13	15	15	15	15	14	14	12	11
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Gustavus: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	5	4	4	4	4	4	4	4	4	2	2
	Fished permits	4	4	4	4	4	4	3	3	3	2	2
	% of permits fished	80%	100%	100%	100%	100%	100%	75%	75%	75%	100%	100%
	Total permit holders	4	3	3	3	3	3	3	3	3	2	2
Groundfish (CFEC) ²	Total permits	11	12	7	5	4	3	3	3	3	4	1
	Fished permits	1	1	1	0	0	0	0	0	0	1	1
	% of permits fished	9%	8%	14%	0%	0%	0%	0%	0%	0%	25%	100%
	Total permit holders	5	5	5	4	3	2	2	2	2	3	1
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	25	26	25	25	28	30	33	32	34	32	34
	Fished permits	11	12	10	10	14	11	16	15	15	16	17
	% of permits fished	44%	46%	40%	40%	50%	37%	48%	47%	44%	50%	50%
	Total permit holders	26	25	24	25	25	28	32	31	31	30	29
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>73</i>	<i>72</i>	<i>65</i>	<i>63</i>	<i>63</i>	<i>64</i>	<i>69</i>	<i>67</i>	<i>70</i>	<i>64</i>	<i>65</i>
	<i>Fished permits</i>	<i>30</i>	<i>33</i>	<i>33</i>	<i>29</i>	<i>37</i>	<i>35</i>	<i>35</i>	<i>33</i>	<i>36</i>	<i>34</i>	<i>35</i>
	<i>% of permits fished</i>	<i>41%</i>	<i>46%</i>	<i>51%</i>	<i>46%</i>	<i>59%</i>	<i>55%</i>	<i>51%</i>	<i>49%</i>	<i>51%</i>	<i>53%</i>	<i>54%</i>
	<i>Permit holders</i>	<i>39</i>	<i>36</i>	<i>36</i>	<i>37</i>	<i>38</i>	<i>40</i>	<i>44</i>	<i>42</i>	<i>41</i>	<i>39</i>	<i>39</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Gustavus: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Gustavus ²	Total Net Pounds Landed in Gustavus ^{2,5}	Total Ex-Vessel Value of Landings in Gustavus ^{2,5}
2000	17	4	1	50	43	18	73,168	\$216,362
2001	12	3	1	44	38	10	--	--
2002	18	4	2	39	32	4	17,313	\$36,202
2003	8	3	1	39	34	3	--	--
2004	20	3	1	40	34	9	--	--
2005	15	2	1	23	19	5	--	--
2006	19	5	1	29	19	11	95,918	\$71,304
2007	27	5	1	28	19	17	14,746	\$54,293
2008	18	3	1	27	20	11	--	--
2009	19	1	1	25	20	8	--	--
2010	20	4	1	26	25	15	3,257	\$13,187

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Total only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Gustavus: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	15	519,800	80,880
2001	19	690,244	111,868
2002	19	684,228	107,333
2003	17	663,989	103,021
2004	18	713,421	119,665
2005	19	642,353	105,116
2006	18	628,267	100,440
2007	20	642,048	91,504
2008	17	630,993	76,357
2009	15	475,093	44,258
2010	13	637,162	63,147

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Gustavus: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	3	478,951	50,948
2001	3	478,951	49,613
2002	3	478,951	49,590
2003	3	478,951	57,632
2004	3	478,951	61,025
2005	2	307,891	36,648
2006	3	478,951	57,113
2007	3	478,951	55,148
2008	3	478,951	51,010
2009	2	307,891	28,189
2010	3	499,356	44,583

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Gustavus: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Gustavus: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	89,142	6,574	--	--	3,257
<i>Total²</i>	--	--	--	--	--	--	89,142	6,574	--	--	3,257
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	\$46,651	\$20,515	--	--	\$13,187
<i>Total²</i>	--	--	--	--	--	--	\$46,651	\$20,515	--	--	\$13,187

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Gustavus Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	16,505	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	42,337	99,572	118,684	87,502	77,536	98,365	122,555	96,110	67,285	37,511	26,060
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	5,267	8,459	5,206	--	1,030	--	3,262	3,328	4,344	7,149	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	91,533	103,164	60,732	69,089	171,168	150,358	263,572	278,155	278,739	276,481	250,459
<i>Total²</i>	<i>155,642</i>	<i>211,195</i>	<i>184,622</i>	<i>156,591</i>	<i>249,734</i>	<i>248,723</i>	<i>389,389</i>	<i>377,593</i>	<i>350,368</i>	<i>321,141</i>	<i>276,519</i>
	<i>Ex-vessel Value (Nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$39,124	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$110,701	\$189,139	\$258,349	\$254,917	\$230,686	\$297,905	\$462,360	\$415,703	\$292,222	\$111,867	\$127,387
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$3,158	\$4,478	\$2,502	--	\$573	--	\$1,667	\$1,785	\$2,000	\$7,761	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$96,307	\$97,827	\$55,313	\$76,645	\$261,881	\$242,519	\$486,595	\$405,247	\$510,712	\$370,187	\$406,098
<i>Total²</i>	<i>\$249,290</i>	<i>\$291,444</i>	<i>\$316,164</i>	<i>\$331,562</i>	<i>\$493,140</i>	<i>\$540,424</i>	<i>\$950,622</i>	<i>\$822,735</i>	<i>\$804,934</i>	<i>\$489,815</i>	<i>\$533,485</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to the 2011 AFSC community survey, Gustavus community leaders reported that a majority of sportfishing activity takes place on charter boats and using private boats owned by both local residents and non-residents. They indicated that some of the most important species targeted by sport fishermen include Chinook and coho salmon, halibut, and crab. In addition, community leaders emphasized the importance of charter halibut and charter salmon fisheries, noting them as two of the most important local fisheries, along with commercial halibut and salmon fisheries. Community leaders also indicated that sport hunting and fishing is one of the most important local industries in Gustavus.

Between 2000 and 2010, the number of active sport fish guide businesses located in Gustavus remained relatively stable, varying between 10 and 14 operating per year. The number of licensed sport fish guides registered in the community appears to have declined slightly, from 27 in 2000 to 17 in 2010. The total number of sportfishing licenses sold in the community increased dramatically over the period, from 610 sold in 2000 to between 1,000 and 2,000 sold each year in the last 5 years of the decade. The number of sportfishing licenses sold to Gustavus residents was much lower than total local sales, averaging 224 per year, reflecting the large number of tourists that come to Gustavus each year and participate in sportfishing activities.

The Alaska Statewide Harvest Survey,³⁷¹ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Gustavus: in freshwater, coho, chum, pink, and sockeye salmon, Dolly Varden, and cutthroat trout; in saltwater, Chinook, chum, coho, sockeye, pink, and chum salmon, Dolly Varden, cutthroat trout, Pacific halibut, rockfish, lingcod, Pacific cod, and smelt. The survey also noted sport harvest of Dungeness and Tanner crab, hardshell clams, and shrimp by Gustavus residents. Kept/released statistics from charter logbook data reported by ADF&G³⁷² show that salmon and halibut were the most important charter targets out of Gustavus, and that coho and pink salmon made up the greatest portion of charter salmon catch. On average between 2000 and 2010, 6,074 halibut, 3,472 coho salmon, and 2,210 pink salmon were kept per year. Other species that were also caught during charters out of Gustavus between 2000 and 2010 included Chinook, chum, and sockeye salmon, yelloweye, pelagic, and other rockfish, lingcod, sablefish, and several sharks. It is also important to note that halibut was by far the most often released species during charters, with an average of 6,732 halibut released per year between 2000 and 2010 during Gustavus charter trips.

Gustavus is located within Alaska Sport Fishing Survey Area G – Glacier Bay. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. In saltwater, non-Alaska resident anglers fished consistently more days than Alaska resident anglers, while in freshwater the two groups fished about the same number of angler days on average. Saltwater sportfishing was much more important in this region than freshwater between 2000 and 2010. Information about the sportfishing sector in and near Gustavus is displayed in Table 11.

³⁷¹ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

³⁷² Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Gustavus: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Gustavus ²
2000	14	27	273	610
2001	13	21	250	560
2002	12	19	225	698
2003	11	21	240	686
2004	12	23	232	802
2005	13	27	238	837
2006	12	24	225	1,017
2007	12	22	204	1,920
2008	10	20	181	1,833
2009	10	20	175	1,207
2010	12	17	222	1,045

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	6,920	3,647	623	563
2001	7,822	3,403	654	544
2002	6,868	2,689	516	475
2003	6,519	3,933	365	365
2004	9,765	3,178	604	330
2005	10,892	4,080	725	579
2006	10,469	3,512	445	860
2007	14,273	3,738	695	478
2008	13,702	2,559	565	275
2009	11,109	3,678	744	504
2010	9,595	2,644	792	308

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010.

ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

During a public meeting in Gustavus in preparation for the community's 2005 Strategic Plan, the freedom and opportunity to live a subsistence lifestyle was identified as one of the primary positive values of the Gustavus way of life.³⁷³ According to the 2011 AFSC survey, community leaders indicated that halibut, salmon, and shellfish are three of the most important aquatic resources utilized by Gustavus residents for subsistence. Community leaders also emphasized the importance of subsistence harvest opportunities to the way of life in Gustavus, and indicated that maintaining subsistence opportunities is one of the community's most important policy concerns related to future fisheries management.

Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of Gustavus households utilizing various marine resources for subsistence purposes or per capita subsistence harvest (Table 12). However, information is available from an earlier ADF&G subsistence survey regarding the percentage of Gustavus households involved in the harvest of non-salmon fish, marine invertebrates, and marine mammals in 1987. That year, the species of marine invertebrates harvested by the greatest percentage of Gustavus households included Dungeness crab (64% of households reported harvesting), clams (31%), Tanner crab (16%), king crab (13%), octopus (10%), shrimp (6%), and sea urchin (4%). Species of non-salmon fish harvested by the greatest percentage of Gustavus households in 1987 included Dolly Varden (45% of households harvested), Pacific cod (29%), flounder (16%), rockfish (15%), and herring (4%). In addition, 4% of Gustavus households participated in harvest of herring roe in spawn on kelp fisheries in 1987.³⁷⁴ It is important to note that in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Gustavus.

Information was reported by ADF&G regarding subsistence harvest of salmon in Gustavus during the 2000-2010 period. In 2008, the most recent year for which salmon subsistence data are available, 22 subsistence salmon permits were issued to Gustavus households, of which 20 were returned. The highest number of subsistence salmon permits was issued in 2001 and 2002 (26 permits), and the lowest number was issued in 2007 (11 permits). Sockeye salmon were the most heavily harvested species, with an average of 233 sockeye taken per year. Smaller numbers of chum and pink salmon were harvested in most years, and subsistence harvest of Chinook and coho was reported in 2008 only.³⁷⁵ Information about subsistence salmon harvest is presented in Table 13, while no information was available regarding marine invertebrate or non-salmon fish (other than halibut) harvest during the 2000-2010 period.

Information was also available from ADF&G between 2003 and 2010 about subsistence halibut harvest in Gustavus. In 2003, 52 Subsistence Halibut Fishing Certificates (SHARC) were issued to residents of Gustavus. This number increased to a high of 81 SHARC cards issued to residents in 2009, but declined again to 58 in 2010. The number of SHARC cards that were actively fished varied between 20 and 46 per year. Maximum halibut harvest during the 2003-

³⁷³ City of Gustavus Strategic Planning Committee (2005). *Gustavus Strategic Plan*. Retrieved October 25, 2012 from <http://cms.gustavus-ak.gov/services/planning/strategic/current/2005SPComplete.pdf>.

³⁷⁴ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

³⁷⁵ *Ibid.*

2010 period took place in 2005, when 8,357 pounds were reported harvested on 37 active SHARC cards. Total halibut harvests appear to have declined through the second half of the decade. This information about subsistence halibut harvest is presented in Table 14.

No information was available from management agencies regarding subsistence harvest of marine mammals by Gustavus residents between 2000 and 2010 (Table 15).

Table 12. Subsistence Participation by Household and Species, Gustavus: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Gustavus: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	14	12	n/a	18	n/a	4	138	n/a	n/a
2001	26	22	n/a	60	n/a	44	302	n/a	n/a
2002	26	20	n/a	2	n/a	2	264	n/a	n/a
2003	18	16	n/a	n/a	n/a	2	516	n/a	n/a
2004	19	15	n/a	n/a	n/a	2	327	n/a	n/a
2005	21	14	n/a	2	n/a	38	119	n/a	n/a
2006	12	8	n/a	3	n/a	6	102	n/a	n/a
2007	11	7	n/a	n/a	n/a	n/a	134	n/a	n/a
2008	22	20	16	n/a	5	2	196	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Gustavus: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	52	27	4,369
2004	61	29	7,291
2005	77	37	8,357
2006	67	35	6,779
2007	70	46	7,264
2008	74	38	5,175
2009	81	26	4,328
2010	58	20	2,475

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Gustavus: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Haines (haynz)



People and Place

*Location*³⁷⁶

Haines lies on the shores of the Lynn Canal, on the Chilkat Peninsula between the Chilkoot and Chilkat Inlets. The town is bordered by the spectacular Chilkat Mountain Range on the west and the Coast Range on the east. The historic routes to the Klondike gold fields – the Chilkat, Chilkoot, and White Pass trails – are located north of the community. Haines Census Designated Place (CDP) encompasses 13.2 square miles of land and 7.4 square miles of water. Haines CDP is located within the Borough of Haines and Haines Recording District.

*Demographic Profile*³⁷⁷

In 2010, there were 1,713 residents in Haines CDP, ranking it the 51st largest community in terms of population size. Overall, between 1990 and 2010, the population has increased by 38.3%. Between 2000 and 2009, the population decreased by 10.5% with an average annual growth rate of -0.85%, which was under the statewide average of 0.75% and indicative of steady decline (Table 1). It is important to note that, until 2002, the populations reported in this profile reflect the previous City of Haines. Following formation of the Borough of Haines, the City was dissolved, and the population numbers reported reflect Haines CDP.

In 2010, the majority of residents of Haines CDP identified themselves as White (81.1%), compared to 79.6% of residents in the City of Haines in 2000; 11.2% identified themselves as American Indian and Alaska Native in 2010, compared to 13.9% in 2000.; 6.0% identified themselves as of two or more races, compared to 5.1% in 2000; 0.6% identified themselves as Black or African American, compared to 0.2% in 2000; 0.5% identified themselves as Asian, compared to 0.7% in 2010; 0.6% identified themselves as of some other race, compared to 0.4% in 2000; and 0.0% identified themselves as Native Hawaiian and Other Pacific Islander, compared to 0.1% in 2000. In addition, 1.7% of residents in Haines CDP identified themselves as Hispanic or Latino in 2010, compared to 1.5% of residents of the City of Haines in 2000 (Figure 1).

In 2010, the average household size in Haines CDP was 2.19, compared to 2.50 in 1990 and 2.40 in 2000 in the City of Haines. In that year, there were a total of 902 housing units, compared to 527 in 1990 and 895 in 2000. Of the households surveyed in 2010, 59% were owner-occupied, compared to 57% in 2000; 28% were renter-occupied, compared to 25% in 2000; 7% were vacant, compared to 11% in 2000; and 6% were occupied seasonally, compared to 5% in 2000. No residents lived in group quarters in 2010, compared to three in 2000.

³⁷⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

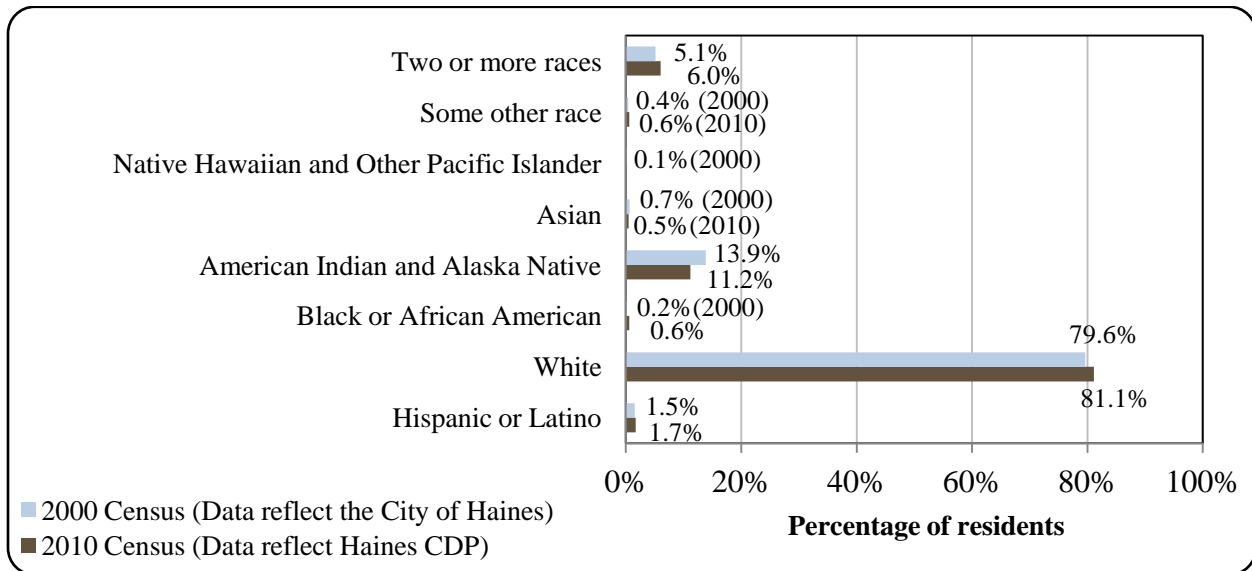
Table 1. Population in Haines from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	1,238	-
2000	1,811	-
2001	-	1,765
2002	-	1,788
2003	-	1,725
2004	-	1,657
2005	-	1,644
2006	-	1,630
2007	-	1,632
2008	-	1,643
2009	-	1,624
2010	1,713	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Haines: 2000-2010 (U.S. Census).

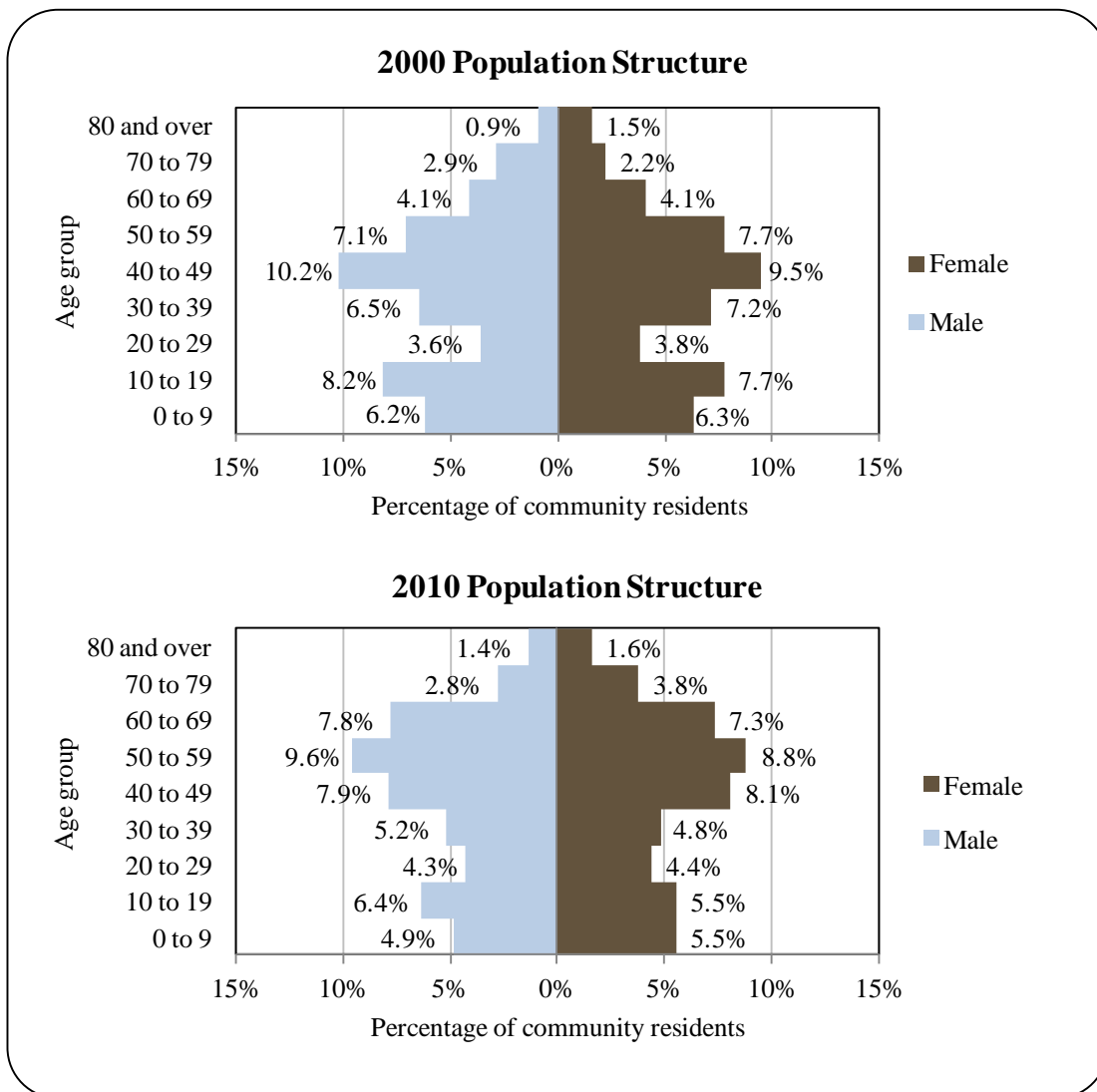


The gender distribution was virtually even in both 2000 and 2010, at 50.0% male and 50.0% female both years. In 2010, the statewide gender distribution was 52.0% male, 48.0% female. The median age in Haines in 2010 was 46.2 years, which was significantly higher than the statewide median of 33.8 years, and somewhat higher than the median age in 2000 of 40.2 years.

The population structure was constrictive in both 2000 and 2010, and cohorts showed age transitions consistent with a stable population between those years. This means that as each cohort aged, they generally maintained their overall structure. In 2010, 22.3% of residents were under the age of 20, compared to 28.4% in 2000; 24.7% were over the age of 59, compared to 15.7% in 2000; 44.4% were between the ages of 30 and 59, compared to 48.2% in 2000; and 8.7% were between the ages of 20 and 29, compared to 7.4% in 2000.

Gender distribution by age cohort was similar in both 2000 and 2010. In 2010, the greatest absolute gender difference occurred within the 70 to 79 range (3.8% female, 2.8% male), followed by the 10 to 19 (6.4% male, 5.5% female) and 50 to 59 (9.6% male, 8.8% female) cohorts. Of those three, the greatest relative gender difference occurred within the 70 to 79 range. Further information regarding population structure can be found in Figure 2.

Figure 2. Population Age Structure in Haines Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³⁷⁸ estimated that 93.5% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 0.9% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 5.5% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 22.6% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 23.5% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 13.6% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The original Tlingit name for Haines was Deishu, which meant “end of the trail”. Occupation of the Haines area likely began between 5,000 to 10,000 years ago, based on archaeological evidence found throughout southeast Alaska. Local fish traps found along the Chilkoot River are dated to approximately 2,100 years ago, and remains of houses, some over 800 years old, can be found throughout the Chilkat Valley. Oral histories can also trace a long tradition of Tlingit occupation within the region.³⁷⁹

The local geography afforded traditional Tlingit inhabitants control over strategic trade routes linking coastal areas to the interior mainland. This allowed them to maintain a position of middleman in the regional fur and eulachon oil trade. The Chilkat Valley had many village sites historically; however, only two remain today.³⁸⁰

Europeans began exploring the area in the late 1700s. In 1794, Joseph Whidbey led a small group up the Lynn Canal to Chilkat Inlet. The village of Klukwan, 20 miles up the Chilkat River, originally had a population of several thousand. By the mid 1800s, the Hudson Bay Company was attempting to access an interior trade route through the Chilkoot Valley, and a fort was built on the Pelly River. However, Chilkoot warriors lead by chief Kohklux attacked and razed the fort on August 21, 1852.³⁸¹

There are several sites linked to historic villages throughout the Chilkat Valley. A village site located along the Chilkoot River was occupied by three clans: Lukaax'adi, Kaagwaantaan, and Shangukeidi. During the 1860s there were 30 houses located along the west bank of the River, and more were located on the east bank. However, a landslide which occurred between 1881 and 1890 destroyed the east village. Disease took its toll on the west side, and by 1882 only 8 houses and 127 residents had survived.³⁸²

Haines was named in honor of Francina Haines of the Presbyterian Home Missions Board. S. Hall Young was the first missionary to the area in 1879, accompanied by his friend John Muir. The purpose of their trip was to scout a location for a mission and a school.

³⁷⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁷⁹ Haines Borough. (2004). *Comprehensive Plan*. Retrieved October 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/HainesBorough-CP-2004.pdf>.

³⁸⁰ Ibid.

³⁸¹ Ibid.

³⁸² Ibid.

In 1892, Jack Dalton established a toll road on the Tlingit trade route into the interior to cash in on gold-seekers and others heading north into Canada. The Dalton Trail, as it became known, reached over the Chilkat Pass and followed the same general route as the current Haines Highway. Haines grew as a mining supply center during the Klondike Gold Rush in the late 1890s.³⁸³

With a growing border dispute between the U.S.-Canada, an army post was commissioned in 1898 to provide a U.S. military presence in the region. Fort William H. Seward was garrisoned in 1903, and became a major component of Haines economy for many years. The fort was decommissioned in 1947, and was purchased by a group of war veterans with hopes of creating an arts and commerce community. The buildings still stand and are a distinctive landmark of Haines. They are now privately owned homes, accommodations, restaurants, galleries, and shops.³⁸⁴

In the 1940s and 1950s, Haines became an important transportation link between the Haines Highway (which links to the Alaska highway system) and the Alaska Marine Highway System. Also in the early 1950s, a pipeline and military fuel storage facility was constructed at Tanani Point. An 8-inch pipeline, which operated for 20 years, ran over 600 miles to Fort Wainwright near Fairbanks.³⁸⁵

In 1968, the Haines area was incorporated into the only 3rd Class Borough in the State, which provided it taxation authority for the purpose of education. In 1970, Fort Seward (renamed Port Chilkoot) merged with Haines to become a single municipality. In 1975, the Haines Borough expanded to annex the seafood processing facility at Excursion Inlet. In 2002, Borough residents voted to consolidate the 1st Class City of Haines and the 3rd Class Haines Borough into a single Unified Home Rule Borough.³⁸⁶

Natural Resources and Environment

Haines is surrounded on all sides by mountains and water. Rising high above the town are the Takinsha Mountains and Chilkat Range to the south, Takshanuk Mountains to the north, and Coast Range to the east across the Lynn Canal. Heading northwest from Haines is the Chilkat River. This River is located in an immense valley carved out long ago by glaciers. To the east is the Lynn Canal, another area that once held glaciers. The Lynn Canal, or Lynn Fjord, is one of the longest and deepest fjords in the world. The fjord measures 60 miles long and more than 2,000 feet deep. Remnants of Haines' glacial history can still be seen in Rainbow and Davidson Glaciers in the Chilkat Range.³⁸⁷

Geology of Chilkat Peninsula consists of Mesozoic greenstones, volcanic sandstones, mudstone, chert, and limestone. These assemblages lie on top of older lower to middle Paleozoic carbonates. Glaciers deposited sand and gravel till into carved river valleys, and sediment originating in the Chilkat Valley can be found deposited as far south as Berner's Bay, north of Juneau. The Chatham Strait fault, which starts near Haines and follows the Lynn Canal south,

³⁸³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁸⁴ Ibid.

³⁸⁵ Haines Borough. (2004). *Comprehensive Plan*. Retrieved October 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/HainesBorough-CP-2004.pdf>.

³⁸⁶ Ibid.

³⁸⁷ Ibid.

has not been active since the mid-Tertiary period.³⁸⁸

The Haines area is dominated by thick stands of Sitka Spruce and Western Hemlock. Valleys and riparian areas are populated by concentrations of cottonwood and birch. Above 3,000 feet, alpine tundra is the only vegetation found. Alder, dwarf maple, willow, berry bushes, and devils club cover the dense understory, and muskeg forms in poorly drained lowlands. Terrestrial mammals include moose, brown and black bear, mountain goat, lynx, mink, martin, muskrat, river otter, weasel, porcupine, and wolverine. Commercially important aquatic species include all five species of Pacific salmon, Dolly Varden, halibut, cutthroat trout, eulachon, and various shellfish including crab, shrimp, and clams. Marine mammals that live in the area include humpback and killer whales, harbor and Dall's porpoise, harbor seals, and Steller sea lions.³⁸⁹

Minerals found in the area include gold, zinc, lead, copper, silver, barite, iron ore, and titalum. Marble, clay, sand, and gravel are also found. Mining exploration increased significantly after 1988, mostly by Canadian mining companies and U.S. subsidiaries. Recent geological surveys have found that extensive marine volcanic rock units of unknown size and grades exist near Haines. This volcanic belt may have extensive mineral deposits; however, exploration is still in its early phase. The Porcupine District encompasses the original Haines mining district, and by 1930 about \$1.25 million worth of placer gold was taken. Approximately 75 lode and 6 placer claims remain active. The Big Nugget Mine on Porcupine Creek is popular with recreational miners and panners. Adjacent to placer claims are several copper, lead, zinc, gold, and barite deposits. There is interest in the Glacier Creek mineral area by Rubicon Mineral and their subsidiary, Toquima Minerals Corporation. The Klukwan Iron Ore Deposit had been under consideration for development since the 1970s; however, the land was eventually put into environmental trust and is no longer open for development. The Kensington Gold Mine is located within the City and Borough of Juneau at Sherman Point 20 miles south of Haines. The large development is a chief employer of many Southeast Alaska residents.³⁹⁰

Although no road connects directly to these glaciers, beautiful views can be seen from Mud Bay Road through Chilkat State Park. Haines is known as "The Valley of the Eagles." Year-round resident eagles total approximately 400 but the population swells to over 3,500 in the autumn months of October through December when a late run of chum salmon in the Chilkat River provides the eagles with a plethora of fish to eat. This natural phenomenon is highlighted each November with the Alaska Bald Eagle Festival featuring guided eagle viewing, educational tours, programs, and photo workshops.³⁹¹

Haines is home to both black and brown bears. Although bears can be seen virtually anywhere in the Chilkat Valley, certain areas are becoming well-known for optimal bear viewing opportunities. The Chilkoot River flows from Chilkoot Lake into Lutak Inlet and is one of the most easily reached bear viewing spots in Southeast Alaska from mid-June to October. Additionally, over 260 species of birds pass through the Chilkat Valley each year, and moose are another highlight for the wildlife viewing in the Haines area.³⁹²

The Haines-Fairbanks Pipeline was used by the U.S. Army from 1954 to 1973 to

³⁸⁸ Ibid.

³⁸⁹ Ibid.

³⁹⁰ Ibid.

³⁹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁹² Haines Community. (n.d.). *Wildlife*. Retrieved February 27, 2012 from <http://www.haines.ak.us/wildlife>

transport petroleum products from the deep-water port of Haines to Fort Greely, Eielson Air Force Base, and Fort Wainwright, in Interior Alaska. Pumping stations, supporting terminal bulk storage tanks and related facilities in Alaska were located in Haines, Lakeview, Tok, Sears Creek, Big Delta, Timber, Birch Lake, Eielson Air Force Base, and Fort Wainwright. The pipeline right-of-way was generally 25 feet wide on each side of centerline. The pipeline was surface laid in some areas and buried in others. By 1974 the pipeline was no longer in use.³⁹³

Earthquakes, flooding, and mass wasting are the three most prevalent environmental hazards within the area. The Haines is the second most seismically active region in Alaska. The U.S. Army Corps of Engineers list the Haines area as a seismic zone 3, in which there is the possibility of earthquakes of magnitude 6.0 and greater. Infrastructure deemed most susceptible to earthquake damage includes the Haines airstrip, Alaska Department of Transportation shop, and the Lutak dry cargo dock. Earthquakes of magnitude 6.0 to 7.0 can be expected to occur within the area twice every 100 years. Flood hazards exist throughout area floodplains and riparian corridors. Sudden changes in channel course occur on the Klukwan and Tsirku River fans. River corridor scouring and channelization increase the probability of flooding in downstream areas. Risk of shore inundation from tsunami is low due to the sheltering effects of the Chilkat Islands and Peninsula. Landslides and avalanches are a major hazard in the Haines area due to the regions steep topography and loosely consolidated soils and talus. Historic landslide events include the 1890s slide which destroyed a Native village at 19-mi along the Haines highway.³⁹⁴

In 2002, the Champagne & Aishihik First Nations approached the Alaska Department of Environmental Conservation (DEC) with information about from the historic use of herbicides to defoliate the pipeline right-of-way in Alaska. One of those herbicides, Esteron Brush Killer, was a mixture of 2,4-dichlorophenoxyacetic acid (2,4-D) and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T). A similar mixture was used as a defoliant in Vietnam and known as “Agent Orange”. 2,4,5,-T was found to contain dioxin, and its use has since been banned in the United States. See more information on dioxin below. This record review and interviews with people with historical knowledge, along with meetings with stakeholders, helped shape a sampling plan to evaluate the level of risk to human health and the environment. Public meetings were held in Tok and Fairbanks in June, and in Haines in early September of 2003. In 2004, the DEC sampled for dioxin at multiple locations and the dioxins levels found were below State cleanup levels at all sampling locations. Since no harmful levels of petroleum, dioxin or herbicide residue contamination have been found along the right-of-way, the pipeline is not listed on the Contaminated Sites Database.³⁹⁵

³⁹³ Alaska Dept of Environmental Conservation. (n.d.). *Haines-Fairbanks Pipeline Corridor*. Retrieved August 30, 2012 from http://dec.alaska.gov/spar/csp/sites/haines_fair_pipe.htm

³⁹⁴ Haines Borough. (2004). *Comprehensive Plan*. Retrieved October 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/HainesBorough-CP-2004.pdf>.

³⁹⁵ Alaska Dept of Environmental Conservation. (n.d.). *Haines-Fairbanks Pipeline Corridor*. Retrieved August 30, 2012 from http://dec.alaska.gov/spar/csp/sites/haines_fair_pipe.htm

Current Economy³⁹⁶

The economy of Haines is highly seasonal due to its dependence on the commercial fishing and tourism industries. Other important industries include timber, government work, and construction. Tourism is a growing industry in the area, as many independent travelers use the Alaska Marine Highway Ferry System and the Haines Highway to and from the interior of Alaska and the Continental United States. Outdoor heritage including scenic beauty and supreme sportfishing grounds attract visitors to the area. The Chilkat Bald Eagle Preserve draws visitors from around the world. Today, around 45,000 cruise ship passengers visit yearly.³⁹⁷

The 2006-2010 American Community Survey (ACS)³⁹⁸ estimated 567 residents were as employed in the civilian labor force in 2010, accounting for 58.8% of residents aged 16 years and over. In that year, unemployment was estimated at 2.6%, lower than the statewide unemployment rate of 5.9%; and an estimated 5.5% of residents were living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed in 2010, an estimated 44.6% worked in the private sector, along with 30.7% in the public sector, 24.3% that were estimated to be self-employed, and 0.4% estimated to work as unpaid family workers.

Based on the 2006-2010 ACS, in 2010, the estimated per capita income in Haines CDP was \$29,188, and the estimated median household income was \$49,063. This can be compared to 2000 figures reported for the City of Haines. That year, per capita income was estimated to be \$22,505, and median household income \$39,926. After adjusting for inflation by converting 2000 values into 2010 dollars,³⁹⁹ the 2000 real per capita income (\$29,594) and real median household income (\$52,502) indicate that both individual earnings and household earnings increased between 2000 and 2010. In 2010, Haines CDP ranked 66th of 305 communities for which per capita income was estimated, and 136th of 299 communities for which median household income was estimated.

However, the small population size in Haines CDP may have prevented the ACS from accurately portraying economic conditions.⁴⁰⁰ An alternative understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development.⁴⁰¹ If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Haines CDP in 2010 is \$11,144.^{402,403} This estimate is significantly less than the 2006-2010 ACS

³⁹⁶ Unless otherwise noted, all monetary data are reported in nominal values.

³⁹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁹⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁹⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁰⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁰¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

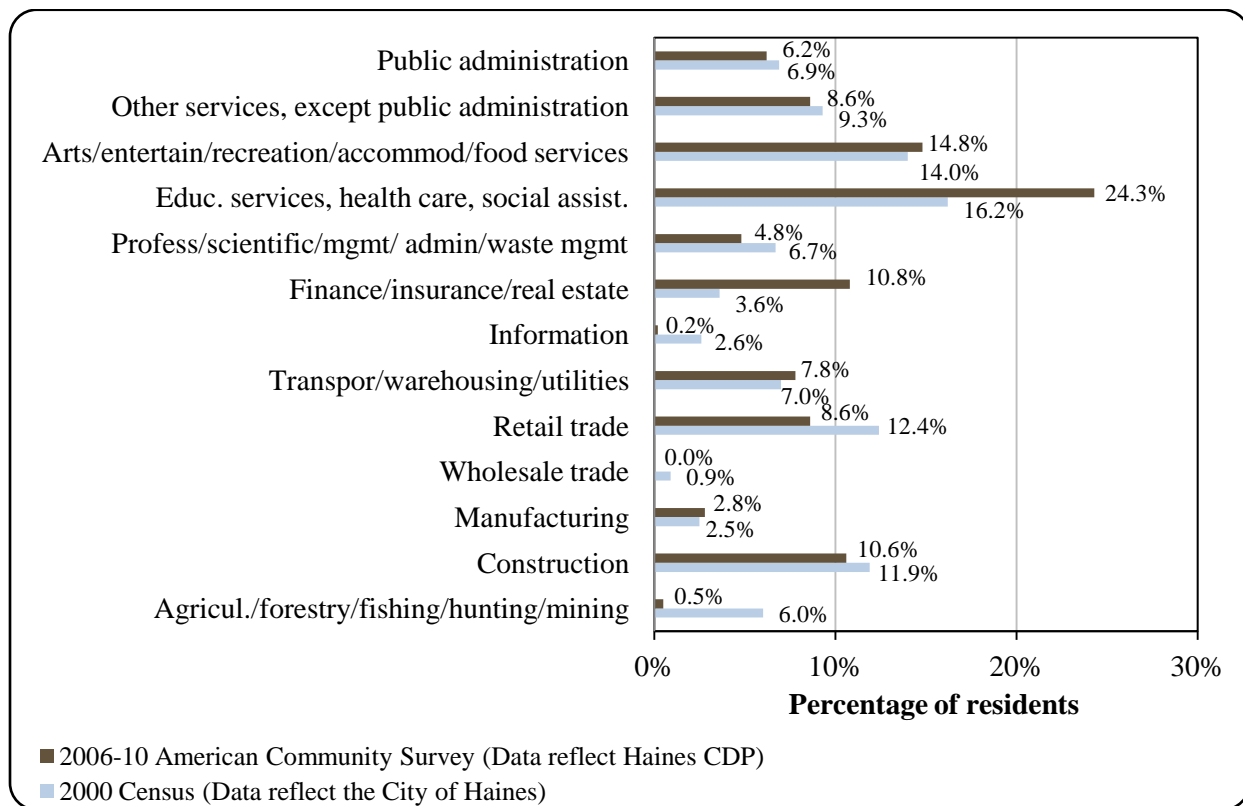
⁴⁰² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

estimate and suggests that caution should be used when using ACS data. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on employment statistics reported in the 2006-2010 ACS, by industry, in 2010, the greatest number of workers were estimated to be employed in education services, health care, and social assistance sectors (24.3%), arts, entertainment, recreation, accommodation, and food services (14.8%), finance and insurance, real estate, rental, and leasing (10.8%), and construction (10.6%). The occupational category in which the greatest percentage of the workforce was estimated to be employed was management, business, science, and arts occupations (44.8%). Employment percentages are presented by industry in Figure 3, and broken down by occupation in Figure 4. Alternative employment figures are available from the ALARI database. These estimates indicate that, in 2010, Haines residents were mostly employed as trade, transportation, and utilities workers (20.7%), local government workers (20.3%), and educational and health service workers (13.2%).⁴⁰⁴

It is also important to note that the number of individuals employed by fishing is likely underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

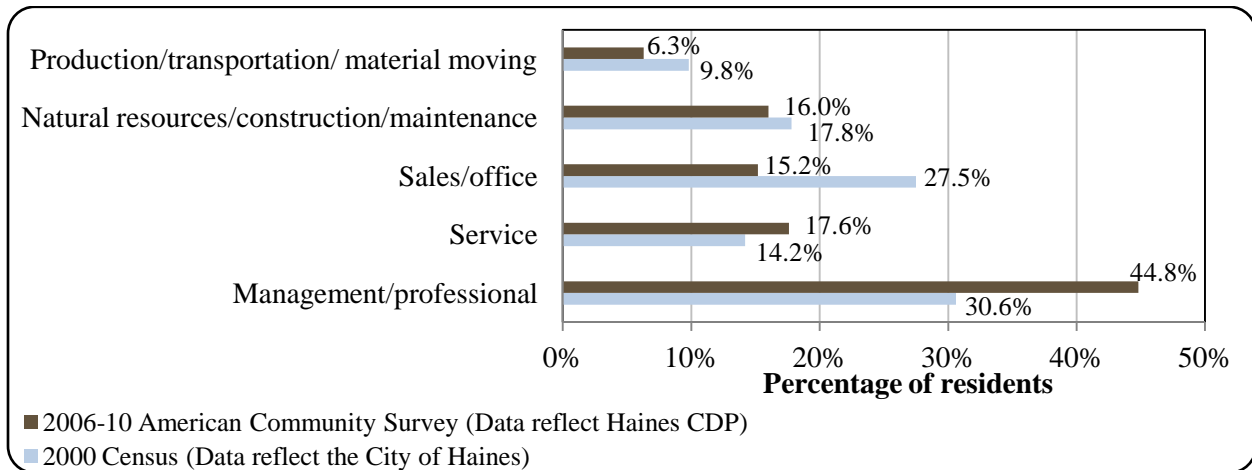
Figure 3. Local Employment by Industry in 2000-2010, Haines (U.S. Census).



⁴⁰³ See footnote 398.

⁴⁰⁴ See footnote 402.

Figure 4. Local Employment by Occupation in 2000-2010, Haines (U.S. Census).



Governance

The City of Haines was incorporated in 1910 as a 1st Class City with a mayor and council form of government. Until 2002, the 1st Class City of Haines and the 3rd Class Haines Borough were separate municipalities. In the Fall of 2002, residents voted to consolidate these governments and form the Home Rule Haines Borough. This consolidated the former City of Haines with the Lutak Land Use Service Area, the Mud Bay Land Use Service Area and the surrounding population centers in outlying areas that had no powers of planning and zoning.⁴⁰⁵

Prior to the consolidation, the City had a 5.5% sales tax and a 4% bed tax. Between 2000 and 2006, the last year municipal revenues were available, total municipal revenues were generally consistent and ranged from \$1.6 to \$1.9 million. Between 2000 and 2003, the last year sales tax revenues available, sales tax collections were generally consistent. The City has also received revenue from the State Revenue Sharing program. Between 2000 and 2003, revenues from this program ranged from \$22,259 to \$26,332. The City did not report receiving revenues from this program between 2004 and 2008. When the program was modified and renamed the Community Revenue Sharing Program in 2009, the City’s revenue increased dramatically, bringing in approximately \$118 thousand in 2009 and 2010. Additionally, the City received a range of fisheries-related grants between 2001 and 2006 and in 2009 and 2010, ranging from \$125 thousand to \$22 million. These grants were used for waterfront development and improvement, float construction projects, spawning channel construction, building ice capacity for fisherman, mooring improvements, and dock repairs. See Table 2 below for more details on selected municipal, state or federal revenue streams for Haines from 2000 to 2010.

⁴⁰⁵ Haines Borough. (2004). *Comprehensive Plan*. Retrieved October 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/HainesBorough-CP-2004.pdf>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Haines from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,824,279	\$1,267,205	\$26,332	n/a
2001	\$1,924,612	\$1,378,549	\$22,266	\$835,530
2002	\$1,633,557	\$1,206,701	\$22,259	\$1,181,369
2003	\$1,684,620	n/a	\$22,394	\$22,458,552
2004	\$1,824,279	n/a	n/a	\$304,000
2005	\$1,924,612	n/a	n/a	\$125,000
2006	\$1,633,557	n/a	n/a	\$300,000
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	\$118,854	\$4,296,350
2010	n/a	n/a	\$118,618	\$1,900,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

In addition, the offices of two federally-recognized tribes are located in Haines. The Chilkoot Indian Association is the official governing body for the Native people living in Haines. A majority of tribal members are Tlingit.⁴⁰⁶ The Chilkat Indian Village is the Tribal government representing the Native people of Klukwan, a community several miles north of Haines along Highway 7. Both Tribes were included under the Alaska Native Claims Settlement Act (ANCSA), but were not allocated land holdings during the settlement, although Klukwan, Incorporated, the Native village corporation associated with the Chilkat Native Village, received 23,040 acres of land reallocated from Sealaska, the regional Native corporation representing shareholders of both Tribes.⁴⁰⁷ The offices of Klukwan, Incorporated have been based in Haines. However, after the village corporation filed for bankruptcy in August 2012 to settle a \$7 million insurance debt,⁴⁰⁸ the local office of the corporation was closed until further notice, staff were laid off, and records were transferred to the home of the new President and CEO in Anchorage. As of the writing of this profile, the bankruptcy case had not been resolved.⁴⁰⁹

⁴⁰⁶ Chilkoot Indian Association. (2008). *Tribal Strategic Plan*. Retrieved September 19, 2013 from <http://www.chilkoot-nsn.gov/sites/default/files/Tribal%20Plan%20Final%202008.pdf>.

⁴⁰⁷ See footnote 405.

⁴⁰⁸ Friedenauer, Margaret. August 10, 2012. "Klukwan Native Corporation Files For Bankruptcy." KHNS – Haines. Retrieved September 20, 2013 from <http://www.alaskapublic.org/2012/08/10/klukwan-native-corporation-files-for-bankruptcy/>.

⁴⁰⁹ Friedenauer, Margaret. January 9, 2013. "Klukwan Native Corporation Closes Haines Office." KHNS – Haines. Retrieved September 20, 2013 from <http://www.alaskapublic.org/2013/01/09/klukwan-native-corporation-closes-haines-office/>.

Members of both the Chilkat Native Village and Chilkoot Indian Association are also eligible for membership in the Central Council of the Tlingit and Haida Indian Tribes of Alaska (Central Council), a tribal non-profit organization headquartered in Juneau. The Central Council was originally established to pursue Alaska Native land claims on behalf of the Tlingit and Haida people in an effort to retain a way of life strongly based on subsistence.⁴¹⁰ The Central Council is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁴¹¹ The Central Council provides services to the Tlingit and Haida communities including employment and training, education, family, elderly, and other community services.⁴¹²

The closest National Marine Fisheries Service (NMFS) Regional Office is located in Juneau. The Bureau of Citizenship and Immigration Services and the Alaska Department of Fish and Game (ADF&G) both maintain regional offices in Haines itself.

Infrastructure

Connectivity and Transportation

Haines is connected to the continental road system via the Haines Highway, which extends 159 miles north to Haines Junction in the Yukon. It was constructed in 1949 as a strategic link connecting the Port of Haines with the Alcan Highway.⁴¹³ Portage Cove Harbor provides moorage for small commercial and recreational vessels. The facility maintains stalls for approximately 200 vessels, a tidal grid, and a boat launch. A 4,000-pound hoist is also available on the dock. Letnikof Cove Float, located on the east side of the Chilkat Inlet, is a state-maintained small-craft harbor providing 500-feet of short term moorage (4-day limit) and a small vessel launch. On the south shore of Letnikof Cove lies the Haines Packing Co. Wharf. This facility provides mooring, fueling, icing, and repair for company-owned commercial fishing vessels. A marine conveyer provides haulout capabilities for vessels up to 36 feet in length, and on-site repair services include a machine shop and carpenter. The Municipal Dock (also known as Lutak dock) is located on the south shore of the Lutak Inlet, south of downtown Haines. This dock has 750-feet of dock face and 4 acres of shoreside storage for the purpose of containerized roll-on/roll-off cargo transfer, receipt of petroleum products, and shipment of logs. Four six-inch pipelines transfer fuel to 14 steel storage tanks capable of holding a combined 77,000 barrels. Port Chilkoot Wharf is located northwest of the Klukwan Forest Products Dock and offers 850 feet of total berthing space for petroleum transfer vessels and cruise ships. The Haines Ferry Terminal Dock, located north of Haines, provides Alaska Marine Highway System ferry moorage.⁴¹⁴

Haines has a 4,000-foot paved runway. Roundtrip airfare between Juneau and Anchorage

⁴¹⁰ Central Council (n.d.) *Homepage*. Retrieved August 15, 2012 from <http://www.ccthita.org/index.html>.

⁴¹¹ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁴¹² See footnote 410.

⁴¹³ Haines Borough. (2004). *Comprehensive Plan*. Retrieved October 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/HainesBorough-CP-2004.pdf>.

⁴¹⁴ Marine Exchange of Alaska. (n.d.). *Haines Harbor Facilities*. Retrieved October 24, 2012 from: http://www.mxak.org/ports/southeast/haines/haines_facilities.html.

in June 2012 was \$399.⁴¹⁵ Scheduled service runs from Juneau to Haines via Wings of Alaska and Air Excursions.

Facilities

Electricity is provided by the Alaska Power Company. The water and sewer systems operator in Haines is City Crystal Cathedrals Water. Haines Sanitation provides solid waste collection and disposal. Waste is processed through recycling and composting, and no solid waste is exported. Heating fuel can be purchased from Delta Western fuel service. Gasoline is available at several service stations. Bulk fuel is delivered to Haines by barge. Propane is also available. Local and long distance telephone is provided by Alaska Power and Telephone. Internet services include dial-up and Digital Subscriber Line (DSL) connections. Haines Cable TV, a private operator, provides 35 channels of cable television. The state rural television service is also transmitted throughout the region.

Public safety services are provided by a municipal police department which employs a full-time chief, full-time Sergeant, three full-time officers, and five dispatchers. The police chief holds special commission from the Alaska State Troopers to provide law enforcement outside the Haines townsite. In addition to municipal police, there is a local Alaska state trooper office, year-round Alaska Department of Natural Resources park ranger, and one fish and wildlife protection officer. Fire and rescue services are provided by the Haines Borough volunteer fire department, which consists of 38 trained fire fighters. This is also one full-time paid fire fighter and one full-time paid Emergency Medical Technician.

A new 7,500-foot public library was constructed in 2003, and provides the community a public meeting space as well as reading materials and internet use.⁴¹⁶ Legal services include a state magistrate and city jail. Additional public facilities include a community hall, two senior centers, a pool, an Alaska Native Brotherhood/Sisterhood hall, four museums, and two school libraries. Visitor accommodations include five hotels and a range of Bed and Breakfasts.⁴¹⁷

*Medical Services*⁴¹⁸

The Haines Health Center, the Haines Public Health Center, and the Klukwan Clinic make up the healthcare system of Haines. The clinic is a qualified Emergency Care Center and is owned and operated by the Southeast Alaska Regional Health Consortium. Specialized Care: Lynn Canal Human Resources & Counseling Center (city & borough operated). Emergency Services have highway marine air and floatplane access. Emergency service is provided by 911 Telephone Service and volunteers. The closest hospital is located in Juneau.

⁴¹⁵ Airfare calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).

⁴¹⁶ See footnote 413.

⁴¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴¹⁸ *Ibid.*

*Educational Opportunities*⁴¹⁹

As of 2011, Haines has two schools. Haines Elementary, which had 174 students enrolled and 17 teachers employed, offered preschool through 8th grade instruction. Haines High School, which offers 9th thru 12th grade instruction, had 109 students enrolled and 7 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historically and today, fishing in Haines has been tied to the Chilkoot and Chilkat watersheds, which are renowned for their productive wild salmon habitat. Haines is located in Federal Statistical and Reporting Area 659, Pacific Halibut Fishery Regulatory Area 2C, and the Southeast Outside Sablefish Regulatory Area. Haines is not eligible to participate in either the Community Development Quota program or the Community Quota Entity program.

Two canneries (Pacific American Fisheries and Astoria & Puget Sound Packing Co.) relocated in 1908 from Haines to Excursion Inlet because the sockeye salmon in the Chilkat River and other Lynn Canal streams had been overfished.⁴²⁰ Concerns over the overfishing of salmon in the Haines area is as much a source of concern today as it was in the early 20th century. For example, it was announced in 2003 that the Haines Borough would receive federal salmon disaster funds to be distributed to several municipalities statewide which have been affected by low salmon prices in order to compensate for consequent losses of salmon taxes or raw fish taxes.⁴²¹

The local gillnet fleet has historically been a chief contributor to the Haines economy, and salmon traditionally comprised of over three-quarters of all fish caught by residents. In 1990, 140 Haines residents held commercial fishing permits, earning an estimated \$4.8 million in total wages. Although the number of permit holders decreased 5 years later, earnings remained about the same. However, in 2002, earnings from fisheries declined to \$2.0 million, and the number of permits held locally also decreased.⁴²²

Many Haines households participate in subsistence and personal use fisheries. Traditionally, hooligan (eulachon) was harvested for oil from the Chilkat River using dip nets, basket traps, and fishhooks. More contemporary harvests include dip nets and in some cases Hawaiian throw nets.⁴²³ Subsistence salmon fishing also takes place in local drainages including the Chilkat, Chilkoot, and Tsirku rivers. Historically, subsistence harvesters would begin fishing for Chinook salmon after eulachon, and were gaffed and immediately eaten or processed. In early June, sockeye would begin to run and extensive fishing would continue through the

⁴¹⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴²⁰ Mackovjak, J.. 2010. *Navigating Troubled Waters: A History of Commercial Fishing in Glacier Bay, Alaska*. U.S. Department of the Interior, National Park Service, Glacier Bay National Park and Reserve.

⁴²¹ Clark, J. H., A. McGregor, R. D. Mecum, P. Krasnowski, and A. M. Carroll. The Commercial Salmon Fishery in Alaska. *Alaska Fishery Research Bulletin* 12(1): 1-146.

⁴²² Haines Borough. (2004). *Comprehensive Plan*. Retrieved October 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/HainesBorough-CP-2004.pdf>.

⁴²³ Betts, M. F. (1994). *The Subsistence Hooligan Fishery of the Chilkat and Chilkoot Rivers*. Alaska Department of Fish and Game. Technical Paper No. 213. Retrieved October 24, 2012 from: <http://www.subsistence.adfg.state.ak.us/download/TPS/tp213.pdf>.

summer. Sockeye salmon were desired for preservation thanks to their relatively firm, dry meat. This made the fish suitable for smoking, drying, and canning. Chum salmon, arriving in late summer, was often used as dog food when not processed and preserved. Given the upwelling within local alluvial fans, winter fishing for chum and coho salmon has been possible. Fish caught during that time was often immediately consumed. Contemporary subsistence salmon fishing is conducted primarily using gill nets. Sockeye salmon remains the most desirable fish.⁴²⁴

Processing Plants

There are several processing plants in Haines according to the 2010 Alaska Department of Fish and Game's Intent to Operate list. Bell's Seafood processes the following species of fish and shellfish in the community of Haines: crab (Dungeness, king), halibut, oysters, rockfish, salmon (Chinook, coho, sockeye), scallops, shrimps and prawns.⁴²⁵ The Chilkoot Fish and Caviar Company in the community of Haines processes king, sockeye, chum, pink and coho salmon. The facility operates during the summer and fall and produces fresh salmon and salmon caviar.⁴²⁶ Dejon Delights Ltd. is a small family-owned and operated smokehouse that has operated since 1984. They hand-smoke sockeye, Chinook, chum and coho salmon as well as halibut and black cod. Salmon caviar is also produced at the facility. All their fish is purchased from local fishermen and there are between 2 and 5 employees throughout the year.⁴²⁷

Another processor in the community is the Haines Packing Company, located 5 and 1/2 miles from Haines at the mouth of the Chilkat River in Northern Lynn Canal. The plant began operations in 2005 and employs a maximum of 16 workers each year.⁴²⁸ Renovated in 2007, the new facility has a fillet machine, pin-bone machine and two Enviro-Pak smokers with a daily capacity of 1,800 lbs. The facility processes Chinook, sockeye, chum, pink and coho salmon from June to September. Its products also include salmon caviar and halibut. Salmon deliveries are taken from the local fleet at the dock in front of the facility.⁴²⁹

Haines lacks cold storage facilities, which limits value-added production locally. Most landings are minimally processed and shipped to contiguous United States and Canadian markets using highway trucking.⁴³⁰

Fisheries-Related Revenue

Between 2004 and 2010, there was no known fisheries-related revenue generated in the community of Haines. Between 2000 and 2003, known fisheries-related revenues totaled

⁴²⁴ Mills, D. D. (1982). *Historical and Contemporary Fishing For salmon and Eulachon at Klukwan: An Interim Report*. Alaska Department of Fish and Game. Technical Paper No. 69. Retrieved October 24, 2012 from: <http://www.arlis.org/docs/vol1/11063692.pdf>.

⁴²⁵ Alaska Seafood Marketing Institute (n.d.). *Suppliers Directory*. Retrieved June 15, 2012 from <http://alaskaseafood.org/industry/suppliers/index.cfm>

⁴²⁶ Chilkoot Fish and Caviar Company. (n.d.). *Home*. Retrieved June 15, 2012 from http://chilkootfish.com/pb/wp_ea577c94/wp_ea577c94.html

⁴²⁷ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

⁴²⁸ Ibid.

⁴²⁹ Haines Packing Company. (n.d.). *Home*. Retrieved August 30, 2012 from <http://www.hainespaking.com/about.htm>

⁴³⁰ Haines Borough. (2004). *Comprehensive Plan*. Retrieved October 23, 2012 from: <http://www.commerce.state.ak.us/dca/plans/HainesBorough-CP-2004.pdf>.

\$1,208,148. In both 2000 and 2001, fisheries-related revenues made up 22% of the total municipal revenue. In 2002, it made up 17% and in 2003 it made up 6%. The known fisheries-related revenue received by the community of Haines from 2000 to 2010 is found in Table 3.⁴³¹

Commercial Fishing

Haines is in the Southeast Alaska/Yakutat Region, which consists of Alaska waters between Cape Suckling on the north and Dixon Entrance on the south. Salmon are commercially harvested in Southeast Alaska with purse seines and drift gillnets and in the Yakutat region with set gillnets. Fishermen in both areas use hand and power troll gear. Herring are harvested in winter bait, sac roe, spawn-on-kelp, and bait pound fisheries. Miscellaneous shellfish, including sea cucumber, sea urchins, and geoduck clams, are harvested in dive fisheries in the region. There are several commercially important shellfish species in Southeast Alaska, including golden and red king crab, Dungeness crab, Tanner crab, and pandalid shrimp.⁴³²

Between 2000 and 2009, the number of CFEC permits held in the community declined steadily from 265 in 2000 to a low of 194 in 2009, after which there was a slight recovery. In 2010, 132 residents, or 7.7% of the population, held 202 permits issued by the Commercial Fisheries Entry Commission (CFEC). Of the CFEC permits held in 2010, salmon accounted for 52.0%, compared to 43.8% in 2000; halibut permits accounted for 18.3%, compared to 19.2% in 2000; “other” shellfish accounted for 11.9%, compared to 9.4% in 2000; groundfish accounted for 5.4%, compared to 14.3% in 2000; sablefish accounted for 5.0%, compared to 4.2% in 2000; crab accounted for 4.5%, compared to 5.7% in 2000; and herring accounted for 3.0%, compared to 3.4% in 2000. There were notable declines in the number of groundfish and halibut permits held locally between 2000 and 2010, while other species permits remained either relatively unchanged or experienced only slight declines. In addition, residents held 28 License Limitation Program (LLP) groundfish permits, 1 LLP crab permit, and 11 Federal Fisheries Permits (FFP) in 2010. The proportion of these permits fished increased steadily between 2000 and 2010, from 43% of groundfish LLP and 0% of crab LLP and FFP; to 53% of groundfish LLP, 100% of crab LLP, and 73% of FFP. Finally, 42 quota share accounted holders held 2.36 million shares of halibut quota in 2010, compared to 2.31 million held by 56 quota share account holders in 2000. The overall amount of halibut quota held in Haines stayed relatively consistent between 2000 and 2010, with the exception of a small dip in the amount of quota between 2002 and 2004.

Of the CFEC permits held in 2010, 68% were actively fished, compared to 62% in 2000. Overall, permit activity as a percentage of total permits held remained relatively unchanged between 2000 and 2010. By fishery, permit activity for salmon, sablefish, and halibut fisheries was proportionately high, while all other fisheries were at 45% of permits held or below. Between 2000 and 2010, there was a downward trend in CFEC crab permit activity, while other fisheries either experienced upward trends, or stayed relatively constant. This may account for why total overall permit activity was at its relative highest between 2007 and 2010. Fisheries prosecuted by Haines residents in 2010 included:⁴³³ Southeast pot Dungeness crab, statewide

⁴³¹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

⁴³² Alaska Dept. of Fish and Game. (n.d.). *Commercial Fisheries Overview: Southeast Alaska and Yakutat*. Retrieved August 29, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=commercialbyareasoutheast.main>.

⁴³³ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

longline halibut, Southeast purse seine herring roe, Northern Southeast herring spawn on kelp, Gulf of Alaska longline miscellaneous finfish, Southeast longline demersal shelf rockfish, Southeast pot shrimp, statewide longline sablefish, Northern Southeast longling sablefish, Southeast drift gillnet salmon, Bristol Bay drift gillnet salmon, Yakutat set gillnet salmon, and statewide power troll salmon.

Between 2000 and 2010, the number of crew license holders declined from 155 to 97. The year in which there was the lowest number of crew license holders was 2003, when 88 residents held licenses. In addition, residents held majority ownership of 89 vessels in 2000, compared to 71 in 2000; representing a steady decline during those years. Between 2000 and 2010, there were significant declines in both the number of fish buyers, and vessels reporting landings within the community. In 2000, the number of local fish buyers peaked at 87; however, by 2005 the number had dropped to 16 at an average loss of 14 per year. The number of fish buyers increased to 20 by 2006 and remained relatively stable through 2010. The number of vessels reporting landings in Haines declined steadily from 194 in 2000, to 46 in 2010.

Non-confidential landings in 2010 totaled 345,381 pounds valued at \$504,109 ex-vessel, compared to a peak of 8.60 million pounds valued at \$3.91 million ex-vessel in 2000. In that year, Haines ranked 43rd of 67 communities both in terms of total pounds landed, and total ex-vessel revenue from landings. However, local landings declined by 96% between 2000 and 2010 overall. By species, 311,961 pounds of salmon valued at \$379,154 ex-vessel were landed in Haines in 2010, compared to 8.18 million pounds valued at \$2.82 million ex-vessel; an increase of \$0.75 per pound after adjusting for inflation,⁴³⁴ without considering the species composition of landings. In addition, 16,410 pounds of halibut valued at \$55,197 ex-vessel was landed that year, compared to 374,100 pounds valued at \$981,310 ex-vessel in 2000; a decline of \$0.25 per pound after adjusting for inflation.⁴³⁵ Finally, 7,278 pounds of “other” shellfish valued at \$46,513 ex-vessel were landed, compared to 25,295 pounds valued at \$80,291 ex-vessel in 2000.

Non-confidential landings by Haines residents declined at a steady rate between 2000 and 2010, although to a lesser degree of severity. Between those years, landings by residents dropped from a cumulative 7.24 million pounds valued at \$3.87 million ex-vessel, to 5.33 million pounds valued at \$6.48 million ex-vessel. The increase in total revenue despite the decline in pounds landed is attributed to increases in revenue-per-pound in both salmon and halibut landings. Salmon, halibut, and sablefish were the top three species landed in 2010 in terms of ex-vessel revenue. In that year, residents landed 4.65 million pounds of salmon valued at \$4.14 million ex-vessel in 2010, compared to 6.55 million pounds valued at \$2.51 million ex-vessel in 2000; an increase of \$0.36 per pound after adjusting for inflation,⁴³⁶ an without considering the species composition of landings. Next, residents landed 358,600 pounds of halibut valued at \$1.60 million ex-vessel in 2010, compared to 319,053 pounds valued at \$827,939 ex-vessel in 2000; an increase of \$0.88 per pound after adjusting for inflation.⁴³⁷ Finally, residents landed 143,925 pounds of sablefish valued at \$562,278 ex-vessel in 2010, compared to 133,281 pounds valued at \$392,494 ex-vessel in 2000; a declined of \$0.14 per pound after adjusting for inflation.⁴³⁸ Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁴³⁴ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

⁴³⁵ Ibid.

⁴³⁶ Ibid.

⁴³⁷ Ibid.

⁴³⁸ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received By The Community of Haines: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$3,998	\$5,835	\$7,880	\$1,655	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$309,275	\$325,857	\$172,029	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	\$84,500	\$98,660	\$95,550	\$102,909	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$397,773</i>	<i>\$430,352</i>	<i>\$275,459</i>	<i>\$104,564</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>\$1,824,279</i>	<i>\$1,924,612</i>	<i>\$1,633,557</i>	<i>\$1,684,620</i>	<i>\$1,824,279</i>	<i>\$1,924,612</i>	<i>\$1,633,557</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Haines: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	30	31	27	26	26	28	28	28	28	27	28
	Active permits	13	14	11	13	14	12	14	15	13	14	15
	% of permits fished	43%	45%	40%	50%	53%	42%	50%	53%	46%	51%	53%
	Total permit holders	29	30	27	26	26	28	28	28	28	27	28
Crab (LLP) ¹	Total permits	0	0	1	1	1	1	1	1	1	1	1
	Active permits	0	0	1	1	1	1	1	1	1	1	1
	% of permits fished	n/a	n/a	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	0	0	1	1	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	15	15	15	7	7	7	9	9	9	10	11
	Fished permits	0	0	0	4	6	5	7	7	6	10	8
	% of permits fished	n/a	n/a	n/a	57%	86%	71%	78%	78%	67%	100%	73%
	Total permit holders	15	15	15	7	7	7	9	9	9	10	11
Crab (CFEC) ²	Total permits	15	13	11	11	11	10	12	11	12	10	9
	Fished permits	9	8	8	8	6	6	5	5	8	3	4
	% of permits fished	60%	62%	73%	73%	55%	60%	42%	45%	67%	30%	44%
	Total permit holders	15	13	11	13	10	11	11	12	13	13	9
Other shellfish (CFEC) ²	Total permits	25	24	21	21	23	24	24	23	21	23	24
	Fished permits	10	11	10	10	11	8	8	7	5	9	11
	% of permits fished	40%	45%	47%	47%	47%	33%	33%	30%	23%	39%	45%
	Total permit holders	24	24	21	22	24	25	23	23	20	22	24
Halibut (CFEC) ²	Total permits	51	46	44	40	39	40	36	38	35	37	37
	Fished permits	38	37	35	34	33	35	32	34	29	33	33
	% of permits fished	75%	80%	80%	85%	85%	88%	89%	89%	83%	89%	89%
	Total permit holders	51	46	43	40	39	40	36	38	35	37	37
Herring (CFEC) ²	Total permits	9	9	7	6	6	7	7	7	7	5	6
	Fished permits	2	0	3	2	3	2	1	1	1	1	2
	% of permits fished	22%	n/a	43%	33%	50%	29%	14%	14%	14%	20%	33%
	Total permit holders	7	7	5	4	4	5	6	6	6	5	6

Table 4 cont'd. Permits and Permit Holders by Species, Haines: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	11	8	8	8	7	8	6	8	8	8	10
	Fished permits	7	6	6	6	6	6	6	8	8	8	10
	% of permits fished	64%	75%	75%	75%	86%	75%	100%	100%	100%	100%	100%
	Total permit holders	10	7	8	8	7	8	6	7	7	7	8
Groundfish (CFEC) ²	Total permits	38	34	26	22	23	23	15	13	13	10	11
	Fished permits	13	7	3	7	4	3	2	3	3	7	3
	% of permits fished	34%	21%	12%	32%	17%	13%	13%	23%	23%	70%	27%
	Total permit holders	29	29	22	18	19	20	13	11	10	8	8
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	116	116	107	100	100	105	112	110	103	101	105
	Fished permits	86	86	65	62	63	66	64	74	70	72	75
	% of permits fished	74%	74%	61%	62%	63%	63%	57%	67%	68%	71%	71%
	Total permit holders	122	123	106	104	101	106	104	105	99	101	103
<i>Total CFEC Permits²</i>	<i>Permits</i>	265	250	224	208	209	217	212	210	199	194	202
	<i>Fished permits</i>	165	155	130	129	126	126	118	132	124	133	138
	<i>% of permits fished</i>	62%	62%	58%	62%	60%	58%	56%	63%	62%	69%	68%
	<i>Permit holders</i>	156	160	137	132	133	137	131	130	126	130	132

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Haines: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Haines ²	Total Net Pounds Landed in Haines ^{2,5}	Total Ex-Vessel Value of Landings in Haines ^{2,5}
2000	155	87	6	123	89	194	8,598,562	\$3,907,319
2001	143	51	5	115	90	204	5,728,799	\$2,947,618
2002	130	54	3	104	87	183	8,445,428	\$3,279,270
2003	88	47	3	96	81	145	4,723,171	\$2,186,598
2004	104	29	3	103	81	86	1,439,510	\$693,704
2005	95	16	4	93	76	52	876,875	\$430,260
2006	101	20	4	86	71	44	1,644,845	\$984,286
2007	109	24	4	82	68	77	1,584,647	\$1,021,754
2008	98	20	4	78	66	48	1,704,922	\$1,306,576
2009	101	17	4	86	71	51	816,452	\$679,781
2010	97	21	4	85	71	46	345,381	\$504,109

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Haines: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	56	2,306,743	298,609
2001	55	2,067,590	290,853
2002	48	1,901,030	262,635
2003	46	1,901,125	262,073
2004	42	1,861,177	311,751
2005	45	2,111,110	363,343
2006	42	2,167,845	364,475
2007	43	2,103,908	300,003
2008	38	2,024,796	225,229
2009	40	2,156,661	199,236
2010	42	2,364,578	195,450

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Haines: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	11	560,915	66,261
2001	9	560,915	62,654
2002	10	457,617	49,044
2003	10	445,541	52,885
2004	9	445,541	56,004
2005	10	537,887	64,025
2006	10	581,856	67,551
2007	10	627,659	69,213
2008	9	624,160	65,169
2009	9	624,160	56,001
2010	10	700,735	58,949

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Haines: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Haines: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	374,100	169,543	166,628	150,768	38,400	--	17,480	--	--	16,323	16,410
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	10,859	9,662	6,692	--	--	--	--	--	--	--	--
Other Shellfish	25,295	4,578	20,820	2,129	3,331	4,981	--	--	--	10,408	7,278
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	8,179,089	5,529,265	8,243,660	4,559,351	1,396,268	853,852	1,618,792	1,545,004	1,669,569	786,597	311,961
<i>Total²</i>	<i>8,589,343</i>	<i>5,713,048</i>	<i>8,437,800</i>	<i>4,712,248</i>	<i>1,437,999</i>	<i>858,833</i>	<i>1,636,272</i>	<i>1,545,004</i>	<i>1,669,569</i>	<i>813,328</i>	<i>335,649</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$981,310	\$343,480	\$360,036	\$439,230	\$110,656	--	\$46,380	--	--	\$34,060	\$55,197
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$7,021	\$4,876	\$4,504	--	--	--	--	--	--	--	--
--	\$80,291	\$15,970	\$50,128	\$8,722	\$13,163	\$23,644	--	--	--	\$57,260	\$46,513
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$2,815,134	\$2,536,361	\$2,839,571	\$1,716,953	\$566,966	\$356,237	\$915,634	\$898,712	\$1,199,933	\$581,472	\$379,154
<i>Total²</i>	<i>\$3,883,756</i>	<i>\$2,900,687</i>	<i>\$3,254,239</i>	<i>\$2,164,905</i>	<i>\$690,785</i>	<i>\$379,881</i>	<i>\$962,014</i>	<i>\$898,712</i>	<i>\$1,199,933</i>	<i>\$672,792</i>	<i>\$480,864</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Haines Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	20,241	26,384	62,268	37,112	17,384	23,020	--	25,315	44,698	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	319,053	192,461	219,928	238,226	252,873	288,385	263,233	425,810	343,410	345,043	358,600
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	42,531	35,409	23,610	17,498	12,642	10,268	14,033	19,985	15,485	34,540	24,105
Other Shellfish	48,257	35,927	38,531	53,206	35,082	33,912	27,918	12,901	8,054	22,219	14,412
Pacific Cod	130,501	26,957	17,172	14,589	101,889	181,946	90,186	61,124	119,967	201,409	135,434
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	133,281	--	82,221	37,635	40,956	44,591	49,493	206,739	189,494	167,686	143,925
Salmon	6,545,087	4,004,426	4,716,529	3,564,563	5,526,473	3,910,171	7,001,822	4,505,442	5,835,767	4,456,504	4,651,291
<i>Total²</i>	<i>7,238,951</i>	<i>4,321,564</i>	<i>5,160,259</i>	<i>3,962,829</i>	<i>5,987,299</i>	<i>4,492,293</i>	<i>7,493,143</i>	<i>5,263,848</i>	<i>6,556,875</i>	<i>5,227,401</i>	<i>5,327,767</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$39,508	\$62,047	\$116,164	\$58,060	\$25,941	\$30,890	--	\$59,913	\$98,944	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$827,939	\$359,180	\$465,376	\$688,025	\$749,191	\$871,482	\$970,384	\$1,847,313	\$1,469,026	\$1,017,012	\$1,595,965
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$38,379	\$33,696	\$21,469	\$14,539	\$9,798	\$6,996	\$10,166	\$10,756	\$9,587	\$25,777	\$16,390
Other Shellfish	\$194,288	\$108,495	\$118,409	\$142,205	\$137,810	\$143,356	\$92,837	\$85,897	\$64,681	\$109,781	\$96,478
Pacific Cod	\$58,959	\$13,055	\$4,938	\$4,887	\$45,435	\$90,294	\$46,653	\$32,099	\$75,807	\$103,396	\$66,642
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$392,494	--	\$218,453	\$114,099	\$108,701	\$137,357	\$137,450	\$591,423	\$572,979	\$546,125	\$562,276
Salmon	\$2,514,399	\$1,978,722	\$1,768,269	\$1,522,716	\$2,454,701	\$2,128,597	\$3,983,769	\$3,029,873	\$4,540,736	\$3,273,173	\$4,142,155
<i>Total²</i>	<i>\$ 3,872,160</i>	<i>\$ 2,555,195</i>	<i>\$ 2,713,078</i>	<i>\$ 2,544,531</i>	<i>\$ 3,531,577</i>	<i>\$ 3,408,972</i>	<i>\$ 5,241,259</i>	<i>\$ 5,657,274</i>	<i>\$ 6,831,078</i>	<i>\$ 5,075,264</i>	<i>\$ 6,479,906</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, the number of active sport fish guide businesses registered in Haines declined from 6 to 2, and the number of licensed sport fish guide declined from 41 to 10. Private angler activity by local residents stayed relatively constant and the number of sportfishing licenses sold in the community showed a relatively consistent increase from 2000 to 2010. There were consistently at least three times the number of licenses sold in the community as there were sold to local residents, indicating that private anglers from other areas have been coming to Haines to fish (Table 11).

Haines is located within Alaska Sport Fishing Survey Areas F2 – Haines. Information is available about saltwater and freshwater sportfishing activity at this regional scale. In 2005, the most recent year data were available between 2000 and 2010, there were at total of 3,891 saltwater angler days fished, compared to 2,472 days in 2000. In 2006, the most recent year data were available for freshwater angler days fished, there 4,870 freshwater angler days fished, compared to 4,899 in 2000. In 2005, non-Alaskan residents accounted for 53.3% of saltwater angler days fished, compared to 67.3% in 2000. In addition, non-Alaskan residents accounted for 100% of freshwater angler days fished in 2006, compared to 58.6% in 2000. Information regarding sportfishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Haines: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Haines²
2000	6	41	880	2,842
2001	3	30	902	3,145
2002	4	29	875	3,670
2003	5	27	902	3,514
2004	7	32	805	4,708
2005	7	16	827	3,519
2006	4	13	844	3,680
2007	4	18	773	3,590
2008	4	18	707	3,263
2009	5	15	817	3,656
2010	2	10	773	3,638

Table 11 cont'd. Sport Fishing Trends, Haines: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	3,754	4,534	7,041	6,581
2001	6,184	4,081	10,250	8,041
2002	4,793	3,877	14,683	8,532
2003	3,242	5,559	11,719	7,078
2004	4,970	8,935	12,437	9,127
2005	5,628	4,793	11,008	7,880
2006	2,899	6,729	10,143	8,949
2007	4,151	4,175	9,289	2,613
2008	2,746	2,192	8,501	6,667
2009	2,235	2,591	7,804	4,109
2010	5,380	3,181	7,422	3,204

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Haines residents participate in salmon, halibut, and marine mammal subsistence harvest. No information was reported by ADF&G regarding per capita subsistence or the percentage of Haines households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, information was reported during the 2000-2010 period regarding annual subsistence harvests of salmon, halibut and some species of marine mammal.

Between 2000 and 2008, the number of subsistence salmon permits issued to Haines households declined from over 600 to less than 400 per year. The number of salmon permits actively fished also declined over the period. In all years for which data were available, sockeye was the most heavily harvested salmon species, although all five species were included in yearly subsistence harvest numbers. No data were reported by ADF&G regarding harvest of marine invertebrates or non-salmon fish (not including halibut) between 2000-2010. Information about salmon, marine invertebrates, and non-salmon fish is presented in Table 13.

From 2003 to 2010, the number of Subsistence Halibut Registration Certificates (SHARC) issued to Haines residents remained relatively stable, in the range of 500 SHARC cards issued per year. However, the number of SHARC cards reported as actively fished declined over the period, from 269 in 2003 to 199 by 2010. The greatest volume of halibut was harvested in 2004, when 293 SHARC cards were actively fished with a total of 59,478 pounds. Information

about halibut subsistence in Haines is presented in Table 14.

Additionally, ADF&G reported harvest of harbor seals by Haines residents between 2000 and 2008, with total harvest ranging from 2 to 20 animals per year. No data were available from management agencies regarding harvest of sea otter, walrus, polar bear, spotted seal, or Steller sea lion by Haines residents during the 2000-2010 period. This information on marine mammal subsistence harvest is presented in Table 15.

Additional Information

Haines hosts many festivals, including the Alcan 200 Road Rally in January, the Actfest Theater Festival in April, the Bald Eagle Run in May, the Mayfest Haines Craft Beer and Home Brew Festival in May, the King Salmon Derby from May to June, the Annual Alaska Mardi Gras in May, the Kluane to Chilkat Bike Relay in June, the Summer Solstice Celebration in June, the Fourth of July/Independence Day Celebration Mt. Riley Run in July, the Haines Rodeo in July, the Southeast Alaska State Fair in August, the Bald Eagle Music Festival in August, the Alaska Bald Eagle Festival in November.

Table 12. Subsistence Participation by Household and Species, Haines: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Haines: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	604	546	106	1,706	488	864	10,302	n/a	n/a
2001	650	582	164	986	270	1,108	12,090	n/a	n/a
2002	669	620	176	1,026	1,208	1,612	11,144	n/a	n/a
2003	703	644	224	1,336	1,052	2,276	13,142	n/a	n/a
2004	350	335	190	719	473	1,445	6,394	n/a	n/a
2005	346	335	98	597	329	1,461	4,736	n/a	n/a
2006	360	336	136	597	392	1,437	6,260	n/a	n/a
2007	375	311	120	253	152	707	6,058	n/a	n/a
2008	395	386	65	765	393	644	7,184	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Haines: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	473	269	31,765
2004	528	293	59,478
2005	556	247	29,169
2006	529	229	23,205
2007	559	250	23,818
2008	482	250	25,408
2009	528	286	29,635
2010	473	199	25,562

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Haines: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	18	n/a
2001	n/a	n/a	n/a	n/a	n/a	19	n/a
2002	n/a	n/a	n/a	n/a	n/a	20	n/a
2003	n/a	n/a	n/a	n/a	n/a	12	n/a
2004	n/a	n/a	n/a	n/a	n/a	7	n/a
2005	n/a	n/a	n/a	n/a	n/a	2	n/a
2006	n/a	n/a	n/a	n/a	n/a	5	n/a
2007	n/a	n/a	n/a	n/a	n/a	20	n/a
2008	n/a	n/a	n/a	n/a	n/a	16	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

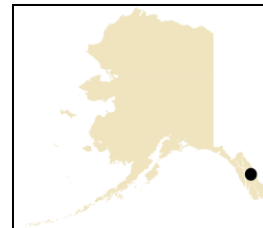
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Hobart Bay



People and Place

*Location*⁴³⁹

Hobart Bay is located on the eastern shore of Stephens Passage, on the mainland 70 miles south of Juneau, and approximately 635 air miles southeast of Anchorage. Hobart Bay is located in the Hoonah-Angoon Census Area and the Petersburg Recording District.

*Demographic Profile*⁴⁴⁰

In 2010, there was one resident living in Hobart Bay, ranking it the 352nd largest of 352 total Alaskan communities with populations recorded that year. Overall between 1990 and 2010, the population of Hobart Bay fell by 99.5%. This decline in population took place between 1990 and 2000, falling from 187 to 3 over the decade, and the population remained at 3 or fewer residents through 2010 (Table 1). In 2000, two out of three permanent residents in Hobart Bay identified themselves as White while the third individual identified as American Indian and Alaska Native. Two of the three residents were between the age of 30 and 39, while the other was in the 40-49 age category. In 2010, the single resident of Hobart Bay was between the age of 60 and 69, and identified himself as American Indian and Alaska Native (Figure 1). No other racial or ethnic groups were represented in Hobart Bay in 2000 or 2010. According to a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, a community leader indicated that the one permanent resident is employed as a caretaker of the Hobart Bay logging camp.

The loss of a majority of the population of Hobart Bay between 1990 and 2000 is reflected in housing statistics. In 1990, there were 55 occupied housing units in Hobart Bay, with an average of 2.7 persons per household. By 2000, only two households were present in Hobart Bay, with an average household size of one. By 2010, there was one household with one person living in it. The one household surveyed for the 2010 U.S. Census was renter occupied. It is also of note that the total number of housing units in Hobart Bay declined precipitously between 1990 and 2010, from 63 available housing units in 1990 (of which 37 were rented, 18 were owner occupied and 8 were vacant) to 17 housing units in 2000 (of which one was rented, one was owner occupied, and 15 were vacant or used only seasonally), to 7 available housing units in 2010 (of which 1 was renter occupied the remaining 6 were vacant or used only seasonally). In 1990 there was also a population of 36 residents residing in group quarters in Hobart Bay. This number decreased to zero in 2000 and 2010.

⁴³⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁴⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Hobart Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	187	-
2000	3	-
2001	-	-
2002	-	-
2003	-	-
2004	-	-
2005	-	3
2006	-	2
2007	-	1
2008	-	1
2009	-	1
2010	1	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Hobart Bay: 2000-2010 (U.S. Census).

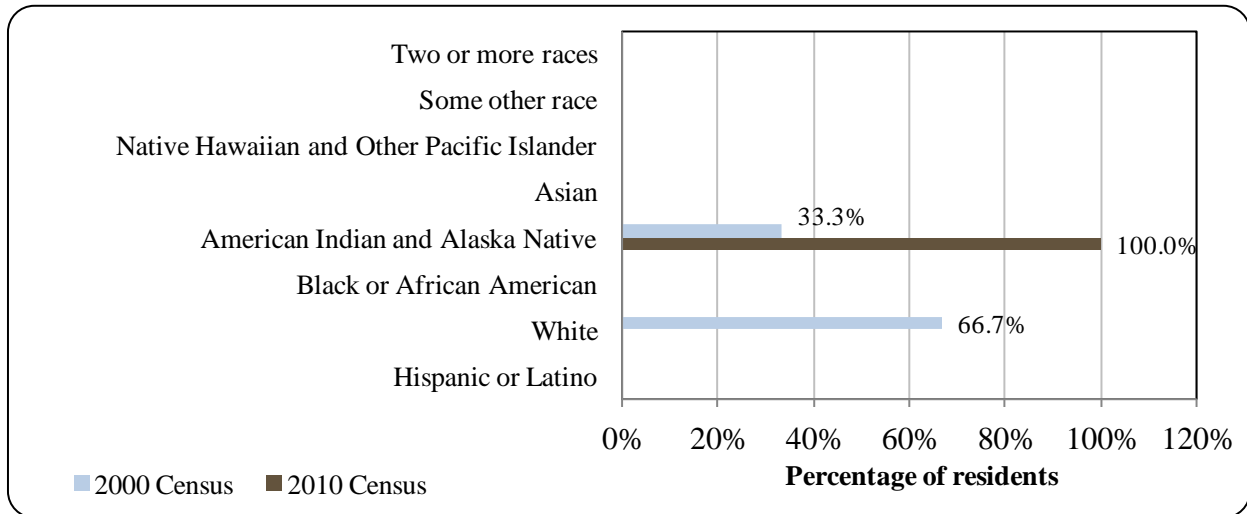
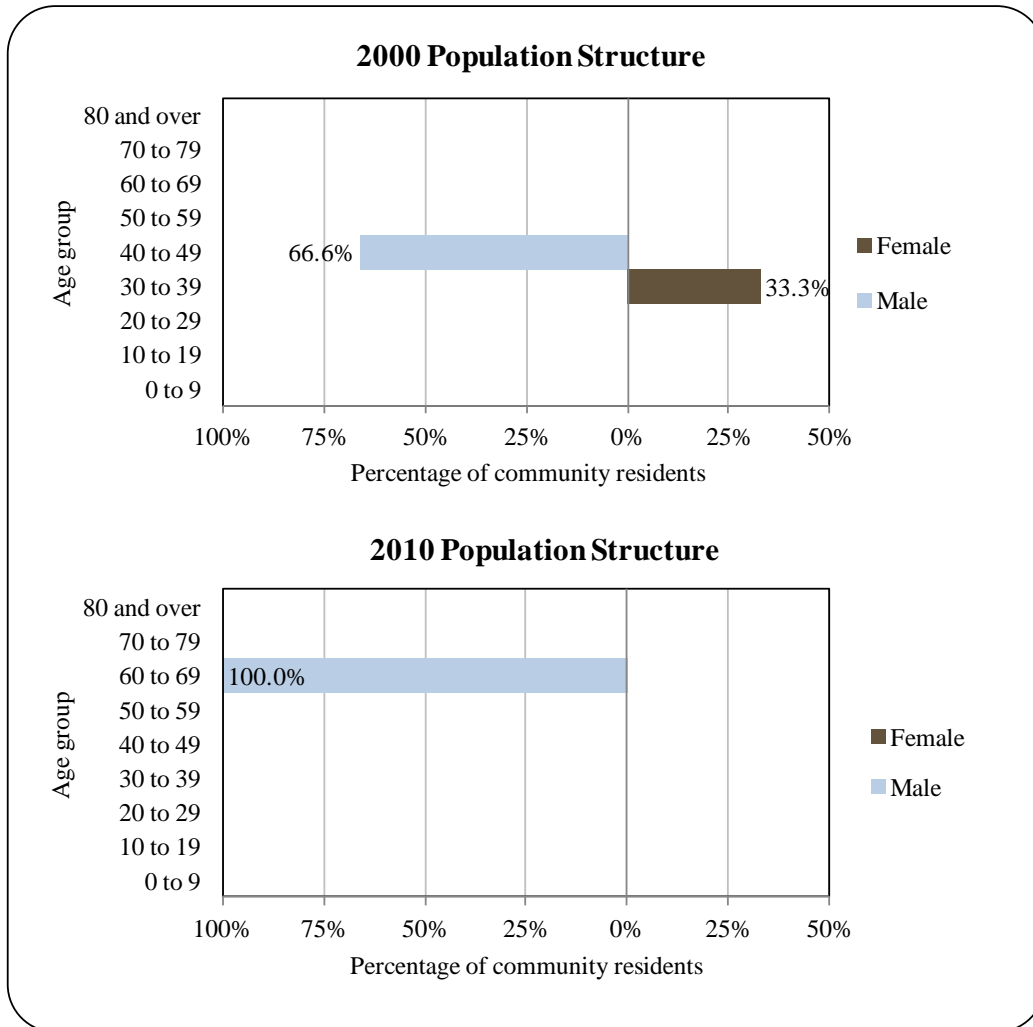


Figure 2. Population Age Structure in Hobart Bay Based on the 2000 and 2010 U.S. Decennial Census.



The 2006-2010 American Community Survey (ACS) did not provide any information regarding educational attainment in Hobart Bay in 2010. Although the U.S. Decennial Census recorded one individual as a permanent resident in Hobart Bay in 2010, the ACS estimated zero residents aged 16 and over in 2010.⁴⁴¹ In 2000, Census sample data for ‘Selected Social Characteristics’ estimated that there were four individuals aged 25 or older residing in Hobart Bay, all of which were held high school diplomas, and two of which also held Bachelor’s degrees. It is important to note that, as in the case of 2006-2010 ACS data, the small population of permanent residents in Hobart Bay in 2000 (three total residents recorded) was not accurately represented by census sample data (which reported one more individual living in the community than the total population).

⁴⁴¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Hobart Bay has been utilized by the Native people of Southeast Alaska for many centuries. The 1880 U.S. Census indicated that, prior to government-mandated consolidation at the present City of Kake, there were at least five villages of the Kake (Keex) Kwaan,⁴⁴² including locations on Kupreanof and Kuiu Islands, on the mainland at Port Houghton, and on Admiralty Island at Seymore Canal, with a total combined population of 568.⁴⁴³ According to testimony received during 1944 hearings in Seattle on aboriginal land rights, residents of Kake and other area Tlingit villages agreed that members of the Kake Kwaan historically occupied territory on the mainland near Port Houghton. The same clan that claimed Port Houghton also gathered herring eggs on Hobart Bay, and had houses on the north and south points of the Bay. However, following the 1944 hearings, the Secretary of the Interior did not designate these lands as “lands to which Natives were entitled under the doctrine of aboriginal rights,” and left them as “lands for which decision has been reserved.”⁴⁴⁴ The contemporary name of Hobart Bay was given in 1889 by Lt. Commander Mansfield of the U. S. Navy.⁴⁴⁵

Following the Alaska Native Claims Settlement Act (ANCSA) of 1971, the newly formed Urban Corporation⁴⁴⁶ from Juneau – Goldbelt, Inc. – selected land at Hobart Bay as part of its land claims settlement.⁴⁴⁷ Goldbelt also has land holdings in West Douglas and Echo Cove. Goldbelt hired a variety of logging contractors to harvest the timber resources during the 1970s and 1980s, and a community grew around the busy logging camp.⁴⁴⁸ By the 1990s, logging activity had declined considerably, and the workforce was scaled back, leading to a precipitous decline in permanent residents. The school was closed during the 1998-1999 school year.⁴⁴⁹ Logging operations also officially ended in 1999. In 2002, Goldbelt announced a proposal to turn the old logging camp into a tourist destination for cruise ships.⁴⁵⁰ However, the recent downturn in the global economy has put possible development of a tourist destination on hold. In the meantime, a year-round caretaker is employed to maintain the lands and roads at Hobart Bay.⁴⁵¹

⁴⁴² ‘Keex’ in Tlingit is pronounced similar to ‘Kake’ in English. ‘Kwaan’ is a Tlingit socio-geographical term meaning “inhabitants of,” literally a contraction of the Tlingit verb “to dwell.” It is most commonly used to refer to a geographic region consisting of those areas controlled by clans or house groups residing in a single winter village or several closely situated winter villages (Source: Thornton, T.. 1997. Know Your Place: The Organization of Tlingit Geographic Knowledge. *Ethnology*, Vol. 36, No. 4. Retrieved July 13, 2012 from <http://www.jstor.org>).

⁴⁴³ Krause, A. 1956. *The Tlingit Indians: Results of a Trip to the Northwest Coast of America and the Bering Straits*. Trans. Erna Gunther. University of Washington Press, Seattle, WA.

⁴⁴⁴ Walter R., and T. H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, T. F. Thornton (ed.). Seattle, WA: University of Washington Press.

⁴⁴⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁴⁶ 16 U.S.C. § 3102 (9): The term “Urban Corporation” means those Native entities which have incorporated pursuant to section 14(h)(3) of the Alaska Native Claims Settlement Act.

⁴⁴⁷ ANCSA 43 U.S.C. § 1613 (h)(3): The Secretary may withdraw and convey to the Natives residing in Sitka, Kenai, Juneau, and Kodiak, if they incorporate under the laws of Alaska, the surface estate of lands of a similar character in not more than 23,040 acres of land, which shall be located in reasonable proximity to the municipalities.

⁴⁴⁸ Goldbelt, Inc. 2012. *Our Company and Hobart Bay*. Retrieved September 27, 2012 from <http://www.goldbelt.com/>.

⁴⁴⁹ See footnote 445.

⁴⁵⁰ Schmid, C. October 6, 2002. Goldbelt plans tourism development at Hobart Bay. *The Juneau Empire*. Retrieved September 27, 2012 from http://juneauempire.com/stories/100602/loc_tourism.shtml.

⁴⁵¹ See footnote 448.

Natural Resources and Environment

Hobart Bay is located in a maritime climate zone characterized by cool summers and mild winters. Average summer temperatures range from 45 to 61 °F, and winter temperatures range from 25 to 39 °F.⁴⁵² This region receives much less precipitation than is typical of Southeast Alaska, with average annual rainfall of approximately 60 inches.⁴⁵³

The topography surrounding Hobart Bay is characterized by steep mountainsides, rising to 5,000 feet in elevation within several miles of the coast.⁴⁵⁴ Inland areas host spruce bogs, sphagnum bogs, and scrub bogs, while the coastal plain consists primarily of spruce bog. The coast is lined by forest and estuarine wetlands, and a flat coastal plain consists primarily of spruce bog.⁴⁵⁵ Forest stands are primarily made up of western hemlock and Sitka spruce, along with scattered Alaska cedar and lodgepole pine in sites with poor drainage. Wildlife includes brown and black bear, moose, Sitka black-tailed deer, wolves, mountain goats, mink, marten, beaver, and other furbearers. Area streams support pink, chum, coho, and sockeye salmon, as well as Dolly Varden, cutthroat trout, and steelhead. Harbor seals have several haulouts along the section of coast between Cape Fanshaw and Windham Bay.⁴⁵⁶ Humpback whales are also known to congregate in large numbers in marine waters near Hobart Bay to feed on concentrations of Pacific herring and krill found in Stephens Passage and Frederick Sound.⁴⁵⁷

A majority of land immediately surrounding Hobart Bay is owned by Goldbelt, Inc., the Urban Native Corporation for Juneau. Much of the 30,000 acres owned by Goldbelt was extensively logged in the 1970s and 1980s. Areas that were clear cut during that period are now in various stages of re-growth for the benefit of both wildlife habitat and forest health.⁴⁵⁸ These Native Corporation lands are adjacent to Tongass National Forest lands. At 16.8 million acres, the Tongass is the largest National Forest in the U.S. Approximately 95% of Southeast Alaska is federal land, of which 80% is designated as National Forest. It includes almost 11,000 miles of meandering island and mainland shorelines. It is managed to produce resource values, products and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.⁴⁵⁹ National Forest lands in the vicinity of Hobart Bay are primarily managed for timber development, along with coastal areas to the north which are designated as scenic viewshed and old-growth habitat.⁴⁶⁰

⁴⁵² Ibid.

⁴⁵³ World Weather Online. 2012. *Average High/Low Temperature for Hobart Bay, United States Of America*. Retrieved September 27, 2012 from <http://www.worldweatheronline.com/>.

⁴⁵⁴ Tongass National Forest website. (n.d.). *Roadless Area Maps & Descriptions – Windham-Port Houghton Roadless Area*. Retrieved September 27, 2012 from <http://www.tongass-seis.net/roadless.html>.

⁴⁵⁵ Alaska Dept. of Natural Resources. 2000. *Central/Southern Southeast Alaska Area Plan*. Retrieved March 29, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/cs_southeast/pdf/adopt_csseap_complete.pdf.

⁴⁵⁶ See footnote 454.

⁴⁵⁷ See footnote 455.

⁴⁵⁸ Goldbelt, Inc. website. 2012. *Hobart Bay*. Retrieved September 27, 2012 from <http://www.goldbelt.com/lands-real-estate/hobart-bay>.

⁴⁵⁹ U.S. Forest Service. (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

⁴⁶⁰ U.S. Forest Service. 2003. *Map of Current Land Use Designations*. Tongass National Forest Land Management Plan Revision, Final SEIS. Retrieved May 8, 2012 from <http://www.tongass-seis.net/pdf/lud.pdf>.

Protected areas near Hobart Bay include the Chuck River Wilderness, located immediately east of Native Corporation lands, and the Tracy Arm-Fords Terror Wilderness inland of the Chuck River Wilderness. The 74,506-acre Chuck River Wilderness follows the path of the Chuck River, from headwaters in Port Houghton (north of Hobart Bay) to its outlet at Windam Bay (south of Hobart Bay). The area within the Chuck River Wilderness rises to approximately 5,000 in elevation.⁴⁶¹ The larger Tracy Arm – Fords Terror Wilderness, totaling 653,179 acres, includes two narrow, deep fjords with tidewater glaciers at their terminus. Sheer fjord walls rise to rugged mountains. Both of these fjords are popular destinations for cruise ships, smaller charter vessels, and sea kayakers.⁴⁶²

In addition, National Forest lands between the Chuck River Wilderness and the coast are included in the 161,922-acre Windam-Port Houghton Roadless Area. This roadless areas does not contain areas of LUD II (land-use designation II), which would be “permanently managed in a roadless state to retain their wildland characteristics.”⁴⁶³ The status of roadless areas in the Tongass National Forest has been a controversial issue in recent years. The Roadless Area Conservation Rule (RACR) was instated in 2001, prohibiting road construction and timber harvesting in 58.5 million acres of roadless areas in the National Forest System. Lawsuits were filed following the RACR, and an exemption was granted for the Tongass National Forests in 2003. A coalition of Alaska Natives, recreation groups, and environmental groups filed a lawsuit in 2009 seeking to reinstate the rule, and on March 4, 2011, the Tongass Exemption was repealed. As of 2012, the RACR applies to roadless areas in the Tongass National Forest.⁴⁶⁴

With regard to marine protections, Hobart Bay is located within the Sumdum-Stephens Passage Tidelands and Marine Water Special Management Area. The management goal of this area is to protect habitat and food sources for humpback whales and other marine mammals, and to protect commercial fishing resources. Humpback whales are known to congregate in the area to feed on high concentration of Pacific herring and krill. Cruise ships, charter boats, and private watercraft often travel to the area for the purpose of whale watching, photography, and whale research. In addition to humpbacks, orca whales frequent the area to feed on harbor seals and Steller sea lions at the Brother’s Islands, immediately across Stephens Passage from Hobart Bay. With regard to commercial fishing value, stocks of red and brown king crab, Tanner crab, halibut, sablefish, and Pacific cod are known to be present in this area, as well as herring spawning areas at various locations along the coastline.⁴⁶⁵

After the decline of logging activity at Hobart Bay in the 1990s, Goldbelt, Inc. proposed development of the old logging camp into a major deepwater cruise ship destination port. These plans are currently on hold due to the economic downturn of the late 2000s.^{466,467} Whale

⁴⁶¹ Wilderness.net. (n.d.). *Chuck River Wilderness*. Retrieved September 28, 2012 from <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&WID=120>.

⁴⁶² Wilderness.net. (n.d.). *Tracy Arm-Fords Terror Wilderness*. Retrieved September 28, 2012 from <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&WID=120>.

⁴⁶³ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume I: Final SEIS Appendix A, B, D, E*. Retrieved April 25, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_I.pdf.

⁴⁶⁴ U.S. Forest Service. August 2011. *Status of Roadless Area Conservation Rule*. Retrieved September 11, 2012 from http://www.fs.fed.us/biology/resources/pubs/issuepapers/issuepaper_RoadlessRules-201108.pdf.

⁴⁶⁵ Alaska Dept. of Natural Resources. 2000. *Central/Southern Southeast Alaska Area Plan*. Retrieved March 29, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/cs_southeast/pdf/adopt_csseap_complete.pdf.

⁴⁶⁶ Goldbelt, Inc. 2012. *Our Company*. Retrieved September 27, 2012 from <http://www.goldbelt.com/>.

⁴⁶⁷ Schmid, C. October 6, 2002. “Goldbelt plans tourism development at Hobart Bay.” *The Juneau Empire*. Retrieved September 27, 2012 from http://juneauempire.com/stories/100602/loc_tourism.shtml.

researchers have expressed concern about the detrimental impact that increased cruise ship traffic to the region could have on the humpback whales.⁴⁶⁸

Natural hazards in the Hobart Bay area include risk of severe weather, storm surge, flooding, shoreline erosion, sea level rise, subsidence, earthquake and tsunami, and avalanche and landslides. Isostatic rebound is taking place throughout Southeast Alaska due to recent retreat of glaciers. This can result in acceleration of erosion caused by rivers and streams, and may also cause streams to dry up if they rise above the water table. In addition, isostatic rebound may outweigh the effects of sea level rise in this area.⁴⁶⁹

According to the Alaska Department of Environmental Conservation (DEC), there are no notable active environmental cleanup sites located in Hobart Bay as of September, 2012.⁴⁷⁰ However, it is important to note that, in 1998, Hobart Bay failed to meet a DEC water quality standard related to bark and woody debris concentrations. A follow-up dive survey in 2007 documented improvement showing that the site is now attaining water quality standards.⁴⁷¹

Current Economy⁴⁷²

Goldbelt, Inc's logging camp provided most of the employment in Hobart Bay from the 1970s through the 1990s. Logging activity began to decline after 1990, and few employment opportunities remained in Hobart Bay following the final closure of logging operations in 1999.⁴⁷³ According to the 2011 AFSC survey, a representative of the Tribal Council indicated that the local economy in Hobart Bay now relies more heavily on ecotourism activities such as whale watching and kayaking. In 2002, Goldbelt, Inc. proposed development of the old logging camp into a major deepwater cruise ship destination port. These plans are currently on hold due to the economic downturn of the late 2000s. A caretaker is currently employed at Hobart Bay to maintain the lands and roads until plans for the future of the site can be finalized.^{474,475}

Although the U.S. Decennial Census reported one residents age 16 or over in Hobart Bay in 2010, household surveys conducted for the 2006-2010 ACS did not collect any data from this resident.^{476,477} The civilian labor force was estimated to be zero and no earnings were reported in

⁴⁶⁸ Szabo, A. (n.d.) *Hobart Bay Project: Southern Stephens Passage and Eastern Frederick Sound Marine Mammal Baseline Study*. Alaska Whale Foundation. Retrieved August 30, 2012 from <http://www.alaskawhalefoundation.org/research/HobartBay/Hobart.html>.

⁴⁶⁹ Alaska Dept. of Natural Resources. 2005. *High Priority Coastal Hazards*. Retrieved April 19, 2012 from http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

⁴⁷⁰ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved September 25, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁴⁷¹ Alaska Dept. of Environmental Conservation. (2010). *Alaska's Final 2010 Integrated Water Quality Monitoring and Assessment Report*. Retrieved September 28, 2012 from http://www.dec.alaska.gov/water/wqsar/Docs/2010_Integrated_Report_Final_20100715_corrected_july_19.pdf.

⁴⁷² Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁷³ See footnote 467.

⁴⁷⁴ Ibid.

⁴⁷⁵ Goldbelt, Inc. website. 2012. *Hobart Bay*. Retrieved September 27, 2012 from <http://www.goldbelt.com/>.

⁴⁷⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁷⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not

Hobart Bay in 2010. Economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD) also indicate that there were zero employed residents in Hobart Bay in 2010.⁴⁷⁸ Given the lack of civilian labor force, the 2006-2010 ACS did not estimate employment statistics.

Income and employment information was reported in the 2000 Census. In 2000, the per capita income in Hobart Bay was reported to be \$34,900 and the median household income was \$68,750. Taking inflation into account by converting the 2000 values to 2010 dollars,⁴⁷⁹ the real per capita income in 2000 is shown to have been \$45,893, and the real median household income in 2000 was \$90,405. Hobart Bay ranked 9th of 344 Alaskan communities with per capita income data in 2000, and 8th in median household income, out of 341 Alaskan communities with household income data that year. In 2000, no Hobart Bay residents were below the poverty level, compared to 9.4% of Alaskan residents overall, and the local unemployment rate was 0%, compared to a statewide rate of 6.1%.

Sample data from the 2000 U.S. Census estimated that there were four residents aged 16 and older in Hobart Bay, all of which were employed in the civilian labor force that year. Two of the four individuals were estimated to be working in manufacturing industries (production, transportation, and material moving occupations), and the other two worked in educational, health, and social service industries (service occupations) (Figures 3 and 4). As in the case of 2006-2010 ACS estimates,⁴⁸⁰ sample data from the 2000 U.S. Census may not provide an entirely accurate representation of communities with very small populations, as reflected by the conflicting numbers between the total population in Hobart Bay (three) and the number of residents employed in the civilian labor force in 2000 (four).

collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁷⁸ Alaska Dept. of Labor and Workforce Dev. (n.d.). *Alaska Local and Regional Information*. Retrieved May 22, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

⁴⁷⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁸⁰ See footnotes 476 and 477.

Figure 3. Local Employment by Industry in 2000-2010, Hobart Bay (U.S. Census).

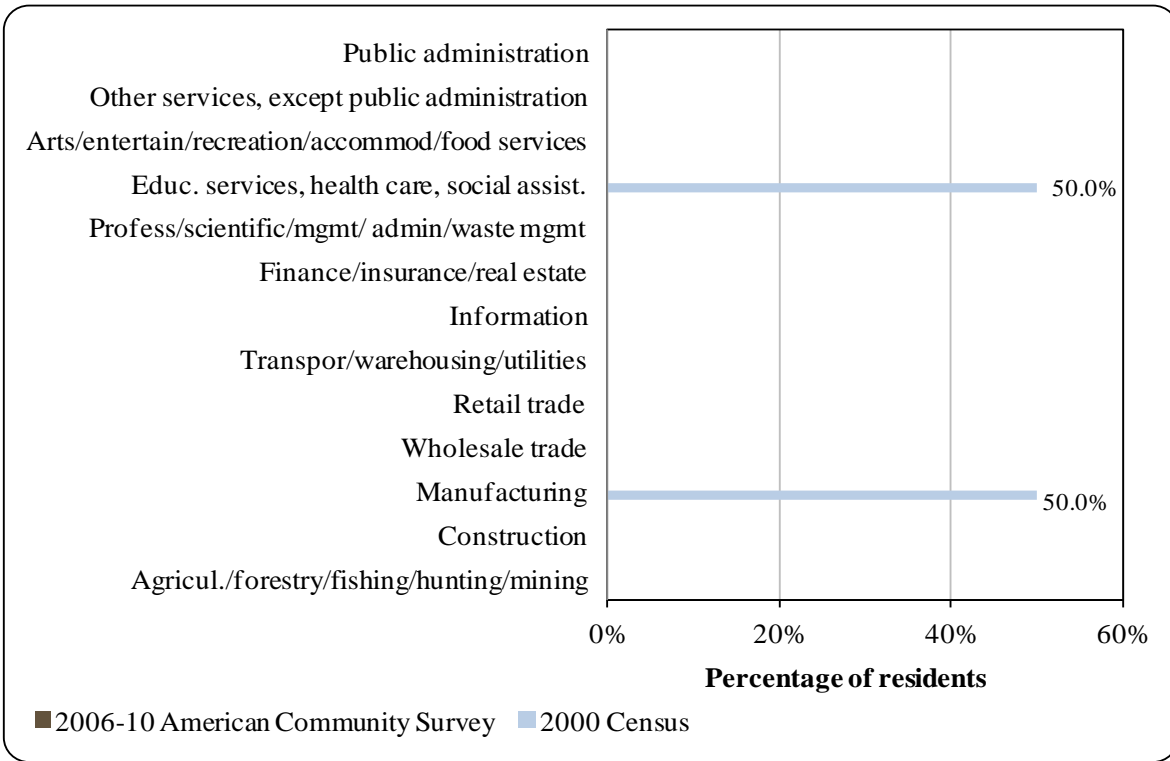
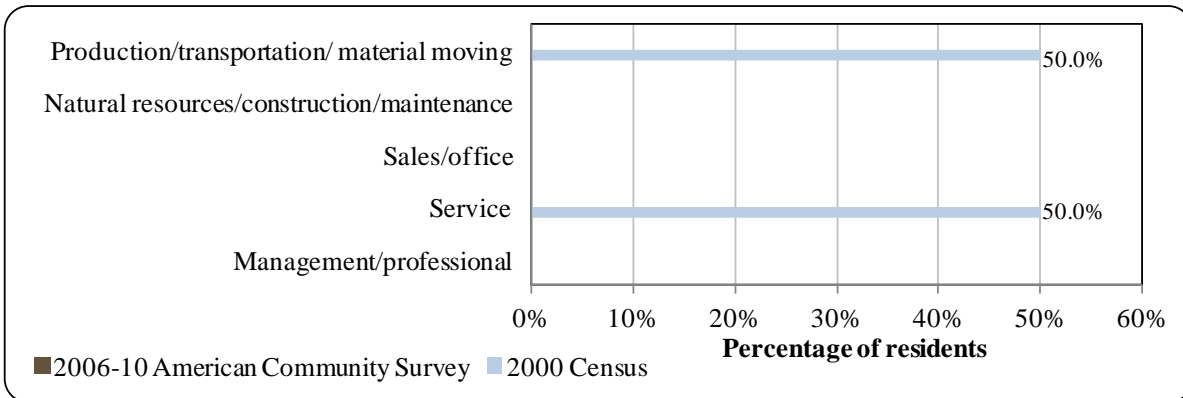


Figure 4. Local Employment by Occupation in 2000-2010, Hobart Bay (U.S. Census).



Governance

Hobart Bay is an unincorporated community located and is not located in an organized borough. Given this, there is no taxing authority in Hobart Bay.⁴⁸¹ No municipal revenue was reported between 2000 and 2010. In addition, no information was reported regarding State and Community Revenue Sharing contributions or fisheries-related grants received by the Hobart Bay between 2000 and 2010 (Table 2). Hobart Bay was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.⁴⁸² However, it is important to note that approximately 30,000 acres of land in and around Hobart Bay is owned by Juneau’s Urban Native Corporation, Goldbelt, Inc. Decisions about future land use and development strategies in Hobart Bay will be made by the Corporation.⁴⁸³

The closest offices of the Alaska Department of Fish and Game (ADF&G), the U.S. Forest Service, and an enforcement office of the National Marine Fisheries Service (NMFS) are located in Petersburg. Juneau hosts the Alaska Regional Office of the NMFS, the AFSC Auke Bay laboratories, and the closest offices of the Alaska Department of Natural Resources and Alaska Department of Commerce, Community, and Economic Development. The nearest field office of the U.S. Bureau of Citizenship and Immigration Services is located in Ketchikan.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Hobart Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁴⁸¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁸² Ibid.

⁴⁸³ Goldbelt, Inc.. 2012. *Our Company and Hobart Bay*. Retrieved September 27, 2012 from <http://www.goldbelt.com/>.

Infrastructure

Connectivity and Transportation

The community is primarily accessed by float plane or private boat. There is a public dock.⁴⁸⁴ No scheduled float plane service is available to Hobart Bay. However, charter floatplane service is available throughout Southeast Alaska. Petersburg and Juneau are the nearest cities with sizeable float plane fleets. As of June 2012, roundtrip airfare between Anchorage and Juneau cost \$353, and roundtrip airfare between Petersburg and Anchorage was 449.⁴⁸⁵

Facilities

Utilities in Hobart Bay are provided and maintained by Goldbelt, Inc., the Native corporation that owns the land in and around Hobart Bay. Water is derived from a surface water source. The water is filtered and chlorinated and distributed to housing units via a piped water system. All housing units in Hobart Bay are fully plumbed. A piped sewer system brings sewage from most homes to a community septic tank, while some homes use individual septic tanks or outhouses. Goldbelt, Inc. provides refuse collection services and maintains a Class 3 landfill. Electricity is provided by individual diesel generators. No police or fire and rescue services are available in Hobart Bay. The nearest state trooper post is located in Petersburg.⁴⁸⁶

With regard to fisheries-related infrastructure, a community leader reported in the 2011 AFSC survey that new dock space was constructed in Hobart Bay within the last 10 years. The community noted that no permanent vessel moorage is available, but vessels of up to 70 feet in length can use moorage in Hobart Bay on a temporary basis. Docking infrastructure in Hobart Bay is capable of handling rescue vessels (e.g., Coast Guard), fuel barges, and private yachts. The Tribal Council representative reported that no other fisheries-related infrastructure, businesses or services are available in Hobart Bay, and indicated that local residents travel to Petersburg, Kake, or Juneau to access fisheries-related businesses and services.

Medical Services

There is no medical clinic in Hobart Bay, but emergency services have coastal and helicopter access.⁴⁸⁷ The nearest hospitals are located in Petersburg and Juneau.

Educational Opportunities

Following the population decline of the 1990s, the school was closed during the 1998-1999 school year.⁴⁸⁸ No school-aged children currently reside in Hobart Bay.⁴⁸⁹

⁴⁸⁴ See footnote 481.

⁴⁸⁵ These fares were calculated on November 21, 2011 using kayak.com.

⁴⁸⁶ See footnote 481.

⁴⁸⁷ Ibid.

⁴⁸⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴⁸⁹ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence harvest of marine resources has always been foundational to the economy and way of life of the Tlingit people that originally inhabited Hobart Bay and the surrounding region.⁴⁹⁰ Historically, fish traps, gaffs, and spears were used to catch salmon, one of the most important subsistence resources for the Tlingit people. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., ‘gumboot’ chitons), and sea plants (e.g., seaweed, beach asparagus and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas, and egg harvesting sites.^{491,492} Hobart Bay is recognized as a site where herring eggs were historically harvested by members of the Kake Kwaan.⁴⁹³

Today, a number of important commercial fisheries take place in the vicinity of Hobart Bay, including fisheries for salmon, crab, shrimp, halibut, and sablefish.⁴⁹⁴ Commercial harvest of salmon began in Southeast Alaska in the late 1870s. Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho, and Chinook). Because of Southeast Alaska’s proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty. The Treaty was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.⁴⁹⁵

Herring fisheries began in Southeast Alaska in the 1880s, with original production oriented toward herring oil and herring meal. Catch of herring for bait began around 1900, and sac roe fisheries developed in the 1970s. In Southeast Alaska, bait herring fisheries take place during the winter each year, while roe is harvested in the spring. Bait and sac roe fisheries use purse seine and set gillnet gear, and roe is also harvested in spawn-on-kelp closed-pound

⁴⁹⁰ W.R. and T.H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.

⁴⁹¹ Alaska Native Heritage Center. (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

⁴⁹² Brock, Mathew, Philippa Coiley-Kenner and the Sitka Tribe of Alaska. (2009). *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

⁴⁹³ See footnote 490.

⁴⁹⁴ Petitioners for Incorporation of the Petersburg Borough. March 2012. *Petitioners Comment to February 2012 Preliminary Report to the Local Boundary Commission*. Retrieved September 28, 2012 from http://www.ci.petersburg.ak.us/index.asp?SEC=54CFDDA3-1BD6-43CB-87AA-5A5BD614CEAC&Type=B_BASIC.

⁴⁹⁵ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

fisheries.⁴⁹⁶ A “closed-pound” is a single, floating, rectangular frame structure with suspended webbing used to enclose herring long enough for them to spawn on kelp in the enclosure.⁴⁹⁷

In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska. The U.S. and Canada signed the Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean in 1923, and since the Convention took effect in 1924, Pacific halibut fisheries have been managed by the International Pacific Halibut Commission, earlier called the International Fisheries Commission.⁴⁹⁸ Halibut fisheries are restricted to use of hook and line gear, although a limited number of halibut can be caught and retained as incidental catch in salmon troll fisheries and sablefish trap fisheries, as well as bycatch in a variety of fisheries using diverse gear types.^{499,500}

Sablefish were first harvested in Southeast Alaska as bycatch in the halibut fishery.⁵⁰¹ By the 1930s, several state-managed sablefish fisheries began in Southeast inside waters as early as the 1930s, including a fishery in Frederick Sound. However, due to diminished catch in Frederick Sound, starting in the 1940s the fleet began to focus fishing effort in Chatham Strait, west of Admiralty Island. Sablefish are harvested using longline or pot gear, and the state fisheries that take place in inside waters are managed independently of the federal fishery.⁵⁰²

In 1995, management of Alaskan halibut and sablefish fisheries shifted from limited entry to a system of Individual Fishing Quotas (IFQ). Motivations for the shift included overcapitalization, short seasons, and the derby-style fishery that led to loss of product quality and safety concerns. As a result of program implementation, the number of shareholders and total vessels participating in the halibut and sablefish fisheries declined substantially, and product quality has improved. This shift to catch shares has been controversial, raising concerns about equity of catch share allocation, reduced crew employment needs, and loss of quota from coastal communities to outside investors.⁵⁰³

Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska

⁴⁹⁶ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J.H. Clark, and L. Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁴⁹⁷ Alaska Dept. of Fish and Game. (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.adfg.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

⁴⁹⁸ International Pacific Halibut Commission. 2006. *History*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/pamphlet/1IPHCHistoryPage.pdf>.

⁴⁹⁹ International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

⁵⁰⁰ Williams, G. 2010. “Halibut Bycatch limits in the 2010 Alaska groundfish fishery.” *IPHC Report of Assessment and Research Activities*. Retrieved September 12, 2012 from <http://www.iphc.washington.edu/publications/rara/2010/2010.299.Halibutbycatchlimitsinthe2010Alaskagroundfishfishery.pdf>.

⁵⁰¹ See footnote 496.

⁵⁰² Carroll, K. and K. Green. June 2012. *Southeast Alaska Northern Southeast Inside Sablefish Fishery Information Report, With Outlook for the 2011 Fishery*. Alaska Dept. of Fish and Game, Fishery Management Report No. 12-28. Retrieved September 11, 2012 from <http://www.sf.adfg.state.ak.us/FedAidPDFs/fmr12-28.pdf>.

⁵⁰³ Fina, M. 2011. “Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific.” *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.⁵⁰⁴

The first northern shrimp (*Pandalus borealis*) trawl fishery began in Thomas Bay, just southeast of Hobart Bay, in 1915.⁵⁰⁵ Although fisheries for this species also began in other areas of the state, the Southeast trawl fishery was the longest-lived and most stable fishery. The fishery peaked in the 1950s. Harvests began to decline in the late 1990s due to heavy competition from shrimp products originated in the Atlantic and the Pacific Northwest, and the market for northern shrimp finally collapsed with the closure of the only processing facility in Petersburg in the 2005-2006 season. Today, the Southeast Alaska shrimp trawl fishery is primarily directed toward sidestripe shrimp (*Pandalopsis dispar*), a larger and more valuable species.⁵⁰⁶ A spot shrimp (*Pandalus platyceros*) fishery has also grown in Southeast Alaska since the 1990s.⁵⁰⁷ Crab species known to occur in marine waters near Hobart Bay include red and brown king crab and Tanner crab.⁵⁰⁸ Commercial harvests of these species were first reported in Southeast in the 1960s.^{509,510}

Hobart Bay is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is “Southeast Outside.” Hobart Bay is not eligible to participate in the Community Quota Entity or Community Development Quota program. In the 2011 AFSC survey, community leaders reported that Hobart Bay does not actively participate in fisheries management processes in Alaska.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Hobart Bay does not have a registered processing plant. The nearest processing plants are located in Kake and Petersburg.

Fisheries-Related Revenue

Between 2000 and 2010, there is no known fisheries-related revenue for Hobart Bay (Table 3).

⁵⁰⁴ See footnote 496.

⁵⁰⁵ Ibid.

⁵⁰⁶ Alaska Dept. of Fish and Game. 2012. *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=northernshrimp.printerfriendly>.

⁵⁰⁷ See footnote 496.

⁵⁰⁸ Alaska Dept. of Natural Resources. 2000. *Central/Southern Southeast Alaska Area Plan*. Retrieved March 29, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/cs_southeast/pdf/adopt_csseap_complete.pdf.

⁵⁰⁹ Stratman, J., G. Bishop, A. Messmer, and C. Siddon. (2011). *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat Tanner Crab Fisheries*. Alaska Dept. of Fish and Game Fishery Management Report No. 11-57. Retrieved September 12, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-57>.

⁵¹⁰ Stratman, J., A. Messmer, G. Bishop, C. Siddon, and A. Olson. (2011). *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat King Crab Fisheries*. Alaska Dept. of Fish and Game Fishery Management Report No. 11-57. Retrieved September 12, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-68.pdf>.

Commercial Fishing

Commercial fishing participation by Hobart Bay residents was minimal between 2000 and 2010. One commercial crew license was held in 2000, and again in 2002. No residents held permits in state or federal fisheries or quota share accounts in federal catch share fisheries during the 2000-2010 period (Table 4). In addition, no Hobart Bay residents were the primary owner of a fishing vessel, although one vessel was homeported in Hobart Bay from 2000 to 2004. No fish buyers or shore-side processors were present in the community during the 2000-2010 period (Table 5). No landings or ex-vessel revenue were reported in Hobart Bay (Table 9), and given the lack of vessel ownership, no data are reported regarding landings and revenue generated by Hobart Bay vessel owners (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Hobart Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Hobart Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Hobart Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Hobart Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Hobart Bay ²	Total Net Pounds Landed In Hobart Bay ^{2,5}	Total Ex-Vessel Value Of Landings In Hobart Bay ^{2,5}
2000	1	0	0	0	1	0	0	\$0
2001	0	0	0	0	1	0	0	\$0
2002	1	0	0	0	1	0	0	\$0
2003	0	0	0	0	1	0	0	\$0
2004	0	0	0	0	1	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Hobart Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Hobart Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Hobart Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Hobart Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Hobart Bay Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to the 2011 AFSC survey, community leaders indicated that Hobart Bay residents fish recreationally using their own private boats, and some Goldbelt, Inc. employees also sport fish in the area. Community leaders indicated that the primary targets of sportfishing in Hobart Bay include pink, chum, Chinook, and coho salmon, halibut, crab, clams, and shrimp. The Alaska Statewide Harvest Survey,⁵¹¹ conducted by ADF&G between 2000 and 2010, did not report on species targeted by private anglers in Hobart Bay.

Between 2000 and 2010, the number of sportfishing licenses issued to Hobart Bay residents varied between zero and eight per year. No active sport fish guide businesses or licensed sport fish guides were present in the community during this period. Given the lack of sport fish businesses, no kept/release log book data were reported for fishing charters out of Hobart Bay between 2000 and 2010.⁵¹² The fact that no licenses were sold in Hobart Bay indicates that local residents must travel to other communities to prepare for sportfishing. Information about the local sportfishing sector in Hobart Bay is presented in Table 11.

Hobart Bay is located within Alaska Sport Fishing Survey Area E – Juneau. Information is available about both saltwater and freshwater sportfishing activity at this regional scale (Table 11). Between 2000 and 2010, there was much higher saltwater sportfishing activity than in freshwater in this region. On average, Alaska resident anglers fished more days in both freshwater and saltwater than non-Alaska resident anglers, although non-Alaska resident anglers fished more days in some years.

Table 11. Sport Fishing Trends, Hobart Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Hobart Bay ²
2000	0	0	4	0
2001	0	0	4	0
2002	0	0	8	0
2003	0	0	0	0
2004	0	0	0	0
2005	0	0	0	0
2006	0	0	0	0
2007	0	0	0	0
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	1	0

⁵¹¹ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁵¹² Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Cont. Sport Fishing Trends, Hobart Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	13,338	29,430	4,343	6,189
2001	19,144	12,469	4,831	5,255
2002	13,737	23,403	3,468	4,628
2003	12,401	13,077	3,380	7,584
2004	21,412	15,646	4,813	5,848
2005	17,196	15,351	3,835	3,465
2006	20,822	20,572	4,578	3,548
2007	19,957	19,407	4,176	3,226
2008	23,754	16,530	3,043	5,945
2009	19,188	26,448	2,564	6,071
2010	21,290	18,419	3,358	3,955

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Between 2000 and 2010, no information was reported by management agencies regarding per capita subsistence harvest in Hobart Bay or the percentage of households utilizing various marine resources for subsistence purposes (Table 12). Likewise, no information was reported regarding harvest of salmon, marine invertebrates, or non-salmon fish (Table 13), halibut (Table 14) or marine mammals (Table 15) by Hobart Bay residents during the 2000-2010 period. According to the 2011 AFSC survey, community leaders reported no notable subsistence harvest takes place in Hobart Bay given the small population of the community.

Table 12. Subsistence Participation by Household and Species, Hobart Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Hobart Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Hobart Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Hobart Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

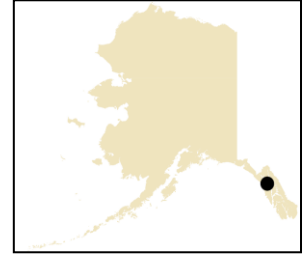
² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Hoonah (HOO-nah)

People and Place

*Location*⁵¹³



Hoonah is a Tlingit community located on the northeast shore of Chichagof Island, 40 air miles west of Juneau and approximately 550 air miles southeast of Anchorage. Hoonah is located in the Hoonah-Angoon Census Area and the Sitka Recording District. The City area encompasses 6.6 square miles of land and 2.1 square miles of water.

Demographic Profile 514

In 2010, there were 760 residents in Hoonah, making it the 80th largest of 352 total Alaskan communities with populations recorded that year. After increasing by 8.2% between 1990 and 2000, the population of Hoonah declined again to 4.4% below 1990s levels by 2010. This decline is supported by Alaska Department of Labor estimates, which show an 11.2% decrease in permanent residents in Hoonah between 2000 and 2009 (Table 1). The average annual growth rate from 2000 to 2009 was -0.86%, reflecting consistent decline with small increases in some years. In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that 860 seasonal workers or transients are also present in Hoonah, primarily between the months of April and September. They also indicated that Hoonah experiences an annual population peak in July and August, which is somewhat driven by employment in fishing sectors.

In 2010, more than half of Hoonah residents identified themselves as American Indian and Alaska Native (52.5%), while 32.6% identified themselves as White, 13.8% as two or more races, 0.5% as Asian, 0.4% as Black or African American, and 0.1% as ‘some other race’. Also in 2010, 3% of Hoonah residents identified themselves as Hispanic or Latino (Figure 1). Compared to 2000, these numbers remained relatively stable, with a small decrease in the percentage of the population identifying as American Indian and Alaska Native, and a proportional increase in the percentages identifying as White or as ‘two or more races’.

The number of households in Hoonah increased over time, from 242 occupied housing units in 1990 to 300 in 2000, and 305 in 2010. The average household size in the community also increased between 1990 and 2000, from 3.2 to 3.34, and then declined to 2.49 in 2010. This decrease in household size between 2000 and 2010 accounts for the population decline over the decade. Of the 399 total housing units surveyed for the 2010 U.S. Census, 47.4% were owner-occupied, 29.1% were rented, and 23.6% were vacant or used only seasonally. In 1990, 4 Hoonah residents were reported to be living in group quarters, increasing to 10 in 2000. No residents lived in group quarters in 2010.

⁵¹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵¹⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

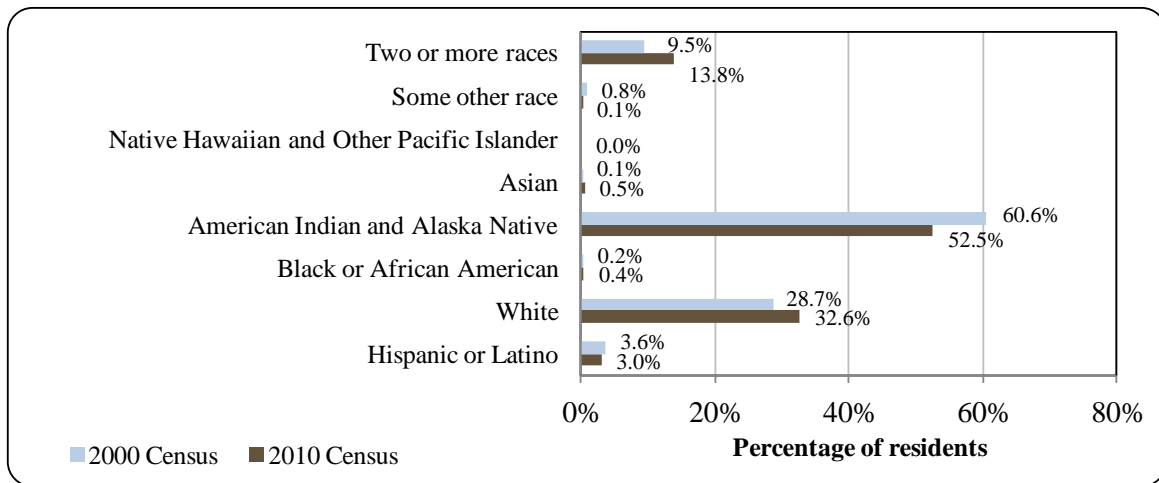
Table 1. Population in Hoonah from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	795	-
2000	860	-
2001	-	871
2002	-	873
2003	-	846
2004	-	839
2005	-	857
2006	-	824
2007	-	836
2008	-	819
2009	-	764
2010	760	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

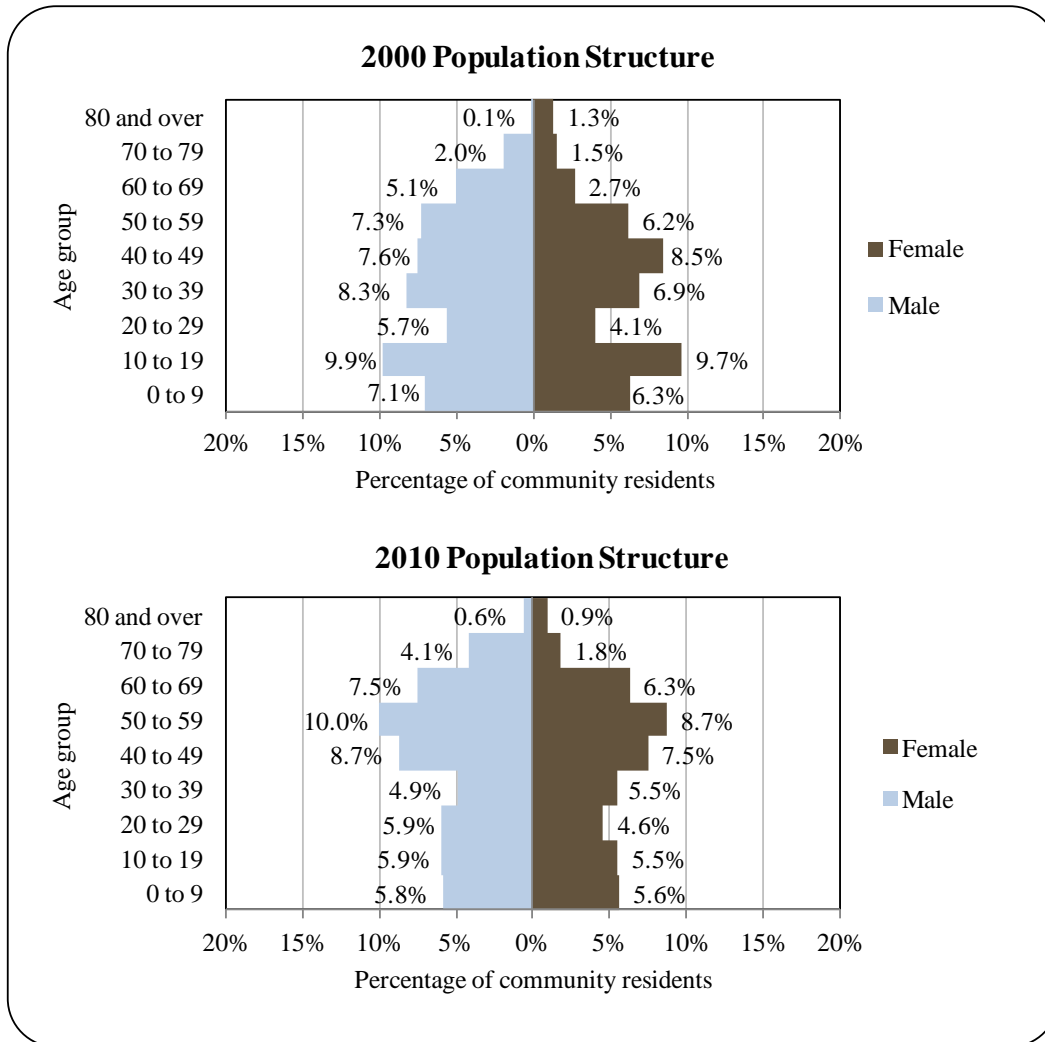
² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Hoonah: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Hoonah’s population was 53.4% male and 46.5% female. This is slightly more skewed toward males than the population of the state as a whole that year, which was 52% male and 48% female. Hoonah residents were much older on average in 2010 than in 2000. The median age in 2010 was estimated to be 44.6 years, compared to a median age of 35.6 years in 2000. In addition, 21.3% of the Hoonah population was age 60 or older in 2010, compared to 12.7% in 2000. The overall population structure of Hoonah in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Hoonah Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁵¹⁵ estimated that 91.5% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, 3.9% had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 4.6% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 17.6% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 15.4% held an Associate's degree, compared to an estimated 8% of Alaskan residents overall; 16.9% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and 6.4% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

⁵¹⁵ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Historical accounts suggest that Tlingit people of the Hoonah (*Huna*) Kaawu^{516,517} occupied the northern portion of Chichigof Island and the mainland shore of Cross Sound and Icy Strait. In addition, the Huna people used the area as far north as Lituya Bay in the Gulf of Alaska. According to local legend, the ancestral home of the Huna people was in Glacier Bay, and was destroyed by advancing glaciers.⁵¹⁸ Oral traditions tell of times when the glaciers extended out of Glacier Bay as far as Point Adolphus, and people traveled under the ice back and forth in Icy Strait.⁵¹⁹

The current community of Hoonah is located in Port Frederick on the northeast corner of Chichigof Island. Port Frederick was explored and given its modern name by Captain Vancouver in 1794.⁵²⁰ Hoonah has been the primary permanent settlement of the Huna Tlingit since earliest recorded history.⁵²¹ Its Tlingit name is Gaotlakan (*Gaaw T'ak Aan*). In the early 1900s, several other villages of the Huna Kaawu were also documented, including a village site in Excursion Inlet, one just east of the mouth of Excursion Inlet at Homeshore, one at the mouth of the Alsek River, and one north of Dry Bay.⁵²² Between 1880 and 1890, disease epidemics had dramatically reduced the Native population in Southeast Alaska. The total combined population of the Hoonah villages fell from 900 in 1880 to 425 in 1890. This reduction in population, along with missionary and government services increasingly consolidated in Hoonah, led much of the remaining population to relocate there.⁵²³

In 1880, the Northwest Trading Company opened the first store in Hoonah, the Presbyterian Home Mission and School were built in 1881, and a post office was established in 1901. In 1912, the Hoonah Packing Company built a large salmon cannery 1.5 miles north of Hoonah and operated the facility until 1923. Icy Strait Packing Company took ownership of the facility in 1934.⁵²⁴ In 1944, a fire destroyed much of the community, including many priceless Tlingit cultural objects. The federal government assisted in rebuilding the community, and the

⁵¹⁶ 'Kaawu' is a locally distinct terminology equating to the term 'Kwaan' used throughout the Tlingit Nation (Source: Langdon, Steve J. 2006. *Traditional Knowledge and Harvesting of Salmon by Huna and Hinyaa Tlingit: Final Report*. U.S. Fish and Wildlife Service, Fisheries Information Service Project 02-104. Retrieved October 10, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/02-104final.pdf>.

⁵¹⁷ 'Kwaan' is a Tlingit socio-geographical term meaning "inhabitants of," literally a contraction of the Tlingit verb "to dwell." It is most commonly used to refer to a geographic region consisting of those areas controlled by clans or house groups residing in a single winter village or several closely situated winter villages (Source: Thornton, Thomas. 1997. "Know Your Place: The Organization of Tlingit Geographic Knowledge." *Ethnology*, Vol. 36, No. 4. Retrieved July 13, 2012 from <http://www.jstor.org>).

⁵¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵¹⁹ Langdon, Steve J. 2006. *Traditional Knowledge and Harvesting of Salmon by Huna and Hinyaa Tlingit: Final Report*. U.S. Fish and Wildlife Service, Fisheries Information Service Project 02-104. Retrieved October 10, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/02-104final.pdf>.

⁵²⁰ Tongass National Forest (n.d.). *Roadless Area Maps & Descriptions*. Retrieved October 12, 2012 from <http://www.tongass-seis.net/roadless.html>.

⁵²¹ Southeast Conference (n.d.). *Hoonah*. Retrieved October 11, 2012 from <http://www.seconference.org/hoonah>.

⁵²² Walter R. and Theodore H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.

⁵²³ See footnote 519.

⁵²⁴ Icy Strait Point (2011). *Our History*. Retrieved October 10, 2012 from <http://www.icystraitpoint.com/AboutUs/History>.

City of Hoonah was incorporated in 1946.⁵²⁵

The Hoonah Cannery ceased operation as a full cannery after the 1953 season, but continued to provide maintenance and support services to the Icy Strait fishing fleet until 1999.⁵²⁶ In 2003, this original cannery facility was converted into a cruise ship destination.⁵²⁷ Over 50 cruise ships have visited the “Hoonah Cannery” each year since 2006.⁵²⁸ The proximity of this tourist destination to the City of Hoonah has led to changes in the community over the past decade, both offering a new source of employment and local business opportunities, and raising concerns about impacts on local culture, subsistence activities, and increased competition between the growing charter fishing fleet and commercial fishers.⁵²⁹

Today, Hoonah is the largest Tlingit community in Alaska.⁵³⁰ In addition to commercial fishing and tourism, the logging industry has been an economic driver in Hoonah in recent decades. Subsistence harvest is also an important part of the lifestyle in Hoonah.⁵³¹

Natural Resources and Environment

Hoonah is located in a maritime climate zone, characterized by cool summers and mild winters. Periods of fog are common in the spring and fall, leading to airport closures up to 20 or 30 days each year. Summer temperatures average 52 to 63 °F, and winter temperatures average 26 to 39 °F, with temperature extremes between -25 to 87 °F. Precipitation averages 100 inches annually, with 71 inches of snowfall.⁵³² Chichagof Island is very mountainous, with features typical of recently glaciated terrain, including rugged mountains and steep-sided, U-shaped valleys and stream courses. The terrain rises to over 3,000 feet above sea level within several miles of the coast.⁵³³

Hoonah is located on land owned by its Native village corporation, Huna Totem Corporation. In addition, Sealaska Corporation, the regional Native corporation for Southeast Alaska, has land holdings just east of Hoonah. Native corporation lands are adjacent to the Tongass National Forest. Approximately 95% of Southeast Alaska is federal land, of which 80% is part of the National Forest. At 16.8 million acres, the Tongass is the largest National Forest in the country. It is managed to produce resource values, products, and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.⁵³⁴

Federal coastal areas near Hoonah are primarily managed as old-growth habitat and

⁵²⁵ See footnote 518.

⁵²⁶ See footnote 524.

⁵²⁷ See footnote 521.

⁵²⁸ See footnote 524.

⁵²⁹ Cerveny, L. K. 2007. Sociocultural Effects of Tourism in Hoonah, Alaska. U.S. Forest Service, General Tech. Report PNW-GTR-734. Retrieved October 10, 2012 from http://www.fs.fed.us/pnw/pubs/pnw_gtr734.pdf.

⁵³⁰ See footnote 521.

⁵³¹ See footnote 518.

⁵³² Ibid.

⁵³³ U.S. Forest Service (2003). *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement, Roadless Area Evaluation for Wilderness Recommendations*. Volume III: Appendix C – Part 2. Retrieved March 16, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_III.pdf.

⁵³⁴ U.S. Forest Service (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

scenic viewshed land-use designations, while inland areas are primarily designated for timber production.⁵³⁵ Several timber sales are scheduled each year on National Forest lands near Hoonah.⁵³⁶ Logging activity on Native corporation lands began in the 1980s, after lands were selected following the Alaska Native Claims Settlement Act (ANCSA) of 1971. Timber harvest on Sealaska Corporation land holdings, based out of Whitestone Logging Camp, has been inactive since 2004.⁵³⁷

A large portion of National Forest lands on northern Chichigof Island are included in roadless areas, including the Neka Mountain and Neka Bay Roadless Areas to the west, Game Creek Roadless Area to the south, and Whitestone, Point Augusta, and Freshwater Bay Roadless Areas to the southeast. These roadless areas close to Hoonah do not contain areas of LUD II (land-use designation II), which are defined as areas “permanently managed in a roadless state to retain their wildland characteristics. Unlike wilderness, limited development is permitted under certain circumstances, including water and power, mining, habitat and transportation developments.”⁵³⁸

The status of roadless areas in the Tongass National Forest has been a controversial issue in recent years. The Roadless Area Conservation Rule (RACR) was instated in 2001, prohibiting road construction and timber harvesting in 58.5 million acres of roadless areas in the National Forest System. Lawsuits were filed following the RACR, and an exemption was granted for the Tongass National Forests in 2003. A coalition of Alaska Natives, recreation groups, and environmental groups filed a lawsuit in 2009 seeking to reinstate the rule, and on March 4, 2011, the Tongass Exemption was repealed. As of 2012, the RACR applies to roadless areas in the Tongass National Forest.⁵³⁹

Protected areas near Hoonah include the West Chichigof-Yakobi Wilderness, the Pleasant/Lemesurier/Inian Islands Wilderness, and Glacier Bay National Park and Preserve. In addition, a large portion the Chichigof Roadless Area, which runs north-south through the central portion of Chichigof Island, is managed under land-use designation II (LUD II).⁵⁴⁰

The West Chichigof-Yakobi Wilderness Area was designated in 1980 under the Alaska National Interest Lands Conservation Act (ANILCA). The Wilderness Area encompasses 265,286 acres of western Chichigof Island and Yakobi Island. The West Chichigof-Yakobi Wilderness is characterized by intricate bays, lagoons, estuaries, muskeg meadows, and natural hot springs.⁵⁴¹ Northwest of Hoonah, a group of islands in Cross Sound make up the Pleasant/Lemesurier/Inian Islands Wilderness. This Wilderness Area, totaling 23,151 acres, was

⁵³⁵ U.S. Forest Service (2003). *Map of Current Land Use Designations*. Tongass National Forest Land Management Plan Revision, Final SEIS. Retrieved May 8, 2012 from <http://www.tongass-seis.net/pdf/lud.pdf>.

⁵³⁶ U.S. Forest Service (2011). *Tongass National Forest: Forest Timber Sale Schedule and Integrated Service Timber Contract Plan – FSM 2431.21*. Retrieved July 13, 2012 from <http://www.fs.usda.gov>.

⁵³⁷ Cervený, Lee K. (2007). *Sociocultural Effects of Tourism in Hoonah, Alaska*. U.S. Forest Service, General Tech. Report PNW-GTR-734. Retrieved October 10, 2012 from http://www.fs.fed.us/pnw/pubs/pnw_gtr734.pdf.

⁵³⁸ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume I: Final SEIS Appendix A, B, D, E*. Retrieved April 25, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_I.pdf.

⁵³⁹ U.S. Forest Service (2011). *Status of Roadless Area Conservation Rule*. Retrieved September 11, 2012 from http://www.fs.fed.us/biology/resources/pubs/issuepapers/issuepaper_RoadlessRules-201108.pdf.

⁵⁴⁰ See footnote 538.

⁵⁴¹ U.S. Forest Service (n.d.). *West Chichigof- Yakobi Wilderness*. Retrieved June 28, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/chic.pdf.

designated in 1990.⁵⁴²

Glacier Bay National Park and Preserve, also established in 1980 under ANILCA, is located to the north of Hoonah, across Icy Strait. The glacier extended all the way to the mouth of Glacier Bay in 1794, when Captain George Vancouver explored the region. Today, the Bay provides a laboratory for scientists to study the way the landscape and animal and plant communities return to areas of the land and sea so recently covered by glaciers. A diversity of land and marine mammals, birds and fish are present in the Park, including humpback, gray, and minke whales, orca whales, Dall's porpoise, harbor porpoise, Steller sea lions, harbor seals, sea otters, moose, bear, wolves, coyotes, mountain goats, smaller furbearers, 240 species of birds, and almost 200 species of fish.⁵⁴³

Minimal potential for mineral development has been identified in the northern portion of Chichigof Island. A patented gold claim is located in Gypsum Creek, which enters Chatham Strait on the northeastern shore of Chichigof Island.⁵⁴⁴

Natural hazards in Hoonah include high risk of severe weather – including wind and heavy precipitation – flooding, erosion, landslides, avalanche, earthquake, and drought, as well as medium risk from wildfire and tsunami and seiche events, and low risk of impacts from volcanic activity.⁵⁴⁵ In 2005, the Governor of Alaska declared a disaster following a strong winter storm and record rainfall in northern Southeast Alaska. Hoonah and other regional cities experienced widespread coastal flooding, landslides, and property damage, requiring relocation of some residents.⁵⁴⁶

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Hoonah as of September 2012.⁵⁴⁷

Current Economy⁵⁴⁸

In the 2011 AFSC survey, community leaders reported that important economic drivers in Hoonah include commercial fishing, logging, ecotourism, and sport hunting and fishing. With declines in resource-based industries such as logging and commercial fishing through the 1990s, local leaders began to look toward tourism as a growth industry for Hoonah.⁵⁴⁹ In 2003, this original Hoonah Cannery facility was reopened as a cruise ship destination. The tourism economy is highly seasonal, with a majority of activity in summer months. In addition to these

⁵⁴² U.S. Forest Service, Tongass National Forest (n.d.). *Pleant/Lemesurier/Inian Islands Wilderness*. Retrieved June 28, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/pleasant.pdf.

⁵⁴³ National Park Service (2011). *Glacier Bay National Park & Preserve*. Retrieved March 16, 2012 from <http://www.nps.gov/glba/>.

⁵⁴⁴ U.S. Forest Service (2003). *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement, Roadless Area Evaluation for Wilderness Recommendations*. Volume III: Appendix C – Part 2. Retrieved March 16, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_III.pdf.

⁵⁴⁵ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁵⁴⁶ Division of Homeland Security and Emergency Management (2010). *State of Alaska Hazard Mitigation Plan*. Retrieved March 12, 2012 from <http://www.ready.alaska.gov/plans/mitigationplan.htm>.

⁵⁴⁷ Alaska Dept. of Environmental Conservation. *List of Contaminated Site Summaries By Region*. Retrieved October 12, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁵⁴⁸ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁴⁹ Cerveny, Lee K. (2007). *Sociocultural Effects of Tourism in Hoonah, Alaska*. U.S. Forest Service, General Tech. Report PNW-GTR-734. Retrieved October 10, 2012 from http://www.fs.fed.us/pnw/pubs/pnw_gtr734.pdf.

industries, most Hoonah residents maintain a subsistence lifestyle.⁵⁵⁰ Important subsistence resources include salmon, halibut, shellfish, deer, waterfowl and berries.⁵⁵¹

Based on household surveys conducted for the 2006-2010 ACS,⁵⁵² in 2010, the per capita income in Hoonah was estimated to be \$24,426 and the median household income was estimated to be \$50,511. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$16,097 and \$39,028, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,⁵⁵³ per capita income is revealed to have increased slightly (from a real per capita income of \$21,167 in 2000), while real median household income decreased slightly (from a real median household income of \$51,321). In 2010, Hoonah ranked 117th of 305 Alaskan communities with per capita income data that year, and 129th in median household income, out of 299 Alaskan communities with household income data.

However, Hoonah's small population size may have prevented the ACS from accurately portraying economic conditions.⁵⁵⁴ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Hoonah in 2010 is \$10,735.^{555,556} This estimate is lower than the per capita income reported by the 2000 Decennial Census, suggesting that caution is warranted when citing an increase in per capita income between 2000 and 2010 based on 2006-2010 ACS estimates. This lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,⁵⁵⁷ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly smaller percentage of Hoonah's population (62.3%) was estimated to be in the civilian labor force compared to the percentage estimated to be in the civilian labor force statewide (68.8%). In the same year, 12.2% of Hoonah residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the local unemployment rate was estimated to be 5%, just under the statewide unemployment rate of 5.9%. An additional estimate of unemployment based on the

⁵⁵⁰ Southeast Conference (n.d.). *Hoonah*. Retrieved October 11, 2012 from <http://www.seconference.org/hoonah>.

⁵⁵¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁵² U.S. Census Bureau (n.d.). *Profile of selected social and economic characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵⁵³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵⁵⁴ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁵⁵⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵⁵⁶ See footnote 552.

⁵⁵⁷ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

ALARI database suggests a higher unemployment rate of 24.4% in 2010, more than twice the statewide unemployment rate estimate of 11.5%.⁵⁵⁸

Also based on the 2006-2010 ACS, half of Hoonah's workforce was estimated to be employed in the private sector (50.6%), along with 34.5% in the public sector, 13.6% estimated to be self-employed, and 1.2% as unpaid family workers. Of the 330 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in educational services, health care, and social assistance industries (23.6%), retail trade (19.1%), transportation, warehousing, and utilities (15.2%), and agriculture, forestry, fishing and hunting, and mining (12.4%). These statistics on employment by industry are presented in Figure 3.

Several important economic shifts are reflected in the changing distribution of employment by industry between 2000 and 2010. The almost 50% reduction in employment in agriculture, forestry, fishing, hunting, and mining industries can be partly attributed to a decline in logging operations, while the 200% increase in retail trade industry employment likely reflects the addition of a major cruise ship destination in Hoonah during the decade. In addition, employment in the manufacturing and public administration industries appear to have declined by two-thirds each. These changes in employment by industry are presented in Figure 3. It is also important to note that the number of individuals employed in the fishing industry is likely underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

The increase in tourism-related jobs and the decline in logging and manufacturing positions are also reflected in occupation statistics. Between 2000 and 2010, the percentage of the Hoonah workforce employed in natural resource, construction, and maintenance occupations decreased by 50%, while the percentage employed in sales and office occupations increased by 32% and the percentage employed in management and professional occupations increased by 50% (Figure 4).

ALARI employment data conflict somewhat with 2006-2010 ACS estimates, showing a greater percentage of the workforce employed in government services. According to the ALARI database, there were 395 employed residents in Hoonah in 2010, of which 28.4% were employed in leisure and hospitality, 27.8% in local government, 13.7% in trade, transportation, and utilities, 8.6% in manufacturing, 7.6% in education and health services, 3.5% in construction, 3% in financial activities, 2.8% in state government, 2.8% in natural resources and mining, 1.5% in professional and business services, and 0.3% in other industries.⁵⁵⁹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

⁵⁵⁸ See footnote 555.

⁵⁵⁹ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Hoonah (U.S. Census).

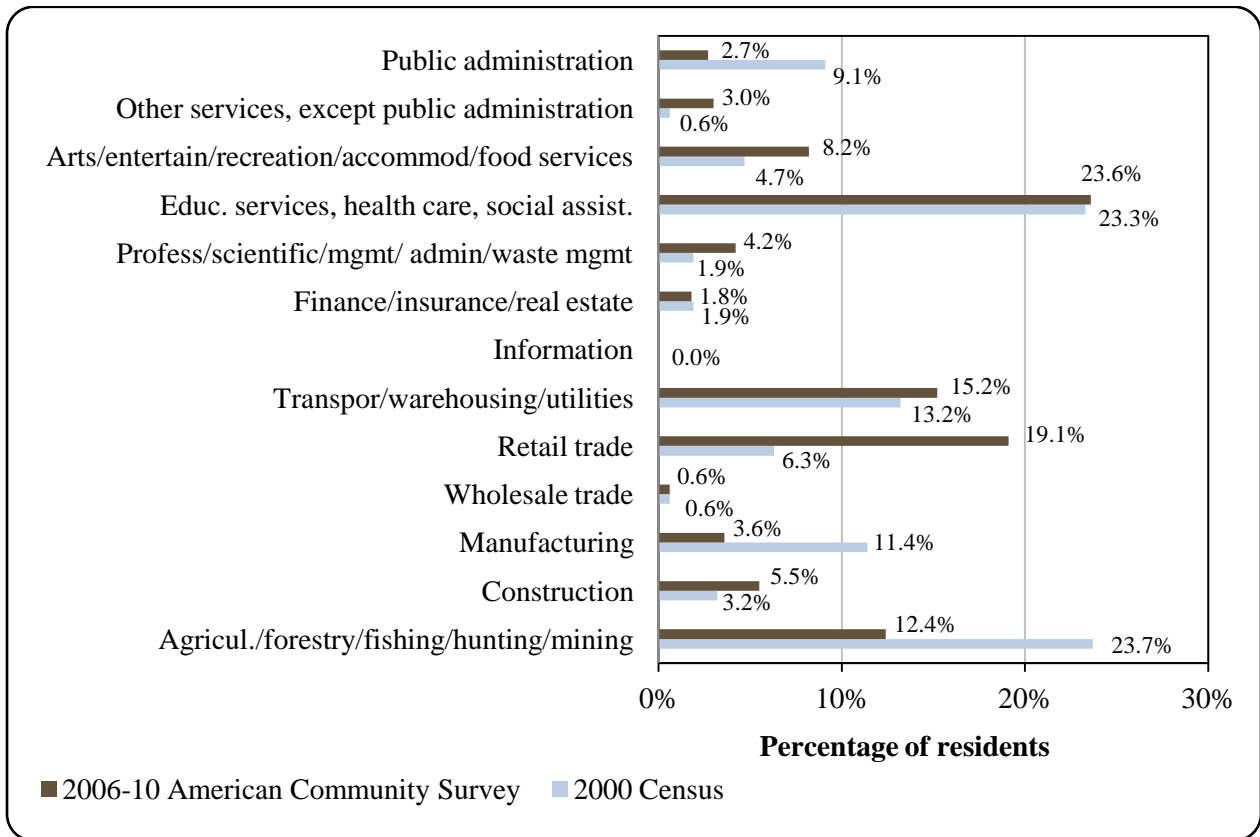
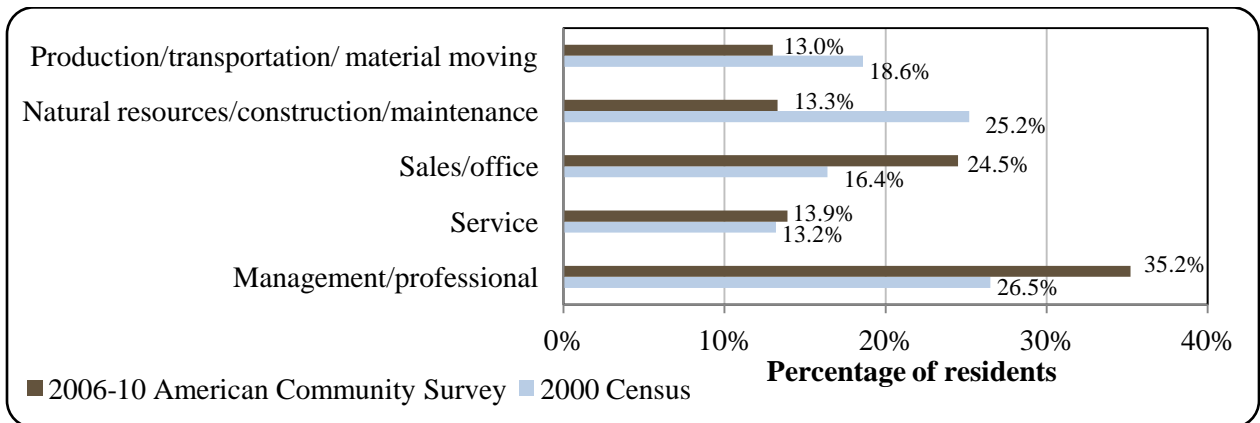


Figure 4. Local Employment by Occupation in 2000-2010, Hoonah (U.S. Census).



Governance

Hoonah was incorporated in 1946. It is a 1st Class City and is not located within an organized borough. The City has a manager, or “Strong Mayor,” form of government, with a seven-person city council including the Mayor, a five-person school board, seven-person planning commission, and several municipal employees. Hoonah administers a 6.5% sales tax, and also collects a 3% City Tax, 1% School Tax, 1% Youth Center Tax, 1% Pool Tax, and 0.5% School Bond Tax. No property tax is levied by the City.⁵⁶⁰ In addition to local tax revenue, other locally-generated revenue sources in Hoonah during the 2000-2010 period included services such as animal control and emergency medical services, building and equipment rentals, rock sales, and liquor board fees. Outside revenue sources included state and federal grants and shared revenues. Shared revenue from the State of Alaska included contributions from the State Revenue Sharing Program from 2000 to 2003, the Community Revenue Sharing program in 2009 and 2010, as well as state fish tax refunds (see the *Fisheries-Related Revenue* section for details). Total annual municipal revenues were higher in later years of the decade, largely due to sizeable capital projects grants received in those years. Grants were received to aid in construction of a marine bulkhead, a boat haul-out facility, and a harbor lift station. Information about selected municipal funding sources is presented in Table 2, and additional details about grant money received between 2000 and 2010 follows.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Hoonah from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$2,494,770	\$282,067	\$55,134	\$180,000
2001	\$2,031,274	\$269,817	\$45,457	\$28,000
2002	\$2,176,090	\$228,811	\$46,747	n/a
2003	\$3,180,918	\$229,138	\$34,982	n/a
2004	\$2,382,033	\$330,407	n/a	\$2,000,000
2005	\$2,925,224	\$372,600	n/a	n/a
2006	\$3,962,629	\$459,375	n/a	\$5,465,000
2007	\$7,170,447	\$597,423	n/a	\$7,465,000
2008	\$5,557,461	\$565,355	n/a	\$4,800,000
2009	\$6,246,862	\$519,749	\$137,985	\$7,500,000
2010	\$5,488,873	\$484,724	\$134,316	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁵⁶⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

In 2000, Hoonah received \$180,000 from the Alaska Native Tribal Health Consortium for renovation of the harbor lift station. In 2001, the Alaska Department of Commerce, Community, and Economic Development (DCCED)'s Division of Community and Rural Affairs (DCRA) awarded \$28,000 for a feasibility study and preliminary design of a marine bulkhead and boat haul-out facility. In 2004, the U.S. Economic Development Administration provided \$2 million for dock and industrial development, including the marine bulkhead, boat ramp, and travel lift. From 2006 to 2009, a total of \$7 million in federal grant dollars and \$7 in state dollars were received toward construction of the haul-out facility. In addition, the DCRA provided \$3 million in 2009 toward haul-out development. State dollars totaling \$6.93 million were also received from 2006 to 2007 for a harbor improvement project. In 2007, \$1 million was received from the DCRA for Phase II development of a marine industrial center, and \$300,000 was received from the Denali Commission in 2008 for marine industrial center construction.

Hoonah was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Hoonah Indian Association. The local village Native corporation is Huna Totem Corporation, which manages 23,040 acres of land. The regional Native corporation to which Hoonah belongs is the Sealaska Corporation.⁵⁶¹

The Hoonah Indian Association is also a member of the Central Council of the Tlingit and Haida Indian Tribes of Alaska (Central Council), a tribal non-profit organization headquartered in Juneau. The Central Council was originally established to pursue Alaska Native land claims on behalf of the Tlingit and Haida people in an effort to retain a way of life strongly based on subsistence.⁵⁶² The Central Council is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁵⁶³ The Central Council provides services to the Tlingit and Haida communities including employment and training, education, family, elderly, and other community services.⁵⁶⁴

The closest offices of the Alaska Department of Fish and Game (ADF&G) are in Sitka and Juneau. The Southeast Regional office of the Alaska Department of Natural Resources (DNR) is located in Juneau, along with a DNR Public Information Center. The Alaska Regional Office of the National Marine Fisheries Service (NMFS) is located in Juneau, along with NMFS enforcement headquarters and the AFSC Auke Bay laboratories. Offices of the DCCED and the U.S. Bureau of Citizenship and Immigration Services are also located in Juneau.

⁵⁶¹ Ibid.

⁵⁶² Central Council (n.d.) *Homepage*. Retrieved August 15, 2012 from <http://www.ccthita.org/index.html>.

⁵⁶³ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁵⁶⁴ See footnote 562.

Infrastructure

Connectivity and Transportation

Hoonah is accessible by air or water. A state-operated 2,997 feet asphalt runway is available, as well as a seaplane base.⁵⁶⁵ Scheduled flights are available between Juneau and Hoonah to both the runway and the seaplane base.⁵⁶⁶ As of Fall 2012, roundtrip airfare between Hoonah and Juneau was \$150, including up to 70 pounds of freight.⁵⁶⁷ Roundtrip airfare between Juneau and Anchorage was \$353.⁵⁶⁸ Hoonah also has a state ferry terminal. As of fall 2012, a one-way adult passenger fare on the Alaska Marine Highway ferry from Hoonah to Juneau was \$33.⁵⁶⁹ Freight can be delivered to Hoonah by barge on a seasonal basis.⁵⁷⁰ A large network of logging roads is present surrounding Hoonah.⁵⁷¹

Facilities

Water in Hoonah is sourced from Gartina Creek. A city-operated water treatment facility was completed in 1998. Water is filtered and chlorinated before being piped to homes and facilities. A small percentage of Hoonah homes lack complete plumbing (2%). These residents haul water from Hoonah's washeteria, located at that marina.⁵⁷² Residents of outlying areas such as Game Creek also haul water from this central watering point.⁵⁷³ The City of Hoonah also operates a piped sewage system and sewage treatment plant. In addition, the City operates a landfill and provides weekly garbage collection services. Inside Passage Electrical Company provides electricity to Hoonah through operation of three diesel-fueled generators.⁵⁷⁴ According to the 2011 AFSC survey, community leaders indicated that improvements to the diesel generators are currently in process, and alternative energy sources are currently under development, and are expected to be completed within the next 10 years. According to the 2009 update of the Southeast Alaska Comprehensive Plan, the City of Pelican is interested in exploring the idea of an energy intertie between Pelican and Hoonah if funding sources can be obtained.⁵⁷⁵

Police services are provided by the City Police Department and state troopers posted in Hoonah. Fire and rescue services are provided by the City Fire Department, the Hoonah Volunteer Fire Department, and Hoonah Volunteer Emergency Medical Services (EMS).⁵⁷⁶ In the 2011 AFSC survey, community leaders indicated that improvements to the fire department

⁵⁶⁵ Southeast Conference and Tlingit and Haida Central Council (2009). *Southeast Alaska Comprehensive Economic Development Strategy: 2009 Update*. Retrieved April 12, 2012 from http://www.seawead.org/images_documents/documents/KCF/SE_conference-CEDS.pdf.

⁵⁶⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁶⁷ Personal communication, Wings of Alaska representative, October 12, 2012.

⁵⁶⁸ This price was calculated on November 21, 2011 using kayak.com.

⁵⁶⁹ Price retrieved October 12, 2012 from http://www.dot.state.ak.us/amhs/doc/fares/SW12_SETariffs.pdf.

⁵⁷⁰ See footnote 565.

⁵⁷¹ See footnote 566.

⁵⁷² Ibid.

⁵⁷³ See footnote 565.

⁵⁷⁴ See footnote 566.

⁵⁷⁵ See footnote 565.

⁵⁷⁶ See footnote 566.

were completed within the last 10 years, and improvements to emergency response services are ongoing. Additional community facilities in Hoonah include a city jail, youth center, Alaska Native Brotherhood and Alaska Native Sisterhood Hall, Hoonah City Hall, a senior center, Tlingit & Haida housing services, a school gymnasium, and a public library.⁵⁷⁷ Community leaders also noted in the 2011 AFSC survey that a U.S. post office is present in Hoonah. Telephone, internet, and cable services are available in Hoonah.⁵⁷⁸

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that 500 feet of dock space is available in Hoonah for permanent vessel moorage, as well as 1,500 feet of dock space for transient vessel moorage. They indicated that vessels of up to 150 in length can use moorage in Hoonah, and the Port of Hoonah is capable of handling rescue vessels (i.e., Coast Guard), ferries, and fuel barges. Over the last 10 years, community leaders reported that new dock space was constructed and improvements were made to the existing dock structure, including a fish cleaning station and electricity serving the dock. In addition, they indicated that progress is currently underway to make water available at the dock. In addition, work is in progress on a boat haul-out facility and an Environmental Protection Agency-certified boat cleaning station.

Community leaders also reported that a wide variety of fishing-related businesses and services are available in Hoonah, including fish processing plants, a commercial cold storage facility, sale, repair, and storage of fishing gear, boat repair services (welding, mechanical, machine shop, and hydraulics services), marine refrigeration, haul-out facilities for small boats (less than 60 tons) and large boats (more than 60 tons), a tidal grid for small boats only, dry dock storage, moorage for both commercial and recreational vessels, fish lodges, and sale of ice, bait, and tackle. For those fishing-related businesses and services not available in Hoonah, community leaders indicated that local residents most often travel to Juneau, Sitka, or Petersburg.

Medical Services

Local medical services are available in Hoonah at the Hoonah Medical Clinic, a qualified Emergency Care Center owned and operated by the Hoonah Indian Association. The clinic is a Community Health Aid Program site. Emergency services have marine, floatplane, helicopter, air, and limited road access. Emergency service is provided by 911 Telephone Service volunteers and the local health aide, and alternative health care is provided by the Hoonah Volunteer EMS.⁵⁷⁹

Educational Opportunities

There are two schools in the community. Hoonah Elementary School instructs preschool through 6th grade, and Hoonah Jr./Sr. High School offers 6th through 12th grade education. As of 2011, the elementary school had 71 students 7 teachers, and the high school had 53 students and 8 teachers.⁵⁸⁰

⁵⁷⁷ Ibid.

⁵⁷⁸ Ibid.

⁵⁷⁹ Ibid.

⁵⁸⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Hoonah Tlingit historically had fish camps in Hoonah and the surrounding area, including Glacier Bay and much of Icy Strait. Subsistence harvest of marine resources has always been foundational to the economy and way of life of the Tlingit people.^{581,582} Salmon were perhaps the most important resource for the Tlingit. Traditionally, fish trap, gaffs, and spears were used to catch salmon. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., ‘gumboot’ chitons), and sea plants (e.g., seaweed, beach asparagus and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas, and egg harvesting sites.^{583,584}

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.⁵⁸⁵ In 1912, the Hoonah Packing Company built a large salmon cannery one and a half miles north of Hoonah and operated the facility until 1923. Icy Strait Packing Company took ownership of the facility in 1934, and operated the facility until 1953. From 1954 until 1999, the facility continued to provide maintenance and support services to the Icy Strait fishing fleet.⁵⁸⁶

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho, and Chinook). Because of Southeast Alaska’s proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty. The Treaty was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.⁵⁸⁷

In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska. The U.S. and Canada signed the Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean in 1923, and since the Convention took effect in 1924, Pacific halibut fisheries have been managed by the International Pacific Halibut Commission, earlier called the

⁵⁸¹ Brock, M., P. Coiley-Kenner, and the Sitka Tribe of Alaska (2009). *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

⁵⁸² Walter R., and T. H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.

⁵⁸³ Alaska Native Heritage Center (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

⁵⁸⁴ See footnote 581.

⁵⁸⁵ Clark, McGregor, Mecum, Krasnowski, and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁵⁸⁶ Icy Strait Point (2011). *Our History*. Retrieved October 10, 2012 from <http://www.icystraitpoint.com/AboutUs/History>.

⁵⁸⁷ See footnote 585.

International Fisheries Commission.⁵⁸⁸ Halibut fisheries are restricted to use of hook and line gear, although a limited number of halibut can be caught and retained as incidental catch in salmon troll fisheries and sablefish trap fisheries, as well as bycatch in a variety of fisheries using diverse gear types.^{589,590} Sablefish were first harvested in Southeast Alaska as bycatch in the halibut fishery.⁵⁹¹ By the 1930s, several state-managed sablefish fisheries began in Southeast inside waters, including a fishery in Chatham Strait. Sablefish are harvested using longline or pot gear, and the state fisheries that take place in inside waters are managed independently of the federal fishery.⁵⁹² In 1995, management of Alaskan halibut and sablefish fisheries shifted from limited entry to a system of Individual Fishing Quotas (IFQ).

Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.⁵⁹³

Bait herring fisheries take place during the winter each year in Southeast Alaska, while roe is harvested in the spring. Bait and sac roe fisheries use purse seine and set gillnet gear, and roe is also harvested in spawn-on-kelp closed-pound fisheries.⁵⁹⁴ A “closed-pound” is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.⁵⁹⁵ Crab fisheries in Southeast Alaska target red, golden and blue king crab, Tanner crab, and Dungeness crab. Dive fisheries for sea cucumber and sea urchin began to grow in Southeast Alaska in recent decades.⁵⁹⁶ The impact of an increasing sea otter population in Southeast Alaska on stocks of Dungeness crab, sea cucumber, and sea urchin has led to significant economic losses in these fisheries in recent

⁵⁸⁸ International Pacific Halibut Commission (2006). *History*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/pamphlet/1IPHCHistoryPage.pdf>.

⁵⁸⁹ International Pacific Halibut Commission (2012). *Pacific Halibut Fishery Regulations 2012*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

⁵⁹⁰ Williams, G. (2010). “Halibut Bycatch limits in the 2010 Alaska groundfish fishery.” *IPHC Report of Assessment and Research Activities*. Retrieved September 12, 2012 from <http://www.iphc.washington.edu/publications/rara/2010/2010.299.Halibutbycatchlimitsinthe2010Alaskagroundfishfishery.pdf>.

⁵⁹¹ Woodby, D., D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L. Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁵⁹² Carroll, K. and K. Green (2012). *The Southeast Alaska Northern Southeast Inside Sablefish Fishery Information Report, With Outlook for the 2011 Fishery*. Alaska Dept. of Fish and Game, Fishery Management Report No. 08-44. Retrieved September 11, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR12-28.pdf>.

⁵⁹³ See footnote 591.

⁵⁹⁴ Ibid.

⁵⁹⁵ Alaska Dept. of Fish and Game. (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.adfg.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

⁵⁹⁶ See footnote 591.

years.⁵⁹⁷

When President Calvin Coolidge proclaimed Glacier Bay a National Monument in February, 1925, fisheries were of little interest to the ecologists and other scientists who hoped to see the glaciers and fjords protected.⁵⁹⁸ However, concern grew about the impact of commercial fisheries on the ability of the Park Service to preserve the Park as an ecological reserve. With the passage of the Wilderness Act of 1964 and ANILCA in 1980, the National Monument became a National Park and Preserve, including In 1983, the National Park Service (NPS) proposed a rule that would close waters in the wilderness designated areas (referred to here as ‘wilderness waters’) to all forms of commercial fishing, and prohibit trawling in all areas of the Glacier Bay National Park. Local fishermen were angered and dismayed by this proposal, and NPS officials eventually discarded this original proposal. In 1983-1984, NPS officials negotiated with representatives of the State of Alaska, as well as Park employees, commercial fishermen, and environmentalists, but no agreement was reached. In 1990, a regulation was proposed to prohibit commercial fishing in wilderness waters, and to allow commercial fishing in non-wilderness waters of the Park until December 31, 1997. This regulation was intended to provide enough time for fishermen to plan ahead for the change.⁵⁹⁹ In addition to closure of commercial fisheries, subsistence harvest of fish and wildlife is prohibited within the boundaries of Glacier Bay National Park and Preserve.^{600,601}

Hoonah is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is “Southeast Outside.” In the 2011 AFSC survey, community leaders indicated that Hoonah participates actively in fisheries management processes in Alaska, and relies on regional organizations such as the Southeast Conference to provide information on fisheries management issues. When asked to describe challenges facing Hoonah’s fishing economy, community leaders noted high fuel costs and low fish prices in Hoonah. In addition, one community leader reported that Hoonah fishermen have been affected by the timing of fisheries closures, which have coincided with peak run strength. Declining halibut IFQ allotments were also mentioned as having a negative impact on Hoonah.

Hoonah is eligible to participate in the Community Quota Entity (CQE) program, and has established a CQE called the Hoonah Community Fisheries Corporation.⁶⁰² The impetus for the CQE program followed the implementation of the halibut and sablefish IFQ program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share

⁵⁹⁷ McDowell Group (2011). *Sea Otter Impacts on Commercial Fisheries in Southeast Alaska*. Prepared for Southeast Alaska Regional Dive Fisheries Association. Retrieved September 11, 2012 from <http://www.scribd.com/doc/74857876/MCDOWELL-GROUP-2011-Sea-Otter-Impacts-Report>.

⁵⁹⁸ Mackovjak, J. 2010. *Navigating Troubled Waters: A History of Commercial Fishing in Glacier Bay, Alaska*. U.S. Department of the Interior, National Park Service. Retrieved October 26, 2012 from <http://www.nps.gov/glba/historyculture/history-of-commercial-fishing-in-glacier-bay.htm>.

⁵⁹⁹ Catton, T. 1993. *Glacier Bay Administrative History*. Retrieved May 25, 2012 from: <http://www.gustavushistory.org/articles/booksnarticles.aspx>.

⁶⁰⁰ U.S. Fish and Wildlife Service (2011). *Subsistence Management Regulations for the Harvest of Fish and Shellfish on Federal Public Lands and Waters in Alaska*. Retrieved October 29, 2012 from <http://alaska.fws.gov/asm/pdf/fishregs11/entire.pdf>.

⁶⁰¹ U.S. Fish and Wildlife Service, Federal Subsistence Management Program (2010). *Maps: Wildlife Management Units and Fisheries Management Areas*. Retrieved October 31, 2012 from <http://alaska.fws.gov/asm/maps.cfml?maps=4>.

⁶⁰² NOAA Fisheries, Alaska Regional Office (2012). *Name and Contact Information of Community Quota Entities*. Retrieved August 20, 2012 from <http://www.fakr.noaa.gov/ram/daily/cqenamescontacts.pdf>.

program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors led to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.⁶⁰³

As of Fall 2013, the Hoonah Community Fisheries Corporation had not yet purchased any commercial halibut IFQ or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the non-profit had acquired four halibut charter permits for lease to community members.⁶⁰⁴

Processing Plants

ADF&G's 2010 Intent to Operate list noted three registered progressing facilities in Hoonah. The processing facility Dignon CO Inc. operates a seafood processing plant by the name of Hoonah Cold Storage in Hoonah. According to a survey of plant managers conducted by the AFSC in 2011, the plant began operations in 1986 and employs a maximum of 30 workers each year. Plant managers also indicated that up to 20 workers stay in company-provided housing during summer months.⁶⁰⁵ Prior to 1986, the Hoonah Cold Storage had been operated for many years by the Thompson Fish Company.⁶⁰⁶

The Huna Fish Company operates a seafood processing plant in Hoonah. According to the 2011 survey of plant managers, the business began in 2009 and is run by one person, with an additional worker hired during busy workdays. The plant processes high end products and primarily delivers to high end restaurants. In addition, Wendy's Seafood operates a seafood processing plant in Hoonah.

Fisheries-Related Revenue

Between 2000 and 2010, annual fisheries-related revenue in Hoonah averaged \$502,068, with an increasing trend over the decade. The primary sources of fisheries-related revenue were harbor usage fees, a raw fish tax, and the Shared Fisheries Business Tax. In addition, community leaders reported in the 2011 AFSC survey that several thousand dollars were received in 2010

⁶⁰³ North Pacific Fishery Management Council. (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>.

⁶⁰⁴ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

⁶⁰⁵ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

⁶⁰⁶ Bellingham Cold Storage Company (2001). *Customer of the Quarter: Northern Products*. *The Icebreaker Newsletter*, April 2001. Retrieved October 10, 2012 from <http://www.bellcold.com/Icebreakers/Apr01.pdf>.

from port/dock usage, fishing gear storage on tribal land, and leasing of tribal land to members of the fishing industry. Further information about fisheries-related revenue sources is presented in Table 3.⁶⁰⁷

Commercial Fishing

According to the 2011 AFSC survey, community leaders indicated that salmon, halibut, sablefish, and crab are the most important local fisheries. They noted that salmon fisheries take place year-round, halibut and sablefish fisheries take place from March to November each year, and crab fishing is primarily conducted between February and April. In addition to these important fisheries, Hoonah residents also held permits in herring, shrimp, sea cucumber, octopi/squid, lingcod, and several other groundfish fisheries between 2000 and 2010 (Table 4). Community leaders indicated that the most common fishing gears used by Hoonah fishermen are longline, gillnet, troll, purse seine, and pots.

During the 2000-2010 period, Hoonah residents participated in state and federal commercial fisheries as permit, quota share account, and crew license holders, vessel owners, and employees and/or owners of fish buyer or processing companies. The number of residents involved in commercial fisheries generally decreased over the period, from 136 state permit holders, 118 crew license holders, and 111 vessels owned by Hoonah residents in 2000, to 118 state permit holders, 80 crew license holders, and 83 vessels owned by residents in 2010. The number of vessels homeported in Hoonah also decreased over the period, from 123 in 2000 to 70 in 2010. In the 2011 AFSC survey, community leaders echoed this decrease, indicating there were fewer commercial fishing boats in Hoonah compared to five years earlier. Despite these decreases in locally owned and homeported vessels, the number of fish buyers and total vessels making deliveries in Hoonah increased over the decade. Further statistics about commercial fishing activity in Hoonah are presented in Table 5.

Of 167 Commercial Fisheries Entry Commission (CFEC) permits held by Hoonah permit holders in 2010, 127 (76%) were held in salmon fisheries, 17 (10.2%) in halibut fisheries, 10 (6%) in groundfish fisheries, 5 (3%) were held for sablefish, 4 (2.4%) for crab, 3 (1.8%) in ‘other shellfish’ fisheries, and 1 (0.6%) in a herring fishery. Permit numbers are presented in Table 4, and more details regarding permit types and trends are provided below.

Of 127 salmon CFEC permits held in 2010, 88 were statewide troll permits, 32 were statewide power gurdy troll permits, 4 were for the Southeast purse seine fishery, and 3 for the Southeast gillnet. That year, 47 (37%) of these salmon permits were actively fished. The number of salmon permit holders and the total number of permits held decreased slightly between 2000 and 2010, while the percentage of permits actively fished remained relatively stable. It is important to note that, in addition to salmon permit types held in 2010, one Bristol Bay drift gillnet permit was also held by a Hoonah resident in 2000 and in 2003.

Of 17 halibut CFEC permits held in 2010, 16 were statewide longline permits for use on vessels under 60 feet in length, and 1 was a statewide hand troll permit. That year, 88% (15) halibut permits were actively fished. The number of halibut permit holders and the total number of permits held both decreased by almost 50% between 2000 and 2010, while the percentage of permits that were actively fished remained relatively stable. In 2000, 2001, and 2004, at least one statewide halibut longline permit was also held for use on vessels 60 feet or over in length.

⁶⁰⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Of 10 groundfish CFEC permits held in 2010, six were held in statewide longline fisheries for miscellaneous saltwater finfish, two in the statewide dinglebar troll lingcod fishery, and two in the Southeast longline demersal shelf rockfish fishery. Of these, two (20%) were actively fished in 2010, both of which were statewide longline permits for miscellaneous saltwater finfish, for use on vessels under 60 feet in length. The number of permit holders and total groundfish permits held both declined by more than 70% between 2000 and 2010, while the percentage of permits actively fished varied between 8% and 42%.

The number of sablefish CFEC permit holders in Hoonah declined from 11 in 2000 to 4 in 2010, while the number of permits held fell from 12 to 5. In 2010, sablefish permits were held in both the local ‘Northern Southeast’ longline fishery, and the statewide (excluding Southeast and Prince William Sound) longline fishery. In several earlier years of the decade, several statewide (unrestricted) permits were also held for use on vessels 60 feet in length or over, as well as a statewide pot gear permit, for use on vessels 60 feet in length or over.

In 2010, Hoonah residents also held two Southeast shrimp pot gear CFEC permits, one Southeast sea cucumber dive fishery permit, two Southeast Tanner crab permits (one associated with pot gear, the other with ring nets), one Southeast red/blue king/Tanner crab permit associated with pot gear, one Southeast Dungeness crab pot gear permit, and one Norton Sound herring gillnet permit. Of the crab permits, only the red/blue king/Tanner crab permit was actively fished that year, although a majority of crab permits were actively fished in earlier years of the 2000-2010 period. Both shrimp permits were actively fished in 2010. The sea cucumber permit was held from 2001 to 2010, but was not actively fished in any of these years. Roe herring gillnet permits were actively fished in 2000 in the Security Cove and Bristol Bay gillnet fisheries, but no herring permits held later in the decade were actively fished. Information about CFEC permits is presented in Table 4.

In addition to CFEC permit, Hoonah residents also held federal License Limitation Program (LLP) permits and Federal Fisheries Permits (FFP) between 2000 and 2010. In 2010, 16 Hoonah residents held a total of 16 LLP permits in federal groundfish fisheries. Of these, two were actively fished that year (12%). The number of groundfish LLPs held remained very stable over the decade, increasing from 15 held in 2000. In addition, one crab LLP was held in Hoonah from 2004 to 2010, and was actively fished in five of these years. Also in 2010, 11 Hoonah residents held a total of 11 FFP permits, of which 2 were actively fished (18%). Information about permits held in these federal fisheries is also presented in Table 4.

In the year 2000, 40 Hoonah residents held quota share accounts in the federal halibut catch share fishery, decreasing to 25 quota share accounts held in 2010. Total quota shares held decreased from 1,430,321 to 988,712 over the same period. The annual halibut IFQ allotment increased by approximately 40% higher than 2000 levels by 2005, and then decreased to 30% below 2000 levels in 2010. Sablefish catch share participation also showed an overall decrease over the 2000-2010 period, after a peak in activity in the middle of the decade. The number of quota share account holders initially increased from four in 2000 to five in 2004 and 2005, and then declined to three accounts from 2006-2010. The total quota shares held in Hoonah increased from 903,029 in 2000 to a high of 1,471,383 held in 2004, and then declined to 780,829. Sablefish IFQ allotment increased to 6% above 2000 levels in 2004 before decreasing to 27% below 2000 levels by 2010. No quota share accounts or quota shares were held by Hoonah residents in federal crab catch share fisheries between 2000 and 2010. Information about federal catch share participation is presented in Tables 6 through 8.

Hoonah was also active in fish processing between 2000 and 2010. One shore-side

processor was present throughout the decade, and an additional processor began operation in 2010. The number of fish buyers present each year in Hoonah fluctuated between a high of 22 and low of 5. Total landings and ex-vessel revenue in Hoonah over this period are considered confidential given the small number of processors present in Hoonah. In 2010, Hoonah ranked 33rd in landings and 28th in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings that year (Table 5).

Total ex-vessel revenue recorded by fish buyers based in Hoonah ranged between \$5.1 and \$12.3 million dollars between 2000 and 2010, with the low occurring in 2009 and the high occurring in 2004 (Table 9). Total landed pounds by vessels landing catch in Hoonah between 2000 and 2010 averaged 3.3 million pounds annually with a high of 6.7 million pounds in 2005 and a low of 2.1 million pounds in 2002. With regards to individual species, most landings by species are considered confidential due to the low number of fish buyers or vessels landing that species; however, some information can be reported regarding halibut, ‘other’ groundfish, ‘other’ shellfish, Pacific cod, and salmon. Halibut and salmon landings provided the most value to the community between 2000 and 2010. In the years where data is not considered confidential, fish buyers reported an average of \$2.8 million dollars in halibut landings and \$3 million dollars in salmon landings. Landings of all other species were valued at under \$75,000 annually in those years for which data can be reported (Table 9).

In addition, some information can be reported regarding landings delivered by Hoonah vessel owners, including all delivery locations. Landings of salmon, halibut, Pacific cod, and ‘other groundfish’ can be reported for all years. On average between 2000 and 2010, Hoonah vessel owners landed 1,508,207 net pounds of salmon, 179,041 net pounds of halibut, 27,379 net pounds of Pacific cod, and 17,710 net pounds of ‘other groundfish’. These landings were valued, respectively, at \$915,936, \$549,417, \$13,603, and \$11,167 in ex-vessel revenue, on average. For those years in which data can be reported, Hoonah vessel owners landed an average of 157,044 net pounds of sablefish and 32,350 net pounds of crab, valued at \$479,471 and \$70,607 in ex-vessel revenue, respectively. Other years of sablefish and crab, as well as all years of herring, pollock, ‘other shellfish’, and finfish landings and ex-vessel revenue data, are considered confidential due to the small number of participants (Table 10).

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Hoonah: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$151,000	\$100,000	\$100,000	\$159,864	\$135,480	\$119,000	\$130,252	\$130,251	\$142,164	\$149,023	\$150,000
Shared Fisheries Business Tax ¹	\$93,424	\$116,635	\$131,819	\$119,124	\$97,122	\$135,684	\$195,296	\$133,367	\$141,370	\$131,371	\$148,504
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$203,600	\$203,600	\$198,600	\$184,887	\$226,350	\$243,100	\$201,000	\$235,000	\$286,500	\$293,225	\$319,650
Port/dock usage ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$6,426
Fishing gear storage on tribal land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$8,333
Leasing tribal land to members of the fishing industry ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$1,723
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$448,024	\$420,235	\$430,419	\$463,875	\$458,952	\$497,784	\$526,548	\$498,618	\$570,034	\$573,619	\$634,636
Total municipal revenue (in millions)⁵	\$2,494,770	\$2,031,274	\$2,176,090	\$3,180,918	\$2,382,033	\$2,925,224	\$3,962,629	\$7,170,447	\$5,557,461	\$6,246,862	\$5,488,873

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Hoonah: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	15	15	15	14	15	15	15	16	16	16	16
	Active permits	4	6	4	4	4	4	4	5	4	2	2
	% of permits fished	26%	40%	26%	28%	26%	26%	26%	31%	25%	12%	12%
	Total permit holders	15	15	15	14	15	15	15	16	16	16	16
Crab (LLP) ¹	Total permits	0	0	0	0	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	1	1	0	1	1	1
	% of permits fished	-	-	-	-	0%	100%	100%	0%	100%	100%	100%
	Total permit holders	0	0	0	0	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	10	10	10	6	7	7	8	10	10	11	11
	Fished permits	0	0	0	3	4	3	4	5	2	2	2
	% of permits fished	0%	0%	0%	50%	57%	43%	50%	50%	20%	18%	18%
	Total permit holders	9	9	9	6	7	7	8	10	10	11	11
Crab (CFEC) ²	Total permits	6	7	7	7	4	4	4	3	4	3	4
	Fished permits	6	4	5	5	4	4	2	3	4	1	1
	% of permits fished	100%	57%	71%	71%	100%	100%	50%	100%	100%	33%	25%
	Total permit holders	7	6	6	7	3	3	3	2	3	2	3
Other shellfish (CFEC) ²	Total permits	2	2	1	3	4	4	4	4	4	3	3
	Fished permits	1	1	0	2	2	2	2	2	2	1	2
	% of permits fished	50%	50%	0%	66%	50%	50%	50%	50%	50%	33%	66%
	Total permit holders	2	2	0	3	4	4	4	4	4	3	3
Halibut (CFEC) ²	Total permits	30	28	25	26	21	20	21	19	19	17	17
	Fished permits	25	23	23	22	19	18	18	17	16	14	15
	% of permits fished	83%	82%	92%	85%	90%	90%	86%	89%	84%	82%	88%
	Total permit holders	30	28	25	26	21	20	20	19	19	17	17
Herring (CFEC) ²	Total permits	2	0	0	0	0	0	1	1	1	1	1
	Fished permits	2	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	-	-	-	-	-	0%	0%	0%	0%	0%
	Total permit holders	1	0	0	0	0	0	1	1	1	1	1

Table 4 cont'd. Permits and Permit Holders by Species, Hoonah: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	12	12	10	9	9	9	8	8	7	5	5
	Fished permits	11	11	10	9	9	9	7	8	7	5	5
	% of permits fished	92%	92%	100%	100%	100%	100%	88%	100%	100%	100%	100%
	Total permit holders	11	10	9	8	8	8	7	7	6	4	4
Groundfish (CFEC) ²	Total permits	34	30	24	22	25	24	14	15	12	12	10
	Fished permits	6	6	4	3	2	2	3	5	5	3	2
	% of permits fished	18%	20%	17%	14%	8%	8%	21%	33%	42%	25%	20%
	Total permit holders	26	23	20	18	21	19	12	12	9	9	7
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	138	135	132	135	137	138	139	135	131	131	127
	Fished permits	55	60	42	47	53	55	53	53	48	48	47
	% of permits fished	40%	44%	32%	35%	39%	40%	38%	39%	37%	37%	37%
	Total permit holders	126	126	122	124	121	123	122	120	116	116	113
<i>Total CFEC Permits</i> ²	<i>Permits</i>	<i>224</i>	<i>214</i>	<i>199</i>	<i>202</i>	<i>200</i>	<i>199</i>	<i>191</i>	<i>185</i>	<i>178</i>	<i>172</i>	<i>167</i>
	<i>Fished permits</i>	<i>106</i>	<i>105</i>	<i>84</i>	<i>88</i>	<i>89</i>	<i>90</i>	<i>85</i>	<i>88</i>	<i>82</i>	<i>72</i>	<i>72</i>
	<i>% of permits fished</i>	<i>47%</i>	<i>49%</i>	<i>42%</i>	<i>44%</i>	<i>45%</i>	<i>45%</i>	<i>45%</i>	<i>48%</i>	<i>46%</i>	<i>42%</i>	<i>43%</i>
	<i>Permit holders</i>	<i>136</i>	<i>135</i>	<i>133</i>	<i>132</i>	<i>130</i>	<i>132</i>	<i>130</i>	<i>128</i>	<i>122</i>	<i>121</i>	<i>118</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Hoonah: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Hoonah ²	Total Net Pounds Landed in Hoonah ^{2,5}	Total Ex-Vessel Value of Landings in Hoonah ^{2,5}
2000	118	13	1	111	123	179	2,309,123	\$6,314,287
2001	107	6	1	103	105	140	2,588,569	\$6,015,076
2002	89	10	1	97	96	129	2,116,495	\$5,108,681
2003	81	6	1	95	81	131	2,926,366	\$6,753,933
2004	96	5	1	90	80	379	5,551,029	\$12,327,363
2005	79	12	1	88	74	357	6,712,588	\$8,995,881
2006	90	17	1	87	69	335	3,301,447	\$8,940,614
2007	107	15	1	89	72	324	3,113,796	\$8,598,766
2008	97	22	1	86	69	335	3,089,870	\$9,408,770
2009	86	21	1	86	71	289	2,194,979	\$4,803,433
2010	80	19	2	83	70	297	2,361,543	\$6,873,166

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Hoonah: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	40	1,430,321	176,786
2001	39	1,619,754	216,685
2002	37	1,300,182	177,409
2003	31	1,200,594	163,573
2004	29	1,167,825	190,612
2005	32	1,226,977	212,455
2006	31	1,207,015	202,833
2007	31	1,282,099	188,160
2008	25	1,157,887	129,135
2009	26	996,593	94,398
2010	25	988,712	83,806

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Hoonah: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	4	903,029	105,604
2001	5	903,029	99,826
2002	4	1,016,080	107,441
2003	4	1,016,080	119,257
2004	5	1,471,383	183,665
2005	5	1,016,080	119,976
2006	3	780,829	90,284
2007	3	780,829	86,584
2008	3	780,829	82,642
2009	3	780,829	70,439
2010	3	780,829	66,095

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Hoonah: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Hoonah: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	1,054,348	1,407,455	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	136,480	--	--	--	--	--	--	--	--	46,072	47,101
Other Shellfish	--	--	2,817	--	--	--	--	6,155	--	--	--
Pacific Cod	110,795	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	4,545,550	1,614,973	1,336,240	1,553,989	1,342,450	1,383,417
<i>Total²</i>	<i>1,301,623</i>	<i>1,407,455</i>	<i>2,817</i>	--	--	<i>4,545,550</i>	<i>1,614,973</i>	<i>1,342,395</i>	<i>1,553,989</i>	<i>1,388,522</i>	<i>1,430,518</i>
	<i>Ex-vessel Value (Nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$2,754,371	\$2,752,576	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$74,413	-	-	-	-	-	-	-	-	\$29,538	\$20,860
Other Shellfish	-	-	\$12,425	-	-	-	-	\$41,364	-	-	-
Pacific Cod	\$40,624	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>\$2,869,408</i>	<i>\$2,752,576</i>	<i>\$12,425</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$41,364</i>	<i>\$0</i>	<i>\$29,538</i>	<i>\$20,860</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Hoonah Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	31,440	37,883	-	-	-	27,728	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	179,526	277,236	288,643	144,019	218,295	167,018	197,863	155,159	114,543	113,897	113,255
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	23,160	38,159	35,401	23,005	11,112	11,019	15,520	11,303	8,760	8,849	8,517
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	98,769	48,915	50,884	3,889	2,546	19,855	10,913	19,988	17,932	11,570	15,913
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	248,869	218,907	144,507	124,954	128,572	144,371	-	133,962	112,209	-	-
Salmon	1,468,309	2,621,352	1,077,981	1,353,723	1,220,362	1,974,934	1,572,794	1,625,727	1,241,461	1,338,650	1,094,985
<i>Total²</i>	<i>2,050,073</i>	<i>3,242,452</i>	<i>1,597,416</i>	<i>1,649,590</i>	<i>1,580,887</i>	<i>2,344,925</i>	<i>1,797,090</i>	<i>1,946,139</i>	<i>1,494,905</i>	<i>1,472,966</i>	<i>1,232,670</i>
	<i>Ex-vessel Value (Nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$72,662	\$87,198	-	-	-	\$51,959	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$470,021	\$550,431	\$631,135	\$423,892	\$654,529	\$508,763	\$746,997	\$680,424	\$494,907	\$339,753	\$543,332
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$12,238	\$26,567	\$25,388	\$19,138	\$5,740	\$7,042	\$8,093	\$4,998	\$5,242	\$4,300	\$4,088
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	\$39,661	\$27,291	\$29,247	\$992	\$562	\$11,647	\$6,214	\$10,700	\$10,016	\$6,692	\$6,608
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	\$828,332	\$676,371	\$453,305	\$377,426	\$344,556	\$446,427	-	\$360,824	\$348,531	-	-
Salmon	\$736,614	\$915,607	\$396,958	\$388,570	\$873,373	\$770,662	\$1,364,216	\$1,202,686	\$1,460,952	\$924,604	\$1,041,050
<i>Total²</i>	<i>\$2,159,529</i>	<i>\$2,283,464</i>	<i>\$1,536,033</i>	<i>\$1,210,017</i>	<i>\$1,878,761</i>	<i>\$1,796,501</i>	<i>\$2,125,520</i>	<i>\$2,259,633</i>	<i>\$2,319,648</i>	<i>\$1,275,349</i>	<i>\$1,595,079</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to the 2011 AFSC survey, community leaders indicated that sportfishing activity in Hoonah takes place both from shore and from boats, including private boats owned by local residents and non-locals, as well as charter boats or party boats. Community leaders perceived that the number of charter boats present in Hoonah has increased in the last five years, and noted that primary species targeted by sport fishermen in Hoonah include Chinook, coho, sockeye, and pink salmon, halibut, shrimp, crab, and clams.

Between 2000 and 2010, the number of active sport fish guide businesses in Hoonah increased slightly. The number of licensed sport fish guides present in the community increased in the middle of the decade before falling back to 2000 levels by 2010. The number of sportfishing licenses purchased by local residents decreased over the decade, from 620 in 2000 to 314 in 2010. In contrast, the number of sportfishing licenses sold in Hoonah increased, from 952 in 2000 to between 2,000 and 3,000 per year from 2008 to 2010. These license trends can be explained in part by the increase in cruise ship tourism in Hoonah over the decade, which brought a greater number of visitors to the community.

The Alaska Statewide Harvest Survey,⁶⁰⁸ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Hoonah: in freshwater, coho, chum, pink, and sockeye salmon, Dolly Varden, cutthroat trout, and steelhead; in saltwater, Chinook, chum, coho, sockeye, pink, and chum salmon, Dolly Varden, cutthroat trout, Pacific halibut, rockfish, and lingcod. The survey also noted sport harvest of Dungeness crab and hardshell clams by Hoonah residents. Kept/released statistics from charter logbook data reported by ADF&G⁶⁰⁹ show that Pacific halibut, coho salmon, Chinook salmon, and rockfish species were the most important charter targets out of Hoonah. On average between 2000 and 2010, 1,687 halibut, 704 coho salmon, 121 Chinook salmon, and 171 rockfish (including yelloweye, pelagic, and other species) were kept per year. Other species that were also caught during charters out of Hoonah between 2000 and 2010 included chum and sockeye salmon and lingcod. It is also important to note that halibut, small Chinook salmon, and coho were the three species most often released after being caught during charters out of Hoonah.

Hoonah is located within Alaska Sport Fishing Survey Area G – Glacier Bay. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. In saltwater, non-Alaska resident anglers fished consistently more days than Alaska resident anglers, while in freshwater the two groups fished about the same number of angler days on average. Saltwater sportfishing was much more important in this region than freshwater between 2000 and 2010. Information about the sportfishing sector in and near Hoonah is displayed in Table 11.

⁶⁰⁸ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁶⁰⁹ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Hoonah: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Hoonah ²
2000	4	11	620	952
2001	5	15	634	968
2002	4	13	536	891
2003	3	12	518	959
2004	3	20	362	1,077
2005	6	17	343	1,204
2006	8	17	414	1,591
2007	8	17	331	1,754
2008	10	17	401	2,939
2009	8	12	320	2,779
2010	9	13	314	1,899

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	32,212	80,684	3,879	11,706
2001	32,150	73,209	4,957	14,530
2002	24,968	66,921	5,024	11,767
2003	28,586	73,742	3,350	10,392
2004	26,628	86,478	3,741	8,956
2005	37,754	80,680	5,154	12,124
2006	23,379	67,609	4,580	9,338
2007	23,316	75,048	3,733	11,140
2008	24,339	66,296	3,926	9,886
2009	22,970	72,576	4,634	17,504
2010	20,043	65,085	4,167	10,838

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence is an important part of the way of life in Hoonah. Marine subsistence resources utilized by Hoonah residents include salmon, halibut, and shellfish.⁶¹⁰ According to a survey conducted by the AFSC in 2011, black seaweed is also an important local subsistence resource. Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of Hoonah households utilizing various marine resources for subsistence purposes or per capita subsistence harvest (Table 12).

However, information is available from an earlier ADF&G subsistence survey regarding the percentage of Hoonah households involved in the harvest of non-salmon fish, marine invertebrates, and marine mammals in 1996. That year, the species of marine invertebrates harvested by the greatest percentage of Hoonah households included butter clams (47% of households reported harvesting), heart cockles (38%), Pacific littleneck clams (31%), black chitons (29%), Dungeness crab (29%), shrimp (14%), red king crab (12%), Tanner crab (12%), octopus (8%), and basket cockles (5%). The species of non-salmon fish harvested by the greatest percentage of Hoonah households included Dolly Varden (43% of households harvested), herring (25%), red rockfish (17%), cutthroat trout (14%), sablefish (13%), lingcod (10%), Pacific cod (10%), rainbow trout (5%), and skates (5%). In addition, Hoonah households harvested herring roe on hemlock branches as well as spawn on kelp fisheries. Species of marine mammal harvested by Hoonah residents in 1996 included harbor seal.⁶¹¹

It is important to note that in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Hoonah. Sharing networks also extend between communities. In an ethnographic research project conducted between 2004 and 2006, individual ‘high harvesters’ in Hoonah were reported to harvest enough salmon for multiple households. One informant from Hoonah indicated that one household supplied fish for as many as seven households, including five in Hoonah and two in Juneau. In addition, Hoonah households received salmon from a family member living in Sitka.⁶¹²

Information was reported by ADF&G regarding subsistence harvest of salmon in Gustavus during the 2000-2010 period. Since prehistory, salmon have been perhaps the most important subsistence resource for the Tlingit people.⁶¹³ Hoonah residents harvest all five species of salmon for subsistence purposes. Hoonah fishermen report using beach seines and purse seines for harvest of sockeye, chum, and pink salmon, as well as troll gear or rod and reel for harvest of coho.⁶¹⁴ In 2008, the most recent year for which ADF&G data were available, 69 subsistence salmon permits were issued to Hoonah households, of which 57 were returned. These numbers represent a substantial decline from permit numbers earlier in the decade. On

⁶¹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶¹¹ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁶¹² Brock, M., P. Cooley-Kenner, and the Sitka Tribe of Alaska. (2009). *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

⁶¹³ Alaska Native Heritage Center. (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

⁶¹⁴ See footnote 612.

average, sockeye salmon were the most heavily harvested for subsistence purpose, with an average of 2,394 sockeye taken per year. Chum salmon were also important relative to the other salmon species, with an average of 1,250 chum taken per year. Very few Chinook salmon were reported to have been harvested for subsistence purposes, although Hoonah fishers reported that Chinook are present in the Hoonah area all year long.⁶¹⁵ Information about subsistence salmon harvest is presented in Table 13, while no information was available regarding marine invertebrate or non-salmon fish (other than halibut) harvest during the 2000-2010 period.

Information is also available from ADF&G's regarding subsistence harvest of halibut and several species of marine mammals in Hoonah between 2000 and 2010. In 2010, 236 Subsistence Halibut Fishing Certificates (SHARC) were issued to residents of Hoonah. Of these, 60 SHARC cards were fished that year, and a total of 13,853 pounds of halibut were harvested through the program. The number of SHARC cards issued initially increased, from 315 in 2003 to 354 in 2007, and then fell by approximately 100 between 2007 and 2008. SHARC program Participation and harvest numbers appear to have decreased between 2003 and 2010. The highest volume harvest of halibut harvested during this period was reported in 2006, with 35,989 pounds harvested on 139 active SHARC cards. Information about subsistence halibut harvest is presented in Table 14.

According to data reported by the U.S. Fish and Wildlife Service and ADF&G, marine mammal harvest in Hoonah focused primarily on sea otter and harbor seal, with an average harvest of 27 sea otter and 76 harbor seal per year, for those years in which data were reported between 2000 and 2010. No information was reported by management agencies regarding harvest of beluga whale, walrus, Steller sea lion, or spotted seal during the 2000-2010 period (Table 15).

Table 12. Subsistence Participation by Household and Species, Hoonah: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁶¹⁵ Ibid.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Hoonah: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	237	151	n/a	332	38	284	2,362	n/a	n/a
2001	302	200	n/a	2,260	296	140	2,400	n/a	n/a
2002	282	142	n/a	382	8	318	3,158	n/a	n/a
2003	301	69	n/a	6,870	476	18	5,338	n/a	n/a
2004	162	84	n/a	51	20	144	2,921	n/a	n/a
2005	130	53	n/a	71	15	93	1,751	n/a	n/a
2006	79	29	n/a	11	8	79	761	n/a	n/a
2007	60	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	69	57	1	24	115	n/a	459	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Hoonah: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	315	138	61,096
2004	339	133	41,304
2005	334	126	25,189
2006	331	139	35,989
2007	354	117	20,903
2008	251	108	16,291
2009	262	109	19,085
2010	236	60	13,853

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Hoonah: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	8	n/a	n/a	n/a	148	n/a
2001	n/a	4	n/a	n/a	n/a	143	n/a
2002	n/a	2	n/a	n/a	n/a	96	n/a
2003	n/a	43	n/a	n/a	n/a	52	n/a
2004	n/a	50	n/a	n/a	n/a	106	n/a
2005	n/a	19	n/a	n/a	n/a	53	n/a
2006	n/a	34	n/a	n/a	n/a	56	n/a
2007	n/a	28	n/a	n/a	n/a	34	n/a
2008	n/a	30	n/a	n/a	n/a	25	n/a
2009	n/a	27	n/a	n/a	n/a	n/a	n/a
2010	n/a	53	n/a	n/a	n/a	n/a	n/a

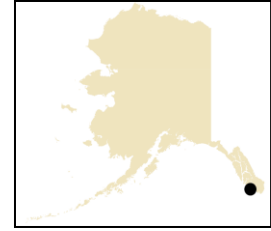
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Hydaburg (HIGH-duh-burg)



People and Place

*Location*⁶¹⁶

Hydaburg is located on the southwest coast of Prince of Wales Island (PWI), 45 mi west of Ketchikan, and 750 mi southeast of Anchorage. It lies 36 road mi west of Hollis, site of the state ferry landing. The community encompasses 0.3 sq mi of land. Hydaburg was incorporated as a city in 1927, is located within the Prince of Wales-Hyder Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁶¹⁷

In 2010, there were 376 residents, ranking Hydaburg 142nd of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population decreased by 2.1%. Between 2000 and 2009, the population declined by 10.8% with an average annual growth rate of -1.55%, which was significantly less than the statewide average of 0.75% and indicative of steady decline during those years. However, the population recovered significantly between 2009 and 2010 indicating a possible discrepancy between U.S. Census figures and Alaska Department of Community and Rural Affairs (DCRA) estimates (Table 1).

Hydaburg is the largest Haida village in Alaska. In 2010, 77.1% of residents identified themselves as American Indian or Alaska Native, compared to 85.1% in 2000; 11.4% identified themselves as White, compared to 9.4% in 2000; 0.3% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.0% in 2000; 9.6% identified themselves as two or more races, compared to 4.5% in 2000; and 1.1% identified themselves as some other race, compared to 0.0% in 2000. In addition, 3.2% of residents identified themselves as Hispanic or Latino, compared to 0.0% in 2000 (Figure 1).

In 2010, the average household size was 2.94, compared to 3.20 in 1990 and 2.87 in 2000. In that year, there were a total of 139 housing units, compared to 135 in 1990 and 154 in 2000. Of the households surveyed in 2010, 65% were owner-occupied, compared to 55% in 2000; 27% were renter-occupied, compared to 32% in 2000; 6% were vacant, compared to 11% in 2000; and 1% were occupied seasonally, compared to 3% in 2000. No residents lived in group quarters between 1990 and 2010.

⁶¹⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶¹⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

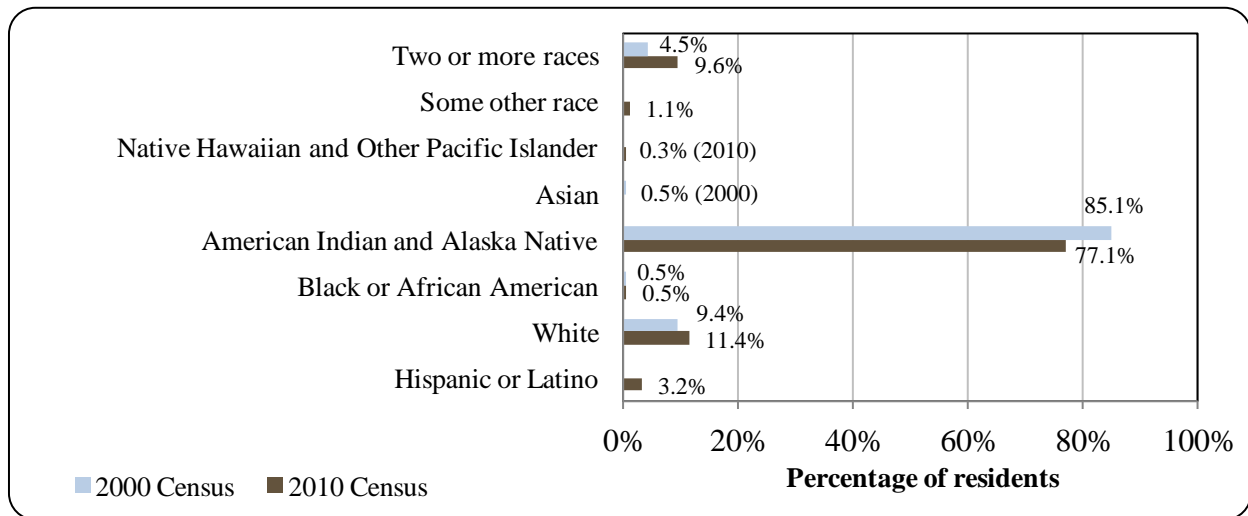
Table 1. Population in Hydaburg from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	384	-
2000	382	-
2001	-	352
2002	-	364
2003	-	369
2004	-	349
2005	-	370
2006	-	351
2007	-	352
2008	-	341
2009	-	340
2010	376	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Hydaburg: 2000-2010 (U.S. Census).

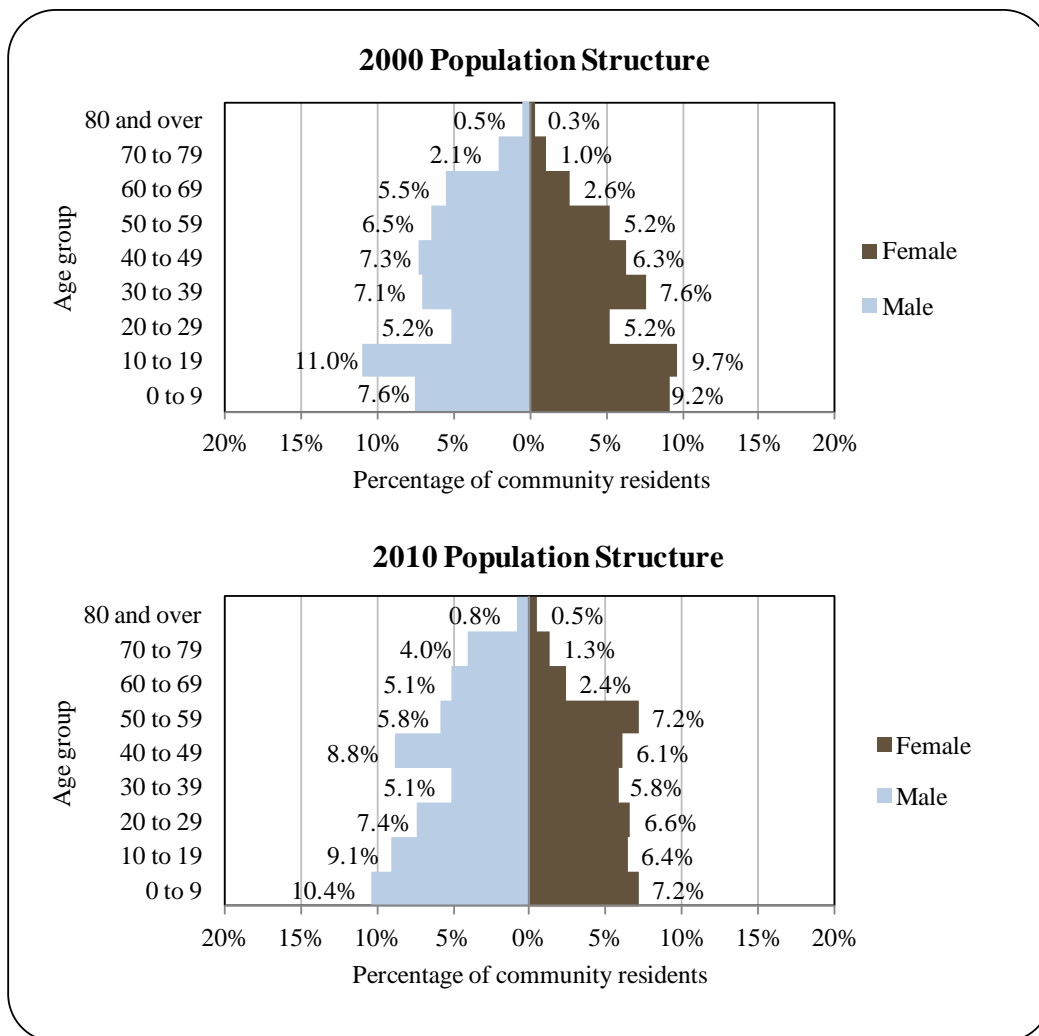


The gender distribution was biased towards males in 2010 at 56.4% male and 43.6% female. This was less even than both the distribution statewide (52.0% male, 48.0% female), and distribution in 2000 (52.9% male, 47.1% female). The median age that year was 32.0 years, which was slightly younger than the statewide median of 33.8 years, and similar to the 2000 median of 31.8 years.

The population structure was expansive in both 2000 and 2010. In 2010, 33.1% of residents were under the age of 20, compared to 37.5% in 2000; 14.1% were over the age of 59, compared to 12.0% in 2000; 38.8% were between the ages of 30 and 59, compared to 40.0% in 2000; and 14.0% were between the ages of 20 and 29, compared to 10.4% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 0 to 9 range (10.4% male, 7.2% female), followed by the 60 to 69 (5.1% male, 2.4% female) and 70 to 79 (4.0% male, 1.3% female) ranges. Of those three, the greatest relative gender difference occurred within the 70 to 79 range. Information regarding trends in Hydaburg’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Hydaburg Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁶¹⁸ estimated that 77.3% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 2.9% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 19.8% of residents had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 22.1% of resident had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; and 9.7% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Since prehistory, PWI has been occupied by Tlingit Indians. Starting in the 1700s, however, Haida Indians moved into the southern portion of Southeast Alaska from Haida Gwaii (British Columbia's Queen Charlotte Islands). On PWI they established multiple settlements, taking advantage of the Island's rich resources, including abundant sea otters. Diseases such as smallpox took a heavy toll on the island, however; by the time missionaries arrived in 1878, the Haida's numbers had dwindled from nearly 10,000 to just 800.⁶¹⁹ Hydaburg was organized in 1911 through combining the villages of Klinkwan and Kowkan. Contemporary Haidas in Alaska are descendents of the Quetas (mud-eater) people and the Yadaas of Haida Gwaii.⁶²⁰

European contact first occurred with Captain Perez in 1774, and later by Captain Cook in 1778. By 1787, George Dixon began trading sea otter pelts with the Haida. Trading continued for 30 years before the sea otter population began to dwindle. By the mid-1800s, permanent trading posts were established. Frequent contact with European and American settlers led to outbreaks of smallpox, typhoid, measles, and syphilis which severely impacted the indigenous population.⁶²¹

Mineral and fisheries became the focus of development of PWI during the late 1800s, with the first cannery opening in nearby Klawock in 1878. It was during this time that foreign claims over local resources began to take precedent over indigenous familial and clan ones. From 1890 to 1911, Haida leaders expressed their concern over the encroachment on resources and lawlessness of White settlers to the Federal government. It was during that time that missionaries began their task of convincing local Haida that the only way they might attain equity and protection was to adopt European culture.⁶²²

During the late 1800s and early 1900s, Hydaburg underwent rapid change resulting from expanding Federal authority in the region. Metlakatla, on Annette Island, became the first and only reservation in Alaska, created by Executive Order in 1891. Between 1905 and 1919, additional reserves were successfully lobbied to the U.S. Interior Department. The villages of

⁶¹⁸ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶¹⁹ Halliday, Jan. (1998). *Native Peoples of Alaska: A Traveler's Guide to Land, Art, and Culture*. Seattle: Sasquatch Books. P. 25.

⁶²⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶²¹ Holden Gerken and Associates. (1984). *Hydaburg Comprehensive Plan*. Retrieved October 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Hydaburg-CP-1984.pdf>.

⁶²² Ibid.

Howkan and Klinkwan made attempts to be recognized under Territorial law; however after failing to become recognized, they formed the combined community of Hydaburg in 1912. After its formation, President Taft set aside a 7,800 acre land and water reserve for “the use of the Haida Tribe of Indians.” However, in 1926 President Coolidge revoked the reserve, leaving only two acres set aside for a school. In 1927, 189 acres of land in and around the village were set aside as the community’s townsite. By 1933, Hydaburg was incorporated as a second-class municipality within the Alaska Territory.⁶²³

The Indian Reorganization Act (IRA) was extended to Alaska in 1936, and Hydaburg was the first village to organize under the act. The IRA had initially intended to create reservations, similar to Annette Island, and in 1945, between 77,000 and 100,000 acres was offered to Kake, Klawock, and Hydaburg residents. The offers were rejected by Kake and Klawock, and Hydaburg finally accepted the offer in 1949.⁶²⁴

In 1971, the Alaska Native Claims Settlement Act (ANCSA) was passed, forming both the regional Native corporation, Sealaska; and the local village corporation, Haida Corporation. Both entities are now major landholders and economic developers in the region. Today, much of life centers around subsistence hunting and fishing, and traditional arts.⁶²⁵

Hydaburg has many cultural, historic, and archaeological resources in and around the community. These include remains of former permanent Haida villages, former Haida seasonal villages and camps, burial sites, pictographs and petroglyphs, and former mining settlements. The City of Hydaburg also manages a totem park, where some historic totems have been restored.⁶²⁶

Natural Resources and Environment

PWI is dominated by a cool, moist, maritime climate. Summer temperatures range from 49 to 63 °F; winter temperatures range from 32 to 42 °F. Average annual precipitation is 120 inches, with 40 inches of snow.

PWI is located within the Tongass National Forest, which occupies 16.8 million acres of highly productive rainforest. Managed by the U.S. Forest Service under a multi-use regime; the Tongass provides excellent recreational, ecological, scenic, subsistence, timber, mineral, and wildlife resources.⁶²⁷ Hydaburg is positioned between the Sukkwan Strait and Natzuhini Bay, across from Goat and Sukkwan islands. This protected bay is characterized by rugged, irregular coastline and rolling, moderate relief slopes. Soils are deep, organic, and of relatively low clay content. Generally, soils are poorly drained in lowlands and basins, and well-drained on steeper topography. Vegetation is consistent with Southeast Alaska’s temperate rain forest. Dense stands of western hemlock and Sitka spruce dominate the landscape, while Muskeg/bog environments cover poorly drained basins.⁶²⁸ Forested areas and interspersed with red and yellow cedar, and

⁶²³ Ibid.

⁶²⁴ Ibid.

⁶²⁵ Craig Alaska. (n.d.). *Hydaburg Alaska Community Information*. Retrieved October 11, 2012 from: http://www.craigalaska.com/craig_alaska/hydaburg_alaska.html.

⁶²⁶ GT Consulting and Walsh Planning and Development Services. (2002). *Hydaburg Community Action Plan*. Retrieved October 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Hydaburg-GCP-2002.pdf>.

⁶²⁷ U.S. Forest Service. (n.d.). *Tongass National Forest*. Retrieved October 12 from: <http://www.fs.usda.gov/main/tongass/>.

⁶²⁸ U.S. Forest Service. (n.d.). *Tongass SEIS*. Retrieved October 12, 2012 from: <http://www.tongass-seis.net/crd/pdf/504.pdf>.

riparian areas often lined with willows, alders, and cottonwood.⁶²⁹ Common shrubs include salmonberry, thimbleberry, devil's club, blueberry, rusty menziesia, and salal. Ground cover consists of mosses, sedges, and rushes. Streams and lakes support coho, pink, and chum salmon, and steelhead trout. Commercially important fish include Walleye pollock, Pacific halibut, Pacific herring, rockfish, turbot, sole, sablefish, Pacific ocean perch, and all five species of Pacific salmon. Common marine mammals include Steller sea lions, harbor seals, Dall's and harbor porpoise, and killer whales. Terrestrial mammals include Sitka black tailed deer, wolf, river otter, mink, marten, and black bear. Many species of waterfowl and shorebirds populate the region as well.⁶³⁰

Sukkwan Island possesses two explored copper prospects on the southern portion of the Island. The area contains 7,556 acres of undiscovered locatable mineral resources which are considered to have moderate potential for development.⁶³¹ Active mineral developments in the area include the Niblack and Bokan Mountain mineral projects. The Niblack project is a copper-zinc-silver prospect which was in the final stages of exploration as of 2011.⁶³² Bokan Mountain mineral area is a source of uranium and rare earths on the southern portion of PWI. Other potential mineral sources are found around Hetta Mountain, east of Hydaburg.⁶³³ Depending on land ownership, timber resources are either managed by the U.S. Forest Service, the state, or by private entity. The 2009 Logjam timber sale opened up 3,422 acres of the Tongass National Forest to commercial harvesting with a potential yield of 73 million board ft.⁶³⁴ Sealaska, the regional ANSCA corporation for southeast Alaska, also has active timber developments within Tribal lands on the island.⁶³⁵ In 2010 alone, the Tongass offered 49 million board ft of timber of which 35.4 million board ft was harvested.⁶³⁶

Hydaburg is protected against many natural hazards due to its sheltered position. However, earthquakes have been classified as a moderate risk by the U.S. Army Corps of Engineers and it is projected that regional damage caused by an earthquake would be major.⁶³⁷ Damage from earthquakes would likely come from shaking, tsunamis, seiches, and landslides. Storm events also pose threats in the form of high winds, heavy rains, freezing rain, and heavy snow. Typically, Southeast Alaska experiences high wind storm events, and heavy rain events, which can damage infrastructure and result in flooding and slope failures.⁶³⁸

According to the Alaska Department of Environmental Conservation, there were no

⁶²⁹ CRM; and National Oceanic and Atmospheric Administration. (2006). *Environmental Assessment: Alaska Coastal Management Plan*. Retrieved October 12, 2012 from:

<http://coastalmanagement.noaa.gov/assessments/docs/akea1.pdf>

⁶³⁰ City of Craig. (2006). *Craig Coastal Management Plan*. Retrieved February 29, 2012 from:

<http://www.craigak.com/documents/Craig%20Coastal%20Management%20Plan%20-%202007.pdf>.

⁶³¹ See footnote 628.

⁶³² Alaska Department of Natural Resources. (n.d.). *Niblack Project*. Retrieved February 14, 2012 from:

<http://dnr.alaska.gov/mlw/mining/largemine/niblack/>.

⁶³³ See footnote 629.

⁶³⁴ United States Forest Service. (2009). *Logjam Timber Sale Record of Decision*. Retrieved February 29, 2012

from: http://www.fs.fed.us/r10/tongass/projects/logjamDEIS/05_rod_logjam.pdf.

⁶³⁵ Sealaska Timber Corporation. (n.d.). *About us*. Retrieved February 14, 2012 from:

<http://www.sealaskatimber.com/page/about-us>.

⁶³⁶ U.S. Forest Service. (2011). *2010 Annual Monitoring and Evaluation*. Retrieved October 12, 2012 from:

http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5393490.pdf.

⁶³⁷ City of Craig. (2000). *City of Craig Comprehensive Plan*. Retrieved February 29, 2012 from:

<http://www.commerce.state.ak.us/dca/plans/Craig-CP-2000.pdf>.

⁶³⁸ City of Thorne Bay. (2011). *Draft Thorne Bay Hazard Mitigation Plan*. Retrieved October 12, 2012 from:

https://www.thornebay-ak.gov/uploads/Thorne_Bay_Draft_HMP_6-2011.pdf.

significant environmental remediation projects active within Hydaburg in 2010.⁶³⁹

Current Economy⁶⁴⁰

Hydaburg's economy is dependent on subsistence, commercial fishing, timber, and government. Subsistence is extremely important both as supplement to wage employment and as way of life; tethering residents to their environment, and providing a sense of place and community. All Haida families in Hydaburg depend upon subsistence through harvesting, processing, or customary trade. Timber harvests by Haida Corporation were halted in 1985 because of depressed economic conditions; however, Sealaska continues to harvest their holdings around Hydaburg. The Sealaska Timber Corporation harvested 31 million board feet of timber within the Hydaburg area in 2007.⁶⁴¹ Haida Corporation owns and log transfer facility and sort yard at Saltry Point, which supplies the community with part-time and seasonal employment. The tribal council, City, school, and Southeast Alaska Regional Health Consortium are also considered leading employers within the community. There is a specialty timber processing plant, and the community has expressed interest in developing a shoreside seafood processing facility.⁶⁴²

In 2010,⁶⁴³ the estimated per capita income was \$21,100 and the estimated median household income was \$42,656, compared to \$11,401 and \$31,625 in 2000, respectively. When adjusted for inflation by converting 2000 values into 2010 dollars,⁶⁴⁴ the real per capita income (\$14,992) and real median household income (\$41,586) indicate while individual earnings rose, household earnings staid relatively flat. In 2010, Hydaburg ranked 140th of 305 community from which per capita income was estimated, and 178th of 299 communities from which median household income was estimated.

Hydaburg's small population size may have prevented the ACS from accurately portraying economic conditions. Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$3.51 million in total wages in 2010.⁶⁴⁵ When matched with the decennial Census for 2010, the per capita income equals \$9,322, which is significantly lower than the 2010 ACS estimate and suggests that caution should be used when

⁶³⁹ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved October 12, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Southeast>.

⁶⁴⁰ Unless otherwise noted, all monetary data are reported in nominal values.

⁶⁴¹ McDowell Group. (2008). *The Impact of Sealaska Corporation on the Southeast Alaska Economy*. Retrieved October 12, 2012: [http://www.iser.uaa.alaska.edu/Publications/8\(a\)/background%20info/Sealaska_Southeast_Report.pdf](http://www.iser.uaa.alaska.edu/Publications/8(a)/background%20info/Sealaska_Southeast_Report.pdf).

⁶⁴² Okleasik, T. (2005). *Community Economic Development Plan Hydaburg, Alaska 2005-2015*. Northwest Planning and Grants Development. Retrieved October 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Hydaburg-EDP-2005.pdf>.

⁶⁴³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁴⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁴⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

comparing 2000 Census and 2010 ACS figures.⁶⁴⁶ However, it should be noted that Hydaburg was not listed as distressed by the Denali Commission, meaning that by their estimates, less than 70% of residents aged 16 and older made less than \$16,120 in 2010.⁶⁴⁷

According to 2006-2010 estimates,⁶⁴⁸ 50.3% of residents aged 16 and older were part of the civilian labor force in 2010. In that year, unemployment was estimated at 10.3%, compared to an estimated 5.9% statewide; and an estimated 19.5% of residents lived below the poverty level, compared to an estimated 9.5% of Alaska residents overall. The ACS may have inaccurately captured unemployment in Hydaburg due to the community's small population size. According to 2010 ALARI estimates, the unemployment rate was 31.3% based on unemployment insurance claimants. In addition, it should be noted that labor statistics taken by the ACS and DOLWD include only wage employment, and do not take under consideration value of the subsistence economy, or in many cases take into consideration those employed in commercial fisheries. It should also be noted that unless they are employed in a second wage-based position, commercial fishermen classify themselves as self-employed and are not captured in ALARI estimates. This may also account for the significantly low fraction of residents over 16 within the civilian labor force (as reported in the ACS). The ACS's failure to accurately capture the number of residents over 16 were within the civilian labor force is possibly supported by the fact that it estimated that only 3.5% were self-employed in 2010 (45.8% worked in private sectors, and 50.7% worked in public sectors).

By industry, most (25.7%) employed residents were estimated to work in education services, health care, and social assistance sectors; followed by agriculture, forestry, fishing, hunting, and mining (25.0%); other services (15.3%) and transportation, warehousing, and utilities sectors (13.9%). Between 2000 and 2010, there was a somewhat significant loss of employment diversity, and strong proportional gains in agriculture, forestry, fishing, hunting, mining, and other service sectors. However, notable proportional declines occurred in most other sectors, including a significant decline in education services, health care, and social assistance sectors (Figure 3). According to 2010 ALARI estimates, most (35.4%) of those employed work in local government sectors; followed by trade, transportation, and utilities (29.3%); and construction sectors (13.4%).⁶⁴⁹

By occupation type, most (39.6%) employed residents hold management or professional positions; followed by natural resources, construction, or maintenance (32.6%); service (12.5%); sales or office (7.6%); and production, transportation, or material moving positions (7.6%). Between 2000 and 2010, there were significant proportional declines in the number of sales and office positions, while there were significant proportional gains in the number of natural resources, construction, and maintenance positions (Figure 4).

Figure 3. Local Employment by Industry in 2000-2010, Hydaburg (U.S Census).

⁶⁴⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁴⁷ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

⁶⁴⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁴⁹ See footnote 646.

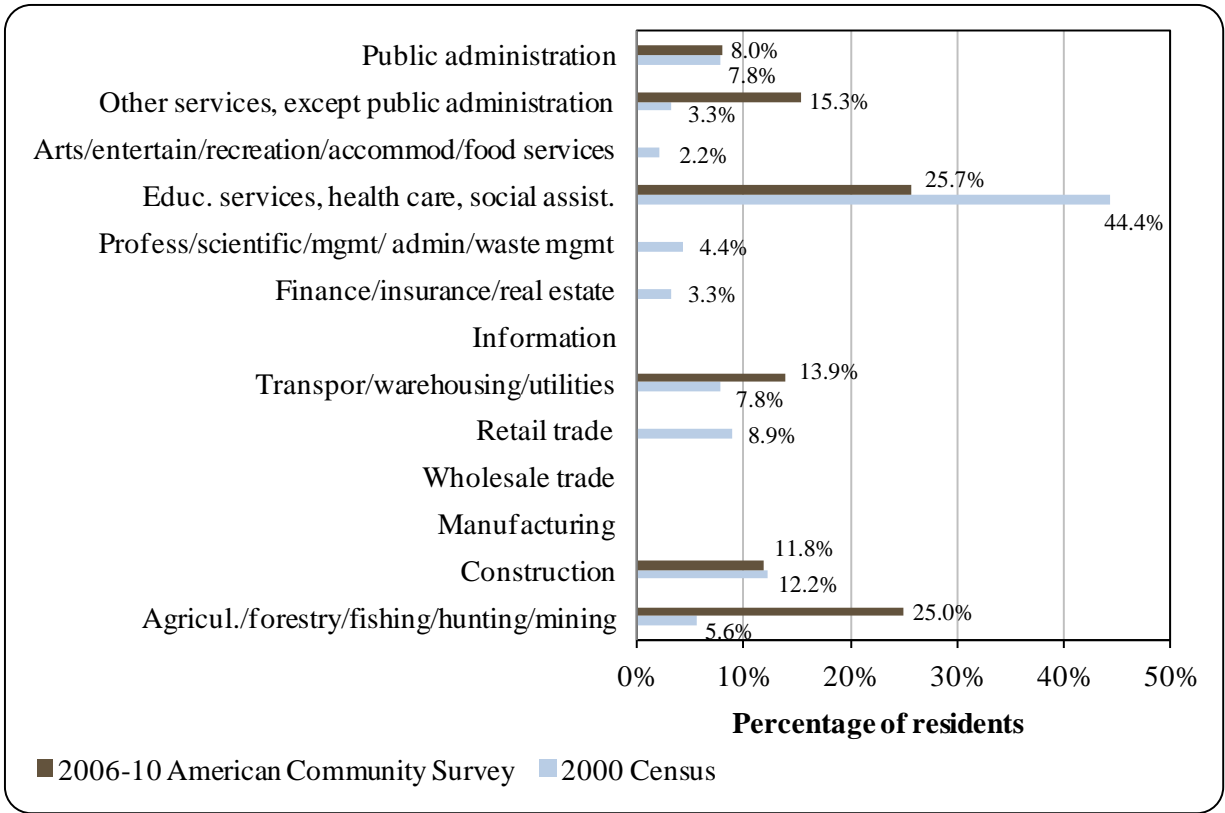
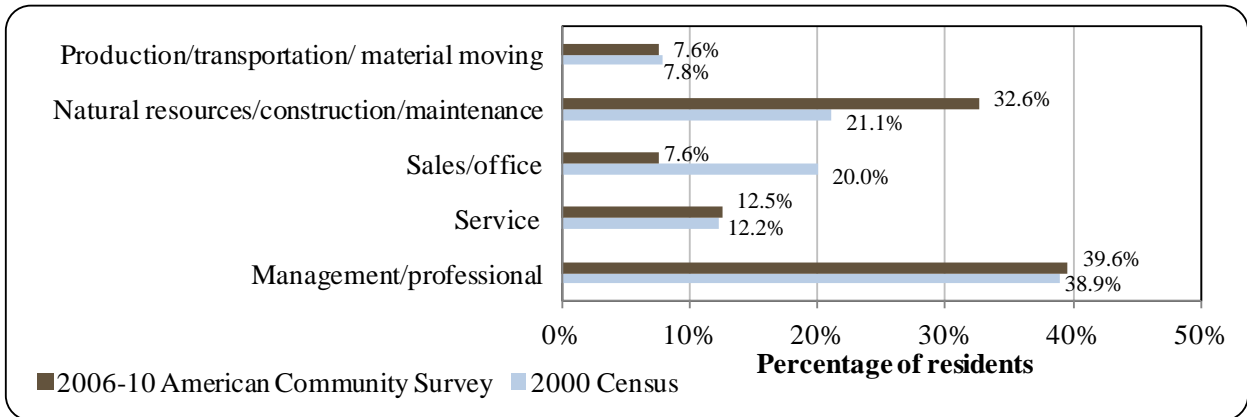


Figure 4. Local Employment by Occupation in 2000-2010, Hydaburg (U.S. Census).



Governance

Hydaburg is a First-class city with a mayoral form of government. In addition, Hydaburg has a federally recognized tribal government.

The city collects a 4% sales tax and does not collect a property tax. When adjusted for inflation,⁶⁵⁰ total municipal revenues increased by 324.7% between 2000 and 2010 from \$213,128 to \$1.17 million. In 2010, most locally generated revenues came utility and service charges and income on interests. Most outside revenues were collected from capital and unrestricted grants and entitlements. Municipal revenues increased steadily between 2000 and 2010, peaking significantly in 2008 thanks to large capital grants.

Sales taxes accounted for 6.3% of the total budget in 2010, compared to 8.6% in 2000. Sales tax revenues steadily increased between 2002 and 2010. Also in 2010, state allocated Community Revenue Sharing accounted for 17.0% of the total budget that year, compared to 9.2% from State Revenue Sharing in 2000. Fisheries-related state and federal grants awarded to Hydaburg between 2000 and 2010 included \$93,719 for harbor maintenance and \$53,571 for a cold storage/smoker facility. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Hydaburg from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$213,128	\$18,330	\$19,704	n/a
2001	\$232,569	\$34,732	\$19,046	n/a
2002	\$346,660	\$11,344	\$19,859	n/a
2003	\$366,848	\$11,273	\$19,973	\$53,571
2004	\$369,021	\$23,906	-	n/a
2005	\$264,933	\$25,685	-	n/a
2006	\$343,699	\$25,856	-	n/a
2007	\$337,272	\$27,011	-	n/a
2008	\$3,514,065	\$29,250	\$87,167	n/a
2009	\$844,390	\$41,968	\$109,141	\$93,719
2010	\$1,170,460	\$40,931	\$110,130	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁶⁵⁰ Inflation calculated using 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Hydaburg is the Sealaska Corporation, and the local ANCSA chartered non-profit is the Central Council of the Tlingit and Haida Indian Tribes. The ANCSA chartered village corporation is the Haida Corporation.

The closest Alaska Department of Fish and Game (ADF&G) office is located in Craig, 19 mi north. The closest National Marine Fisheries Service (NMFS) and U.S. Department of Citizenship and Immigration Services (BCIS) offices are located in Ketchikan, 45 mi east.

Infrastructure

Connectivity and Transportation

Hydaburg has a seaplane base. Scheduled flights from Hydaburg connect in Ketchikan via Taquan Air. Charter service is available via Pacific Airways or Promech Air. Roundtrip airfare between Anchorage and Ketchikan in June 2012 was \$461.⁶⁵¹ An emergency heliport is also available. The City owns a dock and small boat harbor. Hydaburg is also connected to Craig, Klawock, and Hollis via the PWI road system. Inter-island ferries connect Ketchikan with Hollis. There is weekly barge service from Seattle, and goods are often trucked to Hydaburg from Craig or Hollis.⁶⁵²

Facilities

The Hydaburg River provides water, which is treated and piped throughout the city. Piped gravity sewage is treated at a secondary treatment plant, with an 800-ft outfall to Sukkwan Strait. Over 95% of all homes are plumbed. Alaska Power and Telephone Company, based in Skagway, owns and operates diesel power systems in Hydaburg and Craig that provide electricity to many island communities.⁶⁵³ There are two bulk fuel storage tanks owned by Tlingit and Haida Regional Housing Authority and Alaska Power and Telephone Company, with 21,000 gallon capacity. As of 2005, there was no community fuel or oil supplier. Fuel for individual use is trucked from Craig by residents.⁶⁵⁴ Public safety services are provided by local Village Public Safety Office and state troopers stationed in Klawock. There is also a city jail. Fire and Rescue services are provided by Hydaburg Emergency Medical Service (EMS) and PWI area EMS. Additional public facilities include a day care, youth center, Alaska Native Brotherhood/ Sisterhood hall, municipal building, and school library. Communications services include local and long distance telephone, internet, local and cable television, and local radio.⁶⁵⁵

⁶⁵¹ Airfare was averaged from prices found on travel websites, including <http://www.travelocity.com> (retrieved June 2004) and <http://www.cheaptickets.com> (retrieved October 2011).

⁶⁵² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁵³ Ibid.

⁶⁵⁴ Okleasik, T. (2005). *Community Economic Development Plan Hydaburg, Alaska 2005-2015*. Northwest Planning and Grants Development. Retrieved October 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Hydaburg-EDP-2005.pdf>.

⁶⁵⁵ See footnote 652.

Medical Services

The Hydaburg Health Center offers medical services to Hydaburg residents and is a Community Health Aid Program facility. Emergency Services have limited highway, marine, floatplane, and helicopter access. Emergency service is provided by 911 Telephone Service volunteers and a health aid. The closest hospital is located in Ketchikan.⁶⁵⁶

Educational Opportunities

Hydaburg School is located within its own district and offers preschool through 12th grade instruction. As of 2011, there were 62 students enrolled and 9 teachers employed.⁶⁵⁷

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

As with many communities in Southeast Alaska, Hydaburg residents have long engaged in commercial and subsistence fishing. Traditionally, local Tlingits had fished the PWI area for thousands of years. In the mid-seventeenth Century, Haidas moved into PWI from Haida Gwaii (Queen Charlotte Islands) in British Columbia. Fish and shellfish were abundant in the area and salmon, halibut, steelhead, cod, Dolly Varden, and eulachon were economically important species.⁶⁵⁸ Commercial fishing began in the late nineteenth Century with the construction of a salmon cannery in Klawock in 1878. Cannery construction expanded throughout southeast Alaska and by 1920 there were more than 100 in operation in the region, with the first fish processing plant opening in Hydaburg in 1927, and three other canneries operating through the 1930s.

Commercial fishing for salmon began in Southeast Alaska during the late nineteenth Century, following the construction of the first canneries in Klawock and Sitka. Sockeye, chum, and pink salmon were the first species to be targeted extensively. Early sockeye and chum harvests peaked in the 1910s. In the 1930s, Chinook and pink salmon harvests peaked, and by the 1940s, coho salmon harvests peaked. By the time of statehood, salmon populations were severely depressed due to years of weak federal management. Salmon stocks rebuilt through the 1960s and 1970s, and rebounded during the 1990s when Chinook and sockeye harvests reached their highest points in decades. For the most part, a purse seine gear type is used in fishing salmon, although drift gillnets, troll gear, and set gillnets are also used to a lesser extent. There are over 5,500 salmon producing streams and tributaries in Southeast Alaska.

The drift gillnet fisheries target sockeye, pink, and chum during the summer season from mid-June through mid-August; and coho and fall-run chum through late September and early October. Trollers primarily target Chinook and coho salmon, and are comprised of hand and power troll gear types. Power troll took an average of 89% of Chinook, and 86% of coho salmon harvested in the troll fishery between 1975 and 2004. The Chinook season is separated into

⁶⁵⁶ Ibid.

⁶⁵⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶⁵⁸ Alaska History and Cultural Studies. (n.d.). *Alaska's Heritage*. Retrieved March 5, 2012 from: <http://www.akhistorycourse.org/articles/article.php?artID=149>.

winter and summer seasons. Winter season runs from October 1 to April 30, and summer seasons run from May 1 to September 30, are separated into both spring and summer seasons. The majority of Chinook are harvested during summer seasons, which begin in early July. In addition to commercial fishing, the Southeast Alaska sport fishery has increased substantially along with the growing tourism industry. Chinook and coho salmon are primary targets of recreational anglers.⁶⁵⁹

The Alaska commercial herring fishery began in 1878 when 30,000 lb were harvested and processed for human consumption. Salted and pickled herring would peak following World War I. In Southeast Alaska, herring reduction (i.e., fishmeal and oil production) first began outside of Angoon, where the Northwest Trading Company established a whaling post at the village of Killisnoo. Whaling efforts were ultimately abandoned in favor of converting the facility to a herring reduction plant. Demand for herring reduction products increased in the 1920s, and for two decades harvests topped 250 million pounds annually. During that time, stocks began to decline and demand shifted to lower-cost Peruvian anchovy reduction fisheries. Soon after, Southeast Alaska herring reduction facilities began to decline. Demand for herring sac roe increased in the 1970s, most notably in Japan where domestic stocks were depressed. Commercial bait fisheries began in Alaska around 1900, and have remained relatively stable despite fluctuating reduction and sac row fisheries. Crab industry growth fueled increased bait demand during the 1970s. Today, herring is primarily harvested for roe, which is predominately sold to Asian markets where demand remains high. Purse seines and gillnets are primary gear types used in harvesting herring. A number of “spawn-on-kelp” fisheries have developed as well. In these fisheries, mature herring are either impounded and released after depositing their eggs on kelp fronds, or are allowed to naturally deposit their eggs on constructed kelp racks. Southeast Alaska remains the second largest producer of commercial herring by pounds landed. Commercial bait fisheries occur during the winter, and sac roe fisheries occur during the spring. Herring is found in abundance within the Seymore Canal, Hobart Bay, Tenakee Inlet, Hoonah Sound, and outside of Sitka.⁶⁶⁰

Dungeness crab account for the majority of crab harvests in Southeast Alaska, although there are limited Tanner and king crab fisheries as well. Golden king crab constitutes the largest portion of Southeast Alaska king crab harvests. The shrimp trawl fishery began in Petersburg in 1915, and peaked in 1958 at 7.6 million pounds. Spot shrimp pot fisheries within Southeast Alaska grew in the 1990s, with most of the harvest occurring within the southern and central Southeast regions. Pot fisheries for spot and coonstripe shrimp and beam trawl fisheries for northern and sidestripe shrimp are largely stable within the region.

Giant red sea cucumbers are harvested on the northwest side of Admiralty Island. The first commercial harvest of sea cucumbers occurred in 1983 around Ketchikan. Harvesting peaked in 1989 at 2.3 million pounds of processed product. Harvesting is restricted to hand picking, and product is sold to Asian and domestic markets. Geoducks are harvested throughout Southeast Alaska and are prized within Asian markets.

Groundfish fisheries include lingcod, halibut, sablefish, pacific cod, and rockfish. In the

⁶⁵⁹ Clark, J. H., McGregor, A., Mecum, R. D., Krasnowski, P., and Carroll, A. M. (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fishery Research Bulletin*, 12(1), 1-146. Retrieved October 3, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶⁶⁰ Woodby, D., Carlile, D., Siddeek, S., Funk, F., Clark, J. H., and Hulbert, L. (2005). *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved October 3, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidPDFs/sp05-09.pdf>.

1880s, commercial fishing for halibut began, with sablefish targeted as a secondary fishery. Commercial halibut harvests were shipped south on steamers to Seattle and Vancouver. Halibut harvests increased in 1899 when a cannery wharf was built in Petersburg and steamers made regular scheduled calls. By 1901, a salmon cannery in Icy Strait started processing halibut during the slack season. Halibut was harvested by local schooners until 1910, when the steamer fleet moved in. As stocks depleted in Puget Sound, harvests in Southeast Alaska intensified and markets shifted to Prince Rupert, B.C.⁶⁶¹ Both halibut and sablefish are caught using longline gear. However, sablefish are also harvested using pot gear or as bycatch in trawl fisheries within the Gulf of Alaska (GOA). With the exception of halibut, groundfish fisheries are mostly managed by NMFS within federally excluded waters, although some historic state fisheries remain. Lingcod and black and blue rockfish are not covered under a federal Fishery Management Plan and are managed by the state. Prior to 1987, most lingcod in Southeast Alaska was caught incidentally; however, the species began to grow more commercially important in the years following. In 1988, AFDG began monitoring the species more intensely as directed fisheries increased. Between 1987 and 1991, Sitka received 91% of lingcod landings, with the greatest amount landed during summer months.⁶⁶²

In terms of rockfish, Yelloweye rockfish is the predominate species in the directed commercial fishery, typically accounting for 90% of landings by weight. Rockfish are harvested in areas within the GOA, along the continental shelf. The directed rockfish fishery began in 1979, as a small, shore based, hook and line fishery in Southeast Alaska. The early fishery targeted all species of demersal shelf rockfish, although yelloweye still accounted for most landings. The fishery began in the Sitka area (Central Southeast Outside), although it eventually spread to the Southern Southeast Outside area as well.⁶⁶³ Pacific cod are harvested primarily by longline gear within the internal waters of Southeast Alaska, although pots, jig, and dinglebar are also used. Southeast Alaska pacific cod markets are limited due to their small size and susceptibility to parasites.⁶⁶⁴

Hydaburg is eligible to participate in the Community Quota Entity program (CQE) and is represented by the Hydaburg Community Holding Corporation. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it

⁶⁶¹ Thompson, W. F.; and Freeman, N. L. (1930). *History of the Pacific Halibut Fishery*. Retrieved October 3, 2012 from: <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁶⁶² Gordon, D. A. (1994). Lingcod Fishery and Fishery Monitoring in Southeast Alaska. *Alaska Fishery Research Bulletin*, 1(2), 140-152. Retrieved October 3, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidpdfs/AFRB.01.2.140-152.pdf>

⁶⁶³ O'Connell, V. M. ; and Brylinsky, C. (2003). *The Southeast Alaska Demersal Shelf Rockfish Fishery with 2003 Season Outlook*. Alaska Department of Fish and Game, Regional Information Report No. 1J03-10. Retrieved October 4, 2012 from: <http://www.sf.adfg.state.ak.us/fedaaidpdfs/RIR.1J.2003.10.pdf>.

⁶⁶⁴ Coonradt, E. E. (2002). *The Southeast Alaska Pacific Cod Fishery*. Alaska Department of Fish and Game, Regional Information Report No. 1J02-10. Retrieved October 4, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidpdfs/RIR.1J.2002.10.pdf>.

was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.⁶⁶⁵

As of Fall 2013, the Hydaburg Community Holding Corporation had not yet purchased any commercial halibut IFQ or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the non-profit had acquired four halibut charter permits for lease to community members.⁶⁶⁶

Hydaburg is located in Federal Statistical Reporting Area 659, Pacific Halibut Fishery Regulatory Area 2C, and the Eastern Gulf of Alaska Sablefish Regulatory District.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Hydaburg does not have a registered processing plant. The closest seafood processing plant is located in Klawock.

Fisheries-Related Revenue

In 2010, Hydaburg received \$2,790 in fisheries-related revenue from Shares Fisheries Business Taxes, compared to \$7,591 in 2000. Between 2000 and 2010, revenue from that source totaled \$62,053, and averaged \$5,641 annually. The City also collected harbor usage fees totaling \$17,500 between 2000 and 2003. Overall, fisheries-related revenue peaked in 2002 at \$11,654, totaled \$79,553 between 2000 and 2010, and averaged \$7,232 annually (Table 3).

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 40 residents, or 10.6% of the total population, held 63 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). This represented a decline from 2000, when 48 residents held 77 CFEC permits. The number of CFEC permits held in Hydaburg peaked in 2001 at 78, and there was an average of 71 CFEC permits held locally between 2000 and 2010. Of the CFEC permits held in 2010, 44% were for salmon, compared to 45% in 2000; 33% were for herring, compared to 23% in 2000; 17% were for "other" shellfish, compared to 19% in 2000; 3% were for halibut, compared to 12% in 2000; and 2% were for sablefish, compared to 0% in 2000. In addition, three residents held three License Limitation Program (LLP) groundfish permits in 2010, which was unchanged from 2000. Residents held 78,458 shares of halibut quota on 6 accounts in 2010, compared to 100,077 shares on 10

⁶⁶⁵ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>

⁶⁶⁶ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

accounts in 2000. Overall, there was a steady decline in the amount of halibut quota held in Hydaburg between 2000 and 2010. Between 2000 and 2010, one account held 9,011 shares of sablefish quota. No residents held crab quota between 2010 and when the program began. In both 2000 and 2010, between 42 and 44% of CFEC permits held were actively fished. Between those years, permit activity peaked at 57% in 2006, and averaged 50%. CFEC Permit activity varied by fishery in 2010, from 100% of sablefish permits, to 18% of “other” shellfish. During those years, “other” shellfish permit activity declined dramatically from 78% in 2000. Salmon and halibut fisheries experienced more modest declines in permit activity, while herring permit activity was somewhat variable. No groundfish LLP permits were actively fished between 2007 and 2010. Fisheries prosecuted by Hydaburg residents in 2010 included:⁶⁶⁷ statewide longline halibut; Southeast purse seine herring; northern Southeast herring spawn on kelp; southern Southeast herring spawn on kelp; Southeast pot shrimp; southern Southeast longline sablefish; Southeast purse seine salmon; and statewide hand and power troll salmon.

In 2010, residents held 30 commercial crew licenses, compared to 42 in 2000; which was also the year in which the number of licenses peaked. Also in 2010, residents held majority ownership of 31 commercial fishing vessels, compared to 39 in 2000. No landings were reported in Hydaburg in 2010 between 2000 and 2003, and in 2010. Landings made in other years and considered confidential, with the exception of 2005 when 8 vessels landed 45,346 lb of seafood valued at \$47,248. Landings reported by Hydaburg residents in 2010 are considered confidential, with the exception of salmon landings. In that year, residents landed 1.55 million lb of salmon valued at \$677,167 ex-vessel, compared to 851,687 lb valued at \$249,547 ex-vessel in 2000; an increase of \$0.04 per pound ex-vessel after adjusting for inflation,⁶⁶⁸ and without considering the species composition of landings. In 2008, residents landed 7,158 lb of “other” shellfish valued at \$25,047 ex-vessel, compared to 55,809 lb valued at \$229,148 ex-vessel in 2000. Finally, in 2007, residents landed 9,925 lb of halibut valued at \$42,211 ex-vessel, compared to 13,372 lb valued at \$34,968 ex-vessel in 2000; an increase of \$1.04 per pound ex-vessel after adjusting for inflation.⁶⁶⁹ Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁶⁶⁷ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁶⁶⁸ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

⁶⁶⁹ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Hydaburg: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$7,591	\$7,164	\$2,654	\$4,804	\$5,270	\$7,156	\$9,013	\$7,870	\$2,822	\$4,919	\$2,790
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$2,000	\$2,000	\$9,000	\$4,500	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$9,591</i>	<i>\$9,164</i>	<i>\$11,654</i>	<i>\$9,304</i>	<i>\$5,270</i>	<i>\$7,156</i>	<i>\$9,013</i>	<i>\$7,870</i>	<i>\$2,822</i>	<i>\$4,919</i>	<i>\$2,790</i>
<i>Total municipal revenue⁵</i>	<i>\$213,128</i>	<i>\$232,569</i>	<i>\$346,660</i>	<i>\$366,484</i>	<i>\$369,021</i>	<i>\$264,933</i>	<i>\$343,699</i>	<i>\$337,272</i>	<i>\$3.51 M</i>	<i>\$844,390</i>	<i>\$1.17 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Hydaburg: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	3	3	3	3	3	3	3	3	3	3	3
	Active permits	1	1	0	1	0	1	1	0	0	0	0
	% of permits fished	33%	33%	0%	33%	0%	33%	33%	0%	0%	0%	0%
	Total permit holders	3	3	3	3	3	3	3	3	3	3	3
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	3	3	3	2	2	2	1	1	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	n/a	n/a
	Total permit holders	3	3	3	2	2	2	1	1	1	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	15	17	13	11	11	12	12	12	12	11	11
	Fished permits	11	11	8	7	7	8	8	5	4	2	2
	% of permits fished	73%	64%	61%	63%	63%	66%	66%	41%	33%	18%	18%
	Total permit holders	11	13	12	10	10	11	11	11	11	10	10
Halibut (CFEC) ²	Total permits	9	7	8	6	7	5	7	6	3	2	2
	Fished permits	6	4	4	5	6	4	6	5	3	1	1
	% of permits fished	67%	57%	50%	83%	86%	80%	86%	83%	100%	50%	50%
	Total permit holders	9	7	8	6	7	5	7	6	3	2	2
Herring (CFEC) ²	Total permits	18	20	19	22	23	24	25	24	23	25	21
	Fished permits	0	11	12	18	14	15	15	10	15	19	13
	% of permits fished	0%	55%	63%	82%	61%	63%	60%	42%	65%	76%	62%
	Total permit holders	18	19	18	20	19	19	18	20	18	18	14

Table 4 Cont. Permits and Permit Holders by Species, Hydaburg: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	1	1	0	1	0	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	1	1	1	1	1
	% of permits fished	n/a	0%	0%	n/a	0%	n/a	100%	100%	100%	100%	100%
	Total permit holders	0	1	1	0	1	0	1	1	1	1	1
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	1	1	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	1	1	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	35	33	32	32	29	26	27	28	29	31	28
	Fished permits	15	11	9	9	10	10	11	15	13	13	11
	% of permits fished	43%	33%	28%	28%	34%	38%	41%	54%	45%	42%	39%
	Total permit holders	35	32	31	31	29	26	27	28	29	31	28
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>77</i>	<i>78</i>	<i>73</i>	<i>71</i>	<i>71</i>	<i>67</i>	<i>72</i>	<i>71</i>	<i>69</i>	<i>71</i>	<i>63</i>
	<i>Fished permits</i>	<i>32</i>	<i>37</i>	<i>33</i>	<i>39</i>	<i>37</i>	<i>37</i>	<i>41</i>	<i>36</i>	<i>36</i>	<i>36</i>	<i>28</i>
	<i>% of permits fished</i>	<i>42%</i>	<i>47%</i>	<i>45%</i>	<i>55%</i>	<i>52%</i>	<i>55%</i>	<i>57%</i>	<i>51%</i>	<i>52%</i>	<i>51%</i>	<i>44%</i>
	<i>Permit holders</i>	<i>48</i>	<i>46</i>	<i>44</i>	<i>45</i>	<i>46</i>	<i>44</i>	<i>43</i>	<i>46</i>	<i>44</i>	<i>44</i>	<i>40</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Hydaburg: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Hydaburg ²	Total Net Lb Landed In Hydaburg ^{2,5}	Total Ex-Vessel Value Of Landings In Hydaburg ^{2,5}
2000	42	0	0	39	34	0	0	\$0
2001	28	0	0	35	31	0	0	\$0
2002	33	0	0	31	29	0	0	\$0
2003	31	0	0	22	20	0	0	\$0
2004	27	3	0	28	28	4	--	--
2005	33	4	0	26	24	8	45,346	\$47,248
2006	35	2	0	30	26	2	--	--
2007	41	3	0	33	29	5	--	--
2008	41	1	0	33	34	1	--	--
2009	31	3	0	33	33	7	--	--
2010	30	0	0	31	31	0	0	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Hydaburg: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lb)
2000	10	100,077	14,115
2001	11	100,282	14,764
2002	11	99,946	14,245
2003	11	99,946	14,245
2004	10	96,666	17,042
2005	10	96,666	17,740
2006	10	96,666	17,254
2007	9	91,870	13,128
2008	9	91,870	9,580
2009	7	82,753	6,975
2010	6	78,458	5,796

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Hydaburg: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lb)
2000	1	9,011	1,068
2001	1	9,011	1,010
2002	1	9,011	965
2003	1	9,011	1,069
2004	1	9,011	1,132
2005	1	9,011	1,072
2006	1	9,011	1,057
2007	1	9,011	1,012
2008	1	9,011	967
2009	1	9,011	825
2010	1	9,011	775

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Hydaburg: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Hydaburg: 2000-2010.

	<i>Total Net Lb¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	--	--	--	--	--	--	0
Finfish	0	0	0	0	--	--	--	--	--	--	0
Halibut	0	0	0	0	--	--	--	--	--	--	0
Herring	0	0	0	0	--	--	--	--	--	--	0
Other Groundfish	0	0	0	0	--	--	--	--	--	--	0
Other Shellfish	0	0	0	0	--	--	--	--	--	--	0
Pacific Cod	0	0	0	0	--	--	--	--	--	--	0
Pollock	0	0	0	0	--	--	--	--	--	--	0
Sablefish	0	0	0	0	--	--	--	--	--	--	0
Salmon	0	0	0	0	--	--	--	--	--	--	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	--	--	--	--	--	--	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
Finfish	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
Halibut	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
Herring	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
Other Groundfish	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
Other Shellfish	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
Pacific Cod	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
Pollock	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
Sablefish	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
Salmon	\$0	\$0	\$0	\$0	--	--	--	--	--	--	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	--	--	--	--	--	--	<i>\$0</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Hydaburg Residents: 2000-2010.

	<i>Total Net Lb¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	13,372	--	--	7,921	15,714	4,166	7,384	9,925	--	--	--
Herring	--	--	--	--	70,109	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	55,809	64,715	52,149	55,852	49,722	52,872	51,935	33,296	7,158	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	17,974	--	--
Salmon	851,687	1,235,500	845,097	778,125	1,029,334	1,177,018	638,786	2,389,792	1,080,348	1,533,592	1,545,441
<i>Total²</i>	<i>920,868</i>	<i>1,314,720</i>	<i>918,878</i>	<i>860,748</i>	<i>1,165,270</i>	<i>1,276,843</i>	<i>932,598</i>	<i>2,935,948</i>	<i>1,406,726</i>	<i>2,030,192</i>	<i>2,747,742</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$34,968	--	--	\$23,327	\$47,943	\$12,548	\$27,062	\$42,211	\$26,348	--	--
Herring	--	--	--	--	\$280,578	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--	--	--
Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	\$229,148	\$137,583	\$122,995	\$132,885	\$51,373	\$77,739	\$140,352	\$101,942	\$25,047	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	\$54,605	--	--
Salmon	\$249,547	\$312,401	\$148,265	\$162,385	\$249,385	\$248,557	\$356,495	\$852,440	\$627,443	\$600,053	\$677,167
<i>Total²</i>	<i>\$513,663</i>	<i>\$ 506,787</i>	<i>\$372,001</i>	<i>\$435,336</i>	<i>\$ 629,780</i>	<i>\$459,201</i>	<i>\$725,393</i>	<i>\$1,513,411</i>	<i>\$1,323,906</i>	<i>\$1,050,239</i>	<i>\$1,343,653</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing is popular on PWI, although Craig absorbs the majority of tourists traveling from Ketchikan. Hydaburg has expressed interest in developing its tourism economy and infrastructure, but there is concern over how increased tourism will impact the community's character and residents' way of life.⁶⁷⁰ No registered sport fish guide businesses were active in 2009 or 2010. Two sport fish guide licenses were issued in 2010, compared to three in 2000. Between 2000 and 2010, no sportfishing licenses were sold in Hydaburg. In 2010, residents held 90 sportfishing licenses, compared to 77 in 2000. During those years, an average of 89 sportfishing licenses was sold to residents each year (Table 11).

Most sportfishing in marine waters occurs from late May through early September. Chinook fishing occurs from May through July, and peaks during June. Coho peaks in August, although fishing is good between July and September. Halibut fishing also peaks during the summer. Shellfish targeted by recreational anglers include Dungeness, Tanner, and king crab, shrimp, scallops, abalone, and clams.

Freshwater drainages support fall coho salmon runs which are popular among recreational anglers, and the Klawock River supports the largest of these runs on the island. There are small steelhead runs throughout PWI, and fishing effort is typically highest during April and May.

Hydaburg is located within the Prince of Wales ADF&G Harvest Survey Area which includes all waters and drainages from Cape Chacon to Sumner Strait and from Clarence Island westward. In 2010 there was a total of 51,312 saltwater angler days fished, compared to 49,074 in 2000. In that year, non-Alaska residents accounted for 74.4% of angler days fished, compared to 67.3% in 2000. In terms of freshwater, there was a total of 15,138 angler days fished in 2010, compared to 19,654 in 2000. In that year, non-Alaska residents accounted for 70.4% of angler days fished, compared to 45.9% in 2000.

According to ADF&G Harvest Survey Data,⁶⁷¹ local private anglers target Chinook, coho, sockeye, and pink salmon, Dolly Varden, Pacific halibut, rockfish, lingcod, Dungeness crab, hardshell clams, and shrimp. No charter log information is available for Hydaburg. Information regarding recreational fishing trends can be found in Table 11.

⁶⁷⁰ Okleasik, T. (2005). *Community Economic Development Plan Hydaburg, Alaska 2005-2015*. Northwest Planning and Grants Development. Retrieved October 12, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Hydaburg-EDP-2005.pdf>.

⁶⁷¹ Alaska Department of Fish and Game. (2011). *Alaska Sportfishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Hydaburg: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to residents ²	Sport Fishing Licenses Sold in Hydaburg ²
2000	2	3	77	0
2001	1	2	72	0
2002	0	2	84	0
2003	1	2	92	0
2004	1	2	85	0
2005	1	2	115	0
2006	1	1	88	0
2007	1	3	108	0
2008	1	2	84	0
2009	0	3	89	0
2010	0	2	90	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	21,102	9,657	2,112	2,180
2001	20,445	8,670	2,654	1,749
2002	24,140	7,364	3,389	1,308
2003	22,577	7,280	2,700	1,830
2004	28,037	9,102	2,300	1,485
2005	28,644	9,195	2,436	1,760
2006	25,609	7,490	2,719	1,097
2007	28,443	6,416	2,539	889
2008	26,372	7,437	2,680	1,499
2009	24,138	11,589	1,941	1,700
2010	20,513	8,829	1,701	1,508

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

A survey of Alaska communities found that Hydaburg residents consumed an estimated 336 lb of subsistence wild food per capita between 1982 and 1999. Household subsistence data are unavailable for 2000 through 2010 (Table 12). Aquatic subsistence resources harvested by Hydaburg residents include coho salmon, Dolly Varden, cutthroat trout, abalone, herring, bottomfish, Dungeness crab, sea urchin, clams, and cockles. Many areas surrounding Hydaburg have historic seasonal fish camps that are used contemporarily. Arena Cove, west of Hydaburg, is used extensively for the harvest of seaweed, abalone, deer, mink, and land otter. The McFarland Islands, southwest of Hydaburg, serve as important habitat for herring roe. Jackson Island, off the southern tip of Sukkwan Island, provides subsistence opportunities for Chinook, pink, coho, and chum salmon; abalone; and rock scallops. The Hydaburg River supports runs of Dolly Varden, and pink, chum and coho salmon. Saltery Creek and Crab Trap Cove, southeast of Hydaburg, support pink, chum, and coho salmon, cutthroat trout, Dolly Varden, and steelhead. Marine subsistence species include Dungeness crab, halibut, octopus, and various species of clams and cockles. Finally, Hetta Cove and Eek Inlet, east of Hydaburg, supports sockeye, pink, chum, and coho salmon, steelhead, cutthroat, and rainbow trout, Dungeness crab, shrimp, and red snapper. Hetta Cove is the site of an old Haida village site, and is still used as a fish camp. Hetta Lake and Creek is the largest sockeye salmon producing system in Southeast Alaska.⁶⁷²

It has also been found that Hydaburg residents, as well as residents from other communities in the southern portion of Southeast Alaska, such as Craig and Klawock, have historically harvested sea cucumber (*Parastichopus californicus*) as part of their subsistence fishing practices.⁶⁷³

According to the ADF&G *Community Subsistence Information System*,⁶⁷⁴ species which Hydaburg residents harvested or used include abalone, cockles, chitons, blue king crab, brown king crab, butter clams, Dungeness crab, geoducks, urchins, horse clams, limpets, octopus, oyster, littleneck clams, razor clams, red king crab, rock scallops, shrimp, squid, starfish, Tanner crab, mussels, sea cucumber, fur seal, harbor seal, Steller sea lion, black rockfish, brook trout, sculpin, cutthroat trout, dogfish, Dolly Varden, eulachon, grayling, herring, lingcod, Pacific cod, Pacific tom cod, rainbow trout, Irish lord, red rockfish, rock greenling, sablefish, sea bass, sea perch, silver smelt, skates, steelhead, flounder, shark, and sole.

Of the species listed by ADF&G in Table 13, residents reported harvesting sockeye salmon most often, followed by pink, coho, chum, and Chinook salmon. In 2008, residents reported harvesting 2,848 salmon using 22 subsistence salmon permits, compared to 3,220 salmon using 68 subsistence salmon permits in 2000. Returned subsistence salmon permits declined significantly between 2000 and 2008, from a peak of 68 in 2000, to a low of 7 in 2007. The number of subsistence salmon permits issued during those years was variable.

Halibut subsistence is very important, and almost one third of Hydaburg residents held Subsistence Halibut Registration Certificates (SHARC) in 2010. The number of residents

⁶⁷² National Oceanic and Atmospheric Administration. (2006). *Environmental Assessment: Alaska Coastal Management Plan*. Retrieved October 12, 2012 from: <http://coastalmanagement.noaa.gov/assessments/docs/akea1.pdf>

⁶⁷³ Mathews, V., et al. (1990). *Subsistence Harvest and Use of Sea Cucumber in Southeast Alaska*. Technical Paper No. 90. Division of Subsistence. Alaska Department of Fish and Game.

⁶⁷⁴ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

holding SHARC declined between 2003 and 2010 from 177, to 120; however, the number of SHARC actively fished remained relatively constant. In 2010, an estimated 27,180 lb of halibut was harvested using 60 SHARC, compared to 20,812 harvested on 62 SHARC in 2003. Halibut harvests peaked in 2004 at an estimated 37,447 lb harvested using 69 SHARC (Table 14).

In terms of marine mammal harvests, an estimated 163 sea otters were harvested between 2000 and 2003. Data subsequent to that year are unavailable. In addition, residents harvest an estimated 14 harbor seals annually, although that figure is based off a single observation and may in fact vary. Information regarding other marine mammal harvests are unavailable (Table 15).

Table 12. Subsistence Participation by Household and Species, Hydaburg: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Hydaburg: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	112	68	n/a	6	16	424	2,774	n/a	n/a
2001	88	48	n/a	36	8	n/a	1,874	n/a	n/a
2002	94	68	n/a	n/a	n/a	n/a	1,592	n/a	n/a
2003	130	54	n/a	4	28	346	3,718	n/a	n/a
2004	56	30	n/a	n/a	n/a	n/a	1,688	n/a	n/a
2005	41	25	1	n/a	n/a	n/a	1,648	n/a	n/a
2006	73	46	5	n/a	12	84	3,331	n/a	n/a
2007	55	7	n/a	n/a	n/a	n/a	456	n/a	n/a
2008	43	22	n/a	n/a	n/a	12	2,836	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Hydaburg: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	177	62	20,812
2004	183	69	37,447
2005	186	71	24,363
2006	194	60	20,426
2007	195	78	36,511
2008	117	61	24,259
2009	119	63	21,853
2010	120	60	27,180

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Hydaburg: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	95	n/a	n/a	n/a	14	n/a
2001	n/a	49	n/a	n/a	n/a	14	n/a
2002	n/a	n/a	n/a	n/a	n/a	14	n/a
2003	n/a	19	n/a	n/a	n/a	14	n/a
2004	n/a	n/a	n/a	n/a	n/a	14	n/a
2005	n/a	n/a	n/a	n/a	n/a	14	n/a
2006	n/a	n/a	n/a	n/a	n/a	14	n/a
2007	n/a	n/a	n/a	n/a	n/a	14	n/a
2008	n/a	n/a	n/a	n/a	n/a	14	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

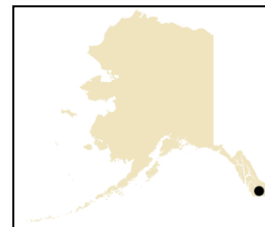
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Hyder (*HIGH-dur*)



People and Place

*Location*⁶⁷⁵

Hyder is nestled at the head of Portland Canal, a 96 mile-long fjord which forms a portion of the U.S./Canadian border. Hyder is 75 mi from Ketchikan and approximately 800 mi southeast of Anchorage. It is the only community in southern southeast Alaska accessible by road; the only road into Hyder runs through Stewart, British Columbia, just two miles across the Canadian border. The area encompasses 14.8 sq mi of land. Hyder is unincorporated and is located within the Prince of Wales-Hyder Census Area.

*Demographic Profile*⁶⁷⁶

In 2010, there were 87 residents, ranking Hyder 258th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population decreased by 12.1%. Between 2000 and 2009, the population declined by 10.3%, with an average annual growth rate of 2.7%, which was significantly greater than the statewide average and indicative of a relatively variable population (Table 1). In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 80 permanent and 15 to 20 seasonal/transient residents living in Hyder in 2010. Community leaders reported that the population peaks in July and August, and is not at all related to employment in fisheries sectors.

The population of Hyder is predominately White, with 90.8% of residents identifying themselves as such in 2010, compared to 95.9% in 2000. Also in that year, 1.1% of residents identified themselves as American Indian or Alaska Native, compared to 0.0% in 2000; 1.1% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.0% in 2000; 4.6% identified themselves as two or more races, compared to 4.1% in 2000; and 2.3% identified themselves as some other race, compared to 0.0% in 2000. In addition, 2.3% of residents identified themselves as Hispanic or Latino, compared to 1.0% in 2000. Information regarding racial and ethnic trends can be found in Figure 1.

In 2010, the average household size was 1.81, compared to 2.20 in 1990 and 2.06 in 2000. In that year, there were a total of 90 housing units, compared to 58 in 1990 and 72 in 2000. Of the households surveyed in 2010, 38% were owner-occupied, compared to 47% in 2000; 16% were renter-occupied, compared to 18% in 2000; 20% were vacant, compared to 6% in 2000; and 27% were occupied seasonally, compared to 29% in 2000. No residents lived in group quarters between 1990 and 2010.

⁶⁷⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁷⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

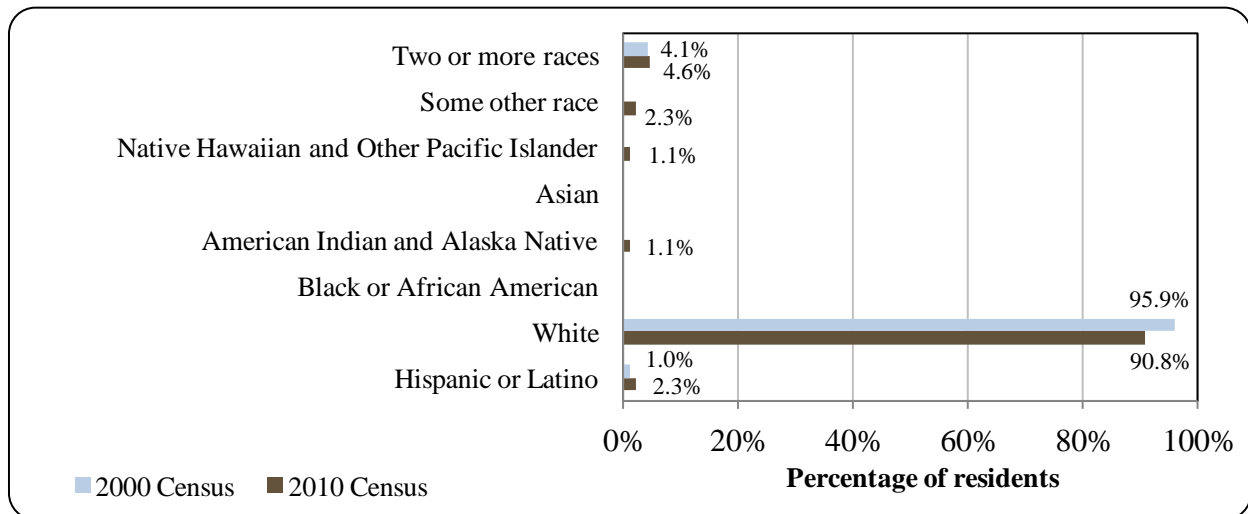
Table 1. Population in Hyder from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	99	-
2000	97	-
2001	-	102
2002	-	89
2003	-	77
2004	-	84
2005	-	91
2006	-	91
2007	-	72
2008	-	94
2009	-	87
2010	87	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. 2011. Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Hyder: 2000-2010 (U.S. Census).

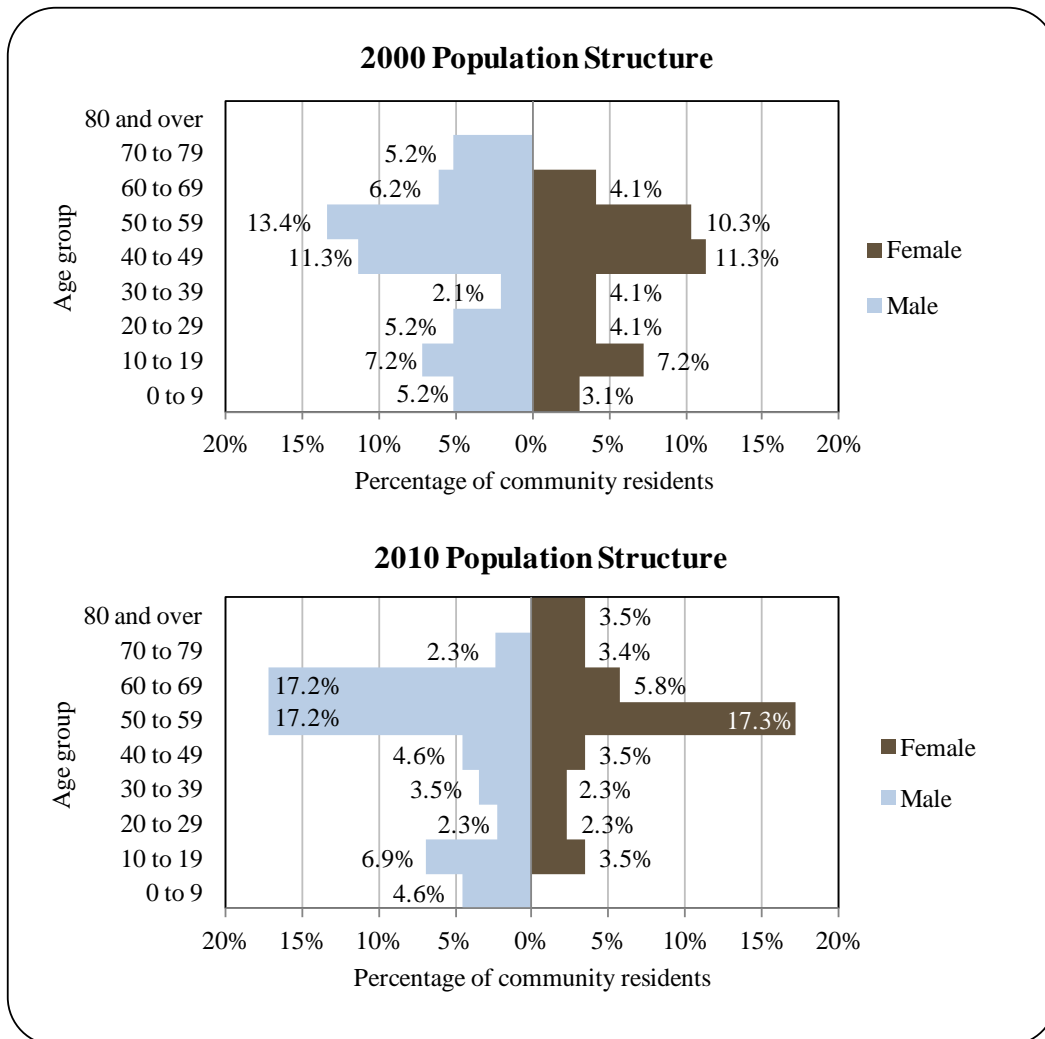


The gender distribution in Hyder was skewed at 58.6% male and 41.4% female, which was more skewed than both the statewide distribution that year (52.0% male, 48.0% female), and distribution in 2000 (55.7% male, 44.3% female). The median age that year was 54.8 years, which was significantly older than the statewide median of 33.8 years, and somewhat older than the 2000 median of 46.3 years.

Given Hyder’s small and variable population, a population structure trend is difficult to discern. In 2010, 15.0% of residents were under the age of 20, compared to 22.7% in 2000; 32.2% were over the age of 59, compared to 15.5% in 2000; 48.4% were between the ages 30 and 59, compared to 52.5% in 2000; and 4.6% were between the ages of 20 and 29, compared to 9.3% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 60 to 69 range (17.2% male, 5.8% female); followed by the 0 to 9 (4.6% male, 0.0% female) and 80 and over (3.5% female, 0.0% male) ranges. Of those three, the greatest relative gender difference occurred within the 0 to 9 range. Information regarding Hyder’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Hyder Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁶⁷⁷ estimated that 100% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, no residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; no resident had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; no resident had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; 63.5% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*⁶⁷⁸

The Nisga'a tribe, who live throughout western British Columbia, called the head of Portland Canal "Skam-A-Kounst," meaning "safe place," probably referring to the site as a retreat from the harassment of the neighboring coastal Haidas. The Nisga'a used this area as a seasonal berry-picking and bird-hunting site. In 1896, Capt. D.D. Gaillard of the U.S. Army Corps of Engineers explored Portland Canal. Gold and silver lodes were discovered in this area in the late 1898, mainly on the Canadian side in the upper Salmon River basin. Townships sprung up concurrently on the Alaskan and Canadian sides of the border. On the Alaskan side, the township of Portland City was founded. In 1914, local prospectors applied for a postal permit for the settlement. The request was denied on the basis that too many United States communities shared the name "Portland." The decision was made to name the community after Frederick Hyder, a respected Canadian mining engineer who predicted the area would have a prosperous future in mining. Due to its location along the Portland Canal, Hyder became the access and supply point to Canadian mining. Hyder's boom years occurred between 1920 and 1930, when gold, silver, copper, lead, zinc, and tungsten were extracted from the Riverside Mine on the Alaskan side of the border. The mine operated from 1924 until 1950. In 1928, the Hyder business district was consumed by fire. During the Prohibition era, a small community called "Hyder, B.C." was created just across the Canadian border to serve as a legal speakeasy to the Hyder mining community, even housing its own Canadian Customs office. Shortly after Prohibition was repealed, "Hyder, B.C." was abandoned. By 1956, all major mining had closed except for the Granduc Copper Mine in Canada, which operated until 1984. Several mining startups near Stewart have come and gone in the past three decades, but no mining activity has occurred on the Alaskan side of the border since the Riverside Mine closed.

Hyder is largely dependent on tourism from highway visitors. Hyder continues to pay homage to its mining roots and is known as the "Friendliest Ghost Town in Alaska." One tradition carried over from mining days involves nailing currency to the walls of the Glacier Inn Bar. In mining days, it is claimed that miners who went bankrupt could take down their money and buy one last meal before leaving town. Due to its isolation from other Alaskan communities and its close proximity to Stewart, British Columbia (population 500), Hyder has many cultural ties with Canada and also receives electric and telephone service from Canadian companies, thus

⁶⁷⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁷⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

it uses the 250 area code. Hyder is the only community in Alaska not using the 907 area code. Because of its proximity to the border and the lack of banks in Hyder or Stewart, Hyder businesses operate on either U.S. or Canadian currency.

Natural Resources and Environment

Hyder is in the maritime climate zone with warm winters, cool summers and heavy precipitation. Summer temperatures range from 41 to 57 °F (5 to 14 °C) ; winters range from 25 to 43 °F (-4 to 6 °C). Temperature extremes have been measured from -18 to 89 °F (-28 to 32 °C). Rainfall averages 78 inches annually, with annual mean snowfall of 162 inches.⁶⁷⁹

The community is located at the end of the Portland Canal, which stretches 71 mi and forms the border between Southeast Alaska and British Columbia. The rugged landscape surrounding Hyder is characterized by high relief slopes rising from coastlines to over 5,000 ft in many areas. The glacial valley Hyder sits in is carved from granodiorite, with layers of glacial till and outwash covering the valley floor. The Salmon River extends from its discharge point at the head of the Portland Canal, north into British Columbia. Lower slopes are covered with dense coniferous forests, consisting of Western hemlock, Sitka spruce, and yellow cedar. Higher elevations are covered by shrubland transitioning to alpine tundra.⁶⁸⁰ Terrestrial wildlife in the area includes large populations of brown and black bears, wolves, mink, and river otter. Fish and Marx creeks are known for their large spawning populations of chum salmon, and local chum size are above average for the state.⁶⁸¹

Hyder has a long and colorful mining history which it shares with its neighbor, Stewart, B.C. Many historic mines are located over the Canadian border, of which Silbak/Premier mines was the most recently operated. Major mine operations closed in 1957; however, limited activity continued intermittently until the 1990s.⁶⁸² More recently, Seabridge Gold has proposed development at the Kerr-Sulphurets-Mitchell mineral property, which is located in a rugged, mountainous area northwest of Hyder in British Columbia. This expansive mineral zone shows commercially viable gold-copper and silver deposits.⁶⁸³

Hyder sheltered location at the end of the Portland Canal protects it from most environmental hazards. During heavy rain events or snow melt, local drainages including Salmon River and Fish Creek may be prone to flooding. The steep slopes surrounding Hyder produce landslide and avalanche hazards. As of 2010, there has been no disaster declarations made in the Hyder area.⁶⁸⁴

According to the Alaska Department of Environmental Conservation, there were no

⁶⁷⁹ Ibid.

⁶⁸⁰ Haumann, D. (n.d.). *Photogrammetric and Glaciological Studies of Salmon Glacier*. Retrieved October 9, 2012 from: <http://arctic.synergiesprairies.ca/arctic/index.php/arctic/article/viewFile/3690/3665>.

⁶⁸¹ Novak, P. (1983). *Stream and Fisheries Rehabilitation Activities at Fish Creek – Hyder*. Alaska Department of Fish and Game. No. 7. Retrieved October 9, 2012 from: <http://www.sf.adfg.state.ak.us/fedaidpdfs/FRED.007.pdf>.

⁶⁸² Stewart, B.C. (n.d.). *Mines – Premier Mines*. Retrieved October 9, 2012 from: <http://www.stewartbc.com/premier.htm>.

⁶⁸³ Seabridge Gold. (n.d.). *KSM (Kerr-Sulphurets-Mitchell: Geology*. Retrieved October 9, 2012 from: http://www.seabridgegold.net/ksm_geology.php.

⁶⁸⁴ Division of Homeland Security and Emergency Management. (2010). *State of Alaska Hazard Mitigation Plan*. Retrieved October 9, 2012 from: http://www.ready.alaska.gov/plans/documents/SHMP_2010_UPDATE_ENTIRE_FINAL_COMPLETE.pdf.

significant environmental remediation sites active in 2010.⁶⁸⁵

Current Economy⁶⁸⁶

Hyder's economy is based primarily on tourism, which is bolstered by the community's proximity to Stewart and connection to Canada's road system. Visitor accommodations include the Sealaska Inn, Kathy's Korner B&B, and the Grandview Inn. Campgrounds include Camp Run-A-Muck. Shops include Boundary Gallery & Gifts and Moose Antler Carvings. Restaurants include Alaskan Premier Seafoods, Glacier Inn, Sealaska Inn, and "The Bus." Local attractions include Fish Creek bear viewing area.⁶⁸⁷ In a survey conducted by the AFSC in 2011, community leaders reported that Hyder's economy is reliant on mining, logging, fishing, and sport hunting/fishing. Nearby Stewart is a transportation hub, hosting Canada's northernmost year-round ice-free port. The port serves as Northwest British Columbia's gateway to mineral and timber resources in the area.

In 2010,⁶⁸⁸ the estimated per capita income was \$23,205 and the estimated median household income was \$43,625, compared to \$11,491 and \$11,719 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,⁶⁸⁹ the real per capita income (\$15,111) and real median household income (\$15,410) indicate a significant gain in both individual and household earnings. In 2010, Hyder ranked 123rd of 305 communities from which per capita income was estimated, and 170th of 299 communities from which median household income was estimated.

However, Hyder's small population size may have prevented the ACS from accurately portraying economic conditions.⁶⁹⁰ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$282,193 in total wages in 2010.⁶⁹¹ When matched with the 2010 Decennial Census population, the per capita income equals \$3,244, which is significantly lower than the 2010 ACS estimate, and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.⁶⁹² In addition, Hyder was recognized as "distressed" by the Denali Commission indicating that over 70% of

⁶⁸⁵ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved October 9, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

⁶⁸⁶ Unless otherwise noted, all monetary data are reported in nominal values.

⁶⁸⁷ Deacon-Rogers, Les. (n.d.). *Welcome to Stewart, British Columbia and Hyder, Alaska*. Retrieved October 9, 2012 from: <http://stewartbchyderak.homestead.com/homepage.html>.

⁶⁸⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁸⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁹⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁹¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁶⁹² Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

residents aged 16 and older earned less than \$16,120 in 2010. However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.⁶⁹³

According to 2006-2010 ACS estimates, 62.4% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 0.0%, compared to an estimated 5.9% statewide; an estimated 0.0% of residents lived below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Both unemployment and poverty rate estimates conflict with ALARI per capita income estimates, and Hyder's "distressed community" designation, suggesting that the community's small population size may have affected ACS estimates. In 2010, DOLWD estimated that the unemployment rate was 29.0% based on unemployment insurance claimants. Of those employed in 2010, an estimated 44.9% worked in the private sector, an estimated 51.3% worked in the public sector, and an estimated 3.8% were self-employed. It should be noted that if the number of self-employed workers was higher than what the ACS estimated, or if a relatively high percentage of workers were employed by the federal government, than DOLWD per capita income estimates may be inaccurate.

By industry, the 2006-2010 ACS estimated that most (55.1%) of those employed worked in transportation, warehousing, and utilities sectors; followed by finance, insurance, and real estate (27.5%); wholesale trade (11.6%); and arts, recreation, accommodations, and food service sectors (5.8%). Between 2000 and 2010, industry sector employment varied greatly with the most significant proportional gains occurring within transportation, warehousing, and utilities sectors. There appears to be a somewhat notable reduction in economic diversity, with employment consolidating into comparatively fewer industries. While this could be attributed to shifting employment conditions or demographics, it is also possible that the ACS failed to capture the full range of employment types represented in the community. According to 2010 ALARI estimates, most (30.0%) employed residents worked in state government sectors; followed by leisure and hospitality (20.0%); trade, transportation, and utilities (20.0%); and construction sectors (15.0%). Further information can be found in Figure 3.

By occupation type, most (52.9%) employed residents were estimated to hold management or professional positions; followed by service positions (47.1%). Again, there is a significant decline in the number of occupation types within the community between 2000 and 2010 which could be attributed to an unrepresentative ACS sample. ALARI occupation data for Hyder is unavailable. Further information can be found in Figure 4.

⁶⁹³ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

Figure 3. Local Employment by Industry in 2000-2010, Hyder (U.S. Census).

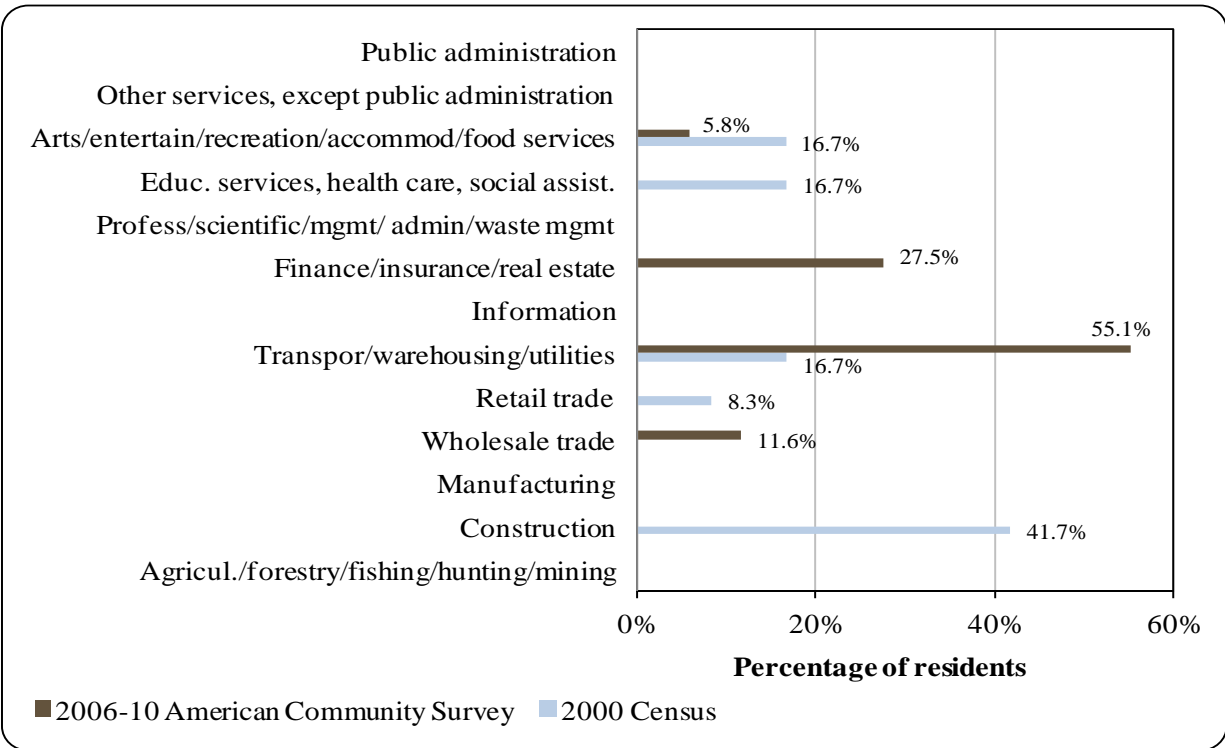
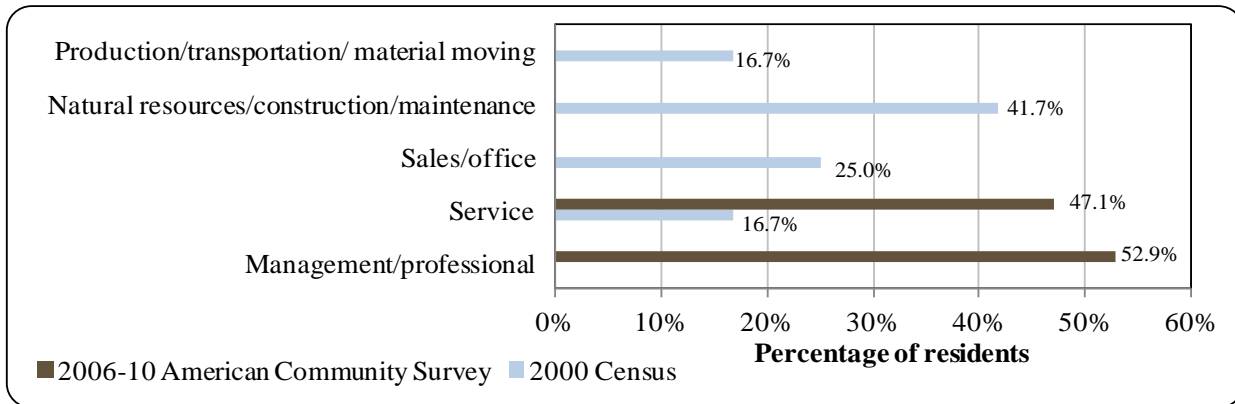


Figure 4. Local Employment by Occupation in 2000-2010, Hyder (U.S. Census).



Governance

Hyder is unincorporated and unable to collect taxes or public fees (Table 2). It was not included in the Alaska Native Claims Settlement Act (ANSCA) and does not have a federally recognized tribal government. The Hyder Community Association, Inc. is a local community non-profit which acts as a governing body.

The closest Bureau of Citizenship and Immigration Services, National Marine Fisheries Service (NMFS), and Alaska Department of Fish and Game (ADF&G) offices are located in Ketchikan, 75 mi southwest.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Hyder from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Hyder has a seaplane base that opens in Portland Canal. As of June 2012, roundtrip airfare from Anchorage to Ketchikan (the nearest airport) cost \$508.⁶⁹⁴ Taquan Air, Promech Air, Carlin Air, Pirate Airworks, Island Wings Air Service, Southeast Aviation, Pacific Airways, Alaska Seaplane Tours, and Misty Fjords Air & Outfitting all provide charter air service from Ketchikan. Hyder is connected to Canada’s highway system, which makes it accessible by road. Combined port facilities for Hyder and Stewart provide a deep draft, ice-free port capable of handling large cargo barges. The Arrow/Cassiar Barge Ramp provides a hydraulic barge ramp, intermodal transit, and gravel storage area. Stewart Bulk Terminals are located between Hyder and Stewart, and provide 800 ft of berth face. Facilities include a 750 ton-per-hour bulk shiploader and covered storage. Deep sea log export facilities are also available. Harbor deposition from the Bear River requires annual dredging of 100,000 to 300,000 cubic meters of sediment.^{695,696} As of July 2012, Stewart was in the permitting phase of a \$50 million port project

⁶⁹⁴ Airfare calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2012).

⁶⁹⁵ Invest in Northwest British Columbia. (n.d.). *International Port Facilities*. Retrieved October 10, 2012 from: <http://investnorthwestbc.ca/transportation/ports>

⁶⁹⁶ DKA Marketing, and Banjar Management Inc. (2006). *Alaska – Canada Rail Link Study*. Retrieved October 10, 2012 from:

which would expand existing facilities and provide a multipurpose port capable of supporting barge access, mineral concentrate loading, roll-on/roll-off cargo vessels, and break bulk cargo.⁶⁹⁷

In a survey conducted by the AFSC in 2011, community leaders reported that Hyder has 200 ft of dock space available for permanent vessel moorage, and 50 ft of dock space available for transient moorage. Vessels up to 50 ft long can use moorage in Hyder. A proposed Hyder deep sea terminal would provide 1,200 ft of berth face, cargo and mineral storage, and rail access.⁶⁹⁸

Facilities

Nearly all residences have individual wells and septic tanks and are fully plumbed. The remainder haul water and use outhouses. Electricity and telephone services are provided by Stewart, B.C., Canada. Hyder operates an unpermitted tidewater landfill, but no refuse collection is provided. Public safety services are provided by state troopers based in Ketchikan. Fire and rescue services provided by Hyder volunteer fire department and emergency services. Additional public facilities include a community hall, museum, and public library. Communications services include in-state and long distance telephone, internet, local television, and local radio.⁶⁹⁹

In a survey conducted by the AFSC in 2011, community leaders reported infrastructure projects completed since 2000 including new dock space, dock improvements, roads serving dock space, a breakwater, airport/seaplane base improvements, water treatment, alternative energy, community center/library improvements, telephone service improvements, and post office improvements. Projects in progress as of 2010 included a jetty, broadband internet, road improvements, and fire/rescue service improvements. Fisheries related infrastructure present in the community include fish processing plants, fishing gear sales, haul-out facilities for small vessels (< 60 tn), commercial fishing vessel moorage, recreational fishing vessel moorage, commercial cold storage facilities, ice sales, and seaplane service. Residents typically travel to Stewart B.C., Terrace B.C., and Ketchikan for services unavailable locally.

*Medical Services*⁷⁰⁰

The Stewart Health Clinic in Stewart, B.C. Canada offers the nearest basic medical services. Emergency Services have limited highway, marine, floatplane, and helicopter access. Emergency service is provided by 911 Telephone Service and volunteers. The closest hospital is located in Ketchikan.

http://alaskacanadarail.com/documents/WPB2/B2a%20WorkPkgB2A_Multimodal_Port_Access_Data_Development_FINAL_060508.pdf.

⁶⁹⁷ City of Stewart. (n.d.). *Stewart World Port Project*. Retrieved October 10, 2012 from:

http://stewartbchyderak.homestead.com/PortDevelopment/Stewart_World_Port_signs_exclusive_lease_agreement_with_the_District_of_Stewart.pdf.

⁶⁹⁸ DKA Marketing, and Banjar Management Inc. (2006). *Alaska – Canada Rail Link Study*. Retrieved October 10, 2012 from:

http://alaskacanadarail.com/documents/WPB2/B2a%20WorkPkgB2A_Multimodal_Port_Access_Data_Development_FINAL_060508.pdf.

⁶⁹⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁰⁰ Ibid.

*Educational Opportunities*⁷⁰¹

There is a school in the community, but as of 2011, there were no students or teachers. Hyder is located in the Southeast Island School District.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.⁷⁰² The first reported salmon saltery on the Tongass Narrows at Ketchikan was operated by a man named Snow, but limited details are available regarding its operation. In 1886, a cannery owned by Captain A.W. Bower from Astoria, OR, was relocated from Boca de Quadra Inlet to the Tongass Narrows, and was known as the Tongass Narrows Cannery. The cannery was destroyed in a fire in 1889 and was not rebuilt. However, another saltery was built the following year,⁷⁰³ and by 1912, four additional canneries had been built. By 1936, seven canneries were in operation in Ketchikan.⁷⁰⁴

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (e.g. sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty. The Treaty was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.⁷⁰⁵ Today, Fish and Marx creeks are large producers of chum salmon, which are typically harvested by commercial driftnet vessels within the Dixon Entrance, near the mouth of the Portland Canal.⁷⁰⁶

In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska. The U.S. and Canada signed the Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean in 1923, and since the Convention took effect in 1924, Pacific halibut fisheries have been managed by the International Pacific Halibut Commission, earlier called the International Fisheries Commission.⁷⁰⁷ Halibut fisheries are restricted to the use of hook and line gear, although a limited number of halibut can be caught and retained as incidental catch in

⁷⁰¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁷⁰² Clark, McGregor, Mecum, Krasnowski and Carroll (2006). "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Department of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁷⁰³ Kiffer, Dave. (2007). "Ketchikan took shape 120 years ago." *SitNews.us*. Retrieved September 10, 2012 from http://www.sitnews.us/Kiffer/TongassPacking/040707_tongass_packing.html.

⁷⁰⁴ See footnote 699.

⁷⁰⁵ See footnote 702.

⁷⁰⁶ Heinl, S. C.; Koerner, J. F.; and Blick, D. J. (2000). *Portland Canal Chum Salmon Coded-Wire-Tagging Project*. Alaska Department of Fish and Game. Regional Information Report No. 1J00-16. Retrieved October 10, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidPDFs/RIR.1J.2000.16.pdf>.

⁷⁰⁷ International Pacific Halibut Commission. 2006. *History*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/pamphlet/1IPHCHistoryPage.pdf>.

salmon troll fisheries and sablefish trap fisheries, as well as bycatch in a variety of fisheries using diverse gear types.^{708,709}

Sablefish were first harvested in Southeast Alaska as bycatch in the halibut fishery.⁷¹⁰ By the 1930s, several state-managed sablefish fisheries began in Southeast inside waters as early as the 1930s, including a fishery in Clarence Strait and Dixon Entrance. Sablefish are harvested using longline or pot gear, and the state fisheries that take place in inside waters are managed independently of the federal fishery.⁷¹¹

In 1995, management of Alaskan halibut and sablefish fisheries shifted from limited entry to a system of Individual Fishing Quotas (IFQ). Motivations for the shift included overcapitalization, short seasons, and the derby-style fishery that led to loss of product quality and safety concerns. As a result of program implementation, the number of shareholders and total vessels participating in the halibut and sablefish fisheries declined substantially, and product quality has improved. This shift to a catch share program has been controversial, raising concerns about equity of catch share allocation, reduced crew employment needs, and loss of quota from coastal communities to outside investors.⁷¹²

Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.⁷¹³

State crab fisheries in Southeast Alaska target red, golden, and blue king crab, Tanner crab, and Dungeness crab.⁷¹⁴ The first commercial harvest of Dungeness crab in Southeast Alaska took place in the 1930s.⁷¹⁵ Harvests of king and Tanner crab were not reported in

⁷⁰⁸ International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

⁷⁰⁹ Williams, Greg. (2010). "Halibut Bycatch limits in the 2010 Alaska groundfish fishery." *IPHC Report of Assessment and Research Activities*. Retrieved September 12, 2012 from <http://www.iphc.washington.edu/publications/rara/2010/2010.299.Halibutbycatchlimitsinthe2010Alaskagroundfishshery.pdf>.

⁷¹⁰ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁷¹¹ Sayer, Allison and Deidra Holum. September 2008. *The Southeast Alaska Southern Southeast Inside Sablefish Fishery Information Report with Outlook to the 2008 Fishery*. Alaska Department of Fish and Game, Fishery Management Report No. 08-44. Retrieved September 11, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidPDFs/fmr08-44.pdf>.

⁷¹² Fina, Mark. (2011). "Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific." *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

⁷¹³ See footnote 710.

⁷¹⁴ Ibid.

⁷¹⁵ Messmer, Adam, Gretchen Bishop, Chris Siddon, and Joe Stratman. November 2011. *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat Dungeness Crab Fisheries*. Alaska Department of Fish and Game Fishery Management Report No. 11-62. Retrieved September 12, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-62.pdf>.

Southeast Alaska until the 1960s.^{716,717} Dive fisheries for geoduck, sea cucumber, and sea urchin began to grow in Southeast Alaska in recent decades.⁷¹⁸ The impact of an increasing sea otter population in Southeast Alaska on stocks of Dungeness crab, sea cucumber, and sea urchin has led to significant economic losses in these fisheries in recent years.⁷¹⁹ It is also important to note that the waters between Annette and Gravina Islands are included in a Dive Fishery Research Control Area, and are closed year-round to harvest of sea cucumbers and sea urchins.⁷²⁰

Hyder is located in Federal Statistical and Reporting Area 659, Pacific Halibut Fishery Regulatory Area 2C, and the Southeast Outside Sablefish Regulatory Area. Hyder is not eligible for the Community Quota Entity (CQE) program. The community is also not eligible to participate in the Community Development Quota (CDQ) program.

Processing Plants

Alaska Premier Seafoods has a small shore-based processing facility and retail store in Hyder. It specializes in smoked coho salmon and Dungeness crab. In addition Alaska Premier Seafoods owns a restaurant in Hyder.⁷²¹ Alaska Premier additionally processes Pacific cod, flounder, halibut, lingcod, rockfish, four species of salmon (i.e., Chinook, chum, pink and sockeye), shrimp and prawns.⁷²² The plant began operations in 1994.⁷²³

Fisheries-Related Revenue

Between 2000 and 2010, there was no known fisheries-related revenue received by the community (Table 3).

⁷¹⁶ Stratman, Joe, Gretchen Bishop, Adam Messmer, and Chris Siddon. November 2011. *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat Tanner Crab Fisheries*. Alaska Department of Fish and Game Fishery Management Report No. 11-57. Retrieved September 12, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-57>.

⁷¹⁷ Stratman, Joe, Adam Messmer, Gretchen Bishop, Chris Siddon, and Andrew Olson. December 2011. *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat King Crab Fisheries*. Alaska Department of Fish and Game Fishery Management Report No. 11-57. Retrieved September 12, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-68.pdf>.

⁷¹⁸ See footnote 710.

⁷¹⁹ McDowell Group. November 2011. *Sea Otter Impacts on Commercial Fisheries in Southeast Alaska*. Prepared for Southeast Alaska Regional Dive Fisheries Association. Retrieved September 11, 2012 from <http://www.scribd.com/doc/74857876/MCDOWELL-GROUP-2011-Sea-Otter-Impacts-Report>.

⁷²⁰ Alaska Dept. of Fish and Game, Marine Protected Areas Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

⁷²¹ Alaska Premier Seafoods. (n.d.). *Products*. Retrieved from: <http://www.hyderalaska.com/index.html#products>.

⁷²² Alaska Seafood Marketing Institute. (n.d.). *Suppliers Directory*. Retrieved October 22, 2012 from: <http://www.alaskaseafood.org/industry/suppliers/>.

⁷²³ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing vessels ranging between 35 and 60 ft long use Hyder as a base of operation during fishing seasons. In addition, they reported that number of commercial fishing vessels visiting Hyder remained unchanged between 2005 and 2010, although there was a decline in the relative number of larger vessels.

In 2010, 4 residents, or 4.6% of the population, held commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). This represented a decline in the number of permits from 2000, when 4 residents held 13 CFEC permits. Of the CFEC permits held in 2010, 11% were for salmon, compared to 15% in 2000; 11% were for groundfish, compared to 23% in 2000; 11% were for halibut, compared to 15% in 2000; 22% were for crab, compared to 31% in 2000; and 44% were for “other” shellfish, compared to 31% in 2000. The amount of halibut quota held in the community was similar in both 2000 and 2010 at 26,695 and 28,778 shares, respectively. In addition, the number of halibut quota share account holders never exceeded three between 2000 and 2010. Locally held halibut quota peaked in 2005 and 2006 at 44,909 shares. Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP), License Limitation Program (LLP) permits, crab quota, or sablefish quota.

In both 2000 and 2010, between 38 and 56% of CFEC permits were actively fished. Between those years, an average of 42.5% of salmon, 87.9% of halibut, 47.7% of “other” shellfish, and 81.8% of crab permits were actively fished. No groundfish permits were actively fished between 2000 and 2010. Fisheries actively prosecuted by Hyder residents in 2010 included:⁷²⁴ Southeast pot Dungeness crab; statewide longline halibut; southeast pot shrimp; and statewide hand troll salmon.

Residents held three commercial crew licenses in 2010, compared to four in 2000; however, the number of licenses peaked at six in 2001, 2007, and 2008. In addition, residents held majority of between two and four commercial fishing vessels between 2000 and 2010. Landings made in the community, and landings reported by Hyder residents in those years are considered confidential. However, in 2010 Hyder ranked 61st of 67 Alaskan communities in terms total pounds landed, and 59th in terms of ex-vessel value of landings. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁷²⁴ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Hyder: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total municipal revenue⁵</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Hyder: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	1	1	1	1	1	0	0	0	0	0
Crab (CFEC) ²	Total permits	2	1	1	1	1	1	1	1	1	1	2
	Fished permits	1	1	1	1	0	1	1	1	1	1	1
	% of permits fished	50%	100%	100%	100%	0%	100%	100%	100%	100%	100%	50%
	Total permit holders	2	1	1	1	1	1	1	1	1	1	1
Other shellfish (CFEC) ²	Total permits	4	4	4	4	4	4	4	4	4	4	4
	Fished permits	1	2	2	2	2	2	2	2	2	2	2
	% of permits fished	25%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
	Total permit holders	4	4	4	4	4	4	4	4	4	4	4
Halibut (CFEC) ²	Total permits	2	2	3	2	1	1	1	1	1	1	1
	Fished permits	1	1	2	2	1	1	1	1	1	1	1
	% of permits fished	50%	50%	67%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	2	2	3	2	1	1	1	1	1	1	1
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 Cont. Permits and Permit Holders by Species, Hyder: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	3	3	3	3	2	2	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	1	1	1	1	1	1	1
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	3	2	2	2	2	2	2	2	1	1
	Fished permits	2	2	1	0	0	1	0	1	1	0	1
	% of permits fished	100%	67%	50%	0%	0%	50%	0%	50%	50%	0%	100%
	Total permit holders	2	3	2	2	2	3	2	2	2	1	1
<i>Total CFEC Permits²</i>	<i>Permits</i>	13	13	13	12	10	10	9	9	9	8	9
	<i>Fished permits</i>	5	6	6	5	3	5	4	5	5	4	5
	<i>% of permits fished</i>	38%	46%	46%	42%	30%	50%	44%	56%	56%	50%	56%
	<i>Permit holders</i>	4	5	5	4	4	5	5	5	5	4	4

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Hyder: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Hyder ²	Total Net Lb Landed In Hyder ^{2,5}	Total Ex-Vessel Value Of Landings In Hyder ^{2,5}
2000	4	0	1	4	4	0	0	\$0
2001	6	0	1	3	4	0	0	\$0
2002	5	1	1	3	3	1	--	--
2003	5	0	1	4	5	0	0	\$0
2004	4	1	1	4	4	2	--	--
2005	5	1	1	4	4	3	--	--
2006	5	1	1	2	2	1	--	--
2007	6	1	1	3	3	3	--	--
2008	6	2	1	3	3	3	--	--
2009	2	2	1	3	3	4	--	--
2010	3	1	1	3	3	2	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Hyder: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lb)
2000	2	26,695	3,341
2001	2	26,695	3,639
2002	2	26,695	3,602
2003	3	38,894	5,340
2004	2	26,695	4,295
2005	2	44,909	7,780
2006	2	44,909	7,591
2007	1	28,778	4,112
2008	1	28,778	3,000
2009	1	28,778	2,425
2010	1	28,778	2,126

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Hyder: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Hyder: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Hyder: 2000-2010.

	<i>Total Net Lb¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	--	0	--	--	--	--	--	--	--
Finfish	0	0	--	0	--	--	--	--	--	--	--
Halibut	0	0	--	0	--	--	--	--	--	--	--
Herring	0	0	--	0	--	--	--	--	--	--	--
Other Groundfish	0	0	--	0	--	--	--	--	--	--	--
Other Shellfish	0	0	--	0	--	--	--	--	--	--	--
Pacific Cod	0	0	--	0	--	--	--	--	--	--	--
Pollock	0	0	--	0	--	--	--	--	--	--	--
Sablefish	0	0	--	0	--	--	--	--	--	--	--
Salmon	0	0	--	0	--	--	--	--	--	--	--
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Finfish	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Halibut	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Herring	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Other Groundfish	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Other Shellfish	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Pacific Cod	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Pollock	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Sablefish	\$0	\$0	--	\$0	--	--	--	--	--	--	--
Salmon	\$0	\$0	--	\$0	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>--</i>	<i>\$0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Hyder Residents: 2000-2010.

	<i>Total Net Lb¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Although Hyder lacks any registered sport fish guide businesses, sportfishing remains an important part of the local economy. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers target chum and Chinook salmon, halibut, crab, and shrimp from private boats owned by both local and non-residents. The Salmon River also provides opportunities for shoreside fishing.

In 2010, 115 sportfishing licenses were sold in the community, compared to 188 in 2000. The number of sportfishing licenses sold in the community significantly outnumbers the number sold to residents, indicating that visitors account for much of the local fishing effort. However, the number of sportfishing licenses sold in the community steady declined between 2000 and 2010, from an average of 218 sold per year between 2000 and 2005, to an average of 129 sold per year between 2006 and 2010. The number of sportfishing licenses sold to residents remained relatively constant between 2000 and 2010, peaking at 30 in 2008 (Table 11). According to

ADF&G Harvest Survey Data,⁷²⁵ resident anglers targeted coho and chum salmon, Dolly Varden, rainbow trout, rockfish, and Dungeness crab.

Hyder is located in the ADF&G Harvest Survey Area for Ketchikan, which includes all waters of Alaska, from Portland Inlet to, but not including, Ernest Sound. In 2010, there were a total of 29,342 saltwater angler days fished, compared to 30,759 in 2000. Between 2000 and 2010, non-Alaska residents consistently accounted for a significant majority of saltwater angler days fished. In 2010, non-Alaska residents accounted for 69.9% of total saltwater angler days fished, compared to 68.6% in 2000. In terms of freshwater fisheries, there were a total of 3,209 angler days fished in 2010, compared to 4,292 in 2000. For freshwater fisheries, non-Alaska resident anglers accounted for approximately half of angler days fished between 2000 and 2010. In 2010, non-Alaska residents accounted for 53.0% of freshwater angler days fished, compared to 49.2% in 2000. It should be noted that recreational anglers based in Hyder likely contributed a comparatively small number of angler days fished considering recreational anglers from Ketchikan are included in data. Further information regarding sportfishing trends can be found in Table 11.

Subsistence Fishing

Hyder is federally designated as a rural place and local residents are eligible to participate in subsistence activities. However, subsistence is not as paramount as it is in more traditional subsistence communities in Alaska. Residents of Hyder rely primarily on halibut as a source of subsistence food. In 2010, many residents (31) were issued Subsistence Halibut Registration Certificates (SHARC), compared to 36 in 2003. Halibut harvests varied between those years from an estimated 679 lb harvested on 11 SHARC in 2003, to an estimated 1,640 lb harvested on 14 SHARC in 2010. Estimated halibut harvests peaked in 2004 at 3,467 lb harvested on 27 SHARC (Table 14).

According to the ADF&G *Community Subsistence Information System*,⁷²⁶ non-salmon species which Hyder residents harvest or use include: abalone, chitons, clams, Dungeness crab, king crab, octopus, scallops, sea cucumber, sea urchin, shrimp, Tanner crab, harbor seal, cod, Dolly Varden, eulachon, flounder, herring, and rockfish.

Further information is limited in regards to subsistence participation. Data on subsistence participation by household are unavailable, as are marine mammal harvests. Between 2000 and 2008, very few subsistence salmon permits were issued, with harvests reported only in 2000. In that year, pink salmon accounted for the majority of reported salmon harvests, followed by chum and sockeye salmon. When combined, residents reported harvesting a total of 132 salmon on four permits. While one permit was issued in 2005, 2007, and 2008; no salmon was reported harvested. Further information regarding subsistence trends can be found in Tables 12 through 15.

⁷²⁵ Alaska Department of Fish and Game. (2011). *Alaska Sportfishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁷²⁶ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 11. Sport Fishing Trends, Hyder: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Hyder ²
2000	0	0	28	188
2001	0	0	22	163
2002	0	0	24	275
2003	0	1	26	244
2004	0	1	29	279
2005	0	0	21	158
2006	0	0	17	167
2007	0	2	19	128
2008	0	1	30	109
2009	0	0	27	125
2010	0	2	20	115

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	21,102	9,657	2,112	2,180
2001	20,445	8,670	2,654	1,749
2002	24,140	7,364	3,389	1,308
2003	22,577	7,280	2,700	1,830
2004	28,037	9,102	2,300	1,485
2005	28,644	9,195	2,436	1,760
2006	25,609	7,490	2,719	1,097
2007	28,443	6,416	2,539	889
2008	26,372	7,437	2,680	1,499
2009	24,138	11,589	1,941	1,700
2010	20,513	8,829	1,701	1,508

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Hyder: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Hyder: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	4	4	n/a	24	n/a	88	20	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Hyder: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	36	11	679
2004	36	27	3,467
2005	39	23	2,978
2006	35	20	2,622
2007	39	15	1,284
2008	35	19	2,543
2009	40	20	1,766
2010	31	14	1,640

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Hyder: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

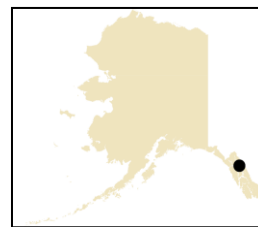
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Juneau (JEW-noh , includes Douglas and Auke Bay)



People and Place

*Location*⁷²⁷

The City of Juneau is situated in north of Southeast Alaska, at the center of the Inside Passage along the Gastineau Channel, on the mainland shore and facing Douglas Island. It is 900 mi northwest of Seattle and 577 mi southeast of Anchorage. The area encompasses 2,717 sq mi of land and 538 sq mi of water. Douglas is built in the northern shore of Douglas Island, facing Juneau and the mainland. Auke Bay located along the continental shoreline, inside the borough limits, but 12 mi north of Juneau. The City of Juneau was first incorporated in 1900. In 1970, it was combined with the City of Douglas and unified into the City and Borough of Juneau.

*Demographic Profile*⁷²⁸

In 2010, there were 31,275 residents, ranking Juneau 3rd of 352 communities in terms of population size. Between 1990 and 2010, the population grew by 16.9%. Between 2000 and 2009, the population declined by 0.16% with an average annual growth rate of -0.28%, which was less than the statewide average of 0.75% and indicative of very little population change.

Although a racially and ethnically diverse city, Juneau's population is predominately White. In 2010, 69.7% of residents identified themselves as White, compared to 74.8% in 2000; 11.8% identified themselves as American Indian or Alaska Native, compared to 11.4% in 2000; 6.1% identified themselves as Asian, compared to 4.7% in 2000; 0.9% identified themselves as Black or African American, compared to 0.8% in 2000; 0.7% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.4% in 2000; 9.5% identified themselves as two or more races, compared to 6.9% in 2000; and 1.2% identified themselves as some other race, compared to 1.1% in 2000 (Figure 1). In addition, 5.1% of residents identified themselves as Hispanic or Latino, compared to 3.4% in 2000.

The average household size in 2010 was 1.70, compared to 2.60 in both 1990 and 2000. In that year, there were 13,055 total housing units, compared to 10,638 in 1990 and 12,282 in 2000. Of the households surveyed in 2010, 58% were owner-occupied, compared to 60% in 2000; 35% were renter-occupied, compared to 34% in 2000; 4% were vacant, compared to 5% in 2000; and 2% were occupied seasonally, compared to 2% in 2000. In addition, 887 residents were living in group quarters in 2010, compared to 678 in 2000.

In 2010, the gender distribution in Juneau was 51.0% male and 49.0% female, which was slightly more even than the statewide distribution (52.0% male, 48.0% female), and similar to the distribution in 2000 (50.4% male, 49.6% female). The median age that year 38.1 years, which was older than both the statewide median of 33.8 years and 2000 median of 35.3 years.

⁷²⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷²⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

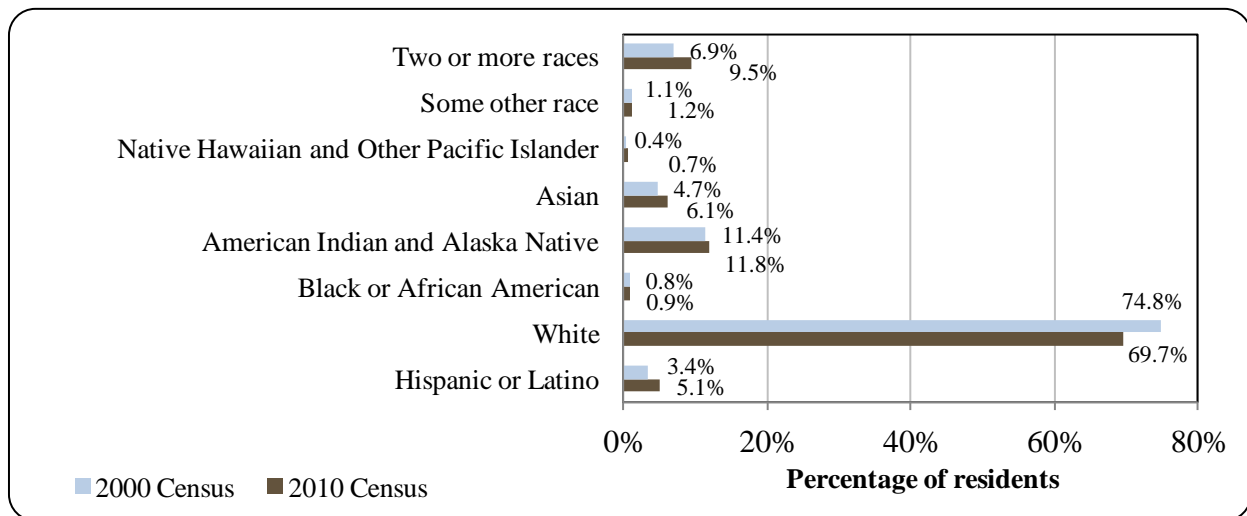
Table 1. Population in Juneau from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	26,751	-
2000	30,711	-
2001	-	30,458
2002	-	31,003
2003	-	31,300
2004	-	31,130
2005	-	31,238
2006	-	30,822
2007	-	30,198
2008	-	30,405
2009	-	30,661
2010	31,275	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

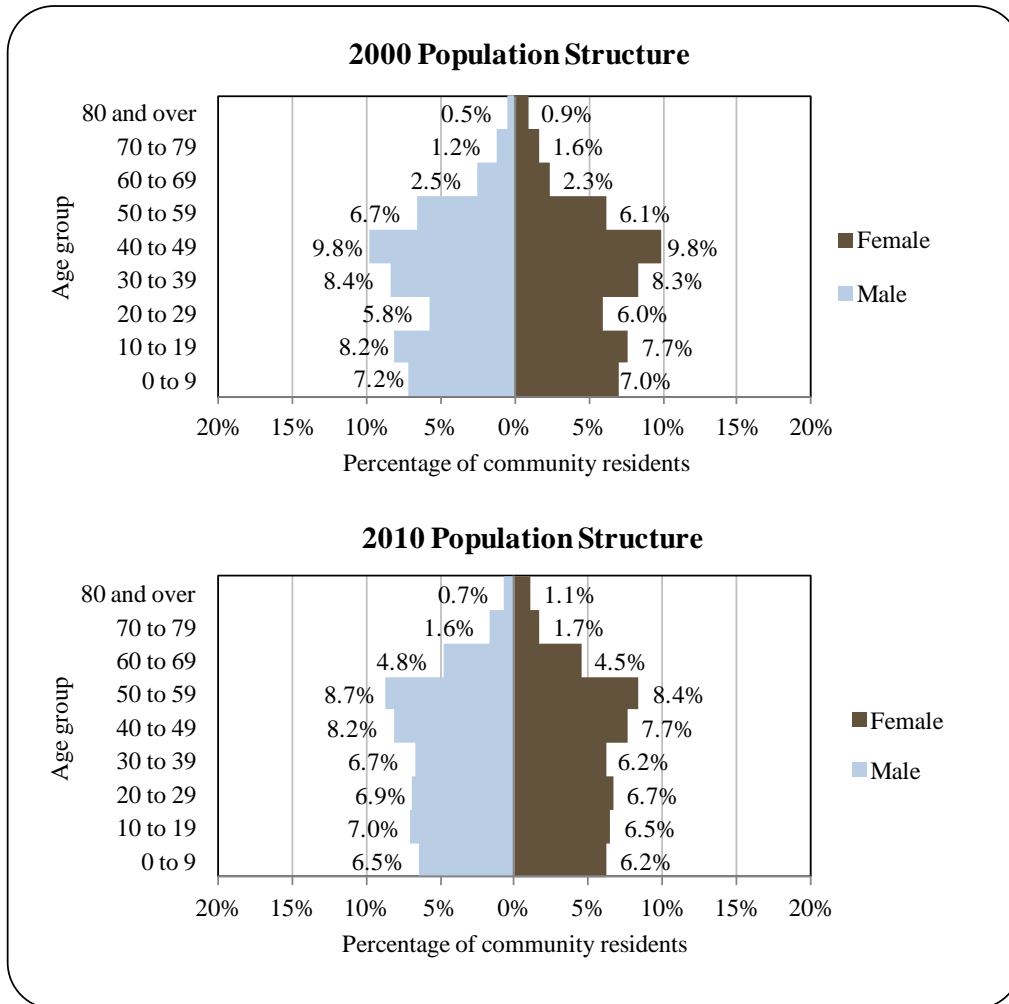
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Juneau: 2000-2010 (U.S. Census).



Overall, the population structure in 2010 was somewhat more stationary than in 2000, with most age cohorts displaying age transitions consistent with a stable population; meaning that as they age, they retain their overall structure. In that year, 26.2% of residents were under the age of 20, compared to 30.1% in 2000; 14.4% were over the age of 59, compared to 9.0% in 2000; 45.9% were between the ages of 30 and 59, compared to 49.1% in 2000; and 13.6% were between the ages of 20 and 29, compared to 11.8% in 2000.

Figure 2. Population Age Structure in Juneau Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution by age cohort was slightly less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 10 to 19 range (7.0% male, 6.5% female), followed by the 30 to 39 (6.7% male, 6.2% female) and 40 to 49 (8.2% male, 7.7% female) ranges. Of those three, the greatest relative gender difference occurred within the 30 to 39 range. Information regarding Juneau’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS) estimated that 95.3% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 1.4% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 3.3% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 30.5% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 22.2% held a Bachelor’s degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 12.5% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture^{729,730}

The widely accepted story about the origins of Juneau tells how a Tlingit Indian Chief from the Auk Tribe, Kowee, showed prospectors Richard Harris and Joseph Juneau where to find gold in Gold Creek in August of 1880. By October, a town site near a beach at the Gastineau Channel was ready for the rush that ensued. Juneau became the first Alaskan city to emerge from the gold rush, although it was initially called Harrisburg. In 1882, the name was changed to Juneau City. The city was incorporated in 1900. The State government was moved to Juneau from Sitka in 1906.

The area had been previously inhabited by Tlingit groups. They had developed an ecologically adapted system of life based on hunting, fishing and gathering practices combined with complex trading networks. The Gastineau Channel was one of its main fishing grounds.

Juneau quickly developed into a large-scale hard-rock mining town when the loose gold in the stream beds ran out. Fishing, mills, canneries, transportation and trading services contributed to the emergence of Juneau as an important city in the early twentieth Century. On Douglas Island, the Treadwell Gold Mining Company and Ready Bullion became a world scale mining company. The ‘golden age’ of Juneau’s mining history peaked between 1915 and 1920. From 1921 to 1944, most of the operations stopped their production. After Alaska became a state in 1959, the Juneau area experienced a rapid rate of growth due to expansions in both the tourism industry and governmental activities. This growth continued into the 1980s; however, in 1986, state operating budgets plummeted with the price of oil, and several hundred state employees were laid off. Compounded by the fact that many residents held jobs associated with the public sector boom, many left Juneau and the community experienced a period of contraction. A substantial housing vacancy was left, and Juneau entered an economic recession. However, Juneau’s economy began to recover in the 1990s as the statewide economy began to improve.

Currently Juneau is the third largest city of Alaska. One third of its inhabitants are concentrated in the city and Douglas Island while the rest are spread across the Borough mainly along the roaded areas. Douglas, previously known as Edwardsville, was incorporated in 1902. It was founded to service mining activities. It was historically the site of an important Tlingit settlement that was destroyed in the 1950s during the construction of the Douglas Harbor. It became a home-rule city in 1966. Auke Bay, on the other hand, was one of the most important Tlingit settlements of the area. The Tlingits abandoned the camp in 1900s and joined the growing city. Although today Juneau is an important center of Native life, official discrimination against Native Alaskans was not legally abolished until 1945.

Natural Resources and Environment

Juneau has a mild, maritime climate. Average summer temperatures range from 44 to 65 °F (7 to 18 °C); winter temperatures range from 25 to 35 °F (-4 to 2 °C). It is in the mildest climate zone in Alaska. Annual precipitation averages 92 inches in downtown Juneau and 54 inches ten miles north at the airport. Snowfall averages 101 inches each year.⁷³¹

⁷²⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved April 2, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷³⁰ City and Borough of Juneau. (2008). *Comprehensive Plan of the City and Borough of Juneau*. Retrieved September 26, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Juneau-CP-2008.pdf>.

⁷³¹ See footnote 729.

Subsurface geology around Juneau is characterized by a diverse assemblage of sedimentary, volcanic, metamorphic, and intrusive rocks which were emplaced in Southeast Alaska during a series of subductions and accretions by colliding tectonic plates during the Jurassic to early Tertiary time. Plate tectonic activity during the late Paleozoic resulted in northwesterly trending curved bands of folded rocks and granitic batholiths are widespread throughout the Coast Range. Widespread glaciation resulted in the formation of fjords and U-shaped valleys. As glaciers receded, emergent coastlines were covered with uplifted marine sediments as a result of isostatic rebound. With the exception of the Mendenhall Valley, the Juneau area is mountainous and characterized by high relief slopes extending into the Gastineau Channel and Lynn Canal. Southeast Alaska is dominated by dense coniferous rainforest, populated by mixed stands of western hemlock, Sitka spruce, mountain hemlock, yellow cedar, and red alder. Much of the area surrounding Juneau is populated by old-growth forest habitat transitioning into subalpine and alpine habitat at approximately 2,500 ft. Relatively open, poorly drained muskeg communities are interspersed throughout forested areas.⁷³²

Marine fish present within the Juneau area include sablefish, rockfish (principally yelloweye), sculpin, skate, Pacific herring, eulachon, capelin, and sand lance. Anadromous fish include all five species of Pacific salmon, cutthroat trout, steelhead trout, Dolly Varden, and round whitefish. Shellfish include red king crab, blue king crab, golden king crab, Tanner crab, Dungeness crab, Pacific blue mussels, clams, and shrimp. Marine mammals include humpback whales, killer whales, minke whales, harbor porpoise, Dall's porpoise, sea otter, harbor seal, and Steller sea lion. Terrestrial mammals include mountain goats, Sitka black-tailed deer, black and brown bears, wolf, martens, moose, porcupine, river otter, and several species of smaller rodents.⁷³³

There are a diverse range of environmental resources within the City and Borough of Juneau. Sources of sand, gravel, and quarry rock are located within the Mendenhall, Herbert, Eagle, and Lemon Creek valleys. Natural areas are abundant throughout the City and Borough. Ease of access and well developed trail systems and infrastructure provide excellent recreation opportunities within short distance of population centers. The Mendenhall Glacier is considered a top local attraction and is accessible by road. Scenic areas easily accessible from populated centers include Mount Roberts, Mendenhall Glacier, North Douglas, and points along Veteran's Memorial Highway which extends north along Lynn Canal. Juneau was built on gold, and minerals continue to be an important part of the city's economy. Kensington (located along the Lynn Canal, northwest of Juneau) is a lode gold mine operated by Coeur Alaska. In 2010, 43,143 ounces of gold was extracted, and production is expected to reach 125,000 ounces annually over its lifespan.⁷³⁴ Greens Creek silver-gold-zinc ore body was discovered on the northern end of Admiralty Island (18 mi southwest of Juneau) in 1975. Full scale development began in 1987 through a joint venture including Hecla, Kennecott, BP Minerals America, and several other interests. Operations ceased in 1993 following depressed markets; however, operations resumed in 1996. In 2008, Hecla assumed full control of the Greens Creek Mine.⁷³⁵

⁷³² Alaska Department of Transportation and Public Facilities. (2006). *Juneau Access Improvements Final Environmental Impact Statement*. Retrieved September 27, 2012 from: http://dot.alaska.gov/sereg/projects/juneau_access/assets/FEIS_06/FEIS-NotLinked.pdf.

⁷³³ Ibid.

⁷³⁴ Coeur Alaska. (n.d.). *Overview*. Retrieved September 27, 2012 from: <http://www.kensingtongold.com/overview.html#mine>.

⁷³⁵ Hecla Mining Company. (n.d.). *Greens Creek, Admiralty Island, Alaska*. Retrieved September 27, 2012 from: http://www.hecla-mining.com/operations/operations_greencreek.php.

The Tongass National Forest, which occupies most of Southeast Alaska, was established in 1907; putting 93% of area timberlands under control of the U.S. Forest Service. In 1920, 100 million board feet of timber was purchased by the Alaska Pulp and Paper Company, which constructed a pulp mill at Port Snettisham, southeast of Juneau. However, the mill soon closed due to high operating costs. For the most part, timber resources have remained undeveloped within the Juneau area. In the past, several potential timber sales in the area were offered, but ultimately fell through. Timber harvesting in the Tongass National Forest has been in decline over the past several decades, and most harvesting is done on private lands owned under the regional Alaska Native Claims Settlement Act (ANCSA) Native corporation; Sealaska.⁷³⁶ Critical Steller sea lion haul-out areas are located on Benjamin Island and its periphery. The island is located several miles northwest of Juneau and is considered one of 19 major haul-out areas in Southeast Alaska.⁷³⁷

Environmental hazards which threaten the city include landslides and avalanches, earthquakes, and flooding. Much of downtown Juneau is located within documented slide areas, and avalanches have resulted in damage to property and infrastructure in the past. Many historic avalanche or mass-wasting sites located on steep to moderate slopes remain sparsely vegetated, increasing the probability of future slide or avalanche events. The nearest active fault line to Juneau is the Fairweather fault, approximately 100 mi west of Juneau. The U.S. Army Corps of Engineers classify Juneau as a Seismic Risk Zone 3, indicating that an earthquake of a magnitude 6.0 or greater may occur. In a little over 50 years, five earthquakes of this magnitude or greater have occurred within 125 mi of Juneau. Frequent flooding occurs in Juneau, and is typically the result of heavy rain, rapid snowmelt, glacial outbursts, or storm events. Warm rainfall and heavy snowpack contribute to elevated stream flows; often within the Montana Creek watershed. As glacial activity retreated within the Mendenhall Valley, it left behind a complex of glacial and alluvial outwash settlements buttressed by rounded bedrock knobs and high relief slopes. This places pressure on the Montana Creek, Jordan Creek, and Duck Creek drainages, which run through populated centers of the Mendenhall Valley. In addition, the Mendenhall River, which runs through heart of the Valley, is subject to seasonal and event-driven variations.⁷³⁸ Federal Emergency Management Administration 2010 flood maps indicate that several residences along the Mendenhall River and much of the south fork of Duck Creek lie within flood zones.⁷³⁹ Glacial outburst floods also pose risks to properties along the Mendenhall River.

According to the Alaska Department of Environmental Conservation, there are no significant environmental remediation sites active within Juneau as of 2010.⁷⁴⁰

Current Economy⁷⁴¹

Juneau's economy developed around mining and mining support industries. In 1906,

⁷³⁶ Alaska Forest Association. (n.d.). *Alaska Timber Industry History: Southeast Alaska*. Retrieved September 27, 2012 from: <http://www.akforest.org/Alaska%20Timber%20Industry%20History.pdf>.

⁷³⁷ City and Borough of Juneau. (2008). *Comprehensive Plan of the City and Borough of Juneau*. Retrieved September 26, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Juneau-CP-2008.pdf>.

⁷³⁸ Ibid.

⁷³⁹ City of Borough of Juneau. (2010). *2010 Aerial Photograph Draft Flood Maps*. Retrieved September 28, 2012 from: <http://www.juneau.org/cddftp/2010DraftFloodMaps.php>.

⁷⁴⁰ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved September 28, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Southeast>.

⁷⁴¹ Unless otherwise noted, all monetary data are reported in nominal values.

when Juneau became the territorial capital, public sector jobs began to increase. When Alaska became a state in 1959, government jobs expanded greatly. Revenues from oil royalties swelled the number of public jobs, particularly in resource management sectors. Soon, commercial fishing and tourism became critical sectors in Juneau's economy, and as its population grew, so did private businesses and services associated with meeting the demands of a large, diverse community. Basic industries include mining, commercial fishing, fish processing, tourism, and State and Federal government. Support sector industries provide goods and services to local residents and include retail, wholesale trade, medical and business services, construction, local government, arts, and many others.⁷⁴²

The State of Alaska was Juneau's largest employer in 2010, providing 4,276 average annual jobs. Within state government, the Department of Transportation and Public Facilities is the largest employer, with 652 employees in that year. The Juneau School District is the largest single employer in the city, with over 700 employees in 2010. The U.S. Coast Guard is the largest local federal employer, with 363 employees that year. Central Council Tlingit and Haida is the largest tribal government employer, employing over 250 residents. Overall, federal, state, and tribal employers provided 42% of total local jobs in 2010. Juneau's public workers earned approximately half of total wages earned in 2010.⁷⁴³

As a whole, the tourism industry is Juneau's largest private-sector employer, providing 2,400 average annual jobs (some seasonal). In 2010, 1.26 million people visited Juneau by airplane, cruise ship, private vessel, or ferry. Of those, 875,600 passengers arrived exclusively by cruise ship, while another 78,000 arrived by ferry and 304,000 arrived by plane. Juneau offers extensive attractions and amenities for travelers, including an extensive historic tourist district, Mt. Roberts Tramway, Mendenhall Glacier visitor center, and a diverse network of trails. Many tour operators offer excursions ranging from whale watching to glacier flightseeing. Kensington and Greens Creek mines together employed 510 residents in 2010, with a collective payroll of \$49.0 million annually. Juneau's largest single private employer is the Hecla Greens Creek Mining Company, whose mine is the second largest silver producer in North America, and the sixth largest in the world. The health care industry accounts for 1,400 jobs with a payroll of \$65.6 million annually. Construction provided 730 jobs and \$44.0 million to the local economy in 2010. The retail trade sector employed 2,000 and \$51.0 million in payroll. Commercial fishing, fish processing, and hatchery production are important components within the local economy. Commercial harvests include salmon, halibut, sablefish, rockfish, shrimp, crab, herring, and groundfish. Sportfishing is also a substantial contributor to the local economy, and is closely tied the Juneau's tourism industry. Locally headquartered Alaska Native entities (e.g., Sealaska Corp. Goldbelt, Inc., Hunta Totem, Inc., and Kootznoowoo, Inc.) are all of economic importance to the local economy. Sealaska represents more than 21,000 shareholders, making it Alaska's largest ANCSA for-profit corporation in terms of shareholder size.⁷⁴⁴

In 2010,⁷⁴⁵ the estimated per capita income was \$34,923 and the estimated median household income was \$75,517, compared to \$26,719 and \$62,034 in 2000, respectively.

⁷⁴² See footnote 737.

⁷⁴³ Juneau Economic Development Council. (2011). *The 2011 Juneau & Southeast Alaska Economic Indicators*. Retrieved September 28, 2012 from: http://www.jedc.org/forms/Indicators_2011.pdf.

⁷⁴⁴ Ibid.

⁷⁴⁵ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

However, after adjusting for inflation by converting 2000 values into 2010 dollars,⁷⁴⁶ the real per capita income (\$35,135) and real median household income (\$81,574) indicate that while individual earnings remained mostly unchanged, household incomes declined somewhat. In 2010, Juneau ranked 29th of 305 communities from which per capita income was estimated, and 32nd of 299 communities from which median household income was estimated. According to the Juneau Economic Development Council (JEDC), per capita income in 2009 was \$48,062, which was significantly greater than the 2006-2010 ACS estimates. In addition, the 2008-2010 3-year ACS estimate revised the inflation adjusted per capita income as \$36,563; however, that estimate was still well below the 2009 JEDC estimate despite the fact that relatively high paying mining and state jobs flourished that year, compared to 2009. In addition, the JEDC estimated that median household income in Juneau was \$74,554, which is similar to 2006-2010 ACS estimates for 2010.⁷⁴⁷ It should be noted that JEDC estimates are based on Alaska Department of Labor and Workforce Development (DOLWD) figures, which do not include self-employed or federally-employed workers. This may impact results of JEDC estimates in ways not applicable to the ACS.

According to the 2006-2010 ACS, 74.2% residents aged 16 and older were part of the civilian labor force, and 1.0% were in the Armed Forces in 2010. In that year, unemployment was estimated at 4.3%, compared to an estimated 5.9% statewide; and an estimated 6.5% of residents were living below the poverty level, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 39.9% worked in the public sector, an estimated 52.7% worked in the private sector, an estimated 7.3% were self-employed, and an estimated 0.1% were unpaid family workers.

By industry, most (22.2%) employed residents were estimated by the 2006-2010 ACS to work in public administration sectors; followed by education, health care, and social assistance (20.7%); retail trade (12.8%); and transportation, warehousing, and utilities sectors (7.5%). Agriculture, forestry, fishing, hunting, and mining sectors accounted for 4.8% of employment by industry sector, compared to 5.2% in 2000. Overall, this shows there was very little change in employment by industry sectors, and the most significant proportional increase occurred in retail trade (Figure 3). However, an alternative estimate provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). The ALARI database shows a different picture indicating the need for caution when utilizing data from the ACS. The ALARI database indicates that the largest percentage of residents is employed in the trade, transportation and utilities industries (20.7%), followed by local government (14.8%) and educational and health services (14.0%).⁷⁴⁸

By occupation type, most (39.1%) employed residents were estimated to hold management or professional positions in 2010; followed by sales or office (27.4%); service (14.6%); natural resources, construction, or maintenance (10.4%); and production, transportation, or material moving positions (8.5%). Again, there was very little variation in employment by occupation type between 2000 and 2010 (Figure 4).

⁷⁴⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁷⁴⁷ See footnote 743.

⁷⁴⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 3. Local Employment by Industry in 2000-2010, Juneau (U.S. Census).

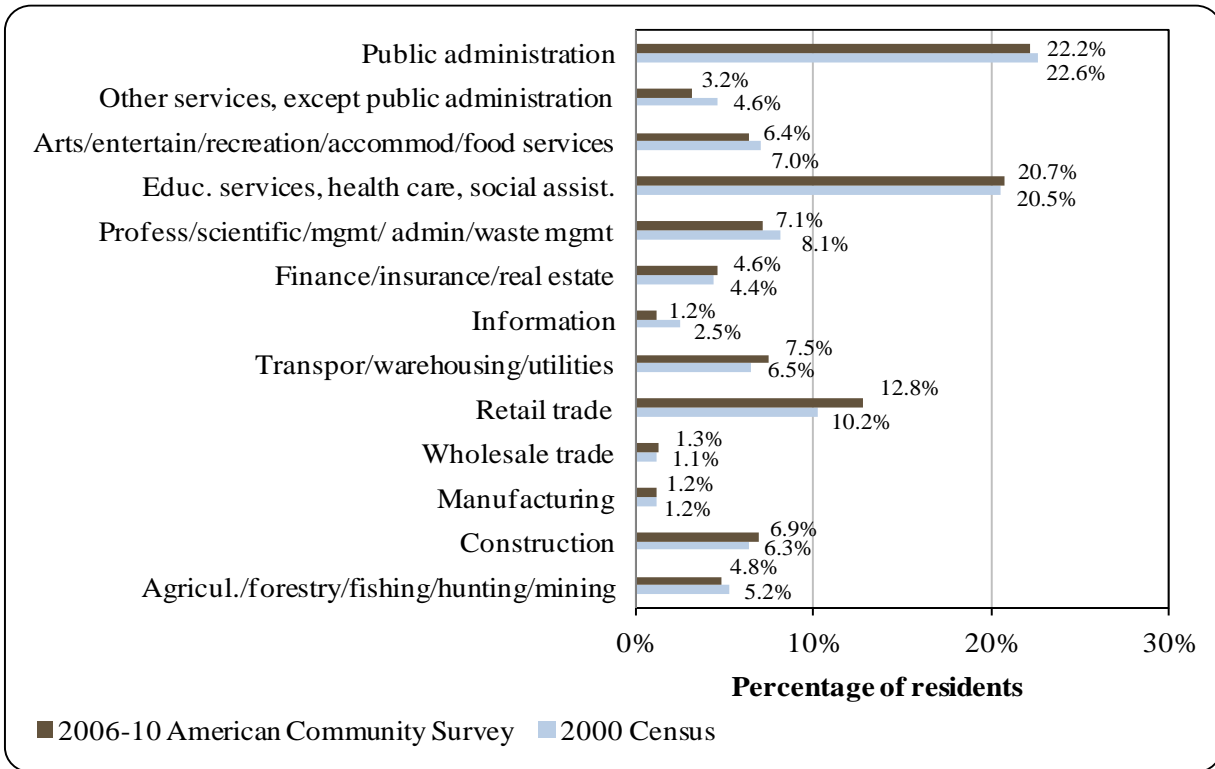
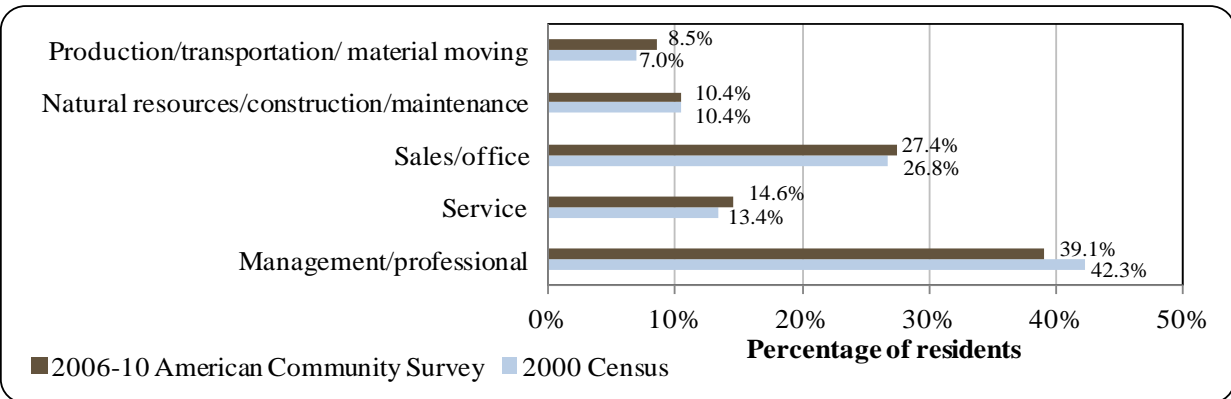


Figure 4. Local Employment by Occupation in 2000-2010, Juneau (U.S. Census).



Governance⁷⁴⁹

Juneau is the state capital of Alaska and is home to state legislators and their staff during the legislative session between January and April. Although first incorporated in 1900, Juneau was reorganized into a Unified Home Rule City within its own borough in 1970. There is a mayor, eight-member city council, seven-member school board, nine-member planning commission, and seven municipal employees. In addition, the Central Council of Tlingit and Haida Indian Tribes is both a federally recognized tribal government and ANCSA-chartered non-profit. Aukquan Traditional Council is a second village council; however, it is not federally recognized. The ANCSA chartered regional corporation representing Juneau is the Sealaska Corporation, which is also headquartered in Juneau. The ANCSA-chartered village corporation is Goldbelt, Inc.

Additional public organizations located within Juneau include Alaska Legal Services Corporation, Alaska Municipal League, Alaska Native Brotherhood/Sisterhood, Alaska State Chamber of Commerce, Aleutian Pribilof Island Community Development Association, Juneau Chamber of Commerce, Juneau Convention and Visitors Bureau, Juneau Economic Development Council, Southeast Alaska Conservation Council, Southeast Alaska Regional Health Consortium, Southeast Conference, Southeast Conference Resource Conservation and Development, The Southeast Alaska Tourism Council, and Tlingit-Haida Regional Housing Authority. The National Marine Fisheries Service (NMFS), Alaska Department of Fish and Game (ADF&G), and the U.S. Bureau of Citizenship and Immigration Services are also located within the city of Juneau.

Juneau issues a 5% sales tax, 3% liquor tax, 7% accommodations tax, \$1 tobacco tax per pack, and \$5 per-person marine passenger fee. In 2010, the total municipal budget for 2010 was \$309.32 million, compared to \$159.66 million in 2000; an increase of 49.8% after adjusting for inflation.⁷⁵⁰ The total municipal budget peaked in 2009 at \$313.27 million. In 2010, sales tax revenues accounted for 12.3% of the total municipal budget, compared to 17.5% in 2000. Again, sales tax revenues peaked in 2009 at \$41.58 million, or 13.3% of the total budget. State allocated Community Revenue Sharing accounted for 0.7% of the total budget in 2010, compared to 0.5% from State Revenue Sharing in 2000.

State and federal fisheries-related grants awarded between 2000 and 2010 include: \$390,000 for hatchery net pen replacement; \$2.5 million for cruise ship dock improvements; \$1.5 million for commercial passenger vessel dock retaining wall repair and replacement; \$6.8 million for University of Alaska School of Fisheries and Ocean Sciences Facility; \$1.0 million for a commercial landing facility in Auke Bay; \$10.0 million for Douglas Harbor improvements; \$38,550 for Icy Strait Seafoods, Inc. roe processing equipment; \$98,868 for salmon caviar marketing; \$30,000 for a refrigerated truck and blast freezer; \$18,725 awarded to Roy's Select Alaskan Catch; \$25,700 for flavored Ikura (salmon roe) marketing; \$16,725 awarded to Krestof Clam Company Geoduck and littleneck clam mariculture; \$18,881 awarded to Rose Fisheries for product promotion; \$11,935 awarded to Taku River Reds for marketing; \$8,700 awarded to Alaska Wild Salmon Products for marketing; \$2,250 awarded to Taku River Reds for a freezer purchase; and \$5.1 million for Douglas Harbor expansion design and construction. Further, information regarding municipal finances can be found in Table 2.

⁷⁴⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved April 2, 2012 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

⁷⁵⁰ Inflation calculated using 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

Table 2. Selected Municipal, State or Federal Revenue Streams for the Community of Juneau from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$159,663,200	\$27,945,000	\$813,755	n/a
2001	\$159,842,800	\$28,786,500	\$713,736	n/a
2002	\$186,959,300	\$29,612,400	\$713,560	\$2,600,000
2003	\$160,873,095	\$29,739,796	\$729,021	\$2,500,000
2004	\$170,095,462	\$30,539,500	-	\$10,270,334
2005	\$196,363,800	\$33,062,900	-	n/a
2006	\$224,967,500	\$34,587,598	-	n/a
2007	\$232,851,800	\$36,475,000	-	\$1,000,000
2008	\$262,988,100	\$39,175,428	-	\$6,800,000
2009	\$313,266,400	\$41,577,389	\$2,032,210	\$1,890,000
2010	\$309,317,500	\$38,118,000	\$2,017,698	\$2,500,000

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue(n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Juneau is accessible by air and sea only. Scheduled jet flights and air taxis are available at the municipally-owned Juneau International Airport, which possesses a paved 8,457-ft long by 150-ft wide runway and seaplane landing pond. The airport is controlled, and currently Alaska Airlines is the only major airline providing jet service to Seattle, Anchorage, and cities in-between. Roundtrip airfare between Juneau and Anchorage in June 2012 was \$399.⁷⁵¹ Additional local air carriers include Wings of Alaska, Ward Air, Alaska Seaplane Service, Temsco Helicopters, Inc., Coastal Helicopters, Era Aviation, Air Excursions LLC, and Northstar Helicopters. Capital Transit provides public transportation throughout Juneau, Auke Bay, and Douglas. In 2010, local ridership totaled 1.22 million trips. Car rental and taxi services are also available.^{752,753}

Juneau's port facilities include seven public harbors, two public deep draft docks, a state ferry terminal, and many smaller public and private docks. Douglas Harbor has berthing space

⁷⁵¹ Airfare calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).

⁷⁵² See footnote 749.

⁷⁵³ Juneau Economic Development Council. (2011). *The 2011 Juneau & Southeast Alaska Economic Indicators*. Retrieved October 1, 2012 from: http://www.jedc.org/forms/Indicators_2011.pdf.

for approximately 135 small commercial fishing or recreational vessels; one 52- by 14-ft tidal grid, and two launch ramps. Aurora Harbor provides berthing space for approximately 457 commercial fishing and recreational vessels. The harbor offers covered stalls, fuel, water, and electricity. No transient moorage is available. Harris Harbor is located adjacent to Aurora Harbor and provides additional space for approximately 275 vessels. A seaplane float is located at the southeasterly side of the boat harbor. Limited transient moorage is available when permanent tenants are out. Harbor facilities include tidal grid, fuel, water, and electricity. Auke Bay/Statter Harbor is located 12 mi north of downtown Juneau and provides mooring for commercial, recreational, and U.S. Coast Guard vessels. It provides berthing space for approximately 245 vessels, and vessels can also find moorage long a 966- by 23-ft floating breakwater. Two parallel boat ramps are located at the northeast side of the harbor, and a 220- by 8-ft float is located between the ramps. Facilities include water, electricity, tidal grid, harbormaster office, showers and restrooms, and U.S. Coast Guard office. Fuel and vessel repair services are available at Fisherman's Bend, adjacent to Statter Harbor. Boat launches are located at Amalga Harbor, 24 mi north of Juneau; Echo Cove, 40 mi north of Juneau, and north Douglas Island, close to False Outer Point. Private marinas are located at Tee Harbor and Fritz Cove.^{754,755}

Public deep draft terminals include Cruise Ship Terminal and Alaska Steamship Dock, offering a combined 1,700 ft of continuous berthing space. These docks are principally used for the docking of cruise ships, along with the privately owned Alaska-Juneau and South Franklin docks. The Intermediate Vessel Float and Marine Park Float are located adjacent to the two public cruise terminals, and are often used for tendering cruise ship passengers from vessels anchored in Gastineau Channel. Goldbelt owned Seadrome marina, offers moorage for small to mid-size cruise vessels and pleasure boats. Merchant's Wharf, located next to Seadrome, provides seaplane floats used by Wings of Alaska.^{756,757}

Alaska Marine Lines transfer terminal occupies 12 acres of paved and 10 acres of unpaved cargo container storage space, including 84 outlets for refrigerated cargo containers. The Juneau Ready-Mix Dock specializes in the receipt and shipment of heavy-lift items, including construction machinery and products. UNOCAL Dock, located south of downtown Juneau, offers gas, diesel 1 and 2, and lubricating oils. Tesoro Dock is located next to Aurora Harbor and offers gas and diesel. Petro Marine Fuel Dock is located across the channel from Harris Harbor and offers diesel 1 and 2, unleaded gas, and lubricants.^{758,759}

*Facilities*⁷⁶⁰

The municipal water supply is obtained from the Last Chance Basin well field on Gold Creek and the Salmon Creek Reservoir and is treated and piped to over 90% of Juneau households. Juneau's water demand is five million gallons per day. The Borough's piped sewage

⁷⁵⁴ City and Borough of Juneau. (n.d.). *Juneau Docks and Harbors*. Retrieved October 1, 2012 from: <http://www.juneau.org/harbors/factsheet.php>.

⁷⁵⁵ Findthedata.org. (n.d.). *Port Facilities, Wharfs, and Docks*. Retrieved October 1, 2012 from: <http://seaport.findthedata.org/d/a/Alaska/Juneau>.

⁷⁵⁶ See footnote 754.

⁷⁵⁷ See footnote 755.

⁷⁵⁸ See footnote 754.

⁷⁵⁹ See footnote 755..

⁷⁶⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

system serves almost 80% of residents and receives secondary treatment. Sludge is incinerated. Refuse collection and the landfill are owned and operated by private firms. Juneau has a sludge site and hazardous waste collection facility, and local organizations also provide recycling programs. Alaska Electric Light and Power Company (AEL&P) receives the majority of its power from the state-owned Snettisham Hydroelectric Facility south of town. AEL&P owns the Annex Creek, Upper Salmon Creek, and Lower Salmon Creek Hydro Plants and the Gold Creek, Lemon Creek, and Auke Bay diesel back-up systems.

Visitor accommodations include Goldbelt Hotel, Westmark Baranof Hostel, Best Western Hotel and Grandma's Featherbed, Travelodge Frontier Suites, The Alaskan Hotel, The Driftwood Lodge, Breakwater Inn, Prospector Hotel, Cashen Quarters B&B, Blueberry Lodge B&B, Inn at the Waterfront, Silverbow Inn, Super 8 Motel, Pearson's Pond Luxury Inn and Spa, Juneau International Youth Hostel, The Bergman Inn, and Aspen Hotel. Local attractions include Mendenhall Glacier and Visitor Center, Eaglecrest Ski Resort, Taku River Lodge, Mt. Roberts Tramway, Macauley Salmon Hatchery and aquariums, Alaska State Museum, Juneau-Douglas City Museum, Governor's Mansion, State Capital Building, Alaskan Brewing Company, St. Nicholas Russian Orthodox Church, Davis Log Cabin/Visitor Center, and the Shrine of Saint Therese.

Public safety services are provided by Borough police department and local state troopers. Fire and rescue services are provided by Capital City Fire and Rescue, Airlift Northwest/Air Ambulance, Greens Creel Emergency Medical Service, U.S. Coast Guard, Borough fire stations and ambulances, State Troopers Mountain Rescue, and Southeast Alaska Dogs Organized for Ground Search. Legal services are provided by state superior court, district court, appellate court, and Lemon Creek Correctional Center. Additional facilities include Zach Gordon You Center, Boys and Girls Club, Centennial Hall Convention Center, Moose Lodge, Elks Lodge, Alaska Native Brotherhood/Sisterhood Hall, several senior centers, Catholic Community Services, Central Council Tlingit Haida center, Borough pool, several private gyms, two movie theaters, one academic library (University of Alaska Southeast), ten school libraries, four public libraries, and seven special libraries.

Local in-state telephone services are provided by Alaska Communication Systems, and long-distance telephone services are provided by AT&T, Alascom, GCI, and ACS Alaska. Broadband internet services are available from ACS Alaska, Net/Tel Alaska, AT&T, Woldnet, Chugach.Net, GCI, and Sinbad Network Communications. Local Television and radio stations are available. Cable television is provided by GCI Cable Inc.

Medical Services

Bartlett Regional Hospital services all of Southeast Alaska as a qualified acute care facility and medevac service center. It also provides long term and specialized care. Health services include birth center, in- and out-patient behavioral health services, cardiac/pulmonary rehabilitation, critical care unit, diagnostic imaging, infusion and chemotherapy, laboratory service, substance abuse center, respiratory therapy, nutrition services, pharmacy, and physical, special, and occupational therapy.⁷⁶¹

The Southeast Alaska Regional Health Consortium is a non-profit, tribal health consortium providing services to 18 Alaska Native communities. Services include dental (basic,

⁷⁶¹ Bartlett Regional Hospital. (n.d.). *Patient Care*. Retrieved October 2, 2012 from: <http://www.bartletthospital.org/patientServices/patientCare.html>

pediatric, prosthodontic, orthodontic), behavioral health, health promotion and education, substance abuse prevention and treatment, air medic services, and community outreach.⁷⁶²

Juneau Public Health Center is a state-run public health center offering basic health care, screening, and referral services.⁷⁶³ Finally, there are a range of private practices offering a variety of health services. Emergency service is provided by 911 telephone service.

Educational Opportunities

As of 2011, there were 14 schools within the Juneau Borough. These included five elementary schools, two middle schools, two high schools, one alternative high school, and several other alternative/private schools. In that year, there were 5,043 students enrolled and 366 teachers employed.⁷⁶⁴

In addition, the University of Alaska Southeast (UAS) maintains their primary campus in Juneau. In 2011, enrollment was at 2,233 full or part time students; which was similar to 2010. Bachelor degrees are offered in business administration, liberal arts, fine arts, biology, elementary education, English, geography/environmental studies, social science, marine biology, special education, and mathematics. Master's degrees are offered in teaching, education, and public administration. Certificates are offered in a wide range of vocational and technical disciplines. UAS also offers statewide remote learning opportunities through E-Learning.⁷⁶⁵

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Tlingits were traditionally a mobile people. Winter villages were often positioned near shellfish beds, and during the late winter months, people would participate in offshore fishing and seaweed collecting. As winter ended, collecting herring spawn would begin. By mid-summer, residents would travel to summer camps located on fish streams, to harvest and process salmon.⁷⁶⁶

Fishing has always been central to Tlingit culture. Prior to Euro-American contact, fishing grounds were owned by clan, and each family group would establish fishing camps close to their fishing grounds. Fall months were important for harvesting salmon. Fish were often gaffed, dried, and smoked for winter months. Roe was cooked and preserved in jars, and salmon heads were fermented by burying them below the tide line. Fresh salmon was often prepared by boiling it in cast iron pots with seal oil.⁷⁶⁷

⁷⁶² Southeast Alaska Regional Health Consortium. (n.d.). *Our Services*. Retrieved October 2, 2012 from: http://www.searhc.org/our_services/.

⁷⁶³ State of Alaska. (n.d.). *Division of Public Health*. Retrieved October 2, 2012 from: <http://www.hss.state.ak.us/dph/nursing/locations.htm#Juneau>.

⁷⁶⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁷⁶⁵ University of Alaska Southeast. (n.d.). *Academic Schools*. Retrieved October 2, 2012 from: <http://www.uas.alaska.edu/academics/>.

⁷⁶⁶ U.S. Forest Service. (1984). *The Subsistence Lifeway of the Tlingit People: Excerpts of Oral Interviews*. Retrieved October 2, 2012 from: http://books.google.com/books?id=JPgTAAAYAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false.

⁷⁶⁷ Ibid.

With the enacting of the Alaska National Interests Lands Conservation Act (ANILCA) in 1980, rural preference was given to subsistence uses of fish and wildlife on federal lands (this preference was later extended to navigable waters). However, the City and Borough of Juneau is not considered rural, prohibiting the harvest of many species in federal waters by Juneau residents. Subsistence (or personal use) fishing is allowed in state waters; however, waters within the Borough are classified as non-subsistence use areas. Eligibility to apply for Subsistence Halibut Registration Certificates (SHARC) is limited to residents of rural communities and members of a federally recognized Alaska Native Tribe with customary and traditional use of halibut. Some Juneau residents are eligible for SHARC registration; however, subsistence harvests are prohibited within the Borough.^{768,769}

The seafood industry is the largest private sector employer in Southeast Alaska in terms of wages. Commercial fishing for salmon began in Southeast Alaska during the late nineteenth Century, following the construction of the first canneries in Klawock and Sitka. However, the commercial fishing industry in Juneau grew slowly in comparison to the booming mining economy. Sockeye, chum, and pink salmon were the first species to be targeted extensively. Early sockeye and chum harvests peaked in the 1910s. In the 1930s, Chinook and pink salmon harvests peaked, and by the 1940s, coho salmon harvests peaked. By the time of statehood, salmon populations were severely depressed due to years of weak federal management. Salmon stocks rebuilt through the 1960s and 1970s, and rebounded during the 1990s when Chinook and sockeye harvests reached their highest points in decades. For the most part, a purse seine gear type is used in fishing salmon, although drift gill nets, troll gear, and set gill nets are also used to a lesser extent. There are over 5,500 salmon producing streams and tributaries in Southeast Alaska.

Eighteen hatcheries located throughout the region also contribute significantly to salmon harvests. From 1995 to 2004, an average of 14% of total commercial salmon harvests was contributed by hatcheries. Macaulay Salmon Hatchery, located in Juneau, produces 50 million pink, 1.5 million coho, and 950,000 Chinook salmon annually.⁷⁷⁰ Other Juneau area hatcheries are located at Auke Bay and Sheep Creek (south of Juneau).

District 11 (Taku-Snettisham) and District 15 (Lynn Canal) are the closest traditional gillnet areas to Juneau. The drift gillnet fisheries target sockeye, pink, and chum during the summer season from mid-June through mid-August; and coho and fall-run chum through late September and early October. Trollers primarily target Chinook and coho salmon, and are comprised of hand and power troll gear types. Power troll took an average of 89% of Chinook, and 86% of coho salmon harvested in the troll fishery between 1975 and 2004. The Chinook season is separated into winter and summer seasons. Winter season runs from October 1 to April 30, and summer seasons run from May 1 to September 30, are separated into both spring and summer seasons. The majority of Chinook are harvested during summer seasons, which begin in early July. In addition to commercial fishing, the Southeast Alaska sportfishery has increased substantially along with the growing tourism industry. Chinook and coho salmon are primary

⁷⁶⁸ U.S. Fish and Wildlife Service. (n.d.). *Federal Subsistence Management Program*. Retrieved October 2, 2012 from: <http://alaska.fws.gov/asm/racdetail.cfm?rac=01>.

⁷⁶⁹ National Marine Fisheries Service. (n.d.). *Subsistence Halibut Fishing in Alaska*. Retrieved October 2, 2012 from: <http://www.fakr.noaa.gov/ram/subsistence/halibut.htm>.

⁷⁷⁰ Dipac. (n.d.). *Macaulay Salmon Hatchery*. Retrieved October 3, 2012 from: http://dipac.net/Macaulay_hatchery.html.

targets of recreational anglers.⁷⁷¹

The Alaska commercial herring fishery began in 1878 when 30,000 lb were harvested and processed for human consumption. Salted and pickled herring would peak following World War I. In Southeast Alaska, herring reduction (fish meal production) first began outside of Angoon, where the Northwest Trading Company established a whaling post at the village of Killisnoo. Whaling efforts were ultimately abandoned in favor of converting the facility to a herring reduction plant. Demand for herring reduction products increased in the 1920s, and for two decades harvests topped 250 million pounds annually. During that time, stocks began to decline and demand shifted to lower-cost Peruvian anchovy reduction fisheries. Soon after, Southeast Alaska herring reduction facilities began to decline. Demand for herring sac roe increased in the 1970s, most notably in Japan where domestic stocks were depressed. Commercial bait fisheries began in Alaska around 1900, and have remained relatively stable despite fluctuating reduction and sac roe fisheries. Crab industry growth fueled increased bait demand during the 1970s. Today, herring is primarily harvested for roe, which is predominately sold to Asian markets where demand remains high. Purse seines and gillnets are primary gear types used in harvesting herring. A number of “spawn-on-kelp” fisheries have developed as well. In these fisheries, mature herring are either impounded and released after depositing their eggs on kelp fronds, or are allowed to naturally deposit their eggs on constructed kelp racks. Southeast Alaska remains the second largest producer of commercial herring by pound landed. Commercial bait fisheries occur during the winter, and sac roe fisheries occur during the spring. Herring is found in abundance within the Seymore Canal, Hobart Bay, Tenakee Inlet, Hoonah Sound, and outside of Sitka. Herring fisheries within the Lynn Canal are closed due to low abundance.⁷⁷²

Dungeness crab account for the majority of crab harvests in Southeast Alaska, although there are limited Tanner and king crab fisheries as well. Golden king crab constitutes the largest portion of Southeast Alaska king crab harvests. The shrimp trawl fishery began in Petersburg in 1915, and peaked in 1958 at 7.6 million pounds. Spot shrimp pot fisheries within Southeast Alaska grew in the 1990s, with most of the harvest occurring within the southern and central Southeast regions. Pot fisheries for spot and coonstripe shrimp and beam trawl fisheries for northern and sidestripe shrimp are largely stable within the region.

Giant red sea cucumber are harvested on the northwest side of Admiralty Island. The first commercial harvest of sea cucumbers occurred in 1983 around Ketchikan. Harvesting peaked in 1989 at 2.3 million pounds of processed product. Harvesting is restricted to hand picking, and product is sold to Asian and domestic markets. Geoducks are harvested throughout Southeast Alaska and are prized within Asian markets.

Groundfish fisheries include lingcod, halibut, sablefish, pacific cod, and rockfish. In the 1880s, commercial fishing for halibut began, with sablefish targeted as a secondary fishery. Commercial halibut harvests were shipped south on steamers to Seattle and Vancouver. Halibut harvests increased in 1899 when a cannery wharf was built in Petersburg and steamers made regular scheduled calls. By 1901, a salmon cannery in Icy Strait started processing halibut during the slack season. Halibut was harvested by local schooners until 1910, when the steamer fleet

⁷⁷¹ Clark, J. H.; McGregor, A.; Mecum, R. D.; Krasnowski, P.; and Carroll, A. M. (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fishery Research Bulletin*, 12(1), 1-146. Retrieved October 3, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁷⁷² Woodby, D.; Carlile, D.; Siddeek, S.; Funk, F.; Clark, J. H.; and Hulbert, L. (2005). *Commercial Fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09. Retrieved October 3, 2012 from: <http://www.sf.ADFG.state.ak.us/FedAidPDFs/sp05-09.pdf>.

moved in. As stocks depleted in Puget Sound, harvests in Southeast Alaska intensified and markets shifted to Prince Rupert, B.C.⁷⁷³ Both halibut and sablefish are caught using longline gear. However, sablefish are also harvested using pot gear or as bycatch in trawl fisheries within the Gulf of Alaska (GOA). With the exception of halibut, groundfish fisheries are mostly managed by NMFS within federally excluded waters, although some historic state fisheries remain. Lingcod and black and blue rockfish are not covered under a federal Fishery Management Plan and are managed by the state. Prior to 1987, most lingcod in Southeast Alaska was caught incidentally; however, the species began to grow more commercially important in the years following. In 1988, AFDG began monitoring the species more intensely as directed fisheries increased. Between 1987 and 1991, Sitka received 91% of lingcod landings, with the greatest amount landed during summer months.⁷⁷⁴

In terms of rockfish, Yelloweye rockfish is the predominate species in the directed commercial fishery, typically accounting for 90% of landings by weight. Rockfish are harvested in areas within the GOA, along the continental shelf. The directed rockfish fishery began in 1979, as a small, shore based, hook and line fishery in Southeast Alaska. The early fishery targeted all species of demersal shelf rockfish, although yelloweye still accounted for most landings. The fishery began in the Sitka area (Central Southeast Outside), although it eventually spread to the Southern Southeast Outside area as well.⁷⁷⁵ Pacific cod are harvested primarily by longline gear within the internal waters of Southeast Alaska, although pots, jig, and dinglebar are also used. Southeast Alaska pacific cod markets are limited due to their small size and susceptibility to parasites.⁷⁷⁶

Juneau is located in Federal Statistical and Reporting Area 659, International Pacific Halibut Commission Area 2C, and the GOA Sablefish Regulatory Area. Juneau is not eligible to participate in either the Community Development Quota program or the Community Quota Entity program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, nine shoreside processing plants were located in Juneau. Alaska Glacier Seafood Company was started in 1996 by the Erickson family. In 2005, the company opened a 10,000-sq ft processing plant on the shore of Auke Nu Cove. The facility processed over 7 million pounds of fish in the year 2008. The facility processes all five species of salmon plus halibut, black cod, sea cucumbers, spot prawns, and crab (Red King, Brown King, Tanner and Dungeness). During peak season (approximately

⁷⁷³ Thompson, W. F.; and Freeman, N. L. (1930). *History of the Pacific Halibut Fishery*. Retrieved October 3, 2012 from: <http://ww.iphc.int/publications/scirep/Report0005.pdf>.

⁷⁷⁴ Gordon, D. A. (1994). Lingcod Fishery and Fishery Monitoring in Southeast Alaska. *Alaska Fishery Research Bulletin*, 1(2), 140-152. Retrieved October 3, 2012 from: <http://www.sf.ADFG.state.ak.us/FedAidpdfs/AFRB.01.2.140-152.pdf>

⁷⁷⁵ O'Connell, V. M. ; and Brylinsky, C. (2003). *The Southeast Alaska Demersal Shelf Rockfish Fishery with 2003 Season Outlook*. Alaska Department of Fish and Game, Regional Information Report No. 1J03-10. Retrieved October 4, 2012 from: <http://www.sf.ADFG.state.ak.us/fedaidpdfs/RIR.1J.2003.10.pdf>.

⁷⁷⁶ Coonradt, E. E. (2002). *The Southeast Alaska Pacific Cod Fishery*. Alaska Department of Fish and Game, Regional Information Report No. 1J02-10. Retrieved October 4, 2012 from: <http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2002.10.pdf>.

between June and August), the plant employs a maximum of 110 workers.⁷⁷⁷ This facility accepts foreign fish processing workers with J-1 visas, offers laundry service, some work gear for free, room and board at a nominal fee, and free transportation to and from work within the community.⁷⁷⁸ The plant is well known among J-1 workers as a quality processing plant to work at.⁷⁷⁹

Alaskan and Proud Market was founded in 1987 and its first store opened in Ketchikan. The company employs 220 associates in the communities of Ketchikan, Juneau and Thorne Bay. Glacier Village Supermarket operates a seafood processing facility called Superbear in Juneau. Horst's Seafood, Inc. in Juneau processes cod (Black and Pacific), clam, crab (Dungeness, King and Snow), halibut, salmon (Chinook, chum, coho, sockeye), shrimp and prawns.⁷⁸⁰ The plant, which began operations in 1993, primarily smokes fish and is a small family-owned business.⁷⁸¹ Icy Strait Seafood's primary processing facility is located in Juneau. Their primary focus is all five species of salmon from the Taku River system. In addition, Icy Strait Seafood processes herring, halibut, black cod, spot prawns and king crab.⁷⁸² Jerry's Meats & Seafoods is a small company that sells smoked salmon, halibut and black cod. Jerry's Meats & Seafoods has been operating in the area of Juneau since 1975 and employs a maximum of 15 workers each year.⁷⁸³

Taku Smokeries, a family operation founded in 1989, is located in a 40,000-sq ft warehouse right on the Juneau waterfront. In 2008, Taku Smokeries and Taku Fisheries, a subsidiary company, purchased and processed over 6 million pounds of fish from local fishermen.⁷⁸⁴ The facility produces a variety of smoked products (sockeye, king and silver salmon), chum salmon caviar, halibut and king crab.⁷⁸⁵ The plant employs a maximum of 80 workers each year.⁷⁸⁶

Limited information is available about the other shoreside processing plants in Juneau. Alaskan and Proud Market, John K Inc., and Northern Keta Inc. operate seafood processing facilities in Juneau. Northern Keta processes caviar from the roe of all five species of salmon and was founded in 1993.⁷⁸⁷ The Alaskan Seafood Market operates a seafood processing plant in nearby Douglas, although its official port location code is listed as Juneau.

⁷⁷⁷ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

⁷⁷⁸ Alaska Glacier Seafoods Co. (n.d.). *Alaska Glacier Seafoods Co.* Retrieved from: <http://www.alaskaglacierseafoods.com/about%20us.html>.

⁷⁷⁹ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

⁷⁸⁰ Alaska Seafood Marketing Institute. (n.d.). *Alaska Seafood Marketing Institute.* Retrieved from: <http://alaskaseafood.org/industry/suppliers/index.cfm>.

⁷⁸¹ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

⁷⁸² Icy Strait Seafoods, Inc. (n.d.). *Products.* Retrieved from: <http://www.icystraitseafoods.com/products.html>.

⁷⁸³ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

⁷⁸⁴ Taku Smokeries. (n.d.). *Taku Smokeries.* Retrieved from: http://www.finesalmon.com/Salmon_Products/Alaska_US/Taku_Smokeries/index.asp

⁷⁸⁵ Taky Smokeries. (n.d.). *Taku Store.* Retrieved from: http://takustore.com/core/product_groups.cfm?prod_category=Cold%20Smoked

⁷⁸⁶ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

⁷⁸⁷ Northern Keta. (n.d.). *Homepage.* Retrieved from: <http://www.northernketa.com/>.

Fisheries-Related Revenue

In 2010, Juneau collected \$356,517 in Shared Fisheries Business Tax revenue, compared to \$153,032 in 2000. Fisheries-related revenues increased significantly between 2000 and 2010, peaking in 2007 at \$359,028. Further information regarding trends in fisheries-related revenues can be found in Table 3.

Commercial Fishing

In 2010, 688 residents, or 2.2% of the population held 980 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 744 residents held 1,227 CFEC permits, indicating a decline in overall permits and permit holders between those years. Overall the percentage of total CFEC permits that were held between 2000 and 2010 for salmon, halibut, sablefish, herring and groundfish decreased over the time period, while the percentage of total permits held for crab and other shellfish increased. In addition, residents held less Federal Fisheries Permits (FFP) in 2010, compared to 2000; 98 License Limitation Program (LLP) groundfish permits, compared to 108 in 2000; and 5 LLP crab permits, compared to 7 in 2000 (Table 4). Residents held 11.87 million shares of halibut quota on 153 accounts in 2010, considerably less accounts and more shares than those held in 2000 (12.48 million shares on 209 accounts). Halibut quota peaked in 2003 at 13.7 million shares. Also in 2010, significantly fewer residents held only slightly less sablefish quota compared to 2000, which was also the year the amount of sablefish quota peaked. No residents participated in federal crab catch share fisheries between 2000 and 2010 (Tables 6 to 8).

In both 2000 and 2010, between 42 and 46% of total CFEC permits were actively fished. This varied by fishery with sablefish and halibut permits showing consistently high activity in those years, and all other permits showing relatively low activity. Groundfish permit activity as a percentage of total groundfish permits remained the lowest of all permit types between 2000 and 2010, despite the fact that the number of groundfish permits held declined significantly in that time. Also in 2010, significantly more FFPs were activity fished than in 2000. Conversely, significantly fewer crab LLP permits were activity fished between 2006 and 2010, than in 2000 and groundfish LLP permit activity dropped slightly between 2000 and 2010 (Table 4). Fisheries prosecuted by Juneau residents in 2010 included: Southeast pot Dungeness crab; Southeast pot king/Tanner crab; Southeast ring net Tanner crab; Kodiak pot Tanner crab; statewide longline halibut; Southeast purse seine herring roe; Southeast gillnet herring roe & food/bait; Northern Southeast spawn on kelp; Southern Southeast spawn on kelp; statewide dinglebar troll lingcod; GOA longline, mechanical jig, and pot miscellaneous saltwater finfish; Southeast beam trawl and pot shrimp; statewide longline sablefish; Northern Southeast longline sablefish; Southeast purse seine and drift gillnet salmon; Prince William Sound purse seine and set gillnet salmon; Kodiak purse seine salmon; Cook Inlet drift gillnet salmon; Bristol Bay drift and set gillnet salmon; Yakutat set gillnet salmon; and statewide hand and power troll salmon.

Residents held 477 commercial crew licenses in 2010, compared to 464 in 2000. Also in that year, residents held majority ownership of 307 vessels, 41% less than in 2000. Also of note, the number of vessels homeported in Juneau dropped significantly from 1,443 in 2000 to its lowest point of 739 in 2010. In 2010, 480 vessels landed 14.41 million pounds of seafood valued at \$26.84 million ex-vessel, compared to 229 vessels landing 4.93 million pounds valued at \$12.72 million ex-vessel in 2000. Total Juneau landings peaked in 2006 when 562 vessels landed

57.31 million pounds valued at \$38.42 million ex-vessel. Revenue peaked in 2008 when 540 vessels landed 33.42 million pounds valued at \$39.34 million ex-vessel (Table 5). In 2010, Juneau ranked 22nd of 67 communities reporting landings in terms of total pounds landed, and 17th in terms of total ex-vessel value of landings.

Based on non-confidential landings, salmon was the most landed species in Juneau by weight in 2010, followed by halibut, “other” groundfish, Pacific cod, and “other” shellfish (Table 9). In that year, 9.47 million pounds of salmon valued at \$8.87 million ex-vessel were landed, compared to 214,570 lb valued at \$93,142 in 2000; an increase of \$0.34 per pound ex-vessel after adjusting for inflation,⁷⁸⁸ and without considering the species composition of landings. Salmon landings peaked in 2006 at 51.83 million pounds valued at \$20.59 million ex-vessel. Halibut landings totaled 1.95 million pounds valued at \$8.88 million ex-vessel, compared to 2.78 million pounds valued at \$7.28 million ex-vessel in 2000; an increase of \$0.95 per pound ex-vessel after adjusting for inflation.⁷⁸⁹ Halibut landings peaked in 2005 at 3.73 million pounds valued at \$11.69 million ex-vessel. Pacific cod landings totaled 203,957 lb valued at \$93,941, compared to 78,002 lb valued at \$23,308 in 2000; an increase of \$0.05 per pound ex-vessel after adjusting for inflation.⁷⁹⁰ Pacific cod landings peaked in 2009 at 219,424 pound valued at \$97,661 ex-vessel. Finally, there was a significant increase “other” shellfish landed from 20,811 lb in 2000, to 150,453 lb in 2010.

Based on non-confidential landings, salmon was again the most landed species by residents (irrespective of port of landing) in 2010, followed by halibut, sablefish, and herring (Table 10). In that year, residents landed 25.99 million pounds of salmon valued at \$19.65 million ex-vessel, compared to 17.15 million pounds valued at \$7.12 million in 2000; an increase of \$0.19 per pound ex-vessel after adjusting for inflation,⁷⁹¹ and without considering the species composition of landings. Also in that year, residents landed 699,024 lb of sablefish valued at \$2.87 million, compared to 877,714 lb valued at \$2.82 million in 2000; a decrease of \$0.30 per pound ex-vessel after adjusting for inflation. Residents landed 1.64 million pounds of halibut valued at \$6.81 million ex-vessel in 2010, compared to 2.42 million pounds valued at \$5.25 million in 2000; an increase of \$1.17 per pound ex-vessel after adjusting for inflation.⁷⁹² Finally, residents landed 963,133 lb of herring (or herring roe) valued at \$438,198 ex-vessel, compared to 831,764 lb valued at \$155,625 ex-vessel in 2000; an increase of \$0.19 per pound ex-vessel after adjusting for inflation.⁷⁹³

⁷⁸⁸ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

⁷⁸⁹ Ibid.

⁷⁹⁰ Ibid.

⁷⁹¹ Ibid.

⁷⁹² Ibid.

⁷⁹³ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Juneau: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$153,032	\$199,445	\$252,055	\$202,379	\$231,450	\$235,783	\$315,727	\$359,028	\$348,352	\$305,872	\$356,517
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$153,032	\$199,445	\$252,055	\$202,379	\$231,450	\$235,783	\$315,727	\$359,028	\$348,352	\$305,872	\$356,517
Total municipal revenue⁵	\$159.6 M	\$159.8 M	\$186.9 M	\$160.9 M	\$170.1 M	\$196.3 M	\$232.8 M	\$262.9 M	\$313.2 M	\$309.3 M	\$232.8 M

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Juneau: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	108	107	108	110	109	106	100	102	96	98	98
	Active permits	49	47	45	49	44	34	31	31	31	31	32
	% of permits fished	45%	43%	41%	44%	40%	32%	31%	30%	32%	31%	32%
	Total permit holders	94	92	93	95	94	90	85	87	87	88	88
Crab (LLP) ¹	Total permits	7	9	9	9	8	8	7	7	5	5	5
	Active permits	2	2	2	2	1	1	0	0	0	0	0
	% of permits fished	28%	22%	22%	22%	12%	12%	0%	0%	0%	0%	0%
	Total permit holders	4	5	5	5	4	4	3	3	2	2	2
Federal Fisheries Permits ¹	Total permits	78	81	81	70	77	77	62	69	74	52	53
	Fished permits	0	0	0	47	48	41	43	43	48	35	36
	% of permits fished	0%	0%	0%	67%	62%	53%	69%	62%	65%	67%	68%
	Total permit holders	68	71	71	62	66	66	55	62	66	52	53
Crab (CFEC) ²	Total permits	75	82	85	74	69	66	66	75	76	73	65
	Fished permits	48	52	57	49	42	36	32	42	44	40	34
	% of permits fished	64%	63%	67%	66%	61%	55%	48%	56%	58%	55%	52%
	Total permit holders	62	68	69	60	59	56	55	66	65	65	61
Other shellfish (CFEC) ²	Total permits	27	29	35	42	37	33	33	34	41	34	33
	Fished permits	10	12	13	16	19	14	11	12	12	9	11
	% of permits fished	37%	41%	37%	38%	51%	42%	33%	35%	29%	26%	33%
	Total permit holders	24	28	31	38	33	31	31	31	32	33	31
Halibut (CFEC) ²	Total permits	173	165	167	163	157	155	154	147	131	120	120
	Fished permits	144	141	150	145	145	142	136	130	118	105	109
	% of permits fished	83%	85%	90%	89%	92%	92%	88%	88%	90%	88%	91%
	Total permit holders	172	164	166	162	156	154	152	146	131	120	120
Herring (CFEC) ²	Total permits	54	49	40	44	41	39	38	35	44	34	32
	Fished permits	18	21	19	23	20	16	10	8	14	16	11
	% of permits fished	33%	43%	48%	52%	49%	41%	26%	23%	32%	47%	34%
	Total permit holders	37	35	25	31	27	24	24	22	24	25	22

Table 4 cont'd. Permits and Permit Holders by Species, Juneau: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	73	77	72	70	66	62	59	56	53	47	50
	Fished permits	70	77	70	67	65	59	57	55	50	45	46
	% of permits fished	96%	100%	97%	96%	98%	95%	97%	98%	94%	96%	92%
	Total permit holders	60	64	58	55	55	52	50	50	43	42	42
Groundfish (CFEC) ²	Total permits	137	144	135	123	105	99	70	61	63	39	32
	Fished permits	40	49	26	19	18	12	6	7	11	8	10
	% of permits fished	29%	34%	19%	15%	17%	12%	9%	11%	17%	21%	31%
	Total permit holders	110	113	102	96	85	78	53	45	44	30	25
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	688	705	730	748	759	732	717	692	661	636	648
	Fished permits	235	228	213	210	227	217	236	238	220	212	228
	% of permits fished	34%	32%	29%	28%	30%	30%	33%	34%	33%	33%	35%
	Total permit holders	632	651	638	642	633	610	612	603	601	587	600
<i>Total CFEC Permits</i> ²	<i>Permits</i>	<i>1,227</i>	<i>1,251</i>	<i>1,264</i>	<i>1,264</i>	<i>1,234</i>	<i>1,186</i>	<i>1,137</i>	<i>1,100</i>	<i>1,069</i>	<i>983</i>	<i>980</i>
	<i>Fished permits</i>	<i>565</i>	<i>580</i>	<i>548</i>	<i>529</i>	<i>536</i>	<i>496</i>	<i>488</i>	<i>492</i>	<i>469</i>	<i>435</i>	<i>449</i>
	<i>% of permits fished</i>	<i>46%</i>	<i>46%</i>	<i>43%</i>	<i>42%</i>	<i>43%</i>	<i>42%</i>	<i>43%</i>	<i>45%</i>	<i>44%</i>	<i>44%</i>	<i>46%</i>
	<i>Permit holders</i>	<i>744</i>	<i>765</i>	<i>744</i>	<i>754</i>	<i>745</i>	<i>723</i>	<i>724</i>	<i>717</i>	<i>697</i>	<i>676</i>	<i>688</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Juneau: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Juneau ²	Total Net Lb Landed In Juneau ^{2,5}	Total Ex-Vessel Value Of Landings In Juneau ^{2,5}
2000	464	31	13	523	1,443	229	4,934,921	\$12,718,170
2001	453	36	12	492	1,328	293	10,958,374	\$11,825,053
2002	344	28	11	451	1,202	224	5,279,270	\$10,741,133
2003	375	41	12	449	1,163	265	20,017,700	\$16,916,201
2004	421	64	10	449	1,109	363	8,715,160	\$17,062,913
2005	382	90	9	330	926	552	17,402,730	\$23,139,590
2006	435	95	10	328	861	562	57,311,136	\$38,421,790
2007	460	70	10	321	824	543	48,253,249	\$33,193,095
2008	413	93	10	323	791	540	33,423,570	\$39,340,713
2009	447	79	9	307	761	526	15,497,368	\$23,135,834
2010	477	85	9	307	739	480	14,413,758	\$26,842,138

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Juneau: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lb)
2000	209	12,475,251	1,680,389
2001	209	12,369,308	1,781,054
2002	210	13,484,197	1,921,434
2003	207	13,701,509	1,969,826
2004	202	13,548,076	2,221,330
2005	191	12,776,502	2,138,081
2006	188	11,792,973	1,926,899
2007	181	11,945,075	1,736,759
2008	164	11,876,471	1,441,938
2009	159	11,473,669	1,172,549
2010	153	11,869,905	1,126,851

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Juneau: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lb)
2000	54	10,691,521	1,110,894
2001	58	9,725,374	998,957
2002	56	9,293,366	940,739
2003	49	9,747,307	1,160,871
2004	47	9,501,109	1,185,692
2005	44	9,576,608	1,102,602
2006	41	8,975,985	1,061,065
2007	42	9,520,160	1,079,632
2008	40	8,981,784	941,316
2009	40	6,444,448	579,689
2010	39	9,679,945	836,744

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Juneau: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Juneau: 2000-2010.

	<i>Total Net Lb¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	0	10	--	--	0	--
Halibut	2,780,296	2,382,754	2,829,010	2,655,555	3,302,594	3,725,945	3,092,814	2,215,330	1,951,907	2,428,210	1,952,937
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	247,415	292,465	269,279	234,929	226,558	263,404	230,260	166,201	177,738	222,121	229,409
Other Shellfish	20,811	16,358	20,715	66,044	133,547	214,263	34,137	135,548	31,780	56,249	150,453
Pacific Cod	78,002	64,736	32,911	68,743	79,120	27,630	29,352	79,841	207,327	219,424	203,957
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	1,426,577	1,158,852	1,217,064	--	--	--	--	--	--	--	--
Salmon	214,570	6,693,539	769,610	15,229,471	3,546,081	10,497,312	51,830,132	43,227,258	28,446,631	10,103,359	9,467,351
<i>Total²</i>	<i>4,767,671</i>	<i>10,608,704</i>	<i>5,138,589</i>	<i>18,254,742</i>	<i>7,287,900</i>	<i>14,728,554</i>	<i>55,216,705</i>	<i>45,824,178</i>	<i>30,815,383</i>	<i>13,029,363</i>	<i>12,004,107</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	\$0	\$4	--	--	\$0	--
Halibut	\$7,282,105	\$4,549,609	\$6,270,028	\$8,029,543	\$10,350,593	\$11,691,281	\$11,467,732	\$9,972,675	\$8,575,775	\$7,365,958	\$8,876,642
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$171,472	\$235,947	\$225,774	\$177,193	\$185,398	\$175,619	\$145,452	\$87,491	\$109,104	\$137,481	\$166,046
Other Shellfish	\$102,624	\$48,246	\$69,610	\$130,932	\$296,228	\$532,470	\$136,959	\$381,386	\$182,299	\$243,435	\$455,310
Pacific Cod	\$23,308	\$27,140	\$8,972	\$17,469	\$29,278	\$5,122	\$5,268	\$28,440	\$121,850	\$97,661	\$93,941
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$5,003,338	\$3,514,618	\$3,633,534	--	--	--	--	--	--	--	--
Salmon	\$93,142	\$2,547,842	\$112,458	\$3,090,660	\$1,879,684	\$3,956,031	\$20,593,162	\$16,254,314	\$22,616,884	\$7,578,213	\$8,867,546
<i>Total²</i>	<i>\$12,675,990</i>	<i>\$10,923,402</i>	<i>\$10,320,377</i>	<i>\$11,445,797</i>	<i>\$12,741,182</i>	<i>\$16,360,524</i>	<i>\$32,348,576</i>	<i>\$26,724,305</i>	<i>\$31,605,913</i>	<i>\$15,422,749</i>	<i>\$18,459,486</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Juneau Residents: 2000-2010.

	<i>Total Net Lb¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	574,627	583,745	710,712	657,765	652,510	713,760	691,281	963,988	730,690	617,576	715,169
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	2,423,289	2,400,136	2,333,033	2,902,788	2,706,446	2,634,875	2,603,501	2,235,838	2,018,070	1,717,539	1,641,582
Herring	831,764	851,611	1,031,811	1,674,762	887,269	1,010,234	830,056	--	--	944,562	963,133
Other Groundfish	182,308	247,700	154,508	186,539	138,133	158,752	147,543	149,190	136,888	122,158	142,104
Other Shellfish	25,926	50,120	50,882	37,898	50,312	54,873	52,122	34,119	76,488	39,698	26,820
Pacific Cod	663,748	729,501	785,119	237,543	406,682	518,288	525,180	625,704	1,277,264	1,726,932	1,494,696
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	877,714	750,297	814,483	1,074,685	813,691	968,513	977,750	844,767	748,793	720,222	699,024
Salmon	17,146,284	17,849,026	24,140,924	28,356,214	26,671,232	18,447,428	35,908,068	26,846,995	26,043,949	25,009,110	25,985,187
<i>Total²</i>	<i>22,725,660</i>	<i>23,462,136</i>	<i>30,021,472</i>	<i>35,128,194</i>	<i>32,326,275</i>	<i>24,506,723</i>	<i>41,735,501</i>	<i>31,700,601</i>	<i>31,032,142</i>	<i>30,897,797</i>	<i>31,667,715</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$1,419,340	\$1,371,751	\$1,450,191	\$1,460,191	\$1,408,377	\$1,633,283	\$1,261,814	\$2,187,402	\$1,705,927	\$1,238,644	\$1,429,145
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$5,245,340	\$4,194,674	\$4,891,908	\$7,137,664	\$7,859,506	\$7,544,843	\$9,239,955	\$9,256,731	\$7,963,551	\$5,059,424	\$6,811,923
Herring	\$155,625	\$144,118	\$171,999	\$241,367	\$219,214	\$266,270	\$150,103	--	--	\$444,929	\$438,198
Other Groundfish	\$138,329	\$141,139	\$97,344	\$141,954	\$103,911	\$99,798	\$81,505	\$75,599	\$85,946	\$72,983	\$81,622
Other Shellfish	\$95,098	\$96,049	\$140,480	\$119,913	\$159,454	\$215,594	\$189,450	\$152,227	\$226,603	\$212,836	\$145,159
Pacific Cod	\$209,396	\$190,494	\$179,738	\$94,608	\$141,357	\$168,756	\$200,661	\$288,891	\$735,822	\$466,545	\$403,477
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$2,818,120	\$2,171,339	\$2,085,031	\$3,324,230	\$2,379,802	\$2,944,533	\$3,204,734	\$2,565,577	\$2,358,309	\$2,587,198	\$2,871,806
Salmon	\$7,120,302	\$7,578,204	\$7,825,105	\$7,578,916	\$9,702,298	\$7,297,257	\$16,705,229	\$13,156,232	\$21,758,609	\$15,612,182	\$19,652,455
<i>Total²</i>	<i>\$17,201,550</i>	<i>\$15,887,767</i>	<i>\$16,841,795</i>	<i>\$20,098,842</i>	<i>\$21,973,919</i>	<i>\$20,170,335</i>	<i>\$31,033,451</i>	<i>\$27,682,659</i>	<i>\$34,834,768</i>	<i>\$25,694,740</i>	<i>\$31,833,784</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing in Juneau is extremely popular thanks to its relatively large population, extensive infrastructure, and developed tourism industry. Juneau's road system allows access to many rivers and streams which support anadromous fish species. Cowee Creek, north of Juneau, is a popular spot for coho, chum, and pink salmon, cutthroat trout, and Dolly Varden. Windfall Lake is accessible by trail and is popular for Dolly Varden, cutthroat trout, rainbow trout, coho salmon, and steelhead. Peterson Creek supports pink, coho, and chum salmon, Dolly Varden, cutthroat trout, rainbow trout, and steelhead. Montana Creek supports all five species of Pacific salmon, as well as Dolly Varden and trout.⁷⁹⁴ Plenty of beaches are accessible by road as well, and fishing off the beach next to Macaulay Salmon Hatchery is popular. In Marine waters, Chinook, coho, and pink salmon are typically taken by trolling or mooching. Halibut, Pacific cod, and rockfish are targeted from May through September, although they are available the entire year. Most effort however, is targeted towards halibut.⁷⁹⁵ Shellfish such as king and Dungeness crab are typically targeted by local residents, rather than tourists.

The number of registered sport fish guide businesses declined significantly between 2000 and 2010 from 114 to 58. The number of sport fish guide businesses that were active during those years remained relatively constant, following a decline between 2000 and 2002 (Table 11). The number of licensed sport fish guides also declined during those years from 153 to 101, with the most significant drop occurring between 2004 and 2005 from 139 to 110. The number of sportfishing licenses sold within the community grew significantly between 2000 and 2010 from 12,908, to 77,313. The number of sportfishing licenses sold to residents remained relatively stable during those years at 9,287 licenses sold in 2010, compared to 9,945 in 2000. The number of sportfishing licenses sold to residents peaked in 2004 at 10,212.

Juneau is located within the Juneau ADF&G Harvest Survey Area which includes all waters of Alaska, including drainages, from Cape Fanshaw to Point Sherman, including Berners Bay, Lynn Canal south of a line from Point Sherman to the Haines Borough boundary, and all of Admiralty Island. Total saltwater angler days fished in 2010 was 85,128, compared to 112,896 in 2000. In that year, non-Alaska residents accounted for 23.5% of total angler days fished, compared to 28.5% in 2000. Total freshwater angler days fished in 2010 was 15,005, compared to 15,585 in 2000. In that year, non-Alaska residents accounted for 27.8% of angler days fished, compared to 24.9% in 2000. According to ADF&G Harvest Survey data, local private anglers targeted all five species of Pacific salmon, landlocked salmon, rainbow trout, Dolly Varden, cutthroat trout, brook trout, whitefish, Arctic grayling, Northern pike, Pacific halibut, rockfish, lingcod, Pacific cod, sablefish, shark, steelhead, Dungeness crab, Tanner crab, razor clams, hardshell calms, and shrimp.⁷⁹⁶ According to 2010 charter logbook data collected by ADF&G,⁷⁹⁷ charter vessels kept 456 Chinook salmon, 3,319 coho salmon, 2,901 halibut, 9 lingcod, 2,251

⁷⁹⁴ Alaskafishingak.com. (n.d.). *Fishing in Juneau Alaska*. Retrieved October 4, 2012 from: <http://www.alaskafishingak.com/juneau/juneaufishing.htm>.

⁷⁹⁵ Alaska Department of Fish and Game. (n.d.). *Fishing in Northern Southeast Alaska*. Retrieved October 4, 2012 from: http://www.adfg.alaska.gov/static/fishing/PDFs/sport/byarea/juneau_salmon.pdf.

⁷⁹⁶ Alaska Department of Fish and Game. (2011). *Alaska Sportfishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁷⁹⁷ Ibid.

rockfish, 3,085 unidentified salmon, 3,423 sablefish, and 32 sockeye salmon.

Table 11. Sport Fishing Trends, Juneau: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Juneau ²
2000	70	153	9,945	12,908
2001	57	133	10,094	14,197
2002	50	140	9,566	16,296
2003	44	144	9,998	24,704
2004	47	139	10,212	34,669
2005	57	110	9,720	44,553
2006	52	102	9,200	55,748
2007	47	98	8,946	69,269
2008	50	108	8,640	75,612
2009	46	106	8,749	73,304
2010	43	101	9,287	77,313

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	32,212	80,684	3,879	11,706
2001	32,150	73,209	4,957	14,530
2002	24,968	66,921	5,024	11,767
2003	28,586	73,742	3,350	10,392
2004	26,628	86,478	3,741	8,956
2005	37,754	80,680	5,154	12,124
2006	23,379	67,609	4,580	9,338
2007	23,316	75,048	3,733	11,140
2008	24,339	66,296	3,926	9,886
2009	22,970	72,576	4,634	17,504
2010	20,043	65,085	4,167	10,838

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011)

Subsistence Fishing

Subsistence harvesting is prohibited within the City and Borough of Juneau. However, personal use fisheries are permitted within the Borough. District 15, including the Lynn Canal and Chilkat, Chilkoot, and Lutak inlets are closed to personal use salmon fishing during commercial salmon seasons. Compared to smaller, more rural communities in Alaska, Juneau residents are less dependent on subsistence resources to supplement diet and income.

Data is limited on subsistence harvesting by residents, and no information is available on subsistence participation by household and species. However, data is available about salmon, halibut and some marine mammal harvesting. Of the species listed by ADF&G in Table 13, residents reported harvesting sockeye salmon most, followed by pink, coho, Chinook, and chum salmon. In 2008, residents reported 10,580 salmon, compared to 11,546. In that year, sockeye salmon accounted for 94.6% of harvests, compared to 91.8% in 2000. Reported salmon harvests peaked in 2003 at 15,193 fish. Between 2000 and 2008, the number of subsistence salmon permits issued to Juneau residents declined significantly from 1,734, to 853. In 2010, 371 Subsistence Halibut Registration Certificates (SHARC) were issued, compared to 380 in 2003. In that year, an estimated 10,821 lb of halibut was harvested on 46 SHARCs, compared to an estimated 14,960 lb harvested on 90 SHARC in 2003. Subsistence halibut harvests peaked in 2005, when an estimated 30,235 lb were harvested on 104 SHARCs (Table 14). There was a significant decline in the number of SHARC that were active in 2010, compared to previous years. An estimated 186 sea otters were harvested between 2000 and 2010, with most harvested between 2008 and 2010. In addition, an estimated 206 harbor seals and 1 Steller sea lion was harvested in those years (Table 15).

Table 12. Subsistence Participation by Household and Species, Juneau: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Juneau: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	1,734	1,270	168	224	260	296	10,598	n/a	n/a
2001	1,505	1,285	53	460	151	814	8,858	n/a	n/a
2002	1,308	927	66	142	260	179	11,953	n/a	n/a
2003	1,447	1,102	107	90	220	1,046	13,730	n/a	n/a
2004	846	756	96	31	161	146	7,755	n/a	n/a
2005	834	611	70	97	368	533	7,215	n/a	n/a
2006	779	550	43	59	267	755	8,689	n/a	n/a
2007	799	426	91	4	254	553	7,771	n/a	n/a
2008	853	812	72	54	192	253	10,009	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Juneau: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	380	90	14,960
2004	461	104	20,160
2005	438	104	30,235
2006	514	94	17,071
2007	565	109	18,296
2008	363	86	16,686
2009	360	89	13,853
2010	371	46	10,821

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Juneau: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	2	n/a	n/a	n/a	59	n/a
2001	n/a	14	n/a	n/a	n/a	29	n/a
2002	n/a	39	n/a	n/a	n/a	17	n/a
2003	n/a	23	n/a	n/a	n/a	30	n/a
2004	n/a	n/a	n/a	n/a	n/a	13	n/a
2005	n/a	9	n/a	n/a	n/a	8	n/a
2006	n/a	1	n/a	n/a	1	26	n/a
2007	n/a	n/a	n/a	n/a	n/a	16	n/a
2008	n/a	30	n/a	n/a	n/a	8	n/a
2009	n/a	33	n/a	n/a	n/a	59	n/a
2010	n/a	35	n/a	n/a	n/a	29	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

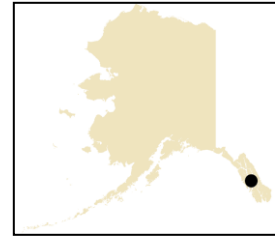
² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kake (CAKE)

People and Place

*Location*⁷⁹⁸



Kake is located on the northwest coast of Kupreanof Island along Keku Strait, 38 air miles northwest of Petersburg and 95 air miles southwest of Juneau. As of the 2010 Decennial Census, Kake was located in the Petersburg Census Area. However, a majority of the Petersburg Census Area was included in the formation of the new City and Borough of Petersburg in January, 2013. Kake was not included within the area of the new Borough, and as of late 2013, Census Areas were still being redrawn. Kake is located in the Petersburg Recording District. The area encompasses 8.2 square miles of land and 6.0 square miles of water.

*Demographic Profile*⁷⁹⁹

In 2010, there were 557 residents in Kake, making it the 108th largest of 352 total Alaskan communities with populations recorded that year. Overall between 1990 and 2010, the population decreased by 20.4%. According to Alaska Department of Labor statistics, between 2000 and 2009, the average annual growth rate was -3.24%, reflecting a steady decline in population during the decade. In 2010, a majority of Kake residents identified themselves as American Indian and Alaska Native (69.1%), while 17.1% identified themselves as White, and 12.2% identified with two or more races. That year, 1.8% of residents also identified themselves as Hispanic. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders noted that yearly population fluctuations are mostly driven by employment in fishing sectors. They indicated that the population of Kake peaks during summer months (June through August), when 50 seasonal workers are present in town. In addition, community leaders reported that 30 local Kake residents also work in the shore-side processing plant.

The average household size in Kake decreased over the 1990-2010 period, from 3.10 persons per household in 1990 to 2.88 in 2000, and 2.62 in 2010. The number of occupied housing units initially increased from 220 in 1990 to 246 in 2000, and then decreased to 213 by 2010. Of the 290 total housing units surveyed for the 2010 U.S. Census, 51% were owner-occupied, 22% were rented, and 27% were vacant or used only seasonally. Between 1990 and 2010, the number of Kake residents living in group quarters varied between zero and nine.

⁷⁹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

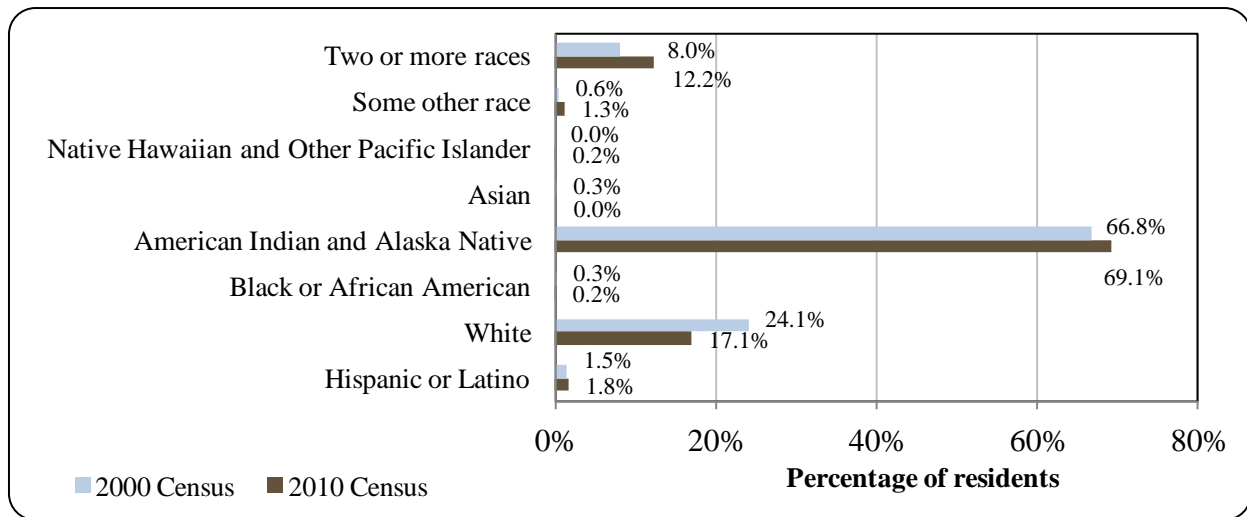
Table 1. Population in Kake from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	700	-
2000	710	-
2001	-	694
2002	-	698
2003	-	680
2004	-	659
2005	-	598
2006	-	536
2007	-	534
2008	-	519
2009	-	497
2010	557	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

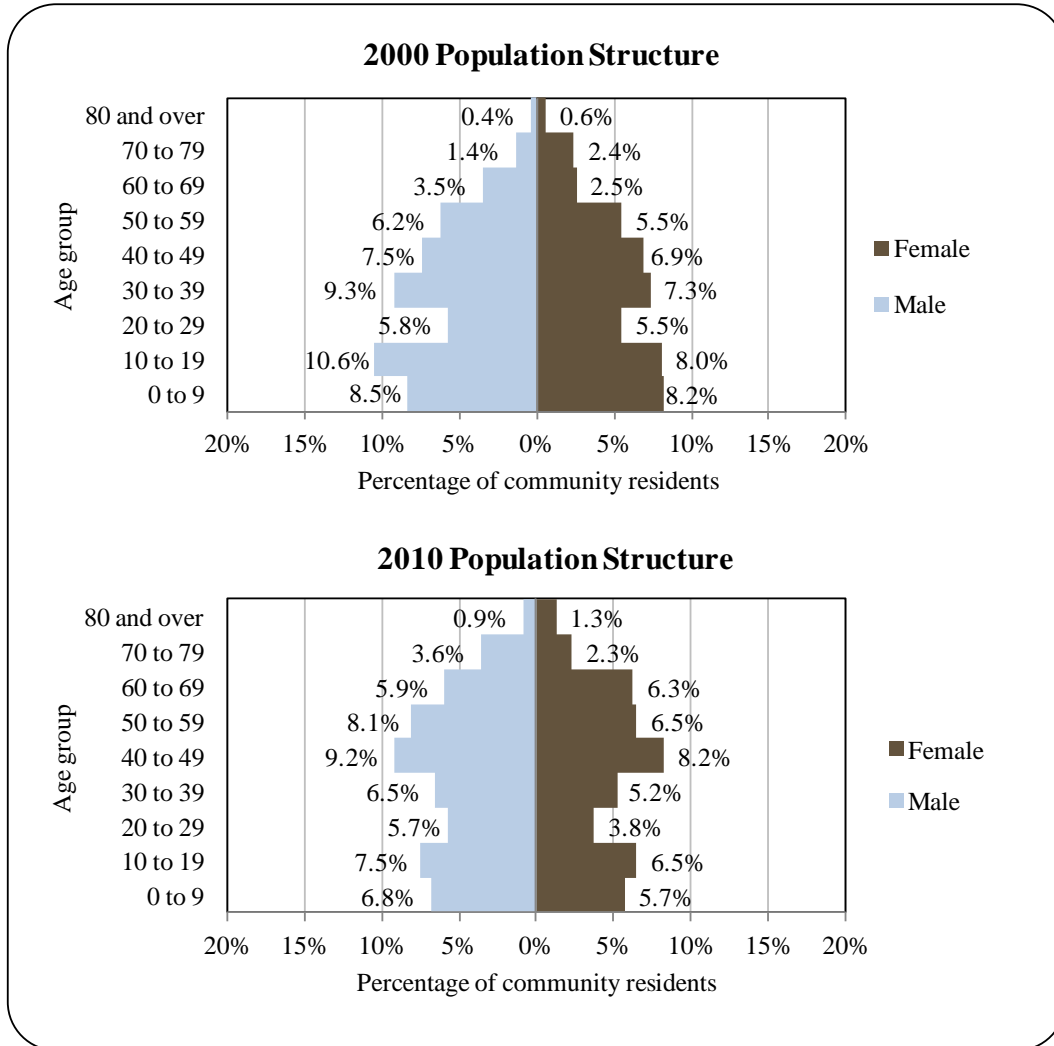
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kake: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Kake’s population (54.2% male and 45.8% female) was more skewed toward males than the population of Alaska as a whole, which was 52% male and 48% female. The median age was estimated to be 41.6 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 20.3% of the Kake population was age 60 or older. The overall population structure of Kake in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Kake Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁸⁰⁰ estimated that 87.2% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, 2.6% had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 10.2% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 23% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 10.2% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and 9.5% held graduate or professional degrees, compared to an estimated 9.6% of Alaskan residents overall.

⁸⁰⁰ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Historically, Tlingit people of the Kake (Keex) Kwaan⁸⁰¹ claimed 2,003,000 acres of territory, including the upper halves of Kuiu, Kupreanof, and Mitkof Island, the eastern shore of Baranof Island and the southern shore of Admiralty Island.⁸⁰² The Kake people controlled trade routes around Kuiu and Kupreanof islands and defended their territory against other tribal groups in the region.⁸⁰³ In the 1800s, the Tlingits were known to travel by canoe as far south as Puget Sound for trading, seasonal work, and raiding missions.⁸⁰⁴ Ventures into the region by early European explorers and traders resulted in occasional skirmishes between Native Tlingits and foreigners. Tensions between locals and outsiders had been escalating when, in 1869, a non-Native sentry at the settlement in Sitka shot and killed a Kake Native. In accordance with their traditional custom, the Kakes then killed two prospectors in retribution. In reprisal, the U.S. Navy sent the USS Saginaw to punish the Kakes by shelling several villages and destroying their homes, boats, and stored foods.⁸⁰⁵ Following this onslaught, the inhabitants of multiple village sites consolidated at the current site of Kake. The U.S. government required further consolidation of the Kake villages in the 1880s in order to provide the people with services such as schools and clinics. According to the 1880 U.S. Census, prior to government consolidation at Kake, there were at least five Kake villages, including locations on Kupreanof and Kuiu Islands, on the mainland at Port Houghton, and on Admiralty Island at Seymore Canal, with a total combined population of 568.⁸⁰⁶

A government school and store were built in Kake in 1891. A Society of Friends mission was also established that year. A post office was built in 1904.⁸⁰⁷ In 1912, the first cannery was built near Kake. After the Second World War, timber harvesting and processing became a major local industry.⁸⁰⁸ In 1952, Kake became an ‘Incorporated State Municipality,’ building on the local tradition of city government begun in 1913 by a group of Kakes who established a city council under a territorial act.⁸⁰⁹ Today, Kake remains a primarily Tlingit village with a fishing, logging, and subsistence lifestyle. Traditional customs are important to the Kakes. The world’s largest totem pole was commissioned by Kake and carved by Chilkats in 1967 for the centennial celebration of the United States’ purchase of Alaska. The 132-foot totem pole now stands on a bluff overlooking town. Sale of alcohol is restricted to the city-owned package store.⁸¹⁰

⁸⁰¹ ‘Keex’ in Tlingit is pronounced similar to ‘Kake’ in English. ‘Kwaan’ is a Tlingit socio-geographical term meaning “inhabitants of,” literally a contraction of the Tlingit verb “to dwell.” It is most commonly used to refer to a geographic region consisting of those areas controlled by clans or house groups residing in a single winter village or several closely situated winter villages (Source: Thornton, Thomas. 1997. “Know Your Place: The Organization of Tlingit Geographic Knowledge.” *Ethnology*, Vol. 36, No. 4, pp. 295-307.)

⁸⁰² Walter R. and Theodore H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.

⁸⁰³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁰⁴ Rosita Worl, “History of Southeastern Alaska since 1867,” in *Northwest Coast*, ed. Wayne Suttles, *Handbook of Northamerican Indians* (Washington D.C.: Smithsonian Institute Press, 1990). pg. 223.

⁸⁰⁵ See footnote 803.

⁸⁰⁶ Krause, Aurel. 1956. *The Tlingit Indians: Results of a Trip to the Northwest Coast of America and the Bering Straits*. Trans. Erna Gunther. University of Washington Press, Seattle, WA.

⁸⁰⁷ See footnote 803.

⁸⁰⁸ Ibid.

⁸⁰⁹ Case, D., and D. Voluck. 2002. *Alaska Natives and American Laws*. 2nd Ed. Univ. of Alaska Press, Fairbanks.

⁸¹⁰ See footnote 803.

Natural Resources and Environment

Kake has a maritime climate characterized by cool summers and mild winters. It receives much less precipitation than is typical of Southeast Alaska, averaging 54 inches a year, with 44 inches of snow. Average summer temperatures range from 44 to 62 °F and winter temperatures average 26 to 43 °F. Temperature extremes have been recorded from -14 to 88 °F. Second-growth forest following timber harvest are found along road systems and shorelines. The old-growth forests in other areas of Kupreanof Island is composed of 80% western hemlock along with smaller percentages of Sitka spruce, mountain hemlock, Alaska yellow cedar, and western red cedar. Kupreanof Island hosts the northernmost stand of western red cedar on the west coast. Kupreanof Island also has several large areas of muskeg. The Island is characterized by relatively low elevation and rolling hills, with a few small mountain ranges.⁸¹¹

Kupreanof Island is home to Sitka black-tailed deer, moose, black bears, wolves, and a variety of small furbearers. A large number of birds reside or migrate through the area. Bats are present during summer months and may overwinter. Amphibians include the rough-skinned newt and western toad. Marine mammals known to inhabit in waters surrounding Kupreanof Island include Pacific white-sided dolphin, orca whale, harbor porpoise, Dall's porpoise, humpback whale, Steller sea lion, and harbor seal.⁸¹² Common fish species in Southeast Alaska include Pacific halibut, all five species of Pacific salmon, herring, Pacific lamprey, lingcod, Atka mackerel, Walleye pollock, black and yelloweye rockfish, sablefish, salmon sharks, smelt, cutthroat trout, steelhead trout, and Dolly Varden.⁸¹³

The City of Kake and Kake Tribal Corporation lands are within the boundary of the Tongass National Forest, and adjacent to Tongass National Forest lands. At 16.8 million acres, the Tongass is the largest National Forest in the U.S. Approximately 95% of Southeast Alaska is federal land, of which 80% is National Forest. It includes almost 11,000 miles of meandering island and mainland shorelines. It is managed to produce resource values, products and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.⁸¹⁴ National Forest lands surrounding Kake on Kupreanof and Kuiu Islands are primarily designated for timber production, as well as Modified Landscape, Transportation and Utility System, Old-growth Habitat, Semi-remote Recreation, and Municipal Watershed land-use designations.^{815,816} Two roadless areas are located in the vicinity of Kake, including the 99,526-acre North Kupreanof Roadless Area and 79,103-acre Rocky Pass Roadless Area.⁸¹⁷

⁸¹¹ U.S. Forest Service. 2000. *Kupreanof Island Analysis*. Retrieved August 14, 2012 from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev2_037806.pdf.

⁸¹² Tongass National Forest website. (n.d.). *Roadless Area Maps & Descriptions – North Kupreanof Roadless Area*. Retrieved April 13, 2012 from <http://www.tongass-seis.net/roadless.html>.

⁸¹³ Alaska Dept. of Fish and Game (n.d.). *Species: Fish*. Retrieved February 14, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=animals.listfish>.

⁸¹⁴ U.S. Forest Service. (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

⁸¹⁵ U.S. Forest Service. 2003. *Map of Current Land Use Designations*. Tongass National Forest Land Management Plan Revision, Final SEIS. Retrieved May 8, 2012 from <http://www.tongass-seis.net/pdf/lud.pdf>.

⁸¹⁶ See footnote 812.

⁸¹⁷ Tongass National Forest website. (n.d.). *Roadless Area Maps & Descriptions*. Retrieved April 13, 2012 from <http://www.tongass-seis.net/roadless.html>.

The status of roadless areas in the Tongass National Forest has been a controversial issue in recent years. The Roadless Area Conservation Rule (RACR) was instated in 2001, prohibiting road construction and timber harvesting in 58.5 million acres of roadless areas in the National Forest System. Lawsuits were filed following the RACR, and an exemption was granted for the Tongass National Forests in 2003. A coalition of Alaska Natives, recreation groups, and environmental groups filed a lawsuit in 2009 seeking to reinstate the rule, and on March 4, 2011, the Tongass Exemption was repealed. As of 2012, the RACR applies to roadless areas in the Tongass National Forest.⁸¹⁸

Logging has been an important economic driver in the Kake area. Turn Mountain Timber – a joint venture between Whitestone Logging and Kake Tribal Corporation – employed residents in logging on tribal lands.⁸¹⁹ In addition to timber harvest on Native corporation lands, the U.S. Forest Service offers yearly timber sales on central and northern Kupreanof Island, and manages some areas of Kuiu Island for timber harvest as well.⁸²⁰

Protected areas near Kake include Admiralty Island National Monument which includes the Kootznoowoo Wilderness, several other Wilderness Areas, and Security Bay State Marine Park. Admiralty Island was declared a National Monument in 1978, and all but the northern end was designated as the Kootznoowoo Wilderness in 1980 under the Alaska National Interest Land Conservation Act (ANILCA). The area totals 952,255 acres.⁸²¹ Kootznoowoo is Tlingit for “Bear Fort” or “Fortress of the Bears,” an apt name for an Island that hosts the greatest concentration of brown bears in the world – more than all the Lower 48 states combined.⁸²² A 26-mi canoe trail crosses through the Kootznoowoo Wilderness, including 9 miles of portages.⁸²³

Three other designated Wilderness Areas within the Tongass National Forest are located near Kake. These include the Petersburg Creek/Duncan Salt Chuck Wilderness Area (40,849 acres) in the central/eastern portion of Kupreanof Island, and two in the south-central portion of Kuiu Island, Kuiu Wilderness Area (60,518 acres) and Tebenkof Bay Wilderness Area adjacent to the north (66,182 acres).⁸²⁴ These wilderness areas offer opportunities for hiking, camping, boating, recreational fishing, and wildlife viewing. In addition, Security Bay State Marine Park is located about 20 miles west of Kake on the north end of Kuiu Island. The Bay provides a safe anchorage for vessels.⁸²⁵ State Marine Parks are intended to protect natural habitat, and do not restrict fishing activity.⁸²⁶

⁸¹⁸ U.S. Forest Service. August 2011. *Status of Roadless Area Conservation Rule*. Retrieved September 11, 2012 from http://www.fs.fed.us/biology/resources/pubs/issuepapers/issuepaper_RoadlessRules-201108.pdf.

⁸¹⁹ NOAA Fisheries. 2006. *Environmental Assessment – Alaska Coastal Management Plan*. Retrieved August 17, 2012 from <http://coastalmanagement.noaa.gov/assessments/docs/akea1.pdf>.

⁸²⁰ U.S. Forest Service. (2011). *Tongass National Forest: Forest Timber Sale Schedule and Integrated Service Timber Contract Plan – FSM 2431.21*. Retrieved July 13, 2012 from <http://www.fs.usda.gov>.

⁸²¹ Wilderness.net website. (n.d.). *Kootznoowoo Wilderness*. Retrieved August 17, 2012 from <http://www.wilderness.net>.

⁸²² U.S. Forest Service. (2011). *Admiralty Island National Monument*. Retrieved August 17, 2012 from <http://www.fs.fed.us/r10/tongass/districts/admiralty/index.shtml>.

⁸²³ See footnote 821.

⁸²⁴ Wilderness.net. (n.d.). *Tebenkof Bay Wilderness, Kuiu Wilderness, and Petersburg Creek/Duncan Salt Chuck Wilderness*. Retrieved April 19, 2012 from <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=AtoZ>.

⁸²⁵ Alaska Dept. of Natural Resources, Division of Parks and Outdoor Recreation. (2011). *Security Bay State Marine Park*. Retrieved August 17, 2012 from <http://dnr.alaska.gov/parks/units/sitka.htm#security>.

⁸²⁶ Alaska Dept. of Fish and Game Marine Protected Area Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Regional Information Report 5J02-08. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

Like many other communities in Southeast Alaska, interest in gold mining brought many newcomers to Kake in the late 19th century. A unnamed barite mine operated from the 1960s into the 1970s southwest of Kake on Kupreanof Island, near Castle River. Current valid mining claims exist in the Castle River area. Information from the U.S. Bureau of Mines indicates the Duncan Canal/Zarembo Island mineral tract has a moderate to high mineral development potential for barite, zinc, lead, and silver. In addition, the U.S. Bureau of Land Management (BLM) lists the Tunehean Creek area (south of Kake, near the south end of Rocky Pass) as a potential area for mineral extraction for copper and molybdenum, although no known claims or patented claims exist. The BLM also notes potential for mineral extraction of sedimentary uranium in the area adjacent to the Cathedral Falls Creek corridor, just south of Kake near Hamilton Bay.⁸²⁷

Natural hazards in the Kake area include risk of severe weather, storm surge, flooding, shoreline erosion, sea level rise, subsidence, earthquake and tsunami, and avalanche and landslides. Isostatic rebound is taking place throughout Southeast Alaska due to recent retreat of glaciers. This can result in acceleration of erosion caused by rivers and streams, and may also cause streams to dry up if they rise above the water table. In addition, isostatic rebound may outweigh the effects of sea level rise in this area.⁸²⁸

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Kake as of October, 2012.⁸²⁹

Current Economy⁸³⁰

Since long before the arrival of Europeans to the region, Kake's economy has been based on utilization of forest and fisheries resources and subsistence harvest activities. According to a survey conducted by the AFSC in 2011, community leaders indicated that the current economy is dependent on logging, fishing, ecotourism, and sport hunting and fishing. In addition to logging and fishing, subsistence harvest remains essential to the local way of life. In the survey, community leaders listed deer, halibut, salmon, and black seaweed as four of the most important subsistence resources. Shellfish, bear, waterfowl, and berries are also important food sources.⁸³¹

Top employers in Kake include the City, the school district, and Kake Tribal Corporation.⁸³² With regard to commercial fisheries, in 2010, 79 Kake residents held state fishing permits, equivalent to 14% of the total local population, and 38 residents held commercial crew licenses. The non-profit Gunnuk Creek Hatchery has assisted in sustaining the salmon fishery, and provides some local employment. From 2000 to 2010, between zero and two shore-side processing facilities were in operation in Kake per year (see *Processing Plants* section).

⁸²⁷ Tongass National Forest website. (n.d.). *Roadless Area Maps & Descriptions – North Kupreanof Roadless Area*. Retrieved April 13, 2012 from <http://www.tongass-seis.net/roadless.html>.

⁸²⁸ Alaska Dept. of Natural Resources. 2005. *High Priority Coastal Hazards*. Retrieved April 19, 2012 from http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

⁸²⁹ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved October 18, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁸³⁰ Unless otherwise noted, all monetary data are reported in nominal values.

⁸³¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸³² Ibid.

Based on household surveys conducted for the 2006-2010 ACS,⁸³³ in 2010, the per capita income in Kake was estimated to be \$22,844 and the median household income was estimated to be \$39,625. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$17,411 and \$39,643, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,⁸³⁴ per capita income is shown to have remained relatively stable (real per capita income in 2000 was \$22,895), while median household income is shown to have decreased slightly, from a real median household income in 2000 was of \$52,130. In 2010, Kake ranked 128th of 305 Alaskan communities with per capita income data, and 192nd in median household income, out of 299 Alaskan communities with household income data that year.

Kake's small population size may have prevented the ACS from accurately portraying economic conditions.⁸³⁵ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Kake in 2010 is \$9,582.^{836,837} This is lower than the 2006-2010 ACS estimate, suggesting that caution is warranted when citing per capita income stability in Kake from 2000 to 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Kake did not meet the Denali Commission's primary criteria as a "distressed community" in 2010. However, Kake did make a list of additional communities that meet the distressed classification when a plus/minus 3% formula is used.⁸³⁸

Based on the 2006-2010 ACS, in 2010, a slightly lower percentage of Kake residents was estimated to be in the civilian labor force (63.8%) than in the civilian labor force statewide (68.8%). In the same year, 17.6% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 10.7%, twice the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates a much higher rate of unemployment in 2010 of 54.7%, compared to a statewide unemployment rate estimate of 11.5%.⁸³⁹

Also based on the 2006-2010 ACS, a majority of the Kake workforce (60.9%) was

⁸³³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸³⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸³⁵ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸³⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸³⁷ See footnote 833.

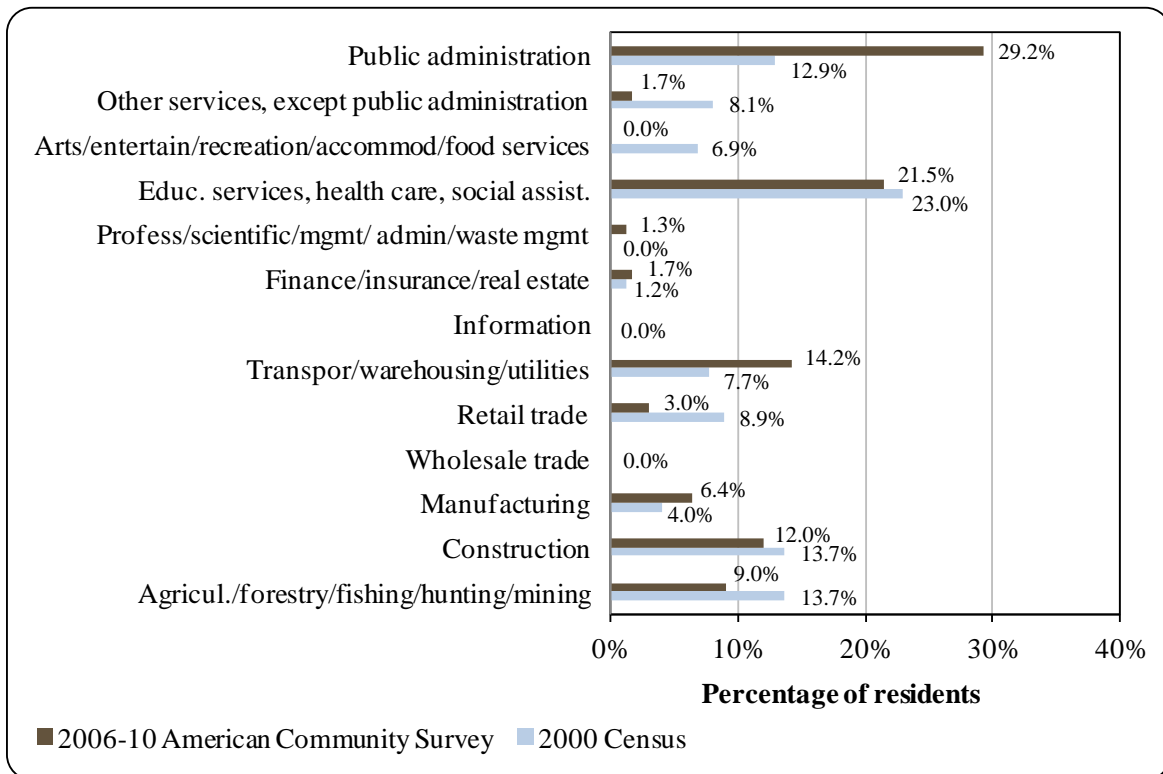
⁸³⁸ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁸³⁹ See footnote 836.

estimated to be employed in the public sector, with the remaining 39.1% in the private sector. Of the 233 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest numbers were estimated to be working public administration (29.2%), educational services, health care, and social assistance (21.5%), transportation, warehousing, and utilities (14.2%), construction (12%), and agriculture, forestry, fishing, hunting, and mining (9%). The number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

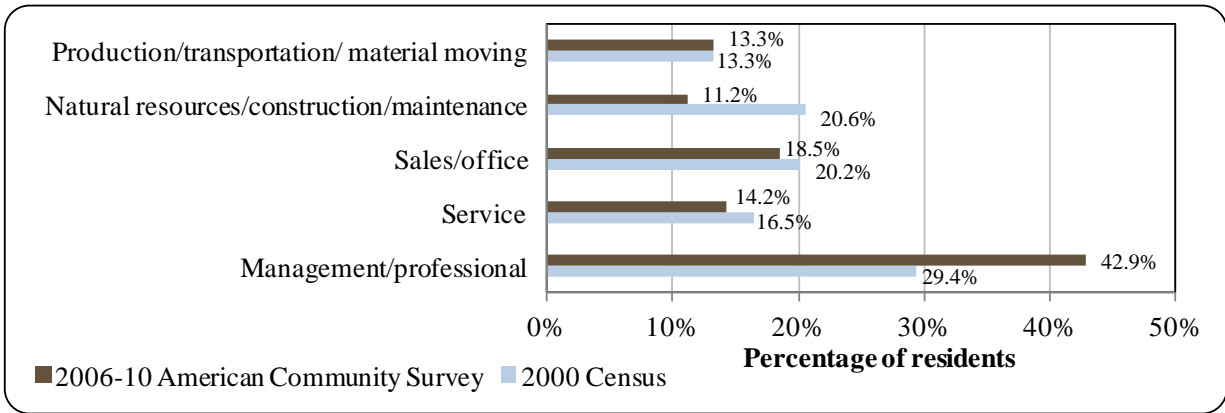
An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 384 employed residents in 2010, of which 48% were employed in local government, 13% in trade, transportation, and utilities industries, 11% in educational and health services, 7.5% in natural resources and mining, 5.5% in professional and business services, 3.9% in construction, 2.8% in financial activities, 2% in manufacturing, 1.6% in leisure and hospitality, 0.8% in state government, 0.4% in unknown industries, and 3.5% in other industries.⁸⁴⁰ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Kake (U.S. Census).



⁸⁴⁰ Ibid.

Figure 4. Local Employment by Occupation in 2000-2010, Kake (U.S. Census).



Governance

Kake initially established a city council under a territorial act in 1913, and in 1952 formed an “Incorporated State Municipality.”⁸⁴¹ Today, Kake is a 1st Class City, and is not located in an organized borough. The City has a manager, or “Strong Mayor,” form of government, with a seven-person city council including the Mayor, a five-person advisory school board, and several municipal employees. The City administers a 5% sales tax.⁸⁴²

In addition to sales tax revenue, other locally-generated municipal revenue sources during the 2000-2010 period included building and equipment rentals, bingo and pull tab receipts, licenses and permits, rock and land sales, fees for city-operated services, and harbor and wharfage fees. Outside revenue sources included shared funds from various state and federal programs as well as grants. Shared funds from the State of Alaska included contributions from the State Revenue Sharing program (between \$5,000 and \$22,000 per year from 2000 to 2003) and the Community Revenue Sharing program (\$120,000 per year in 2009 and 2010), as well as funds from the SAFE Communities program (for public safety, fire, utilities, etc.), fish tax refunds, and electric cooperative shared funds.

Kake also received state and federal grants in most years, a number of which were fisheries-related. These included \$2.5 million from the U.S. Army Corps of Engineers in 2000 for harbor and breakwater construction, \$229,945 from the Alaska Department of Transportation & Public Facilities (DOT&PF) in 2001 for breakwater construction and the seaplane float, \$300,000 from the Alaska Department of Commerce, Community, and Economic Development (DCCED) in 2003 for public dock repair, an additional \$300,000 in 2003 from a port facility/public docks grants, \$200,000 in 2007 from the U.S. Economic Development Administration (EDA) for dock feasibility and design and \$2 million in 2008 from the EDA for “dock for tourism, freight, and fisheries,” \$1 million from the Denali Commission in 2009 for multi-use dock construction, and \$900,000 in 2009 from DOT&PF for dock and seaplane float deferred maintenance and transfer. Further information about selected aspects of Kake’s municipal revenue is presented in Table 2.

⁸⁴¹ Case, D., and D. Voluck. 2002. *Alaska Natives and American Laws*. Second Edition. University of Alaska Press, Fairbanks.

⁸⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kake from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,243,224	\$180,997	\$5,781	\$2,500,000
2001	\$954,138	\$164,809	\$20,877	\$229,945
2002	\$1,074,965	\$121,915	\$20,892	n/a
2003	\$1,064,680	\$154,210	\$21,398	\$600,000
2004	\$837,704	\$193,579	n/a	\$300,000
2005	\$1,119,209	\$131,725	n/a	\$132,613
2006	\$1,087,567	\$157,285	n/a	\$167,387
2007	\$1,146,107	\$221,319	n/a	\$200,000
2008	\$950,780	\$175,437	n/a	\$2,000,000
2009	\$1,650,790	\$175,605	\$122,476	\$1,900,000
2010	\$2,406,778	\$158,316	\$120,925	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Kake was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Organized Village of Kake. The local village Native corporation is Kake Tribal Corporation, which manages 23,040 acres of land. The regional Native corporation to which Kake belongs is the Sealaska Corporation.⁸⁴³

Kake is also a member of the Central Council of the Tlingit and Haida Indian Tribes of Alaska (Central Council), a tribal non-profit organization headquartered in Juneau. The Central Council was originally established to pursue Alaska Native land claims on behalf of the Tlingit and Haida people in an effort to retain a way of life strongly based on subsistence.⁸⁴⁴ The Central Council is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁸⁴⁵ The Central Council provides services to the Tlingit and Haida communities including employment and training, education, family, elderly, and other community services.⁸⁴⁶

⁸⁴³ Ibid.

⁸⁴⁴ Central Council. (n.d.) *Central Council: Tlingit and Haida Indian Tribes of Alaska Homepage*. Retrieved August 15, 2012 from <http://www.cchita.org/index.html>.

⁸⁴⁵ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁸⁴⁶ See footnote 844.

The closest offices of the Alaska Department of Fish and Game (ADF&G), the U.S. Forest Service, and an enforcement office of the National Marine Fisheries Service (NMFS) are located in Petersburg. Juneau hosts the Alaska Regional Office of the NMFS, as well as the AFSC Auke Bay laboratories. In addition, Juneau has the closest offices of the Alaska Department of Natural Resources (DNR) and DCCED. The nearest field office of the U.S. Bureau of Citizenship and Immigration Services is located in Ketchikan.

Infrastructure

Connectivity and Transportation

Kake can be reached by air and sea. There are scheduled float plane and air taxi flights from Juneau and Sitka. Kake has a state-owned 4,000 feet long by 100 feet wide lighted paved runway west of town and a seaplane base at the city dock. As of June 2012, roundtrip airfare from Anchorage to Juneau was \$353.⁸⁴⁷ Air Excursions LLC offers service between Juneau and Kake, with one daily flight during winter months and two daily flights during the summer season.⁸⁴⁸ The cost of roundtrip travel between Juneau and Kake on Air Excursions in summer 2012 was \$330 roundtrip. Each passenger on Air Excursions flights are allowed 70 pounds, and are charged 40 cents per additional pound.⁸⁴⁹ Facilities also include a small boat harbor, boat launch, deep water dock, and state ferry terminal. Weekly state ferry and barge services are also available. As of 2012, the state ferry stopped in Kake once per week northbound and once per week southbound during the summer, with slightly expanded service during the winter season.⁸⁵⁰ Barge service also serves Kake once per week.⁸⁵¹ There are about 120 miles of logging roads in the Kake area, but no connections to other communities on Kupreanof Island.⁸⁵²

Facilities

Water in Kake is pumped from a dam at Gunnuck Creek and is treated, stored in a tank, and piped throughout the City. The City also operates a piped sewer system and primary treatment plant. Almost all households are fully plumbed.⁸⁵³ According to the 2011 AFSC survey, community leaders indicated that sewage treatment is currently limited to upland structures. In addition, they indicated that a city-funded restroom project was scheduled to begin in the spring of 2012. The City of Kake provides refuse collection, recycling, and hazardous waste disposal. The Inside Passage Electric Cooperative is a non-profit subdivision of the state and operates three diesel-fueled generators in Kake.⁸⁵⁴ Studies are currently being conducted

⁸⁴⁷ This price was calculated on November 21, 2011 using kayak.com.

⁸⁴⁸ Air Excursions LLC. 2012. *Summer Timetable*. Retrieved August 15, 2012 from http://www.airexcursions.com/schedules/AirExcursionsSummer_2012.pdf.

⁸⁴⁹ Personal communication, Air Excursions reservations agent, August 15, 2012.

⁸⁵⁰ Alaska Marine Highway System. 2012. *PDF Schedules*. Retrieved August 20, 2012 from http://www.dot.state.ak.us/amhs/schedule_pdf.shtml.

⁸⁵¹ Alaska Marine Lines. 2012. *Weekly Barge Service*. Retrieved August 20, 2012 from <http://www.aml.lynden.com/shipaml/1w-southeast.html>.

⁸⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁵³ Ibid.

⁸⁵⁴ Ibid.

regarding the feasibility of an electrical intertie project between Kake and Petersburg, where electricity is primarily sourced from hydroelectric power generation, including the Tye Lake Hydro Facility near Ketchikan and the Crystal Lake Hydro Facility on Mitkof Island south of Petersburg. An electrical transmission line would be constructed to transmit hydroelectric electricity from Petersburg to the Inside Passage Electric Cooperative's electric system in Kake, reducing Kake's dependence on diesel electricity generation.⁸⁵⁵

Police services are provided by the City Police Department as well as a state trooper post in Petersburg. A State Magistrate is stationed locally. Fire and rescue services are provided by Kake Emergency Medical Services (EMS).⁸⁵⁶ According to the 2011 AFSC survey, community leaders indicated that renovations to the police and fire departments were slated to begin in February, 2012. In addition, EMS services were scheduled for further development in 2012.

Additional community services and facilities include a Boys & Girls Club, community building, the Tlingit Haida Senior Center, one community and one school gymnasium, and a school library.⁸⁵⁷ According to the 2011 AFSC survey, community leaders also indicated that a post office is present, telephone service is available, and broadband internet is now available on a limited basis. In addition, they noted that job placement services are available in Kake.

With regard to fisheries-related infrastructure, community leaders indicated in the 2011 AFSC survey that 1,280 feet of dock space (101 slips) is available for permanent vessel moorage in Kake, along with 914 feet of transient vessel moorage. A breakwater was completed in the last 10 years. Community leaders noted that improvements to the existing dock structure are ongoing. Current projects include construction of new dock space, pilings, and additional roads serving the dock. These improvements are planned to be completed by December 2012. Harbor dredging took place most recently in January 2012, and is planned again in December 2012. Community leaders indicated that any vessel with a draft less than 12 feet can be accommodated in the Kake harbor, including rescue vessels (i.e., Coast Guard), ferries, fuel barges, and HAZMAT vessels. They also reported that the dock is currently served by water, and upgrades are pending on electricity serving the dock, to be completed within the next 10 years. In addition, dry dock space, haul out facilities, and an Environmental Protection Agency-certified boat cleaning station are expected to be in place within the next 10 years.

In addition, community leaders indicated that fish processing plants and commercial cold storage facilities are located in the community, and that fishing gear for sport and light commercial activity are available for sale in town. Bait, tackle, ice, and boat fuel are also sold locally. When Kake residents are in need of fishing-related businesses and services not available locally, community leaders indicated that they travel to Petersburg, Juneau, or Sitka.

Medical Services

The Kake Health Center provides residents with basic medical services. Emergency Services have limited highway, marine, airport, floatplane, and helicopter access. Emergency service is provided by volunteers and a health aide.⁸⁵⁸ The nearest hospital is located in Petersburg.

⁸⁵⁵ Dhittle and Associates, Inc. (2009). *Kake - Petersburg Intertie Study Update. Draft Report*. Retrieved April 3, 2012 from <http://www.seconference.org/pdf/KPI-Draft-050509.pdf>.

⁸⁵⁶ See footnote 852.

⁸⁵⁷ Ibid.

⁸⁵⁸ Ibid.

Educational Opportunities

Kake has one school offering preschool through 12th grade education. As of 2011, the total number of students attending Kake Elementary and High School was 86 students, with 11 teachers.⁸⁵⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Tlingit people historically had fish camps in Kake and the surrounding area, and subsistence harvest of fisheries resources was a foundation of life in the region.⁸⁶⁰ Halibut, salmon, cod, and herring were of particular importance to the Tlingit historically. Seal were also hunted for their hides, meat, and oil.⁸⁶¹ More details about historical subsistence practices are presented in the *Subsistence Fisheries* section below.

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.⁸⁶² In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.⁸⁶³ The first cannery was built at Kake in 1912.⁸⁶⁴ Kake fishers became involved in the industry as both independent and company fishermen. Some Kake residents also worked in the canneries, as well as on fish traps prior to the statewide ban of fish traps at the time of Alaska Statehood.⁸⁶⁵ The tribal government eventually opened and operated the Kake cannery. Along with other tribally operated canneries at Angoon, Klawock, and Hydaburg, the Kake cannery struggled over the years to survive in the changing economic climate facing the salmon fishing industry.⁸⁶⁶

In the 1990s, the ANCSA village corporation, Kake Tribal, began investing in the fish processing industry, operating the community's cold storage facility and developing a fish smokery. Kake Tribal also invested in another Southeast Alaska community, Pelican, at the north and operated the cold storage plant there for several years. However, Kake Tribal Corporation has struggled with bankruptcy. Pelican Seafoods left the ownership of Kake Tribal Corporation

⁸⁵⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁸⁶⁰ Brock, Mathew, Philippa Coiley-Kenner and the Sitka Tribe of Alaska. (2009). *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

⁸⁶¹ De Laguna, Frederica. 1976. *Under Mount Saint Elias: The History and Culture of the Yakutat Tlingit, Vol. 7*. Smithsonian Contributions to Anthropology. Smithsonian Institution Press, Washington D.C.

⁸⁶² Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁸⁶³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁸⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁶⁵ U.S. Dept. of the Interior. March 9, 1959. *General Use of Fish Traps Barred in Alaska Salmon Fishery*. Retrieved April 25, 2012 from <http://www.fws.gov/news/historic/1959/19590309.pdf>.

⁸⁶⁶ Arnold, D. F. (1997). "Putting Up Fish." *Environment, Work, and Culture in Tlingit Society, 1780s-1940s*. Ph.D. Dissertation, University of California, Los Angeles; Price, R. (1990). *The Great Father In Alaska: The Case of the Tlingit and Haida Salmon Fishery*. First Street Press, Douglas, Alaska.

in 2006⁸⁶⁷ (see Pelican community profile for more information), and as of 2012, Kake Foods Cold Storage is not operational.

Between 2000 and 2010, Kake residents had the highest level of participation in commercial salmon fisheries, as well as relatively high participation in fisheries for halibut, groundfish, and crab. Specific crab fisheries in which Kake residents were involved included Dungeness and Tanner crab, and specific groundfish fisheries included Southeast demersal shelf rockfish. In addition, Kake residents were involved in fisheries for herring roe, sablefish, shrimp, and sea cucumber.

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty. The Treaty was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.⁸⁶⁸

A state-managed sablefish fishery currently takes place in inside waters near Kake (Chatham and Clarence Straits). Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Halibut and Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999. Crab fisheries in Southeast Alaska target red, golden and blue king crab, Tanner crab, and Dungeness crab. Dive fisheries for sea cucumber and sea urchin began to grow in Southeast Alaska in recent decades.⁸⁶⁹

Bait herring fisheries take place during the winter each year in Southeast Alaska, while roe is harvested in the spring. Bait and sac roe fisheries use purse seine and set gillnet gear, and roe is also harvested in spawn-on-kelp closed-pound fisheries.⁸⁷⁰ A "closed-pound" is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.⁸⁷¹

Kake is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is "Southeast Outside." Kake is eligible to participate in the Community Quota Entity (CQE) program. The community body that is eligible to participate in the CQE is the City of Kake, but as of August 2012, no CQE had

⁸⁶⁷ Forgey, Pat. September 16, 2009. "Pelican Seafoods foreclosure auction delayed." *Juneau Empire*. Retrieved March 19, 2012 from http://juneauempire.com/stories/091609/loc_493775668.shtml.

⁸⁶⁸ See footnote 862.

⁸⁶⁹ See footnote 863.

⁸⁷⁰ Ibid.

⁸⁷¹ Alaska Dept. of Fish and Game. (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

been established in the community.⁸⁷² Kake is not eligible to participate in the Community Development Quota (CDQ) program.

In a survey conducted by the AFSC in 2011, community leaders indicated that current challenges for Kake's fishing economy include high costs of fuel, electricity, and labor, and shipping constraints for delivering fresh products to market. They noted that competing cold storages in the region have more direct access to the main barge lines. In addition, they noted that the lack of comprehensive boat repair services or access to parts adds the expense of traveling to other communities for repairs or having parts shipped in to Kake. When asked to comment about the effects of fisheries policies or management actions on Kake, community leaders mentioned depletion of local herring stocks in the 1980s and 1990s, and expressed the desire for a restoration strategy for that herring stock.

Community leaders also expressed that the move to Individual Fishing Quotas (IFQs) appears to have contributed to a sharp decline in permit holders in "rural Alaska." In contrast, they commented that the Subsistence Halibut Registration Certificate (SHARC) program has been a success for rural Alaska residents, including both Native Alaskans and non-Natives. In addition to providing subsistence access to halibut, the program is also a success by providing additional catch data to managers through harvest surveys. Data is obtained about both halibut catches and by-catch of other species such as rockfish and lingcod. When asked to comment on potential future policy or management action, Kake community leaders spoke about the large increase in sea otters in the area in recent years, and the associated drop in number of crab, shrimp, and clams. They reported that local Dungeness crab fishermen have been particularly hard hit by this shift, including commercial, subsistence, and sport fishermen. They expressed support for any efforts (legislation, regulations, etc.) that might allow culling of the sea otter population to help crab, shrimp, and clam stocks recover and continue to provide viable local fisheries.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, one private fishing operation was registered as an operating shore-side processing facility that year. The same operation was registered from 2000 to 2003 and in 2008 and 2009. A variety of other private fishing operations were registered as processors on the Intent to Operate list in one or more years during the 2000-2010 period. In addition, Kake Foods Cold Storage, a subsidiary of Kake Tribal Corporation, was registered on the Intent to Operate list in 2002 and 2003. In addition to cold storage services, the facility operated a smokery and produced smoked and dried salmon and halibut.^{873,874} In addition, Thunderbird Charter & Seafoods was registered on the Intent to Operate list in 2008. Thunderbird Charter & Seafoods produces Pacific oysters at several sites south of Kake in Rocky Pass.⁸⁷⁵

⁸⁷² NOAA Fisheries, Alaska Regional Office. 2012. *Name and Contact Information of Community Quota Entities*. Retrieved August 20, 2012 from <http://www.fakr.noaa.gov/ram/daily/cqenamescontacts.pdf>.

⁸⁷³ Hoelting, Kristin. 2003. *Sustaining the Past, Honoring the Future: One Community's Quest for a Sustainable Livelihood*. Harvard College Honors Thesis, Cambridge, MA.

⁸⁷⁴ NOAA Fisheries. 2006. *Environmental Assessment – Alaska Coastal Management Plan*. Retrieved August 17, 2012 from <http://coastalmanagement.noaa.gov/assessments/docs/akea1.pdf>.

⁸⁷⁵ Pearl of Alaska website. (n.d.). Retrieved August 16, 2012 from <http://www.pearlofalaska.com/>.

Fisheries-Related Revenue

In 2010, known fisheries-related revenues for Kake totaled \$38,528, including \$9,000 from a raw fish tax, \$15,553 from the Shared Fisheries Business Tax, and \$14,975 in harbor usage and port/dock usage revenue. This information is presented in Table 3.⁸⁷⁶

According to a survey conducted by the AFSC in 2011, community leaders reported that revenues from fisheries-related taxes and fees support several public services, including harbor maintenance, police/enforcement/fire protection, water and wastewater systems, and general city administration.

Commercial Fishing

Between 2000 and 2010, Kake residents were involved in commercial fisheries as state permit holders, federal permit and quota share account holders, vessel owners, and crew license holders. The greatest number of Kake permit holders participated in salmon fisheries, and relatively high numbers of residents were involved in state and federal groundfish and halibut fisheries, as well as state crab fisheries. In addition, several Kake residents held state permits in herring, sablefish, shrimp, and sea cucumber fisheries during the 2000-2010 period, as well as quota share accounts in the federal sablefish fishery. According to the 2011 AFSC survey, community leaders reported that the spring/summer salmon trolling season runs from April through September, the winter salmon trolling season runs from October through February, the salmon purse seine fishery is underway from June through September, and halibut and sablefish longlining takes place from March through October.

The number of fish buyers in Kake declined from five to one over the decade. In 2010, Kake received few landings and was ranked 66th in landings and 65th in ex-vessel revenue out of 67 Alaskan ports that received landings in 2010. During earlier years in the decade, when a higher number of fish buyers were present in Kake, local landings and ex-vessel revenue reported were relatively high. In 2010, 38 commercial crew licenses were held and 34 vessels were primarily owned by Kake residents. Both of these numbers represent declines from 2000, when 73 crew licenses were held and 56 vessels were primarily owned by residents. Also in 2010, 31 vessels were listed as homeported in Kake, and 2 vessels delivered landings to local fish buyers. This information about the commercial fishing sector is presented in Table 5.

Although fisheries statistics presented in Table 5 show declining trends in commercial fishing activity in Kake, according to a survey conducted by the AFSC in 2011, community leaders reported that a lot more commercial fishing boats were present in Kake that year than five years earlier. Of those vessels that use Kake as a base for fishing operations, community leaders indicated that they most commonly utilize pot, longline, purse seine, and troll gear. They also reported fewer vessels in Kake under 35 feet in length, and no significant change in the number of larger vessels compared to 5 years earlier.

In 2010, 79 Kake residents held a total of 104 state Commercial Fisheries Entry Commission (CFEC) permits. Of these 104 permits, 76 were held for salmon fisheries, 14 were held for halibut, 4 were held for crab, 3 each were held in fisheries for herring and ‘other shellfish’, and 2 each were held in fisheries for sablefish and for groundfish. Additional information about CFEC permits is presented in Table 4, and further details regarding these

⁸⁷⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

permits are included below.

Of 76 salmon CFEC permits held in 2010, 62 were statewide handtroll permits, 7 were statewide power gurdy troll permits, 6 were for the Southeast Alaska purse seine fishery, and 1 was a Southeast ‘special harvest area’ permit (hatchery). Overall, 18% of salmon permits held in Kake were actively fished in 2010. The number of salmon permit holders and the total salmon permits held decreased between 2000 and 2010, while the percentage actively fished remained relatively stable over the period.

Of 14 halibut CFEC permits, a majority (13) were held in the statewide longline fishery using vessels under 60 feet in length, while 1 was held for statewide hand troll. Overall, 86% of halibut permits were actively fished in 2010. Both the number of halibut permits held and the number of permit holders decreased slightly between 2000 and 2010, while the percentage of permits actively fished remained at or above 86% in all but one year during the period.

Of four crab CFEC permits held in 2010, a majority were for Dungeness crab fisheries (three held, one actively fished). In addition, one permit was held and actively fished for brown king / Tanner crab that year. The number of state crab permits held, the number of permit holders, and the percentage of total crab permits actively fished declined between 2000 and 2010. All four crab permits were associated with pot gear in 2000. In previous years during the decade (2000-2009, two Southeast Tanner crab permits were also held, including one permit that was associated with ring nets.

Of three total herring CFEC permits, two were held in Southeast Alaska spawn on kelp ‘closed-pound’ fisheries and one was held in the Prince William Sound spawn on kelp closed-pound fishery. None of these three permits were actively fished in 2010. The number of Kake residents holding herring permits remained very stable between 2000 and 2010, with three permits held in all years but 2009, when the number increased to six permit holders. In addition, 2009 was the only year during the 2000-2010 period that any herring permits were actively fished by Kake residents. That year, five total permits were held and three were actively fished in the Southern Southeast spawn on kelp fishery.

In most years during the 2000-2010 period, all ‘other shellfish’ CFEC permits were held in Southeast shrimp fisheries using pot gear. The number of shrimp permits held varied from two to three, and the number of permits actively fished ranged from zero to one during this period. In 2008 and 2010, one ‘other shellfish’ permit was also held in the Southeast sea cucumber fishery. In both years, the permit was actively fished.

One of the two sablefish CFEC permits held by Kake residents in 2010 was held in the Northern Southeast longline fishery and the other was held in the statewide longline fishery using only vessels under 60 feet in length. Both of these permits were actively fished that year. The number of sablefish permit holders varied from one to two and the total number of sablefish permits held varied from two to three during the 2000-2010 period. In all years during the period, 100% of sablefish permits held were actively fished.

Kake residents’ involvement in state groundfish fisheries decreased over the decade, both in terms of permit holders and total permits held. In 2000, eight groundfish CFEC permits were held by six permit holders, declining to two permits held by two permit holders in 2010. The only year during the 2000-2010 period in which a state groundfish permit was actively fished by a Kake permit holder was 2000, when one of eight total permits was actively fished. During the 2000-2010 period, groundfish permits were primarily held in statewide and Gulf of Alaska fisheries for miscellaneous saltwater finfish. From 2000 to 2002, permits were also held in the statewide lingcod fishery, and from 2000 to 2005, permits were held in the Southeast demersal

rockfish fishery.

In addition to CFEC permits, Kake residents also held federal License Limitation Program (LLP) permits and Federal Fisheries Permits (FFP). Between 2000 and 2010, the number of Kake residents holding groundfish LLPs rose from five to six, and the total number of groundfish LLPs held rose from six to seven. Between two and four groundfish LLPs were actively fished during this period. However, no crab LLPs were held by Kake residents during the 2000-2010 period. From 2000 to 2008, the number of FFPs held by Kake residents varied between one and two. One FFP was actively fished each year from 2004 to 2006. No FFPs were held in 2009 or 2010. This information about federal permits is presented in Table 4.

Between 2000 and 2010, Kake residents held quota share accounts and quota shares in federal catch share fisheries for halibut and sablefish, while no Kake residents held quota shares in federal crab catch share fisheries from 2005 to 2010 (Table 8). The highest number of quota share accounts was held in the federal halibut catch share fishery, with 25 account holders in 2000, declining to 15 by 2010. Although the number of accounts declined substantially, the total quota shares held decreased only slightly, from 764,339 shared held in 2000 to 741,471 held in 2010. The overall halibut IFQ allotment for account holders in Kake initially increased to 20% higher than 2000 levels in 2005, before decreasing to 49% below 2000 levels by 2010. Information about halibut catch share participation is presented in Table 6. The number of sablefish quota share account holders grew from one in 2000 and 2001 to two from 2002 to 2009, and then declined again to one account holder in 2010. One account held 309,797, and the second account brought the total quota shares held to 398,937. The overall sablefish IFQ allotment increased to 29% above 2000 levels by 2005, and then decreased to approximately 27% below 2000 levels by 2010. Information about federal sablefish catch share participation is presented in Table 7.

Although fish buyers purchased deliveries of a variety of species in Kake from 2000 to 2010, the only local landings and ex-vessel revenue information that can be reported is for salmon in 2000, 2003, and 2006. Landings and revenue in other fisheries and for other years of salmon deliveries is considered confidential due to the small number of participants. For the three years in which salmon landings can be reported, an average of 4,588,101 net pounds were landed in Kake per year, for an average ex-vessel revenue of \$1,022,836.

In addition to the landings delivered in Kake by fishermen from many communities, landings and ex-vessel revenue earned by Kake vessel owners is of note. Kake vessel owners made deliveries in many locations around Alaska between 2000 and 2010. Information is reported in some years regarding their landings in crab and ‘other groundfish’ fisheries, and for all years in halibut and salmon fisheries. Information about the additional years of landings in crab and groundfish fisheries is considered confidential due to the small number of participants. In addition, landings and ex-vessel revenue related to landings of other species is also considered confidential. Of the information that can be reported, the species with the greatest landings volume by Kake vessel owners was salmon, with an average of 1,588,906 net pounds landed for an average ex-vessel revenue of \$409,880. The next greatest volumes of landings, averaged for those years in which data are reported, were crab (average of 78,759 net pounds per year, valued at an average of \$122,031 in ex-vessel revenue per year) and halibut (average of 65,861 net pounds, valued at an average of \$199,670 in ex-vessel revenue per year). In addition, for those years in which data can be reported, Kake vessel owners landed an average of 5,766 net pounds of ‘other groundfish’, valued on average at \$3,555 in ex-vessel revenue. This information about landings and revenue generated by Kake vessel owners is presented in Table 10.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kake: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$21,844	n/a	\$106,354	\$114,301	\$47,000	\$614	\$614	n/a	n/a	\$7,500	\$9,000
Shared fisheries business tax ¹	\$30,634	\$60,485	\$31,264	\$114,286	\$5,667	\$41,439	\$14,977	\$7,947	\$22,081	\$9,132	\$15,553
Fisheries resource landing tax ¹	n/a	n/a	n/a	\$15	\$18	\$0	\$18	\$91	\$55	\$150	\$99
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ^{2,3}	\$10,000 ²	\$15,000 ²	\$15,000 ²	\$10,259 ²	\$10,250 ²	\$16,000 ²	\$11,150 ²	\$12,300 ²	\$12,000 ²	\$6,500 ²	\$5,560 ³
Port/dock usage ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$8,415 ³
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$62,478</i>	<i>\$75,485</i>	<i>\$152,618</i>	<i>\$238,860</i>	<i>\$62,936</i>	<i>\$58,053</i>	<i>\$26,760</i>	<i>\$20,339</i>	<i>\$34,137</i>	<i>\$23,281</i>	<i>\$38,627</i>
<i>Total municipal revenue⁵</i>	<i>\$1,243,224</i>	<i>\$954,138</i>	<i>\$1,074,965</i>	<i>\$1,064,680</i>	<i>\$837,704</i>	<i>\$1,119,209</i>	<i>\$1,087,567</i>	<i>\$1,146,107</i>	<i>\$950,780</i>	<i>\$1,650,790</i>	<i>\$2,406,778</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kake: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	6	6	7	7	7	7	7	7	7	7	7
	Active permits	3	2	2	3	3	4	3	3	2	3	3
	% of permits fished	50%	33%	28%	42%	42%	57%	42%	42%	28%	42%	42%
	Total permit holders	5	5	6	6	6	6	6	6	6	6	6
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	2	2	1	1	1	1	1	1	0	0
	Fished permits	0	0	0	1	1	1	0	0	0	0	0
	% of permits fished	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	0	0
Crab (CFEC) ²	Total permits	9	11	9	9	10	8	9	5	5	6	4
	Fished permits	6	9	6	7	5	3	4	3	2	3	2
	% of permits fished	67%	82%	67%	78%	50%	38%	44%	60%	40%	50%	50%
	Total permit holders	7	8	7	7	9	6	7	4	3	4	3
Other shellfish (CFEC) ²	Total permits	2	3	3	2	2	2	2	2	3	2	3
	Fished permits	1	1	1	0	1	1	1	1	2	1	2
	% of permits fished	50%	33%	33%	0%	50%	50%	50%	50%	66%	50%	66%
	Total permit holders	2	3	3	2	2	2	2	2	3	3	3
Halibut (CFEC) ²	Total permits	19	20	16	15	17	15	14	13	14	14	14
	Fished permits	17	13	15	15	17	14	12	12	12	12	12
	% of permits fished	89%	65%	94%	100%	100%	93%	86%	92%	86%	86%	86%
	Total permit holders	19	20	16	15	17	15	14	13	14	14	13
Herring (CFEC) ²	Total permits	3	3	3	3	3	3	3	3	3	5	3
	Fished permits	0	0	0	0	0	0	0	0	0	3	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	60	0%
	Total permit holders	3	3	3	3	3	3	3	3	3	6	3

Table 4 cont'd. Permits and Permit Holders by Species, Kake: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	2	2	3	3	3	3	3	3	3	3	2
	Fished permits	2	2	3	3	3	3	3	3	3	3	2
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	1	1	2	2	2	2	2	2	2	2	1
Groundfish (CFEC) ²	Total permits	8	8	9	7	6	5	2	1	3	1	2
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	6	6	6	6	6	5	2	1	2	1	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	92	91	86	85	83	83	82	81	79	76	76
	Fished permits	21	20	20	15	17	19	21	17	18	13	14
	% of permits fished	23%	22%	23%	18%	20%	23%	26%	21%	23%	17%	18%
	Total permit holders	88	86	83	83	80	80	77	76	74	72	71
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>135</i>	<i>138</i>	<i>129</i>	<i>124</i>	<i>124</i>	<i>119</i>	<i>115</i>	<i>108</i>	<i>110</i>	<i>107</i>	<i>104</i>
	<i>Fished permits</i>	<i>48</i>	<i>45</i>	<i>45</i>	<i>40</i>	<i>43</i>	<i>40</i>	<i>41</i>	<i>36</i>	<i>37</i>	<i>35</i>	<i>32</i>
	<i>% of permits fished</i>	<i>36%</i>	<i>33%</i>	<i>35%</i>	<i>32%</i>	<i>35%</i>	<i>34%</i>	<i>36%</i>	<i>33%</i>	<i>34%</i>	<i>33%</i>	<i>31%</i>
	<i>Permit holders</i>	<i>91</i>	<i>91</i>	<i>89</i>	<i>89</i>	<i>87</i>	<i>85</i>	<i>82</i>	<i>81</i>	<i>81</i>	<i>81</i>	<i>79</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kake: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kake ²	Total Net Pounds Landed in Kake ^{2,5}	Total Ex-Vessel Value of Landings in Kake ^{2,5}
2000	73	5	1	56	52	19	3,670,714	\$1,475,922
2001	60	4	1	54	51	15	841,972	\$451,420
2002	56	4	1	53	48	63	5,070,295	\$1,559,617
2003	74	5	1	51	46	74	9,290,144	\$2,277,127
2004	49	1	0	53	46	9	-	-
2005	41	1	1	47	38	10	-	-
2006	40	4	1	49	38	47	1,538,611	\$659,531
2007	43	1	0	47	40	7	-	-
2008	44	3	2	45	36	7	-	-
2009	33	1	2	42	39	3	-	-
2010	38	1	1	34	31	2	-	-

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kake: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	25	764,339	107,806
2001	22	721,339	106,204
2002	22	717,239	102,231
2003	20	712,445	101,547
2004	20	704,293	124,167
2005	19	704,293	129,254
2006	18	704,293	125,714
2007	19	712,445	101,808
2008	17	711,306	74,173
2009	18	711,306	59,960
2010	15	741,471	54,783

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kake: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	1	309,797	36,749
2001	1	398,937	44,753
2002	2	398,937	42,755
2003	2	398,937	47,353
2004	2	398,937	50,146
2005	2	398,937	47,485
2006	2	398,937	46,820
2007	2	398,937	44,825
2008	2	398,937	42,830
2009	2	309,797	28,364
2010	1	309,797	26,649

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kake: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kake: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	-	-	0	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	3,633,893	-	-	8,612,159	-	-	1,518,250	-	-	-	-
<i>Total²</i>	<i>3,633,893</i>	<i>0</i>	<i>0</i>	<i>8,612,159</i>	<i>-</i>	<i>-</i>	<i>1,518,250</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	-	-	\$0	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$1,377,335	-	-	\$1,110,917	-	-	\$580,258	-	-	-	-
<i>Total²</i>	<i>\$1,377,335</i>	<i>\$0</i>	<i>\$0</i>	<i>\$1,110,917</i>	<i>-</i>	<i>-</i>	<i>\$580,258</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kake Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	65,094	106,650	88,597	81,198	79,117	-	51,896	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	106,952	83,565	94,254	92,019	81,686	70,273	45,420	34,120	33,767	40,848	41,568
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	8,707	11,420	11,101	8,382	5,464	3,492	1,023	1,576	-	728	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	822,000	2,472,345	2,637,179	2,477,599	999,315	2,272,763	1,752,684	1,317,270	661,827	960,697	1,104,283
<i>Total²</i>	<i>1,002,753</i>	<i>2,673,980</i>	<i>2,831,131</i>	<i>2,659,198</i>	<i>1,165,582</i>	<i>2,346,528</i>	<i>1,851,023</i>	<i>1,352,966</i>	<i>695,594</i>	<i>1,002,273</i>	<i>1,145,851</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$122,719	\$191,402	\$105,302	\$117,958	\$121,630	-	\$73,174	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$277,403	\$180,462	\$228,305	\$271,139	\$246,248	\$215,496	\$171,040	\$149,055	\$147,036	\$120,318	\$189,866
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$7,250	\$5,231	\$7,245	\$5,022	\$3,356	\$1,895	\$800	\$742	-	\$450	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$257,570	\$525,391	\$347,194	\$306,447	\$231,840	\$453,857	\$577,220	\$394,755	\$492,530	\$399,866	\$522,012
<i>Total²</i>	<i>\$664,942</i>	<i>\$902,486</i>	<i>\$688,046</i>	<i>\$700,566</i>	<i>\$603,074</i>	<i>\$671,248</i>	<i>\$822,234</i>	<i>\$544,552</i>	<i>\$639,566</i>	<i>\$520,634</i>	<i>\$711,878</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there was a declining trend in the number of active sport fish guide businesses and licensed sport fish guides residing in Kake. As of 2010, one licensed guide was present in Kake, but no sport fish guide businesses remained active. The number of sportfishing licenses sold in Kake varied between 222 and 404 per year during the 2000-2010 period. During these years, between 164 and 265 licenses per year were sold to Kake residents (including Kake and other points of sale). The fact that more licenses were sold per year in Kake than were sold to Kake residents suggests that sportfishing is a local tourism draw.

According to a survey conducted by the AFSC in 2011, community leaders indicated that private anglers in Kake target all five species of salmon, halibut, rockfish, crab, shrimp, clams, and herring. They also noted that sportfishing activity takes place using charter or party boats, private boats owned by both local and non-local residents, and through shore-based fishing by local residents. Community leaders also reported that more charter and party boats, as well as private pleasure boats in general, were present in Kake at the time of the survey than five years previously.

The Alaska Statewide Harvest Survey,⁸⁷⁷ conducted by ADF&G between 2000 and 2010, noted harvesting of the following species by Kake sport fishermen. In freshwater, coho, Dolly Varden, cutthroat trout, and steelhead are harvested. In saltwater, all five salmon species, Dolly Varden, halibut, and rockfish are harvested. In addition, the survey noted recreational harvest of Dungeness and hardshell clams by Kake residents.

Kept/released statistics from charter logbook data reported by ADF&G⁸⁷⁸ show that pelagic rockfish were caught in the highest numbers during fishing charter trips out of Kake, with an average of 374 kept and 117 released per year, for those years in which information was reported. Total rockfish numbers, including yelloweye and ‘other’ rockfish, came to an average of 455 kept and 153 released per year. Pacific halibut was the second most numerous charter catch, with an average of 272 halibut kept and 96 released per year, for those years in which information about halibut was reported. In addition, 70 pink, 66 coho, 29 chum, 12 Chinook, and 2 sockeye were kept on average per year, as well as 10 lingcod per year, for those years in which data are available.

Kake is located within Alaska Sport Fishing Survey Area C – including Kake, Petersburg, Wrangell, and Stikine. Information is available about both saltwater and freshwater sportfishing activity at this regional scale (Table 11). Between 2000 and 2010, there was much higher saltwater sportfishing activity than in freshwater in this region. On average, Alaska resident anglers fished more days in both freshwater and saltwater than non-Alaska resident anglers, although non-Alaska resident anglers fished more days in some years.

⁸⁷⁷ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁸⁷⁸ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Kake: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kake ²
2000	2	5	257	404
2001	5	7	264	355
2002	2	6	242	309
2003	1	4	265	345
2004	1	4	239	272
2005	2	4	219	298
2006	2	5	196	278
2007	1	4	193	263
2008	1	6	182	222
2009	1	2	164	244
2010	0	1	176	253

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	13,338	29,430	4,343	6,189
2001	19,144	12,469	4,831	5,255
2002	13,737	23,403	3,468	4,628
2003	12,401	13,077	3,380	7,584
2004	21,412	15,646	4,813	5,848
2005	17,196	15,351	3,835	3,465
2006	20,822	20,572	4,578	3,548
2007	19,957	19,407	4,176	3,226
2008	23,754	16,530	3,043	5,945
2009	19,188	26,448	2,564	6,071
2010	21,290	18,419	3,358	3,955

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest of marine resources has always been foundational to the economy and way of life of the Kake people. Historically, fish traps, gaffs, and spears were used to catch salmon, one of the most important subsistence resources for the Tlingit people. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., ‘gumboot’ chitons), and sea plants (e.g., seaweed, beach asparagus and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas, and egg harvesting sites.^{879,880} The Keex Kwaan originally claimed 2,003,000 acres of territory, including the upper halves of Kuiu, Kupreanof, and Mitkof Island, the eastern shore of Baranof Island and the southern shore of Admiralty Island.⁸⁸¹ Today, subsistence harvest remains an important part of the lifestyle and economy in Kake.⁸⁸²

According to a survey conducted by the AFSC in 2011, community leaders indicated that halibut, salmon, and black seaweed are three of the most important marine subsistence resources utilized by Kake residents. Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of households using different marine resources, or per capita harvest of subsistence resources by Kake residents (Table 12). However, earlier information about household-level subsistence is available from a 1996 ADF&G study. The survey identified species of marine invertebrates, non-salmon fish (not including halibut), and marine mammals harvested by Kake households that year. The species of marine invertebrates harvested by the greatest percentage of Kake households in 1996 included black chitons (29% of households reported harvest), Dungeness crab (22%), Pacific littleneck clams (14%), and butter clams (10%). The species of non-salmon fish harvested by the greatest percentage of Kake households included Dolly Varden (22% of households harvested), red rockfish (11%), and herring (10%). In addition, Kake households harvested herring roe on hemlock branches as well as spawn on kelp fisheries. Species of marine mammal harvested by Kake residents in 1990 included harbor seal.⁸⁸³ It is important to note that in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Kake.

Data are also available regarding salmon and halibut permits issued between 2000 and 2010. The number of subsistence salmon permits issued per year to Kake households declined between 2000 and 2008, from 360 in the year 2000 and 383 in 2001, to 128 in 2008. Sockeye was the most heavily utilized salmon species during this period, averaging 3,169 harvested per

⁸⁷⁹ Alaska Native Heritage Center. (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

⁸⁸⁰ Brock, Mathew, Philippa Coiley-Kenner and the Sitka Tribe of Alaska. (2009). *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

⁸⁸¹ Walter R. and Theodore H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.

⁸⁸² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁸³ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

year. Fairly large numbers of chum and pink salmon were also reported harvested each year, and some Chinook and coho salmon were also harvested for subsistence purposes. This information about subsistence harvest of salmon is presented in Table 13. Between 2003 and 2010, the number of Kake residents that participated in the SHARC program varied between 110 and 179 per year, and the number of SHARC cards returned each year varied between 32 and 88. The greatest subsistence harvest of halibut was reported in 2004, when 34,916 pounds of halibut were harvested on 88 SHARC cards. Participation in the program appears to have declined over the decade. This information about the subsistence halibut fishery is presented in Table 14.

Information is also available regarding marine mammal harvest by residents of Kake between 2000 and 2010. According to data reported by the U.S. Fish and Wildlife Service and ADF&G, this harvest focused primarily on sea otter and harbor seal. No information was reported by management agencies regarding harvest of beluga whale, walrus, sea lion, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals by Kake residents is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Kake: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kake: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	360	352	6	660	n/a	90	3,258	n/a	n/a
2001	383	367	16	176	42	150	4,252	n/a	n/a
2002	312	280	4	276	n/a	156	4,630	n/a	n/a
2003	350	330	10	802	164	200	6,210	n/a	n/a
2004	155	131	4	190	85	41	3,413	n/a	n/a
2005	142	135	12	45	5	225	1,712	n/a	n/a
2006	132	117	10	255	8	67	2,203	n/a	n/a
2007	146	53	50	55	55	85	1,600	n/a	n/a
2008	128	117	15	113	170	155	1,243	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kake: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	175	73	22,233
2004	179	88	34,916
2005	163	58	19,085
2006	167	65	16,532
2007	177	59	11,016
2008	126	59	8,021
2009	127	54	11,407
2010	110	32	11,660

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kake: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	8	n/a	n/a	n/a	101	n/a
2001	n/a	6	n/a	n/a	n/a	85	n/a
2002	n/a	6	n/a	n/a	n/a	98	n/a
2003	n/a	12	n/a	n/a	n/a	52	n/a
2004	n/a	3	n/a	n/a	n/a	96	n/a
2005	n/a	7	n/a	n/a	n/a	47	n/a
2006	n/a	n/a	n/a	n/a	n/a	40	n/a
2007	n/a	1	n/a	n/a	n/a	24	n/a
2008	n/a	8	n/a	n/a	n/a	23	n/a
2009	n/a	2	n/a	n/a	n/a	n/a	n/a
2010	n/a	17	n/a	n/a	n/a	n/a	n/a

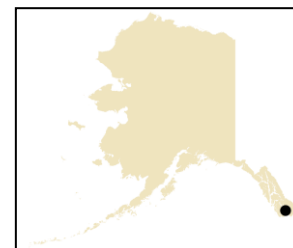
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Ketchikan(KETCH-ih-kan)



People and Place

*Location*⁸⁸⁴

Ketchikan is located on the southwestern coast of Revillagigedo Island, near the southern boundary of Alaska. It is 235 miles south of Juneau and 90 miles north of Prince Rupert, British Columbia. The City encompasses 4.1 square miles of land and 0.8 square miles of water.⁸⁸⁵ Ketchikan is a Home Rule City located in the Ketchikan Gateway Borough and the Ketchikan Recording District.

*Demographic Profile*⁸⁸⁶

In 2010, there were 8,050 residents, making Ketchikan the 10th largest City in Alaska. Overall between 1990 and 2010, the population declined by 2.6%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents fell by 5.29%. However, population estimates from the U.S. Decennial Census⁸⁸⁵ in 2000 and 2010 show a positive growth rate (Table 1), indicating that caution should be used when comparing the decennial and annual estimates.

Ketchikan is a racially diverse community. In 2010, 61% of the population identified as White, 17% identified as American Indian and Alaska Native, 11% as Asian, 1% as Black, and 10% identified with two or more races (Figure 1). Also in 2010, 4.4% of the population consider themselves to be Hispanic or Latino. The percentage of the population made up by White residents decreased over time, from 78.3% in 1990 to 60.7% in 2010, while the percentage made up of Asian residents increased from 4.9% in 1990 to 10.8% in 2010.

In 2010, the average household size was 2.4, a slight decline from 2.5 in 1990 and 3.1 in 2000. However, there has been a slight increase in the total number of households from 3,164 in 1990 to 3,197 in 2000, and 3,259 households in 2010. Of the 3,731 total housing units surveyed in 2010, 44.2% were owner-occupied, 43.2% were rented, and 12.7% were vacant or used only seasonally. In 2010, 193 people were estimated to be living in group quarters, representing an overall increase compared to 107 in 1990 and 182 in 2000.

⁸⁸⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁸⁵ City area information updated by a Ketchikan city official during community review of this profile. Feedback received December 12, 2012.

⁸⁸⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

In a survey conducted by the AFSC in 2011, community leaders estimated that approximately 1,000 seasonal workers or transients are present in Ketchikan each year, with an annual population peak between May and September. They also reported that population fluctuations in Ketchikan are mostly driven by employment in fishing sectors. Tourism-related employment during the cruise season also contributes to an increase in Ketchikan’s population.⁸⁸⁷

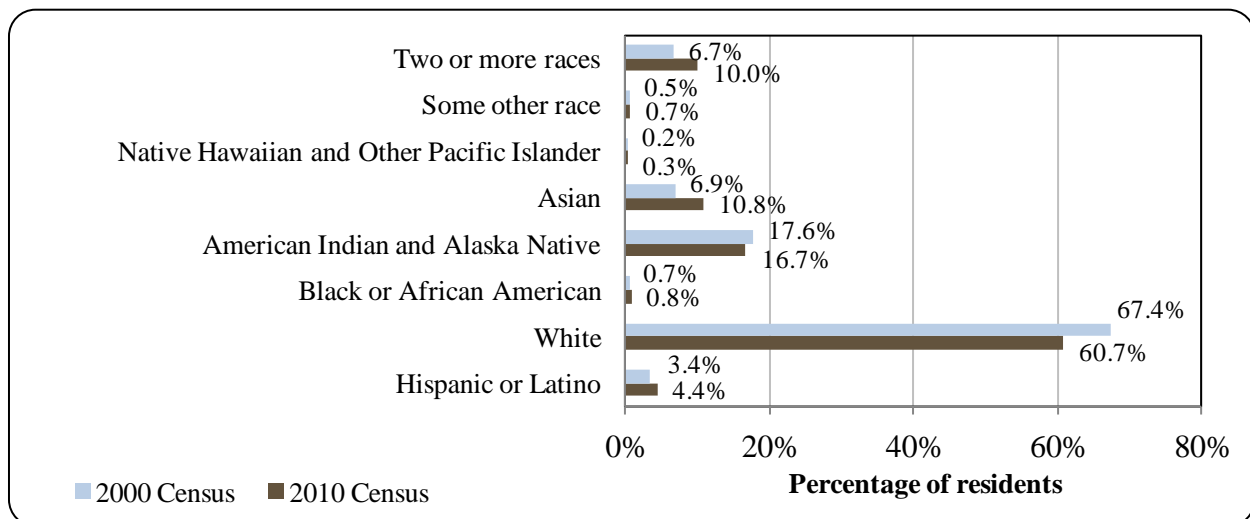
Table 1. Population in Ketchikan from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	8,263	-
2000	7,922	-
2001	-	8,458
2002	-	8,374
2003	-	7,979
2004	-	7,713
2005	-	7,687
2006	-	7,641
2007	-	7,644
2008	-	7,502
2009	-	7,503
2010	8,050	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

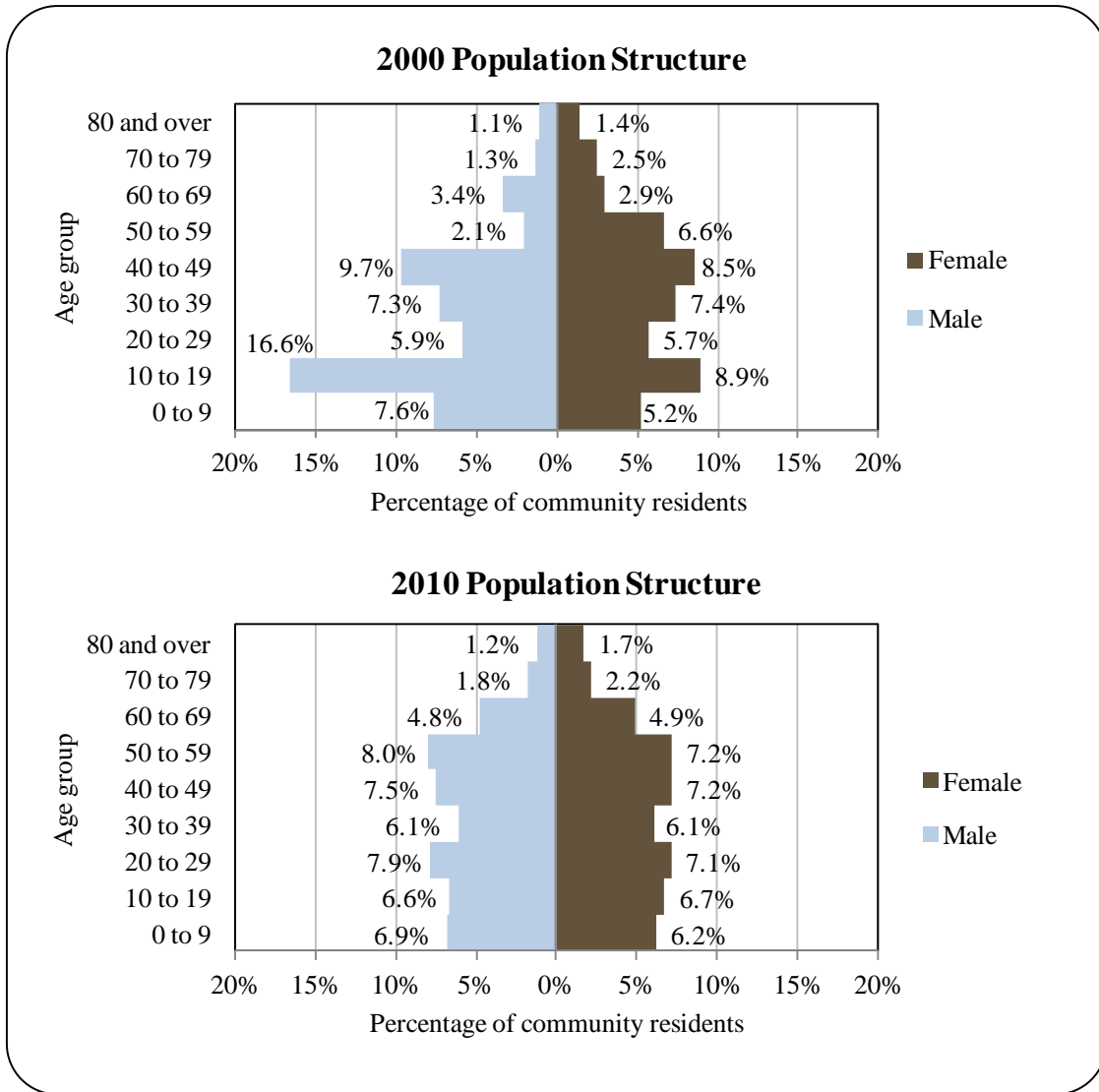
Figure 1. Racial and Ethnic Composition: 2000-2010.



⁸⁸⁷ Feedback received December 12, 2012 from a Ketchikan city official during community review of this profile.

In 2010, the gender makeup of Ketchikan’s population was relatively equal (50.8% male, 49.2% female), slightly more balanced than the population of the state as a whole (52% male, 48% female). The median age was 37 years, very similar to the U.S. national average of 36.8 years and higher than the median age for Alaska, 33.8 years. The overall population structure of Ketchikan in 2010 is shown in Figure 1. There is a relatively even spread of males and females across each age category between ages 0 and 59, with relatively few people aged 60 or older.

Figure 2. Population Age Structure in Ketchikan in 2000 and 2010.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)⁸⁸⁸ estimated that 93% of Ketchikan residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in 2009, 2% of the population had less than a 9th grade education, compared to 4% of Alaskan residents overall; 5% had a 9th to 12th grade education but no diploma, compared to 6% of Alaskan residents overall; 32% had some college but no degree, compared to 28% of Alaskan residents overall; 6% earned an Associate's degree, compared to 8% of Alaskan residents overall; 16% earned a Bachelor's degree, compared to 17% of Alaskan residents overall; and 6% earned a graduate or professional degree, compared to 10% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Ketchikan is located in ancestral territory of both the Tongass and the Cape Fox Tlingit. People from both of these kwaans⁸⁸⁹ utilized Ketchikan Creek as a fish camp, known as "kitschk-hin," which means "creek of the thundering wings of an eagle."⁸⁹⁰ The Cape Fox Kwaan, also known as *Sanyaa Kwaan*, historically utilized the Behm Canal area, inland of Revillagigedo Island. A primary village site was located at Cape Fox.⁸⁹¹ The Tongass Kwaan was originally known as the *Tanta Kwaan* or *Tanyatak Kwaan*. 'Tan', meaning sea lion, is the Tlingit name for Prince of Wales Island. 'Tanyatak Kwaan' means "people of the head part of the sea lion," meaning the southern tip of Prince of Wales Island.⁸⁹² The northward migration of the Haida people from British Columbia into the southern portion of Southeast Alaska permanently displaced the Tanta people around the 1700s.⁸⁹³ The Tanta Tlingit moved eastward, and by the late 1800s, a primary village site was located on Tongass Island, across Nakat Bay from Cape Fox, near Dixon Entrance.⁸⁹⁴

Americans began to settle permanently in the area soon after the U.S. purchased Alaska from Russia in 1867. According to a diary kept by missionary Sheldon Jackson, a white settler

⁸⁸⁸ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸⁸⁹ 'Kwaan' is a Tlingit socio-geographical term meaning "inhabitants of," literally a contraction of the Tlingit verb "to dwell." It is most commonly used to refer to a geographic region consisting of those areas controlled by clans or house groups residing in a single winter village or several closely situated winter villages (Source: Thornton, Thomas. 1997. "Know Your Place: The Organization of Tlingit Geographic Knowledge." *Ethnology*, Vol. 36, No. 4, pp. 295-307).

⁸⁹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁹¹ Crippen, James A. 2012. *Tlingit kwaan, clan, and house list*. Retrieved September 10, 2012 from <http://www.drangle.com/~james/tlingit/clan-list.html#taant'á kwáan>.

⁸⁹² Olson, Richard. 1967. *Social Structure and Social Life of the Tlingit in Alaska*. University of California Press, Berkeley and Los Angeles. Retrieved September 10, 2012 from http://lucy.ukc.ac.uk/EthnoAtlas/Hmar/Mar_dir/XMarriage.4851.

⁸⁹³ Langdon, Steven. 1977. *Technology, Ecology, and Economy: Fishing Systems in Southeast Alaska*. Unpublished Ph.D. dissertation, Stanford University, California. (Cited in Ratner, Nancy C., Peter Brown, James, Rowan, Donald Yates, Morgen Smith, Jesse A. Dizard, Amy Paige, and Michael F. Turek. 2006. *Local Knowledge, Customary Practices, and Harvest of Sockeye Salmon from the Klawock and Sarkar Rivers, Prince of Wales Island, Alaska*. Alaska Dept. of Fish and Game, Tech. Paper No. 308. Retrieved September 10, 2012 from <http://www.subsistence.ADFG.state.ak.us/download/TPS/tp308.pdf>.)

⁸⁹⁴ See footnote 892.

named Mr. Morrison had a homestead along the Tongass Narrows in 1879. A community began to grow with increasing activity in commercial salmon processing. By 1884, one saltery had been constructed at Ketchikan Creek, and a second was built just north at Ward Cove.⁸⁹⁵ In 1886, a cannery owned by Captain A.W. Bower from Astoria, OR, was relocated from Boca de Quadra Inlet to the Tongass Narrows, and was known as the Tongass Narrows Cannery. Unfortunately, the cannery was destroyed in a fire in 1889. Although the Tongass Narrows Cannery was not rebuilt, an employee named George Clark, along with an Irishman named Michael Martin, built a saltery north of the cannery site. Clark and Martin also opened a trading post/general store at the mouth of Ketchikan Creek.^{896,897} According to some accounts, Mike Martin is considered the ‘first resident of Ketchikan’, and is said to have purchased 160 acres from Chief Kyan of the Tanta Kwaan.^{898,899,900} This land is what became the township. The City was incorporated in 1900, making Ketchikan Alaska’s first city.^{901,902}

Four additional canneries had been built in Ketchikan by 1912, and the community continued to grow around the commercial fishing industry. Mining and timber activity also began to grow in the early 1900s. Gold and copper exploration briefly turned Ketchikan into a mining supply center. The Ketchikan Spruce Mills opened in 1903 to provide timber for local construction and salmon packing boxes. In 1954, a pulp mill was built at Ward Cove, providing continued economic growth in the community. The mill had a 50-year contract with the U.S. Forest Service which was not continued, and the mill closed in March of 1997.⁹⁰³

Today, commercial fishing and seafood processing continue to be primary economic drivers in Ketchikan, and the City is popularly known as the “Salmon Capital of the World”. Timber and tourism are also important industries. The population of Ketchikan is ethnically diverse.⁹⁰⁴ The Ketchikan Indian Community represents Native people of three groups: Tlingit, Haida, and Tsimshian.⁹⁰⁵ Members of both the Tongass and Cape Fox Tlingit reside in Ketchikan, as well as nearby Saxman Native Village.⁹⁰⁶

⁸⁹⁵ Welsh, Amanda A. 1999. *Hopkins Alley, Warren Street, & Harding Street Areas: Survey & Inventory Projects Report*. Retrieved September 12, 2012 from <http://www.borough.ketchikan.ak.us/kgbftp/>.

⁸⁹⁶ Ibid.

⁸⁹⁷ Kiffer, Dave. (2007). “Ketchikan took shape 120 years ago.” *SitNews.us*. Retrieved September 10, 2012 from http://www.sitnews.us/Kiffer/TongassPacking/040707_tongass_packing.html.

⁸⁹⁸ Ibid.

⁸⁹⁹ Tongass Tribe. (n.d.). *Chief Kyan Totem Pole plaque*. Located in Ketchikan, Alaska.

⁹⁰⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁰¹ Ibid.

⁹⁰² Explore North (n.d.). *Ketchikan – Alaska’s First City*. Retrieved September 10, 2012 from <http://explorenorth.com/alaska/ketchikan-intro.html>.

⁹⁰³ See footnote 900.

⁹⁰⁴ Ibid.

⁹⁰⁵ Ketchikan Indian Community website. 2012. *Culture & Heritage*. Retrieved September 10, 2012 from <http://www.kictribe.org/community/culture/index.html>.

⁹⁰⁶ Alaska Dept. of Fish and Game, Division of Subsistence. 2003. *Briefing Materials Prepared for the Alaska Board of Fisheries Meeting, Sitka, Jan. 20-29, 2003*. Special Publication No. SP2003-001. Retrieved September 10, 2012 from http://www.subsistence.ADFG.state.ak.us/download/SPS/SP2_SP2003-001.pdf.

Natural Resources and Environment

Ketchikan has an oceanic climate greatly moderated by its maritime location. Winters are cool but far milder than what its latitude alone may suggest: January's high averages 38.4 °F (3.6 °C). Summers are mild, as the high temperature in August averages 64.4 °F (18.0 °C). Rainfall is common in Ketchikan, with an average of 137 inches per year, falling more heavily in autumn and winter.⁹⁰⁷ The landscape is characterized by rugged terrain, with steep mountain slopes rising to over 3,000 feet within several miles of the coastline. The forest is typical of Southeast Alaska, made up primarily of Western hemlock, Sitka spruce, and cedar, as well as large areas of muskeg. Mammals and birds typical of the area include Sitka black-tailed deer, black bear, mountain goat, wolves, river otter, marten, mink, loon, bald eagle, trumpeter swan, Canada goose, and other common waterfowl. Currently no brown bears inhabit Revillagigedo Island. Fish species present in streams on the Island include pink, chum, coho, and sockeye salmon, steelhead and cutthroat trout, and Dolly Varden.⁹⁰⁸

The City of Ketchikan is adjacent to Tongass National Forest lands. Approximately 95% of Southeast Alaska is federal land, of which 80% is part of the National Forest. At 16.8 million acres, the Tongass is the largest National Forest in the U.S. It is managed to produce resource values, products, and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.⁹⁰⁹ National Forest land-use designations in the vicinity of Ketchikan include municipal watershed (manage to meet State water quality standards for domestic water quality supply), semi-remote recreation (provide for recreation and tourism in natural-appearing settings), special interest area (preserve areas with unique archaeological, historical, scenic, geological, botanical, or zoological value), timber production (manage area for industrial wood production), scenic viewshed (maintain scenic quality in areas viewed from popular land and marine travel routes and recreation areas, while permitting timber harvest), and modified landscape (provide for natural appearing landscapes while allowing timber harvest).⁹¹⁰

Protected areas near Ketchikan include Misty Fjords National Monument and Wilderness, several roadless areas within the Tongass National Forest, and Dall Bay State Marine Park. Misty Fjords National Monument Wilderness is the largest wilderness area in the Tongass National Forest, totaling 2,142,234 acres on the mainland as well as the eastern shore of Revillgigedo Island. Misty Fjords National Monument is a smaller non-wilderness portion at the heart of the larger Misty Fjords District. The topography of the National Monument is characterized by deep valleys, steep slopes and sharp intervalley ridges formed by volcanoes and carved by glaciers. Cliffs and fjordsides rise thousands of feet from the water. Unique geological features are found within the Wilderness Area, such as mineral springs and volcanic lava flows. Wildlife commonly seen within Misty Fjords National Monument includes orcas and porpoises,

⁹⁰⁷ See footnote 900.

⁹⁰⁸ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume I: Final SEIS Appendix A, B, D, E.* Retrieved April 25, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_I.pdf.

⁹⁰⁹ U.S. Forest Service. (2008). *Tongass National Forest: Land and Resource Management Plan.* Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

⁹¹⁰ U.S. Forest Service. 2003. *Map of Current Land Use Designations.* Tongass National Forest Land Management Plan Revision, Final SEIS. Retrieved May 8, 2012 from <http://www.tongass-seis.net/pdf/lud.pdf>.

mountain goats, and bears. The area receives very high visitation rates each year.^{911,912}

Two roadless areas are located in close proximity to Ketchikan, including 30,941 acres on the southwest quarter of Revilligedo Island (Revilla Roadless Area) and 38,978 acres on Gravina Island (Gravina Roadless Area). However, neither of these roadless areas contain areas of LUD II (land-use designation II), which would be “permanently managed in a roadless state to retain their wildland characteristics.”⁹¹³ The status of roadless areas in the Tongass National Forest has been a controversial issue in recent years. The Roadless Area Conservation Rule (RACR) was instated in 2001, prohibiting road construction and timber harvesting in 58.5 million acres of roadless areas in the National Forest System. Lawsuits were filed following the RACR, and an exemption was granted for the Tongass National Forests in 2003. A coalition of Alaska Natives, recreation groups, and environmental groups filed a lawsuit in 2009 seeking to reinstate the rule, and on March 4, 2011, the Tongass Exemption was repealed. As of 2012, the RACR applies to roadless areas in the Tongass National Forest.⁹¹⁴

In addition, Dall Bay State Marine Park is located at the southwest end of Gravina Island. The Marine Park covers 585 acres of tidelands.⁹¹⁵ Marine Parks are intended to protect habitat, and fishing activities are not limited within their boundaries.⁹¹⁶

Mineral deposits in southern Southeast Alaska include platinum, nickel and associated metals on Duke Island, polymetallic (precious and base metals) and base metal deposits (copper, lead, zinc, with minor silver and barite) identified on Gravina and Prince of Wales Islands, as well as uranium and thorium deposits on southern Prince of Wales Island.⁹¹⁷ There are no existing mining claims on Duke Island. The southern end of Gravina Island has a long history of mineral exploration and gold mining, and there is a potential for future mine development on the Island.⁹¹⁸

Natural hazards that have been identified as risks in the Ketchikan region include flooding, wildfire, earthquake, snow and avalanche, tsunami and seiche, severe weather, landslides, and erosion. A low risk of drought has also been identified in the region.⁹¹⁹

Near the end of the Ketchikan pulp mill’s operation, contamination was identified as a result of illegal dumping of harmful sludge and wastewater over a three year period. The waters near the Ward Cove plant were classified by the EPA as ‘impaired’. Ketchikan Pulp Company, a subsidiary of Louisiana-Pacific Corp., pled guilty to dumping charges in February of 1995, and

⁹¹¹ U.S. Forest Service, Tongass National Forest. (n.d.). *Misty Fjords National Monument Wilderness*. Retrieved April 25, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/Misty.pdf.

⁹¹² See footnote 908.

⁹¹³ Ibid.

⁹¹⁴ U.S. Forest Service. (2011). *Status of Roadless Area Conservation Rule*. Retrieved September 11, 2012 from http://www.fs.fed.us/biology/resources/pubs/issuepapers/issuepaper_RoadlessRules-201108.pdf.

⁹¹⁵ Alaska Dept. of Natural Resources. (2011). *Dall Bay State Marine Park*. Retrieved April 25, 2012 from <http://dnr.alaska.gov/parks/aspunits/marinepark/dallbay.htm>.

⁹¹⁶ Alaska Dept. of Fish and Game, Marine Protected Areas Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

⁹¹⁷ Alaska Dept. of Natural Resources. (2011). *Mineral Resources of Alaska Map*. Retrieved April 3, 2012 from <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁹¹⁸ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume II: Appendix C – Part I*. Retrieved April 3, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_II.pdf.

⁹¹⁹ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

paid \$6 million in settlement to clean up the affected site and over \$3 million in civil penalties for violation of the Clean Air Act and the Clean Water Act.^{920,921} The Ward Cove mill site was given ‘conditional closure’ status in 2000, and is now safe for residential, industrial, or commercial use.⁹²² According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Ketchikan.⁹²³

Current Economy⁹²⁴

The growth of Ketchikan’s population has always depended on the area’s rich natural resources, including fish, timber, and minerals. In a survey conducted by the AFSC in 2011, community leaders reported local reliance on fishing, logging, mining, and other natural resource-based industries, including ecotourism and sport hunting and fishing. Throughout the 20th century, fish canneries and sawmills went through boom and bust cycles. The Ward Cove pulp mill closed in 1997, but several small timber companies continue to operate in Ketchikan.

Tourism is growing in importance. The city has become a major port-of-call for Alaska-bound cruise ships.⁹²⁵ The number of cruise ship passengers that visit Ketchikan each year has steadily increased since 1998. That year, 523,108 passengers were estimated to disembark in Ketchikan, and by 2009, 937,419 passengers were estimated to have visited on cruise ships.⁹²⁶ Many Ketchikan residents hold commercial fishing permits, or work in seafood processing and supporting industries. Recreational fisheries are a large source of seasonal employment in Ketchikan as well.⁹²⁷

Based on household surveys conducted for the 2006-2010 ACS,⁹²⁸ in 2010, the per capita income in Ketchikan was estimated to be \$27,016 and the median household income was estimated to be \$51,983. This is an increase from per capita and median household income figures reported in 2000 (\$22,484 and \$45,802, respectively). However, when accounting for inflation by converting the 2000 values to 2010 dollars,⁹²⁹ the 2010 estimates show a slight decline in income over time, from a real per capita income of \$29,566 and real median household income of \$60,229 in 2000. In 2010, Ketchikan ranked 85th of 305 Alaskan communities with per capita income data, and 118th in median household income, out of 299 Alaskan communities

⁹²⁰ U.S. Dept. of Justice. March 21, 1995. “Ketchikan Pulp Co. To Oay \$3 Million In Civil Penalties.” Press Release 95-155. Retrieved September 11, 2012 from http://www.justice.gov/opa/pr/Pre_96/March95/151.txt.html.

⁹²¹ U.S. Dept. of Justice. February 6, 1995. “Ketchikan Pulp Co. Pleads Guilty to Environmental Crimes.” Press Release 95-1123. Retrieved September 11, 2012 from http://www.justice.gov/opa/pr/Pre_96/March95/123.txt.html.

⁹²² Alaska Dept. of Environmental Conservation. (2011). *Ketchikan Pulp Corporation Mill Site*. Retrieved September 11, 2012 from <http://dec.alaska.gov/spar/csp/sites/kpc.htm>

⁹²³ Alaska Dept. of Environmental Conservation. *List of Contaminated Site Summaries By Region*. Retrieved September 11, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁹²⁴ Unless otherwise noted, all monetary data is reported in nominal values.

⁹²⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹²⁶ Ketchikan Visitors Bureau website. 2005. *Cruise Ship Statistics*. Retrieved September 10, 2012 from <http://www.visit-ketchikan.com/About/VisitorStatistics.aspx>.

⁹²⁷ See footnote 925.

⁹²⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁹²⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

with household income data that year.

Although Ketchikan's small population size may have prevented the ACS from accurately portraying economic conditions,⁹³⁰ additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Ketchikan in 2010 is \$14,329.^{931,932} Despite estimates of a decline in income between 2000 and 2010, the community was not recognized as "distressed" by the Denali Commission in 2010.⁹³³ It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly higher percentage of Ketchikan residents were estimated to be in the civilian labor force (70.8%) than in the civilian labor force statewide (68.8%). In the same year, approximately 10.8% of local residents were estimated to be living below the poverty line, just over the 9.5% poverty rate of Alaskan residents overall, and the unemployment rate was estimated to be 5.1%, similar to the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 14.6%, compared to a statewide unemployment rate estimate of 11.5%.⁹³⁴

Also based on the 2006-2010 ACS, a majority of the Ketchikan workforce (62.9%) was estimated to be employed in the private sector, along with 27.8% in the public sector, and 9.3% that were estimated to be self-employed. Of the 4,134 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number was estimated to be working in educational services, health care and social assistance (19.7%), transportation, warehousing, and utilities (15.7%), retail trade (14.8%), arts, entertainment, recreation, accommodation, and food services (12.7%), public administration (7.5%), construction (6.6%), professional, scientific, management, and administrative and waste management services (5.4%), and manufacturing (4.9%) (Figure 3). In 2010, 1.1% of the Ketchikan civilian labor force was estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries. However, the number of individuals employed in fishing and forestry occupations and industries may be underestimated in census statistics as fishermen or loggers may hold another job and characterize their employment accordingly.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 3,616 employed residents in Ketchikan in 2010, of which 26.4% were employed in trade, transportation, and utilities occupations, 16.8% in local government, 11.4% in educational and health services, 10.7% in leisure and hospitality, 9.4% in state government, 6.4% in manufacturing, 5.8% in financial activities, 4.8% in construction,

⁹³⁰ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁹³¹ See footnote 928.

⁹³² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹³³ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁹³⁴ See footnote 932.

3.5% in professional and business services, 1.5% in information, 1% in natural resources and mining, 0.1% in unknown industries, and 2.2% in other industries.⁹³⁵ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Ketchikan (U.S. Census).

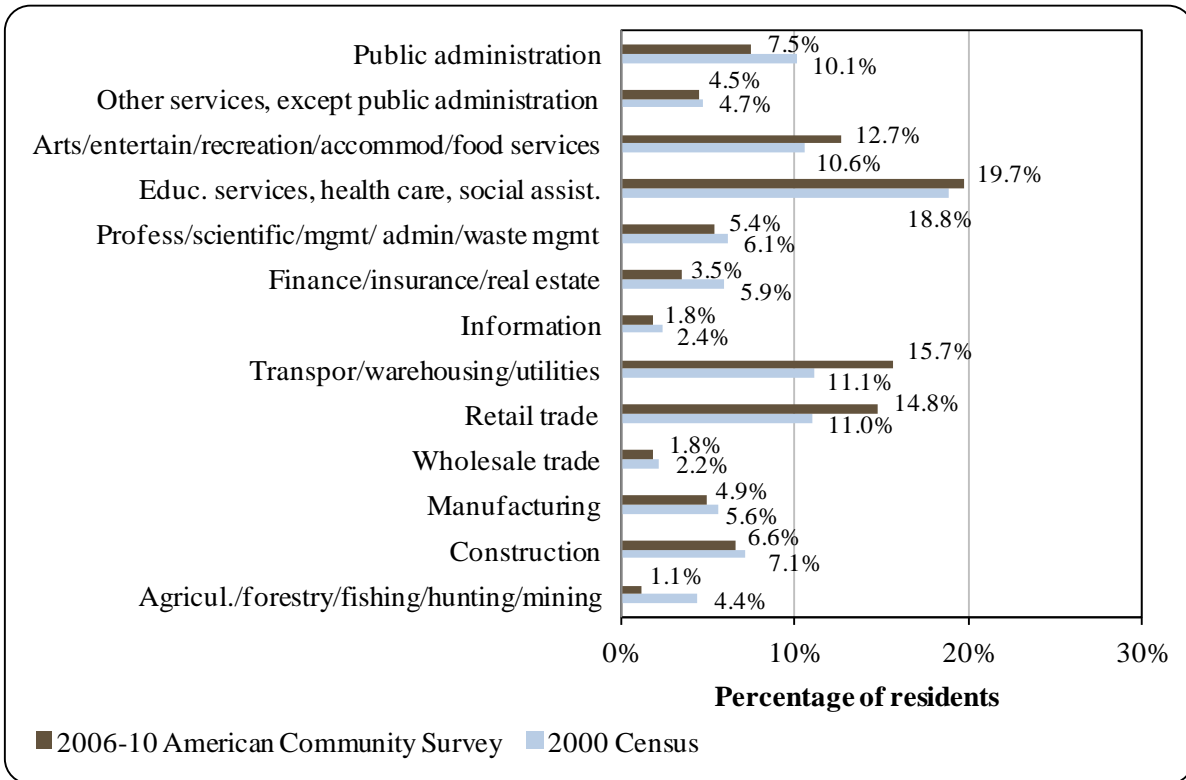
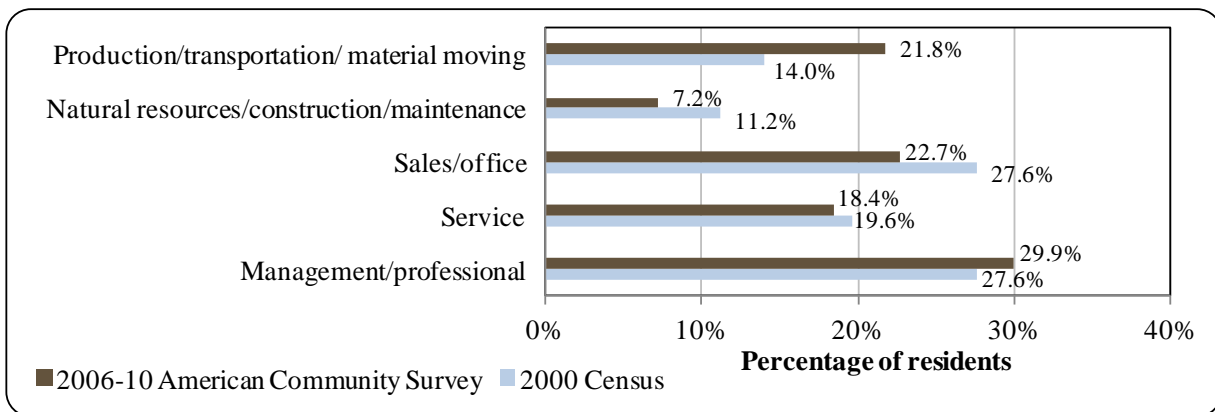


Figure 4. Local Employment by Occupation in 2000-2010, Ketchikan (U.S. Census).



⁹³⁵ Ibid.

Governance

Ketchikan is a Home Rule City located in the Ketchikan Gateway Borough. The City was incorporated in 1900, making it the first city in Alaska.⁹³⁶ It is important to note that, in addition to the office of the City of Ketchikan, offices of the Ketchikan Gateway Borough and the City of Saxman are also located in Ketchikan. Two federally-recognized Tribes – the Ketchikan Indian Community and the Organized Village of Saxman – also have offices in Ketchikan. The primarily Tlingit community of Saxman is located 2 miles south of Ketchikan. The history, cultures, and economies of Saxman and Ketchikan are highly intertwined.⁹³⁷

The City of Ketchikan has a “Council-Manager” form of government. Elected officials for the City include a seven-person city council including the Mayor. The City Manager serves as the Chief Administrative Officer. Together, the City and city-owned utilities (Ketchikan Public Utilities) employ approximately 320 employees.^{938,939} Annual municipal revenue almost doubled between 2000 and 2010, from \$49,780,610 in 2000 to \$97,173,689 in 2010. Sales tax revenue made up an average of 12.5% of reported annual municipal revenue for those years in which data were reported. In addition, Ketchikan received between \$165,000 and \$200,000 per year in State Revenue Sharing contributions from 2000 to 2003, and Community Revenue Sharing contributions of over \$470,000 per year in 2009 and 2010. Further information is presented in Table 2.

Various entities in Ketchikan received fisheries-related grants during the 2000-2010 period, including the City, the State of Alaska, Alaska Ship and Drydock company, and other private enterprises that carried out projects.⁹⁴⁰ In 2000, grants included \$5,657 from the Alaska Department of Community, Commerce, and Economic Development (DCCED)’s Division of Community and Regional Affairs (DCRA) for floating dock upgrades and \$58,695 from the Alaska Department of Transportation and Public Facilities (DOT&PF) for new construction at the Alaska Marine Highway System ferry berth and mooring structures. In 2002, \$3,938,000 was received from DOT&PF for south harbor bar improvements, \$750,000 was received from the U.S. Army Corps of Engineers (COE) for water navigation, and \$1,535,600 was received from the Alaska Industrial Development and Export Authority (AIDEA) for a shipyard shiplift. In 2003, and additional \$750,000 was received from the COE for water navigation, and \$300,000 was received from the U.S. Economic Development Agency (EDA) for a maritime study. In 2004, the DCRA awarded Ketchikan \$1,435,000 for a cold storage and \$100,000 for marine, harbor, and port improvements. In 2005, \$100,000 came from DCRA for a harbor float electrical program. In 2006, the EDA provided \$2,400,000 for ‘shipyard uplands’, and the AIDEA provided \$2,204,400 for shipyard civil works. In 2007, \$413,000 was received from the Denali Commission for Knudson Cove Harbor construction. In 2008, \$1,000,000 was received from the EDA for a mariculture dock and training facility. In 2009, DCRA awarded \$3,000,000 toward replacement of berths I and II at the Port of Ketchikan. Finally, in 2010, a grant of \$25,262,200

⁹³⁶ Explore North. (n.d.). *Ketchikan – Alaska’s First City*. Retrieved September 10, 2012 from <http://explorenorth.com/alaska/ketchikan-intro.html>.

⁹³⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹³⁸ Ibid.

⁹³⁹ Details on community governance provided by a Ketchikan city official during community review of this profile. Feedback received December 12, 2012.

⁹⁴⁰ Details on grant recipients provided by a Ketchikan city official during community review of this profile. Feedback received December 12, 2012.

was received from DOT&PF for Ketchikan Shipyard marine dry-dock, and DCRA granted an additional \$3,000,000 toward berth replacement. Fisheries-related grant totals are also presented in Table 2.

The Ketchikan Indian Community (KIC) was recognized as an Indian Tribe under the Indian Reorganization Act (IRA) of 1934, as amended for Alaska in 1936. It is governed by an eight-member Tribal Council elected by KIC members.⁹⁴¹ The Tribe was not included under the Alaska Native Claims Settlement Act (ANCSA), and did not receive title to lands through that process.⁹⁴² The KIC provides a variety of services to Native residents of Ketchikan, including housing, career, educational, and language programs, veterans assistance, and local health care.⁹⁴³ It is also important to note that the Organized Village of Saxman was included under ANSCA, and received a land entitlement of 23,040 acres. The regional Native corporation representing the Native people of Southeast Alaska is Sealaska Corporation. The Native village corporation associated with the Organized Village of Saxman is the Cape Fox Corporation, with offices located in Ketchikan.⁹⁴⁴

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Ketchikan from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$49,780,610	\$4,690,474	\$197,113	\$64,352
2001	\$52,427,851	\$4,750,831	\$176,462	n/a
2002	\$53,517,100	\$4,953,046	\$178,926	\$6,223,600
2003	\$57,397,437	\$4,832,084	\$167,848	\$1,050,000
2004	\$66,503,598	\$4,071,818	n/a	\$1,535,000
2005	\$61,292,805	\$7,021,638	n/a	\$100,000
2006	\$70,378,764	\$6,412,198	n/a	\$4,604,400
2007	\$79,197,945	\$6,249,310	n/a	\$413,000
2008	\$85,952,238	\$8,566,429	n/a	\$1,000,000
2009	\$79,716,222	\$8,397,300	\$ 459,935	\$3,000,000
2010	\$97,173,689	\$8,007,987	\$ 452,828	\$28,262,200

Note: n/a indicates that no data was reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm

²Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm

³Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from www.tax.state.ak.us

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

⁹⁴¹ Ketchikan Indian Community. 2012. *About Us*. Retrieved September 11, 2012 from <http://www.kictribe.org/about/index.html>.

⁹⁴² See footnote 938.

⁹⁴³ Ketchikan Indian Community. 2012. *Ketchikan Indian Community (KIC) Programs and Health Care Overview and History*. Retrieved September 11, 2012 from <http://www.kictribe.org/index.html>.

⁹⁴⁴ See footnote 937.

Although the KIC was not included under ANCSA, the regional tribal non-profit association that was formed under ANCSA - the Central Council of the Tlingit and Haida Indian Tribes of Alaska (Central Council) – takes an active interest in the Native people of Ketchikan. In order to be eligible to enroll as a member of the Central Council, an individual must be of Tlingit and/or Haida descent, or be able to identify that they are a direct descendant from a tribally enrolled citizen of Central Council.⁹⁴⁵ The Central Council was originally established to pursue Alaska Native land claims on behalf of the Tlingit and Haida people in an effort to retain a way of life strongly based on subsistence.⁹⁴⁶ The Central Council is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁹⁴⁷ Services include employment and training, education, family, elderly, and other community services.⁹⁴⁸

Ketchikan has the nearest offices of the Alaska Department of Fish and Game (ADF&G), the U.S. Forest Service, the Alaska Department of Natural Resources, and the U.S. Bureau of Citizenship and Immigration Services. An enforcement office of the National Marine Fisheries Service (NMFS) is also located in Ketchikan, while Juneau hosts the Alaska Regional Office of the NMFS, as well as the AFSC Auke Bay laboratories. Juneau also has the closest office of the DCCED.

Infrastructure

Connectivity and Transportation

Although there are no roads connecting Ketchikan to other cities, it has well established air and marine transportation infrastructure, making it a hub for southern Southeast Alaska. The Ketchikan International Airport has a paved, lighted 7,500 foot by 150 foot runway⁹⁴⁹ and serves as a gateway for Alaska Airlines jet service to and from Seattle, Juneau, and Anchorage. It also serves as a bush carrier and charter aircraft hub for destinations such as Hyder, Metlakatla, and Prince of Wales Island communities.⁹⁵⁰ As of June 2012, roundtrip airfare between Ketchikan and Anchorage was \$461.⁹⁵¹ There are also four major floatplane landing facilities in Ketchikan.⁹⁵²

Ketchikan is the first major port of call in Alaska for vessels traveling north from Washington State and British Columbia. Ketchikan is a hub for the Alaska Marine Highway

⁹⁴⁵ Central Council website. (n.d.). *Enrollment Eligibility Requirements and Application Process*. Retrieved September 11, 2012 from

<http://www.ccthita.org/services/enrollment/forms/EnrollmentEligibilityRequirementsandApplicaitonProcess.pdf>.

⁹⁴⁶ Central Council. (n.d.) *Home Page*. Retrieved August 15, 2012 from <http://www.ccthita.org/index.html>.

⁹⁴⁷ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁹⁴⁸ See footnote 946.

⁹⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁵⁰ KetchikanAlaska.com. (2011). *Ketchikan Alaska Travel Information*. Retrieved September 10, 2012 from <http://www.ketchikanalaska.com/travel.html>.

⁹⁵¹ Airfare was averaged from prices found on travel websites, including <http://www.travelocity.com> (retrieved June 2004) and <http://www.cheaptickets.com> (retrieved October 2011).

⁹⁵² See footnote 949.

System (AMHS), receiving ferries traveling to and from Bellingham on the main Southeast Alaska route. The AMHS also provides daily service between Ketchikan and Metlakatla in spring, summer, and fall months.⁹⁵³ The Inter-Island Ferry Authority also provides daily passenger and vehicle ferry service between Ketchikan and Prince of Wales Island, with a port in Hollis.⁹⁵⁴

*Facilities*⁹⁵⁵

Water provided within the Ketchikan city limits is derived from a dam at Ketchikan Lake. In addition, the Ketchikan Gateway Borough operates a water treatment facility at Mountain Point south of the City which serves a small population outside the southern end of the city limits. The city water is chlorinated and filtered before being piped to all homes located within Ketchikan city limits. In addition, most homes outside of the city limits use rain catchment systems. The City owns a central sewage collection system with primary treatment, and a borough sewage treatment plant is located at Mountain Point. Ninety-eight percent of homes are fully plumbed. Electricity in Ketchikan comes primarily from hydroelectric facilities. Ketchikan Public Utilities purchases power from the state-owned Swan Lake Hydro Facility and owns three hydroelectric plants (Ketchikan, Beaver Falls, and Silvis), as well as two diesel-fueled plants. The Deer Mountain landfill has an incinerator, balefill system, recycling and resource re-use, and household hazardous waste collection events. The City also ships baled refuse out-of-state.⁹⁵⁶

Police services are provided by the City Police Department, as well as state troopers posted in Ketchikan. A State Superior Court and District Court are located in Ketchikan, as well as a correctional center. Fire and rescue services are provided by the Ketchikan Fire Department, as well as the South Tongass Fire / Emergency Medical Services (EMS) Division and the North Tongass Fire / EMS. Additional community facilities include the a civic center, an American Legion Hall, a Boys and Girls Club, a combined community pool and recreation / fitness center, a movie theater, 3 museums, and 12 libraries, including a new public library opening in January 2013.⁹⁵⁷ In a survey conducted by the AFSC in 2011, community leaders also reported several large construction projects that are underway in Ketchikan, including the construction of a new library (opening January 2013), fire station (Completed July 2012), alternative energy projects, and upgrades to water and sewer pipelines. Additionally, Phase I of the rehabilitation / replacement of cruise ship berths I and II was completed in 2012. Phase II will be completed in May 2013. Community leaders also reported the presence of a food bank, soup kitchen, job placement services, and publicly subsidized housing in Ketchikan.

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that port facilities in Ketchikan include a breakwater, a deep draft dock, five small-boat harbors, a dry dock, a ship repair yard, a boat launch, and a state ferry terminal. They indicated that there is approximately 28,500 feet of dock space available for permanent vessels to

⁹⁵³ Alaska Marine Highway System. (2011). *Sailing Search*. Retrieved September 10, 2012 from <https://www.dot.state.ak.us/oars/reservations/QuickSearchFM.amhsf>.

⁹⁵⁴ Alaska's Inter-Island Ferry Authority. (2010). *Welcome to Alaska's Inter-Island Ferry Authority*. Retrieved September 10, 2012 from <http://www.interislandferry.com/>.

⁹⁵⁵ The facilities information provided in this section was updated by a Ketchikan city official during community review of the profile. Feedback was received December 12, 2012.

⁹⁵⁶ See footnote 949.

⁹⁵⁷ Ibid.

moor at, and approximately 10,500 feet of available dock space for transient vessels. Vessels up to 1,000 feet long can use moorage in Ketchikan. They also noted that fisherman in Ketchikan are seeking additional infrastructure, including a drive-down ramp. Construction was expected to begin in fall 2013.

In addition to infrastructure, in the 2011 AFSC survey, community leaders noted the presence of a wide variety of fisheries-related businesses and services in Ketchikan. These include fish processing plants and commercial cold storage facilities, fishing gear sales, repair, and storage, sales of ice, bait, tackle and fuel, boat repair services (electrical, welding, mechanical service, machine shop, and hydraulics), marine refrigeration, haulout facilities and tidal grids for vessels less than 60 tons and greater than 60 tons, dry dock storage, commercial and recreational fishing vessel moorage, sport fish lodges, fishing business attorneys, fishing-related bookkeeping, water and air taxi, and seaplane services. According to community leaders, Ketchikan residents travel to Seattle, Washington to access fisheries-related businesses and services not available locally.

Medical Services

Local hospitals or health clinics include Ketchikan General Hospital, Ketchikan Indian Community Tribal Health Clinic, and the U.S. Coast Guard (USCG) Ketchikan Dispensary. The Hospital is a qualified Acute Care facility and offers medevac service.⁹⁵⁸ As of 2008, the medevac company, Guardian Flight, acquired a new helicopter that expanded the range of Ketchikan medevac services to Revillagigedo, Prince of Wales, Gravina and Annette Islands, Petersburg, Wrangell, Hyder, Stewart and Prince Rupert, given availability of a safe landing zone.⁹⁵⁹ The USCG facility provides emergency support only and is a qualified Emergency Care Center. In addition, the Ketchikan Pioneers' Home and Island View Manor offer long term care services, and the Gateway Center for Human Services offers substance abuse services. Emergency services have marine, airport, floatplane, helicopter, and limited highway access. Emergency service is provided by 911 telephone service and volunteers.^{960,961}

Educational Opportunities

As of 2011, there were 11 schools located in the Ketchikan, including 4 elementary schools, 2 Kindergarten through 12th grade schools, 1 middle school, 1 high school, and 3 mixed grade schools. There are a total of 2,248 students and 154 teachers in Ketchikan schools.⁹⁶²

In addition, the University of Alaska Southeast has a campus in Ketchikan. The campus was originally constructed in 1954 as Ketchikan Community College. In 1987, statewide restructuring of the University of Alaska brought the Ketchikan campus into a larger state-wide

⁹⁵⁸ Ibid.

⁹⁵⁹ Anonymous. August 6, 2008. "New Helicopter will increase medevac service in Southeast." *Capital City Weekly*. Retrieved September 11, 2012 from http://www.capitalcityweekly.com/stories/080608/community_20080806009.shtml.

⁹⁶⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁶¹ City of Ketchikan. 2004. *Medical Links*. Retrieved September 10, 2012 from http://www.city.ketchikan.ak.us/community_links/medical.html.

⁹⁶² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

system. The Ketchikan campus offers programs in business and industry, as well as a core of technical, maritime studies, and other vocational courses.⁹⁶³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Tlingit people of the Cape Fox and Tongass Kwaans have been harvesting fisheries resources in the Ketchikan area for centuries. Salmon were perhaps the most important resource for the Tlingit. Traditionally, fish trap, gaffs, and spears were used to catch salmon. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., ‘gumboot’ chitons), and sea plants (e.g., seaweed, beach asparagus and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas, and egg harvesting sites.^{964,965} The modern community of Ketchikan was also founded on the abundance of salmon in its waters. That rich fishing tradition lives on today. Ketchikan’s fishing grounds are some of the most fertile in the world, with massive runs of salmon migrating into the protected waters behind Prince of Wales Island, giving Ketchikan the nickname of “Salmon Capitol of the World.”

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.⁹⁶⁶ The first reported salmon saltery on the Tongass Narrows was operated by a man named Snow, but limited details are available regarding its operation. In 1886, a cannery owned by Captain A.W. Bower from Astoria, OR, was relocated from Boca de Quadra Inlet to the Tongass Narrows, and was known as the Tongass Narrows Cannery. The cannery was destroyed in a fire in 1889 and was not rebuilt. However, another saltery was built the following year,⁹⁶⁷ and by 1912, four additional canneries had been built. By 1936, seven canneries were in operation in Ketchikan.⁹⁶⁸

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho, and Chinook). Because of Southeast Alaska’s proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty. The Treaty was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based

⁹⁶³ Anonymous. (2010). *Universities Serving Ketchikan and Southeast Alaska*. Retrieved September 10, 2012 from <http://www.ketchikanalaska.com/communityservices/universities.html>.

⁹⁶⁴ Alaska Native Heritage Center. (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

⁹⁶⁵ Brock, Mathew, Philippa Coiley-Kenner and the Sitka Tribe of Alaska. (2009). *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

⁹⁶⁶ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹⁶⁷ Kiffer, Dave. (2007). “Ketchikan took shape 120 years ago.” *SitNews.us*. Retrieved September 10, 2012 from http://www.sitnews.us/Kiffer/TongassPacking/040707_tongass_packing.html.

⁹⁶⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

management strategies.⁹⁶⁹ It is important to note that the state runs the Deer Mountain Hatchery on Ketchikan Creek, which contributes to populating the local salmon resource.⁹⁷⁰

In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska. The U.S. and Canada signed the Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean in 1923, and since the Convention took effect in 1924, Pacific halibut fisheries have been managed by the International Pacific Halibut Commission, earlier called the International Fisheries Commission.⁹⁷¹ Halibut fisheries are restricted to use of hook and line gear, although a limited number of halibut can be caught and retained as incidental catch in salmon troll fisheries and sablefish trap fisheries, as well as bycatch in a variety of fisheries using diverse gear types.^{972,973}

Sablefish were first harvested in Southeast Alaska as bycatch in the halibut fishery.⁹⁷⁴ By the 1930s, several state-managed sablefish fisheries began in Southeast inside waters, including a fishery in Clarence Strait and Dixon Entrance. Sablefish are harvested using longline or pot gear, and the state fisheries that take place in inside waters are managed independently of the federal fishery.⁹⁷⁵

In 1995, management of Alaskan halibut and sablefish fisheries shifted from limited entry to a system of Individual Fishing Quotas (IFQ). Motivations for the shift included overcapitalization, short seasons, and the derby-style fishery that led to loss of product quality and safety concerns. As a result of program implementation, the number of shareholders and total vessels participating in the halibut and sablefish fisheries declined substantially, and product quality has improved. This shift to catch shares has been controversial, raising concerns about equity of catch share allocation, reduced crew employment needs, and loss of quota from coastal communities to outside investors.⁹⁷⁶

Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside

⁹⁶⁹ See footnote 966.

⁹⁷⁰ See footnote 968.

⁹⁷¹ International Pacific Halibut Commission. 2006. *History*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/pamphlet/1IPHCHistoryPage.pdf>.

⁹⁷² International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

⁹⁷³ Williams, Greg. (2010). "Halibut Bycatch limits in the 2010 Alaska groundfish fishery." *IPHC Report of Assessment and Research Activities*. Retrieved September 12, 2012 from <http://www.iphc.washington.edu/publications/rara/2010/2010.299.Halibutbycatchlimitsinthe2010Alaskagroundfishfishery.pdf>.

⁹⁷⁴ Woodyby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁹⁷⁵ Sayer, Allison and Deidra Holum. September 2008. *The Southeast Alaska Southern Southeast Inside Sablefish Fishery Information Report with Outlook to the 2008 Fishery*. Alaska Dept. of Fish and Game, Fishery Management Report No. 08-44. Retrieved September 11, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidPDFs/fmr08-44.pdf>.

⁹⁷⁶ Fina, Mark. (2011). "Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific." *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

waters in recent decades, but effort has declined since 1999.⁹⁷⁷

State crab fisheries in Southeast Alaska target red, golden, and blue king crab, Tanner crab, and Dungeness crab.⁹⁷⁸ The first commercial harvest of Dungeness crab in Southeast Alaska took place in the 1930s.⁹⁷⁹ Harvests of king and Tanner crab were not reported in Southeast Alaska until the 1960s.^{980,981} Dive fisheries for geoduck, sea cucumber, and sea urchin began to grow in Southeast Alaska in recent decades.⁹⁸² The impact of an increasing sea otter population in Southeast Alaska on stocks of Dungeness crab, sea cucumber, and sea urchin has led to significant economic losses in these fisheries in recent years.⁹⁸³ It is also important to note that the waters between Annette and Gravina Islands are included in a Dive Fishery Research Control Area, and are closed year-round to harvest of sea cucumbers and sea urchins.⁹⁸⁴

The first northern shrimp (*Pandalus borealis*) trawl fishery began in Thomas Bay, approximately 100 miles north of Ketchikan, in 1915.⁹⁸⁵ Although fisheries for this species also began in other areas of the state, the Southeast trawl fishery was the longest-lived and most stable fishery. The fishery peaked in the 1950s. Harvests began to decline in the late 1990s due to heavy competition from shrimp products originated in the Atlantic and the Pacific Northwest, and the market for northern shrimp finally collapsed with the closure of the only processing facility in Petersburg in the 2005-2006 season. Today, the Southeast Alaska shrimp trawl fishery is primarily directed toward sidestripe shrimp (*Pandalopsis dispar*), a larger and more valuable species.⁹⁸⁶ A spot shrimp (*Pandalus platyceros*) fishery has also grown in Southeast Alaska since the 1990s.⁹⁸⁷

Herring fisheries began in Southeast Alaska in the 1880s, with original production oriented toward herring oil and herring meal. Catch of herring for bait began around 1900, and sac roe fisheries developed in the 1970s. In Southeast Alaska, bait herring fisheries take place

⁹⁷⁷ See footnote 974.

⁹⁷⁸ Ibid.

⁹⁷⁹ Messmer, Adam, Gretchen Bishop, Chris Siddon, and Joe Stratman. November 2011. *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat Dungeness Crab Fisheries*. Alaska Dept. of Fish and Game Fishery Management Report No. 11-62. Retrieved September 12, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-62.pdf>.

⁹⁸⁰ Stratman, Joe, Gretchen Bishop, Adam Messmer, and Chris Siddon. November 2011. *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat Tanner Crab Fisheries*. Alaska Dept. of Fish and Game Fishery Management Report No. 11-57. Retrieved September 12, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-57>.

⁹⁸¹ Stratman, Joe, Adam Messmer, Gretchen Bishop, Chris Siddon, and Andrew Olson. December 2011. *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat King Crab Fisheries*. Alaska Dept. of Fish and Game Fishery Management Report No. 11-57. Retrieved September 12, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/FMR11-68.pdf>.

⁹⁸² See footnote 974.

⁹⁸³ McDowell Group. November 2011. *Sea Otter Impacts on Commercial Fisheries in Southeast Alaska*. Prepared for Southeast Alaska Regional Dive Fisheries Association. Retrieved September 11, 2012 from <http://www.scribd.com/doc/74857876/MCDOWELL-GROUP-2011-Sea-Otter-Impacts-Report>.

⁹⁸⁴ Alaska Dept. of Fish and Game, Marine Protected Areas Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

⁹⁸⁵ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹⁸⁶ Alaska Dept. of Fish and Game. 2012. *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=northernshrimp.printerfriendly>.

⁹⁸⁷ See footnote 974.

during the winter each year, while roe is harvested in the spring. Bait and sac roe fisheries use purse seine and set gillnet gear, and roe is also harvested in spawn-on-kelp closed-pound fisheries.⁹⁸⁸ A “closed-pound” is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.⁹⁸⁹

According to the 2011 AFSC survey, community leaders reported that Ketchikan does not participate directly in fisheries management processes in Alaska, but relies on regional organizations, including the Southeast Conference, to provide information on fisheries management issues. When asked to describe current challenges for Ketchikan’s fishing economy, community leaders responded that upkeep of existing infrastructure and construction of desired new infrastructure are both challenges with limited funds. When asked to describe the effects of past policies or management actions on Ketchikan, community leaders responded that the shift to a catch share system in the halibut fishery and lower limits for charter trips have had the greatest negative impact. They expressed that this impact has been felt by fishermen, sport fish lodges, and also local air carriers who have seen a reduction in traffic to area lodges. Community leaders also expressed that fishermen are concerned about the Marine Mammal Protection Act, and feel they do not have input on management decisions over marine mammals.

Ketchikan is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is “Southeast Outside.” Ketchikan is not eligible to participate in the Community Quota Entity program or the Community Development Quota program.

Processing Plants

Ketchikan is a popular center for fish processing and storage. In 2010, there were 9 shore-based processors and 76 fish buyers and tenders in Ketchikan. According to a survey of plant managers conducted by the AFSC in 2011, the recent boom in the local tourism industry has led to some difficulty for processing facilities to hire locally, suggesting that jobs related to tourism soak up the local labor force. According to the plant managers interviewed, this has led some local processors to rely heavily on employees from the Federal J-1 guestworker program. A J-1 visa is a non-immigrant visa issued by the U.S. to exchange visitors seeking work experience in the U.S.⁹⁹⁰

One of Alaska General Seafood’s three Alaska processing plants is located in Ketchikan on Revillagigedo Island. The present Ketchikan facility dates back to 1905, and in the past it has been among the biggest salmon processing plants in Alaska. The plant burned down and was rebuilt in 1994. Ownership has transferred hands several times in its history and in 1999 three companies combined to form Alaska General Seafoods, the plant’s present owner. The facility is open to harvest fish from the Southeast Alaskan salmon run between June and the end of September. The plant is a five-line cannery that processes all five species of salmon.⁹⁹¹ The plant

⁹⁸⁸ Ibid.

⁹⁸⁹ Alaska Dept. of Fish and Game. (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

⁹⁹⁰ U.S. Dept. of State. (n.d.). *J-1 Visa Exchange Visitor Program: Programs*. Retrieved September 12, 2012 from <http://j1visa.state.gov/programs/>.

⁹⁹¹ Alaska Seafood Marketing Institute. (2011). *Suppliers Directory*. Retrieved October 17, 2011 from <http://www.alaskaseafood.org/industry/suppliers/index.cfm>.

employs up to 285 workers in July and August.⁹⁹²

In 1950, Can Alaska Seafoods Inc./E.C. Phillips and Sons Inc. built a waterfront processing facility in Ketchikan. All five species of wild Alaska salmon⁹⁹³ are processed at the Ketchikan plant and the facility operates year round. During the summer and fall the plant employs between 200-250 workers to keep up with deliveries of halibut, sablefish, and salmon. Company housing is available on site for approximately 130 workers.⁹⁹⁴

Since 1987, Ketchikan has been home to a Trident Seafoods processing facility that produces approximately 500,000 cases of canned salmon per year. According to a survey of plant managers conducted by the AFSC in 2011, the facility operates from June until the end of September and exclusively processes and cans salmon. The product is primarily pink salmon. The plant manager also reported that the facility employs up to 80 workers in July and August and between 20 and 50 workers during the rest of the year.

In 2000, Gateway Seafood and Smokehouse opened and processes mainly sport caught fish, but also processes small quantities of commercial caught fish. They are a seasonal operation, open between late May and December, and employ between 15 and 20 workers from June through September.⁹⁹⁵ Absolute Fresh Seafoods Inc. was founded in 2003 and is a family-owned operation based in Sitka. ADF&G's 2010 Intent to Operate list shows that Absolute Fresh Seafoods has fish processing operations in both Craig and Ketchikan, but no information about their facilities in either Craig or Ketchikan was available on the company website. Absolute Fresh Seafoods processes salmon (Chinook, coho), crab (king, Dungeness), spot prawns, and scallops.⁹⁹⁶

According to the AFSC community survey conducted in 2011, community leaders indicated that fish processors in Ketchikan are expanding operations as a result of local efforts to provide cost-effective services, especially low electrical costs.

Fisheries-Related Revenue

From 2000 to 2010, the City of Ketchikan received between \$1,251,247 and \$1,750,432 in fisheries-related revenue from selected taxes and fees. These revenue sources include the Fisheries Resource Landing Tax, a raw fish tax, and fees for fishing gear storage on public land. In the 2011 AFSC survey, community leaders indicated that harbor maintenance is at least partially funded by these revenue sources. Table 3 presents details of these selected aspects of community finances from 2000 to 2010.⁹⁹⁷

⁹⁹² Alaska General Seafoods. (n.d.). *Company profile*. Retrieved October 17, 2011 from http://www.akgen.com/locations/index_ketchikan.asp.

⁹⁹³ See footnote 991.

⁹⁹⁴ E.C. Phillips and Sons Inc. (n.d.). *Company profile*. Retrieved October 17, 2011 from <http://www.ecphillipsalaska.com>.

⁹⁹⁵ Gateway Seafood and Smokehouse. (n.d.). *Company profile*. Retrieved October 17, 2011 from <http://www.gatewaysmokehouse.com>.

⁹⁹⁶ Absolute Fresh Seafoods. (n.d.). *Company profile*. Retrieved October 17, 2011 from <http://www.absolutefreshseafoods.com/Pages/whoweare.html>.

⁹⁹⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Ketchikan residents are highly involved in a majority of Alaskan commercial fisheries, including salmon, halibut, groundfish, sablefish, herring, crab, and ‘other shellfish.’ Between 2000 and 2010, they were active in these fisheries as permit and quota share account holders, crew license holders, and vessel owners. In addition, the community of Ketchikan is one of the leading processing communities in Alaska, ranking 5th in landings and 9th in ex-vessel revenue out of 67 Alaskan ports that received landings in 2010. That year, 76 fish buyers were present locally, and 8 shore-side processing facilities were in operation. The total net poundage of landings in 2010 was 96,286,216, almost 11 times the 2000 total landings of 8,858,581 net pounds. The ex-vessel value of landings increased by approximately 6 times over the same period indicating that the overall value of landings per pound diminished slightly between 2000 and 2010 (Table 5).

Although overall fisheries landings and revenue increased in Ketchikan between 2000 and 2010, the number of crew license holders and vessel owners showed a decreasing trend over the decade. In 2000, there were 482 crew license holders and 547 vessels were primarily owned by residents, and by 2010, 390 Ketchikan residents held crew licenses and 306 vessels were primarily owned by residents. The number of vessels homeported in the community also decreased, from 557 in 2000 to 355 in 2010. In contrast, the number of vessels landing catch in Ketchikan increased substantially over the period, from 420 in 2000 to 730 in 2010. These details of the commercial fishing sector in Ketchikan are presented in Table 5.

In a survey conducted by the AFSC in 2011, community leaders echoed the data reported above, indicating that there were more commercial fishing boats in Ketchikan in 2011 compared to five years earlier. Community leaders reported that a wide variety of commercial fishing vessels use Ketchikan as a base of operations during the fishing season, including many vessels over 125 feet in length. The most common gear types associated with vessels homeported in Ketchikan are purse seine, troll, gillnet, longline, and pots. They reported that the fleet also includes dive boats and tenders. Community leaders also reported that the peak of fishing activity takes place during summer months during salmon season, with salmon seine boats operating from June through September and salmon gillnetters operating from May through September.

In 2010, 558 residents of Ketchikan held a total of 829 state commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Of these, 415 were salmon permits (50.1% of total CFEC permits), 204 were ‘other shellfish’ permits (24.6%), 89 were for herring (10.7%), 59 were for halibut (7.1%), 25 for groundfish (3%), 19 for sablefish (2.3%), and 18 for crab (2.2%). Also in 2010, 41 Ketchikan residents held a total of 44 federal License Limitation Permits (LLP) for groundfish and 27 individual held a total of 27 Federal Fisheries Permits (FFP). Permit numbers between 2000 and 2010 are presented in Table 4, and further details regarding state and federal permits are included below.

Of 415 salmon CFEC permits held by Ketchikan residents in 2010, 269 were statewide handtroll permits, 68 were for statewide power gurdy troll gear, 36 were for Southeast Alaska drift gillnet, 32 were Southeast Alaska purse seine permits, 4 were Bristol Bay drift gillnet permits, and 1 was held in the Yakutat set gillnet fishery. In addition, five ‘special harvest area’ (hatchery) permits were held in 2010. Overall, 37% of these salmon permits were actively fished in 2010. This overall percentage is affected by the low percentage of hand troll permits fished (15.6%) in 2010. The percentage of permits fished in other fisheries was much higher, with

88.9% of Southeast drift gillnet permits active in 2010, 76.5% of power gurdy troll permits active, 75% of Bristol Bay drift gillnet permits active, and 65.6% of Southeast purse seine permits actively fished that year. It is also important to note that a small number of salmon permits were held by Ketchikan residents in the Peninsula-Aleutians, Prince William Sound, and Kodiak purse seine fisheries in some years during the 2000-2010 period. The number of salmon permit holders and the total salmon permits held increased slightly between 2000 and 2010.

In 2010, ‘other shellfish’ CFEC permits were held in sea cucumber, geoduck, shrimp, and sea urchin fisheries. The greatest number (88) were held in the Southeast sea cucumber dive fishery, while 48 permits were held in Southeast geoduck dive fisheries (including fisheries for wild and farmed geoduck stocks), 44 Southeast shrimp pot gear permits were held, and 24 permits were held in the Southeast sea urchin dive fishery. Overall, 52% of these shellfish permits were actively fished in 2010. A slightly higher percentage of geoduck and sea cucumber permits were actively fished (64.6% and 59.1%, respectively) than shrimp or sea urchin permits (36% and 29%, respectively). It is important to note that Ketchikan residents also held permits in several additional ‘other shellfish’ fisheries in previous years of the 2000-2010 period. These included statewide clam permits (shovel and mechanical digger), octopi/squid permits associated with pot gear and dive gear, and occasional statewide sea urchin and sea cucumber permits, excluding the Southeast region. The number of ‘other shellfish’ permit holders and total ‘other shellfish’ permits held increased between 2000 and 2010, while the percentage of permits actively fished appears to have decreased slightly.

Of 89 total herring CFEC permits, 50 were held and 17 actively fished in the southern Southeast spawn on kelp fishery, 17 were held and 16 actively fished in the northern Southeast spawn on kelp fishery, and 18 were held and 9 actively fished in the Southeast roe and food/bait gillnet fishery. In addition, between one and three permits were held by Ketchikan residents in each of the following herring fisheries around the state in 2010: Norton Sound gillnet (three held, zero actively fished), Kodiak roe herring gillnet (two held, zero actively fished), Bristol bay roe herring gillnet (one held, not actively fished), Southeast bait/food purse seine (one held, not actively fished), Southeast bait/food closed pound fishery (one held, not actively fished), and Cook Inlet roe and food/bait purse seine (one held, not actively fished). The number of herring permits held by Ketchikan residents decreased between 2000 and 2010, while the number of permit holders did not show a consistent increasing or decreasing trend.

Of 59 halibut CFEC permits, a majority (57) were held in the statewide longline fishery using vessels under 60 feet in length, 1 was held in the statewide mechanical jig fishery, and 1 was held for statewide hand troll. Overall, 76% were actively fished in 2010. Both the number of halibut permits held and the number of permit holders decreased by approximately 40% between 2000 and 2010, while the percentage of permits actively fished remained relatively stable over the period.

Ketchikan’s involvement in state groundfish fisheries showed a significant decreasing trend over the 2000-2010 period, from 46 permit holders holding 75 groundfish CFEC permits in 2000 to 18 permit holders holding 25 groundfish CFEC permits in 2010. The percentage of permits actively fished also declined, from 20% in 2000 to 8% by 2010. Of the 25 groundfish permits held in 2010, 15 were held in demersal shelf rockfish fisheries, 9 in fisheries for miscellaneous saltwater finfish, and 1 was held for lingcod. Demersal shelf rockfish permits were held in the Southeast longline fishery, including 12 for use on vessels under 60 feet and 2 for vessels over 60 feet in length, and the final permit was held in the Southeast hand troll/hand line fishery. Only 1 of these 12 demersal shelf rockfish permits was actively fished in 2010.

Miscellaneous saltwater finfish permits were associated with longline and hand troll gear for use in the Gulf of Alaska, and two for statewide use. Of nine total saltwater finfish permits, one was actively fished in 2010. The statewide lingcod permit was associated with dinglebar troll gear, and was not actively fished in 2010. It is important to note that a wider variety of groundfish permits were held by Ketchikan residents during earlier years of the 2000-2010 period, including demersal shelf rockfish permits associated with mechanical jig and dinglebar troll gear, and saltwater finfish permits associated with pot gear, dinglebar troll, and mechanical jig gear.

All of the 19 sablefish CFEC permits held in 2010 were held in fisheries using longline gear, including 8 for southern Southeast, 5 were for northern southeast, and 6 were for statewide use, excluding the Southeast region. Overall, 95% of sablefish permits were actively fished in 2010. The number of Ketchikan permit holders and the number of sablefish permits held decreased by one third between 2000 and 2010.

Of 18 crab CFEC permits held by Ketchikan residents in 2010, a majority were for Dungeness crab fisheries (15 held, 5 actively fished). In addition, one permit was held for southeast red/blue king or Tanner crab, and two were held in the Southeast Tanner crab pot fishery. All three of these permits were actively fished in 2010. The number of crab permits held and the number of permit holders both decreased by one-third between 2000 and 2010, and the percentage of total crab permits actively fished also declined slightly. The most common gear associated with these permits was pot gear, although several Dungeness crab permits were associated with ring nets or dive gear.

In addition to CFEC permits, Ketchikan residents also held federal License Limitation Program (LLP) permits in groundfish fisheries and Federal Fisheries Permits (FFP), while no crab LLPs were held by Ketchikan residents during the 2000-2010 period. Between 2000 and 2010, the number of groundfish LLPs held stayed relatively stable, fluctuating between 42 and 48 per year. The percentage of groundfish LLP permits actively fished declined slightly over the period, from 47% in 2000 to 38% in 2010. During the same period, the number of FFP permits held varied between 25 and 42, and did not show a consistent increasing or decreasing trend. The percentage of FFPs that were actively fished increased from 0% in 2000 to 63% in 2010. This information about federal permits is presented in Table 4, along with CFEC permit statistics.

In addition to state and federal permits, between 2000 and 2010, Ketchikan residents held quota share accounts and quota shares in federal catch share fisheries for halibut and sablefish, while no quota share account were held in the federal crab catch share fisheries. The number of halibut quota share account holders in Ketchikan was 118 in the year 2000, declining to 75 by 2010. The total number of quota shares held also decreased over the period, from 5,830,642 held in 2000 to 3,974,659 in 2010. The overall halibut Individual Fishing Quota (IFQ) allotment for account holders in Ketchikan initially increased to 33% higher than 2000 levels in 2005, before decreasing to 38% below 2000 levels by 2010. Information about federal halibut catch share participation is presented in Table 6. The number of sablefish quota share account holders in also decreased over the period, from 20 in 2000 to 9 account holders in 2010. The number of quota shares held also decreased, from 2,471,368 in 2000 to 1,396,553 in 2010. The overall sablefish IFQ allotment increased to 10% above 2000 levels in 2004, before decreasing to approximately 30% below 2000 levels in 2010. Information about federal sablefish catch share participation is presented in Table 7. Table 8 shows the lack of crab quota share accounts held in Ketchikan between 2005 and 2010.

Of the landings reported between 2000 and 2010, the species landed in the greatest volume in Ketchikan (of the data that can be reported) were salmon, ‘other shellfish’, and

halibut. All information about landings of finfish, herring, pollock, and sablefish in Ketchikan between 2000 and 2010 is considered confidential due to the small number of participants, and data for some years is considered confidential for Pacific cod, ‘other groundfish’, and halibut. On average between 2000 and 2010, 66,278,638 net pounds of salmon and 2,764,579 net pounds of ‘other shellfish’ were landed in Ketchikan, valued on average at \$21,438,455 and \$3,564,899, respectively, in ex-vessel revenue. For those years in which data can be reported for halibut, ‘other groundfish’, and Pacific cod, an average of 531,384 net pounds of halibut, 130,446 net pounds of ‘other groundfish’, and 13,446 net pounds of cod were landed. These landings were valued, on average, at \$1,554,904, \$90,795, and \$4,668, respectively. Salmon landings accounted for approximately 86% of total ex-vessel value of landings in Ketchikan during the 2000-2010 period. It is also important to note that, although a lower percentage of total ex-vessel revenue was generated by halibut landings, the value of halibut in dollars/pounds landed was the highest of all landings that can be reported in Ketchikan. Information about landings and ex-vessel revenue in Ketchikan is presented in Table 9.

In addition to the landings delivered in Ketchikan by fishermen from many communities, landings and ex-vessel revenue earned by Ketchikan vessel owners is of note. Ketchikan vessel owners made deliveries in many locations around Alaska between 2000 and 2010. Information can be reported regarding their landings in all fisheries for all years, with the exception of finfish and pollock, for which information is considered confidential in all years due to the small number of participants. The fisheries with the greatest landings volumes by Ketchikan vessel owners were for salmon, herring, ‘other shellfish’, and halibut. On average between 2000 and 2010, Ketchikan vessel owners landed 21,769,041 net pounds of salmon, valued at \$7,143,133 in ex-vessel revenue on average over the period. The next greatest volume of deliveries was herring, with an average of 2,504,936 net pounds landed per year, and average ex-vessel revenue of \$1,136,578. ‘Other shellfish’ deliveries by Ketchikan vessel owners averaged 1,437,937 net pounds per year, with average ex-vessel revenue of \$2,286,773. Halibut landings averaged 709,550 net pounds, for an average ex-vessel revenue of \$2,235,935 per year. In addition, Ketchikan vessel owners landed, on average, 407,807 net pounds of crab, 356,510 net pounds of sablefish, 301,403 net pounds of Pacific cod, and 101,043 net pounds of ‘other groundfish’ per year. Although halibut and sablefish landings by Ketchikan vessel owners were not among the highest in terms of landed volume, these two species had the greatest average price per pound of all species during the 2000-2010 period. ‘Other shellfish’ was the third most lucrative in dollars/pound. Information about landings made by Ketchikan vessel owners is presented in Table 10.

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Table 3. Known Fisheries-Related Revenue (in U.S. dollars) Received by the City of Ketchikan: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$328,763	\$253,049	\$250,000	\$141,7580	\$142,925	\$181,411	\$194,279	\$234,757	\$254,398	\$218,560	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	\$310,113	\$352,768	\$264,438	\$296,949	\$156,072	\$163,836	\$202,800	\$215,125	\$246,374	\$274,872	\$230,017
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	\$890,150	\$892,750	\$861,250	\$901,600	\$850,861	\$906,000	\$1,021,700	\$1,102,145	\$1,169,300	\$1,257,000	\$1,421,000
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$1,529,026</i>	<i>\$1,498,567</i>	<i>\$1,375,688</i>	<i>\$2,616,129</i>	<i>\$1,149,858</i>	<i>\$1,251,247</i>	<i>\$1,418,779</i>	<i>\$1,552,027</i>	<i>\$1,670,072</i>	<i>\$1,750,432</i>	<i>\$1,651,017</i>
<i>Total municipal revenue⁵</i>	<i>\$49,780,610</i>	<i>\$52,427,851</i>	<i>\$53,517,100</i>	<i>\$57,397,437</i>	<i>\$66,503,598</i>	<i>\$61,292,805</i>	<i>\$70,378,764</i>	<i>\$79,197,945</i>	<i>\$85,952,238</i>	<i>\$79,716,222</i>	<i>\$97,173,689</i>

Note: n/a indicates that no data was reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Ketchikan: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	48	47	44	43	42	42	45	44	44	44	44
	Active permits	23	24	19	22	21	19	19	17	16	15	17
	% of permits fished	47%	51%	43%	51%	50%	45%	42%	38%	36%	34%	38%
	Total permit holders	45	45	41	40	39	39	42	41	41	41	41
Crab (LLP) ¹	Total permits	1	1	1	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a
	Active permits	n/a	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a
	% of permits fished	n/a	n/a	n/a	n/a	n/a	100%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	1	1	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a
Federal Fisheries Permits ¹	Total permits	34	34	35	25	25	26	27	42	42	26	27
	Fished permits	n/a	n/a	n/a	18	19	17	18	20	19	16	17
	% of permits fished	n/a	n/a	n/a	72%	76%	65%	67%	48%	45%	62%	63%
	Total permit holders	33	33	34	24	24	25	27	42	42	26	27
Crab (CFEC) ²	Total permits	33	27	26	24	24	24	23	21	19	18	18
	Fished permits	21	16	16	17	14	12	9	11	9	9	8
	% of permits fished	64%	59%	62%	71%	58%	50%	39%	52%	47%	50%	44%
	Total permit holders	29	25	22	23	23	25	23	19	19	18	19
Other shellfish (CFEC) ²	Total permits	195	223	183	190	187	186	204	198	200	200	204
	Fished permits	128	115	108	121	121	112	113	94	88	93	106
	% of permits fished	66%	52%	59%	64%	65%	60%	55%	47%	44%	47%	52%
	Total permit holders	133	148	143	144	140	136	151	146	147	152	152
Halibut (CFEC) ²	Total permits	99	100	101	93	86	85	82	77	67	61	59
	Fished permits	77	69	78	72	66	62	67	61	49	42	45
	% of permits fished	78%	69%	77%	77%	77%	73%	82%	79%	73%	69%	76%
	Total permit holders	97	98	99	91	84	83	81	76	66	60	58
Herring (CFEC) ²	Total permits	105	112	123	125	117	107	98	102	98	90	89
	Fished permits	40	49	63	75	77	51	33	43	57	60	48
	% of permits fished	38%	44%	51%	60%	66%	48%	34%	42%	58%	67%	54%
	Total permit holders	66	70	73	73	74	68	64	69	71	66	63

Table 4 cont'd. Permits and Permit Holders by Species, Ketchikan: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	31	29	29	24	25	26	26	25	22	16	19
	Fished permits	30	28	28	24	24	22	25	21	20	15	18
	% of permits fished	97%	97%	97%	100%	96%	85%	96%	84%	91%	94%	95%
	Total permit holders	29	26	24	22	23	24	24	20	22	19	20
Groundfish (CFEC) ²	Total permits	75	69	66	63	61	56	43	33	31	25	25
	Fished permits	15	15	19	20	3	4	3	1	3	5	2
	% of permits fished	20%	22%	29%	32%	5%	7%	7%	3%	10%	20%	8%
	Total permit holders	46	50	44	44	39	40	29	24	23	17	18
Other Finfish (CFEC) ²	Total permits	5	4	1	1	1	n/a	n/a	n/a	n/a	n/a	n/a
	Fished permits	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	5	4	1	1	1	n/a	n/a	n/a	n/a	n/a	n/a
Salmon (CFEC) ²	Total permits	392	392	398	393	385	406	414	406	413	409	415
	Fished permits	134	135	126	123	124	142	150	142	142	147	153
	% of permits fished	34%	34%	32%	31%	32%	35%	36%	35%	34%	36%	37%
	Total permit holders	373	376	385	377	370	382	383	378	386	382	391
<i>Total CFEC Permits</i> ²	<i>Permits</i>	<i>935</i>	<i>956</i>	<i>927</i>	<i>913</i>	<i>886</i>	<i>890</i>	<i>890</i>	<i>862</i>	<i>850</i>	<i>819</i>	<i>829</i>
	<i>Fished permits</i>	<i>445</i>	<i>427</i>	<i>438</i>	<i>452</i>	<i>429</i>	<i>405</i>	<i>400</i>	<i>373</i>	<i>368</i>	<i>371</i>	<i>380</i>
	<i>% of permits fished</i>	<i>48%</i>	<i>45%</i>	<i>47%</i>	<i>50%</i>	<i>48%</i>	<i>46%</i>	<i>45%</i>	<i>43%</i>	<i>43%</i>	<i>45%</i>	<i>46%</i>
	<i>Permit holders</i>	<i>534</i>	<i>551</i>	<i>548</i>	<i>542</i>	<i>533</i>	<i>547</i>	<i>560</i>	<i>550</i>	<i>558</i>	<i>552</i>	<i>558</i>

Note: n/a indicates that no data was reported for that year. Cells showing – indicate that the data is considered confidential.

¹ National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Ketchikan: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Ketchikan ²	Total Net Pounds Landed in Ketchikan ^{2,5}	Total Ex-Vessel Value of Landings in Ketchikan ^{2,5}
2000	482	80	11	352	557	420	8,858,581	\$9,105,152
2001	445	74	11	356	562	537	25,609,399	\$11,359,204
2002	408	44	7	349	543	504	79,797,790	\$16,206,430
2003	364	49	12	323	529	490	90,361,239	\$21,077,437
2004	337	86	12	326	526	647	91,333,538	\$25,503,542
2005	331	87	8	261	386	636	99,337,024	\$27,952,323
2006	326	81	8	249	358	542	53,964,154	\$26,515,328
2007	338	69	6	237	341	576	81,492,684	\$34,937,834
2008	323	79	6	241	347	617	71,967,235	\$44,447,325
2009	352	70	7	238	352	666	82,843,311	\$41,936,464
2010	390	76	9	237	355	730	96,286,216	\$54,783,280

Note: n/a indicates that no data was reported for that year. Cells showing – indicate that the data is considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Ketchikan: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	118	5,830,642	770,792
2001	117	5,881,458	835,421
2002	114	5,231,182	733,429
2003	113	5,068,334	706,555
2004	105	4,979,137	844,744
2005	100	4,675,364	820,916
2006	100	4,997,423	848,976
2007	92	4,779,551	680,481
2008	83	4,218,029	464,412
2009	81	4,154,257	380,598
2010	75	3,974,659	325,150

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Ketchikan: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	20	2,471,368	255,102
2001	17	2,577,151	248,230
2002	14	2,433,579	231,360
2003	12	1,856,288	194,462
2004	12	1,618,828	183,336
2005	11	1,530,489	168,446
2006	12	1,669,141	167,434
2007	11	1,535,221	152,258
2008	11	1,415,722	128,105
2009	10	1,397,173	110,109
2010	9	1,396,553	101,386

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Ketchikan: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue by Species in Ketchikan: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	638,784	780,806	606,247	566,325	550,031	450,828	492,311	388,230	308,897	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	207,140	202,617	180,435	168,523	86,364	84,733	91,695	91,060	--	84,662	108,133
Other Shellfish	3,088,929	3,368,396	4,173,968	4,475,465	3,643,615	2,694,893	2,209,243	1,973,899	1,351,003	1,811,467	1,619,486
Pacific Cod	25,517	--	10,257	--	--	--	4,563	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	3,967,094	20,372,857	73,902,682	83,892,388	85,463,733	95,180,217	48,847,374	78,201,314	68,815,849	78,615,500	91,806,010
<i>Total²</i>	<i>8,858,581</i>	<i>25,609,399</i>	<i>79,797,790</i>	<i>90,361,239</i>	<i>91,333,538</i>	<i>99,337,024</i>	<i>53,964,154</i>	<i>81,492,684</i>	<i>71,967,235</i>	<i>82,843,311</i>	<i>96,286,216</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$1,619,306	\$1,682,965	\$1,315,924	\$1,617,546	\$1,656,520	\$1,344,521	\$1,830,561	\$1,631,906	\$1,294,887	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$170,430	\$130,468	\$149,282	\$127,470	\$58,255	\$43,603	\$59,827	\$53,168	--	\$53,713	\$61,731
Other Shellfish	\$4,294,158	\$3,026,472	\$2,365,506	\$3,174,452	\$4,138,337	\$3,502,664	\$3,751,374	\$4,188,659	\$2,104,216	\$4,739,678	\$3,928,368
Pacific Cod	\$11,309	--	\$1,862	--	--	--	\$833	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$1,303,662	\$4,541,907	\$10,928,385	\$13,540,093	\$17,922,999	\$21,567,385	\$19,182,354	\$27,474,656	\$38,362,693	\$33,953,757	\$47,045,119
<i>Total²</i>	<i>\$9,105,152</i>	<i>\$11,359,204</i>	<i>\$16,206,430</i>	<i>\$21,077,437</i>	<i>25,503,542</i>	<i>\$27,952,323</i>	<i>\$26,515,328</i>	<i>\$34,937,834</i>	<i>\$44,447,325</i>	<i>\$41,936,464</i>	<i>\$54,783,280</i>

Note: n/a indicates that no data was reported for that year. Cells showing -- indicate that the data is considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, of Ketchikan residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	397,004	327,309	488,111	392,157	400,867	245,917	294,099	968,051	717,915	96,424	158,023
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	780,116	818,782	708,906	776,764	895,258	900,908	882,621	755,728	483,650	431,514	370,805
Herring	1,887,536	2,047,637	3,371,529	2,039,672	2,267,046	2,675,371	2,668,259	2,017,394	2,531,681	2,858,101	3,190,065
Other Groundfish	183,070	142,903	128,812	130,721	74,162	83,593	83,720	75,652	69,263	66,708	72,867
Other Shellfish	1,529,432	1,629,983	2,336,747	2,022,915	1,499,508	1,466,832	1,398,763	1,073,455	944,741	1,040,123	874,805
Pacific Cod	637,588	8,080	394,399	542,611	512,904	586,402	143,814	402,284	78,696	4,453	4,198
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	457,392	457,626	436,673	432,413	306,187	241,359	319,415	293,778	379,570	241,151	356,043
Salmon	15,623,820	26,149,208	19,214,227	26,704,378	29,169,268	30,373,516	17,343,352	24,634,430	14,167,852	19,154,523	16,924,872
<i>Total²</i>	<i>21,500,892</i>	<i>31,547,318</i>	<i>27,072,274</i>	<i>33,030,408</i>	<i>35,113,065</i>	<i>36,566,217</i>	<i>23,119,083</i>	<i>30,181,617</i>	<i>19,332,188</i>	<i>23,833,144</i>	<i>21,976,105</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$911,314	\$721,865	\$1,077,642	\$1,001,577	\$957,831	\$483,386	\$841,958	\$2,051,309	\$1,240,830	\$181,956	\$223,928
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$2,000,443	\$1,741,489	\$1,551,182	\$2,216,932	\$2,688,384	\$2,744,543	\$3,310,150	\$3,243,852	\$2,069,514	\$1,319,020	\$1,709,773
Herring	\$551,628	\$711,075	\$1,446,590	\$994,743	\$1,024,575	\$858,469	\$822,019	\$1,393,018	\$1,845,138	\$1,445,753	\$1,409,343
Other Groundfish	\$126,878	\$96,899	\$106,342	\$98,855	\$50,205	\$53,014	\$63,342	\$46,584	\$47,577	\$45,130	\$46,327
Other Shellfish	\$1,883,049	\$1,439,680	\$1,471,701	\$1,908,020	\$2,411,266	\$2,247,309	\$2,508,389	\$2,663,230	\$2,056,484	\$3,101,183	\$3,464,197
Pacific Cod	\$11,981,111	\$12,609,087	\$10,434,538	\$12,322,064	\$14,572,823	\$14,349,613	\$16,257,427	\$19,646,591	\$18,181,279	\$15,598,013	\$17,791,524
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$1,300,166	\$1,267,884	\$1,137,680	\$1,173,720	\$702,878	\$597,416	\$965,912	\$900,644	\$1,195,735	\$754,341	\$1,362,507
Salmon	\$5,005,787	\$6,627,777	\$3,550,749	\$4,766,014	\$6,615,204	\$7,182,696	\$7,683,450	\$9,141,641	\$9,677,404	\$8,749,123	\$9,574,618
<i>Total²</i>	<i>\$11,952,223</i>	<i>\$12,570,853</i>	<i>\$10,426,178</i>	<i>\$12,308,573</i>	<i>\$14,552,549</i>	<i>\$14,337,842</i>	<i>\$16,220,428</i>	<i>\$19,524,916</i>	<i>\$18,066,922</i>	<i>\$15,418,798</i>	<i>\$17,671,015</i>

Note: n/a indicates that no data was reported for that year. Cells showing -- indicate that the data is considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Ketchikan is a large sportfishing hub, attracting fisherman from all over the world. In the 2011 AFSC survey, community leaders indicated that sportfishing is one of the key industries upon which the local economy depends. They noted that majority of local sport fishermen use private boats, while visitors primarily access sportfishing through charters. They also indicated that the most important sport species for fishermen out of Ketchikan include pink, chum, coho, and Chinook salmon, halibut, rockfish, crab, shrimp, and clams. Community leaders also noted that charter operators in Ketchikan have been negatively affected by declining halibut bag limits for fishing charters.

In 2010, there were 71 active sport fish businesses registered in Ketchikan, and 146 licensed sport fish guides were present. The number of businesses and guides remained relatively stable over the 2000-2010 period, with only a slight declining trend. A total of 5,403 sportfishing licenses were sold to residents of Ketchikan in 2010 (irrespective of the location of the point of sale). In comparison, a total of 33,183 sportfishing licenses were sold in the City of Ketchikan, indicating a large influx of visitors to Ketchikan that are participating in recreational fishing activities (Table 11).

Ketchikan is located within Alaska Sport Fishing Survey Area A. Looking at this regional scale between 2000 and 2010, there was significantly greater saltwater sportfishing activity than freshwater, although both were important. The following numbers of saltwater angler days were recorded: between 30 and 50 thousand non-Alaska resident angler days per year and between 26 and 57 thousand Alaska resident angler days per year. With regard to freshwater sportfishing, Alaska residents fished between 3,295 and 9,128 angler days per year, while non-Alaska resident sport fishermen fished between 3,370 and 5,920 angler days per year (Table 11).

The Alaska Statewide Harvest Survey⁹⁹⁸ conducted by ADF&G between 2000 and 2010 noted the following species targeted by private anglers in Ketchikan: In saltwater, all five species of Pacific salmon as well as landlocked salmon were targeted, along with Dolly Varden, Pacific halibut, rockfish, lingcod, Pacific cod, and shark. The survey also noted sport harvest of Dungeness and Tanner crab, razor and hardshell clams, and shrimp by Ketchikan anglers in saltwater. In freshwater, Ketchikan anglers targeted all five species of Pacific salmon, rainbow trout, Dolly Varden char, cutthroat trout, Arctic grayling, and steelhead.

Kept/released statistics from charter logbook data reported by ADF&G⁹⁹⁹ show that salmon were by far the most important species targeted during fishing charter trips out of Ketchikan between 2000 and 2010, with an average of 28,483 pink, 21,589 coho, 4,447 Chinook, 2,215 chum, 162 sockeye, and 21,464 ‘other salmon’ kept per year. Pacific halibut and rockfish were the next most important charter species in terms of numbers, with an average of 7,655 Pacific halibut kept per year and an average of 6,886 total rockfish kept per year (including 1,783 pelagic rockfish, 1,550 yelloweye, and 3,552 ‘other rockfish’ kept on average per year). Other species caught during charter trips out of Ketchikan were lingcod, sablefish, and shark. Species

⁹⁹⁸ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁹⁹⁹ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

with the greatest release rates during charter fishing trips were, on average: 5,983 Chinook salmon released per year, with emphasis on release of smaller individuals, 2,620 Pacific halibut released per year, and 2,343 rockfish released per year (including pelagic, yelloweye, and other rockfish).

Table 11. Sport Fishing Trends, Ketchikan: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Ketchikan ²
2000	76	169	6,035	25,686
2001	82	172	5,779	25,472
2002	82	190	5,594	30,235
2003	83	181	5,586	39,734
2004	80	192	5,626	42,344
2005	81	164	5,604	42,344
2006	88	201	5,281	36,870
2007	86	189	5,280	39,385
2008	81	182	5,262	38,477
2009	69	146	5,398	33,813
2010	71	146	5,403	33,183

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	40,452	42,813	3,550	9,128
2001	37,054	32,446	4,673	6,745
2002	40,723	38,219	5,920	6,156
2003	36,096	30,347	4,525	5,082
2004	49,461	42,810	3,370	7,892
2005	52,717	34,966	4,984	4,854
2006	42,931	28,490	4,724	3,295
2007	50,001	26,364	4,391	4,289
2008	47,189	31,542	4,344	5,350
2009	44,074	57,006	4,655	8,224
2010	37,842	27,676	3,456	4,398

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest of marine resources was historically the foundation of the way of life of the Tlingit people living in the Ketchikan area. Fish traps, gaffs, and spears were used to catch salmon, one of the most important subsistence resources for the Tlingit people. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., ‘gumboot’ chitons), and sea plants (e.g., seaweed, beach asparagus and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas, and egg harvesting sites.^{1000 1001}

Today, both Native and non-Native residents of Ketchikan continue to participate in subsistence harvest activities. According to the 2011 AFSC survey, community leaders reported that salmon, halibut, and crab are three of the most important subsistence resources utilized by local residents. In addition, eulachon continue to be an important subsistence resource for Native residents. During a 2010 Subsistence Regional Advisory Council meeting, residents expressed concern about declines of eulachon in the Ketchikan area. Tlingit from the Ketchikan area traditionally harvested eulachon from the Nass, Unuk, Klahini, and Chickamin Rivers. Several Ketchikan residents expressed concern about overharvest and closure of eulachon fisheries.¹⁰⁰²

Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of households using different marine resources, or per capita harvest of subsistence resources by Ketchikan residents (Table 12). However, information is available from ADF&G regarding subsistence salmon permits and Subsistence Halibut Registration Certificates (SHARC) issued during the 2000-2010 period, and some information is also reported by various management agencies regarding subsistence harvest of marine mammals.

The number of subsistence salmon permits issued per year to Ketchikan households declined between 2000 and 2008, from 1,112 in the year 2000 to 235 in 2008. Sockeye salmon was the most heavily utilized species during this period, averaging 8,365 harvested per year. Significant numbers of pink and chum salmon were also harvested each year (averaging 1,255 and 1,220 per year, respectively), and a smaller number of coho and Chinook salmon were also harvested for subsistence purposes each year. This information about subsistence harvest of salmon is presented in Table 13.

Between 2003 and 2010, the number of Ketchikan residents that participated in the SHARC program varied between 603 and 1,098, and the number of SHARC cards returned each year varied between 127 and 239. The greatest subsistence harvest of halibut was reported in 2004, when 64,275 pounds of halibut were harvested on 239 SHARC cards (Table 14).

Some data are also available regarding marine mammal harvest by residents of Ketchikan between 2000 and 2010. According to data reported by the U.S. Fish and Wildlife Service and ADF&G, this harvest focused primarily on sea otter (average harvest of 38 per year) and harbor seal (average harvest of 71 per year), as well as a reported harvest of 2 sea lions in 2008. No

¹⁰⁰⁰ Alaska Native Heritage Center. (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

¹⁰⁰¹ Brock, Mathew, Philippa Coiley-Kenner and the Sitka Tribe of Alaska. (2009). *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

¹⁰⁰² Southeast Alaska Federal Subsistence Regional Advisory Council. (2010). “Meeting Minutes, Tuesday, March 16 through Thursday, March 18.” In *Fisheries Meeting Materials, September 28-30, 2010, Hoonah*. Retrieved September 11, 2012 from <http://alaska.fws.gov/asm/pdf/meetingbooks/sefall10/EntireBook.pdf>.

information was reported by management agencies regarding harvest of beluga whale, walrus, or spotted seal between 2000 and 2010. Information about subsistence harvest of marine mammals by Ketchikan residents is presented in Table 15.

Additional Information

The City of Ketchikan originally received its name from the creek that flows through the City. The word Ketchikan comes from the Tlingit word, *Kichxáan*. The meaning of this name is not clear. It may mean “the river belonging to Kitschk,” or possibly “thundering wings of an eagle.”¹⁰⁰³

According to a story told by Tlingit elders Ester Shea, Emma Williams, and Mickey Denney, Ketchikan Creek was utilized for salmon subsistence by the Cape Fox Kwaan until a marriage between a Cape Fox and a Tongass Tlingit, when use of the Creek was given as a wedding gift to the Tongass Kwaan.¹⁰⁰⁴

Ketchikan is home to the world’s largest collection of totem poles, which are found at Totem Bight State Historical Park north of the City, the Saxman Totem Park in Saxman, and in the Totem Heritage Center Museum in Ketchikan.¹⁰⁰⁵

¹⁰⁰³ Sealaska Heritage Institute. (2009). *Curriculum Unit 5: Southeast Alaska Communities*. Retrieved March 30, 2012 from http://www.sealaskaheritage.org/programs/language_and_culture_curriculum.htm.

¹⁰⁰⁴ Hoff, Don Jr. May 11, 2009. “Viewpoint: The Theft of Taan ta Kwaan Lands in Ketchikan.” *SitNews.us*. Retrieved September 10, 2012 from http://www.sitnews.us/0509Viewpoints/051109_don_hoff_jr.html.

¹⁰⁰⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 12. Subsistence Participation by Household and Species, Ketchikan: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Ketchikan: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1,112	964	394	2,486	148	1,780	20,856	n/a	n/a
2001	1,045	915	451	2,600	126	3,648	17,357	n/a	n/a
2002	763	673	410	1,388	98	2,438	10,025	n/a	n/a
2003	669	575	116	1,870	54	1,008	13,274	n/a	n/a
2004	334	290	75	1,159	11	513	3,699	n/a	n/a
2005	338	299	27	733	54	589	4,309	n/a	n/a
2006	328	279	215	428	11	345	2,773	n/a	n/a
2007	328	279	215	428	11	345	2,773	n/a	n/a
2008	235	182	6	171	68	282	870	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data was reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Ketchikan: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	806	191	38,221
2004	967	239	64,275
2005	928	236	47,226
2006	1,056	212	42,819
2007	1,098	205	34,598
2008	701	186	39,441
2009	626	214	37,170
2010	603	127	37,364

Note: n/a indicates that no data was reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Ketchikan: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	15	n/a	n/a	n/a	112	n/a
2001	n/a	48	n/a	n/a	n/a	13	n/a
2002	n/a	11	n/a	n/a	n/a	123	n/a
2003	n/a	84	n/a	n/a	n/a	78	n/a
2004	n/a	73	n/a	n/a	n/a	60	n/a
2005	n/a	31	n/a	n/a	n/a	73	n/a
2006	n/a	35	n/a	n/a	n/a	38	n/a
2007	n/a	56	n/a	n/a	n/a	78	n/a
2008	n/a	13	n/a	n/a	2	67	n/a
2009	n/a	12	n/a	n/a	n/a	n/a	n/a
2010	n/a	41	n/a	n/a	n/a	n/a	n/a

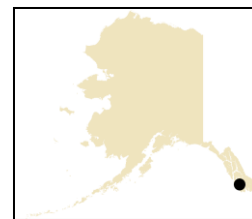
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Klawock (kla-WOCK)



People and Place

*Location*¹⁰⁰⁶

Klawock is located on the west coast of Prince of Wales Island (PWI), on Klawock Inlet, across from Klawock Island. It is 7 miles road north of Craig, 24 road miles from Hollis, and 56 air miles west of Ketchikan. The area encompasses 0.6 square miles of land and 0.3 square miles of water. Incorporated in 1929, Klawock is a first-class city, is located in the Prince of Wales-Hyder Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*¹⁰⁰⁷

In 2010, there were 755 residents, ranking Klawock 81st of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population increased by 4.6%. Between 2000 and 2009, the population declined by 8.43% with an average annual growth rate of -0.58; which was less than the statewide average of 0.75% and reflective of steady decline punctuated by slight variable increases.

Klawock is a mixed Tlingit and non-Native city. In 2010, 48.3% of residents identified themselves as American Indian or Alaska Native, compared to 50.9% in 2000; 38.4% identified themselves as White, compared to 41.0% in 2000; 0.5% identified themselves as Asian, compared to 0.5% in 2000; 0.3% identified themselves as Black or African American, compared to 0.0% in 2000; 0.1% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.1% in 2000; 11.8% identified themselves as two or more races, compared to 7.4% in 2000; and 0.5% identified themselves as some other race, compared to 0.1% in 2000. Information regarding trends in race and ethnicity can be found in Figure 1.

In 2010, the average household size in Klawock was 2.54, compared to 3.0 in 1990 and 2.73 in 2000. Also in 2010, there were a total of 363 housing units, compared to 281 in 1990 and 368 in 2000. Of the households surveyed in 2010, 51% were owner-occupied, compared to 56% in 2000; 31% were renter-occupied, compared to 29% in 2000; 11% were vacant, compared to 13% in 2000; and 7% were occupied seasonally, compared to 2% in 2000.

The gender distribution in Klawock was male biased in 2010 at 52.5% male and 47.5% female. This was similar to the distribution statewide (52.0% male, 48.0% female), and slightly more even than the distribution in 2000 (55.4% male, 44.6% female). The median age that year was 41.4 years, which was higher than both the statewide median of 33.8 and 2000 median of 34.5.

¹⁰⁰⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁰⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Compared with 2000, Klawock’s population structure was somewhat less expansive in 2010. In addition, most age cohorts showed age transitions consistent with a stable population, meaning that as they aged, their structure generally remained the same. In 2010, 28.1% of residents were under the age of 20, compared to 32.7% in 2000; 20.5% were over the age of 59, compared to 11.5% in 2000; 41.9% were between the ages of 30 and 59, compared to 44.8% in 2000; and 9.5% were between the ages of 20 and 29, compared to 11.0% in 2000.

Table 1. Population in Klawock from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	722	-
2000	854	-
2001	-	866
2002	-	864
2003	-	845
2004	-	833
2005	-	778
2006	-	781
2007	-	741
2008	-	781
2009	-	782
2010	755	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Klawock: 2000-2010 (U.S. Census).

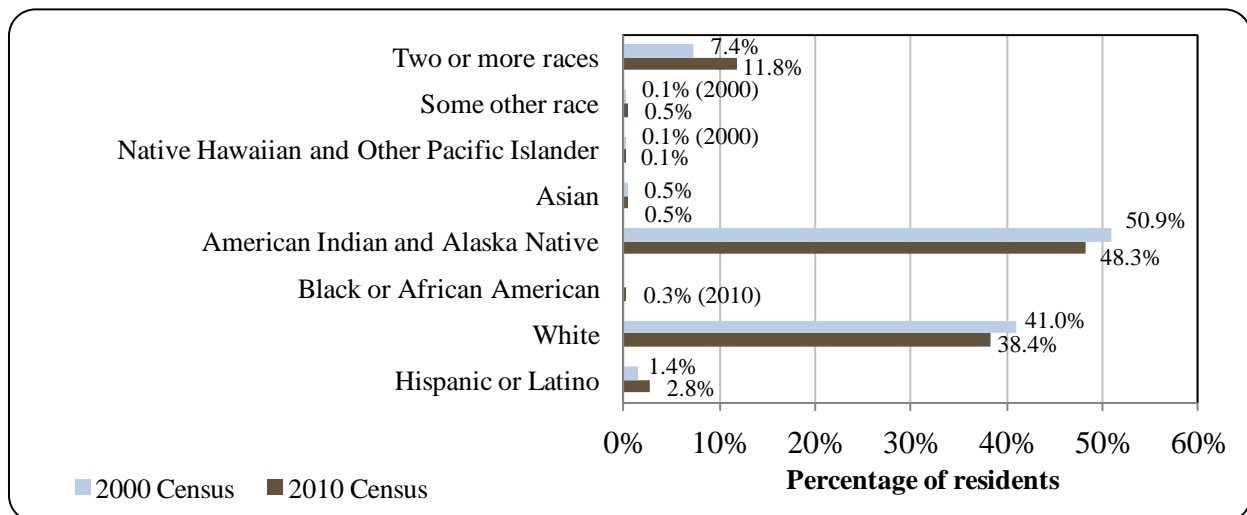
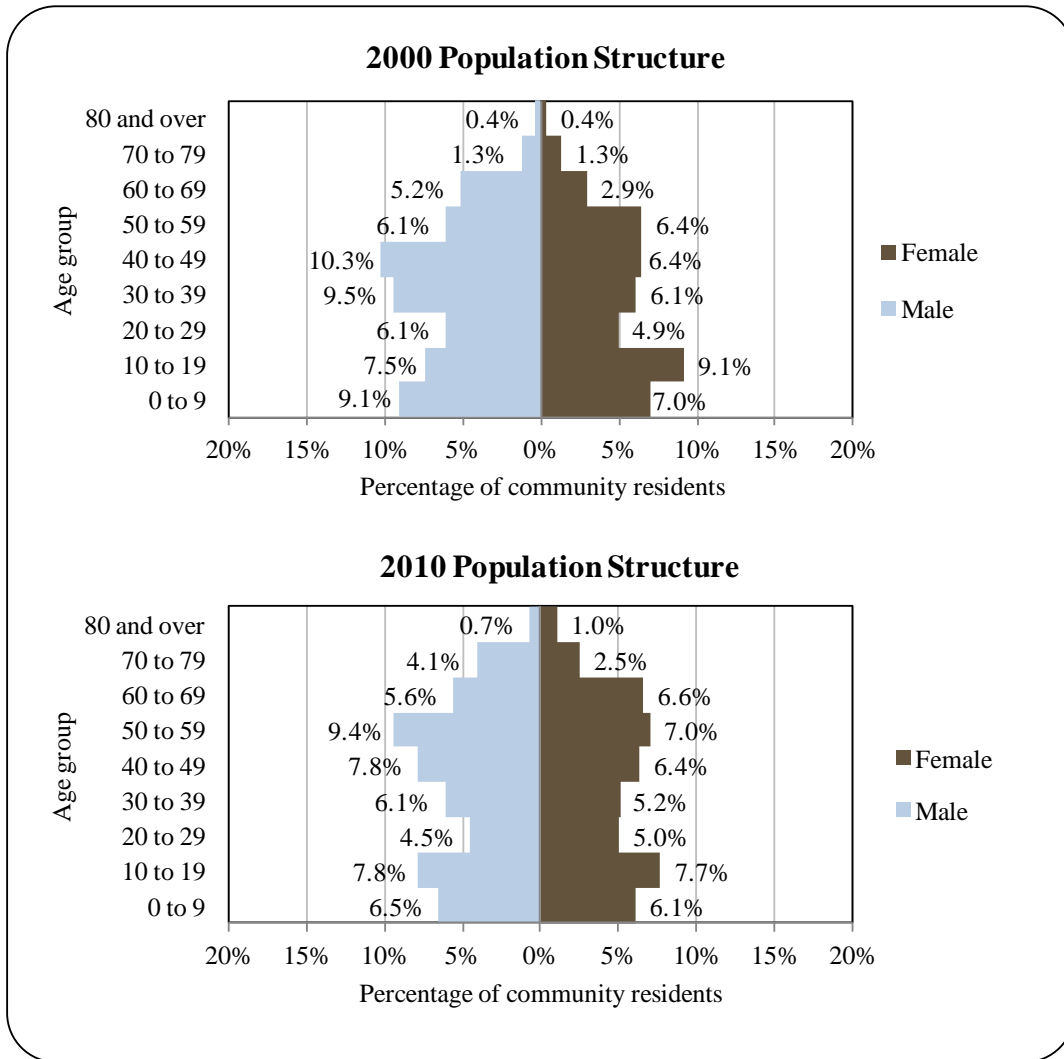


Figure 2. Population Age Structure in Klawock Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 50 to 59 range (9.4% male, 7.0% female), followed by the 70 to 79 (4.1% male, 2.5% female) and 40 to 49 (7.8% male, 6.4% female) ranges. Of those three, the greatest relative gender difference occurred within the 70 to 79 range. Information regarding trends in Klawock’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)¹⁰⁰⁸ estimated that 82.1% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 3.2% of residents had less than a 9th grade education, compared to an

¹⁰⁰⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

estimated 3.5% of Alaskan residents overall; an estimated 14.7% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 20.7% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; 7.2% of resident held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 7.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*¹⁰⁰⁹

Klawock is a mixed Tlingit and non-Native city. The Island has been greatly influenced by logging operations. Most residents pursue a subsistence lifestyle to provide food sources. The community takes great pride in its Totem Park, which displays 21 restored totem poles and replicas from the old village. The Totem Park includes a heritage center and long house. Sale of alcohol is restricted to the city-owned package store.

Prince of Wales Island is in the middle of the transition area between Haida and the Tlingit cultural areas. These two Native American groups had historically occupied the island sustaining themselves with a very elaborate economic system including fishing, hunting and harvesting practices as well as intricate trading networks.

The first settlers and missionaries to arrive in the area at the end of the 19th century encountered an almost completely depopulated island although there was evidence of once blossoming Indian communities, devastated by smallpox and measles. Haida and Tlingit populations are still present in many communities on the Island, including Klawock.

Originally Klawock was a summer fishing camp of Tuxekan, a Tlingit village. Its location facilitated the installation of a trading post and a salmon saltery in 1868 and some of the earliest canneries of Alaska a decade later. Many of these canneries were operated under contract with Chinese laborers. A hatchery was also functioning in Klawock Lake between 1897 and 1917.

Residents from nearby towns and beyond were attracted to the economic opportunities Klawock presented and built up the population of the town. The town was officially incorporated in 1929. In 1971 the Alaska Timber Corp. built a local sawmill. Soon after, the Klawock-Heenya Village Corp., the Shaan Seet Corp. of Craig, and Sealaska Timber Corp. expanded area facilities with a log sort yard outside of Klawock and a deep-water dock on Klawock Island. The State constructed a salmon hatchery on Klawock Lake in 1978, very near the former hatchery site. Logging activities continue to have had great importance in the area.

Natural Resources and Environment

PWI is dominated by a cool, moist, maritime climate. Summer temperatures range from 49 to 63 °F (9 to 17 °C); winter temperatures range from 32 to 42 °F (0 to 6 °C). Average annual precipitation is 120 inches, with 40 inches of snow.¹⁰¹⁰

The Klawock watershed has three main features including the bay, lagoon, and estuary; the Klawock River, and Klawock Lake. Four large rivers feed into Klawock Lake providing significant salmon spawning and rearing habitat. Halfmile and Thee Mile creeks are some of the

¹⁰⁰⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰¹⁰ Ibid.

watershed's most productive streams in terms of salmon habitat for pink salmon, and the Klawock area is one of Southeast Alaska's largest producers of the species.¹⁰¹¹

The community is surrounded by muskegs, floodplains, tideflats, and intertidal zones. Eel grass beds have been identified as critical fish nursery areas, due to their high productivity and limited extent. Vegetation is dominated by mixed stands of Sitka spruce and hemlock. Shrubs common to the area include salmonberry, thimbleberry, devil's club, blueberry, rusty menziesia, and salal. Ground cover is comprised mostly of mosses, ferns, bunchberry, twisted stalk, and deer berry. Alders are found along many stream banks and disturbed areas. Interspersed muskegs are populated with mosses, sedges, and rushes. Intertidal and subtidal areas support growths of algae, kelp beds, and eel grass.¹⁰¹²

Commercially important fish species include pollock, Pacific halibut, Pacific ocean perch, sablefish, turbot, sole, rockfish, herring, all five species of Pacific salmon, Dolly Varden char, and cutthroat and steelhead trout. Common marine mammals include Steller sea lions, harbor seals, Dall and harbor porpoises, and killer whales. Terrestrial mammals include Sitka black tailed deer, wolf, and black bear. Birds include many species of shorebirds and marine birds.¹⁰¹³

Additional natural resources in the area include timber and ecosystem services derived from critical habitats. The 2009 Logjam timber sale opened up 3,422 acres of the Tongass National Forest to commercial harvesting with a potential yield of 73 million board feet.¹⁰¹⁴ Sealaska, the regional Alaska Native Claims Settlement Act (ANCSA) chartered corporation for southeast Alaska, also has active timber developments within Tribal lands on the island.¹⁰¹⁵ Local estuaries, riparian areas, and eel grass beds provide critical feeding and rearing habitat for a range of commercially important species.¹⁰¹⁶ In addition to important habitat, these areas provide valuable recreation resources for the community's tourism economy.¹⁰¹⁷

Mineral developments in the area include the Niblack and Bokan Mountain mineral projects. The Niblack project is a copper-zinc-silver prospect which was in the final stages of exploration as of 2011.¹⁰¹⁸ Bokan Mountain mineral area is a source of uranium and rare earths on the southern portion of PWI.

Environmental hazards with the potential to impact Klawock include tsunami and storm surges. The west side of Klawock Island would bear the brunt of a tidal wave coming up through Bucareli Bay, providing some protection from the wave. Storm surges can cause extreme tides and shoreline erosion; as well as service and utility disruption.

According to the Alaska Department of Environmental Conservation, there were no

¹⁰¹¹ RAI Development Solutions (2007). *Klawock Community Plan 2007*. Retrieved July 26, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Klawock-CP-2007.pdf>.

¹⁰¹² City of Craig (2006). *Craig Coastal Management Plan*. Retrieved February 29, 2012 from: <http://www.craigak.com/documents/Craig%20Coastal%20Management%20Plan%20-%202007.pdf>.

¹⁰¹³ Ibid.

¹⁰¹⁴ U.S. Forest Service (2009). *Logjam Timber Sale Record of Decision*. Retrieved February 29, 2012 from: http://www.fs.fed.us/r10/tongass/projects/logjamDEIS/05_rod_logjam.pdf.

¹⁰¹⁵ Sealaska Timber Corporation. (n.d.) Retrieved February 14, 2012 from: <http://www.sealaskatimber.com/page/about-us>.

¹⁰¹⁶ See footnote 1012.

¹⁰¹⁷ HDR Alaska (2000). *City of Craig Comprehensive Plan*. Retrieved February 29, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Craig-CP-2000.pdf>.

¹⁰¹⁸ Alaska Dept. of Natural Resources (n.d.). Retrieved February 14, 2012 from: <http://dnr.alaska.gov/mlw/mining/largemine/niblack/>.

significant environmental remediation projects active in Klawock in 2010.¹⁰¹⁹

Current Economy¹⁰²⁰

Klawock's economy is largely dependent on natural resource extraction. During the first 100 years of the community's existence, salmon fishing was the major contributor to local employment. At one time there were three canneries in operation locally until commercial fishing subsided. During the 1980s, timber grew in importance following the construction of a sawmill in 1971. By 1991, declining markets and less available timber resulted in the temporary shutdown of the timber industry.¹⁰²¹

The community benefits commercially from its relatively close proximity to Craig, which acts as a regional hub for PWI. In addition, its industrial past left it with well developed port infrastructure capable of handling large vessels. There is a developing tourism industry, again bolstered by Klawock's proximity to Craig and PWI's well-connected transportation network. Recreational fishing, hunting, camping, and boating are all popular activities, and the community's rich cultural heritage provides a tourism draw through Native art and cultural events.¹⁰²² Top employers¹⁰²³ in 2010 included: Alaska Commercial Co., Klawock City School District, Southeast Alaska Regional Health Consortium, City of Klawock, Klawock Coop Assn., Viking Lumber Company Inc., State of Alaska, Southeast Stevedoring Corp., Tlingit Haida Regional Housing Authority, and Community Connections Inc.

In 2010,¹⁰²⁴ the estimated per capita income was \$24,266 and the estimated median household income was \$51,250, compared to \$14,621 and \$35,000 in 2000, respectively. After adjusting for inflation by converting 2000 values into 2010 dollars,¹⁰²⁵ the real per capita income (\$19,226) and real median household income (\$46,025) indicate an increase in both individual and household earnings. In 2010, Klawock ranked 119th of 305 communities from which per capita income was estimated, and 125th of 299 communities from which median household income was estimated.

Klawock's small population size may have prevented the American Community Survey (ACS) from accurately portraying economic conditions.¹⁰²⁶ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$9.88 million in

¹⁰¹⁹ Alaska Dept. of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved July 26, 2012 from: http://dec.alaska.gov/spar/csp/site_archives.htm#southeast.

¹⁰²⁰ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰²¹ See footnote 1011.

¹⁰²² Ibid.

¹⁰²³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁰²⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁰²⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁰²⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

total wages in 2010.¹⁰²⁷ When matched with the 2010 decennial population, the per capita income equals \$13,080, which is significantly less than 2010 ACS estimates and suggests that caution should be used when comparing 2010 ACS and 2000 Census figures.¹⁰²⁸

According to 2006-2010 ACS estimates, 68% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 7.2%, compared to an estimated 5.9% statewide; and an estimated 22.0% of residents were living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Again, it is possible that the ACS did not capture accurate employment statistics due to Klawock's small population. According to 2010 ALARI estimates, unemployment was 16.5%, based on unemployment insurance claimants.¹⁰²⁹ Of those employed in 2010, an estimated 63.1% worked in the private sector, an estimated 24.2% worked in the public sector, an estimated 11.8% were self-employed, and an estimated 1.0% were unpaid family workers. It should be noted that if accurate, the relatively high percentage of self-employed residents might impact the accuracy of ALARI estimates.

Klawock's economy was diverse in both 2010 and 2000. By industry, most (15.3%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by agriculture, forestry, fishing, hunting, and mining sectors (15.3%); construction sectors (15.0%); transportation, warehousing, and utilities sectors (13.1%); and retail trade sectors (11.5%). By occupation type, most (31.2%) employed residents were estimated to hold management or professional positions in that year; followed by natural resources, construction, or maintenance positions (29.0%); production, transportation, or material moving positions (17.8%); sales or office positions (12.4%); and service positions (9.6%).

Overall, there were moderate shifts in employment by industry and occupation type. There were significant proportional gains in transportation, warehousing, and utilities sectors; while there were significant proportional declines in retail trade, and other service sectors. By occupation type, there were significant proportional gains in the number of management and professional positions, while there were significant proportional declines in sales and office positions. Again, ACS estimates may have been biased. According to 2010 ALARI estimates, most (28.5%) employed residents worked in local government sectors; followed by trade, transportation, and utilities sectors (19.7%); and educational and health service sectors (13.9%). Information regarding employment trends can be found in Figures 3 and 4.

¹⁰²⁷ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁰²⁸ See footnote 1023.

¹⁰²⁹ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Klawock (U.S. Census).

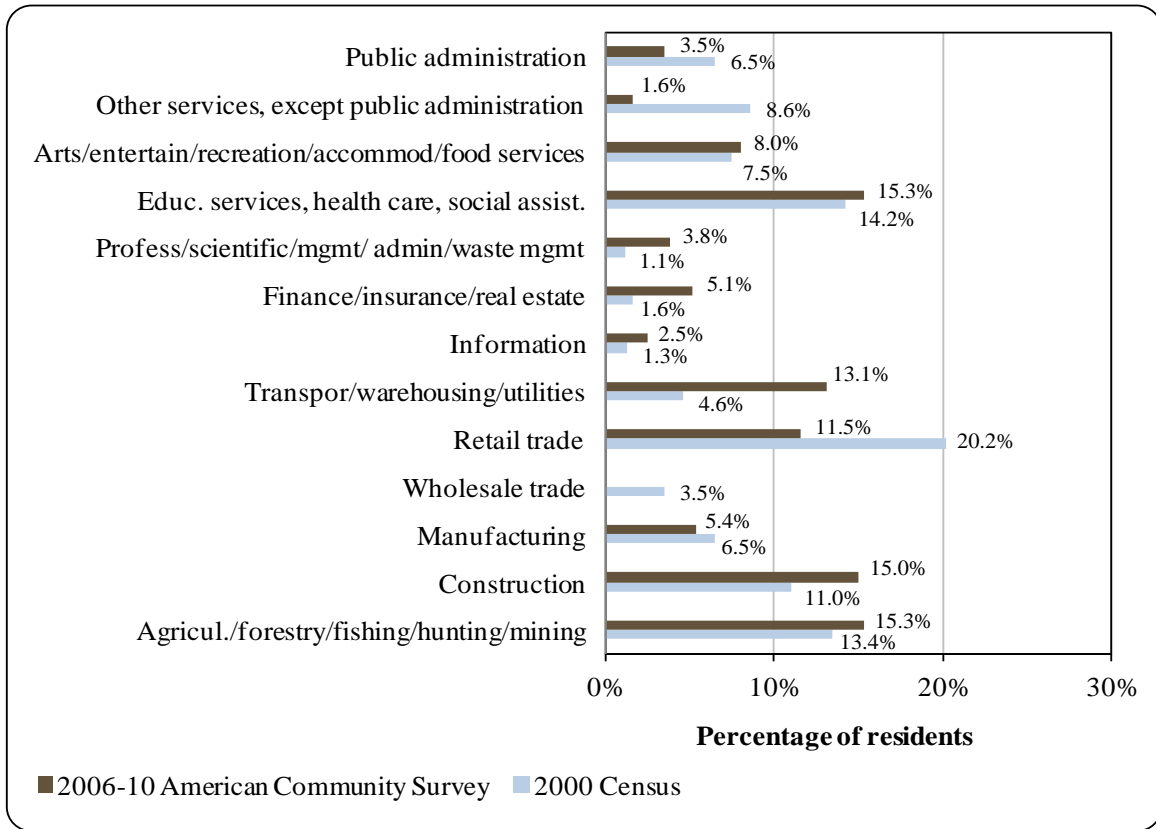
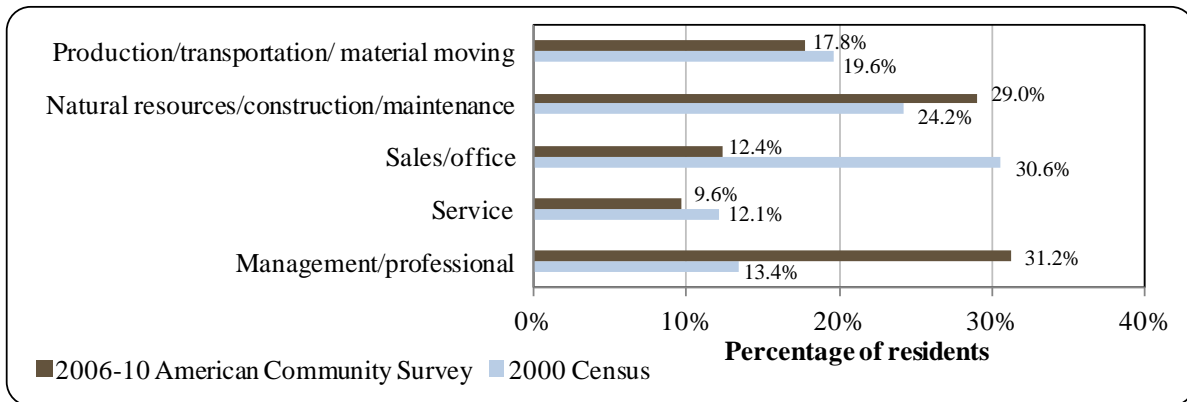


Figure 4. Local Employment by Occupation in 2000-2010, Klawock (U.S. Census).



Governance

Klawock was incorporated in 1929 as a First-class city with a “strong mayor” form of government. The City, located in an unorganized area, has a 5.5% tax on sales. There is a six-member City council, five-member school board, and six municipal employees. Klawock also has a federally recognized Tribal government, The Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Klawock is the Sealaska Native

Corporation, which is headquartered in Juneau. The local ANCSA-chartered non-profit is the Central Council of the Tlingit and Haida Indian Tribes. Klawock Heenya Native Corporation is the local ANCSA-chartered village corporation and manages approximately 23,040 acres of land. The closest Alaska Department of Fish & Game (ADF&G) office is located nearby in Craig. Residents of Klawock have to travel to Ketchikan to access to a Bureau of Citizenship and Immigration Services (BCIS). The nearest National Marine Fisheries Service (NMFS) office is located in Petersburg.

When adjusted for inflation,¹⁰³⁰ total municipal revenues declined by 73.3% between 2000 and 2010 from \$5.76 million, to \$1.99 million. However, it should be noted that municipal revenues are significantly influenced by outside revenues, resulting in yearly variability. In 2010, most locally generated revenues came from local taxes, rentals, and charges for services. Most outside revenues (\$1.11 million) came from intergovernmental grants and operating revenues. In that year, sales taxes accounted for 30.0% of total revenues, compared to 8.9% in 2000. State allocated Community Revenue Sharing accounted for 6.7% of revenues, compared to less than one-percent from State Revenue Sharing in 2000.

State and federal fisheries-related grants awarded to Klawock between 2000 and 2010 included: \$104,137 in harbor repairs and improvements and \$400,000 for construction of a small boat harbor. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Klawock from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-related Grants (State and Federal) ⁵
2000	\$5,761,654	\$514,462	\$22,357	\$25,000
2001	\$3,403,562	\$415,121	\$19,888	\$32,665
2002	\$3,635,486	\$420,875	\$19,938	\$21,668
2003	\$3,925,137	\$496,876	\$20,049	\$24,804
2004	\$1,752,067	\$462,400	-	n/a
2005	\$1,965,439	\$513,384	-	n/a
2006	\$1,481,584	\$594,035	-	\$400,000
2007	\$1,356,285	\$502,473	-	n/a
2008	\$1,669,005	\$597,905	-	n/a
2009	\$2,259,420	\$562,187	\$136,046	n/a
2010	\$1,992,216	\$597,695	\$135,218	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁰³⁰ Inflation calculated using Anchorage CPI for 2010 from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

Infrastructure

Connectivity and Transportation

Klawock is dependent on air transportation from Ketchikan, although it is connected to other communities through the island road system. The only airstrip on PWI is located here, with a 5,000-foot long by 100-foot wide paved runway. A seaplane base is operated by the state on the Klawock River. Ferry transportation is available to Hollis, 23 miles away. Klawock has a small boat harbor and boat launch ramp. A deep draft dock is located at Klawock Island, which is primarily used for loading timber. Freight arrives by cargo plane, barge, and truck. As of June 2012, roundtrip airfare from Anchorage to Klawock costs \$867.¹⁰³¹

Facilities

Over 90% of homes are fully plumbed. Water is derived from a dam on Half Mile Creek and then treated, stored in a tank, and piped throughout Klawock. Most homes have a piped sewage collection, which receives secondary treatment. The City provides refuse collection, which is hauled to a unpermitted landfill shared with Craig and other island residents. The Tlingit-Haida Regional Electric Authority (THREA) purchases electricity from Alaska Power & Telephone over the Craig/Klawock intertie. THREA also owns four standby diesel generators in Klawock. Public safety services are provided by the local police department and state trooper post. Fire and rescue services are provided by Klawock volunteer fire department and Emergency Medical Services (EMS) and PWI area EMS. Communication services include local and long distance telephone, internet, and local television and radio. Public facilities include an Alaska Native Brotherhood/Sisterhood hall and Southeast Senior Services.¹⁰³²

Klawock harbor provides mooring for commercial vessels and recreational watercraft. The small boat harbor has berthing space for approximately 45 vessels. A 36-foot by 58-foot timber float is used for landing seaplanes.¹⁰³³ In 2012, development was underway of additional harbor facilities including a new 1,800 square-foot harbormaster building. The facility will house public restrooms, shower facilities, and a reception area. Harbor improvements and additions conceptualized in a 2007 *Community Development Plan* included: 500 feet of float-dock space capable of accommodating large fishing vessels, yachts, and small cruise ships; a 100-foot commercial fuel float and additional fuel storage; a 300-foot service wharf adjacent to a 12,000 square foot heavy duty wharf apron and 7,000 square foot open or covered storage area; 4,000 square foot sales and service center; a 2,000 square foot gear make-up and repair float with three berths; and harbor access improvements.¹⁰³⁴

Additional community services include automotive and tire repair, fuel sales, diesel and propane sales, grocery, hardware, fish hatchery, fish smoker, library, liquor store, lodging, heritage sites, post office, public telephone, restaurant, Recreational Vehicle (RV) park, thrift

¹⁰³¹ Airfare calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).

¹⁰³² Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰³³ Find The Best. (n.d). Retrieved July 27, 2012 from: <http://seaport.findthebest.com/1/5420/City-of-Klawock-Harbor-Floats>.

¹⁰³⁴ RAI Development Solutions (2007). *Klawock Community Plan 2007*. Retrieved July 26, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Klawock-CP-2007.pdf>.

store, sporting goods, taxi service, variety store, and youth and community center.¹⁰³⁵

*Medical Services*¹⁰³⁶

The Alicia Roberts Medical Center provides residents with basic medical needs. Emergency Services have limited highway, marine, floatplane, and air access and are within 30 minutes of a higher-level satellite health care facility. Emergency service is provided by 911 Telephone Service, volunteers, and a health aide. Emergency, long term, acute, and specialized health care is provided in Craig.

*Educational Opportunities*¹⁰³⁷

Klawock has one school offering preschool through 12th grade instruction. As of 2011, there were 137 students enrolled and 17 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Early inhabitants were from Tuxekan, a Tlingit winter village to the north. Klawock was used as a summer fishing camp and has been known as Klawerak, Tlevak, Clevak, and Klawak. The history of Klawock is closely tied to the fishing industry. A trading post and salmon saltery were established in 1868, and the first cannery in Alaska was built in Klawock by a San Francisco firm in 1878. The subsequent canneries that sprouted in the area were operated under contract with Chinese laborers. A hatchery for red salmon operated at Klawock Lake between 1897 and 1917. In 1929, Klawock incorporated as a city, and a school was constructed. In 1934, Klawock received federal funds under the Wheeler Howard Act to develop a local cannery, on the condition that residents vote to be liquor-free. In 1971, the Alaska Timber Corporation built a sawmill. Soon after, the Klawock-Heenya Village Corporation, the Shaan Seet Corporation of Craig, and Sealaska Timber Corporation expanded area facilities with a log-sort yard outside of Klawock and a deep-water dock on Klawock Island. The state constructed a salmon hatchery on Klawock Lake in 1978, very near the former hatchery site.¹⁰³⁸

Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty, which was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based

¹⁰³⁵ City of Klawock (n.d.). *City of Klawock*. Retrieved July 27, 2012 from: http://www.cityofklawock.com/cg_dept.htm#har.

¹⁰³⁶ See footnote 1032.

¹⁰³⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰³⁸ Southeast Conference (n.d.). *Klawock*. Retrieved July 27, 2012 from: <http://www.seconference.org/klawock>.

management strategies.¹⁰³⁹ Bait herring fisheries take place during the winter each year in Southeast Alaska, while roe is harvested in the spring. Bait and sac roe fisheries use purse seine and set gillnet gear, and roe is also harvested in spawn-on-kelp closed-pound fisheries.¹⁰⁴⁰ A “closed-pound” is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.¹⁰⁴¹

Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species that take place in outside waters. Halibut and Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.¹⁰⁴²

Crab fisheries in Southeast Alaska target red, golden, and blue king crab, Tanner crab, and Dungeness crab. Dive fisheries for sea cucumber and sea urchin began to grow in Southeast Alaska in recent decades.¹⁰⁴³ It is important to note that the waters between Annette and Gravina Islands are included in a Dive Fishery Research Control Area, and are closed year-round to harvest of sea cucumbers and sea urchins.¹⁰⁴⁴

Klawock is eligible to participate in the Community Quota Entity program and is represented by the PWI Community Holding Corporation. However, as of Fall 2013, the CQE non-profit had not yet acquired commercial halibut IFQ, halibut charter permits, or non-trawl groundfish License Limitation Program permits for lease to eligible community members.¹⁰⁴⁵

The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries

¹⁰³⁹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. *The Commercial Salmon Fishery in Alaska*. Alaska Fisheries Research Bulletin 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁰⁴⁰ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁰⁴¹ Alaska Dept. of Fish and Game. (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

¹⁰⁴² See footnote 1040.

¹⁰⁴³ Ibid.

¹⁰⁴⁴ Alaska Dept. of Fish and Game, Marine Protected Areas Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

¹⁰⁴⁵ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.¹⁰⁴⁶ Klawock is located in Federal Statistical Reporting Area 659, Pacific Halibut Fishery Regulatory Area 2C, and the Eastern Gulf of Alaska Sablefish Regulatory District.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, three processing plants were operating in Klawock. Klawock Oceanside Inc. operates a processing plant on located on the Klawock waterfront. They process and blast freeze Chinook, sockeye, chum, pink and Coho salmon from June to mid-September.¹⁰⁴⁷ Two Girls Fishing LLC specializes in the smoking, packing and shipping of sport caught fish at PWI, at mile 7 of the Klawock/ Hollis Highway.¹⁰⁴⁸ Finally, Wildfish Company operates a seafood processing facility in Klawock that began operations in 1987.¹⁰⁴⁹ The plant is a small family-owned business that employs 5 to 6 workers each year and primarily processes for high-end customers and tourists.¹⁰⁵⁰

Fisheries-Related Revenue

In 2010, known fisheries-related revenues totaled \$42,449. This revenue came from a combination of shared fisheries business tax collections and harbor usage collections. While raw fish tax collections in 2000 totaled \$5,000, this revenue stream did not figure in fisheries-related revenues between 2003 and 2010. In general, from 2000 to 2010 Shared Fisheries Business Tax revenues increased by 238%. Further information regarding fisheries-related revenue can be found in Table 3.

Commercial Fishing

In 2010, 62 residents, or 8.2% of the population, held 89 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 54 residents held 79 CFEC permits. Of the CFEC permits held in 2010, 46% were for salmon, compared to 42% in 2000; 30% were for herring, compared to 34% in 2000; 10% were for "other" shellfish, compared to 4% were for halibut, compared to 4% in 2000; 4% were for groundfish, compared to 6% in 2000; and 3%

¹⁰⁴⁶ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>

¹⁰⁴⁷ Klawock Oceanside, Inc. (n.d.). *Company Website*. Retrieved from: <http://www.klawockoceanside.com/index.htm>

¹⁰⁴⁸ Two Girls Fishing (n.d.). *Company Facebook Profile*. Retrieved October 15, 2012 from: <http://www.facebook.com/profile.php?id=100002008676500&sk=wall#!/pages/Two-Girls-Fishing/136291603054104>

¹⁰⁴⁹ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

¹⁰⁵⁰ Ibid.

were for sablefish, compared to 3% in 2000. In addition, four residents held four License Limitation Program (LLP) groundfish permits and two residents held two Federal Fisheries Permits (FFP) in 2010. Residents held 144,469 shares of halibut quota through 6 accounts in 2010, compared to 239,007 through 8 accounts in 2000. Halibut quota peaked in 2002 at 238,207 shares held through 7 accounts. In addition, residents held 573,464 shares of sablefish quota on two accounts in 2010, compared to 1,331 shares held on 1 account in 2000.

Klawock residents are engaged in commercial fishing, with 36 crew license holders in the community in 2010, compared to 25 in 2000. In that same year residents held majority ownership of 41 vessels, compared to 48 in 2000. Of the CFEC permits held in 2010, 55% were actively fished, compared to 41% in 2000. This varied by fishery from 100% of sablefish permits, to 75% of halibut, 67% of herring, 54% of salmon, 33% of “other” shellfish, and 0% of groundfish permits. Fisheries prosecuted by Klawock residents in 2010 included: statewide longline halibut, southeast purse seine herring roe, northern southeast herring spawn on kelp, southern southeast herring spawn on kelp, southeast pot shrimp, southeast dive sea cucumber, statewide longline sablefish, southern southeast pot sablefish, southeast purse seine salmon, and statewide hand and power troll salmon.¹⁰⁵¹

Overall, few vessels made landings each year in Klawock between 2000 and 2010. Although starting in 2004, a significant jump in vessels making landings occurred peaking at 149 in 2006 and 118 in 2007. However, vessels making landings dropped precipitously after that dropping to just three vessels delivering catch in 2010. Landings made between 2000 and 2010 are considered confidential with the exception of 2009. In that year, 29,307 pounds of seafood was landed valued at \$63,542 ex-vessel. In 2010, Klawock ranked 55th of 67 communities in terms of total pounds landed and 54th in terms of total ex-vessel value of landings.

Landings made by Klawock residents in 2010 (irrespective of location made) are considered confidential, with the exception of herring and salmon landings. In 2010, residents landed 2.01 million pounds of salmon valued at \$976,901 ex-vessel, compared to 657,441 pounds valued at \$213,539 ex-vessel in 2000; an increase of \$0.04 per pound landed after adjusting for inflation¹⁰⁵² and without considering the species composition of landings. Total salmon landings and ex-vessel revenues earned by residents peaked in 2007 when 3.15 million pounds of salmon was landed, valued at \$1.19 million ex-vessel. Also in 2010, residents landed 636,972 pounds of herring valued at \$413,951 ex-vessel, compared to 635,258 pounds valued at \$323,123 ex-vessel in 2004; an increase of \$0.02 per pound landed after adjusting for inflation.¹⁰⁵³ Finally in 2009, residents landed 12,582 pounds of “other” shellfish valued at \$36,028, compared to 62,234 pounds valued at \$160,000 in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹⁰⁵¹ Alaska Commercial Fisheries Entry Commission (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁰⁵² Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

¹⁰⁵³ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Klawock: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$5,000	\$1,000	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Shared fisheries business tax ¹	\$7,953	\$6,919	\$5,114	\$6,479	\$5,742	\$10,965	\$6,412	\$19,452	\$30,116	\$35,820	\$26,857
Fisheries resource landing tax ¹	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fuel transfer tax ²	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Extraterritorial fish tax ²	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bulk fuel transfers ¹	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Boat hauls ²	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Harbor usage ²	\$15,000	\$15,000	\$15,000	\$15,000	\$27,830	\$10,500	\$10,500	\$10,500	\$10,500	\$11,500	\$15,592
Port/dock usage ²	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fishing gear storage on public land ³	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Marine fuel sales tax ³	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total fisheries-related revenue⁴</i>	<i>\$27,953</i>	<i>\$22,919</i>	<i>\$20,314</i>	<i>\$21,479</i>	<i>\$33,572</i>	<i>\$21,465</i>	<i>\$16,912</i>	<i>\$29,952</i>	<i>\$40,616</i>	<i>\$47,320</i>	<i>\$42,449</i>
<i>Total municipal revenue⁵</i>	<i>\$5.76 M</i>	<i>\$3.40 M</i>	<i>\$3.64 M</i>	<i>\$3.93 M</i>	<i>\$1.75 M</i>	<i>\$1.97 M</i>	<i>\$1.48 M</i>	<i>\$1.36 M</i>	<i>\$1.67 M</i>	<i>\$2.26 M</i>	<i>\$1.99 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Klawock: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	4	4	4	3	3	4	4	4	4	4	4
	Active permits	1	1	1	0	0	0	0	0	0	0	0
	% of permits fished	25%	25%	25%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	4	3	3	4	4	4	4	4	4
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	2	2	2	2	2	2	2	2
	Fished permits	0	0	0	0	0	0	0	0	1	1	1
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	50%
	Total permit holders	1	1	1	2	2	2	2	2	2	2	2
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	1
Other shellfish (CFEC) ²	Total permits	9	16	13	9	9	9	10	10	10	9	9
	Fished permits	6	7	6	4	5	4	5	2	2	4	3
	% of permits fished	66%	43%	46%	44%	55%	44%	50%	20%	20%	44%	33%
	Total permit holders	9	12	10	9	9	9	11	11	10	9	9
Halibut (CFEC) ²	Total permits	3	3	3	2	2	2	0	1	3	3	4
	Fished permits	3	3	3	2	2	1	0	0	3	3	3
	% of permits fished	100%	100%	100%	100%	100%	50%	n/a	0%	100%	100%	75%
	Total permit holders	3	3	3	2	2	2	0	1	3	3	4
Herring (CFEC) ²	Total permits	27	28	29	29	31	29	24	25	26	24	27
	Fished permits	3	8	15	22	17	14	8	8	22	19	18
	% of permits fished	11%	29%	52%	76%	55%	48%	33%	32%	85%	79%	67%
	Total permit holders	24	23	24	24	27	22	21	21	22	20	22

Table 4 cont'd. Permits and Permit Holders by Species, Klawock: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	2	2	2	2	2	3	3	2	4	3	3
	Fished permits	2	2	2	2	2	3	3	2	4	3	3
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Total permit holders	2	2	2	2	2	3	3	2	4	3	3
Groundfish (CFEC) ²	Total permits	5	4	3	4	6	2	3	3	3	2	4
	Fished permits	3	0	0	0	0	0	0	0	0	0	0
	% of permits fished	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	3	2	2	3	2	1	1	1	1	3
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	33	34	34	33	34	37	41	39	43	42	41
	Fished permits	15	15	11	10	12	15	21	21	23	22	22
	% of permits fished	45%	44%	32%	30%	35%	41%	51%	54%	53%	52%	54%
	Total permit holders	28	30	30	30	31	34	37	37	40	42	39
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>79</i>	<i>87</i>	<i>84</i>	<i>79</i>	<i>84</i>	<i>82</i>	<i>81</i>	<i>80</i>	<i>89</i>	<i>83</i>	<i>89</i>
	<i>Fished permits</i>	<i>32</i>	<i>35</i>	<i>37</i>	<i>40</i>	<i>38</i>	<i>37</i>	<i>37</i>	<i>33</i>	<i>54</i>	<i>51</i>	<i>49</i>
	<i>% of permits fished</i>	<i>41%</i>	<i>40%</i>	<i>44%</i>	<i>51%</i>	<i>45%</i>	<i>45%</i>	<i>46%</i>	<i>41%</i>	<i>61%</i>	<i>61%</i>	<i>55%</i>
	<i>Permit holders</i>	<i>54</i>	<i>58</i>	<i>57</i>	<i>56</i>	<i>60</i>	<i>57</i>	<i>58</i>	<i>59</i>	<i>62</i>	<i>60</i>	<i>62</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Klawock: 2000-2010.

Year	Crew License Holders ¹	Count of all Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Klawock ²	Total Net Pounds Landed in Klawock ^{2,5}	Total Ex-Vessel Value of Landings in Klawock ^{2,5}
2000	25	2	2	48	47	2	--	--
2001	36	1	1	48	47	8	--	--
2002	28	0	3	41	35	0	0	\$0
2003	35	1	3	43	41	3	--	--
2004	53	3	3	50	43	64	--	--
2005	44	2	3	34	28	31	--	--
2006	42	1	3	30	30	149	--	--
2007	37	2	3	32	30	118	--	--
2008	55	1	3	36	34	15	--	--
2009	47	5	3	39	39	8	29,307	\$63,542
2010	36	3	4	41	37	3	--	--

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Klawock: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	8	239,007	33,710
2001	7	238,207	35,071
2002	6	235,255	33,532
2003	5	197,436	28,141
2004	5	197,436	34,808
2005	6	197,835	36,289
2006	4	7,024	1,236
2007	4	7,024	1,003
2008	5	121,455	15,731
2009	5	121,455	14,034
2010	6	144,469	14,603

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Klawock: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	1	1,331	120
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	1	466,851	46,960
2007	1	466,851	45,633
2008	2	573,464	51,993
2009	2	573,464	46,548
2010	2	573,464	42,419

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Klawock: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Klawock: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	0	--	--	--	--	--	--	--	--
Halibut	--	--	0	--	--	--	--	--	--	--	--
Herring	--	--	0	--	--	--	--	--	--	--	--
Other Groundfish	--	--	0	--	--	--	--	--	--	--	--
Other Shellfish	--	--	0	--	--	--	--	--	--	--	--
Pacific Cod	--	--	0	--	--	--	--	--	--	--	--
Pollock	--	--	0	--	--	--	--	--	--	--	--
Sablefish	--	--	0	--	--	--	--	--	--	--	--
Salmon	--	--	0	--	--	--	--	--	--	20,679	--
<i>Total²</i>	--	--	0	--	--	--	--	--	--	20,679	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	\$0	--	--	--	--	--	--	--	--
Halibut	--	--	\$0	--	--	--	--	--	--	--	--
Herring	--	--	\$0	--	--	--	--	--	--	--	--
Other Groundfish	--	--	\$0	--	--	--	--	--	--	--	--
Other Shellfish	--	--	\$0	--	--	--	--	--	--	--	--
Pacific Cod	--	--	\$0	--	--	--	--	--	--	--	--
Pollock	--	--	\$0	--	--	--	--	--	--	--	--
Sablefish	--	--	\$0	--	--	--	--	--	--	--	--
Salmon	--	--	\$0	--	--	--	--	--	--	\$44,786	--
<i>Total²</i>	--	--	\$0	--	--	--	--	--	--	\$44,786	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Klawock Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	635,258	--	--	--	314,527	709,382	636,972
Other	--	2,499	--	--	--	--	--	--	--	--	--
Groundfish											
Other Shellfish	62,234	113,601	278,921	31,257	24,467	--	25,107	--	--	12,582	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	657,441	1,653,810	678,945	853,336	1,704,523	2,609,048	999,225	3,149,916	1,313,600	2,395,536	2,013,998
<i>Total²</i>	<i>719,675</i>	<i>1,769,910</i>	<i>957,866</i>	<i>884,593</i>	<i>2,364,248</i>	<i>2,609,048</i>	<i>1,024,332</i>	<i>3,149,916</i>	<i>1,628,127</i>	<i>3,117,500</i>	<i>2,650,970</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	\$323,123	--	--	--	\$648,623	\$509,211	\$413,951
Other	--	\$391	--	--	--	--	--	--	--	--	--
Groundfish											
Other Shellfish	\$160,000	\$97,154	\$153,765	\$66,686	\$68,100	--	\$60,922	--	--	\$36,028	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$213,539	\$412,566	\$141,353	\$189,049	\$526,833	\$626,635	\$568,881	\$1,185,397	\$925,572	\$977,738	\$976,901
<i>Total²</i>	<i>\$373,538</i>	<i>\$510,111</i>	<i>\$295,118</i>	<i>\$255,734</i>	<i>\$918,056</i>	<i>\$626,635</i>	<i>\$629,803</i>	<i>\$1,185,397</i>	<i>\$1,574,194</i>	<i>\$1,522,977</i>	<i>\$1,390,853</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Klawock residents showed significant participation in recreational fishing between 2000 and 2010. PWI is renowned for sportfishing, and Klawock’s accessibility, distance from Craig, and developed visitor infrastructure makes the community a popular destination. Big Salt Lake, northeast of Klawock, is frequented often by local private anglers, and the Klawock Watershed supplies ample freshwater sportfishing opportunities. In 2010, there were 10 registered (8 active) sport fish guide businesses located in the community, which was relatively stable over the remainder of the decade. The number of sport fish guide licenses issued in the community also remained relatively constant from 12 in 2000, to 14 in 2010. Also in 2010, 424 residents held sportfishing licenses. In that same year, 2,050 sportfishing licenses were sold in the community, compared to 1,596 sold in 2000.

Klawock is located within Alaska Sport Fishing Survey Area B – Prince of Wales. This area includes all waters and drainages from Cape Chacon to Sumner Strait and from Clarence Island westward. Information is available about saltwater and freshwater sportfishing activity at this regional scale. In 2010 there was a total of 51,312 saltwater angler days fished, compared to 49,074 in 2000. In that year, non-Alaskan residents accounted for 74.4% of angler days fished, compared to 67.3% in 2000. In terms of freshwater, there was a total of 15,138 angler days fished in 2010, compared to 19,654 in 2000. In that year, non-Alaskan residents accounted for 70.4% of angler days fished, compared to 45.9% in 2000. According to ADF&G Harvest Survey data, private anglers from Klawock target all five species of Pacific salmon, rainbow trout, Dolly Varden, cutthroat trout, sheefish, Pacific halibut, rockfish, lingcod, Dungeness crab, hardshell clams, shrimp, and other shellfish. ADF&G Charter Logbook data recorded 373 Chinook salmon, 2,307 coho salmon, 1,149 halibut, 191 lingcod, 2,934 rockfish, and 312 unidentified salmon kept in by charter vessels in 2010. Further information regarding sportfishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Klawock: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Klawock²
2000	7	12	376	1,596
2001	7	12	406	1,602
2002	9	10	385	1,892
2003	8	9	380	1,761
2004	8	10	364	1,866
2005	7	11	369	1,975
2006	6	14	378	1,983
2007	6	15	378	1,979
2008	7	14	377	2,357
2009	9	15	442	2,009
2010	8	14	424	2,050

Table 11 cont'd. Sport Fishing Trends, Klawock: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	33,043	16,031	9,024	10,630
2001	38,248	14,090	7,299	5,922
2002	36,736	12,590	9,957	8,981
2003	37,341	16,346	10,627	11,506
2004	40,803	16,770	11,518	3,969
2005	52,135	16,333	10,100	3,527
2006	46,207	11,828	11,073	5,161
2007	49,280	13,327	11,132	6,463
2008	46,717	17,930	11,302	7,185
2009	38,164	10,829	9,918	4,124
2010	37,416	13,896	10,660	4,478

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Traditionally, salmon, halibut, steelhead, cod, Dolly Varden, shellfish and eulachon were all harvested by the Tlingit and Haida on PWI. ADF&G subsistence data is somewhat limited, and information regarding household participation in subsistence fisheries is unavailable (Table 12). Of the species listed by ADF&G on Table 13, sockeye salmon was reported harvested the most often by Klawock residents; followed by chum, pink, coho, and Chinook salmon. In 2008, residents reported harvesting 3,382 salmon on 83 subsistence salmon permits, compared to 6,140 on 248 permits in 2000. Reported salmon harvests peaked in 2003 at 9,384 fish. It should be noted that there was a downward trend in the number of subsistence salmon permits returned between 2000 and 2008.

Subsistence halibut activity was high among Klawock residents between 2003 and 2010. In 2010, residents were issued 237 Subsistence Halibut Registration Certificates (SHARC) from NMFS, compared to 285 in 2003. In that year, an estimated 15,613 pounds of halibut was harvested on 55 SHARC, compared to an estimated 30,831 pounds on 101 SHARC in 2003. Subsistence halibut harvests peaked in 2004 at an estimated 41,510 pounds harvested on 128 SHARC. The number of SHARC fished and pounds of halibut harvested declined at a steady rate between 2003 and 2010.

Between 2000 and 2010, 525 sea otters were reported harvested, 298 of which were

reported in 2009 and 2010. In addition, it was estimated that residents harvested 353 harbor seals and 6 Steller sea lions between 2000 and 2008.

Finally, according to ADF&G's *Community Subsistence Information System*,¹⁰⁵⁴ residents have historically used or harvested abalone, cockles, chitons, blue king crab, brown king crab, butter clams, Dungeness crab, geoducks, sea urchin, horse clams, limpets, octopus, oyster, littleneck clams, razor clams, red king crab, scallops, shrimp, squid, Tanner crab, starfish, fur seal, harbor seal, Steller sea lion, rockfish, Brook trout, sculpin, cutthroat trout, dogfish, Dolly Varden, eulachon, grayling, herring, herring roe, lingcod, Pacific cod, rainbow trout, greenling, sablefish, sea bass, sea perch, smelt, skate, steelhead, and pollock. Further information regarding subsistence trends can be found.

Table 12. Subsistence Participation by Household and Species, Klawock: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁰⁵⁴ Alaska Department of Fish and Game 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Klawock: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	316	248	n/a	176	66	172	5,726	n/a	n/a
2001	316	248	6	264	32	196	7,432	n/a	n/a
2002	350	268	2	152	48	40	7,410	n/a	n/a
2003	292	176	n/a	770	70	114	8,430	n/a	n/a
2004	139	103	n/a	340	43	97	3,188	n/a	n/a
2005	95	76	n/a	8	36	143	594	n/a	n/a
2006	120	94	n/a	26	96	104	2,332	n/a	n/a
2007	96	22	4	n/a	n/a	n/a	1,893	n/a	n/a
2008	124	83	n/a	48	51	43	3,240	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Klawock: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	285	101	30,831
2004	310	128	41,510
2005	320	114	22,996
2006	314	137	34,514
2007	320	137	26,209
2008	203	91	14,073
2009	232	83	15,906
2010	237	55	15,613

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Klawock: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	38	n/a	n/a	1	67	n/a
2001	n/a	46	n/a	n/a	n/a	72	n/a
2002	n/a	33	n/a	n/a	1	24	n/a
2003	n/a	42	n/a	n/a	2	60	n/a
2004	n/a	n/a	n/a	n/a	1	29	n/a
2005	n/a	53	n/a	n/a	n/a	20	n/a
2006	n/a	15	n/a	n/a	1	16	n/a
2007	n/a	7	n/a	2	n/a	44	n/a
2008	n/a	4	n/a	n/a	n/a	21	n/a
2009	n/a	185	n/a	n/a	n/a	n/a	n/a
2010	n/a	113	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Metlakatla (MET-luh-KAT-luh; a.k.a. Annette Island Reserve)



People and Place

*Location*¹⁰⁵⁵

Metlakatla, meaning “saltwater passage” in the Tsimshian language, is located at Port Chester Bay on the west coast of Annette Island. Metlakatla is 15 miles south of Ketchikan, approximately 785 miles southeast of Anchorage (3.5 hours by air), and 655 miles northwest of Seattle (1.5 hours by air). Metlakatla is located in the Ketchikan Recording District and the Prince of Wales-Hyder Census Area.

*Demographic Profile*¹⁰⁵⁶

In 2010, there were 1,405 inhabitants in Metlakatla, making it the 54th largest of 352 total Alaskan communities with populations recorded that year. Metlakatla first appeared in U.S. Census records in 1890 with 823 inhabitants. After declining to 466 by 1930, the population rose steadily, and has remained between 1,300 and 1,400 since 1990. Overall between 1990 and 2010, the population increased by 2.8%. According to Alaska Department of Labor estimates, the population of permanent residents decreased by 3.3% between 2000 and 2009, with an average annual growth rate of -0.18% (Table 1).

In 2010, a majority of Metlakatla residents identified themselves as American Indian and Alaska Native (82.7%), 10% identified as White, 0.7% as Native Hawaiian and Other Pacific Islander, 0.4% as Black or African American, 0.1% as Asian, 0.1% as “some other race”, and 5.9% identified with two or more races. In addition, 1.9% of Metlakatla residents also identified themselves as Hispanic in 2010. Compared to 2000, residents identifying as American Indian and Alaska Native made up 0.9% more of the population and residents identifying as White made up 0.5% more of the population, while individuals identifying with two or more races made up 2% less of the population. Native Hawaiians and Other Pacific Islanders appear to have been present in 2010, but not in 2000 (Figure 1).

The average household size in Metlakatla decreased over time, from 3.2 persons per household in 1990 to 2.93 per household in 2000, and 2.85 in 2010. During the same period, the number of households increased, from 452 occupied households in 1990 and 469 in 2000, to 493 occupied housing units in 2010. Of the 527 total housing units surveyed for the 2010 U.S. Census, 63.2% were owner-occupied, 30.4% were rented, and 6.5% were vacant or used only seasonally. Between 1990 and 2010, no Metlakatla residents were estimated to be living in group quarters.

¹⁰⁵⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁵⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

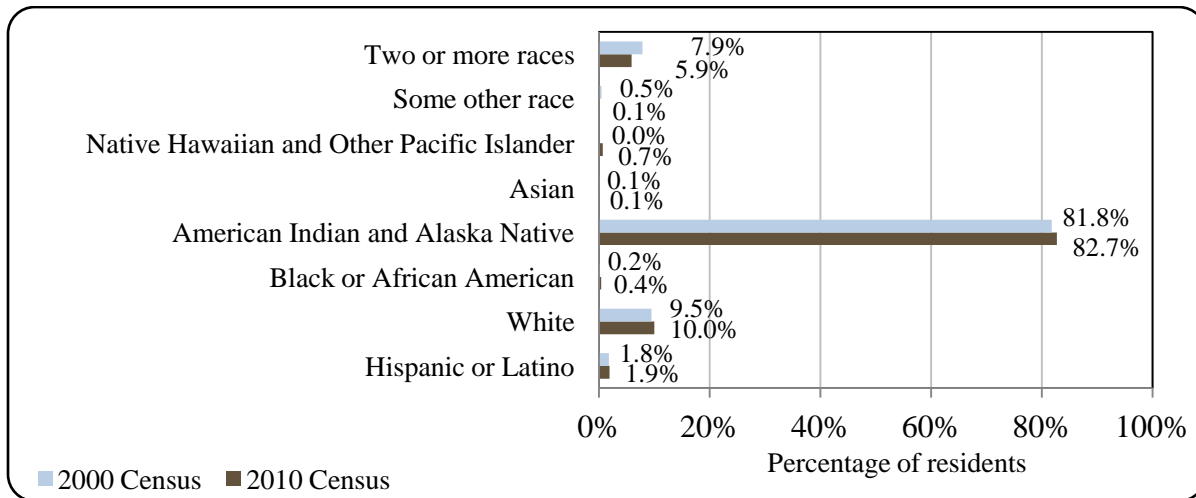
Table 1. Population in Metlakatla from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	1,407	-
2000	1,375	-
2001	-	1,345
2002	-	1,352
2003	-	1,327
2004	-	1,305
2005	-	1,343
2006	-	1,321
2007	-	1,279
2008	-	1,316
2009	-	1,330
2010	1,405	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

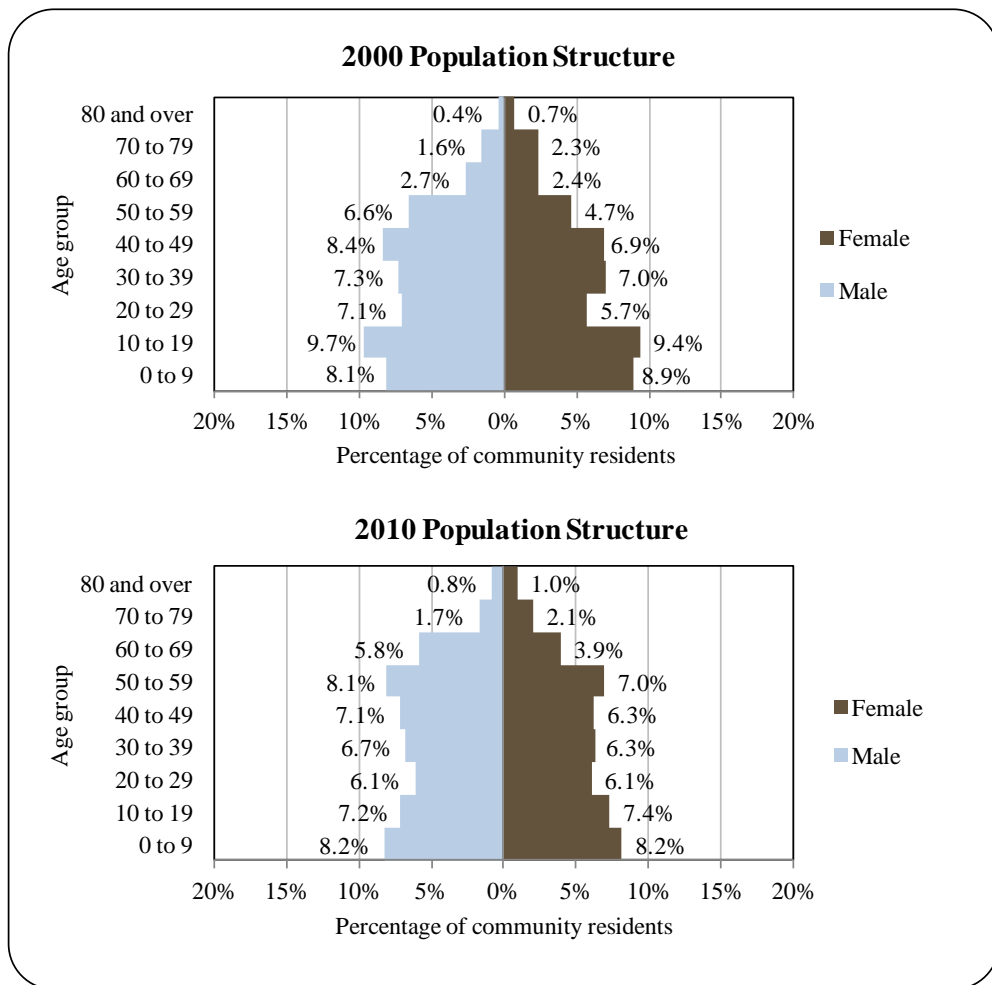
Figure 1. Racial and Ethnic Composition, Metlakatla: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Metlakatla’s population (51.9% male and 48.1% female) was very close to the population of Alaska as a whole, which was 52% male and 48% female. The median age of Metlakatla residents was 35.7 years, close to the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 15.3% of Metlakatla’s population was age 60 or older. The overall population structure of Metlakatla in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁰⁵⁷ 85.8% of Metlakatla residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 4.2% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 9.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 26.5% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 4.1% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 4.8% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 7.2% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Metlakatla Based on the 2000 and 2010 U.S. Decennial Census.



¹⁰⁵⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

The original homeland of the Tsimshian is between the Nass and Skeena Rivers in British Columbia, Canada, though at the time of European contact, several Tsimshian villages were located in southern Southeast Alaska at Hyder and Halibut Bay.¹⁰⁵⁸ In the ancient Tsimshian culture there were several individual tribes, each with its own chief and governing council. Within each tribe there are four major clans: the Eagle, or *Lachsgeek*; the Raven, or *Gunhada*; the Wolf, or *Lachgeebuu*; and the Killer Whale, or *Gisbuutwada*.¹⁰⁵⁹

(New) Metlakatla was founded in 1887 by a group of Canadian Tsimshian in search of religious freedom. In Canada in the mid-1800s, the Church of England was pursuing a mission to Westernize aboriginal peoples through converting them to Christianity. In 1857, a lay missionary named Reverend William Duncan was assigned to work with the Tsimshian in British Columbia. Rev. Duncan waited to begin teaching the Christian Gospels to the people until he had learned the Tsimshian language. Rev. Duncan and the community came into conflict with the Church of England when he refused to administer certain rituals and ceremonies that he felt the people were not yet prepared to participate in.^{1060, 1061}

In order to remove the Tsimshian from the negative influence of these conflicts, Rev. Duncan initially moved them from Fort Simpson to Metlakatla, British Columbia (now known to the Tsimshian in Alaska as “Old Metlakatla”). However, conflicts with the church worsened, and around 1886, Rev. Duncan met with U.S. President Grover Cleveland to request land for the Tsimshian in their traditional territory in coastal Alaska. A group of men was selected by Duncan to travel by canoe to Alaskan waters to identify a site for a settlement. The search committee selected Annette Island, and in 1887, Rev. Duncan and a group of 826 Tsimshian traveled by ocean-going canoes to their new home. In 1891, the U.S. Congress officially declared Annette Island a federal Indian reservation.¹⁰⁶² A later presidential proclamation in 1916 expanded the jurisdiction of the reservation to include the waters within 3,000 ft of the shorelines at mean low tide of Annette Island, and several smaller islands, rocks and islets in the area.¹⁰⁶³ The Tsimshian soon built a church, school, sawmill, and cannery, and constructed homes in an orderly grid pattern. Duncan continued to inspire and lead his followers until his death in 1918. In 1927, the community built a hydroelectric plant. During World War II, the U.S. Army constructed a large air base a few miles from town, which was later used for commercial amphibian flights to Ketchikan. The U.S. Coast Guard also maintained a base on the island until 1976.¹⁰⁶⁴

Today, a majority of Metlakatla’s population remains Tsimshian, but it is also home to individuals of diverse races, including tribal affiliations such as Tlingit, Haida, Aleut, Yup’ik, and other Alaska Native peoples. Members of other tribes are allowed to become members of the Metlakatla Indian Community by virtue of a clause in Metlakatla’s charter that specifically

¹⁰⁵⁸ Alaska Native Heritage Center (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

¹⁰⁵⁹ Metlakatla Indian Community website. 2005. Retrieved April 24, 2012 from <http://www.metlakatla.com/>.

¹⁰⁶⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁶¹ See footnote 1059.

¹⁰⁶² Ibid.

¹⁰⁶³ Code of Federal Regulations (1963). Title 25 – Indians. Chapter I – Bureau of Indian Affairs, Department of the Interior. *Part 241—Indian Fishing in Alaska, 241.2(a)*. Retrieved April 24, 2012 from <http://law.justia.com/cfr/title25/25-1.0.1.10.95.html>.

¹⁰⁶⁴ See footnote 1060.

allows such membership. The Annette Island Reserve is the only federal reservation for indigenous peoples in Alaska. The community was not part of the Alaska Native Claims Settlement Act (ANCSA). Local residents pursue a subsistence lifestyle. Salmon, halibut, cod, seaweed, clams, and waterfowl are important food sources.¹⁰⁶⁵

Natural Resources and Environment

Metlakatla is located on Annette Island. The 86,000 acres that make up the Annette Island Reserve, and the waters within the Annette Island Fishery Reserve (waters surrounding Annette Island out to 3,000 ft), are managed by the Metlakatla Indian Community (Community) and are not subject to state jurisdiction. Commercial fishing within the Annette Island Fishery Reserve is limited to members of the Community.¹⁰⁶⁶

Metlakatla is in the maritime climate zone with warm winters, cool summers, and an average annual precipitation of 115 inches, along with 61 inches of snowfall. A record annual rainfall of 200 inches has been recorded. Average summer temperatures range from 36 to 52 °F, and average winter temperatures range from 28 to 42 °F.¹⁰⁶⁷ The topography of the Metlakatla Peninsula, the area of the island where the community is located, is relatively gentle and low-elevation. In contrast, most of Annette Island is mountainous, rising in elevation to over 3,500 ft above sea level. In the lowlands of the Metlakatla Peninsula, muskeg is the primary vegetation type due to poor drainage of soils. Some lowland forests are present in areas of greater drainage. Forests of hemlock, spruce, and cedar grow on mountain forests up to a tree-line at approximately 2,000 ft.¹⁰⁶⁸ Annette Island is adjacent to Gravina Island to the northwest, Revillagigedo Island to the north and east, and Duke Island to the south. It is bordered on the west by Nichols Passage and on the east by Revillagigedo Channel. Metlakatla is partly exposed to the ocean via Dixon Entrance to the south.

Much of the land surrounding the Annette Island Reserve is included in the Tongass National Forest. Approximately 95% of Southeast Alaska is federal land, of which 80% is part of the National Forest. At 16.8 million acres, the Tongass is the largest National Forest in the United States. It is managed to produce resource values, products, and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.¹⁰⁶⁹

Protected areas near Metlakatla include Misty Fjords National Monument Wilderness, several roadless areas within the Tongass National Forest, and Dall Bay State Marine Park. Misty Fjords National Monument is the largest Wilderness Area in the Tongass National Forest, which encompasses a total of 2,142,234 acres on the mainland as well as the eastern shore of Revillagigedo Island. The topography of the National Monument is characterized by deep valleys, steep slopes, and sharp inter-valley ridges formed by volcanoes and carved by glaciers. Cliffs and fjordsides rise thousands of ft from the water. Unique geological features are found within

¹⁰⁶⁵ Ibid.

¹⁰⁶⁶ Pacific Rim Planners, Inc. (1977). *Annette Islands Land Use & Housing Plan*. Retrieved April 24, 2012 from <http://www.commerce.state.ak.us/dca/plans/Metlakatla-LUP-1977.pdf>.

¹⁰⁶⁷ See footnote 1060.

¹⁰⁶⁸ See footnote 1066.

¹⁰⁶⁹ U.S. Forest Service (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

the Wilderness Area, such as mineral springs and volcanic lava flows. Wildlife commonly seen within Misty Fjords National Monument includes orcas and porpoises, mountain goats, and bears. The area receives very high visitation rates each year.¹⁰⁷⁰

Four roadless areas are located in proximity to Annette Island, including 30,941 acres on the southwest quarter of Revillgigedo Island (Revilla Roadless Area), 53,559 acres spread between the Cleveland Peninsula and the southeast shore of Revillgigedo Island (South Revilla Roadless Area), 46,863 acres on Duke Island (Duke Roadless Area), and 38,978 acres on Gravina Island (Gravina Roadless Area). None of these roadless areas contain areas of LUD II (land-use designation II), which would be “permanently managed in a roadless state to retain their wildland characteristics.”¹⁰⁷¹ The status of roadless areas in the Tongass National Forest has been a controversial issue in recent years. The Roadless Area Conservation Rule (RACR) was instated in 2001, prohibiting road construction and timber harvesting in 58.5 million acres of roadless areas in the National Forest System. Lawsuits were filed following the RACR, and an exemption was granted for the Tongass National Forests in 2003. A coalition of Alaska Natives, recreation groups, and environmental groups filed a lawsuit in 2009 seeking to reinstate the rule, and on March 4, 2011, the Tongass Exemption was repealed. As of 2012, the RACR applies to roadless areas in the Tongass National Forest.¹⁰⁷²

In addition, Dall Bay State Marine Park is located at the southwest end of Gravina Island. The Marine Park covers 585 acres of tidelands.¹⁰⁷³ Marine Parks are intended to protect habitat, and fishing activities are not limited within their boundaries.¹⁰⁷⁴

Mineral deposits in southern Southeast Alaska include platinum, nickel and associated metals on Duke Island, polymetallic (precious and base metals), and base metal deposits (copper, lead, zinc, with minor silver and barite) identified on Gravina and Prince of Wales Islands, as well as uranium and thorium deposits on southern Prince of Wales Island.¹⁰⁷⁵ There are no existing mining claims on Duke Island. The southern end of Gravina Island has a long history of mineral exploration and gold mining, and there is a potential for future mine development on the Island.¹⁰⁷⁶

Natural hazards that have been identified as risks in the Metlakatla region include flooding, wildfire, earthquake, snow and avalanche, tsunami and seiche, severe weather, landslides, and erosion. A low risk of drought was also identified in the region.¹⁰⁷⁷

¹⁰⁷⁰ U.S. Forest Service. (n.d.). *Misty Fjords National Monument Wilderness*. Retrieved April 25, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/Misty.pdf.

¹⁰⁷¹ U.S. Forest Service (2003). *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume I: Final SEIS Appendix A, B, D, E*. Retrieved April 25, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_I.pdf.

¹⁰⁷² U.S. Forest Service (2011). *Status of Roadless Area Conservation Rule*. Retrieved September 11, 2012 from http://www.fs.fed.us/biology/resources/pubs/issuepapers/issuepaper_RoadlessRules-201108.pdf.

¹⁰⁷³ Alaska Dept. of Natural Resources (2011). *Dall Bay State Marine Park*. Retrieved April 25, 2012 from <http://dnr.alaska.gov/parks/aspunits/marinepark/dallbay.htm>.

¹⁰⁷⁴ Alaska Dept. of Fish and Game (2002). *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

¹⁰⁷⁵ Alaska Dept. of Natural Resources. (2011). *Mineral Resources of Alaska Map*. Retrieved April 3, 2012 from <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

¹⁰⁷⁶ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume II: Appendix C – Part I*. Retrieved April 3, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_II.pdf.

¹⁰⁷⁷ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Metlakatla as of May 2012.¹⁰⁷⁸

Current Economy¹⁰⁷⁹

Metlakatla's economy is based primarily on commercial fishing, fish processing, and services. The community built a salmon hatchery on Tamgas Creek, which releases millions of fry of all five salmon species.¹⁰⁸⁰ In 2010, 80 Metlakatla residents held state commercial fishing permits, with the largest number of permits held in fisheries for salmon, herring, sea cucumber, and halibut (see the *Commercial Fishing* section of this profile). Residents also rely on subsistence harvest of salmon, halibut, clams, and waterfowl as food sources.¹⁰⁸¹

In 2010, the largest employer was the Metlakatla Indian Community, which operates the hatchery, the tribal court, and all local services and utilities. The second largest employer, Annette Island Packing Company, is a cold storage facility owned by the Community. Other top employers include the school district, Metlakatla Housing Authority, the state government, Metlakatla Power & Light, and several private companies. A cannery and two sawmills are no longer in operation. The community is also interested in developing tourism.^{1082,1083}

Based on household surveys conducted for the 2006-2010 ACS,¹⁰⁸⁴ in 2010, the per capita income in Metlakatla was estimated to be \$18,909 and the median household income was estimated to be \$43,672. This represents an increase in per capita income in Metlakatla, from \$16,140 in 2000. However, when accounting for inflation by converting the 2000 values to 2010 dollars,¹⁰⁸⁵ it is shown to have decreased from a real per capita income of \$21,224 in 2000. Median household income in 2000 was \$43,516 in Metlakatla, and when accounting for inflation, real median household income is shown to have been \$57,223, revealing a decrease in real median household income in the community as well from 2000 to 2010. In 2010, Metlakatla ranked 163rd of 305 Alaskan communities with per capita income data, and 169th in median household income, out of 299 Alaskan communities with household income data that year.

Although Metlakatla's small population size may have prevented the ACS from accurately portraying economic conditions,¹⁰⁸⁶ additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information

¹⁰⁷⁸ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁰⁷⁹ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰⁸⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁸¹ Ibid.

¹⁰⁸² Ibid.

¹⁰⁸³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁰⁸⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁰⁸⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁰⁸⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

(ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Metlakatla in 2010 is \$12,478.¹⁰⁸⁷ This decline in income between 2000 and 2010 is reflected in the fact that the community was recognized as “distressed” by the Denali Commission,¹⁰⁸⁸ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly lower percentage of Metlakatla residents was estimated to be in the civilian labor force (63.2%) than in the civilian labor force statewide (68.8%). In the same year, approximately 9.2% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 10.2%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 22.3%, compared to a statewide unemployment rate estimate of 11.5%.¹⁰⁸⁹

Also based on the 2006-2010 ACS, a majority of the Metlakatla workforce (73.5%) was estimated to be employed in the public sector, along with 16.1% in the public sector, 9.3% that were self-employed, and 1.1% that were unpaid family workers. Of the 547 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number was estimated to be working in educational services, health care and social assistance (28%), public administration (16.8%), arts, entertainment, recreation, accommodation and food services (10.6%), and manufacturing (10.1%). The occupations in which the greatest percentages of the workforce were estimated to be employed were management/professional (38.6%), service (25.4%), and production/transportation/material moving (15.2%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. In 2010, 5.1% of the Metlakatla civilian labor force was estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries, and 9.9% was estimated to be employed in natural resource/construction/maintenance occupations. A breakdown of this occupation category reveals that only 12 workers (2.2% of the civilian labor force) were estimated to be employed in farming, fishing, and forestry occupations.

¹⁰⁸⁷ See footnotes 1083 and 1084.

¹⁰⁸⁸ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹⁰⁸⁹ See footnote 1083.

Figure 3. Local Employment by Industry in 2000-2010, Metlakatla (U.S. Census).

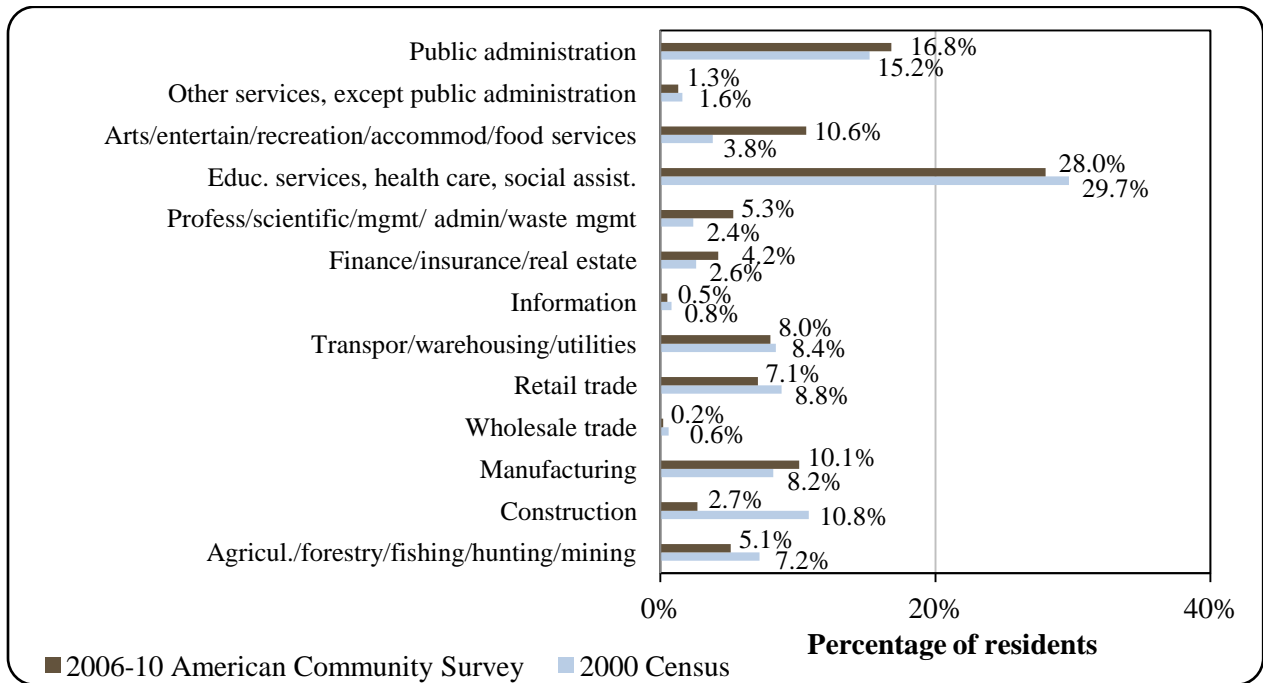
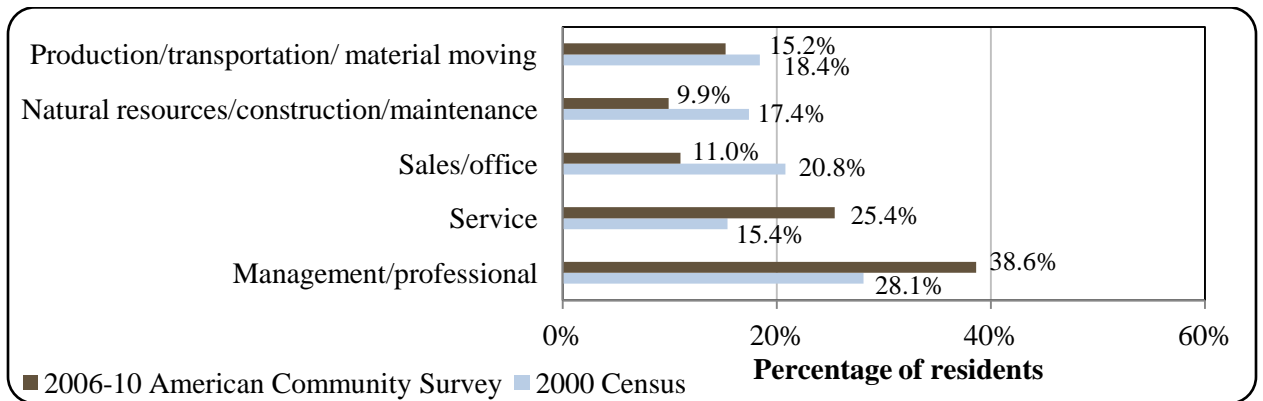


Figure 4. Local Employment by Occupation in 2000-2010, Metlakatla (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 664 employed residents in 2010, of which 69.9% were employed in local government, 9.6% in trade, transportation and utilities industries, 8.4% in financial activities, 2% in construction, 2% in educational and health services, 1.7% in leisure and hospitality, 0.8% in professional and businesses services, 0.6% in information, 0.3% in natural resources and mining, and 1.2% in other industries.¹⁰⁹⁰ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

¹⁰⁹⁰ Ibid.

Governance

Metlakatla is a traditional Tsimshian community located on federal reservation lands. Metlakatla was not included under ANCSA, and is not federally recognized as a Native village. Instead, a federally-recognized Tribe is located in Metlakatla – the Metlakatla Indian Community. The Metlakatla Indian Community incorporated in 1944, and is governed by a 12-member tribal council, mayor, secretary, and treasurer.¹⁰⁹¹ The community also has a five-member school board and several municipal employees. Metlakatla is not part of an organized borough. Because of its status as a federal Indian reservation, there are no local taxes. All reservation lands (86,000-acre Annette Island) and waters out to 3,000 ft surrounding the Island are controlled by the Tribe, and are not subject to state jurisdiction. The Tribe regulates commercial fishing in these waters, operates its own court system, and provides community services, including police and fire/rescue services and utilities.¹⁰⁹²

Annual municipal revenue in Metlakatla increased between 2000 and 2009, from just over \$16 million per year from 2000 to 2002 to over \$22 million per year from 2005 to 2009. No information was reported regarding total community revenue in Metlakatla in 2010. Given the lack of sales tax collected in Metlakatla, no sales tax revenue was reported between 2000 and 2010. Local revenue sources in Metlakatla during the period included leases and rentals, fees, fines, and charges related to government services, revenues from hatchery harvest, fish packing and boat loans, and revenue from gaming. Outside revenue sources included federal grants in some years for projects such as clinic construction, and several fisheries-related grants. These included a \$2.5 million dollar grant in 2003 toward harbor improvements and construction, and almost \$200,000 in 2004 to upgrade the local fish processing plant and state revenue sharing. Metlakatla also received state funding through the State Revenue Sharing program (contributions of \$3,000 per year from 2000 to 2003) and the Community Revenue Sharing program (contributions of approximately \$170,000 per year in 2009 and 2010). Information about selected aspects of Metlakatla's community revenue is presented in Table 2.

Ketchikan has the nearest offices of the Alaska Department of Fish and Game (ADF&G), the U.S. Forest Service, the Alaska Department of Natural Resources, and the U.S. Bureau of Citizenship and Immigration Services. An enforcement office of the NOAA National Marine Fisheries Service (NMFS) is also located in Ketchikan, while Juneau hosts the Alaska Regional Office of the NMFS, as well as the AFSC Auke Bay laboratories. Juneau also has the closest office of the Alaska Department of Commerce, Community, and Economic Development. The NOAA National Weather Service has a weather station on Annette Island, south of the main community of Metlakatla.

¹⁰⁹¹ Metlakatla Indian Community (2005). Retrieved April 23, 2012 from <http://www.metlakatla.com/community.php>.

¹⁰⁹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Metlakatla from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$16,228,568	n/a	\$4,170	n/a
2001	\$16,318,040	n/a	\$3,707	n/a
2002	\$16,249,076	n/a	\$3,681	n/a
2003	\$17,233,016	n/a	\$3,631	\$2,500,000
2004	\$18,416,712	n/a	n/a	\$198,215
2005	\$21,046,215	n/a	n/a	n/a
2006	\$21,401,324	n/a	n/a	n/a
2007	\$23,227,123	n/a	n/a	n/a
2008	\$31,018,039	n/a	n/a	n/a
2009	\$22,292,405	n/a	\$167,318	n/a
2010	\$23,055,383	n/a	\$171,177	n/a

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Metlakatla is accessible by air and water. The Annette Island Airport, located approximately 6 miles south of town, is owned and operated by the Metlakatla Indian Community. The Airport has a 7,493-ft-long and 150-ft-wide asphalt runway, and a 5,709-ft-long by 150-ft-wide gravel crosswind runway.¹⁰⁹³ As of early June 2012, roundtrip airfare between Metlakatla and Anchorage was \$462.¹⁰⁹⁴ Two seaplane bases are also available, with scheduled floatplane service from Ketchikan.^{1095,1096} The state ferry serves Metlakatla from Ketchikan between spring and fall.¹⁰⁹⁷ As of summer 2012, a one-way adult passenger fare on

¹⁰⁹³ Ibid.

¹⁰⁹⁴ This price was calculated on November 21, 2011 using kayak.com.

¹⁰⁹⁵ National Ocean Service (2011). U.S. Coast Pilot 8, Pacific Coast Alaska: Dixon Entrance to Cape Spencer, 33rd Edition. Retrieved April 24, 2012 from <http://www.nauticalcharts.noaa.gov/nsd/coastpilot/files/cp8/CP8-33ed-reduced.pdf>.

¹⁰⁹⁶ See footnote 1092.

¹⁰⁹⁷ Ibid.

the Alaska Marine Highway System from Metlakatla to Ketchikan was \$25.¹⁰⁹⁸ In addition to the state ferry terminal, port facilities in Metlakatla include an oil company pier, a city pier, a packing company wharf, a barge terminal, a barge ramp, two marine way rail haul-outs, and public and privately owned small-craft facilities, including two small boat harbors.

Facilities

Water for the main community of Metlakatla is sourced from a concrete dam on Chester Lake. The water is chlorinated and stored in a 200,000-gallon water tank. A second water source, Yellow Hill Lake, serves Annette and the airport, but the water is not treated. In the main area of the community, a piped gravity sewage system provides primary treatment in an aerated lagoon with effluent discharge through an ocean outfall. The Metlakatla Indian Community operates the piped water and sewer system, which serves the school and 485 homes that are fully plumbed. The airport area uses individual septic tanks. Metlakatla's water system and landfill do not require state permits because the Annette Island Reserve is not within state jurisdiction. The Community provides refuse collection services. Electricity in Metlakatla is provided by two hydroelectric facilities, at Purple Lake and Chester Lake, as well as the Centennial Diesel Plant. Police services are provided by the Metlakatla Police Department, and fire and rescue services are provided by Metlakatla Volunteer Fire, Emergency Medical Services(EMS) and an Ambulance.¹⁰⁹⁹ The nearest state trooper post is in Ketchikan.¹¹⁰⁰

Additional community facilities and services include Metlakatla Town Hall, Tribal Court, Tribal Juvenile Court and Tribal Appellate Court, a senior center, Metlakatla Indian Community Bingo Hall, a teen hall, the Lepquinum Activity Center, a Boys and Girls Club, a public library, and a school library. A museum is also present in the community. Telephone, internet, and cable service are all available in Metlakatla.¹¹⁰¹

Medical Services

Local health care is provided by the Annette Island Service Unit, a clinic owned by the Tribal Council and operated by the Metlakatla Indian Community. The clinic is a qualified Emergency Care Center, as well as a Community Health Aide Program site. Emergency Services have marine, floatplane, and helicopter access. Emergency service is provided by 911 Telephone Service and volunteers. Alternative health care is provided by the Metlakatla Volunteer Fire/EMS/Ambulance.¹¹⁰² The nearest hospital is located in Ketchikan.

Educational Opportunities

There are three schools in Metlakatla. As of 2011, Richard Johnson Elementary School had 139 students and 11 teachers, Charles R. Leask Sr. Middle School had 59 students and 9

¹⁰⁹⁸ Price retrieved April 24, 2012 from http://www.dot.state.ak.us/amhs/doc/fares/met_fares.pdf.

¹⁰⁹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁰⁰ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

¹¹⁰¹ See footnote 1099.

¹¹⁰² Ibid.

teachers, and Metlakatla High School had 81 students and 15 teachers.¹¹⁰³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Metlakatla Indian Community manages exclusive fisheries within the waters of the Annette Island Fishery Reserve (Fishery Reserve). The boundaries of the Fishery Reserve were designated in a Presidential Proclamation on April 28, 1916, and include the “waters within 3,000 ft from the shorelines at mean low tide of Annette Island, Ham Island, Walker Island, Lewis Island, Spire Island, Hemlock Island, and adjacent rocks and islets, located within the broken line upon the diagram attached to and made a part of said Proclamation; and also the bays of said islands, rocks, and islets.” Commercial fishing within the Fishery Reserve is limited to members of the Metlakatla Indian Community, and members of the Community are not required to obtain a license or permit from the State of Alaska to engage in fishing in the waters of the Annette Islands Fishery Reserve.¹¹⁰⁴ The use of most fish traps was prohibited in Alaska started in 1959, but this general ban on fish traps did not include those traps operated by Indian villages.¹¹⁰⁵ In 1963, the Secretary of the Interior formally authorized the use of four fish traps within the Annette Island Fishery Reserve for the harvest of salmon. Fishing for salmon with traps is permitted during the same fishing season when purse seine fisheries are underway, as determined by the Alaska Board of Fish and Game for Commercial Fishing (Alaska Board of Fish). Other forms of commercial fishing within the Fishery Reserve must be in accordance with season and gear restrictions established by the Alaska Board of Fish, or authorized by the Secretary in response to a request by the Metlakatla Indian Community.¹¹⁰⁶

Members of the Metlakatla Indian Community are also engaged in commercial fisheries beyond the boundaries of the Annette Island Fishery Reserve, including fisheries for salmon, herring, sea cucumber, halibut, groundfish, and “other finfish” (see the *Commercial Fishing* section below). Commercial harvest of salmon began in Southeast Alaska in the late 1870s.¹¹⁰⁷ In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery. Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.¹¹⁰⁸

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gill net, troll, and set gill net gear. The highest volume of salmon landings in the region are harvested by purse seine

¹¹⁰³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹¹⁰⁴ Code of Federal Regulations (1963). Title 25 – Indians. Chapter I – Bureau of Indian Affairs, Department of the Interior. *Part 241—Indian Fishing in Alaska, 241.2(a)*. Retrieved April 24, 2012 from <http://law.justia.com/cfr/title25/25-1.0.1.10.95.html>.

¹¹⁰⁵ U.S. Dept. of the Interior (1959). *General Use of Fish Traps Barred in Alaska Salmon Fishery*. Retrieved April 25, 2012 from <http://www.fws.gov/news/historic/1959/19590309.pdf>.

¹¹⁰⁶ See footnote 1104.

¹¹⁰⁷ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹¹⁰⁸ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty, which was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.¹¹⁰⁹ Bait herring fisheries take place during the winter each year in Southeast Alaska, while roe is harvested in the spring. Bait and sac roe fisheries use purse seine and set gillnet gear, and roe is also harvested in spawn-on-kelp closed-pound fisheries.¹¹¹⁰ A "closed-pound" is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.¹¹¹¹

A state-managed sablefish fishery currently takes place in the inside waters of Chatham and Clarence Straits, north of Metlakatla, as well as in Dixon Entrance to the south. Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species that take place in outside waters. Halibut and Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.¹¹¹²

Crab fisheries in Southeast Alaska target red, golden, and blue king crab, Tanner crab, and Dungeness crab. Dive fisheries for sea cucumber and sea urchin began to grow in Southeast Alaska in recent decades.¹¹¹³ The impact of an increasing sea otter population in Southeast Alaska on stocks of sea cucumber and sea urchin has led to significant economic losses in these fisheries in recent years.¹¹¹⁴ It is also important to note that the waters between Annette and Gravina Islands are included in a Dive Fishery Research Control Area, and are closed year-round to harvest of sea cucumbers and sea urchins.¹¹¹⁵

The community of Metlakatla is eligible to participate in the Community Quota Entity (CQE) program, but as of August 2013 had not established a CQE non-profit. Metlakatla is not eligible to participate in the Community Development Quota (CDQ) program.

¹¹⁰⁹ See footnote 1107.

¹¹¹⁰ See footnote 1108.

¹¹¹¹ Alaska Dept. of Fish and Game (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.adfg.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

¹¹¹² See footnote 1108.

¹¹¹³ Ibid.

¹¹¹⁴ McDowell Group (2011). *Sea Otter Impacts on Commercial Fisheries in Southeast Alaska*. Prepared for Southeast Alaska Regional Dive Fisheries Association. Retrieved September 11, 2012 from <http://www.scribd.com/doc/74857876/MCDOWELL-GROUP-2011-Sea-Otter-Impacts-Report>.

¹¹¹⁵ Alaska Dept. of Fish and Game, Marine Protected Areas Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

Processing Plants

ADF&G's 2010 Intent to Operate list noted one registered processing plant in Metlakatla. Annette Island Packing Co. is a Native-owned seafood processing facility which began operations in 1891. According to a survey of processing plant managers conducted by the AFSC in 2011, in 2010, Annette Island Packing Co. employed a maximum of 120 workers. The facility primarily processes salmon, herring, sea cucumbers, and geoduck clams.¹¹¹⁶

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Metlakatla (Table 3).

Commercial Fishing

In addition to exclusive tribal fisheries that take place within the waters of the Annette Island Reserve, Metlakatla residents also participate in state and federally-managed commercial fisheries as crew license holders, fishing vessel owners, and permit and quota share holders. The greatest number of residents were engaged in fisheries for salmon, herring, and shellfish between 2000 and 2010, and some were also involved in fisheries for halibut, groundfish, "other finfish", and crab.

Metlakatla ranked 44th in landings and 48th in ex-vessel revenue out of 67 Alaskan ports that received landings in 2010. That year, one fish buyer and one shore-side processing facility were in operation. Landings and ex-vessel revenue information are considered confidential from 2001 to 2010 due to the small number of fish buyers. In the year 2000, when five fish buyers and three shore-side processing facilities were in operation, a total of 101,796 net lb of landings were reported by Metlakatla fish buyers, generating a total of \$246,842 in ex-vessel revenue (Table 5).

The number of fish buyers and shore-side processing facilities declined through the 2000-2010 period, although at least one buyer and one processor were present each year. The number of vessels landing catch in Metlakatla also declined over time, from 33 in 2000 to 12 in 2010. In 2010, 72 residents held crew licenses and 58 were the primary owner of a fishing vessel. Both of these numbers represent declines from the year 2000, when 98 crew licenses were held and 69 vessels were primarily owned by residents. Also in 2010, 50 vessels were listed as homeported in Metlakatla. This information about the commercial fishing sector in Metlakatla is presented in Table 5.

In 2010, 80 Metlakatla residents held a total of 108 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Of these, 61 were salmon permits, 20 were held for herring fisheries, 18 were held for "other shellfish", 6 were held in the halibut fishery, 2 were held in state groundfish fisheries, and 1 was held in a state crab fishery. In addition, Metlakatla residents held "other finfish" CFEC permits from 2000 to 2008. Information about CFEC permits is presented in Table 4, and further description of permit numbers and trends is included below.

Of 61 salmon CFEC permits held in 2010, 45 were statewide hand troll permits, 10 were for the Southeast Alaska purse seine fishery, 4 were for the Southeast Alaska drift gillnet fishery, and 2 permits were held in the statewide power gurdy troll fishery. In total, 13 salmon permits

¹¹¹⁶ Personal communication with plant employee, June 1, 2012.

(21%) were actively fished in 2010. A larger portion of purse seine (80%) and drift gillnet (75%) permits were actively fished, while only 2% of hand troll permits were actively fished in 2010. Of the two power gurdy troll permits held in 2010, one was actively fished (50%). The number of Metlakatla residents holding salmon CFEC permits, the total number of permits held, and the percentage of salmon permits that were actively fished remained relatively stable between 2000 and 2010.

Of 20 herring CFEC permits held in 2010, 19 were held in the Southeast Alaska herring roe and food/bait gillnet fishery and 1 was held in the Southeast Alaska roe herring purse seine fishery. The purse seine permit was actively fished in 2010, and 18 of 19 gillnet permits were actively fished. The number of herring permits held in Metlakatla fluctuated between 13 held in 2000 and a peak of 26 held in 2004. In most years between 2000 and 2010, a high percentage of herring permits were actively fished.

Of 18 “other shellfish” CFEC permits held in 2010, 14 were held in the Southeast Alaska dive fishery for sea cucumber, and 4 were held in the shrimp pot gear fishery. None of the shrimp permits were actively fished in 2010, while 11 of 14 sea cucumber permits were actively fished that year (79%). The number of “other shellfish” permits held remained relatively constant from 2000 to 2010, although the number of permit holders increased steadily, from 10 in 2000 to 17 in 2010. It is important to note that Metlakatla residents also held two permits in the dive fishery for sea urchins in 2000, although the permits were not actively fished that year. One permit was also held from 2000 to 2003 in the dive fishery for geoduck, but was not actively fished in any of these years.

Of six halibut permits held in 2010, five were actively fished in 2010 (83%). All six permits were associated with longline gear. Five were for use on vessels 60 ft in length or shorter, and one was for use on vessels longer than 60 ft in length. The number of halibut CFEC permits held in Metlakatla decreased slightly over the 2000-2010 period, from nine held in the year 2000. In most years during the period, a high percentage of halibut permits were actively fished.

In addition, in 2010, Metlakatla residents held two groundfish permits and one crab permit, although none of these were actively fished that year. One of the groundfish permits was held in the Gulf of Alaska miscellaneous saltwater finfish fishery, associated with longline gear and vessels under 60 ft in length. The second groundfish permit was held in the Southeast Alaska demersal rockfish fishery, associated with longline gear for use on vessels under 60 ft in length. The crab permit was held in the Southeast Alaska Dungeness crab fishery. Groundfish permits were actively fished in two years during the 2000-2010 period (2000 and 2008), while a crab permit was actively fished in 2003 only. “Other finfish” permits were not actively fished in any year from 2000 to 2010. The number of CFEC groundfish and “other finfish” permits held in Metlakatla both declined over the period, while the number of CFEC crab permits remained relatively stable. CFEC permit information is presented in Table 4.

In addition to CFEC permits, Metlakatla residents also held federal License Limitation Program (LLP) permits and Federal Fisheries Permits (FFP) between 2000 and 2010. In 2000, 11 Metlakatla residents held groundfish LLPs, decreasing to 10 groundfish LLPs held each year from 2001 to 2010. In 2000, 45% of the groundfish LLPs were actively fished, declining to 20% actively fished by 2010. No federal crab LLPs were held between 2000 and 2010 in Metlakatla. The number of FFPs held between 2000 and 2010 stayed constant at one permit each year. The FFP was actively fished in seven years during this period, including in 2010. This information is also presented in Table 4.

Between 2000 and 2010, Metlakatla residents held quota share accounts and quota shares in federal catch share fisheries for halibut and sablefish, with the highest level of participation in the halibut fishery. The number of halibut quota share account holders in Metlakatla was 15 in the year 2000, declining to seven by 2010. The number of quota shares held also decreased over the period, from 518,983 in 2000 to 279,731 in 2010. The annual halibut individual fishing quota (IFQ) allotment initially increased to 30% higher than 2000 levels in 2005, and then decreased to almost 50% below 2000 levels by 2010. Information about federal halibut catch share participation is presented in Table 6. One sablefish quota share account was held each year in Metlakatla from 2000 and 2010, and the number of quota shares remained constant at 26 shares over the period. Information about federal sablefish catch share participation is presented in Table 7. No Metlakatla residents held quota share accounts or quota shares in the federal crab catch share fisheries between 2000 and 2010 (Table 8).

Given that three or fewer processing plants were present per year between 2000 and 2010, landings and ex-vessel revenue in Metlakatla are considered confidential for individual fisheries (Table 9), although overall landings and revenue were reported in the year 2000 (Table 5). More information is available regarding landings and ex-vessel revenue earned by Metlakatla vessel owners, including all delivery locations. Landings by Metlakatla vessel owners were reported for all years between 2000 and 2010 for salmon, herring, “other shellfish”, and halibut fisheries. On average, 1,035,022 net lb of salmon were landed per year by Metlakatla vessel owners between 2000 and 2010, valued on average at \$309,603; an average of 590,033 net lb of herring were landed per year, valued on average at \$164,914; an average of 49,339 net lb of halibut were landed per year, valued on average at \$152,296; and an average of 45,054 net lb of “other shellfish” were landed per year, valued on average at \$94,685 in ex-vessel revenue. In addition, “other groundfish” landings were reported for all years during the period except 2002 and 2008, for which years the information is considered confidential due to the small number of participants. For those years in which “other shellfish” data can be reported, an average of 2,299 net lb were landed per year, valued on average at \$1,440 in ex-vessel revenue. Landings and ex-vessel revenue in other fisheries are considered confidential in all years from 2000 and 2010. Information about landings and ex-vessel revenue earned by Metlakatla vessel owners is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (In Millions of U.S. Dollars) Received by the Community of Metlakatla: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>\$16.2</i>	<i>\$16.3</i>	<i>\$16.2</i>	<i>\$17.2</i>	<i>\$18.4</i>	<i>\$21</i>	<i>\$21.4</i>	<i>\$23.2</i>	<i>\$31</i>	<i>\$22.3</i>	<i>23.1</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Metlakatla: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	11	10	10	10	10	10	10	10	10	10	10
	Active permits	5	4	3	3	3	3	3	3	1	2	2
	% of permits fished	45%	40%	30%	30%	30%	30%	30%	30%	10%	20%	20%
	Total permit holders	11	10	10	10	10	10	10	10	10	10	10
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	1	1	1	1	1	0	1	1
	% of permits fished	0%	0%	0%	100%	100%	100%	100%	100%	0%	100%	100%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (CFEC) ²	Total permits	1	2	1	2	1	1	1	1	1	1	1
	Fished permits	0	0	0	1	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	2	1	3	1	1	1	1	1	1	1
Other shellfish (CFEC) ²	Total permits	16	19	19	19	16	16	16	17	16	16	18
	Fished permits	5	9	11	11	10	9	10	12	10	7	11
	% of permits fished	31%	47%	57%	57%	62%	56%	62%	70%	62%	43%	61%
	Total permit holders	10	14	15	15	14	14	15	14	14	14	17
Halibut (CFEC) ²	Total permits	9	8	8	6	7	5	6	7	7	6	6
	Fished permits	8	7	5	6	5	4	6	7	5	4	5
	% of permits fished	89%	88%	63%	100%	71%	80%	100%	100%	71%	67%	83%
	Total permit holders	9	8	8	6	7	5	6	7	7	6	6
Herring (CFEC) ²	Total permits	13	17	17	23	26	22	16	15	20	21	20
	Fished permits	10	14	17	23	24	19	8	14	20	21	19
	% of permits fished	77%	82%	100%	100%	92%	86%	50%	93%	100%	100%	95%
	Total permit holders	11	17	19	25	28	23	19	17	22	23	21

Table 4 cont'd. Permits and Permit Holders by Species, Metlakatla: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	11	9	6	3	3	3	3	6	5	5	2
	Fished permits	1	0	0	0	0	0	0	0	1	0	0
	% of permits fished	9%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%
	Total permit holders	8	7	4	2	2	2	2	4	3	2	1
Other Finfish (CFEC) ²	Total permits	7	5	1	1	1	1	1	1	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-
	Total permit holders	7	5	1	1	1	1	1	1	1	0	0
Salmon (CFEC) ²	Total permits	60	59	60	60	60	60	61	59	60	60	61
	Fished permits	15	12	17	19	16	19	15	16	16	14	13
	% of permits fished	25%	20%	28%	32%	27%	32%	25%	27%	27%	23%	21%
	Total permit holders	58	59	59	59	60	59	58	56	59	58	61
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>117</i>	<i>119</i>	<i>112</i>	<i>114</i>	<i>114</i>	<i>108</i>	<i>104</i>	<i>106</i>	<i>110</i>	<i>109</i>	<i>108</i>
	<i>Fished permits</i>	<i>39</i>	<i>42</i>	<i>50</i>	<i>60</i>	<i>55</i>	<i>51</i>	<i>39</i>	<i>49</i>	<i>52</i>	<i>46</i>	<i>48</i>
	<i>% of permits fished</i>	<i>33%</i>	<i>35%</i>	<i>45%</i>	<i>53%</i>	<i>48%</i>	<i>47%</i>	<i>38%</i>	<i>46%</i>	<i>47%</i>	<i>42%</i>	<i>44%</i>
	<i>Permit holders</i>	<i>76</i>	<i>82</i>	<i>80</i>	<i>82</i>	<i>84</i>	<i>76</i>	<i>75</i>	<i>75</i>	<i>76</i>	<i>77</i>	<i>80</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Metlakatla: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Metlakatla ²	Total Net Pounds Landed in Metlakatla ^{2,5}	Total Ex-Vessel Value of Landings in Metlakatla ^{2,5}
2000	98	5	3	69	55	33	101,796	\$246,842
2001	97	2	2	70	56	28	-	-
2002	93	1	2	66	53	30	-	-
2003	88	2	2	68	58	49	-	-
2004	91	2	2	72	64	62	-	-
2005	65	2	2	62	57	44	-	-
2006	64	3	1	59	49	26	-	-
2007	64	2	1	54	45	42	-	-
2008	65	2	1	56	47	24	-	-
2009	68	2	1	61	52	23	-	-
2010	72	1	1	58	50	12	-	-

Note: Cells showing “-” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Metlakatla: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	15	518,983	73,200
2001	15	518,983	76,410
2002	12	280,482	39,978
2003	13	307,584	43,294
2004	11	263,565	45,216
2005	10	232,919	42,746
2006	10	232,919	41,575
2007	11	264,198	37,753
2008	7	272,781	28,445
2009	7	272,781	22,994
2010	7	279,731	20,667

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Metlakatla: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	1	26	3
2001	1	26	2
2002	1	26	2
2003	1	26	3
2004	1	26	3
2005	1	26	3
2006	1	26	3
2007	1	26	2
2008	1	26	2
2009	1	26	2
2010	1	26	2

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Metlakatla: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Metlakatla: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	101,796	-	-	-	-	-	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	\$246,842	-	-	-	-	-	-	-	-	-	-

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Metlakatla Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	95523	34788	51317	68330	68375	45106	60821	53521	29656	13752	21535
Herring	485044	395189	377808	793851	432097	737702	703895	602093	802154	519526	641008
Other Groundfish	7282	597	-	1003	1778	2649	3763	2102	-	1002	518
Other Shellfish	21808	28850	52382	79060	62764	14535	70295	60653	23603	42305	39339
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	1140138	1185261	782581	1489997	1045020	1794885	789665	485225	813122	864703	994642
<i>Total²</i>	<i>1749795</i>	<i>1644685</i>	<i>1264088</i>	<i>2432241</i>	<i>1610034</i>	<i>2594877</i>	<i>1628439</i>	<i>1203594</i>	<i>1668535</i>	<i>1441288</i>	<i>1697042</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$237,876	\$68,990	\$108,361	\$196,103	\$202,172	\$135,690	\$227,794	\$224,549	\$125,486	\$44,226	\$104,010
Herring	\$139,938	\$85,985	\$105,169	\$201,010	\$133,518	\$130,197	\$107,253	\$140,890	\$375,825	\$229,465	\$164,807
Other Groundfish	\$5,624	\$226	-	\$749	\$1,142	\$1,299	\$2,292	\$672	-	\$623	\$334
Other Shellfish	\$54,407	\$55,663	\$79,605	\$121,817	\$133,435	\$37,136	\$140,815	\$165,232	\$57,941	\$96,749	\$98,741
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$337,407	\$294,463	\$154,137	\$274,754	\$278,812	\$379,213	\$291,387	\$203,615	\$432,220	\$338,089	\$421,539
<i>Total²</i>	<i>\$775,252</i>	<i>\$505,327</i>	<i>\$447,273</i>	<i>\$794,433</i>	<i>\$749,078</i>	<i>\$683,534</i>	<i>\$769,541</i>	<i>\$734,958</i>	<i>\$991,472</i>	<i>\$709,153</i>	<i>\$789,430</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

From 2000 to 2010, the number of active sport fish guide businesses declined from three to one, while the number of licensed sport fish guides present in Metlakatla declined from four to one. No kept/released statistics from charter logbook data were reported by ADF&G for Metlakatla.¹¹¹⁷ Metlakatla residents purchased between 132 and 186 sportfishing licenses per year, irrespective of point of sale. The number of licenses sold in Metlakatla varied from 0 to 86 per year. The fact that a greater number of residents purchased licenses than the number purchased in the community indicates that Metlakatla is not a primary hub for sportfishing tourism, and also suggests that Metlakatla residents travel elsewhere to purchase licenses and prepare for their own sportfishing activity. Metlakatla's proximity to Ketchikan, a major hub for sportfishing activity in Southeast Alaska, may explain this pattern.

The Alaska Statewide Harvest Survey,¹¹¹⁸ conducted by ADF&G between 2000 and 2010, noted harvesting of the following species by Metlakatla sport fishermen. In freshwater, coho salmon and cutthroat trout were targeted. In saltwater, anglers targeted Chinook, chum, coho, sockeye, and pink salmon, lingcod, Pacific cod, Pacific halibut, and rockfish. The survey also noted sport harvest of shrimp, Dungeness crab, and hardshell clams by Metlakatla sport fishers.

Metlakatla is located within Alaska Sport Fishing Survey Area A – Ketchikan. Looking at this regional scale between 2000 and 2010, there was significantly greater saltwater sportfishing activity than freshwater, although both were important. The following numbers of saltwater angler days were recorded: between 30 and 50 thousand non-Alaska resident angler days per year and between 26 and 57 thousand resident angler days per year. With regard to freshwater sportfishing, Alaska residents fished between 3,295 and 9,128 angler days per year, while non-Alaska resident sport fishermen fished between 3,370 and 5,920 angler days per year. This information about the sportfishing sector in Metlakatla is also presented in Table 11.

¹¹¹⁷ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹¹¹⁸ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Metlakatla: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Metlakatla ²
2000	3	4	160	0
2001	2	3	132	0
2002	1	2	147	46
2003	1	2	165	77
2004	0	2	173	86
2005	2	1	186	80
2006	2	3	173	88
2007	1	2	153	80
2008	0	2	137	76
2009	1	1	154	72
2010	1	1	151	65

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	40,452	42,813	3,550	9,128
2001	37,054	32,446	4,673	6,745
2002	40,723	38,219	5,920	6,156
2003	36,096	30,347	4,525	5,082
2004	49,461	42,810	3,370	7,892
2005	52,717	34,966	4,984	4,854
2006	42,931	28,490	4,724	3,295
2007	50,001	26,364	4,391	4,289
2008	47,189	31,542	4,344	5,350
2009	44,074	57,006	4,655	8,224
2010	37,842	27,676	3,456	4,398

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Metlakatla residents rely on subsistence harvest as a source of food. Important species used for subsistence purposes include salmon, halibut, clams, and waterfowl.¹¹¹⁹ Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of households utilizing various marine resources for subsistence purposes or per capita harvest of subsistence resources by Metlakatla residents (Table 12). However, earlier information about household-level subsistence is available from a 1987 ADF&G study. The survey identified species of marine invertebrates, non-salmon fish (not including halibut), and marine mammals harvested by Metlakatla households that year. The species of marine invertebrates harvested by the greatest percentage of Metlakatla households in 1987 included clams (37% of households reported harvest), Dungeness crab (26%), abalone (22%), chitons (*Bidarkis gumboots*) (19%), octopus (11%), and sea cucumber (9%). Scallops, sea urchins, shrimp, king crab, and Tanner crab were also harvested. The species of non-salmon fish harvested by the greatest percentage of Metlakatla households included rockfish (18% of households reported harvest), Dolly Varden char (11%), and cod (7%). In addition, Metlakatla residents harvested herring, flounder, eulachon (hooligan candlefish), and harvested herring roe (herring spawn on kelp). In 1987, 3% of Metlakatla households also reported harvesting harbor seal.¹¹²⁰ It is important to note that in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Metlakatla.

Data are available regarding subsistence harvest of salmon and halibut between 2000 and 2010. The number of Metlakatla households issued subsistence salmon permits declined between 2000 and 2008, from 22 in the year 2000 to 2 in 2008. Sockeye salmon was the most heavily utilized species during this period, averaging 220 harvested per year. This information about subsistence harvest of salmon is presented in Table 13. Between 2003 and 2010, the number of Metlakatla residents that participated in the Subsistence Halibut Registration Certificate (SHARC) program varied between 193 and 423, and the number of SHARC cards returned each year varied between 31 and 146. The greatest subsistence harvest of halibut was reported in 2003, when 26,185 lb of halibut were harvested on 121 SHARC cards. Over time there was a generally decreasing trend in the number of SHARC cards issued and returned, as well as total lb of halibut reported harvested. Information about the subsistence halibut fishery is presented in Table 14.

Finally, no information was reported by management agencies regarding subsistence harvest of marine mammal by residents of Metlakatla between 2000 and 2010 (Table 15).

¹¹¹⁹ Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹²⁰ Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Metlakatla: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Metlakatla: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	22	10	n/a	n/a	n/a	n/a	4	n/a	n/a
2001	21	21	n/a	n/a	n/a	n/a	202	n/a	n/a
2002	12	12	n/a	n/a	n/a	n/a	40	n/a	n/a
2003	40	32	n/a	54	n/a	74	890	n/a	n/a
2004	15	14	n/a	11	2	10	51	n/a	n/a
2005	21	17	n/a	n/a	n/a	n/a	188	n/a	n/a
2006	18	17	3	n/a	2	1	167	n/a	n/a
2007	3	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Metlakatla: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	360	121	26,185
2004	409	146	20,001
2005	414	120	16,883
2006	419	118	10,332
2007	423	117	14,026
2008	232	63	5,490
2009	207	54	4,950
2010	193	31	10,772

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Metlakatla: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Meyers Chuck



People and Place

Location

Meyers Chuck is located at the confluence of Clarence Strait and Ernest Sound, on the northwest tip of the Cleveland Peninsula. It lies 40 miles northwest of Ketchikan and 50 miles south of Wrangell. The community encompasses 0.6 square miles of land and 0.2 square miles of water.¹¹²¹ As of the 2010 U.S. Census, Meyers Chuck is classified as a remote community within the City and Borough of Wrangell.¹¹²² It is located within the Ketchikan Recording District and the Borough of Wrangell Census Area.

*Demographic Profile*¹¹²³

Meyers Chuck first appeared in the U.S. Census in 1940 with 107 residents. At the time of the 2000 U.S. Census, the population had declined to 21 inhabitants. According to the Alaska Department of Labor, the population of permanent residents remained relatively stable between 2000 and 2007, when 20 individuals resided in the community. In 2008, Meyers Chuck was included in the formation of the City and Borough of Wrangell, and is no longer considered a separate census designated place (CDP). Starting with the 2010 U.S. Census, the population of Meyers Chuck is included in the count for the City and Borough of Wrangell, and no separate information is available about the population of Meyers Chuck. This shift in census data recording is reflected in the lack of information for years 2008 to 2010 in Table 1 below.

Since it is no longer a CDP, no demographic information is available about Meyers Chuck in 2010, and data from the 2000 U.S. Census are used in this profile. As of 2000, 90.5% of Meyers Chuck residents identified themselves as White, and the remaining 9.5% identified with two or more racial groups. Individuals identifying as White made up 1% more of the Meyers Chuck population in 2000 than in 1990, and the number identifying as American Indian and Alaska Natives declined from 10% to 0% over the same period. Information about the racial and ethnic composition of Meyers Chuck in the year 2000 is presented in Figure 1.

Also reflecting previous census data, in 2000, the average household size in Meyers Chuck was 2.33, a slight decrease from 2.8 persons per household in 1990. There was also a slight decrease in the number of occupied households in Meyers Chuck, from 13 in 1990 to 9 in 2000. Of the total 48 housing units surveyed for the 2000 U.S. Census, 19% were owner-occupied and the remaining 81% were considered vacant or used seasonally. None of the housing units in Meyers Chuck were occupied by renters in 2000, and no residents lived in group quarters.

¹¹²¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹²² City and Borough of Wrangell (2010). *Comprehensive Plan, May 2010 Draft*. Retrieved November 18, 2011 from <http://www.wrangell.com/projects/articles/uploads/attachments/May2010Plannomaps%20%286MB%29.pdf>.

¹¹²³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data).. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

In the year 2000, the gender ratio in the Meyers Chuck was slightly more weighted toward males (52.4% male and 47.6% female) than the state population as a whole, which was 51.7% male and 48.3% female that year. The age groups particularly skewed toward males included 30 to 39 and 50 to 69. There were more females than males in age groups 0 to 9, 20 to 29 and 40 to 49. The median age, 50.3 years, was much older than the 2000 national average of 36.5 years and the 2000 Alaska median age of 32.4 years; 66.7% of the population was over the age of 45, and there were no community members between 10 and 24 years old. The population structure of Meyers Chuck in 2000 is shown in Figure 2.

In terms of educational attainment, according to the U.S. Census, 100% of Meyers Chuck residents age 25 or older held a high school diploma or higher degree in 2000, compared to 88.3% of Alaska residents overall that year. Of these, 61.5% held a high school diploma and no higher degree, compared to 27.9% of Alaska residents statewide, while 38.5% held Bachelor's degrees, compared to 16.1% statewide.

Table 1. Population in Meyers Chuck from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimates of Permanent Residents ²
1990	37	-
2000	21	-
2001	-	19
2002	-	20
2003	-	25
2004	-	18
2005	-	23
2006	-	16
2007	-	20
2008	-	n/a
2009	-	n/a
2010	n/a	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Meyers Chuck: 2000 (U.S. Census).

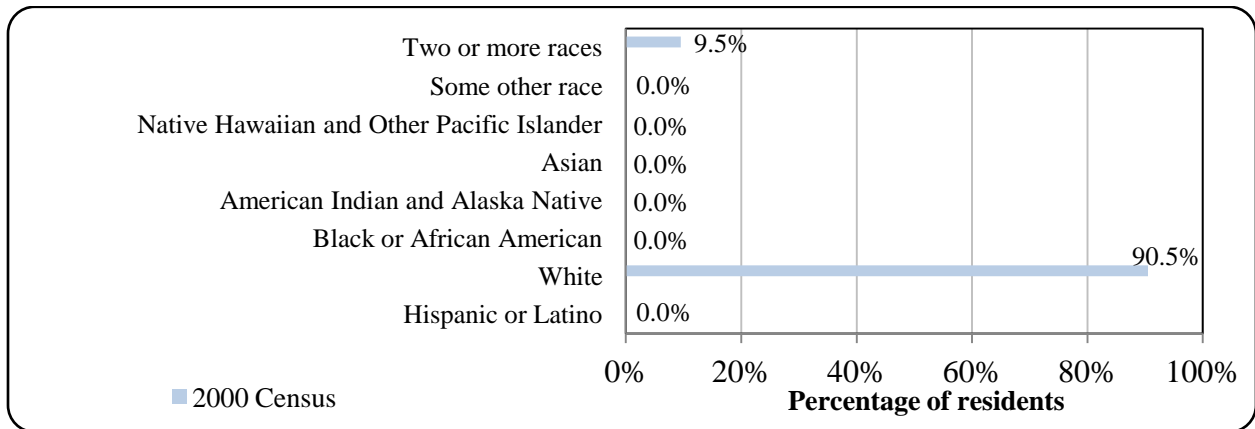
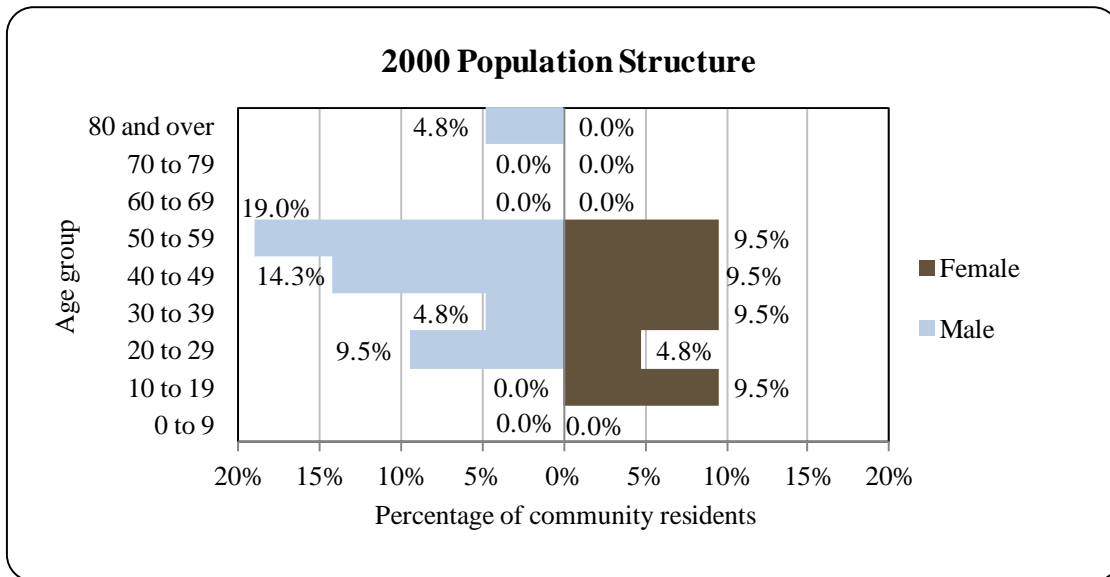


Figure 2. Population Age Structure in Meyers Chuck Based on the 2000 U.S. Decennial Census.



History, Traditional Knowledge, and Culture

Meyers Chuck’s natural, well-protected harbor has long provided shelter for fishing boats caught in the stormy waters of Clarence Strait. White settlers began living year-round at Meyers Chuck by the late 1800s. “Chuck” is a Chinook jargon word applied to a saltwater body that fills at high tide.¹¹²⁴ Many prehistoric sites are located on the Cleveland Peninsula. Helm Bay and Port Stewart, two bays located on the opposite side of the Peninsula from Meyers Chuck, were the traditional origin places of the Kiksudi Tlingit clans of Wrangell and Sitka, and the

¹¹²⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Gonoxaidi clan of the Stikine Tlingit Kwaan,¹¹²⁵ respectively.¹¹²⁶

In 1916, a cannery was established at nearby Union Bay. From 1916 to 1945, local fishermen sold their catch to the Union Bay Cannery, which in turn sold in bulk to Japan. In the 1920s, a saltery produced mild-cured king salmon. A floating clam cannery and a herring reduction plant were also present in the area during this time. A U.S. post office, store, machine shop, barber shop, bakery, and bar developed to support residents around 1922. By 1939, 107 residents lived year-round in Meyers Chuck. When fish runs began to decline in the 1940s, many people left the community to join the armed forces or to work at war-time production jobs in the lower 48. The Union Bay Cannery burned down in 1947. Land was patented to local residents between 1965 and 1969, and the community was withdrawn from the Tongass National Forest. In 1977, five residents donated funds to establish a fish hatchery. A school was constructed in 1983 but is no longer staffed. After two major fires in the summer of 1983, residents pooled their resources to establish a fund to purchase firefighting equipment. A state land disposal sale was offered in 1986.¹¹²⁷

In 2008, Meyers Chuck was annexed by the newly formed City and Borough of Wrangell and is now classified as a remote community in the Borough.¹¹²⁸ Today, Meyers Chuck remains a fishing community home to many of retirement age who seek the tranquility that this remote location affords. Many residents live in the community only seasonally.¹¹²⁹

Natural Resources and Environment

Meyers Chuck is in a maritime climate zone with warm winters and cool summers. Summer temperatures range from 49 to 65 °F, and winter temperatures range from 34 to 50 °F. Record temperatures have been recorded from -10 to 92 °F. Average annual precipitation is 82 inches, with 50 inches of snow.¹¹³⁰ The topography of the southern Cleveland Peninsula is characterized by a combination of gently rolling hills and moderately rugged mountains rising to just over 3,000 ft. Well-developed forests of western hemlock and Sitka spruce, interspersed with cedar, are found on well-drained slopes, and muskeg is found on poorly drained soils along valley floors.¹¹³¹

Meyers Chuck is adjacent to Tongass National Forest lands. Approximately 95% of Southeast Alaska is federal land, of which 80% is part of the National Forest. At 16.8 million acres, the Tongass is the largest National Forest in the United States. It is managed to produce resource values, products, and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence

¹¹²⁵ “Kwaan” is a geographically defined relationship between smaller clan groups.

¹¹²⁶ Tongass National Forest website (n.d.). *Roadless Area Maps & Descriptions*. Retrieved April 13, 2012 from <http://www.tongass-seis.net/roadless.html>.

¹¹²⁷ See footnote 1124.

¹¹²⁸ City and Borough of Wrangell (2010). *Comprehensive Plan, May 2010 Draft*. Retrieved November 18, 2011 from <http://www.wrangell.com/projects/articles/uploads/attachments/May2010Plannomaps%20%286MB%29.pdf>.

¹¹²⁹ See footnote 1124.

¹¹³⁰ Ibid.

¹¹³¹ See footnote 1126.

opportunities for rural residents.¹¹³²

National Forest lands surrounding Meyers Chuck fall under a range of land-use designations (LUDs), including old-growth habitat, timber production, semi-remote recreation, and modified landscape LUDs.¹¹³³ A 191,477 roadless area is located on the southern Cleveland Peninsula.¹¹³⁴ According to the Tongass Timber Management Plan, several timber sales could move forward on the southern Cleveland Peninsula if demand for timber production increases, but are not open for harvest under current market conditions.¹¹³⁵

Some historical and current mining activity is taking place on the southern Cleveland Peninsula. A mining claim at Union Bay has ongoing iron exploration, and an abandoned gold mine at Helm Bay has future copper and lead development potential.¹¹³⁶

Natural hazards identified in the Meyers Chuck area include high risk of wildfire, medium risk of earthquake, tsunami and seiche, medium risk from severe weather, and low risk of flooding, snow and avalanche, landslides, and drought.¹¹³⁷

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Meyers Chuck as of May 2012.¹¹³⁸

Current Economy¹¹³⁹

Meyers Chuck is a very small community without many options for a cash-based economy. Fishing is the fundamental productive activity of Meyers Chuck's population. In the year 2010, 17 commercial fishing permits were registered to addresses in Meyers Chuck, a 70% increase from 10 locally registered permits in the year 2000. Subsistence hunting, fishing, and gathering are a fundamental component of local economy and diet. Deer and fish provide the majority of meat in the local diet.¹¹⁴⁰

As of the year 2000, based on the U.S. Census,¹¹⁴¹ the per capita income in Meyers Chuck was \$31,660 and the median household income was \$64,375. After accounting for inflation by converting to 2010 dollars,¹¹⁴² the real per capita income in Meyers Chuck in the year 2000 was \$40,208, and the real median household income was \$81,756. Only 23.1% of

¹¹³² U.S. Forest Service (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

¹¹³³ U.S. Forest Service (2003). *Map of Current Land Use Designations*. Tongass National Forest Land Management Plan Revision, Final SEIS. Retrieved May 8, 2012 from <http://www.tongass-seis.net/pdf/lud.pdf>.

¹¹³⁴ See footnote 1126.

¹¹³⁵ U.S. Forest Service (2008). *Tongass Forest Amendment Record of Decision*. Retrieved November 23, 2011 from http://tongass-fpadjust.net/FPA_ROD.htm.

¹¹³⁶ Ibid.

¹¹³⁷ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAIa.%20SHMP.pdf>.

¹¹³⁸ Alaska Dept. of Environmental Conservation (n.d.). *List of contaminated sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹¹³⁹ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁴⁰ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁴¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data). Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹⁴² Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

people age 16 and over were in the civilian labor force in 2000, compared to a statewide percentage of 71.3% that year. There was no one living below the poverty line in Meyers Chuck in the year 2000, compared to 9.4% of Alaska residents overall, and 0% of the population was unemployed, compared to 6.1% of the population of Alaska overall that year. According to the 2000 Decennial Census, 100% of the employed labor force in Meyers Chuck worked in professional, management, scientific, and administrative industries and occupations. It is important to note that residents of Meyers Chuck also worked in the fishing industry at different times throughout the year, though this was not captured by census statistics (Figures 3 and 4). It should also be noted that income and employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000, Meyers Chuck (U.S. Census).

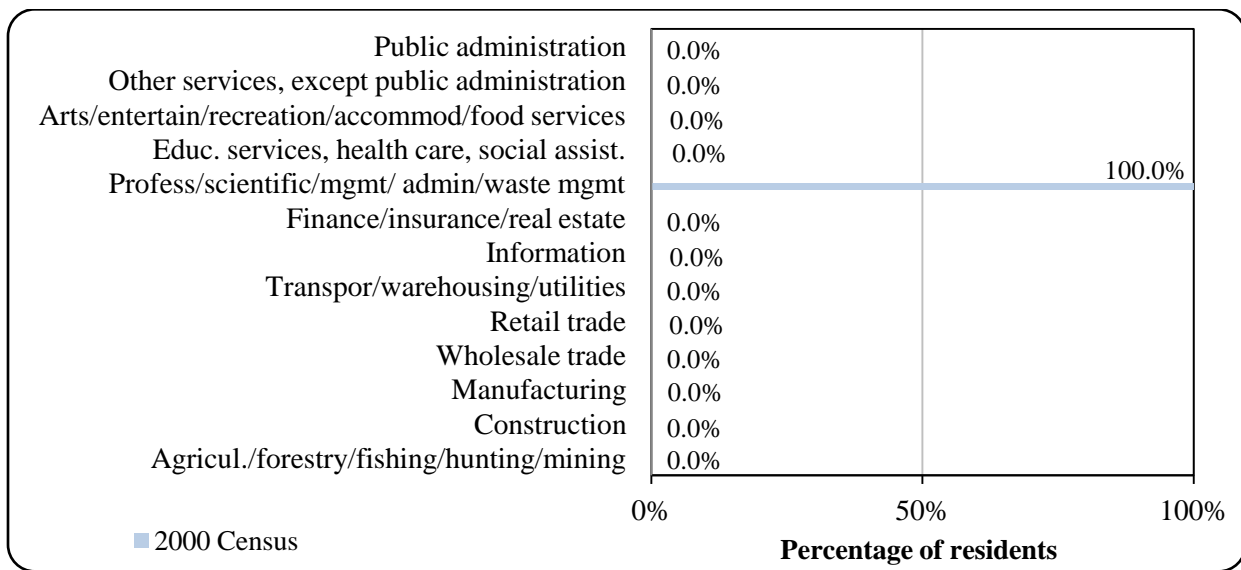
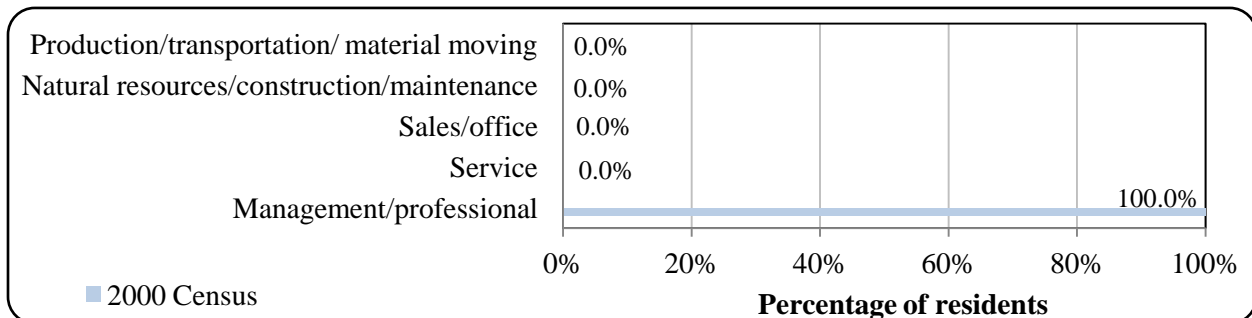


Figure 4. Local Employment by Occupation in 2000, Meyers Chuck (U.S. Census).



Governance

With the formation of the Borough of Wrangell in May 2008, Meyers Chuck now falls within the City and Borough of Wrangell. The former City of Wrangell encompassed 45.3 square miles of land and 25.6 square miles of water. The new City and Borough of Wrangell encompasses 2,582 square miles of land and 883 square miles of water, tidelands, and submerged lands, and includes the rural communities of Meyers Chuck, Thoms Place, Olive Cove, Farm Island, and Wrangell Island East.¹¹⁴³ Of these remote communities, only Meyers Chuck was previously a separate CDP.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Meyers Chuck From 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <http://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Meyers Check did not report municipal revenue between 2000 and 2010. Because Meyers Chuck was an unincorporated community until 2008, no sales tax was collected until that time. Since the formation of the Borough of Wrangell, however, Meyers Chuck is taxed by the Borough. Between 2000 and 2010, no State or Community Revenue Sharing contributions or

¹¹⁴³ City and Borough of Wrangell (2010). *Comprehensive Plan, May 2010 Draft*. Retrieved November 18, 2011 from <http://www.wrangell.com/projects/articles/uploads/attachments/May2010Plannomaps%20%286MB%29.pdf>.

fisheries-related grants were received by Meyers Chuck. Refer to Table 2 for details on some aspects of community finances from 2000 to 2010.

Meyers Chuck was not included under the Alaska Native Claims Settlement Act, and is not federally recognized as a Native village.¹¹⁴⁴ The closest offices of the Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources, U.S. Forest Service, and Bureau of Citizenship and Immigration Services are located in Ketchikan. An enforcement office of the National Marine Fisheries Service (NMFS) is also located in Ketchikan, while Juneau hosts the Alaska Regional Office of the NMFS, as well as the Alaska Fisheries Science Center's Auke Bay laboratories. Juneau also has the closest office of the Alaska Department of Commerce, Community, and Economic Development.

Infrastructure

Connectivity and Transportation

Meyers Chuck is accessible only by floatplane or boat. A state-owned seaplane base is available. With the exception of the mail plane, there are no scheduled flights. Ketchikan-based charter services and barge transport are available. A boat dock provides 650 ft of moorage, and the site is a natural sheltered harbor. Residents use skiffs for local travel.¹¹⁴⁵

Facilities

Meyers Chuck is a very small community with few or no facilities. It does not have a school or police. A piped water system serves most homes, although there are many individual wells. Although there is a centralized system of water distribution, there is no equivalent sewage system available, and most households are connected to individual septic tanks or leachfields. There is no central electric system, and individual generators supply power. Telephone service is available, although internet and cable is not provided in the area. No public safety officer is present in Meyers Chuck.¹¹⁴⁶ The nearest state troopers posts are located in Ketchikan and Wrangell.¹¹⁴⁷

Medical Services

Very basic health care is provided in Meyers Chuck by the local Emergency Medical Services.¹¹⁴⁸ The nearest hospitals are located in Ketchikan and Wrangell.

¹¹⁴⁴ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁴⁵ Ibid.

¹¹⁴⁶ Ibid.

¹¹⁴⁷ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

¹¹⁴⁸ See footnote 1144.

Educational Opportunities

As of 2011, there were no schools operating in Meyers Chuck.¹¹⁴⁹ A one-room school house was constructed in 1983, but is no longer in operation given population decline and present lack of students in the community.¹¹⁵⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Although Meyers Chuck is a very small community, it has had relatively significant involvement in North Pacific fisheries. In the 1930s and 1940s, Meyers Chuck experienced a population boom, with the 1940 U.S. Census counting 107 residents. According to a 1927 article in the Ketchikan *Chronicle*, a large portion of the community's population in the first quarter of the century was made up of salmon trollers.¹¹⁵¹ One reason why these early residents chose Meyers Chuck was the quality of its protected harbor.¹¹⁵² Many local residents continue to be involved in commercial fishing today. Between 2000 and 2010, Meyers Chuck residents held permits in state and federal fisheries for salmon, halibut, sablefish, groundfish, and "other shellfish", including shrimp, sea cucumber, and geoduck fisheries.

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.¹¹⁵³ In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.¹¹⁵⁴ Today, Southeast Alaska salmon fisheries utilize purse seine, drift gill net, troll, and set gill net gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty which was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.¹¹⁵⁵

A state-managed sablefish fishery currently takes place in the inside waters of Chatham and Clarence Straits, north of Meyers Chuck, as well as in Dixon Entrance to the south. Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Halibut and Pacific cod fisheries

¹¹⁴⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹¹⁵⁰ Allen, June (2002). "Meyers Chuck AK 99903: Ever Been There?" *Stories in the News*. Retrieved November 21, 2011 from http://www.sitnews.org/JuneAllen/110202_meyers_chuck.html.

¹¹⁵¹ Ibid.

¹¹⁵² See footnote 1144.

¹¹⁵³ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹¹⁵⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹¹⁵⁵ See footnote 1153.

utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.¹¹⁵⁶

Shrimp trawl fisheries in Southeast Alaska primarily target northern shrimp (*Pandalus borealis*) and sidestripe shrimp (*Pandalopsis dispar*), although the market for northern shrimp has declined in recent years with the closure of the primary processing facility in Petersburg in 2006.¹¹⁵⁷ A pot fishery for spot shrimp (*Pandalus platyceros*) has also grown in Southeast Alaska since the 1990s. Commercial dive fisheries for red sea cucumber (*Parastichopus californicus*) and sea urchin (*Strongylocentrotus spp.*) began near Ketchikan in the early 1980s. A dive fishery for geoduck clams began around the same time, and all three fisheries are now managed by ADF&G according to Fishery Management Plans. Sea cucumbers and sea urchin are hand picked by divers, while geoduck divers use handheld water jets to remove substrate from around the clams.¹¹⁵⁸

Meyers Chuck is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest Sablefish Regulatory Area is “Southeast Outside.” Meyers Chuck is eligible to participate in the Community Quota Entity (CQE) program, but as of August 2013 had not formed a CQE. Meyers Chuck is not eligible to participate in the Community Development Quota (CDQ) program.

Processing Plants

ADF&G’s 2010 Intent to Operate list does not list a registered processing plant in Meyers Chuck. However, processing facilities are registered in larger cities in the surrounding region, including Ketchikan, Wrangell, and Petersburg.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Meyers Chuck (Table 3).

Commercial Fishing

In 2010, 17 residents of Meyers Chuck held a total of 23 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Of these, 14 were salmon permits, of which 8 were fished. These permits were issued for three salmon fisheries, including Southeast drift gill net (one permit issued, one actively fished), Southeast hand troll (five issued, one actively fished), and statewide power gurdy troll (eight issued, six actively fished). Four “other shellfish” permits were issued, including two for the Southeast shrimp pot gear fishery (none actively fished) and two for the Southeast sea cucumber dive fishery (one actively fished).

¹¹⁵⁶ See footnote 1154.

¹¹⁵⁷ Alaska Dept. of Fish and Game (2012). *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=northernshrimp.printerfriendly>.

¹¹⁵⁸ See footnote 1154.

Two halibut permits were issued, and both were actively fished using longline gear on vessels under 60 ft in length. Finally, three groundfish permits were held in 2010, of which zero were actively fished. Permit numbers in these fisheries remained relatively stable between 2000 and 2010, although it is important to note that sablefish CFEC permits were held and actively fished by Meyers Chuck residents between 2000 and 2005 only, and one crab CFEC permit was held in 2000, and not in later years during the 2000-2010 period. This CFEC permit information is presented in Table 4.

In addition to CFEC permits, three Meyers Chuck residents held a total of three Federal Fisheries Permits (FFPs) in 2010, none of which were actively fished, and four residents held a total of four License Limitation Program permits (LLP) in federal groundfish fisheries, of which three were actively fished that year. No LLP permits were held in federal crab fisheries in 2010. These permit numbers also remained relatively stable between 2000 and 2010, with a slight increase in FFP activity over the period (Table 4).

In 2010, one Meyers Chuck resident held a quota share account in the federal halibut catch share fishery, a decrease from three quota share account holders in 2000. There was also one individual holding a quota share account the federal sablefish catch share fishery in 2010, a decrease from two account holders in 2000. There was an overall decline in the number of quota shares held in both the halibut and sablefish fisheries. The annual halibut individual fishing quota (IFQ) allotment initially increased to approximately 30% greater than 2000 levels by 2005, and then declined to approximately half of 2000 levels by 2010. Sablefish IFQ allotment declined to approximately 70% of its 2000 value (pounds per quota share) by 2010. No Meyers Chuck residents held quota share accounts in federal crab catch share fisheries between 2005 and 2010. Information about federal catch share participation is presented in Tables 6 through 8.

In 2010, 10 fishing vessels were owned by Meyers Chuck residents, 11 vessels were homeported in Meyers Chuck, and 6 residents held active crew licenses (Table 5). There were no fish buyers or shore-side processors in Meyers Chuck, and between 2000 and 2010 no vessels landed catch in the community (Table 5). As a result, values for landed lb and ex-vessel revenue in Meyers Chuck were zero over this period (Table 9). In contrast, vessels owned by Meyers Chuck residents landed salmon, halibut, and shellfish between 2000 and 2010. Salmon landings and ex-vessel revenue increased over the period. A total of 83,463 net lb were landed in 2000, with an ex-vessel value of \$47,575. In 2010, 212,373 net lb were landed at a value of \$283,173, showing an increase in price per pound over the period. Information about halibut, groundfish, sablefish, and shellfish landings by vessels owned by Meyers Chuck residents is almost entirely considered confidential during this period due to the small number of participants. Some data can be reported in 2003, when 47,744 net lb of halibut and 17,550 net lb of “other groundfish” were landed with ex-vessel values of \$139,629 and \$15,177, respectively. Table 10 presents information about landings and revenue earned by Meyers Chuck vessel owners.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Meyers Chuck: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Meyers Chuck: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	3	3	4	4	4	4	4	4	4	4	4
	Active permits	2	1	2	3	2	2	1	2	2	3	3
	% of permits fished	66%	33%	50%	75%	50%	50%	25%	50%	50%	75%	75%
	Total permit holders	3	3	4	4	4	4	4	4	4	4	4
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	2	2	2	1	3	3	3	3
	Fished permits	0	0	0	2	1	1	0	1	0	1	0
	% of permits fished	0%	0%	0%	100%	50%	50%	0%	33%	0%	33%	0%
	Total permit holders	1	1	1	2	2	2	1	3	3	3	3
Crab (CFEC) ²	Total permits	1	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	-	-	-	-	-	-	-	-	-	-
	Total permit holders	1	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	5	5	5	5	5	6	6	5	5	4	4
	Fished permits	3	1	1	1	1	2	2	1	1	1	1
	% of permits fished	60%	20%	20%	20%	20%	33%	33%	20%	20%	25%	25%
	Total permit holders	3	3	3	3	3	4	4	4	4	4	4
Halibut (CFEC) ²	Total permits	2	2	4	5	4	3	2	2	2	2	2
	Fished permits	2	2	4	5	4	2	2	2	2	2	2
	% of permits fished	100%	100%	100%	100%	100%	67%	100%	100%	100%	100%	100%
	Total permit holders	2	2	4	5	4	3	2	2	2	2	2
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Meyers Chuck: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	2	2	2	2	0	0	0	0	0
	Fished permits	1	1	2	2	2	1	0	0	0	0	0
	% of permits fished	100%	100%	100%	100%	100%	50%	0%	0%	0%	0%	0%
	Total permit holders	1	1	2	2	2	2	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	4	3	5	5	3	3	2	2	2	2	3
	Fished permits	1	0	2	3	1	0	0	0	0	0	0
	% of permits fished	25%	0%	40%	60%	33%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	1	2	2	1	1	1	1	1	1	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	12	11	12	12	13	13	13	13	14	13	14
	Fished permits	5	4	6	4	4	6	7	7	7	8	8
	% of permits fished	42%	36%	50%	33%	31%	46%	54%	54%	50%	62%	57%
	Total permit holders	10	10	10	10	11	12	12	12	13	12	13
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>25</i>	<i>22</i>	<i>28</i>	<i>29</i>	<i>27</i>	<i>27</i>	<i>23</i>	<i>22</i>	<i>23</i>	<i>21</i>	<i>23</i>
	<i>Fished permits</i>	<i>12</i>	<i>8</i>	<i>15</i>	<i>15</i>	<i>12</i>	<i>11</i>	<i>11</i>	<i>10</i>	<i>10</i>	<i>11</i>	<i>11</i>
	<i>% of permits fished</i>	<i>48%</i>	<i>36%</i>	<i>54%</i>	<i>52%</i>	<i>44%</i>	<i>41%</i>	<i>48%</i>	<i>45%</i>	<i>43%</i>	<i>52%</i>	<i>48%</i>
	<i>Permit holders</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>14</i>	<i>15</i>	<i>15</i>	<i>16</i>	<i>15</i>	<i>17</i>

¹National Marine Fisheries Service. 2011. Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Meyers Chuck: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Meyers Chuck ²	Total Net Pounds Landed in Meyers Chuck ^{2,5}	Total Ex-Vessel Value of Landings in Meyers Chuck ^{2,5}
2000	5	0	0	5	10	0	0	\$0
2001	5	0	0	4	10	0	0	\$0
2002	1	0	0	6	10	0	0	\$0
2003	3	0	0	8	9	0	0	\$0
2004	2	0	0	8	11	0	0	\$0
2005	5	0	0	8	8	0	0	\$0
2006	5	0	0	10	10	0	0	\$0
2007	5	0	0	9	10	0	0	\$0
2008	5	0	0	9	11	0	0	\$0
2009	4	0	0	9	11	0	0	\$0
2010	6	0	0	10	11	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Meyers Chuck: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	3	196,230	27,677
2001	2	194,983	28,707
2002	3	240,731	34,312
2003	3	136,353	19,434
2004	3	152,798	26,938
2005	1	44,769	8,216
2006	1	44,769	7,991
2007	1	91,584	13,087
2008	1	91,584	9,550
2009	1	91,584	7,720
2010	1	91,584	6,766

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Meyers Chuck: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	2	219,184	26,000
2001	2	219,184	24,588
2002	2	110,393	11,831
2003	2	110,393	13,103
2004	2	110,393	13,876
2005	2	110,393	13,140
2006	2	110,393	12,956
2007	2	110,393	12,404
2008	2	110,393	11,851
2009	1	110,055	10,076
2010	1	110,055	9,467

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Meyers Chuck: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Meyers Chuck: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011.
 Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science
 Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Meyers Chuck Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	47,744	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	17,550	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	83,463	-	-	-	-	198,678	189,363	183,707	157,283	217,673	212,373
<i>Total²</i>	<i>83,463</i>	<i>-</i>	<i>-</i>	<i>65,294</i>	<i>-</i>	<i>198,678</i>	<i>189,363</i>	<i>183,707</i>	<i>157,283</i>	<i>217,673</i>	<i>212,373</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	\$139,629	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	\$15,177	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$47,575	-	-	-	-	\$220,529	\$250,809	\$279,064	\$298,627	\$229,821	\$283,173
<i>Total²</i>	<i>\$47,575</i>	<i>-</i>	<i>-</i>	<i>\$154,806</i>	<i>-</i>	<i>\$220,529</i>	<i>\$250,809</i>	<i>\$279,064</i>	<i>\$298,627</i>	<i>\$229,821</i>	<i>\$283,173</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The Alaska Statewide Harvest Survey,¹¹⁵⁹ conducted by ADF&G between 2000 and 2010, reported species targeted in the Clarence Strait area near Meyers Chuck. In freshwater, coho, sockeye, and pink salmon were targeted, along with steelhead, rainbow and cutthroat trout, and Dolly Varden char. In saltwater, all five salmon species were targeted, as well as Dolly Varden, Pacific halibut, rockfish, lingcod, Pacific cod, Dungeness and Tanner crab, razor and hardshell clams, shrimp, and other shellfish.

One active sport fish guide business was registered in Meyers Chuck during two years of the 2000-2010 period (2007 and 2009), and at least one licensed sport fish guide was present each year from 2005 to 2010. However, no kept/released log book data were reported for fishing charters out of Meyers Chuck between 2000 and 2010.¹¹⁶⁰ Sportfishing licenses were sold in the community from 2003 to 2010, with an average of 64 licenses sold per year. Between 2000 and 2010, Meyers Chuck residents purchased 16 sportfishing licenses per year on average (irrespective of point of sale). The fact that more licenses were purchased in the community than were purchased by residents of Meyers Chuck indicates that sportfishing draws visitors to the community. Information about sportfishing activity in Meyers Chuck is presented in Table 11.

Meyers Chuck is located within Alaska Sport Fishing Survey Area A – Ketchikan. Looking at this regional scale between 2000 and 2010, there was significantly greater saltwater sportfishing activity than freshwater, although both were important. The following numbers of saltwater angler days were recorded: between 30 and 50 thousand non-Alaska resident angler days per year and between 26 and 57 thousand Alaska resident angler days per year. With regard to freshwater sportfishing, Alaska residents fished between 3,295 and 9,128 angler days per year, while non-Alaska resident sport fishermen fished between 3,370 and 5,920 angler days per year (Table 11).

Table 11. Sport Fishing Trends, Meyers Chuck: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Meyers Chuck ²
2000	0	0	15	0
2001	0	0	17	0
2002	0	0	11	0
2003	0	0	19	49
2004	0	0	15	71
2005	0	1	15	77
2006	0	1	20	59
2007	1	2	12	71
2008	0	1	14	68
2009	1	1	16	48
2010	0	1	17	65

¹¹⁵⁹ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹¹⁶⁰ Alaska Department of Fish and Game (2011). Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11, cont'd. Sport Fishing Trends, Meyers Chuck: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	40,452	42,813	3,550	9,128
2001	37,054	32,446	4,673	6,745
2002	40,723	38,219	5,920	6,156
2003	36,096	30,347	4,525	5,082
2004	49,461	42,810	3,370	7,892
2005	52,717	34,966	4,984	4,854
2006	42,931	28,490	4,724	3,295
2007	50,001	26,364	4,391	4,289
2008	47,189	31,542	4,344	5,350
2009	44,074	57,006	4,655	8,224
2010	37,842	27,676	3,456	4,398

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Many residents of Meyers Chuck supplement their incomes and diet with subsistence resources.¹¹⁶¹ No information was reported between 2000 and 2010 regarding per capita subsistence harvest or the percentage of Meyers Chuck households utilizing various marine resources for subsistence purposes (Table 12). However, earlier information about household-level subsistence is available from a 1987 ADF&G study. The survey identified species of marine invertebrates, non-salmon fish (not including halibut), and marine mammals harvested by Meyers Chuck households that year. The species of marine invertebrates harvested by the greatest percentage of Meyers Chuck households in 1987 included Dungeness crab (70% of households reported harvest), shrimp (50%), clams (50%), chitons (*Bidarkis gumboots*) (20%), scallops (20%), sea cucumber (20%), abalone (10%), and octopus (10%). King crab, Tanner crab, and sea urchin were also harvested. The species of non-salmon fish harvested by the greatest percentage of Meyers Chuck households included rockfish (80% of households reported harvest), Dolly Varden char (40%), cod (30%), herring (20%), and flounder (10%). In addition, Meyers Chuck residents harvested eulachon (hooligan candlefish) and herring roe (herring

¹¹⁶¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

spawn on kelp). Species of marine mammal harvested by Meyers Chuck residents in 1987 included harbor seal, though no information was available regarding the percentage of households involved in the harvest of this resource.¹¹⁶² It is important to note that in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Meyers Chuck.

Information was available between 2000 and 2010 regarding subsistence harvest of salmon and halibut. From 2003 to 2010, between 8 and 14 Subsistence Halibut Registration Certificates (SHARC) were issued to Meyers Chuck residents per year. The greatest subsistence harvest took place in 2005, when 14 SHARC cards were held, 8 were returned, and 1,400 lb of halibut were reported harvested (Table 14). The number of subsistence salmon permits issued to Meyers Chuck households between 2000 and 2010 varied from one to two per year, for those years in which information was available. No information was reported regarding the number of salmon harvested, or harvests of marine invertebrates and non-salmon fish by Meyers Chuck residents during this period (Table 13). In addition, no information was reported by management agencies regarding subsistence harvest of marine mammals by residents of Meyers Chuck between 2000 and 2010 (Table 15).

Additional Information

Several historical residents of Meyers Chuck became characters of legend. “Lonesome Pete” and “Halibut Pete” were two Scandinavian bachelors who lived a majority of their lives in Meyers Chuck. They were famous for their home brew. Lonesome Pete was also renowned as a story teller, artist, and fisherman. Leo “Lone Wolf” Smith arrived in Meyers Chuck in the 1920s and claimed that the true spelling of the town’s name was “Myers Chuck” after his uncle, whose name was spelled that way. Smith wrote many letters to local, state, and federal government officials and to the Ketchikan newspaper related to salmon management. He was particularly opposed to the creation of salmon hatcheries.¹¹⁶³

¹¹⁶² Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹¹⁶³ Allen, June (2002). “Meyers Chuck AK 99903: Ever Been There?” *Stories in the News*. Retrieved November 21, 2011 from http://www.sitnews.org/JuneAllen/110202_meyers_chuck.html.

Table 12. Subsistence Participation by Household and Species, Meyers Chuck: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Meyers Chuck: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Meyers Chuck: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	10	8	400
2004	13	7	567
2005	14	8	1,400
2006	10	8	533
2007	9	7	464
2008	8	7	590
2009	9	7	865
2010	8	7	1,638

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Meyers Chuck: 2000-2010.

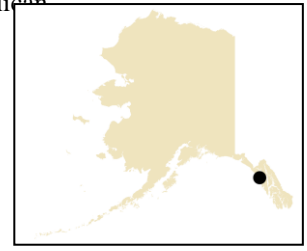
Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Pelican (PELL-ih-kun)

People and Place

*Location*¹¹⁶⁴

Pelican is located on the northwest coast of Chichagof Island, 10 miles south along Lisianski Inlet from its mouth at Cross Sound. The community lies 80 miles north of Sitka and 70 miles west of Juneau. Most of the community is built on pilings over the tidelands. Sunnyside and Phonograph are two residential areas neighboring Pelican on either side with close ties to the community. Pelican is located in the Sitka Recording District and the Hoonah-Angoon Census Area. The City encompasses 0.6 square miles of land and 0.1 square miles of water.

*Demographic Profile*¹¹⁶⁵

In 2010, there were 88 inhabitants in Pelican, making it the 256th largest of 352 total Alaskan communities with recorded populations that year. The town first appeared in U.S. Census records in 1940 with 48 inhabitants. The population increased steadily until 1990. According to the U.S. Decennial Census, between 1990 and 2010, the population declined by 60.4%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of Pelican decreased by 25.2%, although the average annual growth rate over this period was 0.77%, reflecting small increases in population in some years despite the overall decreasing trend.

According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that seasonal workers or transients are present in Pelican between May and September each year, and the community's population peaks between June and August. They also indicated that population fluctuations in Pelican are mostly driven by employment in fishing sectors. The population decline since the 1990s is largely attributable to changes in commercial seafood processing activities and seafood harvesting regulations.¹¹⁶⁶

In 2010, a majority of Pelican residents identified themselves as White (59.1%), along with 34.1% who identified as American Indian and Alaska Native, and 6.8% identifying with two or more races. In 2010, 1.1% of Pelican residents also identified themselves as Hispanic. The percentage of the Pedro Bay population identifying themselves as White decreased by 13.3% between 2000 and 2010, and the percentage identifying as American Indian and Alaska Natives increased by 12.6%. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010 the average household size in Pelican was 2.15, a decrease from 2.3 persons per

¹¹⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁶⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹⁶⁶ City of Pelican. 2005. *Coastal Management Plan: Concept Approved Plan*. Retrieved March 19, 2012 from <http://alaskacoast.state.ak.us/District/FinalPlans/Pelican/Final%20Draft%20Plan.pdf>.

household in 1990 and 2000. The total number of occupied households in Pelican decreased overtime along with the population, from 81 in 1990 and 70 in 2000, to 41 in 2010. Of the 77 housing units surveyed for the 2010 U.S. Census, 32.5% were owner-occupied, 20.8% were renter-occupied, and 46.8% were vacant or used only seasonally. In 1990, 36 Pelican residents lived in group quarters. This number declined to two by 2000, and in 2010 no Pelican residents lived in group quarters.

Table 1. Population in Pelican from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	222	-
2000	163	-
2001	-	159
2002	-	115
2003	-	112
2004	-	117
2005	-	114
2006	-	106
2007	-	108
2008	-	112
2009	-	122
2010	88	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Pelican: 2000-2010 (U.S. Census).

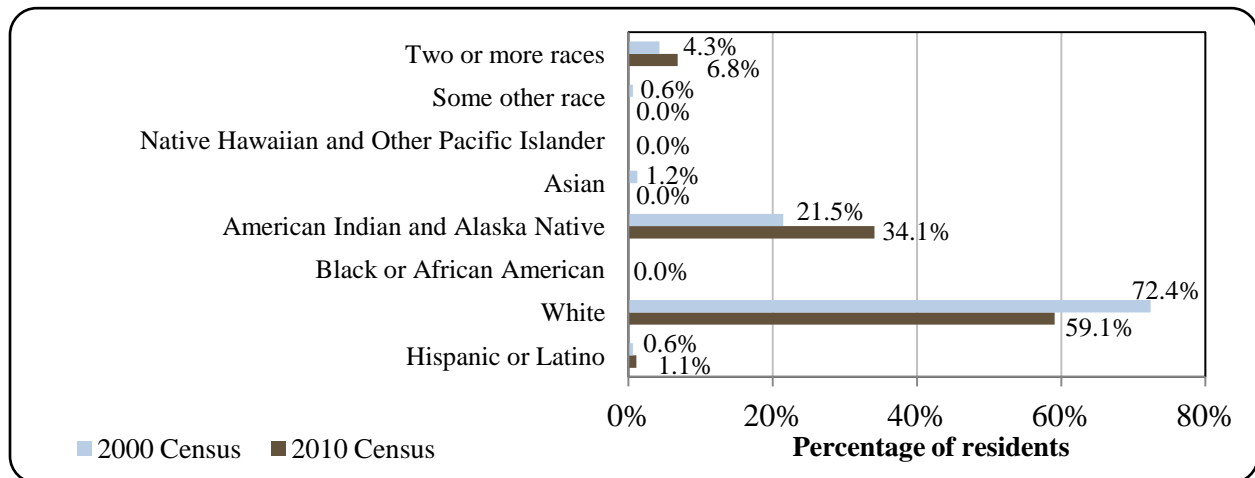
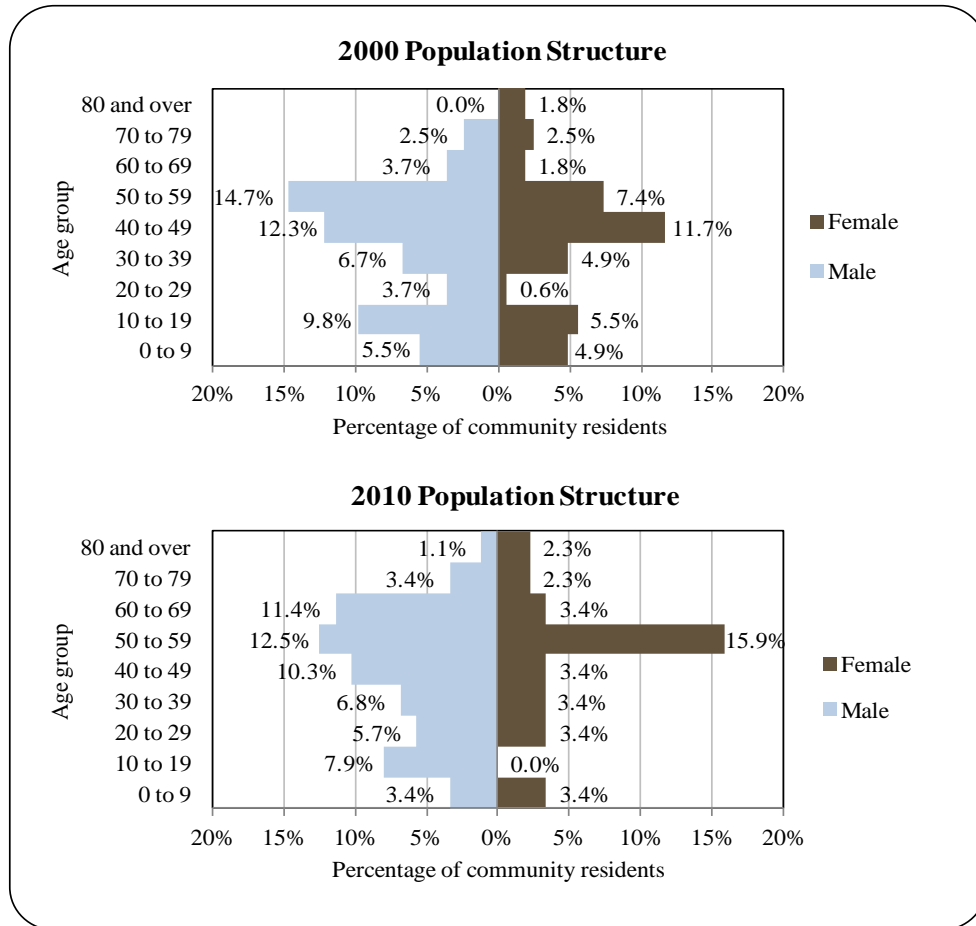


Figure 2. Population Age Structure in Pelican Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup in Pelican was 62.5% male and 37.5% female, much less gender balanced than the population of Alaska as a whole, which was 52% males and 48% females in 2010. The median age in Pelican was 55.5 years in 2010, much higher than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the only age groups in which the gender distribution was balanced were ages 0-9, 50-59, and age 70 and older. In 2010, 23.8% of Pelican residents were age 60 or older. The overall population structure of Pelican in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹¹⁶⁷ 95.1% of Pelican residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 4.9% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 0% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 32.1% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall;

¹¹⁶⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

0% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 22.2% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 12.3% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

At the time of Euroamerican contact, the Hoonah and Angoon Tlingit used this northern portion of Chichagof Island for seasonal subsistence hunting, fishing, and collecting activities.¹¹⁶⁸ Some gold mining activity took place in Lisianski Inlet in the early 1930s. The Apex-El Nido mine produced 50,000 ounces of gold, but production was winding down by the time Pelican was settled in the 1930s.^{1169,1170} A cold storage plant was the first developed at this site in 1938. A Finnish man named Kalle (Charley) Raataikainen bought fish in this area, which he transported to Sitka. He chose this protected inlet as an ideal cold storage site and named the place after his fish-packing vessel, "The Pelican."¹¹⁷¹ At the end of the 1938 fishing season, Raataikainen towed his two fish-buying scows to the site and beached them. One was converted into a cookhouse, and the other into a warehouse. The first buildings constructed in Pelican were a Finnish sauna and the Raatikainen home. Soon the Pelican Cold Storage Company was incorporated,¹¹⁷² and the community of Pelican grew around the cold storage operation. In addition to the sauna, a store, office, sawmill, and post office had been erected by 1939. A school and cannery were developed in the 1940s, and the City was incorporated in 1943.¹¹⁷³ The sawmill operated until about 1957.¹¹⁷⁴

Today, Pelican remains a fishing community. The economy is highly dependent on commercial salmon fishing, crabbing, and longline fisheries for halibut and sablefish.¹¹⁷⁵ Pelican Seafoods, Inc., the cold storage facility originally developed by Raataikainen, has been in a state of flux since the 1990s and its future is currently uncertain (see *Processing Plants* section).¹¹⁷⁶ According to a survey conducted by the AFSC in 2011, community leaders reported that the plant most recently closed in 2008, and indicated that reopening the plant is a key challenge for the future of Pelican's fishing economy. Most people in Pelican rely on subsistence resources as an important part of their lifestyle. The community has seen increasing activity in the visitor industry and from recreational boaters. There is a seasonal population influx of commercial fishermen and seasonal residents. A boardwalk serves as the town's main thoroughfare, due to

¹¹⁶⁸ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement, Roadless Area Evaluation for Wilderness Recommendations*. Volume III: Appendix C – Part 2. Retrieved March 16, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_III.pdf.

¹¹⁶⁹ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

¹¹⁷⁰ Carson, Norm. (2009). *A Glimpse of Pelican's Beginning*. Retrieved March 16, 2012 from <http://www.pelican.net/history.html>.

¹¹⁷¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁷² City of Pelican. 2005. *Coastal Management Plan: Concept Approved Plan*. Retrieved March 19, 2012 from <http://alaskacoast.state.ak.us/District/FinalPlans/Pelican/Final%20Draft%20Plan.pdf>.

¹¹⁷³ See footnote 1171.

¹¹⁷⁴ See footnote 1172.

¹¹⁷⁵ Ibid.

¹¹⁷⁶ See footnote 1171.

the lack of flat land.¹¹⁷⁷

Natural Resources and Environment

Pelican has a maritime climate characterized by cool summers and mild winters. Summer temperatures range from 51 to 62 °F on average, and winter temperatures range from 21 to 39 °F. Temperature extremes have been recorded from -3 to 84 °F. Annual precipitation averages 127 inches, with 120 inches of snow. During winter months, fog, high winds, and high seas can limit access to the community.¹¹⁷⁸

Chichigof Island is very mountainous, with features typical of recently glaciated terrain, including rugged mountains and steep-sided, U-shaped valleys and stream courses. In Lisianski Inlet, the terrain rises to over 3,000 feet above sea level within several miles of the coast.¹¹⁷⁹ Pelican is located at the base of a nearly vertical escarpment. Pelican Creek is the only significant natural drainage near the City. The Creek serves as a source for both drinking water and hydroelectric power.¹¹⁸⁰ The most significant river in the area is the Lisianski River, which empties into the Inlet at its southern terminus, approximately 11 miles southeast of Pelican. The flatter areas along the coast are primarily around the estuaries and tidal flats. Muskeg is a typical ecosystem in the region.¹¹⁸¹

Pelican is located adjacent to Tongass National Forest lands. Approximately 95% of Southeast Alaska is federal land, of which 80% is part of the National Forest. At 16.8 million acres, the Tongass is the largest National Forest in the U.S. It is managed to produce resource values, products, and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.¹¹⁸²

Protected areas near Pelican include the West Chichigof-Yakobi Wilderness, the Pleasant/Lemesurier/Inian Islands Wilderness, and Glacier Bay National Park and Preserve. The West Chichigof-Yakobi Wilderness Area was designated in 1980 under the Alaska National Interest Lands Conservation Act (ANILCA). The Wilderness Area encompasses 265,286 acres of western Chichigof Island and Yakobi Island, with its eastern boundary located directly across Lisianski Inlet from Pelican. The West Chichigof-Yakobi Wilderness is characterized by intricate bays, lagoons, estuaries, muskeg meadows, and natural hot springs.¹¹⁸³ North of Pelican, a group of islands in Cross Sound make up the Pleasant/Lemesurier/Inian Islands Wilderness. This Wilderness Area, totaling 23,151 acres, was designated in 1990.¹¹⁸⁴

¹¹⁷⁷ Ibid.

¹¹⁷⁸ Ibid.

¹¹⁷⁹ See footnote 1168.

¹¹⁸⁰ City of Pelican. 1998. *Comprehensive Plan*. Retrieved March 15, 2012 from <http://www.commerce.state.ak.us/dca/plans/Pelican-CP-1998.pdf>.

¹¹⁸¹ See footnote 1168.

¹¹⁸² U.S. Forest Service. (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

¹¹⁸³ U.S. Forest Service. (n.d.). *West Chichigof- Yakobi Wilderness*. Retrieved June 28, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/chic.pdf.

¹¹⁸⁴ U.S. Forest Service. (n.d.). *Pleasant/Lemesurier/Inian Islands Wilderness*. Retrieved June 28, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/pleasant.pdf.

Glacier Bay National Park and Preserve, also established in 1980 under ANILCA, is located to the north of Pelican, across Cross Sound from the entrance to Lisianski Inlet. The glacier extended all the way to the mouth of Glacier Bay in 1794, when Captain George Vancouver explored the region. Today, the Bay provides a laboratory for scientists to study the way the landscape and animal and plant communities return to areas of the land and sea so recently covered by glaciers. A diversity of land and marine mammals, birds and fish are present in the Park, including humpback, gray, and minke whales, orca whales, Dall's porpoise, harbor porpoise, Steller sea lions, harbor seals, sea otters, moose, bear, wolves, coyotes, mountain goats, smaller furbearers, 240 species of birds, and almost 200 species of fish.¹¹⁸⁵

In addition, the U.S. Forest Service manages the central and northern portions of Chichigof Island under land-use designation II (LUD II). These areas are "permanently managed in a roadless state to retain their wildland characteristics. Unlike wilderness, limited development is permitted under certain circumstances (including water and power, mining, habitat and transportation developments."¹¹⁸⁶ A large portion of the Chichigof Roadless Area is made up by LUD II-designated lands.¹¹⁸⁷ A total of 50 identified recreation places are located throughout this Roadless Area, including sites used for hiking, dispersed camping, big game hunting, marine viewing, beachcombing, saltwater kayaking, and saltwater shore fishing. Other activities include stream fishing, picnicking, nature study, viewing scenery, small game hunting, lake fishing, flightseeing, waterfowl hunting, beach related waterplay, canoeing, viewing wildlife and fish, powerboat use, gathering of forest products, and cross-country skiing. Established trails are present between Lisianski Inlet and North Hoonah Sound, and between Lisianski Strait and Takanis Bay.¹¹⁸⁸

Mineral resources that have been identified in Lisianski Inlet include mineralization of nickel, copper, and cobalt at Bohemia Basin, and gold and tungsten deposits at the Apex-El Nido mine. Bohemia Basin has not been developed. The Apex-El Nido mine historically produced more than 50,000 ounces of gold.¹¹⁸⁹ Much of this production occurred prior to Pelican's establishment in 1938.¹¹⁹⁰

Natural hazards in Pelican include high risk of severe weather – including wind and heavy precipitation – flooding, erosion, landslides, avalanche, earthquake, and drought, as well as medium risk from wildfire and tsunami and seiche events, and low risk of impacts from volcanic activity.¹¹⁹¹ Since the 1980s, the State of Alaska has issued disaster declarations for Pelican four times. In 1986, a windstorm destroyed the roof of the Pelican public school. In

¹¹⁸⁵ National Park Service. (2011). *Glacier Bay National Park & Preserve*. Retrieved March 16, 2012 from <http://www.nps.gov/glbpa/>.

¹¹⁸⁶ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement, Roadless Area Evaluation for Wilderness Recommendations. Volume I: Final SEIS Appendix A, B, D, E*. Retrieved April 25, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_I.pdf.

¹¹⁸⁷ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement, Roadless Area Evaluation for Wilderness Recommendations. Volume III: Appendix C – Part 2*. Retrieved March 16, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_III.pdf.

¹¹⁸⁸ Ibid.

¹¹⁸⁹ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

¹¹⁹⁰ Carson, Norm. (2009). *A Glimpse of Pelican's Beginning*. Retrieved March 16, 2012 from <http://www.pelican.net/history.html>.

¹¹⁹¹ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

1996, a severe storm led to sustained erosion of Pelican Creek and around the bridge that crosses Pelican Creek. In 2005, a strong winter storm and record rainfall led to widespread damage in northern Southeast Alaska, including coastal flooding, landslides and property damage, requiring relocation of some residents. In 2009, Pelican received 10 inches of rain within one 48-hour period, causing severe flooding and damaging the water supply system and the hydroelectric facility.¹¹⁹²

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Pelican as of June 2012.¹¹⁹³

Current Economy

Commercial fishing is the mainstay of Pelican's economy. In 2010, 38 residents held commercial fishing permits. The commercial fishing sector provides most employment opportunities.¹¹⁹⁴ According to a survey conducted by the AFSC in 2011, community leaders indicated that salmon, halibut and sablefish are the most important local fisheries, and that the local economy also depends heavily on the sportfishing industry. Crab species also account for significant commercial value in Pelican. Pelican was originally selected as a site for a cold storage due to its proximity to the rich Fairweather fishing grounds in the Gulf of Alaska, and the town grew alongside the cold storage and cannery.¹¹⁹⁵ Today, most people in Pelican still make their living from commercial fishing, but the future of the processing facility is uncertain. In the 2011 AFSC survey, community leaders noted that the processing facility closed most recently in 2008, and that a central goal for the future of Pelican's economy is to find a way to make it operational again (see *Processing Plants* section).

In addition to fishing sectors, several businesses in Pelican cater to the visitor industry. The Pelican Utility District, which owns the electric utility and fuel company, also employs some residents, and the City and school provide year-round employment for several residents as well.¹¹⁹⁶ Other top employers in Pelican in 2010 included Kake Tribal Corporation, transportation and health services, and the State of Alaska.¹¹⁹⁷ In the face of uncertainty and instability in fishing and processing sectors, Pelican's local economy is challenged to grow and diversify, and to gain more permanent residents. One goal is to recover Pelican's role as a center for fishing, fish processing, mariculture, and services for the fishing industry in the Cross Sound area. Other goals include expansion of transportation and communication services, development of small-scale tourism, continued government services, and mining industry support services. It is important to note that subsistence harvest is also important for local residents.¹¹⁹⁸

¹¹⁹² Division of Homeland Security and Emergency Management. (2010). *State of Alaska Hazard Mitigation Plan*. Retrieved March 12, 2012 from <http://www.ready.alaska.gov/plans/mitigationplan.htm>.

¹¹⁹³ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹¹⁹⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁹⁵ City of Pelican. 2005. *Coastal Management Plan: Concept Approved Plan*. Retrieved March 19, 2012 from <http://alaskacoast.state.ak.us/District/FinalPlans/Pelican/Final%20Draft%20Plan.pdf>.

¹¹⁹⁶ See footnote 1194.

¹¹⁹⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹⁹⁸ See footnote 1195.

Based on household surveys conducted for the 2006-2010 ACS,¹¹⁹⁹ in 2010, the per capita income in Pelican was estimated to be \$34,520 and the median household income was estimated to be \$44,750. This represents a small increase from the per capita and median household incomes reported in the year 2000 (\$29,347 and \$48,750, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,¹²⁰⁰ income is revealed to have decreased, from a real per capita income of \$38,591 and real median household income of \$64,106 in 2000. In 2010, Pelican ranked 32nd of 305 Alaskan communities with per capita income data that year, and 163rd in median household income, out of 299 Alaskan communities with household income data.

Although Pelican's small population size may have prevented the ACS from accurately portraying economic conditions,¹²⁰¹ additional evidence for an even larger decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Pelican in 2010 is \$9,655.¹²⁰² Despite this apparent decline in per capita income in Pelican, the community was not recognized as "distressed" by the Denali Commission.¹²⁰³ It is important to note that both ACS and DOLWD data are based on wage earnings, and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Pelican's population (52.9%) was estimated to be in the civilian labor force compared to the percentage estimated to be in the civilian labor force statewide (68.8%). In the same year, no Pelican residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the local unemployment rate was estimated to be 3.4%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment based on the ALARI database suggests a higher unemployment rate of 18.3% in 2010, compared to a statewide unemployment rate estimate of 11.5%.¹²⁰⁴

Also based on the 2006-2010 ACS, a majority of Pelican's workforce was estimated to be employed in the private sector (60.5%), along with 32.6% in the public sector and 7% estimated to be self-employed. Of the 43 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in transportation, warehousing, and utilities (25.6%), construction (18.6%), agriculture, forestry, fishing and hunting, and mining (14%), manufacturing (11.6%), wholesale trade (11.6%), and educational services, health care, and social assistance (11.6%). However, the number of

¹¹⁹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²⁰⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²⁰¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²⁰² See footnotes 1197 and 1199.

¹²⁰³ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹²⁰⁴ See footnote 1197.

individuals employed in farming, fishing and forestry industries is likely underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 41 employed residents in Pelican in 2010, of which 63.4% were employed in local government, 12.2% in state government, 9.8% in trade, transportation, and utilities, 7.3% in education and health services, and 7.3% in leisure and hospitality.¹²⁰⁵ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Pelican (U.S. Census).

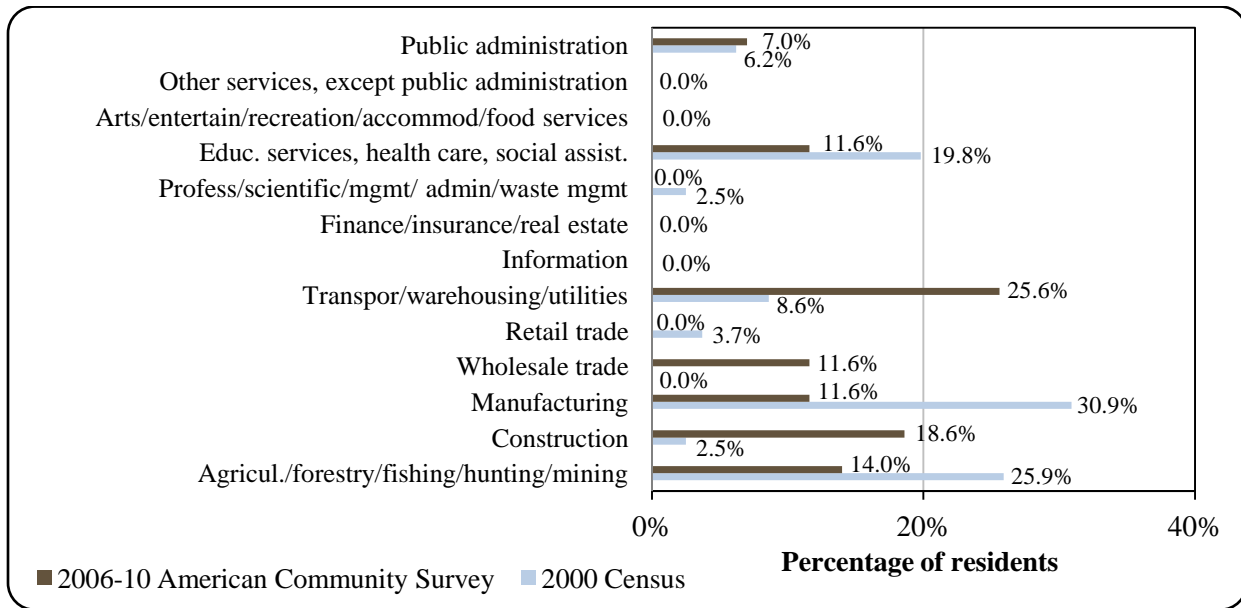
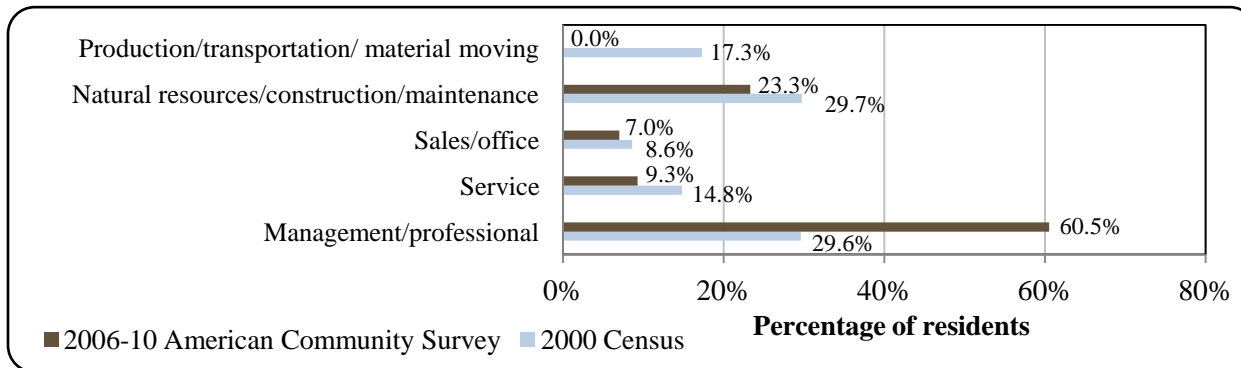


Figure 4. Local Employment by Occupation in 2006-2010, Pelican (U.S. Census).



¹²⁰⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Governance

Pelican is a 1st Class City, and is not located in an organized borough. The City was incorporated in 1943 and has a Strong Mayor form of government, with a seven-person city council including the Mayor, a five-person advisory school board, a five-person planning and zoning commission, and a number of municipal employees. The City administers a 4% sales tax, 7.0 mills property tax, and 6% bed tax.¹²⁰⁶ Between 2000 and 2010, municipal revenue in Pelican fluctuated between a low of \$250,581 in 2000 and a high of \$537,221 in 2009. Between 2000 and 2006, sales tax revenue made up 16.3% of municipal revenue on average, with a low of 7.2% in 2010 and a high of 22.2% in 2002. Pelican received State Revenue Sharing contributions of approximately \$20,000 per year between 2000 and 2003, and Community Revenue Sharing contributions of just over \$100,000 per year in 2009 and 2010.

Between 2000 and 2010, Pelican also received a total of over \$4 million in fisheries-related grants. These included four grants from the Division of Community and Regional Affairs, a division within the Alaska Department of Commerce, Community, and Economic Development (DCCED) in 2000 (\$20,000 for development of a harbor revitalization engineering plan), 2001 (\$25,321 for work float and dock harbor rejuvenation), 2002 (\$22,110 for breakwater expansion and remodel), and 2007 (\$465,866 for construction of harbor tee floats). In addition, the Alaska Department of Transportation and Public Facilities awarded Pelican \$1,451,142 in 2002 for the boat harbor project, the Denali Commission provided \$1,018 in 2007 toward harbor rehabilitation and \$100,000 in 2009 for harbor tee float construction, and several additional grants were received in 2004 for the harbor project and a Bohemia Basin dock project. Information about selected aspects of Pelican's municipal revenue is presented in Table 2.

Pelican was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village,¹²⁰⁷ although Native residents in Pelican comprise approximately one-fourth of the population, and are represented by a local Tlingit and Haida Community Council.¹²⁰⁸ The closest offices of the Alaska Department of Fish and Game (ADF&G) are in Sitka and Juneau. The Southeast Regional office of the Alaska Department of Natural Resources is located in Juneau, along with a DNR Public Information Center. The Alaska Regional Office of the National Marine Fisheries Service (NMFS) is located in Juneau, along with NMFS enforcement headquarters and the AFSC Auke Bay laboratories. Offices of the DCCED and the U.S. Bureau of Citizenship and Immigration Services are also located in Juneau.

¹²⁰⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁰⁷ Ibid.

¹²⁰⁸ City of Pelican. 2005. *Coastal Management Plan: Concept Approved Plan*. Retrieved March 19, 2012 from <http://alaskacoast.state.ak.us/District/FinalPlans/Pelican/Final%20Draft%20Plan.pdf>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Pelican from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$250,581	\$43,335	\$21,688	\$20,000
2001	\$280,950	\$58,207	\$20,872	\$25,321
2002	\$385,159	\$85,568	\$20,872	\$1,473,252
2003	\$466,276	\$46,570	\$21,015	n/a
2004	\$384,600	\$57,253	n/a	\$1,320,000
2005	\$317,774	\$42,428	n/a	n/a
2006	\$315,790	\$58,501	n/a	n/a
2007	\$356,220	\$61,438	n/a	\$466,884
2008	\$290,990	\$77,604	n/a	n/a
2009	\$537,221	\$58,601	\$101,765	\$100,000
2010	\$420,540	\$30,383	\$102,118	\$655,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Pelican is dependent on float planes and the Alaska Marine Highway System ferry for travel. Daily scheduled air taxi services are available from Juneau. As of June 2012, a roundtrip between Pelican and Juneau by float plane was \$340,¹²⁰⁹ and roundtrip between Juneau and Anchorage was \$353.¹²¹⁰ Facilities include a small boat harbor with a seaplane dock and state ferry terminal. The ferry provides two monthly departures to Juneau during summer months and one monthly departure during winter.¹²¹¹ According to a survey conducted by the AFSC in 2011, water taxi service is also available to Pelican. Barge service is available only on an as-needed basis. During winter months, fog, high winds, and high seas can limit access to the community. No paved roads are present in Pelican, and a boardwalk serves as the town's main thoroughfare due to the lack of flat land.¹²¹²

¹²⁰⁹ Alaska Seaplane Services website. (n.d.). Scheduled flights. Retrieved June 28, 2012 from <http://www.flyalaskaseaplanes.com/>.

¹²¹⁰ This price was calculated on November 21, 2011 using kayak.com.

¹²¹¹ See footnote 1206.

¹²¹² Ibid.

Facilities

Water in Pelican is derived from a dam and reservoir on Pelican Creek. Water is chlorinated and distributed to homes through a piped water system operated by the City of Pelican. The City also operates a piped sewer system, including a 10,000-gallon community septic tank for sewage collection. The City provides garbage collection and recycling services, and a burnbox at the unpermitted landfill. As of March 2012, electricity was provided in Pelican by a diesel powerhouse while renovations and repairs were being completed on the hydroelectric power station on Pelican Creek.¹²¹³ The hydroelectric plant was damaged during a heavy storm in 2009.¹²¹⁴ As of March 2012, ownership of the Pelican Utility Company was still in transition from Kake Tribal Corporation to the City of Pelican pending review of the certification transfer request by the Regulatory Commission of Alaska (RCA).¹²¹⁵ Police services are provided by a Village Public Safety Officer (VPSO) stationed in Pelican.¹²¹⁶ The nearest state trooper post is located in Juneau.¹²¹⁷ Fire and rescue services are provided by Pelican Volunteer Fire and Emergency Medical Services (EMS).¹²¹⁸

Additional community facilities include a library, city hall and apartment, city holding cell, community center, fire department building and apartment, public safety building and apartment, recycling building, city warehouse and shop, public library and school library, and a school gymnasium. Internet and telephone service is available in Pelican, but there is no local cable provider.¹²¹⁹ According to a survey conducted by the AFSC in 2011, community leaders indicated that improvements are currently in progress for broadband internet, water and sewer pipelines, sewage and water treatment, and the hydroelectric facility.

Regarding fisheries-related facilities, community leaders reported in the 2011 AFSC survey that over 2,000 feet of dock space is available for moorage of permanent vessels, approximately 1,500 feet of dock space is available for transient vessel moorage, and the harbor can accommodate vessels of up to 90-110 feet in length. They also indicated that, within the last 10 years, new dock space and pilings have been installed, a barge landing area was completed, a fish cleaning area was added, new fuel tanks, electricity, and water service were added at the harbor, and further improvements to the dock are expected to be completed within the next 10 years. They also reported the presence of the following fisheries-related services in the community: a fish processing plant, fishing lodges, sale of fishing gear and tackle, ice sales and boat fuel sales, boat repair (electrical, welding, mechanical services, machine shop, and hydraulics), and tidal grids for small boats. Fishing related bookkeeping services are also available locally. For fisheries-related businesses and services not available in Pelican, community leaders indicated that residents typically go to nearby cities of Juneau or Sitka.

¹²¹³ Personal communication with City of Pelican staff, March 20, 2012.

¹²¹⁴ Division of Homeland Security and Emergency Management (2010). *State of Alaska Hazard Mitigation Plan*. Retrieved March 12, 2012 from <http://www.ready.alaska.gov/plans/mitigationplan.htm>.

¹²¹⁵ See footnote 1213.

¹²¹⁶ Dept. of Public Safety, Alaska State Troopers. *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

¹²¹⁷ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

¹²¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²¹⁹ Ibid.

Medical Services

The Southeast Alaska Regional Health Consortium (SEARHC), a non-profit tribal health consortium serving the Native people of Southeast Alaska,¹²²⁰ operates community and family services in Pelican. The SEARHC clinic is a qualified Emergency Care Center and a Community Health Aide Program site. Alternate health care is provided by Pelican Volunteer Fire & Emergency Medical Services. Emergency services have marine, floatplane, and helicopter access. Emergency service is provided by volunteers.¹²²¹ The nearest hospitals are located in Juneau and Sitka.

Educational Opportunities

One school is present in Pelican. The Pelican School serves Kindergarten through 12th grade. As of 2011, 18 students were enrolled and there were 2 teachers.¹²²²

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Pelican area was historically used by the Hoonah and Angoon Tlingit for seasonal subsistence hunting, fishing, and collecting activities.¹²²³ Commercial harvest of salmon began in Southeast Alaska in the late 1870s.¹²²⁴ The first commercial salteries on northern Chichagof Island were established at Idaho Inlet in 1884, and at Basket and Saltery Bays in the early 1900s.¹²²⁵ In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.¹²²⁶ Pelican was established by a fish buyer named Kalle (Charley) Raataikainen who arrived on his fish-packing vessel, the “Pelican” in the 1930s. A cold storage plant was the first development at the site in 1938, and the community of Pelican grew around this operation. A cannery was built in the 1940s.¹²²⁷ The original cold storage and processing facility still exist in Pelican, but has been closed since 2008 and its future is currently in question (see *Processing Plants* section).

According to a survey conducted by the AFSC in 2011, Pelican residents are most

¹²²⁰ Southeast Alaska Regional Health Consortium (2011). *About SEARHC*. Retrieved March 20, 2012 from http://www.searhc.org/about/searhc_history.php.

¹²²¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²²² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹²²³ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement, Roadless Area Evaluation for Wilderness Recommendations*. Volume III: Appendix C – Part 2. Retrieved March 16, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_III.pdf.

¹²²⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹²²⁵ See footnote 1223.

¹²²⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹²²⁷ See footnote 1221.

engaged in fisheries for salmon, halibut, and sablefish. Crab and herring fisheries have also been important in Pelican historically. Fishing areas in Cross Sound, outside waters off Chichagof and Yakobi Islands, and the Gulf of Alaska, including the Fairweather Grounds, attract fishermen from throughout Southeast Alaska. Pelican's proximity to these fishing grounds gave it an advantage over other ports during derby fisheries openings that took place before halibut and sablefish fisheries management shifted to a catch share system.¹²²⁸ According to the 2011 AFSC survey, community leaders expressed the opinion that the shift to halibut and sablefish catch share programs was an important factor contributing to relocation of the fishing fleet away from Pelican. An increasing emphasis on the fresh fish market as a result of the increasing availability of farmed salmon also made it difficult for Pelican's seafood plant to compete, given lack of a terrestrial airstrip and refrigerated van capacity.¹²²⁹

Bait herring fisheries were most active in the area between 1960s and 1990s. Prior to the closure of Pelican's seafood plant, roe herring harvested in waters near Ketchikan, Sitka, and in Prince of Wales Sound was processed in Pelican. Crab was also processed locally between 1975 and 1997, after a remodel of the old Pelican cold storage cannery in 1974. A majority of the crab delivered in Pelican was from boats fishing in Glacier Bay. With the closure of Glacier Bay to the commercial Dungeness crab fishery in 1997, Pelican's crab processing came to an end.¹²³⁰ According to the 2011 AFSC survey, community leaders expressed that the closure of Glacier Bay to commercial crab harvest was another primary factor contributing to relocation of the fishing fleet away from Pelican.

Declining salmon prices in the late 1990s and early 2000s resulting from changing regulations and the advent of farmed salmon on the market led many salmon trollers to diversify their fishing operations. Many geared up for other fisheries such as halibut and sablefish, and some began to incorporate work in the charter fishing industry.¹²³¹ The percentage of salmon permits saw a decreasing trend until 2003, but rebounded slightly in the second half of the decade (see *Commercial Fishing* section), and after the initial increase in sportfishing activity in the early 2000s, the number of sport fish guide businesses and registered sport fish guides living in Pelican has been decreasing (see *Recreational Fishing* section). This may be due to population declines and/or a renewed focus on salmon trolling.

Pelican is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is "Southeast Outside." Pelican is eligible to participate in the Community Quota Entity (CQE) program, and participates through the non-profit Pelican Fishing Corporation. The CQE non-profit was established at the recommendation of the City of Pelican. As of Fall 2013, the Pelican Fishing Corporation had not yet purchased any commercial halibut IFQ or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the non-profit had acquired four halibut charter permits for lease to community members.¹²³² Pelican is not eligible to participate in the Community Development Quota program.

According to the 2011 AFSC survey, community leaders indicated that Pelican participates in fisheries management processes in Alaska through a representative that attends

¹²²⁸ City of Pelican. 2005. *Coastal Management Plan: Concept Approved Plan*. Retrieved March 19, 2012 from <http://alaskacoast.state.ak.us/District/FinalPlans/Pelican/Final%20Draft%20Plan.pdf>.

¹²²⁹ Ibid.

¹²³⁰ Ibid.

¹²³¹ Ibid.

¹²³² NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

North Pacific Fishery Management Council meetings and/or Board of Fisheries meetings, a representative that participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process, and information provided by the Southeast Conference on fisheries management issues.

Processing Plants

ADF&G's 2010 Intent to Operate list noted one registered processing plant in Pelican. Cross Sound Seafoods processes Chinook and coho salmon.¹²³³ According to a survey of processing plants conducted by the AFSC in 2011, the plant is a small family-owned business that began operations in 2007 and primarily provides tender services.

Although not currently in operation, it is important to note that Pelican Seafoods, a cold storage and seafood processing facility, has operated in Pelican since it began operations in the late 1930s and early 1940s. The plant was originally built and operated by Kalle Raataikainen, a Finnish fish-buyer from Sitka who was Pelican's first resident.¹²³⁴ The original facility was renovated in 1974. Between the late 1980s and 1995, the plant was operated by a Japanese company called Kaioh Suisan. It was set to close in 1995, but Kake Tribal Corporation, the Native village corporation for the Tlingit village of Kake, Alaska, bought it at that time.¹²³⁵ Kake Tribal Corporation's lack of success operating the plant, along with its 1999 bankruptcy, led to its sale to Ed Bahrt & Associates LLC in 2006. However, Bahrt failed to make payments on the purchase.¹²³⁶ In 2010, the City of Pelican acquired the plant, after foreclosure on Ed Bahrt & Associates and by jumping in line ahead of Kake Tribal Corporation to acquire it. Pelican Seafoods has been closed since 2008, and the City of Pelican is exploring options for resuming operations. Their first goal is to restore services for fishing vessels such as the ice plant and laundry facilities.¹²³⁷ The City is in the process of renovating the local hydroelectric plant after it sustained damages in a 2009 storm.¹²³⁸ These improvements are expected to result in reduced electrical costs, increasing the potential for the plant to reopen in the future under new ownership.¹²³⁹

Fisheries-Related Revenue

Between 2000 and 2010, Pelican received between \$12,046 and \$94,011 per year in revenue from the Shared Fisheries Business Tax. From 2002 to 2009, an average of \$250 per year was also earned from the Fisheries Resource Landing Tax. According to a survey conducted by the AFSC in 2011, community leaders reported that 2010 annual revenue earned by public

¹²³³ Alaska Seafood Marketing Institute. 2005. *Suppliers Directory*. Retrieved March 19, 2012 from <http://alaskaseafood.org/industry/suppliers/>.

¹²³⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²³⁵ See footnote 1228.

¹²³⁶ Forgey, Pat. September 16, 2009. "Pelican Seafoods foreclosure auction delayed." *Juneau Empire*. Retrieved March 19, 2012 from http://juneauempire.com/stories/091609/loc_493775668.shtml.

¹²³⁷ Forgey, Pat. October 5, 2010. "Pelican Seafoods plant foreclosed by city." *Juneau Empire*. Retrieved March 19, 2012 from http://juneauempire.com/stories/100510/loc_716107311.shtml.

¹²³⁸ Personal communication with City of Pelican staff, March 20, 2012.

¹²³⁹ Schoenfeld, Ed. October 7, 2012. "Pelican forecloses on town's seafood plant." *KSTK, Sitka*. Retrieved March 19, 2012 from http://kstk.org/modules/local_news/index.php?op=sideBlock&syndicated=true&ID=1447.

moorage facilities amounted to \$57,000. This information is presented in Table 3.¹²⁴⁰

According to an interview with Pelican Mayor Patricia Phillips in 2009, the closure of Pelican Seafoods led to loss of fish tax and sales tax revenue for the City. The processing plant had also been the largest customer for the city electrical utility, Pelican Utility Company.¹²⁴¹

Commercial Fishing

According to the 2011 AFSC survey, community leaders indicated that salmon, halibut, and sablefish are the most important local fisheries. They noted that salmon trolling takes place from March to November each year, and halibut and sablefish longlining takes place from April to November. In addition to these important fisheries, Pelican residents also held permits in crab, groundfish, ‘other shellfish’, and herring fisheries between 2000 and 2010 (Table 4). During the 2000-2010 period, Pelican residents participated in state and federal fisheries as permit, quota share account, and crew license holders, vessel owners, and employees and/or owners of fish buyer or processing companies.

In 2010, 43 Pelican residents held a total of 70 Commercial Fisheries Entry Commission (CFEC) permits. Of these, 47 (67.1%) were held in salmon fisheries, and 26 of these were actively fished in 2010 (55%); 7 statewide halibut longline permits were held by Pelican residents, of which 5 were actively fished (71%); 5 of 6 sablefish longline permits were actively fished in 2010 (83%); 1 of 8 groundfish permits was actively fished (13%); 0 of 1 crab permit was actively fished (0%); and 0 of 1 herring permit was actively fished in 2010. In 2010, groundfish permits were held in Gulf of Alaska hand troll, longline, and mechanical jig fisheries, as well as the statewide hand troll fishery. Earlier in the decade, groundfish permits were also held for statewide lingcod hand troll, dinglebar troll, and longline fisheries, and demersal shelf rockfish hand troll/hand line, dinglebar troll, and longline fisheries. In 2010, the crab permit was held in the Tanner crab pot gear fishery, and the herring permit was held in the Southeast purse seine foot/bait fishery. Earlier in the decade, crab permits were also held in the Southeast red/blue king and Dungeness crab fisheries, and permits were also held for ‘other shellfish’ in the octopus/squid pot gear, shrimp pot gear, and sea cucumber dive gear fisheries.

Salmon permit numbers remained relatively stable between 2000 and 2010, with a slight increase in total permits held and the percentage of permits actively fished. In contrast, numbers of halibut, sablefish, and groundfish permits declined substantially over the period. One herring permit was held in all years between 2000 and 2010, but was not actively fished in any year. The number of crab permits held and percentage that were actively fished decreased between 2001 and 2010. The last year during the 2000-2010 period in which an ‘other shellfish’ permit was held by a Pelican resident was 2008, and the permit was not actively fished that year. Information about CFEC permits held by Pelican residents is presented in Table 4.

Pelican residents also held federal License Limitation Program (LLP) permits and Federal Fisheries Permits (FFP) between 2000 and 2010. In 2010, 13 Pelican residents held a total of 15 LLP permits in federal groundfish fisheries. Of these, two were actively fished that year (13%). This represents a decline from the year 2000, when 27 permits were held by 22

¹²⁴⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

¹²⁴¹ Forgey, Pat. September, 2009. “Take Tribal Corporation to reacquire fish processing plant in default.” *Indian Country News*. Retrieved March 19, 2012 from http://indiancountrynews.net/index.php?option=com_content&task=view&id=7347&Itemid=84.

residents, of which five were actively fished that year (18%). In 2010, six Pelican residents held a total of six FFP permits, of which three were actively fished. This represents a decrease in total permits and permit holders (from 10 permits and permit holders in 2000), but an increase in the percentage of permits actively fished. Between 2000 and 2010, no LLP permits were held in federal crab fisheries. Information about permits held in these federal fisheries is also presented in Table 4.

In the year 2000, 22 Pelican residents held quota share accounts in the federal halibut catch share fishery, decreasing to 10 quota share accounts held in 2010. Total quota shares held decreased from 1,673,642 to 873,574 over the same period. The annual halibut individual fishing quota (IFQ) allotment increased by approximately 37% over 2000 levels by 2005, then decreased to 35% below 2000 levels in 2010. Sablefish quota followed similar patterns. The number of quota share account holders decreased from 13 in 2000 to 5 in 2010, and the total quota shares held in Pelican decrease from 2,362,394 in 2000 to 954,603 in 2010. Sablefish IFQ allotment increased to 12% above 2000 levels in 2004 before decreasing to 25% below 2000 levels by 2010. No quota share accounts or quota shares were held by Pelican residents in federal crab catch share fisheries between 2000 and 2010. Information about federal catch share participation is presented in Tables 6 through 8.

In 2010, there were 26 crew license holders in Pelican, 40 fishing vessels were primarily owned by Pelican resident, and 54 vessels were homeported there (Table 5). According to the 2011 AFSC survey, community leaders indicated that fishing vessels based out of Pelican range in size from under 35 to 125 feet in length, and primarily use troll and longline gear. They reported that fewer commercial fishing boats are present in Pelican today compared to five years ago, with a particular decrease in numbers of larger vessels. They also indicated that an increasing number of commercial fishing boats are in disrepair in Pelican as a result of declining economic conditions in Pelican and changes in federal regulations. They expressed the opinion that the shift to halibut and sablefish catch share programs and the closure of Glacier Bay to commercial Dungeness crab harvest in 1997 were factors contributing to relocation of the fishing fleet away from Pelican.

The number of shore-side processing facilities decreased from three in 2000 to zero between 2004 and 2005, then increased to one in 2010. According to the 2011 AFSC survey, community leaders indicated that the one shore-side processing facility operating in 2010 is a small company operated by a husband and wife team (see *Processing Facilities* section). Total landings and ex-vessel revenue (including all fisheries) in Pelican fluctuated along with the number of fish buyers, and are considered confidential during years in which three or fewer fish buyers were present (2003-2005). The highest reported total landings (2,225,965 net pounds) were recorded in 2007 when 13 fish buyers were present in Pelican. These landings were valued at \$5,385,108 in ex-vessel revenue. The lowest reported total landings (998 net pounds) were recorded in 2009, when four fish buyers were present. These landings were valued at \$2,452 in ex-vessel revenue. In 2010, Pelican ranked 63rd in landings and 64th in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings that year. Information about the commercial fishing sector in Pelican is presented in Table 5.

Some information was also reported regarding landings and ex-vessel revenue in Pelican in individual fisheries, although much of this information is considered confidential between 2000 and 2010 due to the small number of participants. Halibut landings of 103,568 and 234,336 net pounds were reported in Pelican in 2000 and 2001, respectively, valued at \$269,822 and \$476,316 in ex-vessel revenue. ‘Other groundfish’ landings were reported in Pelican each year

between 2006 and 2008, averaging 45,092 in net pounds and \$36,577 in ex-vessel revenue. Salmon landings were reported between 2005 and 2010, averaging 516,566 net pounds and \$937,877 in ex-vessel revenue. These landings and revenue fluctuated alongside changes in numbers of fish buyers present. Information about landings and ex-vessel revenue in Pelican is presented in Table 9.

Landings by Pelican vessel owners, including all delivery locations, were more consistent between 2000 and 2010 than local landings in Pelican. For the nine years in which halibut landings can be reported, an average of 183,776 net pounds were landed per year, valued at an average of \$540,665 in ex-vessel revenue. For the six years in which sablefish landings can be reported, an average of 226,523 net pounds were landed, valued at an average of \$728,946 in ex-vessel revenue. Pacific cod landings can be reported between 2000 and 2002, averaging 1,691 net pounds of landings and \$672 in ex-vessel revenue in these years. Salmon and ‘other groundfish’ landings were reported for all years between 2000 and 2010. Pelican vessel owners landed an average of 280,621 net pounds of salmon and 29,858 net pounds of ‘other groundfish’ during this period, valued at \$728,946 and \$18,327 in ex-vessel revenue, respectively. Information about other species, as well as the non-reported years for halibut, sablefish and Pacific cod, is considered confidential due to the small number of participants. This information about landings and ex-vessel revenue generated by Pelican vessel owners is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Pelican: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$12,046	\$32,619	\$29,574	\$41,174	\$52,460	\$14,518	\$21,682	\$12,141	\$74,945	\$19,267	\$94,011
Fisheries Resource Landing Tax ¹	n/a	n/a	\$176	\$26	\$497	\$751	\$310	\$73	\$45	\$123	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$57,000
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$12,046	\$32,619	\$29,750	\$41,200	\$52,958	\$15,269	\$21,992	\$12,214	\$74,990	\$19,390	\$151,011
Total municipal revenue⁵	\$250,581	\$280,950	\$385,159	\$466,276	\$384,600	\$317,774	\$315,790	\$356,220	\$290,990	\$537,221	\$420,540

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Pelican: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	27	26	22	20	20	20	17	16	16	15	15
	Active permits	5	6	4	3	2	3	3	2	2	2	2
	% of permits fished	18%	23%	18%	15%	10%	15%	17%	12%	12%	13%	13%
	Total permit holders	22	21	19	17	17	17	15	14	14	13	13
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	10	10	10	7	7	7	6	11	12	5	6
	Fished permits	0	0	0	4	4	3	3	5	5	3	3
	% of permits fished	0%	0%	0%	57%	57%	43%	50%	45%	42%	60%	50%
	Total permit holders	10	10	10	7	7	7	6	11	12	5	6
Crab (CFEC) ²	Total permits	1	5	3	2	2	3	2	2	2	1	1
	Fished permits	1	3	2	1	2	2	1	0	0	0	0
	% of permits fished	100%	60%	67%	50%	100%	67%	50%	0%	0%	0%	0%
	Total permit holders	1	4	2	2	2	3	3	2	2	1	1
Other shellfish (CFEC) ²	Total permits	5	4	2	2	2	1	2	2	1	0	0
	Fished permits	1	1	0	0	0	0	0	1	0	0	0
	% of permits fished	20%	25%	0%	0%	0%	0%	0%	50%	0%	-	-
	Total permit holders	5	4	2	2	2	1	2	2	1	0	0
Halibut (CFEC) ²	Total permits	21	23	21	19	20	14	12	12	12	12	7
	Fished permits	16	17	16	15	14	10	10	10	9	8	5
	% of permits fished	76%	74%	76%	79%	70%	71%	83%	83%	75%	67%	71%
	Total permit holders	19	21	19	17	18	14	12	12	12	12	7
Herring (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1

Table 4 cont'd. Permits and Permit Holders by Species, Pelican: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	14	14	15	12	13	9	8	8	9	7	6
	Fished permits	14	14	15	12	13	9	8	8	9	7	5
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	83%
	Total permit holders	12	12	13	11	12	8	7	7	8	6	5
Groundfish (CFEC) ²	Total permits	24	21	16	16	16	11	14	13	10	6	8
	Fished permits	7	5	3	2	0	2	3	1	1	1	1
	% of permits fished	29%	24%	19%	13%	0%	18%	21%	8%	10%	17%	13%
	Total permit holders	11	12	9	9	8	5	7	7	5	3	4
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	44	41	39	39	40	40	46	47	47	45	47
	Fished permits	23	23	18	16	21	19	27	28	25	25	26
	% of permits fished	52%	56%	46%	41%	53%	48%	59%	60%	53%	56%	55%
	Total permit holders	42	36	35	34	34	35	39	41	42	39	40
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>110</i>	<i>109</i>	<i>97</i>	<i>91</i>	<i>94</i>	<i>79</i>	<i>85</i>	<i>85</i>	<i>82</i>	<i>72</i>	<i>70</i>
	<i>Fished permits</i>	<i>62</i>	<i>63</i>	<i>54</i>	<i>46</i>	<i>50</i>	<i>42</i>	<i>49</i>	<i>48</i>	<i>44</i>	<i>41</i>	<i>37</i>
	<i>% of permits fished</i>	<i>56%</i>	<i>58%</i>	<i>56%</i>	<i>51%</i>	<i>53%</i>	<i>53%</i>	<i>58%</i>	<i>56%</i>	<i>54%</i>	<i>57%</i>	<i>53%</i>
	<i>Permit holders</i>	<i>50</i>	<i>47</i>	<i>43</i>	<i>40</i>	<i>41</i>	<i>41</i>	<i>45</i>	<i>46</i>	<i>45</i>	<i>43</i>	<i>43</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Pelican: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Pelican ²	Total Net Pounds Landed in Pelican ^{2,5}	Total Ex-Vessel Value of Landings in Pelican ^{2,5}
2000	25	4	3	51	55	51	365,281	\$1,078,101
2001	31	6	3	45	53	60	469,712	\$1,066,026
2002	24	2	3	46	53	83	-	-
2003	21	3	2	45	52	86	-	-
2004	35	1	0	44	55	1	-	-
2005	28	4	0	40	49	7	5,033	\$12,750
2006	28	8	2	47	58	208	1,645,307	\$4,115,405
2007	27	13	2	46	55	235	2,225,965	\$5,385,108
2008	26	8	1	42	56	92	475,464	\$747,565
2009	28	4	1	47	58	4	998	\$2,452
2010	26	7	1	40	54	13	3,505	\$10,949

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Pelican: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	22	1,673,642	212,527
2001	17	1,336,030	188,475
2002	19	1,792,223	240,867
2003	17	963,647	137,447
2004	16	982,639	165,474
2005	16	912,467	158,554
2006	14	905,829	153,220
2007	13	905,209	130,805
2008	13	891,091	98,722
2009	12	878,817	81,254
2010	10	873,574	71,941

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Pelican: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	13	2,362,394	259,299
2001	9	1,991,743	207,476
2002	11	3,166,201	305,428
2003	7	1,497,315	175,700
2004	7	1,279,850	158,278
2005	6	1,232,920	142,690
2006	5	1,187,450	137,682
2007	5	1,187,450	134,208
2008	5	1,125,807	117,010
2009	5	1,015,822	88,072
2010	5	954,603	77,626

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Pelican: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Pelican: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	103,568	234,336	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	34,690	86,948	13,639	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	4,650	1,229,379	1,418,358	442,706	910	3,394
<i>Total²</i>	<i>103,568</i>	<i>234,336</i>	-	-	-	<i>4,650</i>	<i>1,264,069</i>	<i>1,505,306</i>	<i>456,345</i>	<i>910</i>	<i>3,394</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$269,822	\$476,316	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	\$18,379	\$72,560	\$18,793	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	\$12,605	\$2,657,768	\$2,297,406	\$646,177	\$2,399	\$10,904
<i>Total²</i>	<i>\$269,822</i>	<i>\$476,316</i>	-	-	-	<i>\$12,605</i>	<i>\$2,676,146</i>	<i>\$2,369,965</i>	<i>\$664,970</i>	<i>\$2,399</i>	<i>\$10,904</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Pelican Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	210,318	256,853	253,432	186,074	245,310	125,833	136,280	125,661	114,223	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	53,484	54,499	43,849	30,636	25,353	14,698	22,790	25,741	25,188	25,078	7,124
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	2,517	2,116	441	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	243,467	232,431	251,785	216,862	246,870	-	-	167,721	-	-	-
Salmon	195,024	348,317	186,394	194,362	381,668	308,556	330,075	321,443	332,533	212,171	276,289
<i>Total²</i>	<i>704,810</i>	<i>894,216</i>	<i>735,901</i>	<i>627,934</i>	<i>899,201</i>	<i>449,087</i>	<i>489,145</i>	<i>640,566</i>	<i>471,944</i>	<i>237,249</i>	<i>283,413</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$551,277	\$513,178	\$552,267	\$546,342	\$753,267	\$389,525	\$510,315	\$554,216	\$495,602	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$34,463	\$32,325	\$21,732	\$16,510	\$17,810	\$6,953	\$17,149	\$14,524	\$17,496	\$18,209	\$4,427
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	\$1,357	\$598	\$60	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	\$855,126	\$690,909	\$814,984	\$763,157	\$765,021	-	-	\$484,482	-	-	-
Salmon	\$260,366	\$366,730	\$173,795	\$202,179	\$597,403	\$468,616	\$787,983	\$723,011	\$956,082	\$393,723	\$540,739
<i>Total²</i>	<i>\$1,702,589</i>	<i>\$1,603,740</i>	<i>\$1,562,838</i>	<i>\$1,528,188</i>	<i>\$2,133,501</i>	<i>\$865,093</i>	<i>\$1,315,447</i>	<i>\$1,776,233</i>	<i>\$1,469,180</i>	<i>\$411,932</i>	<i>\$545,166</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

The number of active sport fish guide businesses registered in Pelican remained relatively stable during the 2000–2010 period, varying between three and seven per year. Over the same period, the number of licensed sport fish guides present in the community declined from 14 to 7. The number of Pelican residents who purchased sportfishing licenses (irrespective of point of sale) varied between 54 and 91 per year between 2000 and 2010, while the number of licenses sold locally in Pelican varied between 43 and 163 over the same period. The greater variation in the number of licenses sold in Pelican compared to the number purchased by Pelican residents indicates both that Pelican residents may travel to other communities to prepare for sportfishing activity, and also that sportfishing may draw visitors to Pelican.

According to the 2011 AFSC survey, community leaders indicated that a majority of sportfishing activity occurs using boats, including private boats owned by both local residents and visitors as well as charter boats or party boats. Some community leaders perceived that the number of charter boats present in Pelican has decreased in the last five years, while others indicated the number had increased. Community leaders agreed that the primary species targeted by sport fishermen in Pelican include Chinook, coho, sockeye, and pink salmon, halibut, various rockfish species, shrimp, crab, and clams.

The Alaska Statewide Harvest Survey,¹²⁴² conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Pelican: in freshwater, Dolly Varden char and cutthroat trout; in saltwater, Chinook, coho, sockeye, pink, and chum salmon, Dolly Varden char, Pacific halibut, rockfish, lingcod, and shark. The survey also noted sport harvest of Dungeness crab, Tanner crab, hardshell clams, and shrimp in Pelican. Kept/released statistics from charter logbook data reported by ADF&G¹²⁴³ show that coho salmon, Pacific halibut, and rockfish species were the most important charter targets out of Pelican. On average between 2000 and 2010, 729 coho, 497 halibut, and 416 rockfish (including yelloweye, pelagic, and other species) were kept per year. Lingcod was also an important charter species, with an average 168 kept per year. Other species that were also caught during charters out of Pelican between 2000 and 2010 included Chinook, sockeye, chum, and pink salmon.

Pelican is located within Alaska Sport Fishing Survey Area G – Glacier Bay. Information is available about both saltwater and freshwater sportfishing activity at this regional scale. In saltwater, non-Alaska resident anglers fished consistently more days than Alaska resident anglers, while in freshwater the two groups fished about the same number of angler days on average. Saltwater sportfishing was much more important in this region than freshwater between 2000 and 2010. Information about the sportfishing sector in and near Pelican is displayed in Table 11.

¹²⁴² Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹²⁴³ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Pelican: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Pelican ²
2000	7	14	81	43
2001	6	11	91	68
2002	3	9	60	58
2003	5	9	68	78
2004	6	9	90	81
2005	6	8	68	70
2006	7	9	63	163
2007	6	10	62	163
2008	7	10	54	141
2009	5	9	57	56
2010	5	7	60	55

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	22,025	16,101	1,231	2,018
2001	20,935	18,028	1,991	1,512
2002	19,213	9,293	1,868	1,305
2003	17,403	14,706	651	1,464
2004	28,202	9,304	1,434	810
2005	30,641	16,832	1,264	1,076
2006	29,274	10,514	988	1,658
2007	33,057	14,365	1,860	3,323
2008	30,119	7,061	1,550	1,421
2009	29,042	9,744	1,253	1,118
2010	23,338	5,687	2,347	643

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Most people in Pelican rely on subsistence resources as an important part of their lifestyle.¹²⁴⁴ Native and non-Native residents alike in Pelican depend on a mix of subsistence use of wild resources and cash income.¹²⁴⁵ According to a survey conducted by the AFSC in 2011, salmon, halibut, and rockfish are three of the most important subsistence resources for residents of Pelican. A survey of subsistence harvest in Pelican in 1988 also found that residents harvested these fish species in Lisianski Inlet, Lisianski Strait, as well as outer coastal waters. The subsistence survey also noted harvest of herring roe during the spring spawn at First Island, Second Island, and Phonograph Creek, harvest of crab and shrimp in Lisianski Inlet and Stag Bay, and butter clam and mussel harvest from sand and gravel beaches in the area. Beach vegetation is also harvested, including beach asparagus, goose tongue, seaweed, and wild parsley. Other subsistence resources include waterfowl, deer, bear, furbearers, berries, and wood for supplemental home heating.¹²⁴⁶

Between 2000 and 2010, no information was reported by ADF&G regarding the percentage of Pelican households utilizing various marine resources for subsistence purposes or per capita subsistence harvest (Table 12). However, information was reported regarding total subsistence harvest of salmon, halibut, and several species of marine mammals. In 2008, the most recent year for which data are available about subsistence salmon harvest, eight subsistence salmon permits were issued to Pelican households, of which seven were returned, with a total of 59 salmon reported harvested. These numbers represent a decline from 20 permits issued in 2000 and 2001, and total salmon harvests of 492 and 216 in those years, respectively. This decline may be due in part to overall population decline in Pelican during the same period. Sockeye salmon made up the greatest percentage of the subsistence salmon harvest in Pelican, averaging 141 sockeye harvested per year between 2000 and 2008. No information regarding marine invertebrate or non-salmon fish (other than halibut) was reported between 2000 and 2010 (Table 13).

In 2010, 45 Subsistence Halibut Fishing Certificates (SHARC) were issued to residents of Pelican. Of these, 19 SHARC cards were fished that year, and a reported 3,589 pounds of halibut were harvested. The number of SHARC cards issued remained relatively stable between 2003 and 2010, but the percentage of cards fished declined from 72% in 2003 to 42% by 2010. The volume of halibut reported harvested through this program also declined over the decade. This information about subsistence halibut harvest is presented in Table 14.

Pelican residents also participated in the subsistence harvest of marine mammals. According to data reported by the U.S. Fish and Wildlife and ADF&G, an average of eight sea otters and seven harbor seals were harvested per year between 2000 and 2010. No information was reported by management agencies regarding harvest of beluga whale, walrus, Steller sea lion, or spotted seal during the 2000-2010 period. Information about marine mammal subsistence in Pelican is presented in Table 15.

¹²⁴⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁴⁵ City of Pelican. 2005. *Coastal Management Plan: Concept Approved Plan*. Retrieved March 19, 2012 from <http://alaskacoast.state.ak.us/District/FinalPlans/Pelican/Final%20Draft%20Plan.pdf>.

¹²⁴⁶ Ibid.

Table 12. Subsistence Participation by Household and Species, Pelican: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Pelican: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	20	16	n/a	4	n/a	148	340	n/a	n/a
2001	20	18	n/a	2	n/a	n/a	214	n/a	n/a
2002	14	14	n/a	n/a	n/a	n/a	240	n/a	n/a
2003	16	16	n/a	n/a	n/a	n/a	248	n/a	n/a
2004	11	11	n/a	n/a	n/a	n/a	68	n/a	n/a
2005	6	6	n/a	n/a	n/a	25	37	n/a	n/a
2006	9	9	n/a	n/a	n/a	n/a	24	n/a	n/a
2007	9	5	n/a	n/a	n/a	n/a	45	n/a	n/a
2008	8	7	n/a	n/a	6	1	52	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Pelican: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	51	37	11,466
2004	56	38	11,127
2005	57	34	7,667
2006	53	36	8,672
2007	57	35	6,743
2008	51	31	8,851
2009	54	28	3,659
2010	45	19	3,589

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Pelican: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	1	n/a	n/a	n/a	7	n/a
2001	n/a	9	n/a	n/a	n/a	9	n/a
2002	n/a	20	n/a	n/a	n/a	2	n/a
2003	n/a	17	n/a	n/a	n/a	2	n/a
2004	n/a	11	n/a	n/a	n/a	2	n/a
2005	n/a	n/a	n/a	n/a	n/a	11	n/a
2006	n/a	2	n/a	n/a	n/a	8	n/a
2007	n/a	7	n/a	n/a	n/a	8	n/a
2008	n/a	10	n/a	n/a	n/a	10	n/a
2009	n/a	3	n/a	n/a	n/a	7	n/a
2010	n/a	4	n/a	n/a	n/a	9	n/a

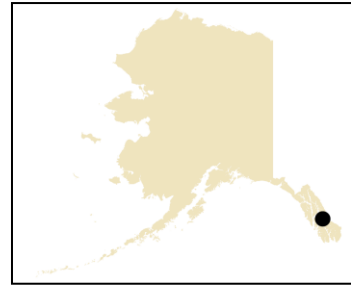
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Petersburg



People and Place

*Location*¹²⁴⁷

Petersburg is located on the northwest end of Mitkof Island, where the Wrangell Narrows meet Frederick Sound. It lies midway between Juneau and Ketchikan, about 120 miles from either community, and approximately 675 miles southeast of Anchorage. As of the 2010 Decennial Census, Petersburg was located in the Petersburg Census Area. However, in January 2013, the City and Borough of Petersburg was formed. As of late 2013, Census Area boundaries were still being redrawn. Petersburg is located in the Petersburg Recording District. The City encompasses an area of 43.9 square miles of land and 2.2 square miles of water.

*Demographic Profile*¹²⁴⁸

In 2010, there were 2,948 inhabitants in Petersburg, making it the 35th largest of 352 total Alaskan communities with populations recorded that year. Petersburg first appeared in U.S. Census records in 1910 with 585 inhabitants. The population rose steadily until 2000, with a population peak of over 3,000 inhabitants in the last two decades. According to Alaska Department of Labor estimates, the population of permanent residents decreased by 7.8% between 2000 and 2009, with an average annual growth rate of -0.34%.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported between 100 and 250 Petersburg residents work in local shore-side processing plants. In addition, they estimated that 600-800 seasonal workers or transients are present in Petersburg each year between April and November, with a population peak between June and August, and that this population fluctuation is mostly driven by employment in fishing sectors. A smaller number of seasonal employees also work in the tourism industry, for the Tongass National Forest, and in logging.¹²⁴⁹

In 2010, a majority of Petersburg residents identified themselves as White (80%), 7% identified as American Indian or Alaska Native, 3.2% as Asian, 0.4% as Black or African American, 0.2% as Native Hawaiian or Other Pacific Islander, 1.2% as 'some other race', and 7.9% identified with two or more races. That year, 3.7% of Petersburg residents also identified themselves as Hispanic. In 2010, individuals identifying as White made up 1.6% less of the population compared to 2000, and the percentage of individuals identifying with two or more races increased by 1.9%. The change in population from 1990 to 2010 is provided in Table 1

¹²⁴⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁴⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²⁴⁹ Petersburg Hazard Mitigation Planning Committee, and URS. (2008). *The City of Petersburg Multi-Hazard Mitigation Plan*. Retrieved March 29, 2012 from http://www.commerce.state.ak.us/dcra/planning/nfip/Hazard_Mitigation_Plans/Petersburg_MHMP.pdf.

below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Petersburg decreased over time, from 2.7 persons per household in 1990 to 2.56 per household in 2000, and 2.32 in 2010. During the same period, the number of households increased slightly, from 1,135 occupied households in 1990 and 1,240 in 2000, to 1,252 occupied housing units in 2010. Of the 1,356 total housing units surveyed for the 2010 U.S. Census, 63% were owner-occupied, 30% were rented, and 8% were vacant or used only seasonally. Between 1990 and 2010, the number of Petersburg residents living in group quarters varied between 43 and 46.

Table 1. Population in Petersburg from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	3,207	-
2000	3,224	-
2001	-	3,225
2002	-	3,157
2003	-	3,080
2004	-	3,132
2005	-	3,156
2006	-	3,125
2007	-	3,042
2008	-	3,010
2009	-	2,973
2010	2,948	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Petersburg: 2000-2010 (U.S. Census).

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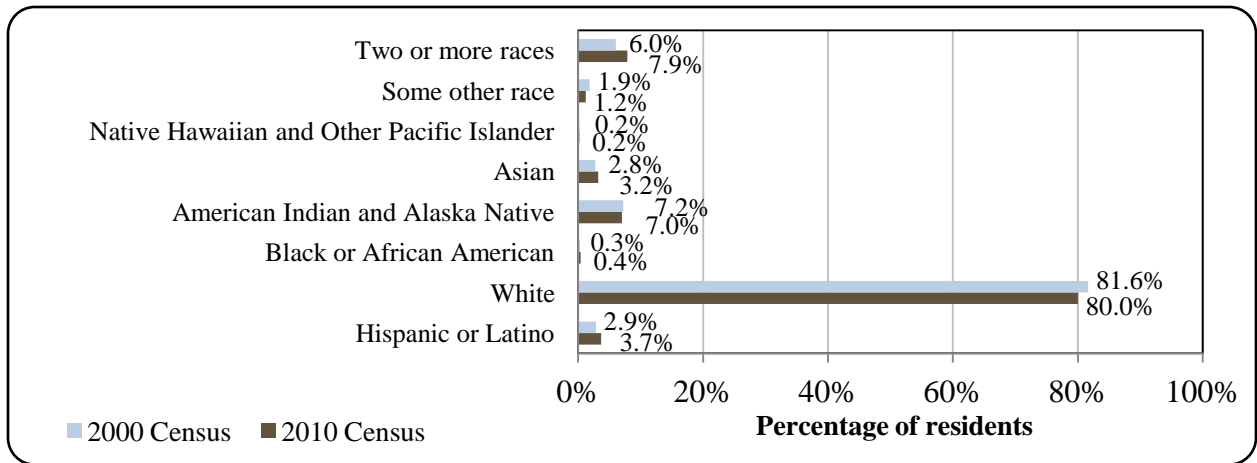
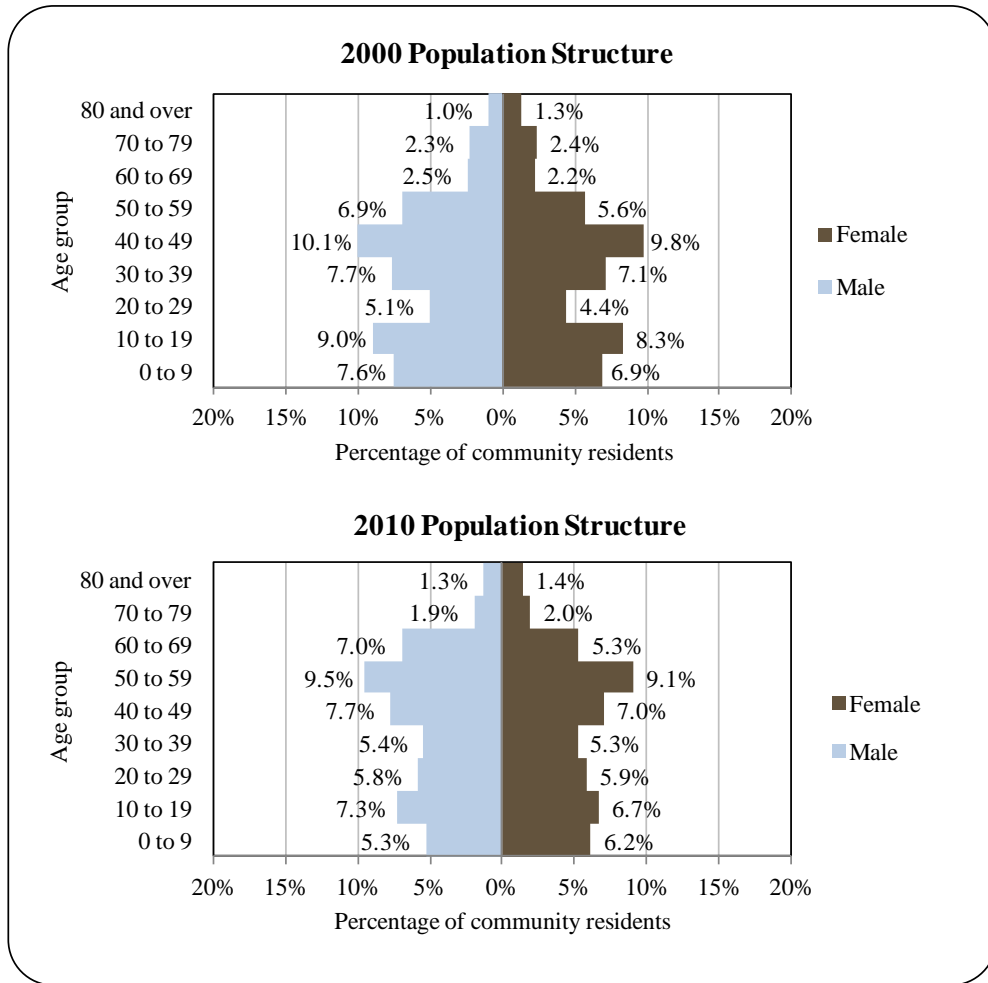


Figure 2. Population Age Structure in Petersburg Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup of Petersburg’s population (51.2% male and 48.8% female) was slightly more balanced between men and women than the population of Alaska as a whole, which was 52% male and 48% female. The median age of Petersburg residents was 41.4 years, older than the national average of 36.8 years and the median age for Alaska, 33.8 years. Also in 2010, 18.9% of Petersburg’s population was age 60 or older. The overall population structure of Petersburg in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹²⁵⁰ 96.5% of Petersburg residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 2.3% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 1.3% were estimated to have a 9th to 12th grade education

¹²⁵⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

but no diploma, compared to 5.8% of Alaskan residents overall; 25.5% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 5.6% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 16.5% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 11.3% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Tlingit Indians from Kake utilized the north end of Mitkof Island as a summer fish camp. Some reportedly began living year-round at the site. Petersburg was named after Peter Buschmann, a Norwegian immigrant and a pioneer in the cannery business, who arrived in the late 1890s. By 1900, he had built the Icy Strait Packing Company cannery, a sawmill, and a dock. His family's homesteads grew into this community, populated largely by people of Scandinavian origin. In 1910, the City was incorporated, and by 1920, 600 people lived in Petersburg year-round. During this time, fresh salmon and halibut were packed in glacier ice for shipment.¹²⁵¹ Alaska's first shrimp processor, Alaska Glacier Seafoods, was founded in Petersburg in 1916, and operated continuously for 80 years until its closure during the 2005-2006 season.^{1252,1253} A cold storage plant was built in 1926. The cannery has operated continuously since that time and is now known as Petersburg Fisheries, a subsidiary of Icicle Seafoods, Inc.¹²⁵⁴

Today, Petersburg is one of Alaska's major fishing communities. It has one of the largest home-based halibut fleets in Alaska, and is also well-known for shrimp, crab, salmon, herring, and other fish products.¹²⁵⁵ The community maintains a mixture of Tlingit and Scandinavian history. It is known as "Little Norway" for its history and annual Little Norway Festival during May. As in many Alaskan communities, subsistence harvest is an important part of the local way of life. Residents include salmon, halibut, shrimp, and crab in their diet.¹²⁵⁶

The town of Kupreanof is located across the Wrangell Narrows from Petersburg, on Kupreanof Island. Previously known as "West Petersburg," the community was once busy with fur farms, a boat repair yard, and a sawmill. Although the Knudsen Mill and the Yukon Fur Farm continued operations into the 1960s, the economics of living on Kupreanof Island became more difficult. The population fell from 60 in 1950 to 26 in 1960, and has since remained stable. Kupreanof was named after the Island when it incorporated as a 2nd Class City in 1975. All of the homes in Kupreanof are built on the waterfront, and there are no roads. Residents use skiffs to travel to Petersburg for schooling, goods, and services.¹²⁵⁷

¹²⁵¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁵² Ibid.

¹²⁵³ Alaska Dept. of Fish and Game. 2012. *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=northernshrimp.printerfriendly>.

¹²⁵⁴ See footnote 1251.

¹²⁵⁵ City of Petersburg. 2000. *Comprehensive Plan*. Retrieved March 29, 2012 from <http://www.commerce.state.ak.us/dca/plans/Petersburg-CP-2000.pdf>.

¹²⁵⁶ See footnote 1251.

¹²⁵⁷ Ibid.

Natural Resources and Environment

Petersburg's climate is characterized by mild winters, cool summers, and year-round rainfall. Average summer temperatures range from 40 to 56 °F; winters average from 27 to 43 °F. Annual precipitation averages 106 inches, with 97 inches of snow.¹²⁵⁸ The topography surrounding Petersburg, including the northern portions of Mitkof and Kupreanof Islands, is characterized by steep mountainous terrain, with large areas of spruce bogs, sphagnum bogs, and scrub bogs. Upland areas consist of mixed hemlock/spruce forest.¹²⁵⁹

The highest point on Mitkof Island is Crystal Mountain (3,317 feet in elevation), along with other peaks around 2,500 feet high. To the north, across Frederick Sound, the Coast Mountains rise steeply to 6,000 feet above sea level within 10-15 miles of the coast, with the iconic Devil's Thumb rising to over 9,000 feet. Petersburg is located at the intersection of Frederick Sound and the Wrangell Narrows. Tides in Petersburg can range from a high of 19 feet to a low of -4 feet in one day.¹²⁶⁰ With a large amount of water passing through the "Narrows," tidal currents can run over five knots.¹²⁶¹

The City of Petersburg is adjacent to Tongass National Forest lands. At 16.8 million acres, the Tongass is the largest National Forest in the U.S. Approximately 95% of Southeast Alaska is federal land, of which 80% is National Forest. It includes almost 11,000 miles of meandering island and mainland shorelines. It is managed to produce resource values, products and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.¹²⁶² Upland state lands near Petersburg are primarily used for recreation, commercial timber harvest and settlement. Commercial timber harvest in the last three decades has been concentrated along Sumner Strait in the southern portion of Mitkof Island. The State is currently harvesting timber at Frederick Point, in the northeastern portion of Mitkof Island.¹²⁶³ The U.S. Forest Service also offers yearly timber sales on the south end of Mitkof Island and central and northern Kupreanof Island.¹²⁶⁴

Protected areas in the vicinity of Petersburg include the Petersburg Creek – Duncan Salt Chuck Wilderness Area to the west on Kupreanof Island,¹²⁶⁵ and the Stikine – Leconte Wilderness Area east of Petersburg, across Frederick Sound on the mainland.¹²⁶⁶ These Wilderness Areas offer opportunities for hiking and camping, recreational fishing, wildlife

¹²⁵⁸ Ibid.

¹²⁵⁹ Alaska Dept. of Natural Resources. 2000. *Central/Southern Southeast Alaska Area Plan*. Retrieved March 29, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/cs_southeast/pdf/adopt_csseap_complete.pdf.

¹²⁶⁰ Petersburg Chamber of Commerce website. 2004. *Local Geography*. Retrieved April 3, 2012 from <http://www.petersburg.org/town/geography.html>.

¹²⁶¹ Current information retrieved April 3, 2012 from <http://tides.mobilegeographics.com/locations/7072.html>.

¹²⁶² U.S. Forest Service. (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

¹²⁶³ See footnote 1259.

¹²⁶⁴ U.S. Forest Service. (2011). *Tongass National Forest: Forest Timber Sale Schedule and Integrated Service Timber Contract Plan – FSM 2431.21*. Retrieved July 13, 2012 from <http://www.fs.usda.gov>.

¹²⁶⁵ U.S. Forest Service. (n.d.). *Petersburg Creek-Duncan Salt Chuck Wilderness*. Retrieved March 29, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/petersberg.pdf.

¹²⁶⁶ U.S. Forest Service. (n.d.). *Stikine-Leconte Wilderness*. Retrieved March 29, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/resources/wilderness/stikineleconte.pdf.

viewing, glacier viewing and ice climbing. The Stikine River is the fastest free-flowing navigable river in the U.S., and the Leconte Glacier is the southernmost tidewater glacier in the northern hemisphere.¹²⁶⁷ In addition, Beecher Pass State Marine Park is located south of Petersburg along the Wrangell Narrows. State Marine Parks are intended to protect natural habitat, and do not restrict fishing activity.¹²⁶⁸

Mineral deposits in the Petersburg area include several polymetallic (precious and base metals) and base metal deposits (copper, lead, zinc, with minor silver and barite) identified on Kupreanof, Woewodski and Zarembo Islands.¹²⁶⁹ Woewodski Island, located off the southwest coast of Mitkof Island, just south of Beecher Pass State Marine Park, is unique in the region for its greater concentration of mineral deposits, including gold. Extensive mining took place on Woewodski Island in the 1930s, but only small amounts of gold were found before the vein was lost. Approximately 90% of the island has had mining claims. In addition, the southern portion of Kupreanof Island has the potential for copper and molybdenum extraction, and valid mining claims currently exist west of Duncan Salt Chuck Creek. The Duncan Canal/Zarembo Island mineral tract also has a moderate to high mineral development potential for barite, zinc, lead, and silver.¹²⁷⁰

Natural hazards that have been identified as risks in Petersburg include earthquake, flooding, and landslides.¹²⁷¹ According to the Alaska Department of Environmental Conservation (DEC), there are no notable active environmental cleanup sites located in Petersburg as of September, 2012.¹²⁷²

Current Economy¹²⁷³

Since the community was founded, Petersburg's economy has been based on commercial fishing and timber harvests. Today, Petersburg is one of the top-ranking ports in the U.S. for the quality and value of fish landed.¹²⁷⁴ In 2010, 559 residents held commercial fishing permits (Table 4), equivalent to 19% of the total local population that year. In the same year, 482 Petersburg residents held commercial crew licenses (equivalent to 16% of the population) (Table 5). Several processors operate cold storage, canneries, and custom packing services in Petersburg. Petersburg is the supply and service center for smaller communities in the area.¹²⁷⁵ In

¹²⁶⁷ Ibid.

¹²⁶⁸ Alaska Dept. of Fish and Game Marine Protected Area Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Regional Information Report 5J02-08. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

¹²⁶⁹ Alaska Dept. of Natural Resources. (2011). *Mineral Resources of Alaska Map*. Retrieved April 3, 2012 from <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

¹²⁷⁰ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume II: Appendix C – Part I*. Retrieved April 3, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_II.pdf.

¹²⁷¹ Petersburg Hazard Mitigation Planning Committee, and URS. (2008). *The City of Petersburg Multi-Hazard Mitigation Plan*. Retrieved March 29, 2012 from http://www.commerce.state.ak.us/dcra/planning/nfip/Hazard_Mitigation_Plans/Petersburg_MHMP.pdf.

¹²⁷² Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved September 25, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹²⁷³ Unless otherwise noted, all monetary data are reported in nominal values.

¹²⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁷⁵ Ibid.

addition to fisheries-related employment, in 2010, top local employers included the Petersburg School District, the City of Petersburg, Petersburg Medical Center, the State of Alaska, Petersburg Indian Association, and several local grocers, retailers, and bars.¹²⁷⁶ Tourism is also important to the community. Although there is no deep-water dock for large ships such as cruise ships,¹²⁷⁷ some small-ship cruise lines stop in Petersburg.¹²⁷⁸ Local charter boats and fishing lodges are one draw for tourism in the community.¹²⁷⁹

Based on household surveys conducted for the 2006-2010 ACS,¹²⁸⁰ in 2010, the per capita income in Petersburg was estimated to be \$31,496 and the median household income was estimated to be \$64,323. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$25,827 and \$49,028, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,¹²⁸¹ income is shown to have remained stable or decreased very slightly from a real per capita income in 2000 of \$33,962, and a real median household income of \$64,471. In 2010, Petersburg ranked 53rd of 305 Alaskan communities with per capita income data, and 64th in median household income, out of 299 Alaskan communities with household income data that year.

Petersburg's small population size may have prevented the ACS from accurately portraying economic conditions.¹²⁸² An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Petersburg in 2010 is \$10,862.¹²⁸³ This estimate is lower than both reported per capita income in 2000 and the 2010 ACS estimate, providing additional evidence that per capita income may have decreased between 2000 and 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Petersburg did not meet the Denali Commission's primary criteria as a "distressed community" in 2010. However, Petersburg did make a list of additional communities that meet the distressed classification when a plus/minus 3% formula is used.¹²⁸⁴

Based on the 2006-2010 ACS, in 2010, a slightly higher percentage of Petersburg residents was estimated to be in the civilian labor force (70.2%) than in the civilian labor force

¹²⁷⁶ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²⁷⁷ See footnote 1274.

¹²⁷⁸ City of Petersburg (n.d.). *Homepage*. Retrieved March 29, 2012 from <http://www.ci.petersburg.ak.us/>.

¹²⁷⁹ See footnote 1274.

¹²⁸⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²⁸¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²⁸² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²⁸³ See footnotes 1276 and 1280.

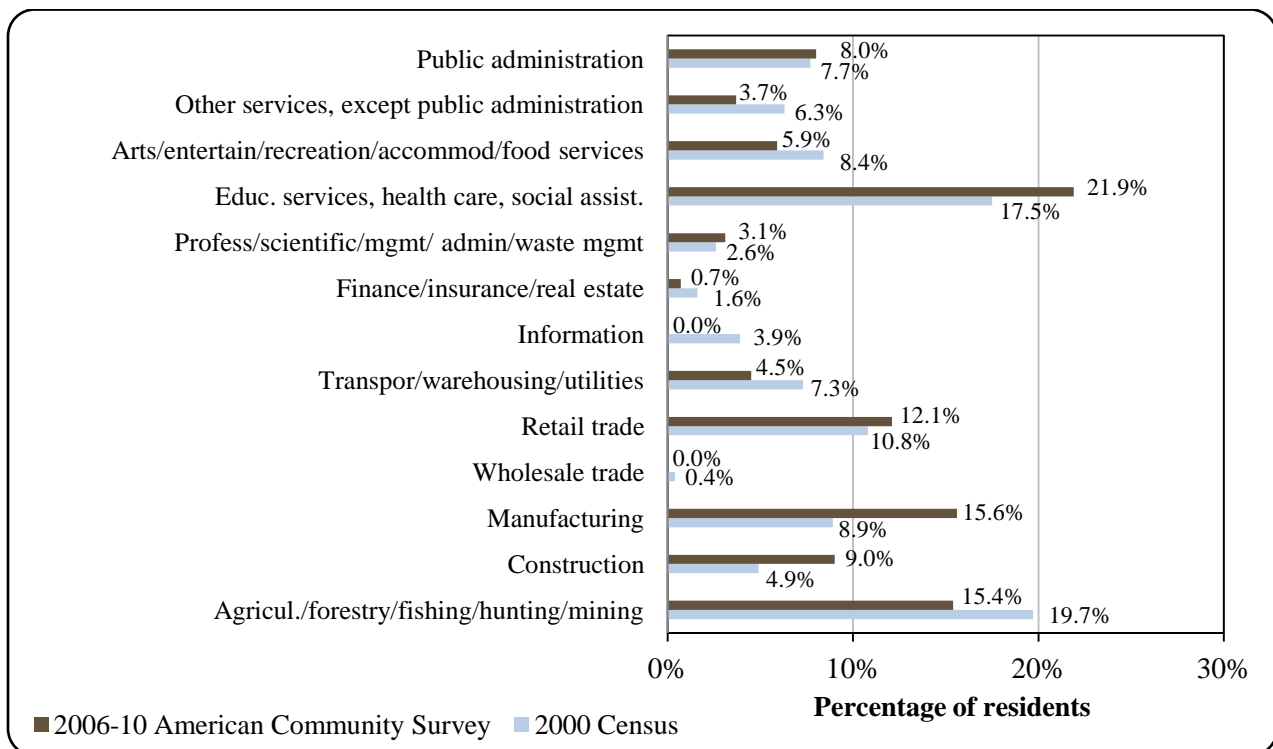
¹²⁸⁴ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

statewide (68.8%). In the same year, 8.9% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 1.9%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 10.2%, compared to a statewide unemployment rate estimate of 11.5%.¹²⁸⁵

Also based on the 2006-2010 ACS, a majority of the Petersburg workforce (55%) was estimated to be employed in the private sector, along with 28.3% in the public sector and 16.6% that were self-employed. Of the 1,605 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number was estimated to be working in educational services, health care, and social assistance (21.9%), manufacturing (15.6%), agriculture, forestry, fishing, hunting, and mining (15.4%), and retail trade (12.1%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It is important to note that the number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. According to the Petersburg Economic Development Council, most local Petersburg fishermen and deckhands are self-employed, and do not show up in either U.S. Census or Alaska Department of Labor statistics.¹²⁸⁶

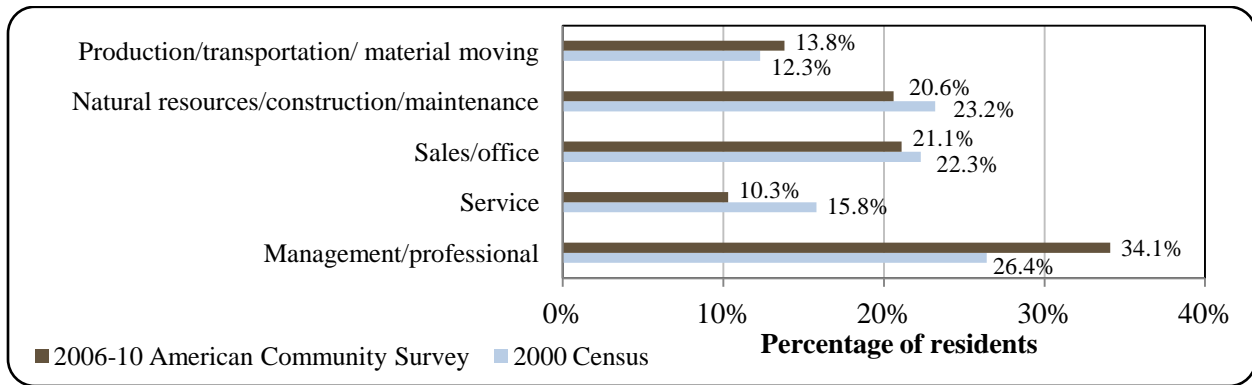
Figure 3. Local Employment by Industry in 2000-2010, Petersburg (U.S. Census).



¹²⁸⁵ See footnote 1276.

¹²⁸⁶ Personal communication from the Petersburg Economic Development Council, December 13, 2013.

Figure 4. Local Employment by Occupation in 2000-2010, Petersburg (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 1,151 employed residents in 2010, of which 22.5% were employed in local government, 21.4% in trade, transportation, and utilities industries, 13.3% in manufacturing, 12.8% in educational and health services, 6.9% in leisure and hospitality, 6.8% in state government, 5.6% in construction, 2.5% in information, 2.3% in financial activities, 2.1% in professional and businesses services, 2% in natural resources and mining, and 2% in other industries.¹²⁸⁷ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

Until January 2013, Petersburg was incorporated as a Home Rule City, and was not located in an organized borough. In December 2012 voters approved a plan to incorporate the Petersburg Borough, incorporating rural residents in outlying areas. The City of Petersburg was dissolved in the formation of the Borough, although the City of Kupreanof did not. Kupreanof is located within the boundaries of the new Borough.^{1288,1289} On January 3, 2013, the Petersburg Borough was incorporated. A final plan for the transition to the Borough was not expected until late 2013. One issue that remained to be resolved was a dispute with the City and Borough of Juneau over the final boundary between the two Boroughs.¹²⁹⁰ The Petersburg Borough is governed by a Borough Mayor, Vice Mayor, and six Assembly members. In addition, there is a 7-person planning commission, a 5-member school board, and a number of Borough employees.

Information about revenue sources presented in Table 2 is based on the 2000-2010 time period, when the City of Petersburg was the governing body for the community. The City was governed by a “Council Manager” form of government, with a city council including the Mayor

¹²⁸⁷ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²⁸⁸ Miller, M. December 18, 2012. “Petersburg Borough approved by voters.” *Juneau Empire*. Retrieved August 21, 2013 from <http://juneauempire.com/local/2012-12-18/petersburg-borough-approved-voters#.UhUP-D-Yfe8>.

¹²⁸⁹ Forgey, Pat. February 26, 2012. “Petersburg borough gets partial endorsement.” *Juneau Empire*. Retrieved March 29, 2012 from <http://juneauempire.com/local/2012-02-26/petersburg-borough-plan-gets-partial-endorsement>.

¹²⁹⁰ Pope, S. January 24, 2013. “Borough transition is moving forward.” *Petersburg Pilot*. Retrieved August 21, 2013 from <http://www.petersburgpilot.com/story/2013/01/24/news/borough-transition-is-moving-forward/954.html>.

as a member of the council.¹²⁹¹ As of 2010, the City administered a 6% sales tax, a 10.25 mills property tax, and a 4% bed tax.¹²⁹² Municipal revenue in Petersburg increased between 2000 and 2010, from less than \$7 million to over \$8 million per year. In addition to tax revenues, locally-generated revenue sources in Petersburg included lease income, revenues from city-operated businesses and services such as police and public safety, ambulance, recreation activity fees, swimming pool and community gym, library fees, and cemetery plots sales. Outside revenue sources included a variety of shared funds from state and federal sources, including contributions from the State Revenue Sharing and Community Revenue Sharing programs listed in Table 2. Shared funds were also received from fish tax refunds (see *Fisheries-Related Revenue* section).

No information was reported regarding fisheries-related grants received by Petersburg between 2000 and 2010. However, beyond the data presented in Table 2, it is important to note that following the formation of the Petersburg Borough, the State planned to provide \$600,000 toward creation of a new Comprehensive Plan for the Borough, as well as harbor and dock upgrades.¹²⁹³ See the *Facilities* section of this profile for more information.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Petersburg from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$6,740,793	\$2,422,382	\$126,414	n/a
2001	\$6,388,420	\$2,310,898	\$111,788	n/a
2002	\$6,828,227	\$2,325,883	\$107,426	n/a
2003	\$6,363,770	\$2,140,917	\$105,927	n/a
2004	\$6,892,727	\$2,586,353	n/a	n/a
2005	\$7,022,188	\$2,432,531	n/a	n/a
2006	\$7,725,220	\$2,741,057	n/a	n/a
2007	\$8,077,600	\$2,747,146	n/a	n/a
2008	\$8,618,360	\$2,870,844	n/a	n/a
2009	\$8,634,238	\$2,846,832	\$249,502	n/a
2010	\$8,221,581	\$2,646,277	\$245,101	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹²⁹¹ Personal communication from the Petersburg Economic Development Council, December 13, 2012.

¹²⁹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁹³ See footnote 1290.

Petersburg was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.¹²⁹⁴ The Native population of Petersburg is represented by the Petersburg Indian Association, an organization “dedicated to empowering our native community by promoting our cultural values, education and wellness, while creating a sustainable and diverse economy, cultivating leadership, strengthening families, and respecting our environment.” The Association offers programs and services for Tribal members, including Temporary Assistance to Native Families, Indian Child Welfare Act casework, general assistance and energy assistance.¹²⁹⁵

Petersburg has an office of the Alaska Department of Fish and Game (ADF&G), the Petersburg Ranger District office of the U.S. Forest Service, a Supervisor’s office for the U.S. Forest Service, an enforcement office of the National Marine Fisheries Service (NMFS), and a University of Alaska Sea Grant program office. Juneau hosts the Alaska Regional Office of the NMFS, as well as the AFSC Auke Bay laboratories. In addition, Juneau has the closest offices of the Alaska Department of Natural Resources and Alaska Department of Commerce, Community, and Economic Development. The nearest field office of the U.S. Bureau of Citizenship and Immigration Services is located in Ketchikan.

Infrastructure

Connectivity and Transportation

Petersburg is accessed by air and water. It is on the mainline state ferry route. The state-owned James A. Johnson Airport has a 6000 feet long and 150 feet wide runway for scheduled jet service.¹²⁹⁶ As of early June 2012, roundtrip airfare between Petersburg and Anchorage was \$449.¹²⁹⁷ As of summer 2012, a one-way adult passenger fare on the Alaska State ferry from Petersburg to Juneau was \$66, and \$279 to Bellingham, WA.¹²⁹⁸ The Lloyd R. Roundtree Seaplane Base (on the Wrangell Narrows) provides a base for float plane service. Harbor facilities include a petroleum wharf, barge terminals, three boat harbors with moorage for 700 boats, a boat launch, and a boat haul-out. Freight arrives by barge, ferry, or cargo plane. There is no deep-water dock for large ships such as cruise ships,¹²⁹⁹ although some small-ship cruise lines stop in Petersburg.¹³⁰⁰ According to a survey conducted by the AFSC in 2011, air taxi and water taxi services are available between Petersburg and the surrounding area, as well as land craft transporters.

Facilities

Water in Petersburg is sourced from a 200-million gallon water reservoir formed by the Cabin Creek Dam. The water is filtered and chlorinated and stored in a 2 million gallon tank. The Borough Water Utility operates the piped water system which distributes water to 90% of

¹²⁹⁴ Ibid.

¹²⁹⁵ Petersburg Indian Association website. 2012. Retrieved March 29, 2012 from <http://piatribal.org/>.

¹²⁹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁹⁷ This price was calculated on November 21, 2011 using kayak.com.

¹²⁹⁸ Prices retrieved March 29, 2012 from <http://www.dot.state.ak.us/amhs/doc/fares/SETariffs.pdf>.

¹²⁹⁹ See footnote 1296.

¹³⁰⁰ City of Petersburg (n.d.). *Homepage*. Retrieved March 29, 2012 from <http://www.ci.petersburg.ak.us/>.

households located within the boundaries of the old City of Petersburg. Outlying homes use individual wells or water delivery services. The Borough also operates the piped sewer system. All homes are connected to the municipal sewer or have approved on-site treatment. Sewage is pumped via a series of 20 pump stations to the municipal treatment plant. The wastewater plant operates as a primary plant under a treatment waiver issued by the Environmental Protection Agency (EPA). Refuse is baled and shipped to Washington State.^{1301,1302} According to a survey conducted by the AFSC in 2011, community leaders indicated that improvements to the piped water and sewer system were completed within the last decade. Electricity in Petersburg is primarily produced by hydroelectric, with diesel backup. Petersburg Municipal Power & Light purchases electricity from the Tyee Lake Hydro Facility and also owns the Crystal Lake Hydro Facility and three diesel-fueled generators.¹³⁰³ Studies are currently being conducted regarding the feasibility of an electrical intertie project between Petersburg and Kake. An electrical transmission line would be constructed to transmit hydroelectric electricity to the Inside Passage Electric Cooperative (IPEC)'s electric system in Kake, reducing Kake's dependence on diesel electricity generation.¹³⁰⁴

Police services are provided by the Borough Police Department as well as a state trooper post in Petersburg. A jail facility and a State Superior Court are located in Petersburg, and a State Magistrate is stationed locally. Fire and rescue services are provided by the Petersburg Volunteer Fire Department and Emergency Medical Services (EMS).¹³⁰⁵ According to the 2011 AFSC survey, community leaders indicated that improvements to local EMS were put in place in 2010. A new fire station was completed in early 2012.¹³⁰⁶

Additional community services and facilities include a community recreational center and school pool, an Assisted Living Facility for seniors, a movie theater, a museum, one public library and two school libraries. Lodges and clubs include the Sons of Norway Hall, Elks Club, Masons, and Alaska Native Brotherhood/Alaska Native Sisterhood. Telephone, internet, and cable services are available in Petersburg. Two radio stations are operated locally.¹³⁰⁷ According to the 2011 AFSC survey, community leaders also indicated that a food bank and publicly subsidized housing are present in Petersburg. Community leaders also noted that a new post office building was completed in the year 2000, and a new public library was completed by late 2013.

With regard to fisheries-related infrastructure, community leaders indicated in the 2011 AFSC survey that 21,000 feet of public dock space is available for permanent vessel moorage in Petersburg, along with 5,000 feet of dock space for transient vessel moorage. They reported that vessels of up to 150 feet in length can use moorage. According to the survey, improvements to existing dock structures and construction of new dock space was completed in South Harbor in the past 10 years, along with a fish cleaning station, an EPA certified boat cleaning station, addition of water and electricity serving the dock, and upgraded fuel tanks at the dock. Harbor

¹³⁰¹ See footnote 1296.

¹³⁰² Petersburg, Alaska. 2013. *Borough Departments*. Retrieved August 21, 2013 from <http://www.ci.petersburg.ak.us>.

¹³⁰³ Ibid.

¹³⁰⁴ Dhittle and Associates, Inc. (2009). *Kake - Petersburg Intertie Study Update. Draft Report*. Retrieved April 3, 2012 from <http://www.seconference.org/pdf/KPI-Draft-050509.pdf>.

¹³⁰⁵ See footnotes 1296 and 1302.

¹³⁰⁶ Petersburg Pilot. "Fire House dedicated during Little Norway Festival." Retrieved July 3, 2012 from <http://www.petersburgpilot.com/story/2012/05/24/news/fire-house-dedicated-during-little-norway-festival/263.html>.

¹³⁰⁷ Ibid.

dredging was completed within the last 10 years at both the South and Middle harbors. Community leaders indicated that facilities in Petersburg can also accommodate rescue vessels (i.e., Coast Guard), small cruise ships, ferries, and fuel barges. It is important to note that, on August 1, 2013, demolition began on Petersburg's oldest harbor. Pilings and floats will be replaced, and the harbor will be dredged. These improvements are expected to be completed by May 2014.¹³⁰⁸

Community leaders also indicated that haul-out facilities and tidal grids are available for small and large vessels in Petersburg, as well as dry dock storage. Improvements in both haul out facilities and dry dock are currently in progress. Community leaders also noted the presence of a variety of boat repair services in town, including electrical, welding, hydraulics, machine shop, and mechanical services. They also reported that fish processing plants and cold storage facilities are present in town, and the availability of fishing gear storage and repair, marine refrigeration, fishing-related legal and bookkeeping services, sale of fishing gear, boat fuel, bait, tackle and ice. They also noted the presence of fish lodges in Petersburg. When Petersburg residents are in need of fishing-related businesses and services not available locally, community leaders indicated that they travel to Juneau, Ketchikan, Wrangell, Anchorage, or Seattle.

Medical Services

Petersburg's hospital, the Petersburg Medical Center, offers a wide range of medical and health services, including a Public Health Center, clinic, medical-surgical floor, emergency room, Long Term Care facility, laboratory, radiology lab, physical therapy center, home health program, dietary services, and community education program.¹³⁰⁹ The hospital is a qualified Acute Care and Long Term Care facility.¹³¹⁰ A chiropractor, two dentists, and several massage therapists also practice at the Medical Center. In addition, Petersburg Mental Health Services, Inc. offers counseling and therapy for emotional and substance abuse problems.¹³¹¹ Emergency services have limited highway, marine, airport, and floatplane access. Emergency service is provided by 911 Telephone Service and volunteers.¹³¹²

Educational Opportunities

Three schools are present in Petersburg: one elementary, one middle, and one high school. Rae C. Stedman Elementary School serves preschool through 5th grade, and as of 2011, had 180 students and 16 teachers; Mitkof Middle School serves grades 6 through 8, and as of 2011, had 102 students and five teachers; Petersburg High School serves grades 9 through 12,

¹³⁰⁸ Associated Press. August 3, 2013. "Harbor Renovation Work Begins in Petersburg." *KTUU*. Retrieved August 21, 2013 from <http://www.ktuu.com/news/harbor-renovation-work-begins-in-petersburg-ktuu-20130803,0,49492.story>.

¹³⁰⁹ Petersburg Medical Center (n.d.). *Homepage*. Retrieved March 29, 2012 from <http://www.pmc-health.com/>.

¹³¹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³¹¹ Petersburg Hazard Mitigation Planning Committee, and URS. (2008). *The City of Petersburg Multi-Hazard Mitigation Plan*. Retrieved March 29, 2012 from http://www.commerce.state.ak.us/dcra/planning/nfip/Hazard_Mitigation_Plans/Petersburg_MHMP.pdf.

¹³¹² See footnote 1310.

and as of 2011, had 150 students and 17 teachers.¹³¹³ In addition, several early-learning centers are present in Petersburg, including Tlingit-Haida Head Start, the Lutheran Church’s Good Beginnings preschool, REACH Infant Learning Program, and Petersburg Children’s Center Preschool.¹³¹⁴

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Tlingit people of the Kake (Keex) Kwaan¹³¹⁵ historically had fish camps in the Petersburg area. Several miles from the town center of Petersburg, the remains of one fish trap are still visible that date to 2,000 years ago.¹³¹⁶ The fish traps, as well as gaffs and spears, were traditionally used to catch salmon, one of the most important subsistence resources for the Tlingit people. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., ‘gumboot’ chitons), and sea plants (e.g., seaweed, beach asparagus and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas, and egg harvesting sites.^{1317,1318} The Keek Kwaan originally claimed 2,003,000 acres of territory, including the upper halves of Kuiu, Kupreanof, and Mitkof Island, the eastern shore of Baranof Island and the southern shore of Admiralty Island.¹³¹⁹

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.¹³²⁰ In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.¹³²¹ A Norwegian immigrant named Peter Buschmann came to the Petersburg area in the late 1800s. He chose the site for its proximity to these rich salmon and halibut fishing grounds and glacier ice for packing fish. By 1900, he had constructed

¹³¹³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹³¹⁴ See footnote 1311.

¹³¹⁵ ‘Keex’ in Tlingit is pronounced similar to ‘Kake’ in English. ‘Kwaan’ is a Tlingit socio-geographical term meaning “inhabitants of,” literally a contraction of the Tlingit verb “to dwell.” It is most commonly used to refer to a geographic region consisting of those areas controlled by clans or house groups residing in a single winter village or several closely situated winter villages (Source: Thornton, Thomas. 1997. “Know Your Place: The Organization of Tlingit Geographic Knowledge.” *Ethnology*, Vol. 36, No. 4. Retrieved July 13, 2012 from <http://www.jstor.org/>.)

¹³¹⁶ Sealaska Heritage Institute. (2009). *Curriculum Unit 5: Southeast Alaska Communities*. Retrieved March 30, 2012 from http://www.sealaskaheritage.org/programs/language_and_culture_curriculum.htm.

¹³¹⁷ Alaska Native Heritage Center. (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

¹³¹⁸ Brock, Mathew, Philippa Coiley-Kenner and the Sitka Tribe of Alaska. (2009). *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

¹³¹⁹ Walter R. and Theodore H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.

¹³²⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹³²¹ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

the Icy Strait Packing Company cannery, along with a sawmill and a dock at the current site of Petersburg.¹³²²

The first northern shrimp (*Pandalus borealis*) trawl fishery began near Petersburg in 1915, in Thomas Bay.¹³²³ A shrimp processor was founded in Petersburg in 1916, and operated continuously for 80 years before its closure during the 2005-2006 season.^{1324,1325} Although fisheries for this species also began in other areas of the state, the Southeast trawl fishery was the longest-lived and most stable fishery. The fishery peaked in the 1950s. Harvests began to decline in the late 1990s due to heavy competition from shrimp products originating in the Atlantic and the Pacific Northwest, and the market for northern shrimp finally collapsed with the closure of the Petersburg processing plant. Today, the Southeast Alaska shrimp trawl fishery is primarily directed toward sidestripe shrimp (*Pandalopsis dispar*), a larger and more valuable species.¹³²⁶ A spot shrimp (*Pandalus platyceros*) fishery has also grown in Southeast Alaska since the 1990s.¹³²⁷

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty. The Treaty was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.¹³²⁸ It is important to note that the state runs the Crystal Lake Hatchery on Mitkof Island, which contributes to the local salmon resource.¹³²⁹

Herring fisheries began in Southeast Alaska in the 1880s, with original production oriented toward herring oil and herring meal. Catch of herring for bait began around 1900, and sac roe fisheries developed in the 1970s. Today, bait herring fisheries take place during the winter each year in Southeast Alaska, while roe is harvested in the spring. Bait and sac roe fisheries use purse seine and set gillnet gear, and roe is also harvested in spawn-on-kelp closed-pound fisheries.¹³³⁰ A "closed-pound" is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.¹³³¹

In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska. The U.S. and Canada signed the Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean in 1923, and since the Convention took effect in 1924, Pacific halibut

¹³²² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³²³ See footnote 1321.

¹³²⁴ See footnote 1322.

¹³²⁵ Alaska Dept. of Fish and Game. 2012. *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=northernshrimp.printerfriendly>.

¹³²⁶ Ibid.

¹³²⁷ See footnote 1321.

¹³²⁸ See footnote 1320.

¹³²⁹ See footnote 1322.

¹³³⁰ See footnote 1321.

¹³³¹ Alaska Dept. of Fish and Game. (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

fisheries have been managed by the International Pacific Halibut Commission (IPHC), earlier called the International Fisheries Commission.¹³³² A state-managed sablefish fishery currently takes place in inside waters near Petersburg (Chatham and Clarence Straits). Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Halibut and Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999. Crab fisheries in Southeast Alaska target red, golden and blue king crab, Tanner crab, and Dungeness crab. Dive fisheries for sea cucumber and sea urchin began to grow in Southeast Alaska in recent decades.¹³³³ The impact of an increasing sea otter population in Southeast Alaska on stocks of Dungeness crab, sea cucumber, and sea urchin has led to significant economic losses in these fisheries in recent years.¹³³⁴

Petersburg is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is “Southeast Outside.” Petersburg is not eligible to participate in the Community Quota Entity program or the Community Development Quota program.

According to a survey conducted by the AFSC in 2011, community leaders indicated that a portion of the Petersburg fishing fleet is involved in the fisheries management process in Alaska through an industry coalition, the Petersburg Vessel Owners Association. They also noted challenges for Petersburg’s fishing economy, including the loss of, degradation and aging of local commercial fishing infrastructure, high expenses for transportation and shipping to and from Petersburg, and difficulties for the younger generation to enter fisheries due to the high price of permits. When asked to identify past fisheries management actions that have affected Petersburg the most, community leaders noted limited entry programs and implementation of individual fishing quotas (IFQs). When asked about current management decisions with the potential to impact Petersburg, they noted the dispute over halibut allocation between the commercial and charter fishing industries. When asked to comment on potential future management actions that concern Petersburg the most, community leaders noted regulation of sea otter populations and unnecessary EPA regulations.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, eight processing facilities were in operation in Petersburg. Information about and history of these facilities is presented below.

Petersburg Fisheries, incorporated in 1965, is a subsidiary of Icicle Seafoods and runs Icicle’s plant in Petersburg. The physical facility is the oldest cannery in Alaska, having operated

¹³³² International Pacific Halibut Commission. 2006. *History*. Retrieved September 12, 2012 from <http://www.iphc.int/publications/pamphlet/1IPHCHistoryPage.pdf>.

¹³³³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹³³⁴ McDowell Group. (2011). *Sea Otter Impacts on Commercial Fisheries in Southeast Alaska*. Prepared for Southeast Alaska Regional Dive Fisheries Association. Retrieved September 11, 2012 from <http://www.scribd.com/doc/74857876/MCDOWELL-GROUP-2011-Sea-Otter-Impacts-Report>.

continuously since 1899. King crab, snow crab, Dungeness crab, halibut, sablefish, rockfish, herring, and salmon are processed at the plant and are shipped fresh, frozen, or canned to markets worldwide. The facility operates year round and employs over 600 people, although most of those 600 workers are employed during the peak season (from June through August). Icicle offers free bunkhouse accommodations to its fish processing workforce in Petersburg.¹³³⁵

Ocean Beauty Seafoods LLC was founded in 1910 in Seattle as Washington Fish & Oyster, and began its Alaska operations in the 1930s. In 1984, Ocean Beauty acquired its Petersburg facility, which now processes Ikura (salmon roe), as well as coho, chum, and sockeye salmon. Salmon processed at the plant is sold both fresh and frozen to distributors. The facility typically begins processing in June and finishes up the salmon season in mid-September. During the summer, the plant employs workers from all over the United States and Mexico. According to an AFSC survey of plant managers in 2011, the plant employs a total of 265 workers in the months of June and July. Ocean Beauty provides free room and board for its processing workforce. Housing is limited, however. It also offers them free weekly laundry service as well as raingear and boots.¹³³⁶

Trident Seafoods Corporation was founded in 1973, and by the year 2000 was employing 4,000 people annually throughout Alaska and the Pacific Northwest. Throughout Alaska, Trident processes cod, pollock, and crab in the winter, salmon and herring in the summer, and pollock again in the summer and fall. The Petersburg Trident facility began operations in 2003 and provides room and board at a nominal cost to its processing workers and employed a maximum of 60 workers in 2010. Free air transportation to Petersburg from Seattle and back is also provided to processing workers.¹³³⁷

Coastal Cold Storage was founded in 1990 and is located in an 8,800 square foot building purchased in 2006. Coastal Cold Storage is located on Nordic Drive in the main part of the town of Petersburg. Originally started as a custom processing and smoking business for sport fishermen, Coast Cold Storage has expanded and now sells commercially caught halibut, black cod, spot prawns, salmon, king crab, and various other seafood products. In addition to seafood processing and sales, Coastal Cold Storage also has three bunkhouse rooms, accommodating about ten employees and sport fishermen.¹³³⁸ According to an AFSC survey of plant managers in 2011, the plant employs between 6 and 22 workers, and provides housing for up to 12 workers during the busy months (May through September).

Northern Lights Smokeries is a small family-owned seafood company in Petersburg that was established in 1992. They specialize in smoked salmon (red Chinook, white Chinook, sockeye, coho, chum), sablefish, and halibut. Northern Lights also processes and sells frozen salmon and halibut.¹³³⁹

Tonka Seafoods is a smokehouse and seafood dealer in Petersburg that began operations in 1991. It smokes salmon, halibut, and sablefish. They also sell a variety of fresh and frozen seafood products. Tonka Seafoods is not owned and operated by a single family, rather by a

¹³³⁵ Icicle Seafoods (n.d.). *Welcome to Petersburg Fisheries*. Retrieved August, 2011, from <http://www.icicleseafoods.com/locations/ptg/>.

¹³³⁶ Ocean Beauty Seafoods (n.d.). *About – Product Locations: Petersburg*. Retrieved August, 2011, from <http://www.oceanbeauty.com/about/petersburg.htm>.

¹³³⁷ Trident Seafoods (n.d.). *Homepage*. Retrieved August, 2011, from <http://tridentseafoods.com/>.

¹³³⁸ Coastal Cold Storage (n.d.). *Homepage*. Retrieved August, 2011, from <http://www.coastalcoldstoragealaska.com/>.

¹³³⁹ Northern Lights Smokeries (n.d.). *Homepage*. Retrieved August, 2011 from <http://www.nlsmokeries.com/4.html>.

group of local families whose Tlingit and Norwegian forebears had been fishing in this area for at least three generations or even up to thousands of years.¹³⁴⁰ According to an AFSC survey of plant managers in 2011, the plant employs a total of 12 workers from May to September and has a workforce of 6 employees year-round.

Desire Fish Plant is located in Petersburg and is a small family run and operated processing company founded in 1985. All the fish processed in this small facility are caught on the F/V Desire, a 37-foot gillnetter built in 1990. Two thousand pounds of salmon can be processed and frozen per day here. Desire Fish Plant processes Chinook, sockeye, chum, pink, and coho salmon during the summer and early fall.¹³⁴¹

According to ADF&G's 2010 Intent to Operate list, True North Seafoods also operates a seafood processing plant in Petersburg under the name Starfish Inc.

It is also important to note that Alaska Glacier Seafoods, a shrimp processing facility, operated for 80 years in Petersburg. The plant closed during the 2005-2006 season.^{1342,1343}

Fisheries-Related Revenue

In 2010, the City of Petersburg received \$1,815,432 from fisheries-related taxes and fees. These revenue sources include the Shared Fisheries Business Tax, fees for harbor and port/dock usage, as well as leasing of public land to members of the fishing industry, rent from fishing gear storage on public land, moorage of tour ships, live-aboard fees, and other penalties and interest. Table 3 presents details of selected aspects of community finances between 2000 and 2010.¹³⁴⁴

In a survey conducted by the AFSC in 2011, community leaders indicated that several public services in Petersburg are at least partially funded by fisheries-related revenue sources. These services include harbor maintenance, medical and emergency response services, police/enforcement/fire protection, roads, social services such as the public library, and educational scholarships.

It is important to note that, after the formation of the Borough of Petersburg, the State provided \$600,000 to fund development of a new Comprehensive Plan, as well as harbor and dock development.¹³⁴⁵

Commercial Fishing

Petersburg residents are highly involved in a majority of Alaskan commercial fisheries, including salmon, halibut, crab, groundfish, sablefish, herring, and 'other shellfish.' Between 2000 and 2010, they were active in these fisheries as permit and quota share account holders, crew license holders, and vessel owners. In addition, the community of Petersburg is one of the

¹³⁴⁰ Tonka Seafoods (n.d.). *Homepage*. Retrieved August, 2011 from <http://www.tonkaseafoods.com/>.

¹³⁴¹ Desire Fish Company (n.d.). *Our Process*. Retrieved August, 2011 from <http://www.desirefish.com/process.html>.

¹³⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁴³ Alaska Dept. of Fish and Game. 2012. *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=northernshrimp.printerfriendly>.

¹³⁴⁴ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

¹³⁴⁵ Pope, S. January 24, 2013. "Borough transition is moving forward." *Petersburg Pilot*. Retrieved August 21, 2013 from <http://www.petersburgpilot.com/story/2013/01/24/news/borough-transition-is-moving-forward/954.html>.

leading processing communities in Alaska, ranking 14th in landings and 12th in ex-vessel revenue out of 67 Alaskan ports that received landings in 2010. That year, 52 fish buyers were present locally, and 8 shore-side processing facilities were in operation. In total, 46,025,419 net pounds were landed by Petersburg fish buyers in 2010, generating a total of \$37,340,289 in ex-vessel revenue (Table 5).

In 2010, 482 commercial crew licenses were held and 551 vessels were primarily owned by Petersburg residents. Both of these numbers represent declines from the year 2000, when 529 crew licenses were held and 613 vessels were primarily owned by residents. Also in 2010, 580 vessels were listed as homeported in Petersburg, and 605 vessels delivered landings to local processing plants. Further information about the commercial fishing sector in Petersburg is presented in Table 5. According to a survey conducted by the AFSC in 2011, community leaders reported that a wide range of fishing vessel sizes and types use Petersburg as a base of fishing operations. Fishing vessels range in size from under 35 feet to over 125 feet in length, and use trawl, longline, gillnet, purse seine, troll, pot, dive, and jig gear. Some community leaders noted an increase in commercial fishing boats over the last five years, with particular increase in vessels between 35 and 60 feet in length. Other community leaders noted no change in the number of commercial fishing vessels based in Petersburg in the last five years.

In 2010, 559 Petersburg residents held a total of 1,224 state Commercial Fisheries Entry Commission (CFEC) permits. Of these, 492 were held for salmon fisheries, 202 were held for halibut, 157 were held for crab, 146 were held for herring, 87 were held for sablefish, 82 were held for ‘other shellfish’, and 58 were held in groundfish fisheries (Table 4).

Of 492 salmon CFEC permits held in 2010, 208 were statewide handtroll permits, 95 were for Southeast Alaska drift gillnet, 75 were for statewide power gurdy troll gear, 71 were Southeast Alaska purse seine permits, 32 were Bristol Bay drift gillnet permits, and a handful were held in Prince William Sound, Peninsula-Aleutian, and Yakutat salmon fisheries. Overall, 54% of salmon permits held in Petersburg were actively fished in 2010. The number of salmon permit holders and the total salmon permits held increased slightly between 2000 and 2010, while the percentage actively fished remained relatively stable over the period.

Of 202 halibut CFEC permits, a majority (188) was held in the statewide longline fishery using vessels under 60 feet in length, while 11 were held for the statewide longline fishery for vessels 60 feet or over, 2 were held in the statewide mechanical jig fishery, and 1 was held for statewide hand troll. Overall, 93% were actively fished in 2010. Both the number of halibut permits held and the number of permit holders decreased slightly between 2000 and 2010, while the percentage of permits actively fished remained relatively stable over the period.

Of 157 crab CFEC permits held in 2010, a majority were for Dungeness crab fisheries (105 held, 75 actively fished). In addition, 13 permits were held for red/blue or brown king crab fisheries (6 actively fished), 15 were held for Tanner crab fisheries (9 actively fished), 23 were held in combined king/Tanner crab fisheries (21 actively fished), and 1 permit was held in the Korean hair crab Bering Sea fishery (not actively fished in 2010). The number of crab permits held, the number of permit holders, and the percentage of total crab permits actively fished declined between 2000 and 2010. The most common gear associated with these permits was pot gear, although several Dungeness and Tanner crab permits were associated with ring nets.

Of 146 total herring CFEC permits, 125 were held and 97 actively fished in Southeast Alaska fisheries in 2010, including 83 in spawn on kelp ‘closed-pound’ fisheries, 35 herring roe and food/bait gillnet and 7 roe herring purse seine permits. The remaining 11 herring permits were held in fisheries in areas including Prince William Sound, Bristol Bay, Norton Sound, and

Nunivak Island. Of these additional fisheries, only Bristol Bay permits were actively fished by Petersburg herring fishermen in 2010. The number of Petersburg residents holding herring permits increased between 2000 and 2010, as did the total number of permits held and the percentage of permits that were actively fished.

All of the 87 sablefish CFEC permits held in 2010, all were held in fisheries using longline gear. A majority (50) were held for vessels under 60 feet, to be fished in areas of the state other than Southeast Alaska or Prince William Sound, while 10 statewide permits were held for vessels 60 feet or over, 19 were held for northern Southeast Alaska (no vessel size restriction), and 9 were held for southern Southeast Alaska (no vessel size restriction). Overall, 94% of sablefish permits were actively fished in 2010. The number of Petersburg permit holders, the number of permits held, and the percentage of permits actively fished remained very stable between 2000 and 2010.

‘Other shellfish’ CFEC permits were held in shrimp, sea cucumber, and geoduck fisheries. The greatest number (42) were held in shrimp fisheries, including 33 shrimp permits associated with pot gear and 9 associated with beam trawl. In addition, 33 permits were held for the Southeast sea cucumber fishery using dive gear, and 6 permits were held in the dive gear fishery for geoduck. Overall, 43% of these shellfish permits were actively fished in 2010. A slightly higher percentage of sea cucumber and geoduck permits were actively fished (58% and 50%, respectively) than shrimp permits (33%). The number of ‘other shellfish’ permit holders and total ‘other shellfish’ permits held increased slightly between 2000 and 2010, while the percentage of permits actively fished remained relatively stable.

Petersburg’s involvement in state groundfish fisheries decreased substantially over the decade, both in terms of permit holders and total permits held. In 2000, 162 groundfish CFEC permits were held by 125 permit holders, declining to 58 permits held by 47 permit holders in 2010. Of the total 58 permits held in 2010, 9 were actively fished that year (16%). Groundfish permits in 2010 were held in fisheries for demersal shelf rockfish using longline, dinglebar troll, mechanical jig, or longline, as well as miscellaneous saltwater finfish using longline, pot gear, beam trawl, dinglebar troll, mechanical jig, or otter trawl.

In addition to CFEC permits, Petersburg residents also held federal License Limitation Program (LLP) permits and Federal Fisheries Permits (FFP). Between 2000 and 2010, the number of Petersburg residents holding groundfish LLPs varied between 122 and 124 per year, and the total number of groundfish LLPs held varied from 134 to 138. The percentage of groundfish LLP permits actively fished declined slightly over the period, from 62% in 2000 to 49% in 2010. During the same period, the number of crab LLP holders and total crab LLPs held varied between three and four per year, and the percentage actively fished declined from 75% to 33% over the period. This information about federal permits is presented in Table 4.

Between 2000 and 2010, Petersburg residents held quota share accounts and quota shares in federal fisheries for halibut, sablefish, and crab, with the highest level of participation in the halibut fishery. The number of halibut quota share account holders in Petersburg was 235 in the year 2000, declining to 209 by 2010. However, the total number of quota shares held increased over the period, from 26,393,894 in 2000 to 29,696,587 in 2010. The overall halibut Individual Fishing Quota (IFQ) allotment for account holders in Petersburg initially increased to 25% higher than 2000 levels in 2005, before decreasing to 30% below 2000 levels by 2010. Information about federal halibut catch share participation is presented in Table 6.

The number of sablefish quota share account holders remained relatively stable between 2000 and 2010, with a high of 69 and a low of 61. In 2010, 64 Petersburg residents held sablefish

quota share accounts, and a total of 27,422,822 quota shares were held that year. The value of sablefish quota shares, in pounds allocated per share, followed a similar pattern to the halibut quota described above. The overall sablefish IFQ allotment increased to 15% above 2000 levels in 2005, before decreasing to approximately 13% below 2000 levels in 2010. Information about federal sablefish catch share participation is presented in Table 7.

Between 2005 and 2010, the number of Petersburg residents holding quota share accounts in the federal crab fisheries increased slightly, from four quota share accounts between 2005 and 2008 to seven in 2010. However, the total number of quota shares decreased over time, from 16,442,502 in 2006 and 2007, to 14,825,512 in 2010. In 2010, the overall crab IFQ allotment for account holders in Petersburg was 20% higher than in 2005 (Table 8).

Of the landings reported between 2000 and 2010, the species landed in the greatest volume in Petersburg were salmon, herring, halibut, and sablefish. On average between 2000 and 2010, 42,391,288 net pounds of salmon were landed in Petersburg, valued on average at \$10,977,416 in ex-vessel revenue. For the three years in which herring landings and revenue were reported, landings averaged 3,634,561 net pounds, valued at \$2,668,239 in ex-vessel revenue on average. Landings and revenue information for herring is considered confidential in years other than 2004, 2008 and 2009. Halibut landings were reported in all years. On average, 2,297,101 net pounds of halibut were landed in Petersburg, valued at \$7,489,681 in ex-vessel revenue on average. Sablefish landings and revenue were reported in five years during the period. On average, 1,574,673 net pounds were landed in these years, valued at \$5,051,029 in ex-vessel revenue on average. Information about sablefish in other years is considered confidential.

In addition, ‘other shellfish’ landings were reported in all years between 2000 and 2010, and ‘other groundfish’ landings were reported in all years but one. On average, 221,172 net pounds of ‘other shellfish’ per year were landed in Petersburg, valued at \$663,156 in ex-vessel revenue on average. In the case of ‘other groundfish’, 221,172 net pounds were landed in Petersburg on average between 2000 and 2010, with average ex-vessel revenue of \$137,367. Pollock and finfish landings may have been delivered in Petersburg as well, but information about these landings is considered confidential in all years between 2000 and 2010 (Table 9).

In addition to the landings delivered in Petersburg by fishermen from many communities, landings and ex-vessel revenue earned by Petersburg vessel owners is of note. Petersburg vessel owners made deliveries throughout Alaska between 2000 and 2010. Information is reported regarding their landings in all fisheries, with the exception of finfish, in which information is considered confidential in all years (Table 10). The fisheries with the greatest landings volume by Petersburg vessel owners were for salmon, Pacific cod, herring, halibut and crab. On average between 2000 and 2010, Petersburg vessel owners landed 42,749,188 net pounds of salmon, valued at \$13,400,534 in ex-vessel revenue on average over the period. The next greatest volume of deliveries was Pacific cod, with an average of 10,791,095 net pounds landed per year, and average ex-vessel revenue of \$6,549,219. Herring deliveries by Petersburg vessel owners averaged 7,818,374 net pounds per year, with average ex-vessel revenue of \$2,939,159.

Although halibut and crab landings were lower in volume than either Pacific cod or herring on average (4,241,365 and 3,440,421 net pounds per year, respectively), their average ex-vessel revenue was higher (\$13,818,605 and \$6,971,205, respectively). Further, sablefish landings averaged less than Pacific cod, herring, halibut, or crab (2,868,701 net pounds per year), but ex-vessel revenue from sablefish landings was the highest of these five species, averaging \$9,456,212 per year. This reflects the greater value per pound of sablefish, halibut, and crab than Pacific cod or herring, and also the greater value of sablefish per pound than halibut or crab.

In addition, Petersburg vessel owners landed an average of 417,673 net pounds of ‘other shellfish’ per year between 2000 and 2010, valued at \$728,571 in ex-vessel revenue, on average; in ‘other groundfish’ fisheries, they landed an average of 384,469 net pounds, valued at \$222,277 in ex-vessel revenue on average. For the three years in which landings and revenue information was reported for pollock fisheries, they landed an average of 74,316 net pounds, valued at \$13,645 per year on average. Information about pollock for other years is considered confidential.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Petersburg: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries											
Business Tax ¹	\$513,275	\$694,423	\$485,067	\$620,984	\$478,327	\$562,025	\$647,810	\$696,011	\$670,416	\$791,722	\$779,129
Fisheries Resource											
Landing Tax ¹	n/a	\$857	n/a	\$26	\$36	n/a	\$526	\$1,061	\$1,171	\$1,216	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$516,400	\$516,400	\$563,175	\$618,675	\$852,060	\$775,597	\$776,400	\$1,020,556	\$1,040,556	\$781,500	\$707,500
Port/dock usage ²	\$636,400	\$120,000	\$143,000	\$129,000	\$129,000	\$119,200	\$130,068	\$154,000	\$133,900	\$142,000	\$140,000
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$17,791
Leasing public/tribal land to members of fishing industry ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$141,894
Tourship moorage ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$12,164
Live aboard fees ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$5,347
Penalties and interest ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$11,607
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$1,666,075	\$1,331,680	\$1,191,242	\$1,368,686	\$1,459,422	\$1,456,822	\$1,554,804	\$1,871,628	\$1,846,043	\$1,716,438	\$1,815,432
Total municipal revenue⁵	\$6,740,793	\$6,388,420	\$6,828,227	\$6,363,770	\$6,892,727	\$7,022,188	\$7,725,220	\$8,077,600	\$8,618,360	\$8,634,238	\$8,221,581

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at

http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Petersburg: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	138	137	138	138	136	135	134	135	134	136	137
	Active permits	86	81	82	79	76	76	69	74	72	72	68
	% of permits fished	62%	59%	59%	57%	55%	56%	51%	54%	53%	52%	49%
	Total permit holders	123	123	123	123	122	122	122	122	120	122	124
Crab (LLP) ¹	Total permits	4	4	3	3	3	3	3	3	3	3	3
	Active permits	3	3	3	3	3	3	1	1	1	1	1
	% of permits fished	75%	75%	100%	100%	100%	100%	33%	33%	33%	33%	33%
	Total permit holders	4	4	3	3	3	4	3	3	3	3	4
Federal Fisheries Permits ¹	Total permits	59	62	63	58	63	64	61	67	67	65	66
	Fished permits	3	3	3	44	54	53	54	56	57	59	58
	% of permits fished	5%	5%	5%	76%	86%	83%	89%	84%	85%	91%	88%
	Total permit holders	56	59	60	56	61	62	59	64	64	63	64
Crab (CFEC) ²	Total permits	212	204	198	185	194	185	180	176	171	155	157
	Fished permits	174	166	171	150	156	147	125	129	130	119	111
	% of permits fished	82%	81%	86%	81%	80%	79%	69%	73%	76%	77%	71%
	Total permit holders	183	175	160	154	162	156	151	151	144	133	135
Other shellfish (CFEC) ²	Total permits	76	82	72	66	71	82	82	84	81	77	82
	Fished permits	34	36	34	31	31	41	34	33	30	31	36
	% of permits fished	44%	43%	47%	46%	43%	50%	41%	39%	37%	40%	43%
	Total permit holders	60	65	59	56	58	65	67	71	70	69	75
Halibut (CFEC) ²	Total permits	228	227	221	221	224	217	221	209	209	200	202
	Fished permits	209	204	203	205	213	201	208	199	201	192	188
	% of permits fished	92%	90%	92%	93%	95%	93%	94%	95%	96%	96%	93%
	Total permit holders	226	226	220	219	222	215	220	208	208	199	200
Herring (CFEC) ²	Total permits	123	122	127	120	123	130	127	128	136	144	146
	Fished permits	60	75	86	94	100	94	64	75	100	110	100
	% of permits fished	49%	61%	68%	78%	81%	72%	50%	59%	74%	76%	68%
	Total permit holders	92	93	89	92	91	101	96	97	104	109	100

Table 4 cont'd. Permits and Permit Holders by Species, Petersburg: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	85	85	82	86	86	84	89	84	87	86	87
	Fished permits	80	76	76	80	82	78	86	78	82	80	82
	% of permits fished	94%	89%	93%	93%	95%	93%	97%	93%	94%	93%	94%
	Total permit holders	73	72	72	72	73	72	72	69	73	72	72
Groundfish (CFEC) ²	Total permits	162	156	145	129	125	125	87	86	79	67	58
	Fished permits	58	45	28	20	14	14	12	10	10	13	9
	% of permits fished	36%	29%	19%	16%	11%	11%	14%	12%	13%	19%	16%
	Total permit holders	125	124	115	109	107	104	74	72	66	55	47
Other Finfish (CFEC) ²	Total permits	2	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	%	-	-	-	-	-	-	-	-	-	-
	Total permit holders	2	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	436	437	431	435	441	458	472	477	480	483	492
	Fished permits	252	239	219	218	239	243	270	261	265	272	268
	% of permits fished	58%	55%	51%	50%	54%	53%	57%	55%	55%	56%	54%
	Total permit holders	394	393	374	381	388	405	407	406	396	406	412
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1,324</i>	<i>1,313</i>	<i>1,276</i>	<i>1,242</i>	<i>1,264</i>	<i>1,281</i>	<i>1,258</i>	<i>1,244</i>	<i>1,243</i>	<i>1,212</i>	<i>1,224</i>
	<i>Fished permits</i>	<i>867</i>	<i>841</i>	<i>817</i>	<i>798</i>	<i>835</i>	<i>818</i>	<i>799</i>	<i>785</i>	<i>818</i>	<i>817</i>	<i>794</i>
	<i>% of permits fished</i>	<i>65%</i>	<i>64%</i>	<i>64%</i>	<i>64%</i>	<i>66%</i>	<i>64%</i>	<i>64%</i>	<i>63%</i>	<i>66%</i>	<i>67%</i>	<i>65%</i>
	<i>Permit holders</i>	<i>551</i>	<i>558</i>	<i>540</i>	<i>544</i>	<i>552</i>	<i>562</i>	<i>561</i>	<i>563</i>	<i>549</i>	<i>545</i>	<i>559</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Petersburg: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Petersburg ²	Total Net Pounds Landed In Petersburg ^{2,5}	Total Ex-Vessel Value Of Landings In Petersburg ^{2,5}
2000	529	36	9	613	568	518	21,010,068	\$19,870,902
2001	486	47	11	608	570	474	51,713,786	\$25,683,612
2002	468	48	11	547	552	467	52,578,868	\$22,447,690
2003	433	46	12	556	570	509	96,117,073	\$29,723,698
2004	442	53	11	555	567	559	91,709,368	\$35,899,321
2005	480	49	9	554	577	612	52,054,643	\$31,365,983
2006	489	55	10	539	570	472	25,395,168	\$28,905,904
2007	497	46	10	535	571	484	60,763,200	\$39,461,583
2008	503	59	9	545	591	559	20,146,152	\$32,760,299
2009	487	56	9	542	585	609	46,833,947	\$31,182,680
2010	482	52	8	551	580	605	46,025,419	\$37,340,289

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Petersburg: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	235	26,393,894	3,473,528
2001	230	26,814,924	3,834,979
2002	229	27,496,194	3,921,367
2003	226	27,633,837	3,926,324
2004	227	28,730,293	4,661,410
2005	216	29,057,828	4,806,283
2006	228	28,754,530	4,648,134
2007	224	28,491,542	4,088,253
2008	215	29,883,605	3,581,884
2009	213	29,671,724	3,040,271
2010	209	29,696,587	2,746,515

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Petersburg: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	68	27,963,913	2,713,036
2001	67	28,210,358	2,592,005
2002	69	27,553,279	2,496,534
2003	67	27,367,324	2,871,593
2004	69	27,827,093	3,206,213
2005	64	27,267,263	3,058,976
2006	62	25,939,831	2,718,904
2007	61	25,351,552	2,573,562
2008	62	26,940,665	2,533,437
2009	63	26,874,311	2,192,164
2010	64	27,422,822	2,059,608

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Petersburg: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	4	15,201,889	491,302
2006	4	16,442,502	470,488
2007	4	16,442,502	768,954
2008	4	14,693,825	639,426
2009	6	15,031,686	531,062
2010	7	14,825,512	573,533

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Petersburg: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	1,695,334	2,222,295	2,192,897	1,920,683	2,974,363	3,405,014	3,018,583	2,404,833	2,135,155	1,681,068	1,617,886
Herring	-	-	-	-	6,441,467	-	-	-	3,070,737	1,391,480	-
Other	269,851	303,345	209,375	163,338	-	234,247	277,741	223,974	206,281	165,967	157,603
Groundfish											
Other	1,197,585	859,411	967,105	966,430	1,023,937	802,905	351,314	196,182	198,555	110,323	104,653
Shellfish											
Pacific Cod	98,423	77,647	27,191	30,200	42,380	-	-	98,710	31,687	68,797	74,235
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	1,534,652	-	1,736,853	-	-	1,577,749	-	1,731,870	-	1,292,241	-
Salmon	12,829,263	43,103,462	43,280,606	88,566,926	76,483,215	41,748,432	17,103,899	53,058,923	10,106,391	39,982,202	40,040,846
<i>Total²</i>	<i>17,625,108</i>	<i>46,566,160</i>	<i>48,414,027</i>	<i>91,647,577</i>	<i>86,965,362</i>	<i>47,768,347</i>	<i>20,751,537</i>	<i>57,714,492</i>	<i>15,748,806</i>	<i>44,692,078</i>	<i>41,995,223</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$4,311,833	\$4,940,532	\$4,826,280	\$5,637,477	\$8,855,014	\$10,368,672	\$11,188,347	\$10,369,573	\$9,171,827	\$5,131,636	\$7,585,300
Herring	-	-	-	-	\$2,941,115	-	-	-	\$3,327,824	\$1,735,778	-
Other	\$148,556	\$180,688	\$125,850	\$99,163	-	\$137,960	\$184,518	\$153,295	\$143,025	\$106,693	\$93,921
Groundfish											
Other	\$582,644	\$395,703	\$483,923	\$831,001	\$809,746	\$1,416,065	\$881,907	\$610,327	\$628,215	\$336,100	\$319,087
Shellfish											
Pacific Cod	\$17,818	\$13,215	\$3,287	\$1,812	\$10,362	-	-	\$25,407	\$6,445	\$30,132	\$30,567
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	\$5,897,764	-	\$5,413,754	-	-	\$4,779,804	-	\$4,918,712	-	\$4,245,110	-
Salmon	\$3,618,514	\$8,695,155	\$5,170,948	\$12,753,086	\$13,634,158	\$9,246,186	\$7,089,023	\$16,109,794	\$8,394,746	\$15,802,925	\$20,237,044
<i>Total²</i>	<i>\$14,577,129</i>	<i>\$14,225,292</i>	<i>\$16,024,042</i>	<i>\$19,322,538</i>	<i>\$26,250,396</i>	<i>\$25,948,687</i>	<i>\$19,343,795</i>	<i>\$32,187,107</i>	<i>\$21,672,082</i>	<i>\$27,388,373</i>	<i>\$28,265,919</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Petersburg Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	3,769,905	4,231,875	4,918,008	3,499,016	3,357,819	3,386,260	3,343,980	3,453,250	3,056,748	2,512,716	2,315,054
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	3,657,870	3,900,617	4,286,143	4,165,930	5,033,045	5,304,339	5,154,079	4,270,309	4,083,409	3,570,339	3,228,932
Herring	3,713,055	7,538,785	6,606,338	6,101,947	7,624,350	6,786,331	6,855,246	8,997,820	10,123,191	9,503,916	12,151,140
Other	550,518	334,633	244,164	219,171	404,925	432,238	448,711	418,439	371,222	369,658	435,475
Groundfish											
Other	762,418	284,977	627,113	618,712	606,095	409,788	292,517	218,631	217,615	272,035	284,497
Shellfish											
Pacific Cod	11,451,239	10,398,311	11,620,657	8,653,235	11,062,952	8,608,881	9,525,889	8,797,169	10,672,790	12,726,146	15,184,780
Pollock	56,836	-	4,413	-	-	-	-	-	-	-	161,698
Sablefish	2,664,994	2,422,380	2,354,106	2,648,661	2,929,411	2,944,671	3,072,623	3,423,660	3,533,135	2,841,692	2,720,381
Salmon	29,663,394	51,682,553	37,143,665	53,815,023	53,382,913	57,201,976	31,551,128	50,326,528	25,401,457	39,073,990	40,998,441
<i>Total²</i>	<i>56,290,229</i>	<i>80,794,131</i>	<i>67,804,606</i>	<i>79,721,694</i>	<i>84,401,509</i>	<i>85,074,484</i>	<i>60,244,173</i>	<i>79,905,805</i>	<i>57,459,568</i>	<i>70,870,491</i>	<i>77,480,398</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$8,097,546	\$8,949,835	\$7,878,123	\$7,247,676	\$6,493,749	\$5,949,901	\$5,884,493	\$7,945,564	\$7,503,026	\$5,553,247	\$5,180,096
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$9,460,889	\$8,236,712	\$9,439,103	\$12,091,023	\$15,149,574	\$16,203,428	\$19,123,601	\$18,547,629	\$17,599,248	\$10,985,862	\$15,167,587
Herring	\$943,525	\$1,895,835	\$1,769,052	\$2,108,202	\$2,728,486	\$2,337,436	\$1,670,204	\$3,838,521	\$5,424,352	\$4,859,169	\$4,755,971
Other	\$343,815	\$192,925	\$154,446	\$126,136	\$189,947	\$241,431	\$256,179	\$258,789	\$234,008	\$236,770	\$210,604
Groundfish											
Other	\$779,647	\$480,944	\$575,098	\$721,602	\$885,971	\$848,514	\$741,172	\$674,329	\$653,251	\$787,684	\$866,064
Shellfish											
Pacific Cod	\$7,176,076	\$5,339,711	\$5,331,005	\$4,818,645	\$5,355,801	\$4,487,084	\$6,539,465	\$7,193,493	\$11,446,953	\$6,517,957	\$7,835,222
Pollock	\$7,481	-	\$493	-	-	-	-	-	-	-	\$32,961
Sablefish	\$10,094,533	\$7,537,295	\$7,582,603	\$9,434,504	\$8,948,659	\$9,825,462	\$9,547,280	\$9,961,978	\$11,063,260	\$9,391,320	\$10,631,437
Salmon	\$9,538,571	\$11,835,124	\$6,043,832	\$8,942,218	\$11,856,530	\$12,886,394	\$13,332,583	\$17,318,445	\$17,399,754	\$17,280,797	\$20,971,622
<i>Total²</i>	<i>\$46,442,082</i>	<i>\$44,468,381</i>	<i>\$38,773,756</i>	<i>\$45,490,006</i>	<i>\$51,608,717</i>	<i>\$52,779,650</i>	<i>\$57,094,978</i>	<i>\$65,738,749</i>	<i>\$71,323,853</i>	<i>\$55,612,805</i>	<i>\$65,651,564</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

From 2000 to 2010, the number of active sport fish guide businesses located in Petersburg declined from 25 to 17, and the number of licensed sport fish guides present in town declined from 45 to 23. Petersburg residents purchased between 1,407 and 1,683 sportfishing licenses per year, irrespective of point of sale. The number of licenses sold in Petersburg varied from 2,993 to 3,929 per year. The greater number of licenses sold locally than sold to residents reflects the fact that sportfishing draws tourism to the Petersburg area.

Petersburg is located within Alaska Sport Fishing Survey Area C – including Kake, Petersburg, Wrangell, and Stikine. Information is available about both saltwater and freshwater sportfishing activity at this regional scale (Table 11). Between 2000 and 2010, there was much higher saltwater sportfishing activity than in freshwater in this region. On average, Alaska resident anglers fished more days in both freshwater and saltwater than non-Alaska resident anglers, although non-Alaska resident anglers fished more days in some years.

According to a survey conducted by the AFSC in 2011, community leaders indicated that private anglers in Petersburg target all five species of salmon, steelhead, halibut, rockfish, crab, shrimp, and clams. They also noted that sportfishing activity takes place using private boats and charter boats, and through shore-based fishing. Many private boats are used for sportfishing. The Alaska Statewide Harvest Survey,¹³⁴⁶ conducted by ADF&G between 2000 and 2010, noted harvesting of the following species by Petersburg sport fishermen. In freshwater, Chinook, coho, sockeye, pink, and chum salmon, Dolly Varden, cutthroat trout, smelt, Arctic grayling¹³⁴⁷ and northern pike¹³⁴⁸ are harvested. In saltwater, all five salmon species, Dolly Varden, cutthroat trout, halibut, rockfish, lingcod, Pacific cod, and shark are harvested. In addition, the survey noted sport harvest of Dungeness and Tanner crab, hardshell clams, and shrimp.

Kept/released statistics from charter logbook data reported by ADF&G¹³⁴⁹ show that Pacific halibut was by far the most important species targeted by fishing charter trips out of Petersburg, with an average of 2,661 halibut kept and 3,330 released per year, for those years in which information about halibut was reported. Coho salmon were the next most numerous charter catch, averaging 1,054 coho kept per year. In addition, 535 pink and 405 Chinook salmon were kept per year on average. Considering yelloweye, pelagic, and ‘other’ rockfish together, 462 rockfish were also kept per year. Other species that were caught during charter trips out of Petersburg between 2000 and 2010 include lingcod, sablefish, chum and sockeye salmon, and shark.

¹³⁴⁶ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹³⁴⁷ Arctic grayling is not found in Southeast Alaska, except for stocked populations in a few lakes in the region. (See ADF&G’s *Wildlife Notebook Series: Arctic grayling*. Retrieved April 2, 2012 from http://www.adfg.alaska.gov/static/education/wns/arctic_grayling.pdf.) Harvest by Petersburg residents may include fishing on these stocked populations as well as travel to other regions of Alaska for sport fishing.

¹³⁴⁸ The range of Northern pike extends only as far south as the Kenai Peninsula (see ADF&G’s *Wildlife Notebook Series: Northern Pike*. Retrieved April 2, 2012 from http://www.adfg.alaska.gov/static/education/wns/northern_pike.pdf), so harvest by Petersburg residents took place outside the local region.

¹³⁴⁹ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Petersburg: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Petersburg ²
2000	25	45	1,683	2,993
2001	22	41	1,601	3,064
2002	18	41	1,615	3,099
2003	18	40	1,547	3,189
2004	18	40	1,590	3,062
2005	20	40	1,592	3,413
2006	15	31	1,569	3,584
2007	16	30	1,510	3,929
2008	17	29	1,407	3,924
2009	16	26	1,493	3,495
2010	17	23	1,502	3,277

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	13,338	29,430	4,343	6,189
2001	19,144	12,469	4,831	5,255
2002	13,737	23,403	3,468	4,628
2003	12,401	13,077	3,380	7,584
2004	21,412	15,646	4,813	5,848
2005	17,196	15,351	3,835	3,465
2006	20,822	20,572	4,578	3,548
2007	19,957	19,407	4,176	3,226
2008	23,754	16,530	3,043	5,945
2009	19,188	26,448	2,564	6,071
2010	21,290	18,419	3,358	3,955

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvest supplements the diet of local Petersburg residents.¹³⁵⁰ According to a survey conducted by the AFSC in 2011, community leaders indicated that halibut, salmon, crab, and other shellfish species are some of the most important subsistence resources for Petersburg residents. A household-level subsistence survey conducted by ADF&G in the year 2000 found that 59% of Petersburg households participated in salmon subsistence, 72% participated in halibut subsistence, 69% participated in marine invertebrate subsistence, and 78% participated in non-salmon fish subsistence (not including halibut). The per capita harvest of land and sea-based resources by Petersburg residents in 2000 was estimated to be 492 pounds (Table 12).

Results of the 2000 subsistence survey can be compared to and supplemented by results of an earlier 1987 household-level subsistence ADF&G study. The 1987 survey identified species of marine invertebrates, non-salmon fish (not including halibut), and marine mammals harvested by Petersburg households that year. The species of marine invertebrates harvested by the greatest percentage of Petersburg households in 1987 included clams (40% of households reported harvest), Dungeness crab (27%), sea urchin, shrimp (24%), Tanner crab (12%), king crab (12%), and octopus (10%). The species of non-salmon fish harvested by the greatest percentage of Petersburg households included Dolly Varden (37% of households harvested), rockfish (22%), cod (11%), and herring (10%). Species of marine mammal utilized by Petersburg residents in 1987 included harbor seal, though no information was available regarding the percentage of households involved in the harvest of this resource.¹³⁵¹ It is important to note that in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Petersburg.

Data are also available regarding salmon and halibut permits issued between 2000 and 2010. The number of subsistence salmon permits issued per year to Petersburg households declined between 2000 and 2008, from 196 in the year 2000 and 270 in 2001, to 72 in 2007 and 93 in 2008. Sockeye and coho salmon were the two most heavily utilized salmon species during this period, averaging 1,269 and 458 harvested per year, respectively. Some pink, chum, and Chinook salmon were also reported harvested in most years. This information about subsistence harvest of salmon is presented in Table 13. Between 2003 and 2010, the number of Petersburg residents that participated in the Subsistence Halibut Registration Certificate (SHARC) program varied between 961 and 1,197, and the number of SHARC cards returned each year varied between 291 and 482. The greatest subsistence harvest of halibut was reported in 2004, when 95,712 pounds of halibut were harvested on 482 SHARC cards (Table 14).

Information is also available regarding marine mammal harvest by residents of Petersburg between 2000 and 2010. According to data reported by the U.S. Fish and Wildlife Service and ADF&G, this harvest focused primarily on sea otter and harbor seal. No information was reported by management agencies regarding harvest of beluga whale, walrus, sea lion, or spotted seal between 2000 and 2010 (Table 15).

¹³⁵⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁵¹ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Petersburg: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	59%	72%	n/a	69%	78%	492
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Petersburg: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	196	191	17	152	288	42	1,000	n/a	n/a
2001	270	268	12	68	844	234	1,672	n/a	n/a
2002	232	223	2	26	770	18	2,298	n/a	n/a
2003	268	262	6	86	620	106	3,452	n/a	n/a
2004	146	144	1	71	366	24	1,974	n/a	n/a
2005	88	84	1	12	305	116	165	n/a	n/a
2006	83	83	2	13	171	60	408	n/a	n/a
2007	72	46	n/a	42	179	24	296	n/a	n/a
2008	93	91	4	14	575	23	153	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Petersburg: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1,047	415	55,718
2004	1,187	482	95,712
2005	1,197	436	61,685
2006	1,082	426	53,682
2007	1,123	386	47,517
2008	985	394	46,600
2009	1,041	418	46,766
2010	961	291	48,357

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Petersburg: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	21	n/a
2001	n/a	n/a	n/a	n/a	n/a	16	n/a
2002	n/a	22	n/a	n/a	n/a	45	n/a
2003	n/a	2	n/a	n/a	n/a	10	n/a
2004	n/a	26	n/a	n/a	n/a	10	n/a
2005	n/a	63	n/a	n/a	n/a	30	n/a
2006	n/a	n/a	n/a	n/a	n/a	10	n/a
2007	n/a	3	n/a	n/a	n/a	9	n/a
2008	n/a	n/a	n/a	n/a	n/a	8	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	13	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Point Baker



People and Place

*Location*¹³⁵²

Located on the northern tip of Prince of Wales Island, Point Baker is 142 miles south of Juneau and 50 miles west of Wrangell. Point Baker is a Census Designated Place located in the Petersburg Recording District and the Prince of Wales-Hyder Census Area.

*Demographic Profile*¹³⁵³

In 2010, there were 15 inhabitants in Point Baker, making it the 333rd largest of 352 total Alaskan communities with populations recorded that year. Point Baker first appeared in U.S. Decennial Census records in 1930 with 39 inhabitants. The population peaked around 90 residents in 1980 and has been decreasingly steadily since that time. According to Alaska Department of Labor estimates, the population of permanent residents decreased by 68.6% between 2000 and 2009, with an average annual growth rate of -9.99%. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that Point Baker's population remains stable year round, and seasonal workers or transients are not present.

In 2010, a majority of Point Baker residents identified themselves as White (73.3%), and the remaining 27.7% identified with two or more races. In addition, 6.7% of residents identified themselves as Hispanic in 2010. Compared to 2000, residents identifying with two or more races made up 18.1% more of the population in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Point Baker increased from 1.8 persons per household in 1990 to 2.69 in 2000, and then decreased again to 1.88 by 2010. The number of occupied households decreased steadily over the same period, declining from 21 in 1990 to 13 in 2000, and then to 8 occupied households in 2010. Of the 18 total housing units surveyed for the 2010 U.S. Census, 38.9% were owner-occupied, 5.6% were rented, and 55.6% were vacant or used only seasonally. Between 1990 and 2010, no Point Baker residents lived in group quarters.

In 2010, Point Baker's population was slightly less gender balanced (53.3% male and 46.7% female) than the population of Alaska as a whole, which was 52% male and 48% female. That year, the median age of Point Baker residents was 55.5 years, much older than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, all 15 Point Baker residents (100% of Point Baker's population) were age 16 or older. Of these, one was under 18 years of age, 10 were between the ages of 18 and 64, and 4 were aged 65 or older, including one

¹³⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁵³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

individual over 85 years in age. The overall population structure of Point Baker in 2000 and 2010 is shown in Figure 2.

Table 1. Population in Point Baker from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	39	-
2000	35	-
2001	-	34
2002	-	35
2003	-	33
2004	-	24
2005	-	20
2006	-	16
2007	-	15
2008	-	15
2009	-	11
2010	15	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Point Baker: 2000-2010 (U.S. Census).

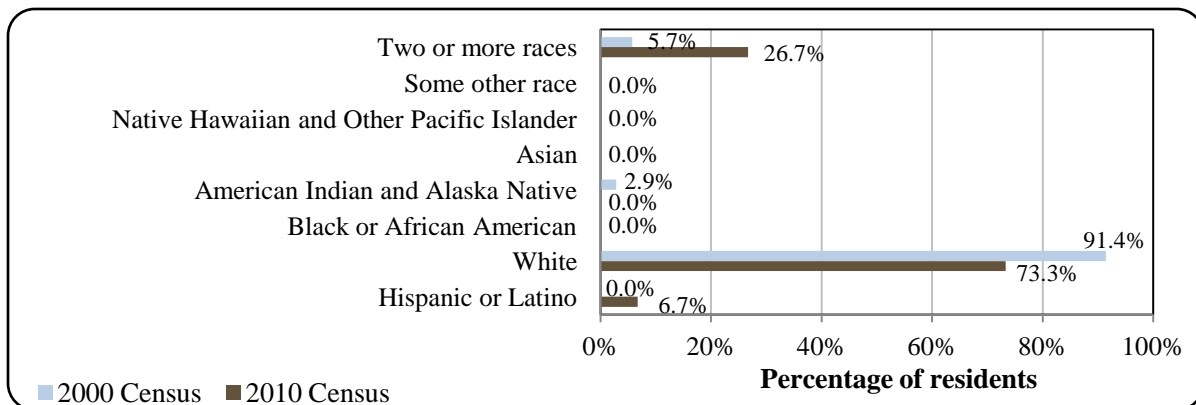
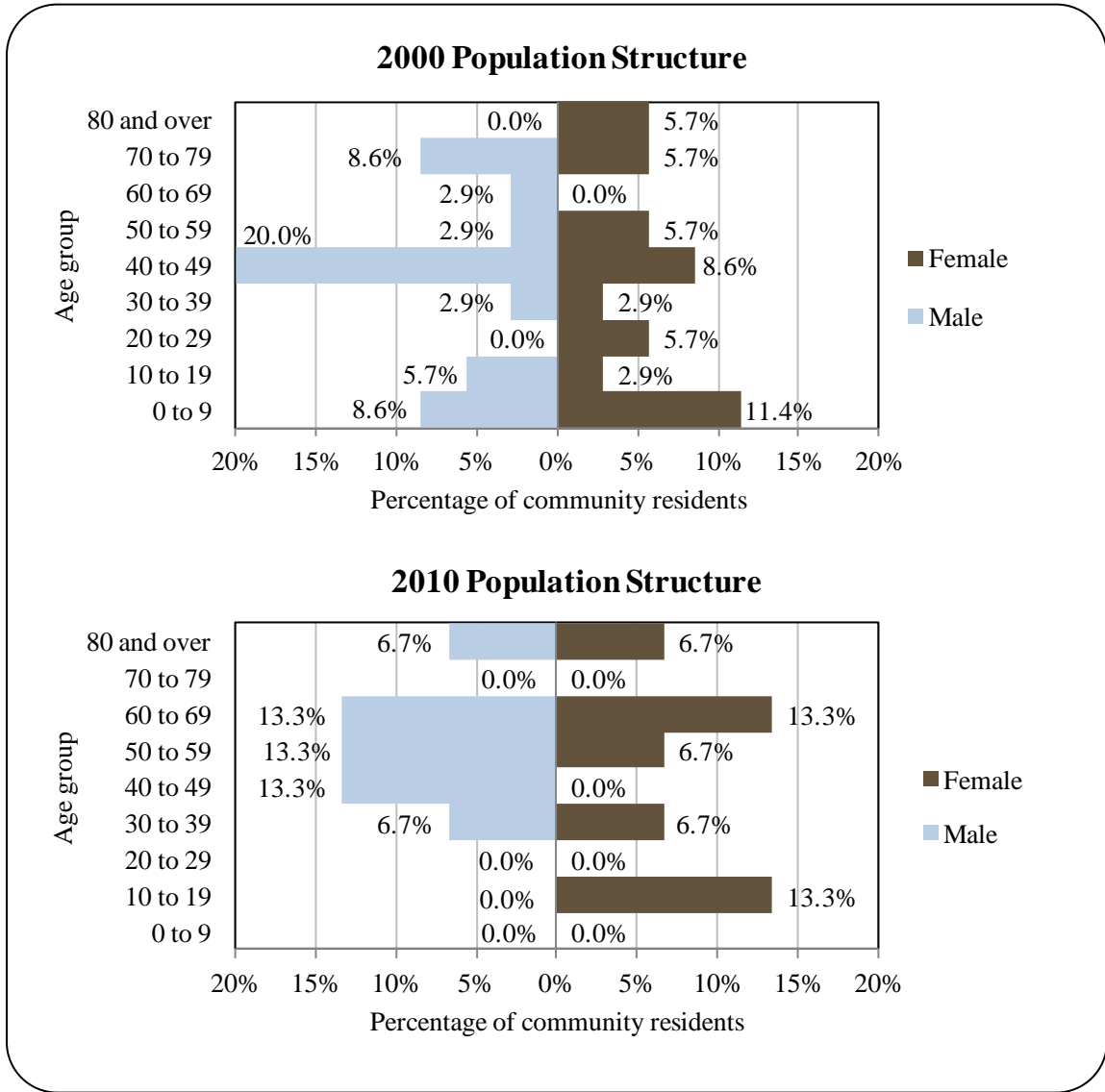


Figure 2. Population Age Structure in Point Baker Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹³⁵⁴ 100% of Point Baker residents aged 25 and over were estimated to hold a high school diploma in 2010. That year, no residents were estimated to hold higher degrees, compared to 8% of Alaskan residents overall that were estimated to hold Associate’s degrees, 17.4% estimated to hold Bachelor’s degrees, and 9.6% estimated to hold graduate or professional degrees. In addition, no residents were estimated to have attended some college without receiving a degree, compared to 28.3% of Alaskan residents overall.

¹³⁵⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

The Point Baker area was historically used by a group of Tlingit known as the Henya, and the area east of Point Baker was used by the Stikine Tlingit. At the time of European contact, Prince of Wales Island was a transition zone between the territories of Tlingit and Haida peoples.¹³⁵⁵ Point Baker was named in 1793 by Capt. George Vancouver, who named it after the Second Lieutenant on his ship, “The Discovery.” The first floating fish packer came to Point Baker in 1919, and fish buying continued until the 1930s, when the U.S. Forest Service opened the area for homesites. During the 1920s and 1930s, up to 100 tents lined the Point Baker harbor, occupied by salmon hand-trollers. The first store was built in 1941, and a post office opened in 1942. In 1955, Point Baker was withdrawn from the Tongass National Forest. A floating dock was built by the State in 1961, and was replaced by larger docks in 1968. The population of Point Baker has been in decline since the 1980s. Today, Point Baker remains a small fishing community. Local residents also engage in subsistence and recreational fishing.¹³⁵⁶

Natural Resources and Environment¹³⁵⁷

Prince of Wales Island is dominated by a cool, moist, maritime climate. Average summer temperatures range from 49 to 63 °F; winter temperatures average from 32 to 42 °F. Average annual precipitation is 120 inches, with 40 inches of snow.¹³⁵⁸ The landscape of northern Prince of Wales Island is characterized by low-elevation hills. Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily made up of western hemlock and Sitka spruce with large components of cedar. Large areas of muskeg are also present, along with alpine tundra at higher elevations. Some of the highest mountains in the area include the 2,457-foot El Capitan Peak and Mount Calder at 3,400 feet. Much of the area is underlain by marble and limestone, and an extensive karst cave system has developed on Prince of Wales Island.^{1359,1360}

Point Baker was withdrawn from the Tongass National Forest in 1955,¹³⁶¹ but a majority of the surrounding landscape is included in National Forest lands. Approximately 95% of Southeast Alaska is federal land, of which 80% is included in the National Forest. The National Forest is managed to produce resource values, products, and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.¹³⁶² Two roadless areas in the National

¹³⁵⁵ Langdon, Steven. 1979. “Comparative Tlingit and Haida Adaptation to the West Coast of the Prince of Wales Archipelago.” *Ethnology* 18:2 (101-119).

¹³⁵⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁵⁷ Ibid.

¹³⁵⁸ Ibid.

¹³⁵⁹ Nowacki, Gregory. 2001. *Ecological subregions of Southeast Alaska and neighboring areas of Canada*. U.S. Forest Service, Alaska Region. Technical Publication R10-TP-75.

¹³⁶⁰ Tongass National Forest website. (n.d.). *Roadless Area Maps & Descriptions*. Retrieved April 13, 2012 from <http://www.tongass-seis.net/roadless.html>.

¹³⁶¹ See footnote 1356.

¹³⁶² U.S. Forest Service. (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

Forest – El Capitan and Salmon Bay – are located in the northern portion of Prince of Wales Island. Both of these areas are heavily used by residents of Point Baker for subsistence harvest activities.¹³⁶³ The timber industry is also very active on Prince of Wales Island. Viking Lumber, a Craig-based company, is the largest private timber industry employer on the island.¹³⁶⁴

The Joe Mace Island Marine Park is located just west of Point Baker, off the west coast of Prince of Wales Island. State Marine Parks are intended to protect natural habitat, and do not restrict fishing activity.¹³⁶⁵ The Island is closed to trapping¹³⁶⁶ and mining activity.¹³⁶⁷

Mining has played a large role in the history of the Prince of Wales region. The first gold mine in Alaska was developed on Prince of Wales Island. The Island also supplied high quality marble for building construction¹³⁶⁸ between 1900 and 1941.¹³⁶⁹ Ownership of a calcium carbonate deposit on Prince of Wales known as the Admiral Calder quarry has been transferred several times in recent decades. In 2005, it was purchased from Sealaska by Tri-Valley Corporation, and in 2010, Tri-Valley sold it to Columbia River Carbonates.¹³⁷⁰ Several ‘rare-earth element’ deposits are also present in the northeast corner and along the southeast coast of Prince of Wales Island.¹³⁷¹

Natural hazards that have been identified as risks in the Prince of Wales Census Area include flooding, wildfire, earthquake, tsunami, avalanche, landslides, erosion, severe weather, and low risk of droughts.¹³⁷² According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Point Baker as of July 2012.¹³⁷³

Current Economy¹³⁷⁴

According to a survey conducted by the AFSC in 2011, community leaders indicated that the Point Baker economy relies on commercial fishing and, to a lesser degree, the sport hunting

¹³⁶³ Tongass National Forest website. (n.d.). *Roadless Area Maps & Descriptions*. Retrieved April 13, 2012 from <http://www.tongass-seis.net/roadless.html>.

¹³⁶⁴ Southeast Conference and Tlingit and Haida Central Council. (2009). *Southeast Alaska Comprehensive Economic Development Strategy: 2009 Update*. Retrieved April 12, 2012 from http://www.seawead.org/images_documents/documents/KCF/SE_conference-CEDS.pdf.

¹³⁶⁵ Alaska Dept. of Fish and Game Marine Protected Area Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Regional Information Report 5J02-08. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

¹³⁶⁶ Alaska Dept. of Fish and Game. (n.d.). *Joe Mace Island Marine Park*. Retrieved April 13, 2012 from https://secure.wildlife.alaska.gov/gis/index.cfm?GIS=SpecialMgmt.SpecialMgmtDetail&map=TR_joemaceisland.

¹³⁶⁷ Alaska Dept. of Natural Resources. 1998. *Prince of Wales Area Plan*. Retrieved April 13, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/wales/plan/pow_plan_complete.pdf.

¹³⁶⁸ See footnote 1364.

¹³⁶⁹ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

¹³⁷⁰ Tri-Valley Corp. December 21, 2010. U.S. Securities and Exchange Commission Form 8-K. Retrieved April 13, 2012 from <http://apps.shareholder.com/sec/viewerContent.aspx?companyid=ABEA-4UE364&docid=7625940>.

¹³⁷¹ See footnote 1369.

¹³⁷² State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

¹³⁷³ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹³⁷⁴ Unless otherwise noted, all monetary data are reported in nominal values.

and fishing industries.¹³⁷⁵ In 2010, 35 state commercial fishing permit holders were reported having Point Baker addresses, indicative of significant local participation in commercial fisheries, although some permit holders stating residence in Point Baker do not actually live there given that the 2010 population was estimated to be 15 individuals. Point Baker residents also participate in subsistence and recreational harvest of deer, salmon, halibut, shrimp, and crab.¹³⁷⁶ As of 2010, the Point Baker Trading Post was also an important source of local employment.¹³⁷⁷

Although the 2010 U.S. Decennial Census reported 15 residents age 16 or over in Point Baker, of which 10 were between the ages of 18 and 64 years, household surveys conducted for the 2006-2010 ACS collected limited data from local residents.¹³⁷⁸ The ACS estimated that 11 residents were aged 16 and over, of which none were estimated to be in the civilian labor force that year. Given this, no 2010 earnings estimates were calculated for Point Baker through the 2006-2010 ACS.¹³⁷⁹

In 2000, the U.S. Census reported a per capita income of \$12,580 in Point Baker, and a median household income of \$28,000. These numbers ranked Point Baker at 215th of 344 Alaskan communities with per capita income data that year, and 250th in median household income of 341 Alaskan communities with household income data. If inflation is taken into account by converting the 2000 U.S. Census figures to 2010 dollars,¹³⁸⁰ the real per capita income in Point Baker in the year 2000 was \$16,543, and the real median household income was \$36,820.

Given the lack of ACS estimates for 2010 earnings in Point Baker, no trend can be discerned in median household income. However, an alternative estimate of 2010 per capita income can be derived from economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). The ALARI database estimated that there were 26 residents age 16 and over in the civilian labor force in 2010. Of these, six residents were estimated to be employed that year.¹³⁸¹ If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Point Baker in 2010 is \$5,196.¹³⁸² This estimate is lower than the 2000 per capita income reported by the 2000 U.S. Census (\$12,580), providing some evidence that per capita income may have declined in the community between 2000 and 2010. However, given the different data sources used to generate the 2000 and 2010 statistics, caution should be used when considering this information.

Although limited data are available regarding 2010 income in Point Baker, it should be

¹³⁷⁵ See footnote 1356.

¹³⁷⁶ Ibid.

¹³⁷⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹³⁷⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹³⁷⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹³⁸⁰ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

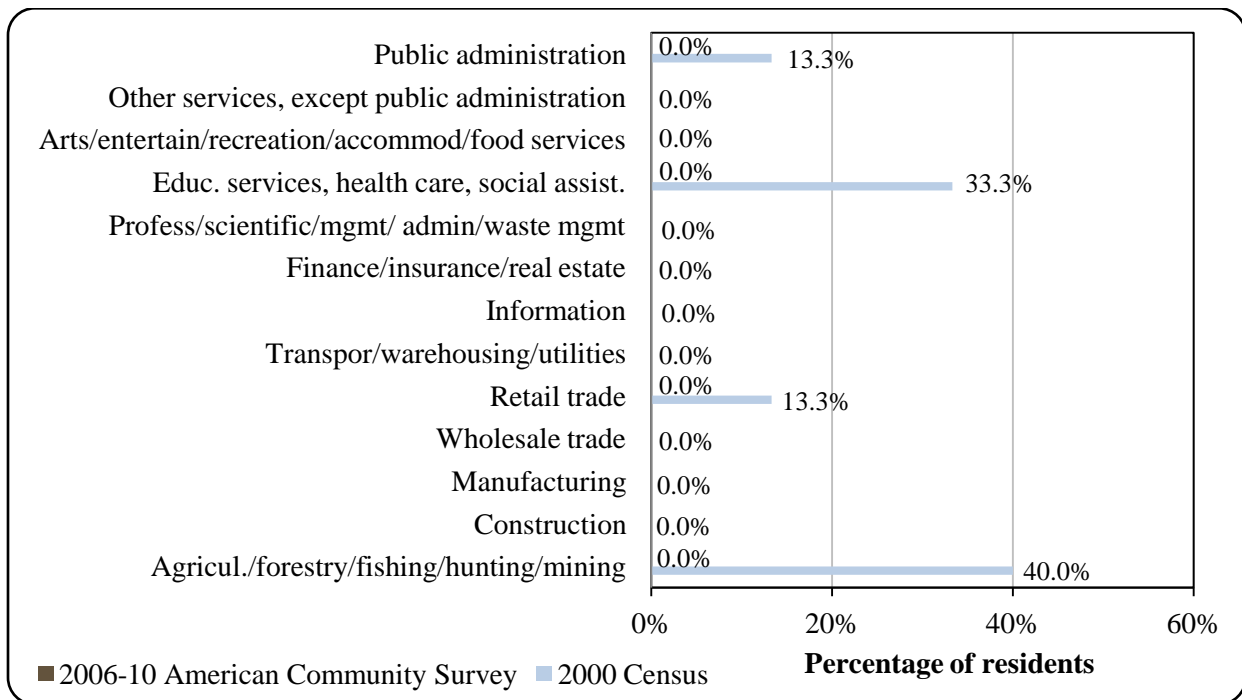
¹³⁸¹ See footnote 1377.

¹³⁸² See footnotes 1377 and 1379.

noted that the community met the Denali Commission’s 2011 criteria as “distressed,”¹³⁸³ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should also be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the potential value of subsistence within the local economy.

According to the 2000 Decennial Census, 40% of the employed labor force in Point Baker worked in agriculture, forestry, fisheries, hunting, and mining, 33.3% in education services, health care, accommodations, and food services, 13.3% in public administration, and 13.3% in retail trade. Figures 3 and 4 show the 2000 employment breakdown by industry and occupation, respectively. The percentage of the Point Baker living below the poverty line in the year 2000 was 5.6%. The 2006-2010 ACS estimate suggests that no Point Baker residents were living below the poverty line in 2010. However, the 2006-2010 ACS does not provide employment estimates for 2010, given the estimated civilian labor force of zero.¹³⁸⁴ An alternative estimate of 2010 employment is provided by economic data compiled in the ALARI database, which indicate that there were six employed residents in 2010, of which two (33.3%) were employed in trade, transportation, and utilities, two (33.3%) in education and health services, one (16.7%) in leisure and hospitality, and one (16.7%) in local government. Also based on the ALARI database, the unemployment rate in 2010 was estimated to be 11.5%, compared to a statewide unemployment rate estimate of 11.5%.¹³⁸⁵ As with income statistics, it should also be noted that both ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Point Baker (U.S. Census).

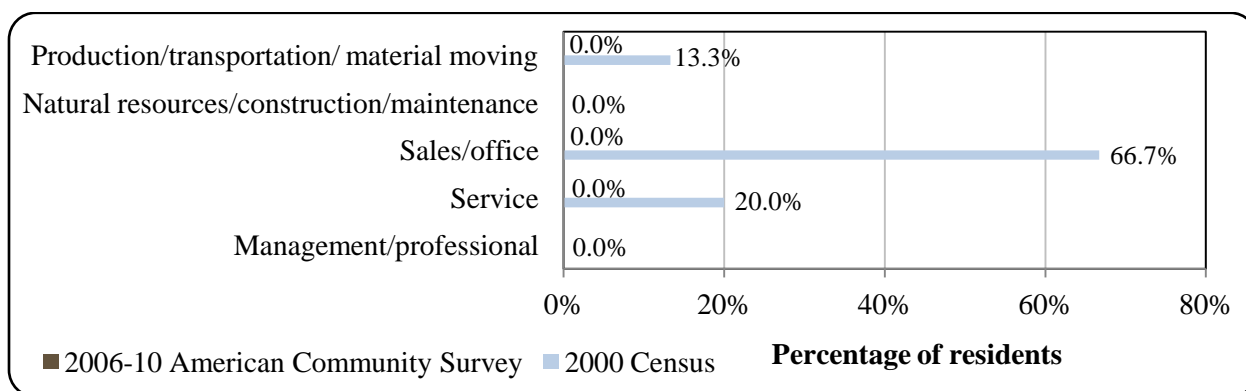


¹³⁸³ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹³⁸⁴ See footnotes 1378 and 1379.

¹³⁸⁵ See footnote 1377.

Figure 4. Local Employment by Occupation in 2000-2010, Point Baker (U.S. Census).



Governance

Point Baker is an unincorporated community, and is not located in an organized borough. Point Baker was not included under the Alaska Native Claims Settlement Act (ANCSA), and therefore is not federally recognized as a Native village.¹³⁸⁶ The community is represented by the Point Baker Community Council, a non-profit that provides basic community services, including emergency response, fire protection, and community hall maintenance.¹³⁸⁷ No taxes are collected in Point Baker, and no municipal revenue was reported between 2000 and 2010. Point Baker did receive State Revenue Sharing contributions of between \$3,000 and \$4,000 per year from 2000 to 2003. No information was reported regarding fisheries-related grants received by Point Baker between 2000 and 2010. Information about selected revenue sources is presented in Table 2.

The nearest offices of the Alaska Department of Fish and Game (ADF&G), the U.S. Forest Service, and the U.S. Bureau of Citizenship and Immigration Services are located in Ketchikan. An enforcement office of the National Marine Fisheries Service (NMFS) and a Park and Recreational ranger station of the Alaska Department of Natural Resources (DNR) are also located in Ketchikan. Juneau hosts the Alaska Regional Office of the NMFS, as well as the AFSC Auke Bay laboratories. Juneau also has the closest office of the Alaska Department of Commerce, Community, and Economic Development.

¹³⁸⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁸⁷ Alaska Dept. of Comm. and Rural Affairs. (2010). *Ruba Community Profile: Point Baker*. Retrieved April 12, 2012 from http://www.commerce.state.ak.us/dca/ruba/report/Ruba_public_report.cfm?rID=717&isRuba=1.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Point Baker from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Point Baker is accessible by float plane, helicopter, barge, and skiff. A state-owned seaplane base and heliport serve chartered flights from Ketchikan.¹³⁸⁸ Taquan Air offers scheduled flights between Ketchikan and Point Baker four times per week during the winter and three times per week during the summer. As of June 2012, the fare for a scheduled float plane flight between Point Baker and Ketchikan was \$378.¹³⁸⁹ As of early June, 2012, roundtrip airfare between Ketchikan and Anchorage was \$462.¹³⁹⁰ Point Baker also has a state-owned vessel float and boat harbor. Barges deliver cargo from Wrangell. There is no direct access from Point Baker to the Prince of Wales road system, airport, or ferry terminal.¹³⁹¹ The nearest road access point is located southwest at Labouchere Bay, and some Point Baker residents travel there by skiff. As of the late 1990s, a majority of residents in Point Baker were opposed to extension of the road system further north.¹³⁹²

¹³⁸⁸ See footnotes 1386 and 1387.

¹³⁸⁹ Flight information retrieved April 12, 2012 from <http://www.taquanair.com/>.

¹³⁹⁰ This price was calculated on November 21, 2011 using kayak.com.

¹³⁹¹ See footnote 1386.

¹³⁹² Alaska Dept. of Natural Resources. 1998. *Prince of Wales Area Plan*. Retrieved April 13, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/wales/plan/pow_plan_complete.pdf.

Facilities

Point Baker residents get water from rain catchment or area springs. A public water source is also available at a State of Alaska owned dock. No homes in Point Baker are plumbed. Individual residents in Point Baker are responsible for disposal of household wastewater.^{1393,1394} Outhouses are in use,¹³⁹⁵ and a community septic tank is also available. No landfill is present in Point Baker. Occasionally, Point Baker residents voluntarily charter a craft to haul solid waste to the Wrangell landfill. Electricity in Point Baker comes primarily from use of individual gasoline generators, supplemented by solar panels, storage batteries and inverters, as well as small wind-power units. The Point Baker Trading Post also operates diesel generators year-round. Police services are provided by state troopers stationed in Petersburg. Fire and rescue services are provided by Point Baker Emergency Medical Services (EMS) and the Prince of Wales Island Area EMS.¹³⁹⁶

Additional community facilities and services include a community hall, which houses the local fire boat and fire-fighting equipment, kitchen supplies, medical supply lockers, a public meeting room, small library, and the local post office.¹³⁹⁷ According to a survey conducted by the AFSC in 2011, community leaders indicated that improvements to the fire department, post office, and alternative energy options are on-going. Currently, local and long-distance telephone service is available in Point Baker, and television is available via satellite. No cable or internet providers are present,¹³⁹⁸ although according to the 2011 AFSC survey, community leaders indicated that improvements to both telephone and broadband internet service are in progress.

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that 690 feet of dock space is available in Point Baker for transient vessel moorage, and no space is available for permanent moorage. They indicated that vessels of up to 72 feet in length can use moorage in Point Baker. In addition, they noted availability of a tidal grid for small vessels (less than 60 tons). Community leaders also noted several fisheries-related services in Point Baker, including sales of bait and boat fuel. They also reported that two sport fish lodges have been established in Point Baker.

Medical Services

No medical facilities are present in Point Baker. Emergency services have coastal, floatplane and helicopter access. Emergency service is provided by volunteers, and alternative health care is provided by the Point Baker EMS and Prince of Wales Island Area EMS. The nearest hospitals are located in Wrangell and Petersburg, and health clinics are also located in

¹³⁹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁹⁴ Alaska Dept. of Comm. and Rural Affairs. (2010). *Ruba Community Profile: Point Baker*. Retrieved April 12, 2012 from http://www.commerce.state.ak.us/dca/ruba/report/Ruba_public_report.cfm?rID=717&isRuba=1.

¹³⁹⁵ Southeast Conference and Tlingit and Haida Central Council. (2009). *Southeast Alaska Comprehensive Economic Development Strategy: 2009 Update*. Retrieved April 12, 2012 from http://www.seawead.org/images_documents/documents/KCF/SE_conference-CEDS.pdf.

¹³⁹⁶ See footnotes 1393 and 1394.

¹³⁹⁷ See footnote 1394.

¹³⁹⁸ See footnote 1393.

Klawock and Craig, to the south.¹³⁹⁹

Educational Opportunities

No school facility is available in Point Baker. Local children are home-schooled using correspondence courses.¹⁴⁰⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Indigenous people have used the Point Baker area for subsistence harvest for thousands of years.¹⁴⁰¹ Commercial harvest of salmon began in Southeast Alaska in the late 1870s.¹⁴⁰² In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.¹⁴⁰³ The first floating fish packer came to Point Baker to buy fish in 1919, and trade continued in this fashion until the 1930s, when the U.S. Forest Service opened the area for home sites. During the 1920s and 1930s, up to 100 tents lined the harbor, occupied by salmon hand-trollers.¹⁴⁰⁴ Today, Point Baker residents hold state and federal permits in fisheries for salmon, halibut, groundfish, and Dungeness crab. A sea cucumber dive fishery has also existed in the area (see *Commercial Fishing* section below).

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (sockeye, coho, and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty, which was originally negotiated in 1985, and was renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.¹⁴⁰⁵

State-managed sablefish fisheries currently take place in Southeast inside waters in Chatham and Clarence Straits and in Dixon Entrance. Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Point Baker is located in Pacific Halibut Fishery Regulatory Area 2C. Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species that take place in outside waters. Halibut and Pacific cod fisheries utilize longline gear,

¹³⁹⁹ Ibid.

¹⁴⁰⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁴⁰¹ Langdon, Steven. 1979. "Comparative Tlingit and Haida Adaptation to the West Coast of the Prince of Wales Archipelago." *Ethnology* 18:2 (101-119).

¹⁴⁰² Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁴⁰³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁴⁰⁴ See footnote 1393.

¹⁴⁰⁵ See footnote 1402.

while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999. Crab fisheries in Southeast Alaska target red, golden, and blue king crab, Tanner crab, and Dungeness crab. Dive fisheries for sea cucumber and sea urchin began to grow in Southeast Alaska in recent decades.¹⁴⁰⁶

Point Baker participates in the Community Quota Entity (CQE) program, and has established a CQE non-profit called Point Baker Community Fisheries, Inc. The CQE non-profit was established at the recommendation of the Point Baker Community Association. As of Fall 2013, the Point Baker Community Fisheries, Inc. had not yet purchased any commercial halibut Individual Fishing Quotas (IFQ) or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the non-profit had acquired four halibut charter permits for lease to community members.¹⁴⁰⁷ Point Baker is not eligible to participate in the Community Development Quota (CDQ) program. Point Baker is located in Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is “Southeast Outside.”

According to a survey conducted by the AFSC in 2011, community leaders indicated that the community of Point Baker does not actively participate in fisheries management processes in Alaska. They also outlined several challenges that face the Point Baker fishing economy, including competition from ‘outside’ catcher boats, the high cost of fuel and insurance, and market instability. Community leaders also reported that Point Baker has been positively affected by establishment of ‘open seasons’ in the halibut fishery and effective salmon management policies. On the other hand, the community has been negatively affected by increased regulation on sport charter harvest of halibut and rockfish, and continuous reduction of poundage allocation associated with IFQ quota shares.

Processing Plants

ADF&G’s 2010 Intent to Operate list does not list a registered processing plant in Point Baker. However, according to the Intent to Operate list, processing facilities are available in cities in the surrounding region, including Craig, Klawock, Ketchikan, Wrangell, and Petersburg.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Point Baker (Table 3).

Commercial Fishing

In 2010, Point Baker residents participated in commercial fisheries as vessel owners, crew license holders, and permit and quota share account holders in state and federal fisheries. According to a survey conducted by the AFSC in 2011, community leaders indicated that some

¹⁴⁰⁶ See footnote 1403.

¹⁴⁰⁷ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

of the most important local fisheries are those for salmon and halibut. They reported that the salmon fishery runs from June through September, and commercial halibut fishing typically takes place from April through October.

In 2010, 21 fishing vessels were registered to addresses in Point Baker, and 21 vessels were homeported there. These numbers represent declines from a 43 vessels registered in Point Baker and 28 vessels homeported there in 2001. According to the 2011 AFSC survey, fishing vessels based out of Point Baker are primarily under 35 feet or between 35 and 60 feet in length, and the most common gear types used are longline, gillnet and troll. In 2010, 8 residents held active crew licenses, a decrease from 18 held in the year 2000. Information about the commercial fishing sector in Point Baker is presented in Table 5.

In 2010, 35 individuals held a total of 46 Commercial Fisheries Entry Commission (CFEC) permits registered to addresses in Point Baker, indicative of significant local participation in commercial fisheries, although some permit holders stating residence in Point Baker may not actually live there given that the 2010 population reported by the 2010 U.S. Census was 15 individuals. Of the 46 permits held, 39 were salmon permits, of which 13 were actively fished that year. A majority of these salmon permits were held in the statewide hand troll fishery, along with several in the Southeastern drift gillnet and statewide power gurdy troll fisheries. Five halibut CFEC permits were held in 2010 in the statewide longline fishery using vessels under 60 feet in length, of which four were actively fished that year. In addition, one Dungeness crab ring net permit and one groundfish (miscellaneous saltwater finfish statewide handtroll) permit were held by Point Baker residents in 2010. Neither of these permits was actively fished that year.

The number of salmon CFEC permits held in Point Baker declined by approximately 20% between 2000 and 2010, the number of halibut permits decreased by approximately 45%, and groundfish CFEC permits decreased from two or three held in 2000-2005 to one held from 2006 to 2010. Crab CFEC permit numbers stayed stable at one permit held per year between 2000 and 2010, although this permit was not actively fished in any year during the period. The only year during the 2000-2010 period in which a groundfish CFEC permit was actively fished was 2004. It is also important to note that one ‘other shellfish’ CFEC permit for the Southeast sea cucumber dive fishery was held by a Point Baker resident in 2004 only. The sea cucumber permit was actively fished that year.

In addition, Point Baker residents held two License Limitation Program (LLP) permits in federal groundfish fisheries in 2010. One of these two permits was actively fished in 2010. No LLPs were held in federal crab fisheries that year. In addition, no Federal Fisheries Permits (FFP) were held by Point Baker residents in 2010, although it is important to note that one or two FFP permits were held each year from 2000 to 2008, but were not actively fished in any of these years. Information about CFEC, FFP and LLP permits is presented in Table 4.

In 2010, 8 Point Baker residents held quota share accounts in the federal halibut catch share fishery, a decrease from 14 halibut account holders in 2000. The number of halibut quota shares held also decreased over the period, from a high of 215,520 in 2001 to 147,192 shares held in 2010. The annual halibut individual fishing quota (IFQ) allotment initially increased to 30% higher than 2000 levels by 2005, and then fell to approximately 50% of 2000 levels by 2010. Information about federal halibut catch share participation is presented in Table 6. One Point Baker resident also held a federal sablefish quota share account from 2001 to 2010. The number of sablefish quota shares held stayed constant at 364 during this period. The annual sablefish IFQ allotment initially increased to 12% higher than the 2001 level in 2004, and by

2010 the allotment was approximately 23% lower than in 2001. Information about federal sablefish catch share participation is presented in Table 7. Between 2000 and 2010, no Point Baker residents held quota share accounts or quota shares in federal crab catch share fisheries (Table 8).

There were no fish buyers or shore-side processors in Point Baker between 2000 and 2010. As such, no vessels landed catch in the community (Table 5), resulting in zero landed pounds and ex-vessel revenue in Point Baker over this period (Table 9). Information was available, however, regarding landings and ex-vessel revenue earned by Point Baker vessel owners making landings elsewhere between 2000 and 2010. Salmon landings were reported for all years during the period. On average, Point Baker vessel owners landed 540,330 net pounds of salmon per year, valued on average at \$388,777 in ex-vessel revenue. Halibut landings and revenue can be reported between 2000 and 2005, after which they are considered confidential due to the small number of participants. For the years in which information was reported, halibut landings by Point Baker vessel owners averaged 15,500 net pounds annually, with an average annual ex-vessel revenue of \$40,769, and a generally declining trend over the period. ‘Other groundfish’ landings were reported for 2000 only, when 89 net pounds were landed, valued at \$20 in ex-vessel revenue. Information about ‘other groundfish’ landings between 2001 and 2010, and landings in other fisheries between 2000 and 2010, are considered confidential due to low participant numbers. Landings and ex-vessel revenue information is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Point Baker: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Point Baker: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	3	3	3	3	3	3	3	2	2	2	2
	Active permits	1	2	2	2	0	0	1	1	0	1	1
	% of permits fished	33%	66%	66%	66%	0%	0%	33%	50%	0%	50%	50%
	Total permit holders	3	3	3	3	3	3	3	2	2	2	2
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	2	2	2	2	1	1	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-
	Total permit holders	1	1	1	1	1	1	1	1	1	0	0
Crab (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Other shellfish (CFEC) ²	Total permits	0	0	0	0	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	1	0	0	0	0	0	0
	% of permits fished	-	-	-	-	100%	-	-	-	-	-	-
	Total permit holders	0	0	0	0	1	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	11	13	12	9	6	5	5	5	5	5	5
	Fished permits	9	7	9	7	6	5	5	5	4	4	4
	% of permits fished	82%	54%	75%	78%	100%	100%	100%	100%	80%	80%	80%
	Total permit holders	9	10	10	8	6	5	5	5	5	5	5
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Point Baker: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	2	3	3	2	3	3	1	1	1	1	1
	Fished permits	0	0	0	0	1	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	3	3	2	3	3	1	1	1	1	1
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	49	51	51	48	45	45	45	42	41	40	39
	Fished permits	24	24	24	22	18	20	17	18	18	17	13
	% of permits fished	49%	47%	47%	46%	40%	44%	38%	43%	44%	43%	33%
	Total permit holders	41	43	43	40	38	37	37	36	35	35	34
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>63</i>	<i>68</i>	<i>67</i>	<i>60</i>	<i>56</i>	<i>54</i>	<i>52</i>	<i>49</i>	<i>48</i>	<i>47</i>	<i>46</i>
	<i>Fished permits</i>	<i>33</i>	<i>31</i>	<i>33</i>	<i>29</i>	<i>26</i>	<i>25</i>	<i>22</i>	<i>23</i>	<i>22</i>	<i>21</i>	<i>17</i>
	<i>% of permits fished</i>	<i>52%</i>	<i>46%</i>	<i>49%</i>	<i>48%</i>	<i>46%</i>	<i>46%</i>	<i>42%</i>	<i>47%</i>	<i>46%</i>	<i>45%</i>	<i>37%</i>
	<i>Permit holders</i>	<i>42</i>	<i>45</i>	<i>45</i>	<i>42</i>	<i>41</i>	<i>40</i>	<i>38</i>	<i>37</i>	<i>36</i>	<i>36</i>	<i>35</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Point Baker: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Point Baker ²	Total Net Pounds Landed In Point Baker ^{2,5}	Total Ex-Vessel Value Of Landings In Point Baker ^{2,5}
2000	18	0	0	36	27	0	0	\$0
2001	17	0	0	43	28	0	0	\$0
2002	14	0	0	37	23	0	0	\$0
2003	22	0	0	38	27	0	0	\$0
2004	19	0	0	34	26	0	0	\$0
2005	11	0	0	18	21	0	0	\$0
2006	13	0	0	19	21	0	0	\$0
2007	9	0	0	20	22	0	0	\$0
2008	9	0	0	19	22	0	0	\$0
2009	6	0	0	21	22	0	0	\$0
2010	8	0	0	21	21	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Point Baker: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	14	208,914	29,466
2001	14	215,520	31,731
2002	13	207,121	29,522
2003	12	173,240	24,692
2004	12	165,691	29,211
2005	11	165,691	30,408
2006	11	168,009	29,989
2007	10	149,938	21,426
2008	9	149,938	15,635
2009	9	149,938	12,639
2010	8	147,192	10,875

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Point Baker: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	1	364	40
2002	1	364	39
2003	1	364	43
2004	1	364	45
2005	1	364	43
2006	1	364	42
2007	1	364	40
2008	1	364	39
2009	1	364	33
2010	1	364	31

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Point Baker: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Point Baker: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Point Baker Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	25,112	20,180	13,578	10,873	10,968	12,291	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	89	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	573,891	608,207	591,614	614,522	485,195	570,888	630,809	529,590	452,809	484,777	400,999
<i>Total²</i>	<i>599,092</i>	<i>628,387</i>	<i>605,192</i>	<i>625,395</i>	<i>496,163</i>	<i>583,179</i>	<i>630,809</i>	<i>529,590</i>	<i>452,809</i>	<i>484,777</i>	<i>400,999</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$65,010	\$43,244	\$33,795	\$31,924	\$32,486	\$38,156	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$20	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	\$276,985	\$367,243	\$319,820	\$320,079	\$378,920	\$390,467	\$468,582	\$385,998	\$543,057	\$391,800	\$433,598
<i>Total²</i>	<i>\$342,014</i>	<i>\$410,487</i>	<i>\$353,615</i>	<i>\$352,003</i>	<i>\$411,406</i>	<i>\$428,623</i>	<i>\$468,582</i>	<i>\$385,998</i>	<i>\$543,057</i>	<i>\$391,800</i>	<i>\$433,598</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, several active sport fish guide businesses and licensed sport fish guides were present in Point Baker. In 2010, one active sport fish guide business was registered there, and two licensed sport fish guides resided in the community. The number of sportfishing licenses purchased by Point Baker residents (irrespective of point of sale) ranged from 18 to 32 between 2000 and 2010, and the number of licenses sold in Point Baker varied from 22 to 73 over the same period. The fact that more licenses were purchased in the community than were purchased by residents of Point Baker indicates that sportfishing draws visitors to the community.

According to a survey conducted by the AFSC in 2011, community leaders indicated that several sportfishing lodges are present in Point Baker. They also noted that sportfishing typically takes place in Point Baker on charter boats, as well as private boats owned by either local or non-resident sport fishermen. They also reported that the most commonly targeted sport fish include Chinook and coho salmon, halibut, and rockfish. The Statewide Harvest Survey,¹⁴⁰⁸ conducted by ADF&G between 2000 and 2010, noted these same species targeted by sport fishermen in Point Baker, along with pink salmon, Dolly Varden, lingcod, Pacific cod, Dungeness crab, hardshell clams, and shrimp.

Kept/released statistics from charter logbook data reported by ADF&G¹⁴⁰⁹ show that rockfish, Pacific halibut, and coho salmon were the most numerous charter catches between 2000 and 2010. For those years in which data were reported between 2000 and 2010, the number of pelagic rockfish kept per year averaged 794, along with an average of 156 yellow rockfish and 275 ‘other rockfish’ (1,225 total rockfish per year), the number of halibut kept averaged 624 per year, pink salmon kept averaged 510, and the number of coho salmon kept averaged 447. Although only 39 Chinook salmon on average were kept per year, this species was noted by community leaders in the 2011 AFSC survey as one of the primary targets of sportfishing activity. Other species kept during sport charters out of Point Baker between 2000 and 2010 included lingcod, chum salmon, and sockeye salmon. A shark was also kept in one year, but a majority of sharks reported caught were released.

Point Baker is located within Alaska Sport Fishing Survey Area B – Prince of Wales. Looking at this regional scale between 2000 and 2010, there was significantly greater saltwater sportfishing activity than freshwater, although both were important. In both cases, non-Alaska resident anglers fished a greater number of days than Alaska resident anglers. In saltwater, non-Alaska resident anglers fished an average of 41,463 days per year, while Alaska resident anglers fished an average of 14,543 days. In freshwater, non-Alaska resident anglers averaged 10,237 days per year, and Alaska resident anglers averaged 6,541 days. This information about the sportfishing sector in Point Baker is presented in Table 11.

¹⁴⁰⁸ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁴⁰⁹ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Point Baker: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Point Baker ²
2000	2	4	32	22
2001	1	4	36	46
2002	1	3	37	44
2003	1	3	40	50
2004	1	3	23	50
2005	2	3	35	57
2006	3	4	22	62
2007	1	3	24	73
2008	0	1	20	65
2009	2	2	27	25
2010	1	2	18	38

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	33,043	16,031	9,024	10,630
2001	38,248	14,090	7,299	5,922
2002	36,736	12,590	9,957	8,981
2003	37,341	16,346	10,627	11,506
2004	40,803	16,770	11,518	3,969
2005	52,135	16,333	10,100	3,527
2006	46,207	11,828	11,073	5,161
2007	49,280	13,327	11,132	6,463
2008	46,717	17,930	11,302	7,185
2009	38,164	10,829	9,918	4,124
2010	37,416	13,896	10,660	4,478

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Point Baker residents supplement their incomes and diet with subsistence resources.¹⁴¹⁰ According to a survey conducted by the AFSC in 2011, salmon and halibut are the primary species utilized for subsistence purposes in Point Baker. No information was reported by ADF&G regarding per capita subsistence or the percentage of Point Baker households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, information was reported during the 2000-2010 period regarding annual subsistence harvests of salmon and halibut. Between 2000 and 2008, the number of subsistence salmon permits issued to Point Baker households varied from one to six. Sockeye salmon were harvested most consistently and in the highest numbers during these years, with an average of 65 harvested per year. Salmon subsistence information is presented in Table 13. From 2003 to 2010, the number of Subsistence Halibut Registration Certificates (SHARC) issued to Point Baker residents varied from 20 to 29. In 2001, when 29 SHARC cards were held and 20 were returned, Point Baker residents harvested 5,231 pounds of halibut for subsistence purposes. In 2010, 1,893 pounds of halibut were harvested on 11 returned SHARC cards. Information about halibut subsistence in Point Baker is presented in Table 14.

No information was reported by management agencies regarding subsistence harvest of marine invertebrates, non-salmon fish (not including halibut) (Table 13), or marine mammals (Table 15) by residents of Point Baker between 2000 and 2010.

Table 12. Subsistence Participation by Household and Species, Point Baker: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁴¹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Point Baker: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	6	6	4	50	14	76	304	n/a	n/a
2001	4	4	n/a	n/a	n/a	n/a	14	n/a	n/a
2002	2	2	n/a	32	40	12	54	n/a	n/a
2003	4	2	2	32	16	80	50	n/a	n/a
2004	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	1	1	n/a	12	7	29	21	n/a	n/a
2006	1	1	n/a	22	1	3	24	n/a	n/a
2007	3	3	n/a	9	1	15	25	n/a	n/a
2008	2	2	n/a	7	4	2	24	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Point Baker: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	27	18	2,775
2004	29	20	5,231
2005	28	17	1,986
2006	27	22	3,399
2007	26	18	2,190
2008	22	17	1,908
2009	22	18	1,597
2010	20	11	1,893

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Point Baker: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Port Alexander



People and Place

*Location*¹⁴¹¹

Port Alexander is located on the south end of Baranof Island, 65 miles south of Sitka. It provides a safe harbor during the frequent gales and storms of Chatham Strait, and offers an ice-free port in winter. As of the 2010 Decennial Census, Port Alexander was located in the Petersburg Census Area. However, a majority of the Petersburg Census Area was included in the formation of the new City and Borough of Petersburg in January, 2013. Port Alexander was not included within the area of the new Borough, and as of late 2013, Census Areas were still being redrawn. Port Alexander is located in the Petersburg Recording District. The City boundaries encompass 3.8 square miles of land and 11.3 square miles of water.

*Demographic Profile*¹⁴¹²

In 2010, there were 52 inhabitants in Port Alexander, making it the 293rd largest of 352 total Alaskan communities with populations recorded that year. Port Alexander first appeared in U.S. Decennial Census records in 1930 with 107 inhabitants. The population declined to 18 by 1960, then peaked again in 1990 with 119 residents. Between 1990 and 2010, the population decreased by 56.3%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 24.7%, with an average annual growth rate of -0.47%.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that approximately 10 seasonal workers or transients are also present in Port Alexander. They reported that Port Alexander's population peaks between May and August each year, and population fluctuations are somewhat driven by employment in fisheries sectors.

In 2010, a majority of Port Alexander residents identified themselves as White (90.4%), while 3.8% identified as American Indian or Alaska Native, 3.5% identified as Asian, and 1.9% identified with two or more races. In addition, 1.9% of residents identified themselves as Hispanic in 2010. Compared to 2000, the percentage of the population that identified as White increased by 6.4%, and the percentage identifying with two or more races declined by 7.2%. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Port Alexander decreased slightly over time, from 3 persons per household in 1990 to 2.38 in 2000, and 2.36 in 2010. The number of occupied

¹⁴¹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴¹² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

households also decreased over this period, from 39 in 1990 to 34 in 2000, and 22 occupied households in 2010. Of the 64 total housing units surveyed for the 2010 U.S. Census, 20.3% were owner-occupied, 14.1% were rented, and 65.6% were vacant or used only seasonally. Between 1990 and 2010, no Port Alexander residents lived in group quarters.

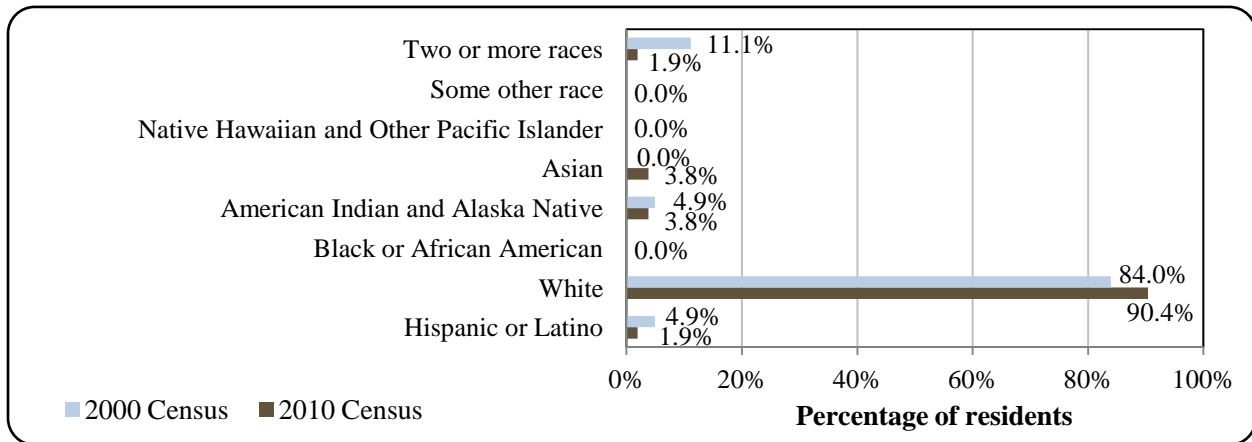
Table 1. Population in Port from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	119	-
2000	81	-
2001	-	84
2002	-	72
2003	-	70
2004	-	67
2005	-	75
2006	-	64
2007	-	59
2008	-	51
2009	-	61
2010	52	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

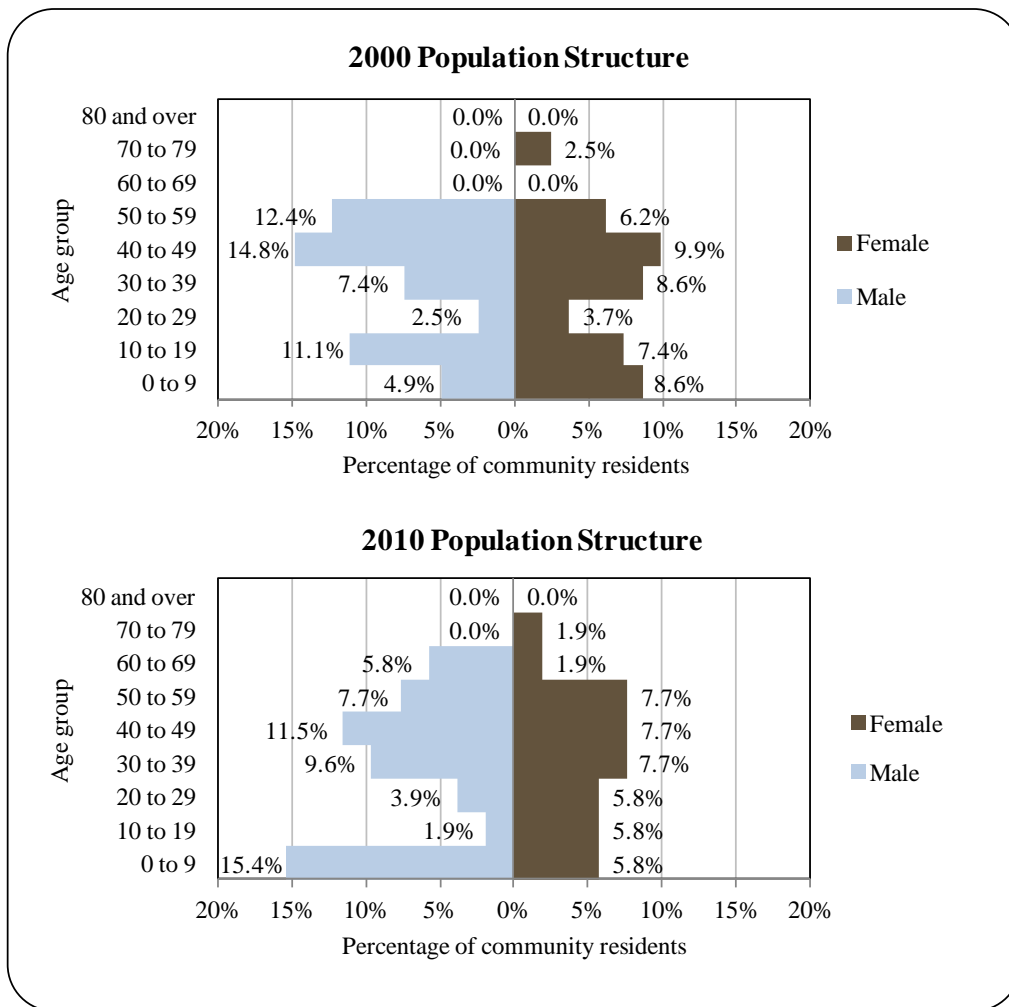
Figure 1. Racial and Ethnic Composition, Port Alexander: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Port Alexander’s population (55.8% male and 44.2% female) was less gender balanced than the population of Alaska as a whole, which was 52% male and 48% female. The median age of Port Alexander residents was 35 years, similar to the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 9.6% of Port Alexander’s population was age 60 or older. The overall population structure of Port Alexander in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁴¹³ 100% of Port Alexander residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 52.9% of the population was estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 32.4% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 0% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

Figure 2. Population Age Structure in Port Alexander Based on the 2000 and 2010 U.S. Decennial Census.



¹⁴¹³ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Port Alexander is located in traditional Tlingit territory, at the boundary between areas controlled by the Kake (Kéex') and Sitka (Sheet'ká) Kwaans.^{1414,1415} Kéex' means, "the beginning of dawn," and Sheet'ká means, "the people on the outside of Baranof Island."¹⁴¹⁶ In 1795, Captain George Vancouver discovered a deserted village site in the cove where Port Alexander is currently located. The site was named in 1849 by Captain M.D. Tebenkov, Governor of the Russian American colonies.¹⁴¹⁷

In 1913, salmon trollers began using the rich fishing grounds of the South Chatham Strait area as a seasonal base. Two floating processors arrived soon after. By 1916, there was a fishing supply store, a shore station owned by Northland Trading and Packing Company, and a bakery at Port Alexander. Families of fishermen began coming to the community during the summers, and many of the first arrivals lived in tents. Karl Hansen, a Norwegian immigrant, operated a fish-buying station, the Pacific Mild Cure Company. He also sold supplies and fuel and installed a wireless station. During the 1920s and 1930s, a year-round community had evolved around the prosperous fishing fleet, and houses, stores, restaurants, a post office, and a school were constructed. A soda fountain, butcher shop, dairy, dance hall, and hotel were also built. During the summer, over 1,000 fishing boats would anchor in the protected harbor.^{1418,1419}

Beginning in 1938, fish stocks declined dramatically and processing became uneconomical. The outbreak of World War II essentially collapsed the town's economy; a bankrupted Karl Hansen left Port Alexander in the late 1940s, after 20 prosperous years and 10 years of struggle. By 1950, 22 residents lived in the town year-round. In the 1970s, state land disposal sales and upswings in salmon stocks enabled new families to build and settle in the community. The city incorporated in 1974 and seceded from the City and Borough of Sitka during that year. Today, Port Alexander remains a fishing community. The sale of alcohol is prohibited, although importation and possession are allowed.¹⁴²⁰

Natural Resources and Environment

Port Alexander is in a maritime climate zone, marked by cool summers and mild winters. Summer temperatures range from 41 to 55 °F; winter temperatures from 32 to 45 °F. Record temperatures range from 4 to 80 °F. The average total precipitation is 172 inches per year, with 85 inches of snow.¹⁴²¹ The topography of the southern end of Baranof Island is steeply mountainous with high ridgelines descending into fjord arms.¹⁴²² The peaks of Baranof Island

¹⁴¹⁴ Walter R. and Theodore H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and Use*, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.

¹⁴¹⁵ Kake and Sitka are English versions of the Tlingit names, Keex' and Sheet'ká. A 'kwaan' is a geographically defined relationship between smaller clan groups.

¹⁴¹⁶ Sealaska Heritage Institute. (2009). *Curriculum Unit 5: Southeast Alaska Communities*. Retrieved March 30, 2012 from http://www.sealaskaheritage.org/programs/language_and_culture_curriculum.htm.

¹⁴¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴¹⁸ Ibid.

¹⁴¹⁹ City of Port Alexander. (2008). *Port Alexander Comprehensive Plan, Revised*. Retrieved April 18, 2012 from <http://www.commerce.state.ak.us/dca/plans/PortAlexander-CP-2008.pdf>.

¹⁴²⁰ See footnote 1417.

¹⁴²¹ Ibid.

¹⁴²² See footnote 1419.

have permanent snowfields and active glaciers. A prominent peak, visible from the east, is Mt. Ada, which rises to 4,528 feet above sea level approximately 30 miles north of Port Alexander.¹⁴²³

The City of Port Alexander is adjacent to Tongass National Forest lands. At 16.8 million acres, the Tongass is the largest National Forest in the U.S. Approximately 95% of Southeast Alaska is federal land, of which 80% is National Forest. The Tongass includes almost 11,000 miles of meandering island and mainland shorelines. It is managed to produce resource values, products and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping, and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.¹⁴²⁴ Given the steep terrain, there are no commercially harvestable stands of timber in the vicinity of Port Alexander. The portion of National Forest located on the southern end of Baranof Island has been designated as LUD II (land-use-designation II), a classification that prohibits logging, road-building and development of recreational facilities, but allows improvements such as hatcheries. Given the steep terrain in the area, there are no commercially harvestable stands of timber in the vicinity of Port Alexander.¹⁴²⁵

Beginning approximately 20 miles north of Port Alexander, the South Baranof Wilderness Area covers a total of 319,568 acres of the southern half of Baranof Island. Wildlife found in the Wilderness Area and throughout the Island includes brown bears, Sitka black-tailed deer, small furbearers, and a diversity of birds, including eagles and ravens. The waters surrounding Baranof host seals, sea lions, humpback, gray, and orca whales, and a large population of sea otters.¹⁴²⁶ Immediately across Chatham Strait from Port Alexander lie two additional wilderness areas, Kuiu Wilderness Area (60,518 acres) and Tebenkof Bay Wilderness Area adjacent to the north (66,182 acres).¹⁴²⁷

Natural hazards in Port Alexander include risk of severe weather, storm surge, flooding, shoreline erosion, sea level rise, subsidence, earthquake and tsunami, and avalanche and landslides. Isostatic rebound is taking place throughout Southeast Alaska due to recent retreat of glaciers. This can result in acceleration of erosion caused by rivers and streams, and may also cause streams to dry up if they rise above the water table. In addition, isostatic rebound may outweigh the effects of sea level rise in this area.¹⁴²⁸

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Port Alexander as of July 2012.¹⁴²⁹

¹⁴²³ Wilderness.net. (n.d.). *South Baranof Wilderness*. Retrieved April 19, 2012 from <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&WID=561&tab=General>.

¹⁴²⁴ U.S. Forest Service. (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

¹⁴²⁵ See footnote 1419.

¹⁴²⁶ See footnote 1423.

¹⁴²⁷ Wilderness.net. (n.d.). *Tebenkof Bay Wilderness and Kuiu Wilderness*. Retrieved April 19, 2012 from <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=AtoZ>.

¹⁴²⁸ Alaska Dept. of Natural Resources. 2005. *High Priority Coastal Hazards*. Retrieved April 19, 2012 from http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

¹⁴²⁹ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹⁴³⁰

Commercial fishing and subsistence uses of marine and forest resources are the primary economic activities in Port Alexander. Deer, salmon, halibut, shrimp, and crab are favorite subsistence food sources.¹⁴³¹ In 2010, 23 residents held state commercial fishing permits (equivalent to 44% of the local population). Many residents own their own boats, and others work as crew members or work for the seafood-buying scow that operates out of Port Alexander during the summer.¹⁴³² Top employers in Port Alexander in 2010 included the City, the Armstrong Keta salmon hatchery (located several miles north of Port Alexander in Port Armstrong), a private construction company, a private lodge, and the school.¹⁴³³ The post office also provides employment, along with two stores, tourism operators, and cottage industries.¹⁴³⁴

Based on household surveys conducted for the 2006-2010 ACS,¹⁴³⁵ in 2010, the per capita income in Port Alexander was estimated to be \$33,435 and the median household income was estimated to be \$59,306. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$14,767 and \$31,563, respectively). The increase remains substantial even after inflation is taken into account by converting the 2000 values to 2010 dollars,¹⁴³⁶ revealing a real per capita income of \$19,418 and real median household income of \$41,505 in 2000. In 2010, Port Alexander ranked 41st of 305 Alaskan communities with per capita income data that year, and 80th in median household income, out of 299 Alaskan communities with household income data.

However, Port Alexander's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁴³⁷ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Port Alexander in 2010 is \$3,385.¹⁴³⁸ This estimate is much lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Port Alexander between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community met the

¹⁴³⁰ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁴³¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴³² City of Port Alexander. (2008). *Port Alexander Comprehensive Plan, Revised*. Retrieved April 18, 2012 from <http://www.commerce.state.ak.us/dca/plans/PortAlexander-CP-2008.pdf>.

¹⁴³³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁴³⁴ See footnotes 1431 and 1432.

¹⁴³⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁴³⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁴³⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

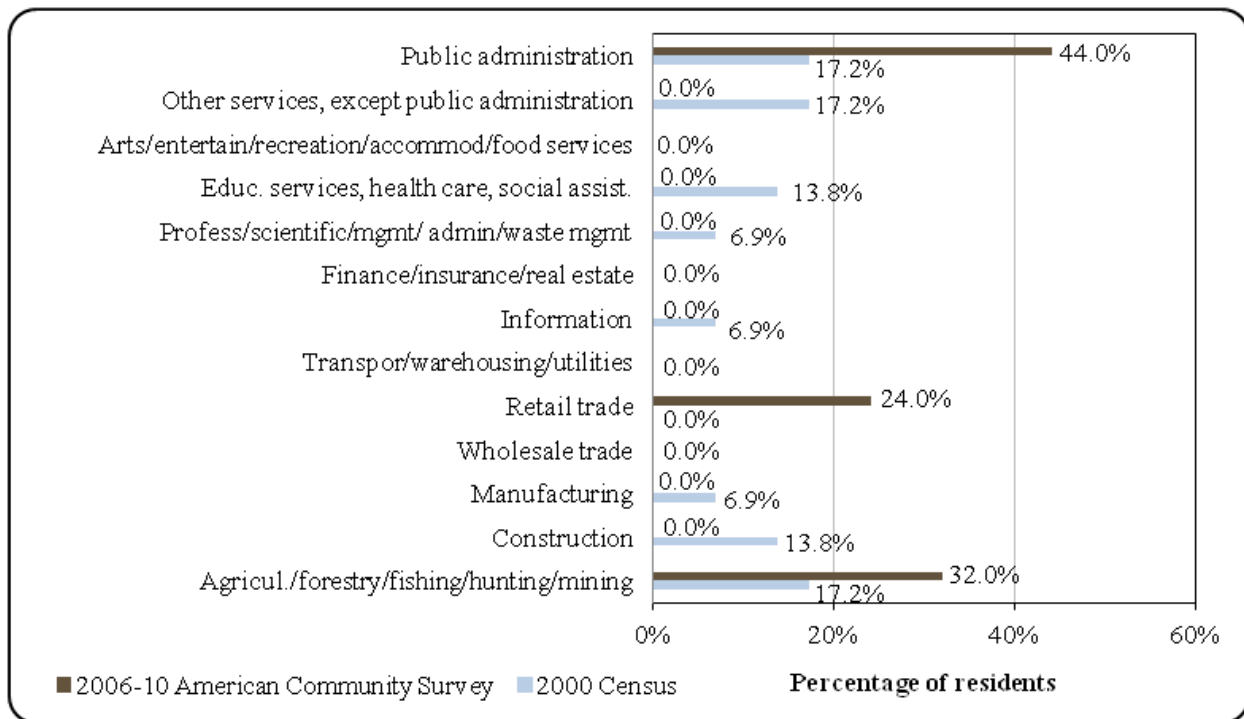
¹⁴³⁸ See footnotes 1433 and 1435.

Denali Commission’s “distressed” criteria in 2011,¹⁴³⁹ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a lower percentage of Port Alexander residents was estimated to be in the civilian labor force (55.6%) than in the civilian labor force statewide (68.8%). In the same year, 10.6% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and no residents were estimated to be unemployed, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which suggests a lower unemployment rate in 2010 of 7.3%, compared to a statewide unemployment rate estimate of 11.5%.¹⁴⁴⁰

Also based on the 2006-2010 ACS, 44% of the Port Alexander civilian labor force was estimated to be employed in the private sector, along with 44% in the public sector, and 12% estimated to be self-employed. Of the 25 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number were estimated to be working in public administration (44%), agriculture, forestry, fishing, hunting, and mining (32%), and retail trade (24%) (Figures 3 and 4). The number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

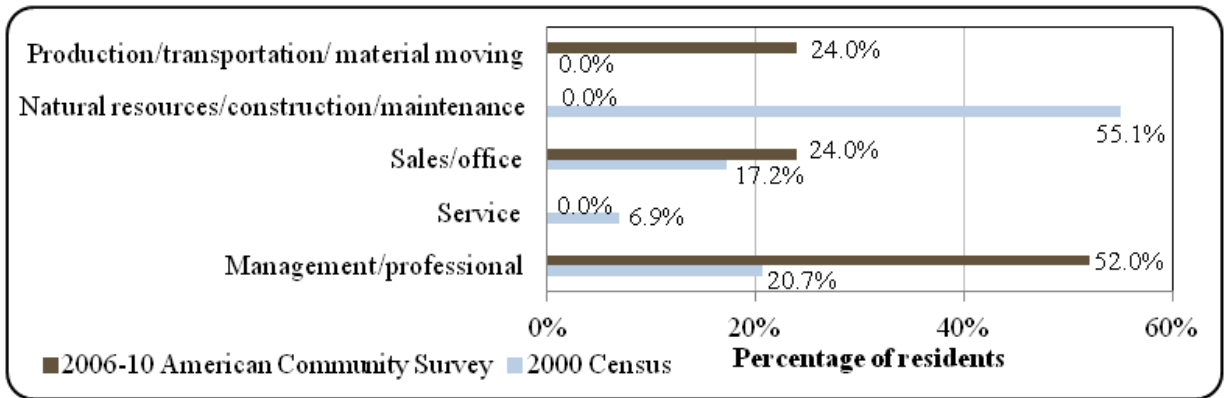
Figure 3. Local Employment by Industry in 2000-2010, Port Alexander (U.S. Census).



¹⁴³⁹ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹⁴⁴⁰ See footnote 1433.

Figure 4. Local Employment by Occupation in 2000-2010, Port Alexander (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 20 employed residents in Port Alexander in 2010, of which 45% were employed in local government, 20% in natural resources and mining, 15% in construction, 19% in leisure and hospitality, 5% in information, and 5% in education and health services.¹⁴⁴¹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

Port Alexander is a 2nd Class City, and is not located in an organized borough. The City of Port Alexander has a Strong Mayor form of government, including a seven-person city council which includes the Mayor, a five-person advisory school board, a five-person planning commission, and several municipal employees. Port Alexander was not included under the Alaska Native Claims Settlement Act (ANCSA), and is not federally recognized as a Native village.¹⁴⁴² The primary source of locally-generated revenue during the 2000-2010 period was revenues from a 4% sales tax and a 6% Bed Tax. Outside revenue sources during this period included shared revenues from various state and federal programs, as well as grants in some years. Revenue sharing contributions came from the State Revenue Sharing program (\$20,000 per year from 2000 to 2003), the Community Revenue Sharing program (just under \$100,000 per year in 2009 and 2010), and smaller contributions from the federal Payment in Lieu of Taxes program and state fish tax refunds (see the *Fisheries-Related Revenue* section for more details). Grants were received for repair and upgrade of the community waterline, water systems, boardwalk, fireshed and community hall, as well as grants for firefighters assistance, energy assistance, and the local recycling program. No information was reported regarding fisheries-related grants received by Port Alexander between 2000 and 2010. Information about selected aspects of Port Alexander’s municipal revenue is presented in Table 2.

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the U.S. Forest Service are located in Sitka and Petersburg, along with an enforcement office of the National Marine Fisheries Service (NMFS). Juneau hosts the Alaska Regional Office of the

¹⁴⁴¹ Ibid.

¹⁴⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

NMFS, as well as the AFSC Auke Bay laboratories. Juneau also has the closest offices of the Alaska Department of Natural Resources and Alaska Department of Commerce, Community, and Economic Development. The nearest office of the U.S. Bureau of Citizenship and Immigration Services is located in Ketchikan.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Port Alexander from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$93,328	\$7,858	\$20,531	n/a
2001	\$143,856	\$21,618	\$19,740	n/a
2002	\$115,179	\$19,860	\$19,743	n/a
2003	\$81,427	\$13,475	\$19,988	n/a
2004	\$85,077	\$15,453	n/a	n/a
2005	\$39,021	\$14,687	n/a	n/a
2006	\$63,711	\$23,153	n/a	n/a
2007	\$116,488	\$29,748	n/a	n/a
2008	\$125,580	\$24,887	n/a	n/a
2009	\$159,627	\$22,221	\$98,602	n/a
2010	\$142,164	\$10,490	\$99,059	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Transportation access to Port Alexander is by float plane or boat. A state-owned seaplane base is present. Passengers can fly from Sitka using essential air float plane service¹⁴⁴³ operated by Harris Air (\$135 one-way as of summer 2012),¹⁴⁴⁴ or can charter a flight from Sitka,

¹⁴⁴³ The U.S. Congress established the Essential Air Service (EAS) program after the passage of the Airline Deregulation Act of 1978. The EAS program is intended to ensure that smaller communities retain a link to the national air transport system, even though the Airline Deregulation Act gave more freedom to private airlines to determine which markets they would serve. The EAS is funded through transfers of Federal Aviation Act (FAA) overflight fees, as well as annual federal appropriations. (Source: Tang, Rachel. (2011). Essential Air Service: Frequently Asked Questions. Congressional Research Service. Retrieved July 5, 2012 from http://assets.opencrs.com/rpts/R41666_20110303.pdf.)

¹⁴⁴⁴ Personal communication, Harris Air representative, April 26, 2012.

Petersburg, Wrangell, or Juneau.¹⁴⁴⁵ From Sitka, roundtrip airfare to Anchorage was \$441 as of early June 2012.¹⁴⁴⁶ The M/V Eyak provides year-round freight, fuel, and mail service to the community.¹⁴⁴⁷ Transportation facilities include a dock and small boat harbor for moorage.¹⁴⁴⁸ There are no roads in Port Alexander, and the City is not connected to other communities on Baranof Island. Residents use a system of boardwalks and gravel or dirt trails maintained by the City.¹⁴⁴⁹ Skiffs are used for local transportation. Most families transport their own essential supplies from outside to the community.¹⁴⁵⁰

Facilities

Water in Port Alexander is derived from “Humpy Creek Dam,” which provides water to a 125,000-gallon storage tank. A reserve water supply is provided by a 6-acre reservoir formed by the “Dirty Dick Dam.” Water is filtered and chlorinated before entering the distribution system. Most homes are connected to the water distribution system.¹⁴⁵¹ One home uses a rain catchment system. There is no piped sewer system. Eleven homes have complete plumbing. Sewage disposal is achieved using individual septic tanks, honeybuckets, or outhouses.¹⁴⁵² According to a survey conducted by the AFSC in 2011, community leaders indicated that improvements have been made to water and sewer pipelines and the water treatment system in the last 10 years, and additional improvements to these systems are currently in progress.

There are no central electrical generation or refuse disposal services in Port Alexander.¹⁴⁵³ Local community members may independently transport plastics and hazardous waste to be disposed of in larger communities, but this can be difficult and expensive. Aluminum, mixed paper, and household batteries are collected at the Port Alexander School and shipped to other communities for recycling.¹⁴⁵⁴ Police services in Port Alexander are provided by state troopers stationed in Sitka, and fire and rescue services are provided by the Port Townsend Emergency Medical Services (EMS).¹⁴⁵⁵ According to the 2011 AFSC survey, community leaders indicated that broadband internet access became available in Port Alexander starting in 2009. Telephone service is also available in Port Alexander, but no cable provider is present. Additional community facilities include a Community Center.¹⁴⁵⁶ According to the 2011 AFSC survey, community leaders also reported that a public library is present in Port Alexander.

With regard to fisheries-related infrastructure, community leaders reported in the 2011 AFSC survey that approximately 450 feet of dock space is available in Port Alexander for permanent or transient vessel moorage. They indicated that vessels of up to 80 feet in length can use local moorage, although large vessels take up a large portion of the dock. Port Alexander can

¹⁴⁴⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁴⁶ This price was calculated on November 21, 2011 using kayak.com.

¹⁴⁴⁷ City of Port Alexander. (2008). *Port Alexander Comprehensive Plan, Revised*. Retrieved April 18, 2012 from <http://www.commerce.state.ak.us/dca/plans/PortAlexander-CP-2008.pdf>.

¹⁴⁴⁸ See footnote 1445.

¹⁴⁴⁹ See footnote 1447.

¹⁴⁵⁰ See footnote 1445.

¹⁴⁵¹ See footnote 1447.

¹⁴⁵² See footnote 1450.

¹⁴⁵³ Ibid.

¹⁴⁵⁴ See footnote 1447.

¹⁴⁵⁵ See footnote 1450.

¹⁴⁵⁶ Ibid.

also accommodate rescue vessels (e.g., Coast Guard) and fuel barges, depending on their size. Community leaders also reported the presence of several fishing-related businesses and services in Port Alexander, including boat welding and sale of boat fuel. They also noted that fishing gear and bait are sold from the seafood-buying scow that is present in Port Alexander during summer months. A tidal grid is available in Port Alexander for small boats (60 tons or less). Community leaders also noted the presence of sport fish lodges in town. For fisheries-related businesses and services not available in Port Alexander, community leaders indicated that local residents commonly travel to Sitka, Wrangell, or Juneau, or south to Seattle, Anacortes, or Port Townsend, Washington.

Medical Services

No hospitals or clinics are located in Port Alexander. Basic health care is provided by Port Alexander Emergency Medical Services. Emergency services have coastal, floatplane, and helicopter access. Emergency services are provided by volunteers.¹⁴⁵⁷ The nearest hospital is located in Sitka.

Educational Opportunities

One school is present in Port Alexander. The Port Alexander School serves Kindergarten through 12th grade. As of 2011, the school had 11 students and 5 teachers.¹⁴⁵⁸

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Historically, the Tlingit used fish traps, gaffs, and spears to catch salmon, one of the most important subsistence resources for the Tlingit people. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., ‘gumboot’ chitons), and sea plants (e.g., seaweed, beach asparagus, and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas and egg harvesting sites.^{1459,1460} The territory of the Sheet’ká Tlingit extends along the Pacific coasts of Chichigof and Baranof Islands, from Point Urey in the north to Cape Ommaney in the south, as well as inland areas between Chichigof and Baranof, close to Angoon and into Hoonah Sound. The territory of the Kéex’ Tlingit includes the upper halves of Kuiu, Kupreanof, and Mitkof Island, the eastern shore of Baranof Island and the southern shore of Admiralty Island.¹⁴⁶¹ Commercial harvest of salmon began in Southeast Alaska

¹⁴⁵⁷ Ibid.

¹⁴⁵⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁴⁵⁹ Alaska Native Heritage Center. (2008). *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

¹⁴⁶⁰ Brock, Mathew, Philippa Coiley-Kenner and the Sitka Tribe of Alaska. (2009). *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

¹⁴⁶¹ Walter R. and Theodore H. Haas Goldschmidt. 1998. *Haa Aaní, Our Land: Tlingit and Haida Land Rights and*

in the late 1870s.¹⁴⁶² In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.¹⁴⁶³

Port Alexander was first settled in the early 1900s by a halibut fisherman who discovered the rich bottom fishing grounds of Chatham Strait and Cape Ommaney by accident.¹⁴⁶⁴ Starting in 1913, salmon trollers began to operate in the area. Two floating processors arrived soon afterward, and a Norwegian named Karl Hansen began operating a fish-buying station in 1915. The salmon fleet continued to grow, and a large herring fleet based out of Port Alexander in the 1920s and 1930s.^{1465,1466} The decline of herring and salmon fisheries in the 1940s led to economic collapse in Port Alexander. The community experienced a resurgence in the 1970s with increasing salmon stocks and the construction of a salmon cold storage plant. The cold storage burned down in January, 1990.¹⁴⁶⁷ The population has declined since that time, but commercial fisheries remain the backbone of the economy. In 2010, Port Alexander residents held state and federal permits in fisheries for salmon, groundfish, halibut, ‘other shellfish’, and sablefish. Herring permits were also held from 2004 to 2009 (see the *Commercial Fishing* section below).

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (sockeye, coho and Chinook). Because of Southeast Alaska’s proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty (PST) which was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.¹⁴⁶⁸

A state-managed sablefish fishery currently takes place in inside waters near Port Alexander (Chatham and Clarence Straits). Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species that take place in outside waters. Halibut and Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in

Use, ed. Thomas F. Thornton. Seattle, WA: University of Washington Press.

¹⁴⁶² Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁴⁶³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁴⁶⁴ City of Port Alexander. (2008). *Port Alexander Comprehensive Plan, Revised*. Retrieved April 18, 2012 from <http://www.commerce.state.ak.us/dca/plans/PortAlexander-CP-2008.pdf>.

¹⁴⁶⁵ Ibid.

¹⁴⁶⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁶⁷ See footnote 1464.

¹⁴⁶⁸ See footnote 1462.

Southeast inside waters in recent decades, but effort has declined since 1999. Crab fisheries in Southeast Alaska target red, golden, and blue king crab, Tanner crab, and Dungeness crab. Dive fisheries for sea cucumber and sea urchin began to grow in Southeast Alaska in recent decades.¹⁴⁶⁹ Several sea cucumber dive fishery closures are located near Port Alexander, including the Bay of Pillars on the west coast of Kuiu Island, and Whale Bay on the southwest coast of Baranof Island.¹⁴⁷⁰

Bait herring fisheries take place during the winter each year in Southeast Alaska, while roe is harvested in the spring. Bait and sac roe fisheries use purse seine and set gillnet gear, and roe is also harvested in spawn-on-kelp closed-pound fisheries.¹⁴⁷¹ A “closed-pound” is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.¹⁴⁷²

Point Alexander participates in the Community Quota Entity (CQE) program, and has established a CQE nonprofit called Port Alexander Community Holding Corporation. The CQE non-profit was established at the recommendation of the City of Port Alexander. As of Fall 2013, the Port Alexander Community Holding Corporation had not yet purchased any commercial halibut Individual Fishing Quota (IFQ) or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the non-profit had acquired four halibut charter permits for lease to community members.¹⁴⁷³ Port Alexander is not eligible to participate in the Community Development Quota program. Port Alexander is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is “Southeast Outside.”

According to a survey conducted by the AFSC in 2011, community leaders indicated that the community of Port Alexander actively participates in fisheries management processes in Alaska. The Port Alexander Fish and Game Advisory Committee is one of 82 Advisory Committees originally established at Statehood to “provide a local forum for the collection and expression of opinions and recommendations on matters related to the management of fish and wildlife resources.”¹⁴⁷⁴ In addition to this local forum, community leaders indicated that Port Alexander relies on regional organizations, such as the Southeast Conference, to provide information on fisheries management, and the community also financially supports fisheries research organizations, industry coalitions and trade associations. Community leaders also outlined challenges to Port Alexander’s fishing economy, including 1) need to upgrade existing docks to provide additional moorage, 2) too much regulation on small fishing vessels making it too difficult and expensive to comply, 3) lack of access to fish-buyers during the winter season, and 4) high fuel prices. In addition, community leaders indicated that Port Alexander has been negatively impacted by the move to an IFQ management system in halibut and groundfish

¹⁴⁶⁹ See footnote 1463.

¹⁴⁷⁰ Alaska Dept. of Fish and Game, Marine Protected Areas Task Force. 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

¹⁴⁷¹ See footnote 1463.

¹⁴⁷² Alaska Dept. of Fish and Game. (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

¹⁴⁷³ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

¹⁴⁷⁴ Alaska Dept. of Fish and Game. 2012. *Advisory Committees*. Retrieved April 18, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=process.advisory>.

fisheries, as well as declining IFQ allotment over time.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Port Alexander does not have a registered shore-side processing plant. The closest shore-side seafood processing facilities are located in Sitka, Klawock, Craig, Petersburg, and Wrangell.

In the 2011 AFSC survey, community leaders noted that, although there is no shore-side processing facility in Port Alexander, fish buying scows or packers are sometimes located in Port Alexander. Between 2000 and 2010, the number of fish buyers present in Port Alexander varied between one and three per year (see *Commercial Fishing* section).

Fisheries-Related Revenue

The primary sources of fisheries-related revenue in Port Alexander between 2000 and 2010 were the Shared Fisheries Business Tax and the Fisheries Resource Landing Tax. On average during this period, Port Alexander received \$6,573 per year from the Shared Fisheries Business Tax. For the years in which revenue was received from the Fisheries Resource Landing Tax, revenue averaged \$46 per year. In 2010, the City of Port Alexander received a total of \$5,159 from fisheries-related taxes and fees. Table 3 presents details of selected aspects of community finances between 2000 and 2010.¹⁴⁷⁵

In the 2011 AFSC survey, community leaders indicated that several public services in Port Alexander are at least partially funded by fisheries-related revenue sources, including maintenance and improvements to roads and water and wastewater systems.

Commercial Fishing

In 2010, Port Alexander residents participated in state and federal commercial fisheries as vessel owners, crew license holders, and permit and quota share account holders. According to the 2011 AFSC survey, community leaders indicated that some of the most important local fisheries include the salmon troll fishery from May to September, and the longline fishery from March to October.

In 2010, 19 fishing vessels were registered to addresses in Port Alexander, and 21 vessels were homeported there. These numbers represent declines from a 33 vessels registered in Port Alexander and 41 vessels homeported there in 2001. According to the 2011 AFSC survey, community leaders reported that fishing vessels basing out of Port Alexander are primarily under 35 feet or between 35 and 60 feet in length, and the most common gear types used are longline, gillnet, and troll. In 2010, 8 residents held active crew licenses, a decrease from 18 held in the year 2000. Information about the commercial fishing sector in Port Alexander is presented in Table 5.

In 2010, 23 individuals held a total of 39 Commercial Fisheries Entry Commission (CFEC) permits registered to addresses in Port Alexander. Of these, 20 were salmon permits, of which 12 were actively fished that year. All of these salmon permits were held in statewide troll

¹⁴⁷⁵ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

fisheries, including 10 associated with hand troll gear and 10 associated with power gurdy troll gear. The number of salmon permits held in Port Alexander declined by approximately 35% between 2000 and 2010, although the percentage of salmon permits that were actively fished remained relatively stable over this period.

In 2010, 9 groundfish permits were held by Port Alexander residents, a substantial decrease from 21 groundfish permits registered in the community in 2000. These included five permits for the statewide dinglebar troll lingcod fishery, two demersal shelf rockfish permits (one associated with longline gear, and one associated with mechanical jig), and two miscellaneous saltwater finfish permits (one associated with longline gear, and one associated with dinglebar troll gear). Two of these permits were actively fished in 2010, both in the lingcod dinglebar troll fishery.

In the halibut fishery, seven CFEC permits were held in 2010, of which six were actively fished that year. All six active halibut permits in 2010 were associated with longline gear, while the seventh, inactive permit was associated with mechanical jig gear. The number of halibut CFEC permits decreased from 19 held in 2000 and 2001, and the number of permit holders also decreased, from 18 in 2000 and 2001 to 6 by 2010. The percentage of halibut permits that were actively fished remained high throughout the 2000-2010 period, with 86% fished in 2010.

The number of sablefish CFEC permits declined between 2000 and 2010 from six to one, and the number of permit holders declined from five to one. In 2010, one permit was held in the sablefish longline fishery, using vessels 60 feet in length or over. The permit was actively fished. Compared to other fisheries involvement in Port Alexander, the sablefish fishery had a very high rate of active permits, with 100% of permits held fished actively in all but three years during the 2000-2010 period.

In 2010, two permit holders held a total of two ‘other shellfish’ permits, both in shrimp fisheries. One was held in the Southeast beam trawl shrimp fishery, and the other in the Southeast pot gear shrimp fishery. Of the two, only the pot gear permit was actively fished in 2010. The number of shrimp permits held in Port Alexander fluctuated between three and zero during the 2000-2010 period, and one permit was actively fished in four of these years.

It is also important to note that one or two herring CFEC permits were held per year by Port Alexander residents between 2004 and 2009. In 2007, the year that two herring permits were held, both permits were for the Northern Southeast spawn on kelp fishery using closed-pound gear.¹⁴⁷⁶ In each year that herring permits were held in Port Alexander, 100% of them were actively fished.

In addition to state fishery permits, in 2010, Port Alexander residents held eight License Limitation Program (LLP) permits in the federal groundfish fishery. Two of these permits were actively fished that year. In addition, six Federal Fisheries Permits (FFP) were held by Port Alexander residents in 2010, of which three were actively fished. The number of groundfish LLP permits held in Port Alexander declined by almost half between 2000 and 2010, and the percentage of permits that were actively fished decreased from 45% in 2000 to 25% by 2010. The number of FFPs held decreased by 33%, but the percentage fished increased over the period. Between 2000 and 2010, no LLPs were held in the federal crab fishery. Information about CFEC, FFP, and LLP permits is presented in Table 4.

In 2010, 7 Port Alexander residents held quota share accounts in the federal halibut catch

¹⁴⁷⁶ Alaska Dept. of Fish and Game. (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.ADFG.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

share fishery, a decrease from 18 quota share account holders in 2000. The number of quota shares held also decreased over the period, from a high of 1,100,936 held in 2000 to 150,905 shares held in 2010. The annual halibut individual fishing quota (IFQ) allotment initially increased to 40% higher than 2000 levels by 2006, and then fell to 59% of 2000 levels by 2010. Information about federal halibut catch share participation is presented in Table 6.

In 2010, one Port Alexander resident held a sablefish quota share account, a decrease from five quota share account holders in 2000. The number of sablefish quota shares also decreased over the period, from a high of 1,686,758 held in 2002 to 152 shares held in 2010. The annual sablefish IFQ allotment initially increased to 11% higher than 2000 levels in 2004, and by 2010 the allotment was approximately 23% lower than 2000 levels. Information about federal sablefish catch share participation is presented in Table 7. Between 2000 and 2010, no Port Alexander residents held quota share accounts or quota shares in federal crab catch share fisheries (Table 8).

The number of fish buyers present in Port Alexander from 2000 and 2010 fluctuated between one and three, and no shore-side processors were present in the community during the period. The years in which the highest number of vessels landed catch in Port Alexander (2006 and 2010) were both years in which three fish buyers were present in the community (Table 5). However, due to the small number of fish buyers in the community, landings data is considered confidential during the 2000-2010 period (Tables 5 and 9).

Information was available, however, regarding landings and ex-vessel revenue earned by Port Alexander vessel owners between 2000 and 2010, including all delivery locations. Salmon, halibut, and ‘other groundfish’ landings can be reported for all years between 2000 and 2010. On average between 2000 and 2010, Port Alexander vessel owners landed 316,875 net pounds of salmon, valued at an average of \$504,247 in ex-vessel revenue; halibut landings averaged 89,881 net pounds over the period, valued at an average of \$264,234 in ex-vessel revenue; and ‘other groundfish’ landings averaged 28,269 net pounds, valued at \$20,036 in ex-vessel revenue. Sablefish landing data can be reported for 2000 and 2005-2007, but are considered confidential in other years during the 2000-2010 period due to the small number of participants. For those years in which data were reported, Port Alexander vessel owners landed an average of 142,995 net pounds of sablefish, valued at \$437,136 in ex-vessel revenue. Landings and revenue information in other fisheries between 2000 and 2010 are considered confidential due to low participant numbers. Port Alexander vessel owner landings and ex-vessel revenue information is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Port Alexander: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$6,995	\$9,517	\$6,303	\$6,392	\$4,784	\$6,640	\$7,924	\$6,804	\$4,722	\$7,068	\$5,159
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	\$12	\$14	n/a	\$14	\$72	\$44	\$120	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$6,995</i>	<i>\$9,517</i>	<i>\$6,303</i>	<i>\$6,404</i>	<i>\$4,798</i>	<i>\$6,640</i>	<i>\$7,938</i>	<i>\$6,876</i>	<i>\$4,766</i>	<i>\$7,188</i>	<i>\$5,159</i>
<i>Total municipal revenue⁵</i>	<i>\$93,328</i>	<i>\$143,856</i>	<i>\$115,179</i>	<i>\$81,427</i>	<i>\$85,077</i>	<i>\$39,021</i>	<i>\$63,711</i>	<i>\$116,488</i>	<i>\$125,580</i>	<i>\$159,627</i>	<i>\$142,164</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Port Alexander: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	15	12	10	9	9	9	8	7	8	8	8
	Active permits	7	3	4	3	1	2	1	1	2	2	2
	% of permits fished	46%	25%	40%	33%	11%	22%	12%	14%	25%	25%	25%
	Total permit holders	13	11	10	9	9	9	8	7	8	8	8
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	9	9	10	7	7	8	8	8	8	6	6
	Fished permits	0	0	0	6	5	5	6	7	7	6	3
	% of permits fished	0%	0%	0%	86%	71%	63%	75%	88%	88%	100%	50%
	Total permit holders	8	8	9	6	6	7	7	7	7	6	6
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	3	3	3	3	0	0	1	1	1	2	2
	Fished permits	0	0	0	1	0	0	1	0	0	1	1
	% of permits fished	0%	0%	0%	33%	-	-	100%	0%	0%	50%	50%
	Total permit holders	2	2	2	2	0	0	1	1	1	2	2
Halibut (CFEC) ²	Total permits	19	19	15	14	12	9	11	11	9	9	7
	Fished permits	19	15	15	13	10	8	10	9	8	7	6
	% of permits fished	100%	79%	100%	93%	83%	89%	91%	82%	89%	78%	86%
	Total permit holders	18	18	14	13	11	8	10	10	8	7	6
Herring (CFEC) ²	Total permits	0	0	0	0	1	1	1	2	1	1	0
	Fished permits	0	0	0	0	1	1	1	2	1	1	0
	% of permits fished	-	-	-	-	100%	100%	100%	100%	100%	100%	-
	Total permit holders	0	0	0	0	1	1	1	2	1	1	0

Table 4 cont'd. Permits and Permit Holders by Species, Port Alexander: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	6	5	5	6	5	4	4	4	4	5	1
	Fished permits	6	5	5	5	4	4	4	4	4	4	1
	% of permits fished	100%	100%	100%	83%	80%	100%	100%	100%	100%	80%	100%
	Total permit holders	5	4	4	5	4	3	3	3	3	3	1
Groundfish (CFEC) ²	Total permits	21	20	19	18	17	15	15	13	15	13	9
	Fished permits	4	1	4	1	1	0	3	1	3	3	2
	% of permits fished	19%	5%	21%	6%	6%	0%	20%	8%	20%	23%	22%
	Total permit holders	14	11	10	10	10	8	8	8	8	7	5
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	31	33	26	26	25	25	25	23	19	20	20
	Fished permits	20	18	12	13	14	11	15	15	11	12	12
	% of permits fished	65%	55%	46%	50%	56%	44%	60%	65%	58%	60%	60%
	Total permit holders	29	30	25	23	22	23	23	22	17	17	18
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>80</i>	<i>80</i>	<i>68</i>	<i>67</i>	<i>60</i>	<i>54</i>	<i>57</i>	<i>54</i>	<i>49</i>	<i>50</i>	<i>39</i>
	<i>Fished permits</i>	<i>49</i>	<i>39</i>	<i>36</i>	<i>33</i>	<i>30</i>	<i>24</i>	<i>34</i>	<i>31</i>	<i>27</i>	<i>28</i>	<i>22</i>
	<i>% of permits fished</i>	<i>61%</i>	<i>49%</i>	<i>53%</i>	<i>49%</i>	<i>50%</i>	<i>44%</i>	<i>60%</i>	<i>57%</i>	<i>55%</i>	<i>56%</i>	<i>56%</i>
	<i>Permit holders</i>	<i>38</i>	<i>39</i>	<i>32</i>	<i>30</i>	<i>31</i>	<i>30</i>	<i>33</i>	<i>31</i>	<i>25</i>	<i>24</i>	<i>23</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Port Alexander: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Port Alexander ²	Total Net Pounds Landed In Port Alexander ^{2,5}	Total Ex-Vessel Value Of Landings In Port Alexander ^{2,5}
2000	21	2	0	33	41	39	-	-
2001	21	3	0	30	38	11	-	-
2002	20	1	0	27	34	12	-	-
2003	18	3	0	26	35	10	-	-
2004	26	2	0	24	33	8	-	-
2005	22	1	0	26	30	7	-	-
2006	25	3	0	21	27	133	-	-
2007	18	1	0	23	27	1	-	-
2008	16	2	0	18	28	4	-	-
2009	19	1	0	21	30	2	-	-
2010	11	3	0	19	25	68	-	-

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Port Alexander: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	18	1,100,936	138,723
2001	14	763,638	101,577
2002	14	1,070,830	145,040
2003	13	921,853	124,351
2004	13	862,324	137,778
2005	12	799,115	130,405
2006	11	461,788	81,683
2007	11	458,477	65,494
2008	9	448,384	47,228
2009	8	293,029	24,703
2010	7	150,905	11,152

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Port Alexander: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	5	1,683,547	184,929
2001	4	1,325,692	134,579
2002	5	1,686,758	169,217
2003	4	1,600,894	180,640
2004	4	1,600,894	195,009
2005	5	1,600,894	187,421
2006	4	1,090,315	127,963
2007	4	1,050,266	118,011
2008	4	1,050,266	112,758
2009	3	689,200	63,101
2010	1	152	13

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Port Alexander: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Port Alexander: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Port Alexander Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	177055	121132	113119	116169	136216	81486	77345	60735	45324	36804	23307
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	34912	25453	25782	63826	20926	23232	34420	24752	26953	18188	12520
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	154986	-	-	-	-	115072	149686	152234	-	-	-
Salmon	235867	528569	335791	381864	413479	438473	274644	230237	191129	215203	251370
<i>Total²</i>	<i>602820</i>	<i>675154</i>	<i>474692</i>	<i>561859</i>	<i>570621</i>	<i>658263</i>	<i>536095</i>	<i>467958</i>	<i>263406</i>	<i>270195</i>	<i>287197</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$456,794	\$254,658	\$248,583	\$338,929	\$414,960	\$248,461	\$289,796	\$269,843	\$185,505	\$104,611	\$94,434
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	\$24,393	\$18,205	\$18,333	\$37,122	\$14,360	\$13,446	\$24,826	\$18,535	\$27,882	\$12,836	\$10,463
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	\$573,059	-	-	-	-	\$381,245	\$422,392	\$371,848	-	-	-
Salmon	\$306,077	\$474,037	\$269,389	\$360,001	\$635,502	\$692,446	\$707,624	\$562,941	\$576,919	\$375,631	\$586,152
<i>Total²</i>	<i>\$1,360,324</i>	<i>\$746,900</i>	<i>\$536,304</i>	<i>\$736,052</i>	<i>\$1,064,821</i>	<i>\$1,335,599</i>	<i>\$1,444,638</i>	<i>\$1,223,167</i>	<i>\$790,306</i>	<i>\$493,078</i>	<i>\$691,049</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, three or four active sport fish guide businesses were present in Port Alexander each year, and the number of licensed sport fish guides living in the community fluctuated between four and six. The number of sportfishing licenses purchased by Port Alexander residents (irrespective of point of sale) ranged from 34 to 48 per year during the same period, and the number of licenses sold in Port Alexander varied from 31 to 145 per year. The fact that more licenses were purchased in the community than were purchased by residents of Port Alexander indicates that sportfishing draws visitors to the community.

According to a survey conducted by the AFSC in 2011, community leaders indicated that several sportfishing lodges are present in Port Alexander. They also noted that sportfishing typically takes place in Port Alexander using charter boats, as well as private boats owned by either local or non-resident sport fishermen. They also reported that the most commonly targeted sport fish include Chinook, coho, and sockeye salmon, halibut, and rockfish, as well as crab and shrimp. In addition to these species, the Statewide Harvest Survey,¹⁴⁷⁷ conducted by ADF&G between 2000 and 2010, also noted sport harvest of pink salmon and lingcod by Port Alexander anglers.

Kept/released statistics from charter logbook data reported by ADF&G¹⁴⁷⁸ show that coho salmon, Pacific halibut, and Chinook salmon were the most numerous charter catches between 2000 and 2010. For those years in which data were reported between 2000 and 2010, the number of coho salmon kept averaged 1,041 per year, the number of halibut kept averaged 483, and the number of Chinook salmon kept averaged 218. The species that had the highest number of releases pelagic rockfish (average of 440 released per year), halibut (average of 413 released), and lingcod (average of 317 released). Other species kept during sport charters out of Port Alexander between 2000 and 2010 included chum, sockeye, and pink salmon, yelloweye rockfish, and ‘other rockfish’. One shark was also caught in 2001, but was released.

Port Alexander is located within Alaska Sport Fishing Survey Area D – Sitka. Looking at this regional scale between 2000 and 2010, there was significantly greater saltwater sportfishing activity than freshwater, although both were important. In saltwater, non-Alaska resident anglers fished a greater number of anglers days on average than Alaska resident anglers, and the opposite was true in freshwater. On average, non-Alaska resident anglers fished 51,348 saltwater angler days and 1,762 freshwater angler days per year, while Alaska resident anglers fished an average of 25,151 saltwater days and 2,252 freshwater days per year. This information about the sportfishing sector in Point Baker is presented in Table 11.

¹⁴⁷⁷ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁴⁷⁸ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Port Alexander: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Port Alexander ²
2000	3	4	47	31
2001	3	4	34	30
2002	3	5	38	43
2003	3	5	47	51
2004	3	6	38	64
2005	4	5	48	48
2006	3	4	42	38
2007	4	4	48	49
2008	3	4	39	145
2009	3	5	28	100
2010	4	5	42	127

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	46,485	38,117	1,742	4,547
2001	56,533	31,124	1,991	2,742
2002	39,772	23,589	2,003	2,392
2003	46,777	19,460	1,524	2,082
2004	50,721	27,597	2,003	1,310
2005	58,394	25,770	1,970	2,356
2006	67,692	18,512	1,920	1,173
2007	64,443	24,728	1,350	1,860
2008	56,022	25,722	1,676	2,924
2009	37,759	18,661	1,664	2,382
2010	40,227	23,382	1,541	1,002

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Port Alexander residents supplement their incomes and diet with subsistence resources.¹⁴⁷⁹ According to a survey conducted by the AFSC in 2011, community leaders indicated that the primary marine resources utilized by Port Alexander residents for subsistence include fish, shellfish, beach asparagus, and seaweed. No information was reported by ADF&G regarding per capita subsistence or the percentage of Port Alexander households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). A subsistence survey was conducted several decades earlier by ADF&G that provides information about household use of marine invertebrates, marine mammals, and non-salmon fish (not including halibut) in Port Alexander. According to this survey, the marine invertebrate species utilized by the greatest percentage of Port Alexander households in 1987 included clams (71% of households reported harvesting), Dungeness crab (27%), ‘gumboot’ chitons (24%), octopus (21%), and shrimp (18%). Sea cucumber, sea urchin, Tanner crab, king crab, abalone, and scallops were also harvested that year. The non-salmon fish species harvested by the greatest number of households included rockfish (50% of households reported harvesting), cod (39%), and Dolly Varden (27%), as well as flounder and herring. Herring roe was also harvested for subsistence purposes. In addition, 3% of Port Alexander households reported harvesting harbor seal in 1987.¹⁴⁸⁰ It is important to note that some of these species were used by a greater percentage of households than reported participating in harvest, indicating that sharing networks are present in Port Alexander.

Between 2000 and 2010, data were available regarding annual subsistence harvest of salmon and halibut. The number of subsistence salmon permits issued to Port Alexander households varied from two to eight between 2000 and 2008, although no data were reported for 2005. Sockeye salmon were the species harvested most consistently and in the highest numbers during this period, with an average of 45 harvested per year. Salmon subsistence information is presented in Table 13. From 2003 to 2010, the number of Subsistence Halibut Registration Certificates (SHARC) issued to Port Alexander residents varied from 21 to 31, and an average of 14 cards were returned. Also on average, 3,080 pounds of halibut were harvested for subsistence purposes during each year. Information about halibut subsistence in Port Alexander is presented in Table 14.

No information was reported by ADF&G agencies regarding total harvest of marine invertebrates or non-salmon fish (not including halibut) during the 2000-2010 period (Table 13). Likewise, no data were available from management agencies regarding subsistence harvest of various marine mammals species by residents of Port Alexander between 2000 and 2010 (Table 15).

¹⁴⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁸⁰ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Port Alexander: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Port Alexander: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	4	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	2	2	n/a	n/a	n/a	n/a	40	n/a	n/a
2002	4	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	8	8	n/a	n/a	n/a	n/a	2	n/a	n/a
2004	4	4	n/a	n/a	2	n/a	58	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	2	n/a	n/a	n/a	n/a	13	n/a	n/a
2007	4	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	4	4	n/a	n/a	n/a	n/a	112	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Port Alexander: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	21	10	1,287
2004	22	11	2,269
2005	25	18	3,121
2006	24	8	1,664
2007	26	17	2,731
2008	31	18	4,308
2009	30	19	4,907
2010	28	14	4,380

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Port Alexander: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Port Protection



People and Place

*Location*¹⁴⁸¹

Port Protection is located near the northern tip of Prince of Wales Island, just south of the community of Point Baker. Port Protection is 145 miles south of Juneau and 50 miles west of Wrangell. It lies within the boundaries of the Tongass National Forest. Port Protection is located in the Petersburg Recording District and Prince of Wales-Hyder Census Area.

*Demographic Profile*¹⁴⁸²

In 2010, there were 48 inhabitants in Port Protection, making it the 299th largest of 352 total Alaskan communities with recorded populations that year. Port Protection first appeared in U.S. Decennial Census records in 1980 with 40 inhabitants. The population increased by half by 1990, to 60 residents, and has remained relatively stable since that time. According to Alaska Department of Labor estimates, the population of permanent residents decreased by 1.6% between 2000 and 2009, with a positive average annual growth rate of 1.88%. According to a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that three seasonal workers or transients are present in Port Protection each summer from June through September. They indicated that yearly population fluctuations are not related to employment in fishing sectors, but that a yearly population peak does occur in August each year. Community leaders also reported that some local fishermen have moved away in recent years, as fishing income is no longer sufficient to support themselves or their families.

In 2010, a majority of Port Protection residents identified themselves as White (72.9%), while 18.8% identified themselves as American Indian and Alaska Native, and 8.3% identified with two or more races. In addition, 4.2% of residents identified themselves as Hispanic in 2010. This racial and ethnic composition represents a significant shift from 2000, when no residents identified themselves as American Indian and Alaska Native, and the percentage of the population that identified themselves as white was 14.4% greater. In addition, the Asian population of Port Protection present in 2000 appeared not to be present in 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹⁴⁸¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁸² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

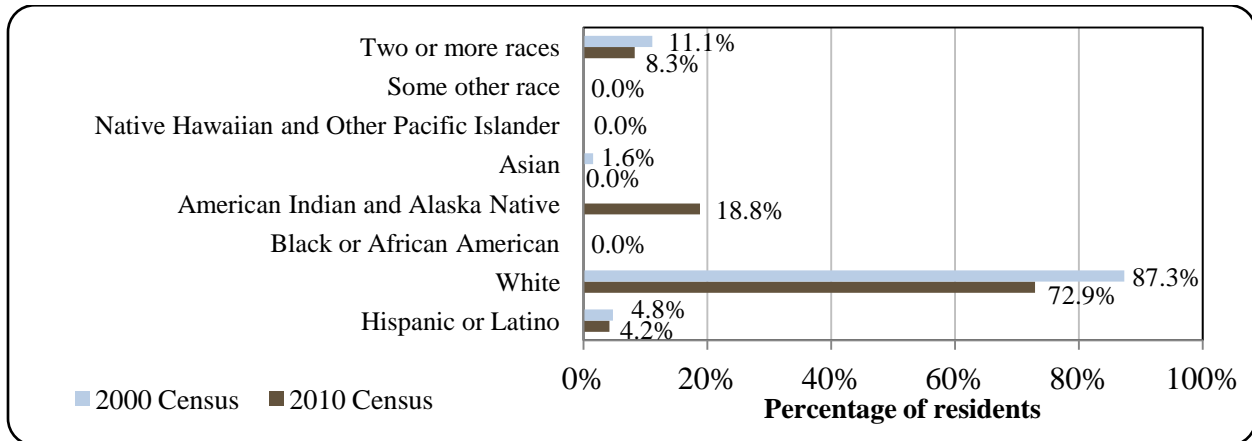
Table 1. Population in Port Protection from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	62	-
2000	63	-
2001	-	63
2002	-	50
2003	-	53
2004	-	44
2005	-	53
2006	-	54
2007	-	52
2008	-	57
2009	-	62
2010	48	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Port Protection: 2000-2010 (U.S. Census).



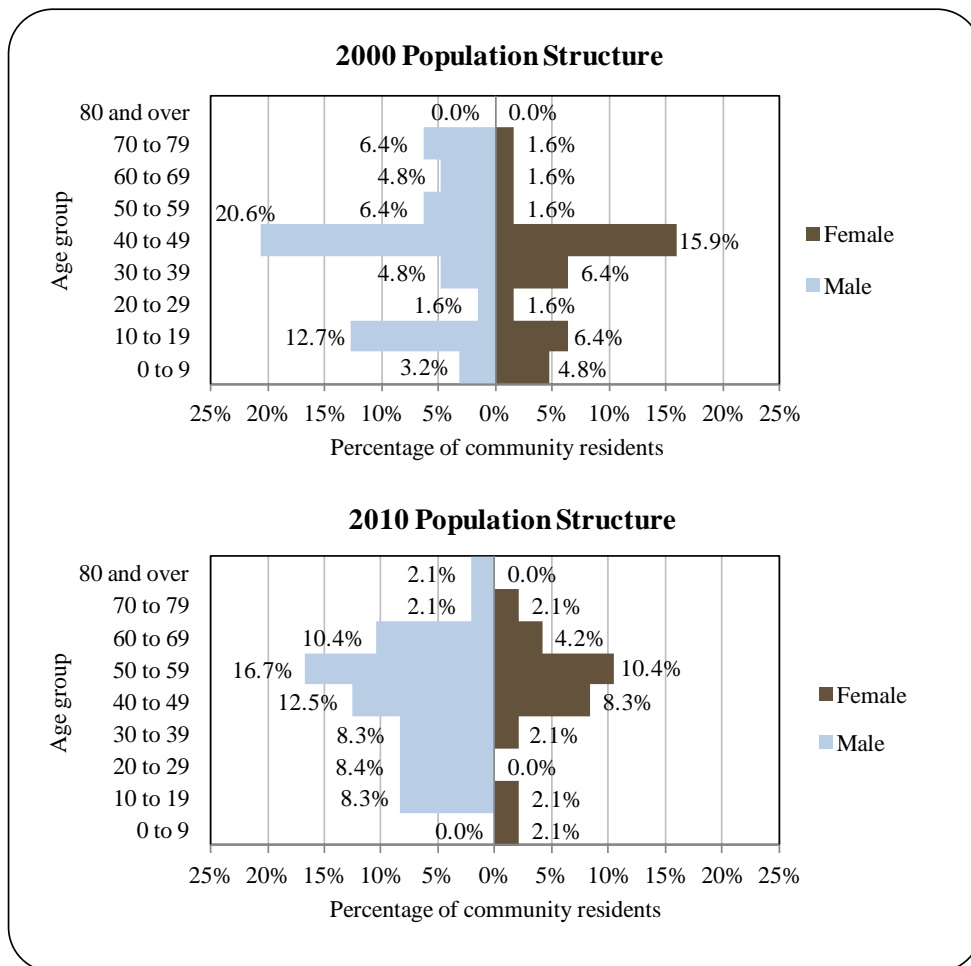
The average household size in Port Protection decreased slightly from 2.1 in 1990 to 2.03 in 2000, and 1.85 persons per household in 2010. The number of occupied households in Port Protection increased between 1990 and 2000, from 29 to 31, and then declined to 26 by 2010. Of the 43 total housing units surveyed for the 2010 U.S. Census, 39.5% were owner-occupied, 20.9% were rented, and 39.5% were vacant or used only seasonally. Between 1990 and 2010, no Port Protection residents were estimated to be living in group quarters.

In 2010, the gender makeup of Port Protection’s population (68.8% male and 31.2% female) was more skewed towards men than the population of Alaska as a whole, which was 52% male and 48% female. The median age of Port Protection residents was 47.5 years, older

than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 20.8% of Port Protection’s population was age 60 or older. The overall population structure of Port Protection in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to 2006-2010 American Community Survey (ACS) estimates,¹⁴⁸³ 100% of Port Protection residents aged 25 and held a high school diploma in 2010, compared to 90.7% of Alaskan residents overall. Of these, 24.5% were also estimated to hold a Bachelor’s degree (compared to 17.4% of Alaskan residents overall), while no Port Protection residents were estimated to hold an Associate’s degree (compared to 8% of Alaskan residents overall) or graduate or professional degrees (compared to 9.6% of the state population). In addition, no residents were estimated to have attended some college without receiving a degree (compared to 28.3% of Alaskan residents overall).

Figure 2. Population Age Structure in Port Protection Based on the 2000 and 2010 U.S. Decennial Census.



¹⁴⁸³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

The Port Protection area was historically used by the Heenya Tlingit of Klawock, and the area east of Port Protection was used by the Stikine Tlingit. At the time of European contact, Prince of Wales Island was a transition zone between the territories of Tlingit and Haida peoples.^{1484,1485} The Islands in Shakan Bay, just south of Port Protection, were the location of Tlingit homesites, including the historical permanent village of Skakan, and many traditional use sites and seasonal camps are located throughout the area. The Russians are known to have traded with the Tlingit along the west coast of Prince of Wales Island.¹⁴⁸⁶

The modern community of Port Protection has primarily been populated by non-Native residents since its founding. “Wooden Wheel” Johnson was the first resident in the early 1900s. His store, fuel dock, and fish-buying scow enabled trollers to stop for supplies and safe anchor on their trips north and south. In 1946, Laurel “Buckshot” Woolery opened the B.S. Trading Post and fish-buying station. In the 1950s, a warehouse was built with the plan to eventually create a shrimp cannery. The cannery idea was never realized, and the building now stands empty. Woolery closed his trading post in 1973. State land disposal programs have enabled the area to be permanently settled.¹⁴⁸⁷ As of 2010, Port Protection remained a primarily non-Native community, although according to the U.S. Decennial Census, the percentage of the population made up of American Indian and Alaska Natives appears to have increased significantly between 2000 and 2010, as represented in Figure 1 in the previous section. There are no roads in Port Protection, and most homes lie along the waterfront. Residents utilize local resources for subsistence and personal use purposes. Some of the most important local food sources include deer, salmon, halibut, shrimp, and crab.¹⁴⁸⁸

Natural Resources and Environment

Prince of Wales Island is dominated by a cool, moist, maritime climate. Average summer temperatures range from 49 to 63 °F; winter temperatures average from 32 to 42 °F. Average annual precipitation is 120 inches, with 40 inches of snow.¹⁴⁸⁹ The landscape of northern Prince of Wales Island is characterized by low-elevation hills. Some of the highest mountains in the area include the 2,457-foot El Capitan Peak and Mount Calder at 3,400 feet. Vegetation is typical Southeast Alaska coastal temperate rain forest. The forest is primarily made up of western hemlock and Sitka spruce with large components of cedar and red alder. Large areas of muskeg are also present in depressions and shallow slopes where drainage is poor, and alpine tundra is found at higher elevations. Much of the area is underlain by marble and limestone, and an extensive karst cave system has developed on Prince of Wales Island.^{1490,1491,1492}

¹⁴⁸⁴ Langdon, Steven. 1979. “Comparative Tlingit and Haida Adaptation to the West Cost of the Prince of Wales Archipelago.” *Ethnology* 18:2 (101-119).

¹⁴⁸⁵ Tongass National Forest website. (n.d.). *Roadless Area Maps & Descriptions*. Retrieved April 13, 2012 from <http://www.tongass-seis.net/roadless.html>.

¹⁴⁸⁶ Ibid.

¹⁴⁸⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁸⁸ Ibid.

¹⁴⁸⁹ Ibid.

¹⁴⁹⁰ Nowacki, Gregory. 2001. *Ecological subregions of Southeast Alaska and neighboring areas of Canada*. U.S. Forest Service, Alaska Region. Technical Publication R10-TP-75.

The rainforests of Southeast Alaska are habitat to a wide range of wildlife. Terrestrial wildlife includes shrews, voles, marmots, ground squirrels, beaver, black bears, porcupine, Sitka black tail deer, marten, fishers, and river otter.¹⁴⁹³ Fish species include Pacific halibut, all five species of Pacific salmon, herring, Pacific lamprey, lingcod, Atka mackerel, Walleye pollock, black and yelloweye rockfish, sablefish, salmon sharks, smelt, cutthroat trout, steelhead trout, and Dolly Varden. Marine mammals include porpoise, Steller sea lion, harbor seals, and several species of whale.¹⁴⁹⁴

Port Protection is located within the boundaries of the Tongass National Forest.¹⁴⁹⁵ At 16.8 million acres, the Tongass is the largest National Forest in the U.S. Approximately 95% of Southeast Alaska is federal land, of which 80% is National Forest. The National Forest is managed with the intent to produce resource values, products and services in a way that also sustains the diversity and productivity of ecosystems, including viable populations of native and some non-native species and their habitats, sustainable fish and wildlife populations, recreational opportunities, hunting, trapping and game viewing opportunities, aquatic habitat quality, scenic quality, and subsistence opportunities for rural residents.¹⁴⁹⁶ National Forest lands surrounding Port Protection fall under a range of land-use designations (LUDs), including old-growth habitat, timber production, semi-remote recreation, and special interest area LUDs.^{1497,1498} In addition, two LUD II areas – Mt. Calder/Mt. Holbrook and Salmon Bay – are located near Port Protection.¹⁴⁹⁹ LUD II areas are “permanently managed in a roadless state to retain their wildland characteristics. Unlike wilderness, limited development is permitted under certain circumstances (including water and power, mining, habitat and transportation developments.”¹⁵⁰⁰ These LUD IIs make up much of the area of three roadless areas¹⁵⁰¹ located in the northern portion of Prince of Wales Island – Calder, El Capitan and Salmon Bay. These areas are used for subsistence purposes by residents of Port Protection.¹⁵⁰²

Although the timber industry has been in decline in Southeast Alaska, the industry remains very active on Prince of Wales Island. The regional Alaska Native Claims Settlement

¹⁴⁹¹ Tongass National Forest website. (n.d.). *Roadless Area Maps & Descriptions*. Retrieved April 13, 2012 from <http://www.tongass-seis.net/roadless.html>.

¹⁴⁹² MacDonald, S.O. & Cook, J. A. (1996). The Land Mammal Fauna of Southeast Alaska. *The Canadian Field-Naturalist*, 110(4), 571-597.

¹⁴⁹³ Ibid.

¹⁴⁹⁴ Alaska Dept. of Fish and Game (n.d.). *Species: Fish*. Retrieved February 14, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=animals.listfish>.

¹⁴⁹⁵ See footnote 1487.

¹⁴⁹⁶ U.S. Forest Service. (2008). *Tongass National Forest: Land and Resource Management Plan*. Retrieved March 29, 2012 from http://tongass-fpadjust.net/Documents/2008_Forest_Plan.pdf.

¹⁴⁹⁷ Tongass National Forest “Special Interest Areas” are managed to preserve unique archaeological, historical, scenic, biological or zoological values.

¹⁴⁹⁸ U.S. Forest Service. 2003. *Map of Current Land Use Designations*. Tongass National Forest Land Management Plan Revision, Final SEIS. Retrieved May 8, 2012 from <http://www.tongass-seis.net/pdf/lud.pdf>.

¹⁴⁹⁹ Ibid.

¹⁵⁰⁰ U.S. Forest Service. 2003. *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement. Roadless Area Evaluation for Wilderness Recommendations. Volume I: Final SEIS Appendix A, B, D, E*. Retrieved April 25, 2012 from http://www.tongass-seis.net/seis/pdf/Volume_I.pdf.

¹⁵⁰¹ ‘Roadless area’ is “a generic term that includes inventoried roadless areas and unroaded areas. See footnote 1500.

¹⁵⁰² See footnote 1491.

Act (ANCSA) Native corporation, Sealaska, has active timber developments on the Island.¹⁵⁰³ In addition, a majority of U.S. Forest Service timber sales scheduled for the 2011-2015 period will take place on Prince of Wales Island. One timber sale of approximately 2,000 million board feet of timber is located on the north end of the Island, near Port Protection.¹⁵⁰⁴ Viking Lumber, a Craig-based company, is the largest private timber industry employer on the island.¹⁵⁰⁵

Mining has played a large role in the history of the Prince of Wales region. The first gold mine in Alaska was developed on Prince of Wales Island. The Island also supplied high quality marble for building construction¹⁵⁰⁶ between 1900 and 1941,¹⁵⁰⁷ and some marble mining is still ongoing at Marble Island, located approximately 25 miles due south of Port Protection.¹⁵⁰⁸ Ownership of a calcium carbonate deposit on northern Prince of Wales Island known as the Admiral Calder quarry has been transferred several times in recent decades. In 2005, Tri-Valley Corporation purchased the mine from Sealaska, the Native Corporation for the Southeast Alaska region. Tri-Valley then sold it to Columbia River Carbonates in 2010.¹⁵⁰⁹ Several ‘rare-earth element’ deposits are also present in the northeast corner and along the southeast coast of Prince of Wales Island.¹⁵¹⁰

The Joe Mace Island Marine Park is located just west of Port Protection, off the west coast of Prince of Wales Island. State Marine Parks are intended to protect natural habitat, and do not restrict fishing activity.¹⁵¹¹ The Island is closed to trapping¹⁵¹² and mining activity.¹⁵¹³

Natural hazards that have been identified as risks in the Prince of Wales Census Area include flooding, wildfire, earthquake, tsunami, avalanche, landslides, erosion, severe weather, and low risk of droughts.¹⁵¹⁴

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Port Protection as of July 2012.¹⁵¹⁵

¹⁵⁰³ Sealaska Timber Corporation (n.d.). *Homepage*. Retrieved February 14, 2012 from: <http://www.sealaskatimber.com>.

¹⁵⁰⁴ U.S. Forest Service. Retrieved April 17, 2012 from: http://forestry.alaska.gov/pdfs/ketchikan_timber/2011-2015/2011-2015_Draft%20FYSTS.pdf.

¹⁵⁰⁵ Southeast Conference and Tlingit and Haida Central Council. (2009). *Southeast Alaska Comprehensive Economic Development Strategy: 2009 Update*. Retrieved April 12, 2012 from http://www.seawead.org/images_documents/documents/KCF/SE_conference-CEDS.pdf.

¹⁵⁰⁶ Ibid.

¹⁵⁰⁷ Szumigala, D.J., L.A. Harbo, and J.N. Adleman. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

¹⁵⁰⁸ See footnote 1491.

¹⁵⁰⁹ Tri-Valley Corp. (2010). *U.S. Securities and Exchange Commission Form 8-K*. Date of Report: December 21, 2010. Retrieved April 13, 2012 from <http://apps.shareholder.com/sec/viewerContent.aspx?companyid=ABEA-4UE364&docid=7625940>.

¹⁵¹⁰ See footnote 1507.

¹⁵¹¹ Alaska Dept. of Fish and Game Marine Protected Area Task Force 2002. *Marine Protected Areas in Alaska: Recommendations for a Public Process*. Regional Information Report 5J02-08. Retrieved April 13, 2012 from <http://www.adfg.alaska.gov/static/lands/protectedareas/pdfs/5j02-08.pdf>.

¹⁵¹² Alaska Dept. of Fish and Game (n.d.). *Joe Mace Island Marine Park*. Retrieved April 13, 2012 from https://secure.wildlife.alaska.gov/gis/index.cfm?GIS=SpecialMgmt.SpecialMgmtDetail&map=TR_joemaceisland.

¹⁵¹³ Alaska Dept. of Natural Resources. 1998. *Prince of Wales Area Plan*. Retrieved April 13, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/wales/plan/pow_plan_complete.pdf.

¹⁵¹⁴ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

¹⁵¹⁵ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹⁵¹⁶

Economic activity in Port Protection is highly seasonal.¹⁵¹⁷ According to a survey conducted by the AFSC in 2011, community leaders indicated that the local economy relies on commercial fishing and sport hunting and fishing. They also noted that some fishermen have moved away in recent years since income from fishing has not been sufficient to support themselves or their families. In 2010, three residents held state commercial fishing permits. Some residents offer sportfishing charters. Top employers in Port Protection in 2010 included Woodenwheel Cove Trading Post, the School District, Port Protection Community Association, and the Rural Alaska Community Action Program.¹⁵¹⁸ In addition to wage employment, Port Protection residents depend on personal use and subsistence fishing and hunting to supplement incomes.¹⁵¹⁹ Important local food sources include deer, salmon, halibut, shrimp, and crab.¹⁵²⁰

Based on household surveys conducted for the 2006-2010 ACS,¹⁵²¹ in 2010, the per capita income in Port Protection was estimated to be \$11,965 and the median household income was estimated to be \$13,958. These numbers are very similar to the reported per capita income in the year 2000 of \$12,058, and median household income of \$10,938. However, if inflation is taken into account by converting the 2000 values to 2010 dollars,¹⁵²² 2010 income estimates are shown to represent a decrease from a real per capita income in 2000 of \$15,856, and a real median household income of \$14,383. In 2010, Port Protection ranked 241st of 305 Alaskan communities with per capita income data, and 296th in median household income, out of 299 Alaskan communities with household income data that year.

Although Port Protection's small population size may have prevented the ACS from accurately portraying economic conditions,¹⁵²³ this decrease in per capita income is confirmed by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Port Protection in 2010 is \$1,878.¹⁵²⁴ The estimated drop in income is reflected in the fact that the community was recognized as "distressed" by the Denali Commission,¹⁵²⁵ indicating that over 70% of residents

¹⁵¹⁶ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁵¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵¹⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁵¹⁹ See footnote 1513.

¹⁵²⁰ See footnote 1517.

¹⁵²¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵²² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁵²³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁵²⁴ See footnotes 1518 and 1521.

¹⁵²⁵ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of personal use and subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a much lower percentage of Port Protection residents were estimated to be in the civilian labor force (28.6%) than in the civilian labor force statewide (68.8%). In the same year, the unemployment rate was estimated to be 0%, compared to a statewide unemployment rate of 5.9%. Approximately 18.4% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall. These poverty and unemployment statistics are likely inaccurate given the small population of Port Protection.¹⁵²⁶ A potentially more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 10%, compared to a statewide unemployment rate estimate of 11.5%.¹⁵²⁷ As with income statistics, it should be noted that these figures do not reflect residents' personal use and subsistence harvest of fish and wildlife resources.

Also based on the 2006-2010 ACS, 14 people aged 16 and older were estimated to be employed in the civilian labor force. Compared to 2000, this represents a substantial decline in the workforce, from 34 to 14. In addition, it is important to note that many fewer industries and occupations were represented in 2010 than in 2000. In 2010, all 14 individuals in the civilian labor force (100% of the workforce) were estimated to be working in the private sector, in agriculture, forestry, fishing, hunting, and mining industries and management/professional occupations. While the concentration of the workforce in fewer industries and occupations may be due to a real population decline in Port Protection, it is also important to note that the sampling methods utilized by the U.S. Census Bureau were altered between 2000 and 2010. The shift in sampling methods may also account for some of the differences observed in employment estimates.¹⁵²⁸ This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 16 employed residents in 2010, of which 31.3% were employed in trade, transportation and utilities industries, 25% were employed by local government, 6.3% in information industries, 6.3% in professional and businesses services, and 31.3% in other industries.¹⁵²⁹ As with income and poverty statistics, it should also be noted that employment statistics do not reflect residents' activity in the subsistence economy.

¹⁵²⁶ See footnote 1523.

¹⁵²⁷ See footnote 1518.

¹⁵²⁸ See footnote 1523.

¹⁵²⁹ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Port Protection (U.S. Census).

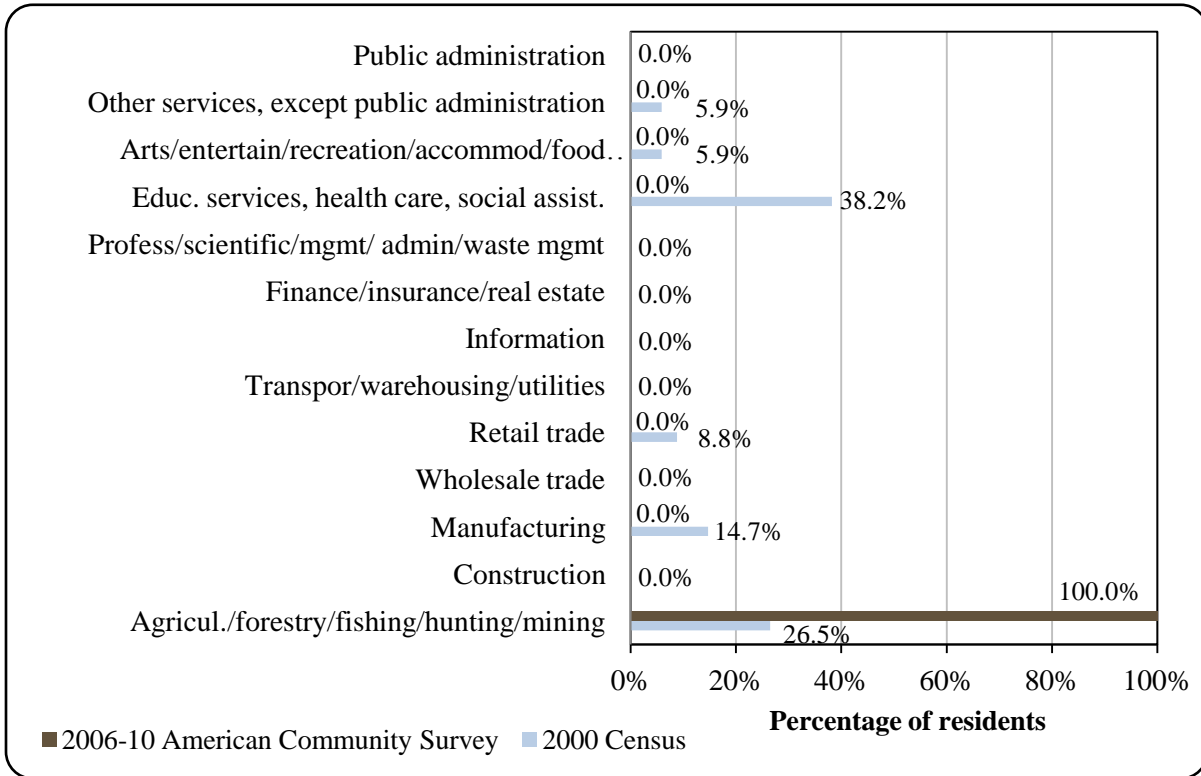
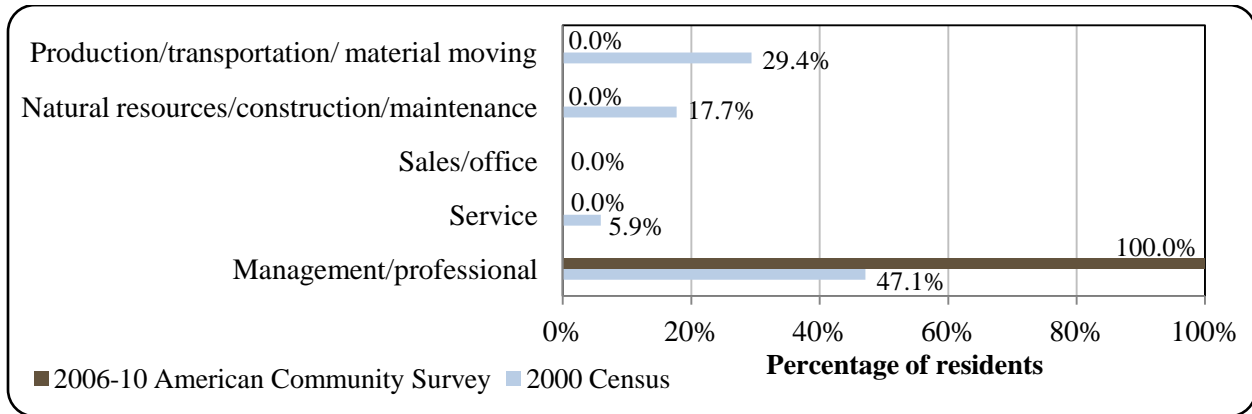


Figure 4. Local Employment by Occupation in 2000-2010, Port Protection (U.S. Census).



Governance

Port Protection is an unincorporated community, and is not located in an incorporated borough. Port Protection was not included under ANCSA, and is not federally recognized as a Native village. The community is represented by the Port Protection Community Association, a non-profit organization that also operates a local piped-water system.¹⁵³⁰ No taxes are collected in Port Protection, and no municipal revenue was reported between 2000 and 2010. Port Protection did receive State Revenue Sharing contributions of between \$3,600 and \$4,200 per year from 2000 to 2003. No information was reported regarding fisheries-related grants received by Port Protection between 2000 and 2010. Information about selected revenue sources in Port Protection is presented in Table 2.

The nearest U.S. Forest Service Ranger District office is located in Thorne Bay, on the east coast of Prince of Wales Island, and Forest Service administrative offices are located in Ketchikan. Ketchikan also hosts the nearest offices of the Alaska Department of Fish and Game (ADF&G), an enforcement office of the National Marine Fisheries Service (NMFS), a Park and Recreational ranger station of the Alaska Department of Natural Resources (DNR), and an office of the U.S. Bureau of Citizenship and Immigration Services. The Alaska Regional Office of the NMFS and the AFSC Auke Bay laboratories are located in Juneau. Juneau also hosts the nearest office of the Alaska Department of Commerce, Community, and Economic Development.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Port Protection from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	n/a
2001	n/a	n/a	\$3,707	n/a
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁵³⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Infrastructure

Connectivity and Transportation

Port Protection is accessible by float plane and boat. A state-owned seaplane base is also available.¹⁵³¹ Taquan Air offers scheduled flights between Ketchikan and Port Protection four times per week during the winter and three times per week during the summer. As of June 2012, the fare for a scheduled float plane flight between Point Baker and Ketchikan was \$378.¹⁵³² As of early June, 2012, roundtrip airfare between Ketchikan and Anchorage was \$462.¹⁵³³ Skiffs are used for local travel, and there is a boat harbor and launch ramp. Port Protection does not have direct access to the Prince of Wales road system, airport, or ferry service. Freight arrives by chartered boat or floatplane. Residents travel to Point Baker for mail.¹⁵³⁴ The nearest road access point is located southwest at Labouchere Bay, and some Port Protection residents travel there by skiff. As of the late 1990s, a majority of residents in Port Protection were opposed to extension of the road system further north.¹⁵³⁵

Facilities

The Port Protection Community Association operates a piped water system. A concrete collection basin directs water from Spring Creek into a 167,000 gallon water storage tank. This water is not treated.¹⁵³⁶ According to a survey conducted by the AFSC in 2011, community leaders indicated that water pipelines were installed in Port Protection in the early 1990s, and that no sewer pipes have been installed. Most homes are fully plumbed for water. A community well and central watering point are also available. A community septic tank is available, and some homes use outhouses. There is no central electrical system in the community, and residents use individual generators. No landfill is available in Port Protection, and no refuse collection services are provided. Police services are provided by state troopers stationed in Petersburg. Fire and rescue services are provided by Port Protection Emergency Medical Services (EMS) and Prince of Wales Island Area EMS.¹⁵³⁷ According to the 2011 AFSC survey, community leaders indicated that a fire department was constructed in Port Protection in 1990. They reported that a community center was also constructed that year. They also noted that telephone service has been available for over 20 years in the community, and broadband internet service was initiated in 2008. No cable provider offers service in Port Protection.¹⁵³⁸

With regard to fisheries-related infrastructure, community leaders indicated in the 2011 AFSC survey that a total of 420 feet of dock space are available for permanent and transient moorage in Port Protection. Each side of the dock float is 210 feet in length, accommodating vessels of up to 200 feet if no other vessels are present. Fuel barges and rescue vessels, such as Coast Guard vessels, can be accommodated at this dock. In addition, community leaders reported

¹⁵³¹ Ibid.

¹⁵³² Flight information retrieved April 12, 2012 from <http://www.taquanair.com/>.

¹⁵³³ This price was calculated on November 21, 2011 using kayak.com.

¹⁵³⁴ See footnote 1530.

¹⁵³⁵ Alaska Dept. of Natural Resources. 1998. *Prince of Wales Area Plan*. Retrieved April 13, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/wales/plan/pow_plan_complete.pdf.

¹⁵³⁶ See footnote 1530.

¹⁵³⁷ Ibid.

¹⁵³⁸ Ibid.

that 150 feet of skiff moorage is available on a separate public float. They indicated that a tidal grid is available for small boats (less than 60 tons), but no boat repair services are available in the community. They noted that fishing gear, bait, tackle, and boat fuel are available for sale in Port Protection. In addition, they indicated that fishermen who sell fish to buyers locally are able to purchase ice. Finally, community leaders noted the presence of several fish lodges. For access to fisheries-related businesses and services not available in Port Protection, community leaders indicated that residents typically travel to Petersburg, Wrangell, or Ketchikan.

Medical Services

There is no clinic or hospital located in Port Protection.¹⁵³⁹ According to the 2011 AFSC survey, a doctor flies in to the community on a quarterly basis. Alternate health care is provided by Port Protection Emergency Medical Services (EMS) and Prince of Wales Island Area EMS. Emergency services have coastal, float plane, and helicopter access, and are provided by volunteers. The nearest hospitals are located in Wrangell and Petersburg, and health clinics are also located in Klawock and Craig, to the south.¹⁵⁴⁰

Educational Opportunities

There is one school in Port Protection, which offers Kindergarten through 12th grade. As of 2011, Port Protection School had a total of 10 students and 2 teachers.¹⁵⁴¹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Indigenous people have used the Port Protection area for subsistence harvest for thousands of years.¹⁵⁴² Commercial harvest of salmon began in Southeast Alaska in the late 1870s.¹⁵⁴³ In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.¹⁵⁴⁴ The first resident of Port Protection, “Wooden Wheel” Johnson, brought a fish-buying scow to the area, enabling trollers to stop for supplies and safe anchor on their trips north or south. In 1946, Laurel “Buckshot” Woolery opened a fish-buying station in the community. In the 1950s, a warehouse was constructed in the hopes of creating a shrimp cannery at Port Protection, but the idea was never realized.¹⁵⁴⁵

¹⁵³⁹ Ibid.

¹⁵⁴⁰ Ibid.

¹⁵⁴¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁵⁴² Langdon, Steven. 1979. “Comparative Tlingit and Haida Adaptation to the West Coast of the Prince of Wales Archipelago.” *Ethnology* 18:2 (101-119).

¹⁵⁴³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁵⁴⁴ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁵⁴⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Between 2000 and 2010, Port Protection residents held state salmon and ‘other shellfish’ permits, which included permits for statewide commercial clam and Southeast sea cucumber fisheries (see *Commercial Fishing* section below). The first experimental commercial harvest of sea cucumbers in Alaska took place near Ketchikan in 1983. The fishery peaked in 1989, and the need to control rapid growth of the fishery led to development of the Southeast Alaska Sea Cucumber Commercial Fisheries Management Plan in 1990. The primary commercial clam fishery in Southeast Alaska targets geoduck clams.¹⁵⁴⁶

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the Southeast region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (sockeye, coho, and Chinook). Because of Southeast Alaska’s proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty, which was originally negotiated in 1985, and was renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.¹⁵⁴⁷

Port Protection participates in the Community Quota Entity (CQE) program, and has established a CQE nonprofit called the Port Protection Community Fisheries Corporation. The CQE non-profit was established at the recommendation of the Port Protection Community Association. As of Fall 2013, the Port Protection Community Fisheries Corporation had not yet purchased any commercial halibut Individual Fishing Quota (IFQ) or non-trawl groundfish License Limitation Program permits for lease to eligible community members. However, the non-profit had acquired four halibut charter permits for lease to community members.¹⁵⁴⁸ Port Protection is not eligible to participate in the Community Development Quota (CDQ) program. Port Protection is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 659. The closest federal Sablefish Regulatory Area is “Southeast Outside.”

According to a survey conducted by the AFSC in 2011, community leaders indicated that the community of Port Protection does not send representation to participate directly in fisheries management processes, and relies on regional organizations, such as the Southeast Conference, to provide information on fisheries management issues. They also outlined several challenges that face the Port Protection fishing economy, largely related to the isolation of the community. These challenges include lack of boat repair services, limited product transportation to market, limited off-loading, and limited dock space, as well as high fuel and grocery prices. Community leaders also reported negative impacts to the community from depletion of local crab and other shellfish resources resulting from the exploding sea otter population, and loss of income resulting from reduction in halibut quota share allocations.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, there were no registered processing plants in Port Protection. Processing facilities are available in several cities in the surrounding region, including Craig, Klawock, Ketchikan, Wrangell, and Petersburg.

¹⁵⁴⁶ See footnote 1544.

¹⁵⁴⁷ See footnote 1543.

¹⁵⁴⁸ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Port Protection (Table 3).

*Commercial Fishing*¹⁵⁴⁹

In a survey conducted by the AFSC in 2011, community leaders reported that major local fisheries include the year-round salmon troll fishery, the salmon gill net fishery from June through September, and longline fisheries from March through November. According to ADF&G permit records, in 2010, three area residents held three permits issued by the Commercial Fisheries Entry Commission (CFEC). Of these, two were statewide salmon troll permits, and one was for the Southeast Alaska sea cucumber dive fishery. At least one statewide salmon hand troll permit was held each year between 2000 and 2010, along with one statewide power gurdy troll permit held in 2001 and one Southeast drift gillnet permit held in 2005. One sea cucumber dive permit was held each year from 2008 to 2010. Previously, from 2001 to 2005, one statewide clam shovel permit was held by a Port Protection area resident (Table 4).

Between 2000 and 2010, no Port Protection area residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits in federal groundfish or crab fisheries. From 2006 to 2010, no residents held federal quota share accounts or quota shares in federal fisheries for halibut, sablefish, or crab. However, between one and three halibut quota share accounts were held by Port Protection residents each year between 2000 and 2005. The highest number of halibut quota shares (5,457) was held from 2002 to 2004, when three area residents held halibut quota share accounts. Information about federal permits is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

One Port Protection area resident held a commercial crew license in the year 2000, but none were held between 2001 and 2010. No shore-side processing facilities were located in Port Protection between 2000 and 2010, although the number of fish buyers operating in the community varied from one to three per year during this period. Area residents held majority ownership of three vessels in 2010, compared to one in 2000. A greater number of vessels were homeported in the Port Protection region than were owned by local residents, although the number fell from 29 in 2000 to 16 in 2010 (Table 5).

According to the 2011 AFSC survey, community leaders indicated that fishing vessels basing out of Port Protection are primarily under 35 feet or between 35 and 60 feet in length, and the most common gear types used are troll, gillnet, longline and dive gear. Community leaders did not perceive a change in the number of commercial fishing vessels in the last five years, although they did perceive a decline in the number of charter boats, private pleasure boats and boats shorter than 35 feet. This observation was explained by noting that people have moved away from the community, taking their boats with them.

Details regarding local landings and ex-vessel revenue are considered confidential between 2000 and 2010 due to the small number of fish buyers (Table 9). In addition, landings reported by individual Port Protection area vessel owners, irrespective of delivery location, are considered confidential during this period due to the small number of participants (Table 10).

¹⁵⁴⁹ ADF&G commercial fishery statistics are reported in aggregate for the communities of Whale Pass, Port Protection, Tokean, Tuxekan, and Noyes Island. Given this, the Port Protection and Whale Pass profiles report combined numbers for commercial fishery data, as well as recreational and subsistence information.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Port Protection: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Port Protection: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	2	2	2	2	1	0	0	1	1	1
	Fished permits	0	0	0	1	0	0	0	0	1	1	1
	% of permits fished	-	0%	0%	50%	0%	0%	-	-	100%	100%	100%
	Total permit holders	0	2	2	2	2	1	0	0	1	1	1
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Port Protection: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	2	1	1	1	1	1	1	1	2	2
	Fished permits	0	1	0	0	0	0	1	0	0	1	1
	% of permits fished	0%	50%	0%	0%	0%	0%	100%	0%	0%	50%	50%
	Total permit holders	1	2	1	1	1	1	1	1	1	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>3</i>
	<i>Fished permits</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>2</i>	<i>2</i>
	<i>% of permits fished</i>	<i>0%</i>	<i>25%</i>	<i>0%</i>	<i>33%</i>	<i>0%</i>	<i>0%</i>	<i>100%</i>	<i>0%</i>	<i>50%</i>	<i>67%</i>	<i>67%</i>
	<i>Permit holders</i>	<i>1</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>3</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Port Protection: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Port Protection ²	Total Net Pounds Landed In Port Protection ^{2,5}	Total Ex-Vessel Value Of Landings In Port Protection ^{2,5}
2000	1	2	0	1	29	7	-	-
2001	0	1	0	2	30	7	-	-
2002	0	1	0	1	22	9	-	-
2003	0	1	0	1	24	5	-	-
2004	0	1	0	1	21	11	-	-
2005	0	1	0	1	14	14	-	-
2006	0	1	0	2	14	11	-	-
2007	0	3	0	3	13	13	-	-
2008	0	1	0	2	12	5	-	-
2009	0	1	0	2	15	4	-	-
2010	0	2	0	3	16	74	-	-

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Port Protection: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	4,289	604
2001	1	4,289	631
2002	3	5,457	754
2003	3	5,457	754
2004	3	5,457	914
2005	2	1,168	160
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Port Protection: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Port Protection: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Port Protection: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Port Protection Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, the number of active sport fish guide businesses located in Port Protection varied from zero to two. The number of licensed sport fish guides registered in the community was very similar in most years, also varying between zero and two each year (Table 11). Kept/released statistics from charter logbook data reported by ADF&G¹⁵⁵⁰ show that coho salmon, pink salmon, and Pacific halibut were the three species most represented in Port Protection area charter catches between 2000 and 2010. Lingcod and various rockfish species are also frequently caught. Smaller numbers of Chinook and sockeye salmon were also reported in charter logbook data.

Port Protection residents were only reported to have purchased sportfishing licenses in one year during the 2000-2010 period. That year (2010), two residents were reported to have purchased licenses (irrespective of point of sale). No sportfishing licenses were sold in the community of Port Protection itself. This information about sportfishing in the Port Protection area is presented in Table 11.

According to ADF&G Statewide Harvest Survey records,¹⁵⁵¹ local private anglers target Chinook and coho salmon, Pacific halibut, rockfish, lingcod, Tanner crab, hardshell clams, and shrimp. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers also target pink and chum salmon. They also indicated that local sportfishing is done by charter and private vessels owned by both Alaskan and non-Alaskan residents, as well as from the shore or docks.

Port Protection is located within Alaska Sport Fishing Survey Area B – Prince of Wales. Looking at this regional scale between 2000 and 2010, there was significantly greater saltwater sportfishing activity than freshwater, although both were important. In both cases, non-Alaska resident anglers fished a greater number of days than Alaska resident anglers. In saltwater, non-Alaska resident anglers fished an average of 41,463 days per year, while Alaska resident anglers fished an average of 14,543 days. In freshwater, non-Alaska resident anglers averaged 10,237 days per year, and Alaska resident anglers averaged 6,541 days. This regional information about the sportfishing sector in the Port Protection area is presented in Table 11.

¹⁵⁵⁰ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁵⁵¹ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11. Sport Fishing Trends, Port Protection: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Port Protection ²
2000	0	0	0	0
2001	0	0	0	0
2002	0	0	0	0
2003	0	0	0	0
2004	0	0	0	0
2005	1	1	0	0
2006	0	0	0	0
2007	0	1	0	0
2008	1	2	0	0
2009	2	2	0	0
2010	1	2	2	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	33,043	16,031	9,024	10,630
2001	38,248	14,090	7,299	5,922
2002	36,736	12,590	9,957	8,981
2003	37,341	16,346	10,627	11,506
2004	40,803	16,770	11,518	3,969
2005	52,135	16,333	10,100	3,527
2006	46,207	11,828	11,073	5,161
2007	49,280	13,327	11,132	6,463
2008	46,717	17,930	11,302	7,185
2009	38,164	10,829	9,918	4,124
2010	37,416	13,896	10,660	4,478

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

The Port Protection area was historically used by the Heenya Tlingit of Klawock. Many historical seasonal camps are located throughout the area.^{1552,1553} Although the modern community of Port Protection was founded in the early 1900s and is not a traditional subsistence-based community, residents of Port Protection rely on subsistence resources to supplement diet and income.^{1554,1555} In a survey conducted by the AFSC in 2011, community leaders reported that three of the most important marine subsistence resources utilized by Port Protection residents are halibut, clams, and salmon.

Data on per capita subsistence harvest and the percentage of households utilizing various marine resources for subsistence purposes are unavailable between 2000 and 2010. However, earlier information about household-level subsistence participation is available from a 1996 ADF&G study. The survey identified species of marine invertebrates, non-salmon fish (not including halibut), and marine mammals harvested by Port Protection households that year. The species of marine invertebrates harvested by the greatest percentage of Port Protection households in 1996 included butter clams (68% of households reported harvest), Dungeness crab (64%), shrimp (44%), starfish (28%), heart cockles (24%), Pacific littleneck clams (20%), horse clams (20%), abalone (16%), black chitons (16%), and octopus (12%). The species of non-salmon fish harvested by the greatest percentage of Port Protection households included black rockfish (52% of households harvested), red rockfish (40%), Dolly Varden (32%), herring (32%), cutthroat trout (20%), lingcod (20%), steelhead (16%), rainbow trout (12%), rock greenling (12%), sablefish (12%), and silver smelt (12%). In addition, Port Protection residents were reported to harvest herring roe using hemlock branches, hair seaweed, and general spawn on kelp harvest. Also in 1996, 8% of Port Protection households reported harvesting harbor seal.¹⁵⁵⁶ It is important to note that in many cases, the number of households reporting use of these subsistence resources was greater than the number involved in harvest, indicating the presence of sharing networks in Port Protection.

Some data were available between 2000 and 2010 regarding annual subsistence harvest of salmon and halibut. For those years in which information was reported, the number of subsistence salmon permits issued to Port Protection area households varied from two to four per year. In 2004, a total of 123 salmon were harvested using subsistence salmon permits, of which 86 were sockeye. Reports of salmon harvest numbers in subsequent years are unavailable (Table 13). From 2004 to 2010, the number of Port Protection residents holding Subsistence Halibut Registration Certificates (SHARC) varied between 1 and 2 per year. No data were available regarding the number of SHARC cards returned or pounds of halibut harvested through this program (Table 14). Finally, no information was reported by management agencies between

¹⁵⁵² Tongass National Forest website. (n.d.). *Roadless Area Maps & Descriptions*. Retrieved April 13, 2012 from <http://www.tongass-seis.net/roadless.html>.

¹⁵⁵³ Langdon, Steven. 1979. "Comparative Tlingit and Haida Adaptation to the West Coast of the Prince of Wales Archipelago." *Ethnology* 18:2 (101-119).

¹⁵⁵⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁵⁵ Alaska Dept. of Natural Resources. 1998. *Prince of Wales Area Plan*. Retrieved April 13, 2012 from http://dnr.alaska.gov/mlw/planning/areaplans/wales/plan/pow_plan_complete.pdf.

¹⁵⁵⁶ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

2000 and 2010 regarding subsistence harvest of other fish species, marine invertebrates, or marine mammals by residents of Port Protection (Tables 13 and 15).

Table 12. Subsistence Participation by Household and Species, Port Protection: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Port Protection: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	4	4	n/a	9	6	22	86	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	2	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Port Protection: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	1	n/a	n/a
2009	2	n/a	n/a
2010	2	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Port Protection: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Sitka (SIT-kuh)

People and Place

*Location*¹⁵⁵⁷



Sitka is located on the west coast of Baranof Island fronting the Pacific Ocean, on Sitka Sound. A dormant volcano, Mount Edgecumbe, rises 3,200 ft above the community. Sitka is 95 air miles southwest of Juneau and 185 miles northwest of Ketchikan. Seattle, Washington, lies 862 air miles to the south. The City and Borough of Sitka is located in the Sitka Recording District and the Sitka Census Area. The City and Borough encompass 2,874 square miles of land and 1,937.5 square miles of water.

*Demographic Profile*¹⁵⁵⁸

In 2010, there were 8,881 residents in the Sitka, making it the 7th largest of 352 total Alaskan communities with recorded populations that year. According to Alaska Department of Labor estimates, the population of permanent residents increased by 1.8% between 2000 and 2006, and then declined by 4.1% between 2006 and 2009. Overall between 2000 and 2009, the population decreased by 2.4%. The average annual growth rate during this period was -0.41%, reflecting the fact that the population increased in some years and declined in others, with an overall decline. The change in population from 1990 to 2010 is provided in Table 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders noted that Sitka has approximately 1,800 seasonal workers or transients each year, typically from April through September, and that this annual peak in population is mostly driven by employment in the fishing sectors.

In 2010, a majority of Sitka residents identified themselves as White (65.3%). Other ethnic groups present in Sitka that year included American Indian and Alaska Native (16.8%), two or more races (9.8%), Asian (6%), Hispanic or Latino (4.9%), some other race (1.3%), Black or African American (0.5%), and Native Hawaiian and Other Pacific Islander (0.3%). Between 2000 and 2010, the percentage of the population identifying themselves as White declined by 3.2% and the percentage of the population identifying themselves as American Indian and Alaska Native decreased by 1.8%. During that same period there were corresponding increases in the percentage of the population identifying themselves as Hispanic or Latino, two or more races, Asian, some other race, and Black or African American. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹⁵⁵⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁵⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

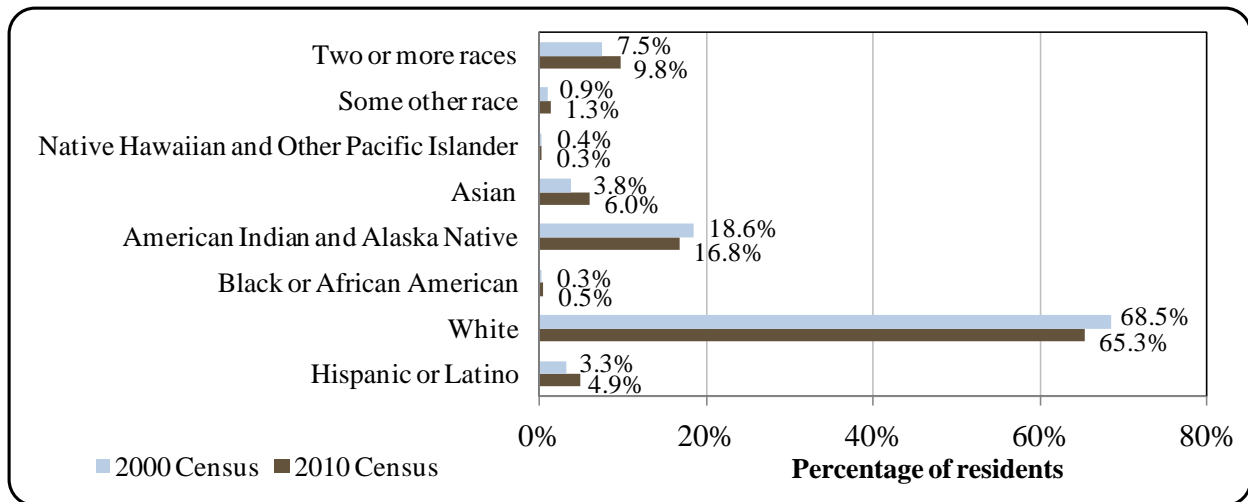
Table 1. Population in Sitka from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	8,588	-
2000	8,835	-
2001	-	8,727
2002	-	8,794
2003	-	8,892
2004	-	8,826
2005	-	8,948
2006	-	8,992
2007	-	8,621
2008	-	8,641
2009	-	8,627
2010	8,881	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Sitka: 2000-2010 (U.S. Census).

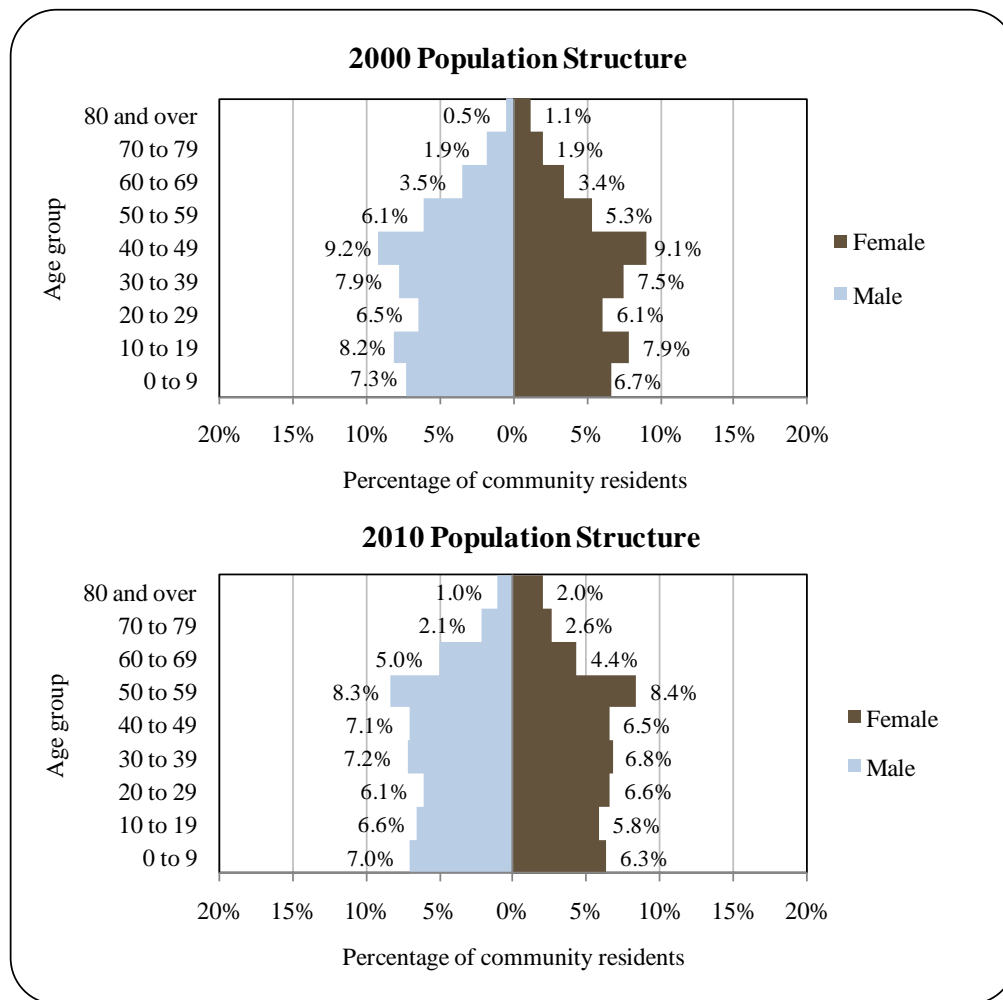


In 2010, the average household size in Sitka was 2.43, a slight decrease from 2.8 persons per household in 1990 and 2.61 in 2000. The total number of households in Sitka increased from 2,939 in 1990 and 3,278 in 2000 to 3,545 by 2010. Of the 4,102 total housing units surveyed for the 2010 Decennial Census, 2,050 (50%) were owner-occupied, 1,495 (36.4%) were renter-occupied, and 557 (13.6%) were vacant. Of these vacant housing units, 237 were vacant due to

seasonal, recreational, or occasional use. The number of Sitka residents estimated to be living in group quarters increased from 247 in 1990 to 271 in 2000, and then fell again to 255 in 2010.

In 2010, the gender makeup in Sitka was 50.5% male and 49.5% female, slightly less skewed than the state as a whole (52% male, 48% female). The median age was estimated to be 38.2 years, slightly higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of Sitka residents fell within the age category 40-59 years old, with males outnumbering females in every age category except 20-29 years old, 50-59 years old, and 70 years old and older. Relatively few residents were age 80 and over. The overall population structure of Sitka in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Sitka Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁵⁵⁹ 92.3% of Sitka residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 1.6% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 6.1% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 26.2% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 28% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 9% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 18.1% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 11% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The Tlingit people first settled in the Sitka area an estimated 10,000 years ago. The name Sitka is an English derivation of *Sheet'ká*, a contraction of the full name *Shee At'iká*, meaning “People on the Outside of Shee” (Baranof Island). The full name for Baranof Island in Tlingit is *Sheet'ka X'aát'*. When a Russian expedition led by Vitus Bering arrived in 1741, a Tlingit settlement was recorded at the present site of Sitka, and the high value of the location and surrounding resource base was noted. In 1799, members of the Russian American Company, led by Alexander Baranov, returned to Sitka. St. Michael's Redoubt trading post and fort were built near the Tlingit village. The Russians called the site, “New Archangel.”¹⁵⁶⁰

With escalating conflict between the Native peoples of Southeast Alaska and the Russians, an unprecedented war alliance formed across Tlingit and Haida clans and communities, from Yakutat in the north to the Kaigani Haida in the south. Three coordinated attacks on Russian positions were carried out by the alliance 1802, including destruction of the Russian fort at Sitka on June 15, an attack on a Russian party led by Urbanov near Kake, and fighting with Kuskov near Yakutat. Baranov was unable to retaliate immediately due to a shortage of manpower. However, in 1804, Baranov returned to Sitka with a fleet of seven vessels and an Aleut sea-otter hunting party of 400 baidarkas. The army destroyed the villages of Kake and Kuiu in retaliation for their participation in the 1802 attacks, and then sailed to Sitka. The Sitka Tlingit had built a fort on Indian River. Although both the Tlingit and the Russians suffered casualties during the battle that ensued, the Tlingit were outnumbered, and fled during the night on an overland route across Baranof Island to Angoon. The Russians declared victory, having taken the Tlingit Fort.¹⁵⁶¹ After the evacuation of the Tlingit, they did not return to Sitka until around 1822. The 1804 battle was the last major stand by the Tlingits against the Russians. By 1808, Sitka was the capital of Russian America, which extended from northern Alaska south to

¹⁵⁵⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁵⁶⁰ Sitka Economic Development Association. (n.d.). *Culture & History*. Retrieved November 21, 2012 from <http://www.sitka.net/sitka/culturehistory.html>.

¹⁵⁶¹ Dauenhauer, Nora Marks, Dauenhauer, Richard L., Black, Lydia T. (2008). *Anóoshi Lingít Aaní Ká. Russians in Tlingit America: The Battles of Sitka 1802 and 1804*. Sealaska Heritage Institute. University of Washington Press, Seattle.

Fort Ross, California.¹⁵⁶² Alexander Baranov was Governor of Russian America from 1790 to 1818.¹⁵⁶³

In the mid-1800s, Sitka was the major port on the north Pacific coast, with the first boatyard, a lighthouse, sawmill, several foundries, and a flour mill. Between 1806 and 1867, a number of large ships were built at Sitka, including steamships, steam launches, and many sailing vessels. Ships called from many nations, bringing supplies to the Russians, and leaving with exports including furs, salmon, lumber, and ice.¹⁵⁶⁴

Following the purchase of Alaska by the United States in 1867, Sitka remained the capital of the Alaska Territory until the seat of government was transferred to Juneau in 1906.¹⁵⁶⁵ In 1878, Sitka became the site of one of the first canneries in Alaska, although the Sitka cannery closed after only two seasons of operation.¹⁵⁶⁶ Also in 1878, a Presbyterian missionary named Sheldon Jackson started a school in Sitka to be used as an Industrial and Training School for Alaska Natives. In 1911, additional buildings were constructed, and the training college turned into Sheldon Jackson School. It became a junior college in 1944, and began offering 4-year degrees in 1967. In 2007, the college was closed due to insufficient enrollment and lack of funding.¹⁵⁶⁷

Sitka's growth was also fueled by gold mining activity in the early 1900s. The City was incorporated in 1913. Additional development took place during World War II, when the town was fortified and the U.S. Navy built an air base on Japonski Island, a small island located across a narrow channel from Sitka's harbor. Approximately 30,000 military personnel and over 7,000 civilians were stationed there during the war. After the war, some military buildings were converted by the Bureau of Indian Affairs (BIA) into a boarding school. Today, Mt Edgecumbe High School is located at this campus, and the U.S. Coast Guard maintains the air station and other facilities on the Island.¹⁵⁶⁸ In 1959, Alaska Pulp Corporation began producing wood fiber at a pulp mill at Silver Bay near Sitka. The pulp mill employed a maximum of 450 people in Sitka at one time. The mill closed in 1993. In 1999, the City and Borough of Sitka took ownership of the site and is currently working to develop the Sawmill Cove Industrial Park.¹⁵⁶⁹ The facility is envisioned to be a deep water port intermodal facility, featuring a multi-purpose dock and a bulkhead cargo and freight dock.¹⁵⁷⁰ The City and Borough governments were unified in 1971.¹⁵⁷¹

¹⁵⁶² See footnote 1560.

¹⁵⁶³ Southeast Conference. (n.d.). *Community Profile: Sitka City and Borough*. Retrieved November 28, 2012 from <http://www.seconference.org/sitka>.

¹⁵⁶⁴ Alaska History and Cultural Studies. (2012). *Other Economic Activity*. Retrieved November 28, 2012 from <http://www.akhistorycourse.org/articles/article.php?artID=160>.

¹⁵⁶⁵ See footnote 1560.

¹⁵⁶⁶ Alaska History and Cultural Studies. (2012). *Southeast Alaska: 1873-1900 Developing Southeast Alaska*. Retrieved November 28, 2012 from <http://www.akhistorycourse.org/articles/article.php?artID=71>.

¹⁵⁶⁷ Sitka Economic Development Association. (n.d.). *Sheldon Jackson College*. Retrieved November 28, 2012 from <http://www.sitka.net/SJC/SJCAbout.html>.

¹⁵⁶⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁶⁹ Sawmill Cove Industrial Park. (2010). *The Evolution of a Marine Industrial Park*. Retrieved November 28, 2012 from <http://www.sawmillcove.com/history.html>.

¹⁵⁷⁰ City and Borough of Sitka. (2012). *Legislative Priorities, Fiscal Year 2013*. Retrieved November 28, 2012 from http://www.cityofsitka.com/government/documents/FinalCompletePacket_000.pdf.

¹⁵⁷¹ See footnote 1568.

Today, Tlingit and Russian cultural influences remain evident in Sitka. Residents enjoy a diverse economy, and year-round access to outdoor recreation in the Gulf of Alaska and Tongass National Forest.¹⁵⁷²

Natural Resources and Environment

January temperatures range from 23 to 35 °F (-5 to 1.7 °C), while summers vary from 48 to 61 °F (8.9 to 16.1 °C). Average annual precipitation is 96 inches, including 39 inches of snowfall.¹⁵⁷³ City and Borough lands are surrounded by the Tongass National Forest (Tongass). The Tongass is the largest unit in the national forest system, at almost 17 million acres. The U.S. Forest Service works to balance multiple uses of the forest resources. The Tongass has healthy fish and wildlife populations, clean water, trees to support local industry, and recreational opportunities unique to Alaska. The roads that exist in Southeast Alaska have been developed from forest roads that were originally built to reach timber. Though home to the world's largest temperate rain forest, almost half of the Tongass is covered by ice, water, wetlands and rock. Few places in the world have the geologic and climatic variations that sculpt this landscape. The snow and ice of the 1,500-square-mi Juneau Ice Field are less than eight miles from the salt water in Gastineau Channel.¹⁵⁷⁴

The Tongass is home to numerous plant species, including ferns, dwarf dogwood, false lily of the valley, marsh marigold, skunk cabbage, western hemlocks, Sitka spruce, sub-alpine fir, yellow cedar, and hardwoods such as alder. The largest known concentrations of bald eagles gather each year in the National Forest, and thousands of shorebirds use the forest as a resting place during their annual migrations. Marine mammals such as sea otters, whales, porpoises, and seals utilize marine waters in the area. Terrestrial species that inhabit Baranof Island include Sitka black-tailed deer, brown bears, mountain goats, beaver, fox, and porcupines. All five species of Pacific salmon (chum, coho, Chinook, pink, and sockeye) can be found in rivers and streams of the Tongass, along with Dolly Varden, rainbow trout, steelhead trout, and cutthroat trout.¹⁵⁷⁵

Marine resources have long been the basis of life in the region. For an estimated 10,000 years,¹⁵⁷⁶ Tlingit and Haida peoples have fished for salmon and herring and gathered berries and other plants. Each generation shares its knowledge of the land with the next.¹⁵⁷⁷ In a survey conducted by the AFSC in 2011, community leaders reported that Sitka's economy today relies on natural resource-based industries such as fishing, ecotourism (e.g. whale watching, kayaking), and sport hunting and fishing. The waterways of Southeast Alaska are an important resource for the tourism industry and the lifestyle of local residents alike, providing opportunity for sailing, motorboating, kayaking, and fishing. Today, many rural residents continue to participate in subsistence harvest of marine resources.¹⁵⁷⁸

¹⁵⁷² Ibid.

¹⁵⁷³ Ibid.

¹⁵⁷⁴ U.S. Forest Service (n.d.). *Introduction to the Tongass*. Retrieved March 8, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/faqs/intro.shtml.

¹⁵⁷⁵ Ibid.

¹⁵⁷⁶ Sitka Economic Development Association. (n.d.). *Culture & History*. Retrieved November 21, 2012 from <http://www.sitka.net/sitka/culturehistory.html>.

¹⁵⁷⁷ See footnote 1574.

¹⁵⁷⁸ Ibid.

Natural hazards with likelihood of occurring in the City and Borough of Sitka include earthquake, snow avalanche, tsunami, severe weather, ground failure, and flood/erosion. Of these, the hazards with the greatest probability of occurring are earthquake, snow avalanche, and tsunami.¹⁵⁷⁹ According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in the Sitka area as of March 2013.¹⁵⁸⁰

Current Economy¹⁵⁸¹

The economy is diversified with fishing, fish processing, tourism, government, transportation, retail, and healthcare services. Cruise ships heavily stimulate the local tourism industry. In 2010, 563 residents held commercial fishing permits, and fish processing provides seasonal employment. The seafood industry is a major employer. Regional healthcare services, the U.S. Forest Service, and the U.S. Coast Guard also employ residents. Moreover, in 2011, 191 Coast Guard personnel were stationed in Sitka.¹⁵⁸²

Based on the 2006-2010 ACS,¹⁵⁸³ in 2010, per capita income in Sitka was estimated to be \$29,982 and the median household income was estimated to be \$62,024, compared to \$23,622 and \$51,901 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁵⁸⁴ the real per capita income in 2000 is shown to have been \$31,063 and the real 2000 median household income was \$68,249. This shows that per capita and household incomes both decreased between 2000 and 2010. However, Sitka's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁵⁸⁵ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Sitka in 2010 is \$13,634.^{1586,1587} This provides support for an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.

Based on 2006-2010 ACS estimates, in 2010, Sitka ranked 63rd of 305 Alaskan communities with per capita income that year, and 70th of 299 Alaskan communities with

¹⁵⁷⁹ City and Borough of City, WHPacific, and Bechtol Planning & Development. (2010). *City & Borough of Sitka Multi-Hazard Mitigation Plan - FEMA Preapproved Plan*. Retrieved March 5, 2013 from <http://sitka.legistar.com/View.ashx?M=F&ID=911913&GUID=7E149260-28B5-46D9-B8EC-BBE046A17B52>.

¹⁵⁸⁰ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 5, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁵⁸¹ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁵⁸² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵⁸³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵⁸⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁵⁸⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

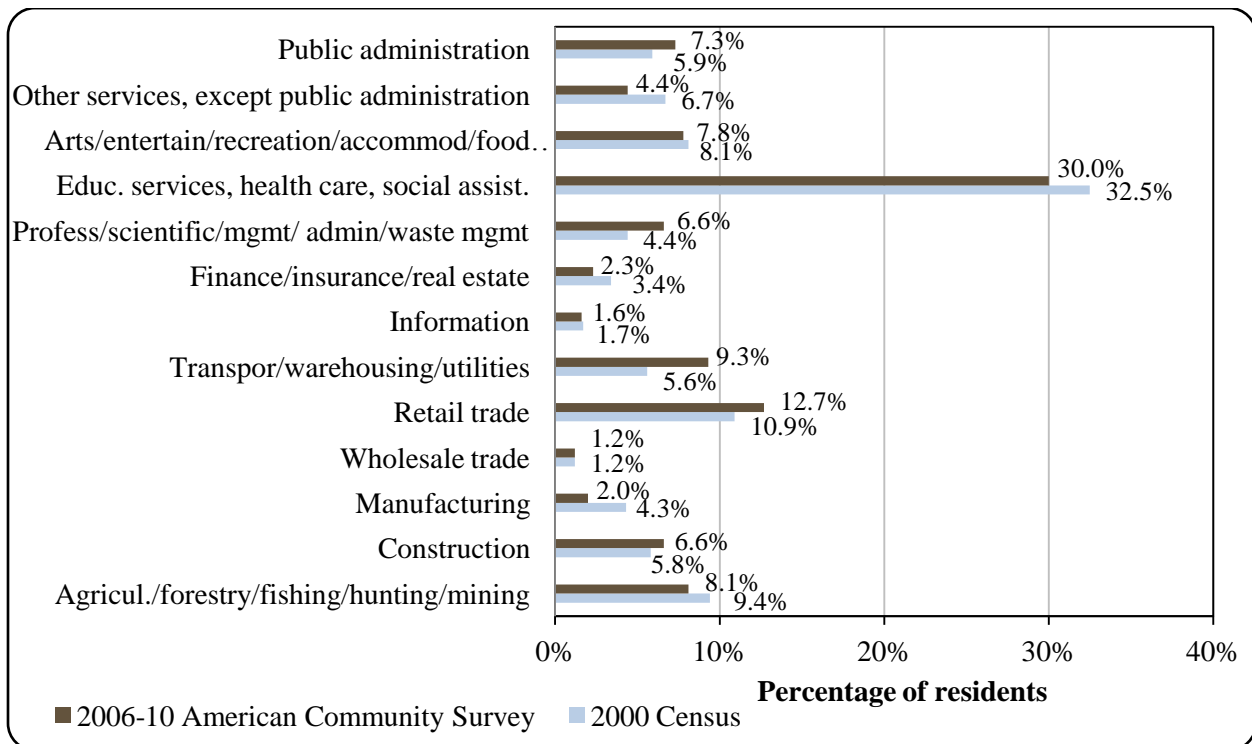
¹⁵⁸⁶ See footnote 1583.

¹⁵⁸⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

household income data. In the same year, 70.4% of the population aged 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 6.9%, compared to the statewide unemployment rate of 5.9%. Another estimate of unemployment based on the ALARI database indicates that unemployment in 2010 was 9.3%.¹⁵⁸⁸ ACS estimates suggest that 7% of local residents were estimated to be living below the poverty line, compared to an estimated 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Sitka are not reflective of the value of subsistence to the local economy.

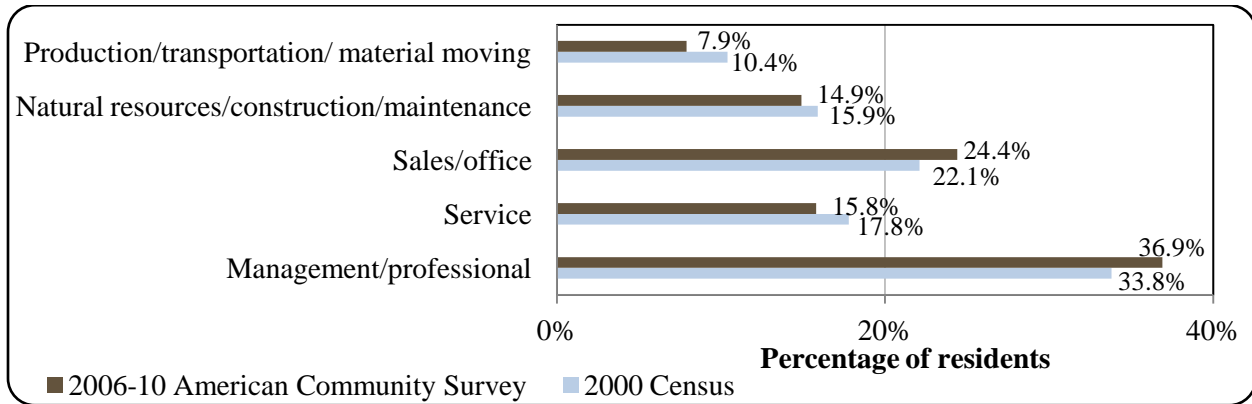
Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was employed in the private sector (61.7%), while 28.1% of workers were employed in the public sector and 10.1% were self-employed. Out of 4,692 people aged 16 and older that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in education services, health care, and social assistance (30%), retail trade (12.7%), and transportation, warehousing, and utilities (9.3%). The most common occupations were estimated to be management/professional (36.9%) and sales/office occupations (24.4%). An estimated 5.9% of the workforce characterized themselves as working in farming, fishing, and forestry occupations (a sub-category of natural resource/construction/maintenance occupations). Based on the high commercial fishing participation reported in the *Commercial Fishing* section below, the number of individuals employed by fishing may be underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Sitka (U.S. Census).



¹⁵⁸⁸ Ibid.

Figure 4. Local Employment by Occupation in 2000-2010, Sitka (U.S. Census).



Governance

Sitka is a Unified Home Rule Municipality and has been referred to as the City and Borough of Sitka since the city and borough governments were unified in 1971. The City and Borough administer a sales tax that varies seasonally, from 5% between October and March to 6% between April and September. In addition, a 6.0 mills property tax, 6% bed tax, and 5% tobacco tax are administered.¹⁵⁸⁹

The amount of annual municipal revenue received by Sitka increased between 2000 and 2010, and the years of 2008 and 2009 were the highest during this period. Revenue received from sales tax also increased overall between 2000 and 2010, though sales tax revenue in 2010 was lower than sales tax revenue from 2006 to 2009. Outside revenue sources in Sitka included shared revenues from and grants from the State of Alaska and federal agencies. State shared revenues included contributions from the State Revenue Sharing program from 2000 to 2003 and the Community Revenue Sharing program in 2009 and 2010. Fisheries-related grants from both state and federal sources were received during the 2000-2010 period. The grants were obtained for multiple projects including a pulp dock warehouse upgrade, a ferry shuttle vessel for the Alaska marine highway system, harbor pre-construction and feasibility and design, harbor construction, upgrades to and purchase of equipment for fish processing and aquaculture, a fisheries/hatchery training facility, a cove lift station replacement, Swan Lake dock and pedestrian improvements, and commercial passenger vessel lightering facility improvements. Information about selected aspects of Sitka’s community revenue is presented in Table 2.

Sitka was included under the Alaska Native Claims Settlement Act (ANCSA), and the federally authorized traditional entity is the Sitka Tribe of Alaska. The local Native village corporation is Shee Atika, Incorporated. Sitka is also a member of the Sealaska Corporation, a regional Native corporation. Sealaska is a Native Corporation owned by over 20,000 tribal member shareholders and guided by the traditions of environmental stewardship and positively impacting their communities. Sealaska is made up of legendary traders who are deeply connected to their lands and have successfully adapted to constantly changing environments and global economies. Sealaska brings together the wisdom and foresight of their combined heritage to

¹⁵⁸⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

create an enduring corporation that provides business opportunities, benefits and cultural strength for their people. Today Sealaska is the largest private landowner and the largest for-profit private employer in Southeast Alaska. Sealaska is a diverse company with investments in forest products, construction aggregates, machining and fabrication, environmental remediation, information technology, plastics injection molding and manufacturing, global logistics, wood products and financial markets. Sealaska’s status as a Minority Business Enterprise and Small Disadvantaged Business add to their strength as a government contractor and commercial diversity supplier.¹⁵⁹⁰

The Alaska Department of Fish and Game (ADF&G), Department of Natural Resources (DNR), U.S. Forest Service, and the National Marine Fisheries Service (NMFS) all have offices located in Sitka. The nearest location of the Alaska Department of Commerce, Community, and Economic Development is in Juneau. The nearest office of the Bureau of Citizenship and Immigration Services is located in Ketchikan.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Sitka from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$44,457,473	\$6,006,740	\$206,992	n/a
2001	\$46,765,433	\$6,377,699	\$199,602	\$3,801,169
2002	\$47,508,174	\$6,593,998	\$197,703	\$4,784,500
2003	\$47,149,199	\$7,119,114	\$195,172	\$2,500,000
2004	\$50,479,347	\$7,527,857	n/a	\$234,170
2005	\$51,491,494	\$8,866,834	n/a	n/a
2006	\$54,893,881	\$9,277,571	n/a	n/a
2007	\$58,454,975	\$9,800,634	n/a	\$1,200,000
2008	\$64,821,369	\$9,901,347	n/a	\$155,300
2009	\$68,890,719	\$9,761,477	\$919,488	\$100,000
2010	\$51,601,720	\$8,645,781	\$912,658	\$2,000,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁵⁹⁰ Sealaska (n.d.). 2012. *Who We Are*. Retrieved on May 9, 2012 from http://www.sealaska.com/page/who_we_are.html.

Infrastructure

Connectivity and Transportation

The state-owned Rocky Gutierrez Airport on Japonski Island has a 6,500 ft long by 150 ft wide paved and lighted runway. In addition to daily jet service, several scheduled air taxis, air charters, and helicopters are available.¹⁵⁹¹ In June 2012, round-trip airfare between Sitka and Anchorage was \$441.¹⁵⁹²

The City and Borough of Sitka operates five small boat harbors with 1,347 stalls and a seaplane base on Sitka Sound.¹⁵⁹³ There is a breakwater at Thompson Harbor but no deep draft dock. A boat launch, haul-out, boat repairs, and other services exist. Cruise ships anchor in the harbor and lighter visitors to shore. The Alaska Marine Highway System (state ferry) has a docking facility approximately 6 miles north of town. The ferry serves Sitka several times a week. Freight arrives by barge and cargo plane.¹⁵⁹⁴

Facilities

Water is drawn from a reservoir on Blue Lake and Indian River and is treated, stored, and piped to nearly all homes in Sitka. The maximum capacity is 8.6-million gallons per day, with 197-million gallons of storage capacity. Ninety-five percent (95%) of homes are connected to the piped sewage system, which receives primary treatment. Refuse is collected and shipped to the State of Washington. The community participates in annual hazardous waste disposal events. The City and Borough own hydroelectric facilities at Blue Lake and Green Lake and a diesel-fueled generator at Indian River. Law enforcement services are provided by the borough police department and a local state troopers post. Fire and rescue services are provided by the Sitka Fire Department/Ambulance/Rescue, the Southeast Alaska Regional Health Consortium Air Medical, and the U.S. Coast Guard Air Station/Medevac. The State Superior Court administers a State Magistrate and a State Jail that is operated through a contract to the City of Sitka. The Sitka Teen Resource Center is operated by the Boys and Girls Club and the community has several community halls. Senior services are provided by the Sitka Senior Center and the Pioneer Home Center for Community. Sitka is home to a movie theater, five museums, one public library, five school libraries, and one special library.¹⁵⁹⁵

In a survey conducted by the AFSC in 2011, community leaders reported that there are 1,326 slips (though the total number of ft available is unknown) available for permanent vessels to moor in Sitka, and approximately 2,970 ft of dock space available for mooring of transient vessels. Community leaders noted that vessels up to 300 ft long can use moorage in Sitka, including rescue vessels, cruise ships, ferries, and fuel barges. In the same survey, community leaders indicated that the following infrastructure projects have been completed within the past ten years: fish cleaning station, construction of new dock space, improvements to existing dock structure, electricity and roads serving the dock, pilings, a breakwater, an Environmental

¹⁵⁹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹⁵⁹² Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹⁵⁹³ Information provided by Sitka community leaders during a review of the draft community profile in July, 2012.

¹⁵⁹⁴ See footnote 1591.

¹⁵⁹⁵ Ibid.

Protection Agency-certified boat cleaning station, broadband internet access, roads, water and sewer pipelines, and improvements to emergency response, fire department, school, and telephone services. In addition, community leaders noted that the following infrastructure projects are in progress: construction of new dock space, fuel tanks at dock, breakwater, roads, a runway extension at the airport/seaplane base, water treatment, alternative energy, and improvements to school and telephone services. Community leaders noted that projects planned for completion in the next ten years include: construction of new dock space, pilings, breakwater, haul out facilities, roads, seaplane base, water treatment, alternative energy, expansion of the community center and library, and improvements to school and telephone services.

*Medical Services*¹⁵⁹⁶

Sitka has two hospitals, the Mt. Edgecumbe/SEARHC Hospital and the Sitka Community Hospital, in addition to a U.S. Coast Guard (USCG) Air Station. The hospitals are owned by the US Public Health Service and the City, respectively, and are operated by the SEARHC. The hospitals are both qualified Acute Care facilities, while the USCG Air Station provides emergency support, medevac services, and is a qualified Emergency Care Center. Long term care is provided by the Sitka Pioneers' Home, with specialized care provided by Aurora's Watch (operated by the Shee Atika Corporation) and the Sitka Council on Alcoholism. Emergency services have limited highway, marine floatplane, and airport access and are provided by 911 telephone service volunteers and the military. Alternate health care is provided by the Sitka Fire Department/Ambulance/Rescue, SEARHC Air Medical, and the USCG Air Station/Medevac.

*Educational Opportunities*¹⁵⁹⁷

Instruction is provided to students in Sitka at seven schools. Baranof Elementary school provides instruction to students in pre-school through first grade, and in 2011 the school had 222 students and 21 teachers. Keet Gooshi Heen elementary school provides instruction to students in grades two through five, and in 2011 the school had 409 students and 29 teachers. Blatchley Middle School provides instruction to students in grades six through eight, and in 2011 the school had 258 students and 22 teachers. The Sitka Correspondence School provides instruction via correspondence to students in Kindergarten through 12th grade, and in 2011 the school had 89 students and one teacher. There are three high schools in Sitka, each providing instruction to students in grades nine through 12. In 2011, the Pacific High School had 37 students and six teachers, Sitka High School had 373 students and 25 teachers, and Mt. Edgecumbe High School, a boarding school, had 400 students and 25 teachers.

¹⁵⁹⁶ Ibid.

¹⁵⁹⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Tlingit people living in Sitka and surrounding settlements historically utilized a wide variety of subsistence resources. Fish traps, as well as gaffs and spears, were traditionally used to catch salmon, one of the most important subsistence resources for the Tlingit people. Steelhead, herring, herring eggs, ooligans (eulachon), and Dolly Varden were also caught and eaten. The Tlingit also utilized marine mammals (e.g., seal), deepwater fish (e.g., halibut), marine invertebrates (e.g., ‘gumboot’ chitons), and sea plants (e.g., seaweed, beach asparagus and goose tongue). A system of property ownership was in place over harvesting places, including streams, halibut banks, berry patches, hunting areas, intertidal areas, and egg harvesting sites.^{1598,1599}

During the Russian occupation of the region, these resources continued to be used primarily for subsistence purposes. Commercial fisheries began to develop after the United States purchased Alaska from Russia in 1867.¹⁶⁰⁰ The first Salmon cannery in Alaska opened in Klawock on Prince of Wales Island in 1878. In the same year, a cannery was also built at Old Sitka, but it closed after only two seasons in operation.¹⁶⁰¹ Sitka didn’t have another fish plant until 1913 when Booth Fisheries Cold Storage opened. It became Sitka Cold Storage in 1930.¹⁶⁰² Today the Shee Atiká Totem Square Inn stands on the site.¹⁶⁰³ The Pyramid Packing cannery opened a few years later in 1918. It is still standing as the Murray Pacific building. Canneries in Peril Strait and at Sitkoh Bay (Chatham Cannery) also employed Sitkans. Seining and later traps supplied the fish for canning.¹⁶⁰⁴

Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll, and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho, and Chinook). Because of Southeast Alaska’s proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty. The Treaty was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.¹⁶⁰⁵

Bait herring fisheries take place during the winter each year in Southeast Alaska, while roe is harvested in the spring. Bait and sac roe fisheries use purse seine and set gillnet gear. One

¹⁵⁹⁸ Alaska Native Heritage Center. 2008. *Eyak, Tlingit, Haida & Tsimshian: Who We Are*. Retrieved November 23, 2011 from www.alaskanative.net/en/main_nav/education/culture_alaska/eyak.

¹⁵⁹⁹ Brock, Mathew, Philippa Coiley-Kenner and the Sitka Tribe of Alaska. 2009. *A Compilation of Traditional Knowledge about the Fisheries of Southeast Alaska*. ADF&G Technical Paper No. 332. Retrieved March 30, 2012 from <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-652Final.pdf>.

¹⁶⁰⁰ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.ADF&G.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁶⁰¹ Alaska History and Cultural Studies. (2012). *Southeast Alaska: 1873-1900 Developing Southeast Alaska*. Retrieved November 28, 2012 from <http://www.akhistorycourse.org/articles/article.php?artID=71>.

¹⁶⁰² The Sitka Maritime Heritage Society. (2012). *A Short Maritime History of Sitka, Alaska*. Retrieved on May 9, 2012 from <http://www.sitkamaritime.org/sitka-maritime-history.html>.

¹⁶⁰³ Information provided by Sitka community leaders during a review of the draft community profile in July, 2012.

¹⁶⁰⁴ See footnote 1602.

¹⁶⁰⁵ See footnote 1600.

of the two exclusively purse seine sac roe fisheries takes place in Sitka Sound. Roe is also harvested in spawn-on-kelp closed-pound fisheries.¹⁶⁰⁶ A “closed-pound” is a single, floating, rectangular frame structure with suspended webbing that is used to enclose herring long enough for them to spawn on kelp included in the enclosure.¹⁶⁰⁷

A state-managed sablefish fishery currently takes place in waters inland of Baranof Island (Chatham and Clarence Straits). Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Halibut and Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999. Crab fisheries in Southeast Alaska target red, golden and blue king crab, Tanner crab, and Dungeness crab. Dive fisheries for sea cucumber and sea urchin began to grow in Southeast Alaska in recent decades.¹⁶⁰⁸

Sitka is located in Pacific Halibut Fishery Regulatory Area 2C and Federal Statistical and Reporting Area 650. The closest federal Sablefish Regulatory Area is “Southeast Outside.” Sitka is not eligible to participate in the Community Quota Entity (CQE) program or the Community Development Quota (CDQ) program. According to a survey conducted by the AFSC in 2011, community leaders reported that Sitka participates in the fisheries management process in Alaska through a paid staff member that attends North Pacific Fisheries Management Council meetings and/or Board of Fisheries meetings, a representative that sits on regional fisheries advisory and/or working groups run by the Alaska Department of Fish and Game, and through a representative that participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, six processing facilities were in operation in Sitka. Information about and the history of these facilities is presented below.

Absolute Fresh Seafoods Inc. was founded in 2003 and is a family-owned operation based in Sitka. Absolute Fresh as a company processes salmon (Chinook, coho), crab (king, Dungeness), spot prawns, and scallops.¹⁶⁰⁹

Big Blue Fisheries LLC is a small smokehouse and processing plant located in Sitka. The plant began operations in 2001 and employs between 3 and 10 people each year.¹⁶¹⁰ They

¹⁶⁰⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.ADF&G.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁶⁰⁷ Alaska Dept. of Fish and Game. (2011). *2011 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan*. Regional Information Report No. 1J11-01. Retrieved April 2, 2012 from <http://www.sf.ADF&G.state.ak.us/FedAidpdfs/RIR.1J.2011.01.PDF>.

¹⁶⁰⁸ See footnote 1606.

¹⁶⁰⁹ Absolute Fresh Seafoods, Inc. (n.d.). *Who we are*. Retrieved April 15, 2012 from <http://www.absolutefreshseafoods.com/Pages/whoweare.html>.

specialize in processing and smoking troll-caught Chinook and coho salmon. Big Blue Fisheries also processes halibut, lingcod, rockfish, shrimp, scallops, snapper, and Dungeness crab. The facility also custom processes fish caught by sport fishermen.¹⁶¹¹ The plant does charter processing in the summer months.¹⁶¹²

North Pacific Seafoods, Inc. plant in Sitka has always been known as Sitka Sound Seafoods despite the fact that North Pacific Seafoods purchased the plant from Sitka Sound in 1997. The plant began operating under Sitka Sound Seafoods in the 1960's. The plant typically operates from March until the end of October. During this time the plant processes all species of salmon from all gear types, as well as halibut, sablefish, rockfish, herring, sea cucumbers, lingcod, Pacific cod, shrimp and Dungeness crab. The peak season for the facility is from June 15 until the end of September during the Southeast Alaska salmon season. During peak season the plant employs nearly 200 workers. In 2010, the plant employed a maximum of 185 workers during the peak season (June through August). A company bunkhouse located ¼ mi from the plant facility and provides accommodations (which include shower and laundry facilities) to fish processing workers, although such accommodations are limited in number. Meals are provided from a company galley. Air transportation from and to Anchorage or Seattle is provided for processing workers.¹⁶¹³

Quality Processing is a small processing company established in 1999 and is located in Sitka. Quality Processing sells halibut, scallops, spot tail shrimp, Chinook, and coho salmon. It also offers smoked salmon (Chinook and coho) and sablefish.¹⁶¹⁴

Established in 1944, Seafood Producers Cooperative is a cooperative of over 500 hook-and-line fishermen. The current plant in Sitka began operations in 1980.¹⁶¹⁵ Seafood Producers processes Chinook salmon and lingcod all year, and halibut, sablefish and Pacific cod from March through November. It also processes coho salmon (July through September), yelloweye (all year except February), and albacore (June through October). The peak season is from June to the end of August in conjunction with the salmon season. In 2010, the plant employed between 20 and 108 workers.¹⁶¹⁶ Seafood Producers provides bunkhouse accommodations for up to 44 non-resident employees during the processing season. The provided housing includes meals, a TV room, and shower and laundry facilities.¹⁶¹⁷

Silver Bay Seafoods LLC began operations in 2007. The company processes salmon, crab, halibut, and herring at its Sitka facility. It is a predominantly fishermen-owned company with facilities located at the Sawmill Cove Industrial Park.¹⁶¹⁸ During the 2010 salmon season, Silver Bay employed 200 workers for fish processing and facility maintenance. Unlike companies that segregate job tasks, all SBS employees perform a variety of tasks.¹⁶¹⁹

¹⁶¹⁰ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

¹⁶¹¹ Big Blue Fisheries, LLC (n.d.). *Homepage*. Retrieved April 15, 2011
http://alaskasmokedfish.com/index.php?main_page=page&id=4&zenid=c76258c8cad4447f9d58164f3de9a921.

¹⁶¹² This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

¹⁶¹³ North Pacific Seafoods (n.d.). *Homepage*. Retrieved April 15, 2012 from
http://northpacificseafoods.com/index.php?option=com_content&task=view&id=39&Itemid=51.

¹⁶¹⁴ Quality Processing (n.d.). *Homepage*. Retrieved April 15, 2012 from <http://qualityprocessingsitka.com/>.

¹⁶¹⁵ See footnote 1612.

¹⁶¹⁶ *Ibid*.

¹⁶¹⁷ Seafood Producers Cooperative (n.d.). *Homepage*. Retrieved April 15, 2012 from <http://spcsales.com>.

¹⁶¹⁸ See footnote 1610.

¹⁶¹⁹ Silver Bay Seafoods (n.d.). *Homepage*. Retrieved April 15, 2012 from <http://silverbayseafoods.com>.

Fisheries-Related Revenue

Between 2000 and 2010, Sitka received fisheries-related revenue from the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, and harbor usage fees. Revenue received from the Shared Fisheries Business Tax increased during this period, while revenue received from the Fisheries Resource Landing Tax was highly variable from year to year. Revenue received from harbor usage also increased substantially between 2000 and 2010. Total fisheries-related revenue received by Sitka increased between 2000 and 2010. Information on known fisheries-related revenue received by the community of Sitka from 2000 to 2010 is presented in Table 3.¹⁶²⁰

In a survey conducted by the AFSC in 2011, community leaders reported that the following public services are at least partially supported by fisheries-related revenue such as raw fish tax, the Shared Fisheries Business Tax, the Fisheries Resource Landing Tax, or marine fuel sales tax: harbor maintenance, social services, and other services such as the hatchery and science center. In addition, community leaders noted that Sitka has local fishing-related fee programs charged to the fishing industry that specifically support public services and infrastructure, such as the 3% fishery enhancement tax that goes to the hatchery, the fish box tax that goes to non-profits, and the sales tax that goes to the City of Sitka.

Commercial Fishing

Sitka was among the top ports in Alaska in landings and ex-vessel revenue in 2010, ranking 6th in landings and 5th in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings in that year. In 2010, there were 750 Sitka residents holding 1,323 permits issued by the Commercial Fisheries Entry Commission (CFEC). Between 2000 and 2010, the total number of CFEC permits held decreased, even as the total number of permit holders increased. Also in 2010, 814 (62%) of CFEC permits were reported as actively fished – a number that decreased overall between 2000 and 2010, while the percentage of permits reported as actively fished increased during the same period. Sitka residents held CFEC permits in 2010 for the commercial harvest of crab, other shellfish, halibut, herring, sablefish, groundfish, and salmon.

The number of salmon and herring CFEC permits and permit holders increased between 2000 and 2010, as did the number of those permits reported as fished. The majority of the salmon CFEC permits issued in 2010 were for the statewide hand troll and power gurdy troll fisheries, with the remainder issued for the southeast, Prince William Sound, Kodiak, Chignik, and Peninsula-Aleutians purse seine fisheries; the southeastern, Prince William Sound, Cook Inlet, and Bristol Bay drift gillnet fisheries; the Yakutat, Kodiak, and Bristol Bay set gillnet fisheries; the Lower Yukon and Kuskokwim gillnet fisheries; and the southeastern special harvest area (hatchery) fishery. Herring CFEC permits issued in 2010 were mainly for the southeastern purse seine fishery, with the remainder issued for the Prince William Sound and Cook Inlet purse seine fisheries, the southeast gillnet fishery, the Goodnews Bay roe herring gillnet fishery, the Norton Sound gillnet fishery, the southeast purse seine fishery for bait/food, the southeastern pound fishery for bait/food, and the northern southeast and southern southeast herring spawn on kelp pound fisheries.

¹⁶²⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

For groundfish, halibut, other shellfish, and crab CFEC permits, the number of permits and permit holders, as well as the number of permits reported as actively fished, decreased between 2000 and 2010. Groundfish CFEC permits issued in 2010 were mostly for the statewide lingcod dinglebar troll fishery, with permits also issued for the statewide lingcod hand troll and mechanical jig fisheries. Permits by the CFEC in 2010 for the following miscellaneous saltwater finfish fisheries: statewide and Gulf of Alaska hand troll, statewide and Gulf of Alaska longline fisheries using vessels under 60 ft, the statewide pot gear fishery using vessels under 60 ft, the statewide and Gulf of Alaska dinglebar troll fisheries, the statewide and Gulf of Alaska mechanical jig fisheries, the statewide and Gulf of Alaska longline fisheries using vessels between 60 and 90 ft, and the Gulf of Alaska otter trawl fishery using vessels under 60 ft. There were also groundfish CFEC permits issued for the southeast demersal shelf rockfish fisheries using vessels under 60 ft and vessels 60 ft or over. Nearly all the halibut CFEC permits issued in 2010 were for the statewide longline fishery using vessels under 60 ft, with the remainder issued for the statewide hand troll, dinglebar troll, mechanical jig, and longline (using vessels 60 ft or over) fisheries. The majority of the other shellfish CFEC permits issued in 2010 were for the southeast shrimp pot fishery and the southeast sea cucumber diving gear fishery. Additional other shellfish permits were issued in 2010 for the southeast shrimp otter trawl and beam trawl fisheries, the Kodiak sea cucumber diving gear fishery, the southeast geoduck clam diving gear fishery, and the southeast sea urchin diving gear fishery. Crab CFEC permits issued in 2010 were for the southeastern Dungeness crab fisheries using 300 pots (100% of max), 225 pots (75% of max), 150 pots (50% of max), and 75 pots (25% of max). Crab CFEC permits were also issued in 2010 for the southeast brown king crab, red/blue king/Tanner crab, and king and Tanner crab pot gear fisheries, the Peninsula-Aleutians Tanner crab pot fishery using vessels under 60 ft, the southeastern Tanner crab ring net fishery, and the southeast Tanner crab pot fishery.

The number of CFEC permits, permit holders, and permits reported as fished for sablefish remained relatively stable between 2000 and 2010. The majority of the sablefish CFEC permits issued in 2010 were for the statewide longline fishery using vessels under 60 ft, with the remainder issued for the northern southeast longline fishery, the statewide longline fishery using vessels 60 ft or over, and the southern southeast longline fishery.

The number of Federal Fisheries Permits held (and the number of individuals holding Federal Fisheries Permits) increased slightly between 2000 and 2010, though the number of those permits reported as actively fished increased substantially during the same period with a peak between 2003 and 2004. For permits issued under the License Limitation Program (LLP), in 2010 Sitka residents held both crab and groundfish LLP permits. Only one individual held one crab LLP permit between 2002 and 2010, though that permit was not reported as fished between 2004 and 2010. There were 183 permit holders that held 200 groundfish LLP permits in 2010, both of which represent a slight decrease from the number of permits and permit holders in 2000. However, the number and percentage of those permits reported as fished both decreased between 2000 and 2010. Information about permits and permit holders by species is reported in Table 4.

In 2010 there were 674 crew license holders in Sitka, an increase from 650 in 2000. There were also 115 fish buyers in Sitka in 2010, a decrease from 147 in 2000, though the lowest number of fish buyers in Sitka during this period occurred in 2003 and the number increased slightly between 2003 and 2010. There were five shore-side processing facilities in 2010, a number that decreased overall between 2000 and 2010. Both the number of vessels owned primarily by Sitka residents and the number of vessels homeported in Sitka decreased during this period. However, the number of vessels landing catch in the community increased during that

same period after a substantial decrease between 2002 and 2004. Both the total net lbs landed in Sitka and the ex-vessel value of those landings increased overall (though both experienced declines during this period), with the ex-vessel value of landings increasing much more dramatically than the total net lbs landed during this period. Characteristics of the commercial fishing sector in Sitka from 2000 to 2010 are presented in Table 5.

The number of individuals holding quota share accounts for halibut decreased from 2000 to 2010, while the number of halibut quota shares held remained relatively stable during that same period. The total halibut Individual Fishing Quota (IFQ) allotment decreased between 2000 and 2010 (Table 6). The number of sablefish quota share account holders increased slightly between 2000 and 2010, while the number of sablefish quota shares held decreased, as did the annual sablefish IFQ allotment (Table 7). There was only one year from 2005 to 2010 in which there was one crab quota share account held, in 2006 (Table 8).

There were no crab landings reported for Sitka between 2000 and 2010. Landings for finfish between 2000 and 2008 and landings for pollock between 2000 and 2010 are considered confidential due to the small number of participants. Landings for finfish in 2009 and 2010 were small, as were the associated ex-vessel values for finfish landed in Sitka in those years. Between 2000 and 2010, landings for halibut and salmon decreased, while ex-vessel value of those landings increased. Landings of other groundfish also decreased during that same period, though the ex-vessel value also decreased. Landings and ex-vessel value for herring, other shellfish, Pacific cod, and sablefish both increased during this period. Information on landed lbs and ex-vessel revenue by species in Sitka between 2000 and 2010 is presented in Table 9.

When landings and ex-vessel value are viewed in terms of landings reported by Sitka vessel owners, including all delivery locations, the landings and ex-vessel value for crab, other groundfish, Pacific cod, and sablefish decreased between 2000 and 2010. While landings for halibut decreased during that same period, the ex-vessel value of those landings increased. Landings and ex-vessel value for herring and salmon increased between 2000 and 2010, and while landings for other shellfish remained relatively stable during this period, the ex-vessel value of those landings increased. Landings and ex-vessel value for finfish in 2001, 2003, 2008, and 2009 and landings for pollock from 2001 to 2010 are considered confidential due to the small number of participants. Landings for finfish, though relatively small, decreased slightly between 2000 and 2010 after an increase in 2004 and 2005, while ex-vessel value increased slightly between 2000 and 2010, with the peak in 2004 and 2005. Information on landed lbs and ex-vessel revenue by species by Sitka residents is presented in Table 10.

In a survey conducted by the AFSC in 2011, community leaders reported that there has been a slight increase in commercial fishing boats in Sitka in the last five years, perhaps due to a rise in market prices for fish. Community leaders also noted that the following gear types are used by commercial fishing boats that use Sitka as their base of operations during the fishing season: trawl, pots, longline, gillnet, purse seine, troll, ring net, and diving. In the same survey, community leaders indicated that commercial fishing boats under 125 ft use Sitka as their base of operations during the fishing season.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Sitka: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	\$479,048	\$57,282	\$622,899	\$525,929	\$384,817	\$510,527	\$709,031	\$716,450	\$834,650	\$950,929	\$1,168,685
Fisheries resource landing tax ¹	\$901	\$265	\$800	\$3,057	\$2,959	\$542	\$594	\$3,187	\$247	\$971	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$1,224,900	\$1,406,900	\$1,481,420	\$1,576,580	\$1,454,270	\$1,463,250	\$1,603,900	\$2,069,620	\$2,422,750	\$2,579,400	\$2,588,990
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$1,704,849</i>	<i>\$1,464,447</i>	<i>\$2,105,119</i>	<i>\$2,105,566</i>	<i>\$1,842,045</i>	<i>\$1,974,319</i>	<i>\$2,313,526</i>	<i>\$2,789,257</i>	<i>\$3,257,648</i>	<i>\$3,531,300</i>	<i>\$3,757,675</i>
<i>Total municipal revenue⁵</i>	<i>\$44.5M</i>	<i>\$46.8M</i>	<i>\$47.5M</i>	<i>\$47.2M</i>	<i>\$50.5M</i>	<i>\$51.5M</i>	<i>\$54.9M</i>	<i>\$58.5M</i>	<i>\$64.8M</i>	<i>\$68.9M</i>	<i>\$51.6 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Sitka: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	204	202	206	202	196	201	205	201	201	199	200
	Active permits	80	79	80	80	82	77	72	70	70	72	66
	% of permits fished	39%	39%	38%	39%	41%	38%	35%	34%	34%	36%	33%
	Total permit holders	190	187	189	187	181	185	188	184	185	183	183
Crab (LLP) ¹	Total permits	2	2	1	1	1	1	1	1	1	1	1
	Active permits	2	2	1	1	1	0	0	0	0	0	0
	% of permits fished	100%	100%	100%	100%	100%	-	-	-	-	-	-
	Total permit holders	2	2	1	1	1	1	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	157	161	167	158	161	166	131	178	186	163	166
	Fished permits	1	1	1	122	119	110	95	97	95	97	95
	% of permits fished	1%	1%	1%	77%	74%	66%	73%	54%	51%	60%	57%
	Total permit holders	153	156	161	154	157	160	127	172	180	155	157
Crab (CFEC) ²	Total permits	47	59	58	46	33	30	25	29	28	29	34
	Fished permits	37	44	40	28	14	19	15	20	22	20	21
	% of permits fished	79%	75%	69%	61%	42%	63%	60%	69%	79%	69%	62%
	Total permit holders	44	56	55	44	30	28	24	27	28	25	30
Other shellfish (CFEC) ²	Total permits	166	195	147	138	137	134	130	131	129	129	129
	Fished permits	91	93	78	72	65	69	55	56	54	48	59
	% of permits fished	54%	47%	53%	52%	47%	51%	42%	42%	41%	37%	45%
	Total permit holders	120	129	123	116	113	109	111	113	107	110	111
Halibut (CFEC) ²	Total permits	264	254	251	254	236	238	231	219	216	220	219
	Fished permits	214	207	210	221	201	207	209	195	189	189	191
	% of permits fished	81%	81%	84%	87%	85%	87%	90%	89%	88%	86%	87%
	Total permit holders	256	248	246	250	234	236	231	218	213	218	218
Herring (CFEC) ²	Total permits	40	36	35	43	44	51	48	41	43	49	48
	Fished permits	29	20	22	28	32	29	25	23	28	32	30
	% of permits fished	73%	56%	63%	65%	73%	57%	52%	56%	65%	65%	63%
	Total permit holders	29	29	24	27	28	31	32	34	29	34	33

Table 4 Cont. Permits and Permit Holders by Species, Sitka: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	141	137	129	129	134	135	143	137	130	135	143
	Fished permits	135	133	127	125	132	133	138	132	127	130	136
	% of permits fished	96%	97%	98%	97%	99%	99%	97%	96%	98%	96%	95%
	Total permit holders	118	115	111	110	111	119	122	119	117	122	126
Groundfish (CFEC) ²	Total permits	344	310	261	246	246	188	137	133	154	173	143
	Fished permits	112	87	74	76	65	27	18	29	43	47	36
	% of permits fished	33%	28%	28%	31%	26%	14%	13%	22%	28%	27%	25%
	Total permit holders	190	170	157	152	154	122	97	92	99	114	98
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	536	551	555	558	567	566	562	560	572	590	607
	Fished permits	311	309	294	268	302	294	302	308	316	346	341
	% of permits fished	58%	56%	53%	48%	53%	52%	54%	55%	55%	59%	56%
	Total permit holders	525	532	529	541	538	538	539	534	539	565	568
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1,538</i>	<i>1,542</i>	<i>1,436</i>	<i>1,414</i>	<i>1,397</i>	<i>1,342</i>	<i>1,276</i>	<i>1,250</i>	<i>1,272</i>	<i>1,325</i>	<i>1,323</i>
	<i>Fished permits</i>	<i>929</i>	<i>893</i>	<i>845</i>	<i>818</i>	<i>811</i>	<i>778</i>	<i>762</i>	<i>763</i>	<i>779</i>	<i>812</i>	<i>814</i>
	<i>% of permits fished</i>	<i>60%</i>	<i>58%</i>	<i>59%</i>	<i>58%</i>	<i>58%</i>	<i>58%</i>	<i>60%</i>	<i>61%</i>	<i>61%</i>	<i>61%</i>	<i>62%</i>
	<i>Permit holders</i>	<i>714</i>	<i>731</i>	<i>722</i>	<i>733</i>	<i>724</i>	<i>733</i>	<i>724</i>	<i>722</i>	<i>721</i>	<i>754</i>	<i>750</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Sitka: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Sitka ²	Total Net Pounds Landed In Sitka ^{2,5}	Total Ex-Vessel Value Of Landings In Sitka ^{2,5}
2000	650	147	10	756	692	904	90,524,003	\$45,817,665
2001	659	101	10	751	689	903	72,566,961	\$35,304,607
2002	524	97	10	756	706	681	70,903,957	\$29,326,684
2003	525	78	8	762	701	476	36,641,467	\$28,645,532
2004	610	95	8	768	713	771	56,669,652	\$48,788,925
2005	597	83	9	591	553	884	70,775,067	\$52,933,923
2006	601	96	10	567	541	1,006	73,226,237	\$60,547,852
2007	622	115	9	568	569	936	87,527,904	\$69,090,792
2008	631	104	8	597	597	1,083	79,783,063	\$84,842,960
2009	604	121	5	618	600	1,005	111,273,049	\$76,990,520
2010	674	115	5	616	604	949	94,250,416	\$75,702,739

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Individual Fishing Quota, Halibut, Sitka: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	288	18,087,132	2,539,671
2001	294	19,347,914	2,934,482
2002	298	18,930,898	2,839,549
2003	295	18,695,070	2,753,928
2004	272	17,899,000	3,000,148
2005	265	17,898,126	3,039,922
2006	265	18,270,895	2,998,766
2007	255	17,285,718	2,492,399
2008	243	17,969,839	2,194,642
2009	246	19,102,190	2,001,772
2010	237	18,673,731	1,763,397

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Individual Fishing Quota, Sablefish, Sitka: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	113	33,407,542	3,468,534
2001	115	33,219,207	3,296,817
2002	110	31,707,752	3,068,520
2003	114	31,850,395	3,550,234
2004	110	31,814,180	3,819,987
2005	110	30,300,540	3,452,530
2006	108	28,657,444	3,121,127
2007	108	27,824,275	2,912,278
2008	115	28,316,459	2,789,026
2009	117	30,399,799	2,568,982
2010	117	29,734,443	2,331,889

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Individual Fishing Quota, Crab, Sitka: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	1	382,422	10,013
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: (NMFS) National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Sitka: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	42	71
Halibut	2,335,686	2,555,355	2,305,128	2,872,717	3,717,755	3,789,824	3,922,720	3,556,280	2,871,941	2,209,332	2,021,764
Herring	9,184,234	24,204,200	20,271,930	14,317,841	13,029,593	24,102,603	21,265,952	24,265,878	30,210,784	31,000,316	36,530,513
Other	1,286,964	1,090,193	1,003,602	1,056,360	1,147,218	809,800	859,167	810,967	992,046	847,800	640,841
Groundfish											
Other	195,405	340,349	272,180	195,155	173,028	128,871	253,717	253,761	250,725	224,718	263,333
Shellfish											
Pacific Cod	167,658	112,918	111,577	182,484	208,353	14,690	147,022	273,338	391,286	373,401	462,198
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	3,800,570	2,999,632	2,747,554	3,476,939	4,019,153	3,921,965	4,887,315	4,913,280	4,825,108	4,099,049	3,894,196
Salmon	73,492,262	41,032,486	44,023,850	14,382,018	34,224,832	37,834,192	41,542,934	53,063,992	39,950,482	71,913,748	49,816,762
<i>Total²</i>	<i>90,462,779</i>	<i>72,335,133</i>	<i>70,735,821</i>	<i>36,483,514</i>	<i>56,519,932</i>	<i>70,601,945</i>	<i>72,878,827</i>	<i>87,137,496</i>	<i>79,492,372</i>	<i>110,668,406</i>	<i>93,629,678</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	\$15	\$40
Halibut	\$6,091,611	\$5,295,580	\$5,062,474	\$8,482,066	\$11,344,830	\$11,587,571	\$14,688,018	\$15,767,579	\$12,243,580	\$6,842,163	\$8,350,746
Herring	\$3,171,477	\$6,855,826	\$6,279,427	\$4,293,020	\$4,470,429	\$7,444,171	\$3,716,353	\$10,274,867	\$16,225,690	\$15,274,651	\$13,812,229
Other	\$1,182,419	\$978,165	\$949,595	\$976,077	\$1,122,568	\$690,559	\$747,222	\$645,920	\$885,404	\$735,755	\$513,544
Groundfish											
Other	\$504,447	\$647,788	\$443,260	\$373,197	\$485,314	\$422,270	\$713,811	\$809,204	\$681,179	\$625,645	\$937,372
Shellfish											
Pacific Cod	\$68,264	\$38,766	\$36,865	\$63,687	\$79,842	\$3,890	\$81,847	\$156,755	\$249,487	\$177,758	\$222,900
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	\$12,300,188	\$8,618,450	\$8,313,965	\$11,848,906	\$11,869,421	\$12,776,127	\$13,623,485	\$11,376,214	\$13,323,767	\$12,177,497	\$13,402,410
Salmon	\$22,398,290	\$12,370,678	\$7,959,835	\$2,340,940	\$19,177,197	\$19,756,199	\$26,445,202	\$29,205,786	\$40,555,628	\$40,093,537	\$37,560,868
<i>Total²</i>	<i>\$45,716,695</i>	<i>\$34,805,252</i>	<i>\$29,045,421</i>	<i>\$28,377,893</i>	<i>\$48,549,601</i>	<i>\$52,680,786</i>	<i>\$60,015,939</i>	<i>\$68,236,325</i>	<i>\$84,164,735</i>	<i>\$75,927,019</i>	<i>\$74,800,109</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Sitka Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	1,203,764	1,091,356	1,035,325	608,895	525,688	383,046	401,567	316,571	298,211	392,315	337,108
Finfish	54	--	55	--	291	147	60	31	--	--	37
Halibut	2,974,851	3,115,133	3,337,492	3,119,879	3,551,933	3,827,792	3,674,967	3,018,181	2,620,882	2,553,361	2,629,416
Herring	1,900,274	2,301,234	2,164,519	1,475,510	2,391,738	2,418,550	1,985,279	2,892,607	2,495,731	3,669,993	6,422,209
Other	1,188,308	1,052,813	1,028,527	905,309	1,004,981	650,593	618,950	571,373	672,856	589,757	561,566
Groundfish											
Other	338,744	370,128	359,204	351,257	299,422	314,950	286,026	304,114	228,074	301,763	321,619
Shellfish											
Pacific Cod	1,548,984	171,060	975,442	1,214,442	472,288	175,138	113,001	171,662	256,910	658,338	1,428,404
Pollock	286,957	--	--	--	--	--	--	--	--	--	--
Sablefish	3,361,080	3,014,537	3,056,565	3,257,590	3,599,787	3,095,214	3,466,563	3,548,874	3,477,714	3,079,460	2,920,924
Salmon	18,197,104	22,189,029	15,426,049	16,622,390	24,931,382	23,090,799	16,000,357	18,357,068	10,894,169	16,452,791	18,939,150
<i>Total²</i>	<i>31,000,120</i>	<i>33,305,290</i>	<i>27,383,178</i>	<i>27,555,272</i>	<i>36,777,510</i>	<i>33,956,229</i>	<i>26,546,770</i>	<i>29,180,481</i>	<i>20,944,547</i>	<i>27,697,778</i>	<i>33,560,433</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$2,590,458	\$2,307,374	\$2,019,078	\$1,376,911	\$1,261,130	\$655,028	\$665,399	\$696,488	\$679,817	\$738,808	\$573,326
Finfish	\$19	--	\$24	--	\$131	\$66	\$32	\$15	--	--	\$22
Halibut	\$7,657,498	\$6,307,585	\$7,304,927	\$9,095,623	\$10,745,113	\$11,675,442	\$13,773,033	\$13,339,798	\$11,214,889	\$7,780,634	\$11,629,786
Herring	\$429,601	\$500,147	\$390,331	\$585,615	\$1,060,912	\$663,682	\$577,183	\$1,147,528	\$1,608,449	\$1,898,938	\$2,461,863
Other	\$1,051,589	\$906,621	\$944,877	\$823,220	\$1,007,924	\$564,578	\$564,654	\$471,856	\$600,612	\$487,089	\$453,734
Groundfish											
Other	\$906,296	\$722,852	\$573,433	\$634,413	\$738,362	\$794,534	\$747,724	\$878,392	\$609,090	\$833,633	\$1,104,827
Shellfish											
Pacific Cod	\$541,017	\$57,035	\$232,655	\$362,052	\$129,210	\$53,574	\$51,756	\$94,538	\$152,717	\$232,394	\$472,240
Pollock	\$33,087	--	--	--	--	--	--	--	--	--	--
Sablefish	\$11,437,083	\$8,870,682	\$9,477,020	\$11,087,526	\$10,581,785	\$10,088,083	\$10,397,962	\$8,917,450	\$10,152,555	\$9,658,972	\$10,836,373
Salmon	\$8,641,682	\$8,754,994	\$5,663,325	\$6,025,408	\$12,067,466	\$10,988,675	\$13,376,654	\$12,677,996	\$14,830,634	\$11,669,590	\$15,974,911
<i>Total²</i>	<i>\$33,288,329</i>	<i>\$28,427,290</i>	<i>\$26,605,669</i>	<i>\$29,990,768</i>	<i>\$37,592,032</i>	<i>\$35,483,662</i>	<i>\$40,154,397</i>	<i>\$38,224,062</i>	<i>\$39,848,763</i>	<i>\$33,300,058</i>	<i>\$43,507,081</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Tourism, including a large sportfishing charter industry, is vital to the economy of Sitka and other communities in the region.¹⁶²¹ The number of sportfishing licenses sold to Sitka residents (irrespective of the point of sale) averaged just over 3,000 per year from 2000 to 2010. Over the same period, the number of sportfishing licenses sold in Sitka increased substantially, from just over 8,000 in 2000 to a high of more than 20,000 in later years in the decade. These high license sale numbers are evidence of the importance of sportfishing as an attraction for visitors in Sitka (Table 11).

In 2010, 78 active sport fish guide businesses and 132 individuals with sport fish guide licenses catered to the high demand for sportfishing charters in Sitka. Both of these numbers represent a decrease from 2000, when there were 98 active sport fish guide businesses and 177 licensed sport fish guides in Sitka (Table 11). The declining trend in sport fish guide numbers may be related to rule changes in the Southeast Alaska halibut charter industry. Due to concerns related to allocation between the commercial and sport halibut fisheries as well as localized overfishing of the resource, the Alaska Board of Fish (BOF) and North Pacific Fishery Management Council (NPFMC) began discussing a moratorium on new charter licenses in Southeast and Southcentral Alaska in the 1990s.¹⁶²² In 2007, the NPFMC approved a motion to implement a limited entry program for halibut charter fleets in Areas 2C and 3A (Southeast and Southcentral Alaska) and a daily halibut bag limit for each charter vessel angler of two halibut of any size per day per person.^{1623,1624} Allocation decisions between the charter halibut industry and commercial halibut interests remain extremely controversial.¹⁶²⁵

The Sitka Sport Fishing Management Area (Sport Fish Survey Area D) includes saltwater adjacent to and all freshwaters of Baranof, Yakobi, and western Chichagof Islands from Column Point in the north to Point Hayes in the south. Looking at the regional scale of Sport Fishing Survey Area D, between 2000 and 2010, there was significantly greater saltwater sportfishing activity than freshwater, although both were important. In saltwater, non-Alaska resident anglers fished a greater number of angler days on average than Alaska resident anglers, and the opposite was true in freshwater. On average, non-Alaska resident anglers fished 51,348 saltwater angler days and 1,762 freshwater angler days per year, while Alaska resident anglers fished an average of 25,151 saltwater days and 2,252 freshwater days per year (Table 11).

¹⁶²¹ ADF&G. (2012). *Sport Fishing: Sitka Management Area Overview*. Retrieved July 13, 2012 from <http://www.ADF&G.alaska.gov/index.cfm?ADF&G=ByAreaSoutheastSitka.main>.

¹⁶²² Dean, M. R. and A. L. Howe. 1999. *Alaska Dept. of Fish and Game Sportfishing Guide and Business Registration and Saltwater Sportfishing Charter Vessel Logbook Program, 1998*. ADF&G Special Publication No. 99-1. Retrieved May 2, 2012 from <http://www.sf.adfg.state.ak.us/fedaidpdfs/Sp99-01.pdf>.

¹⁶²³ North Pacific Fishery Management Council. April 2007. *News and Notes* Volume 2-07. Retrieved May 2, 2012 from <http://www.alaskafisheries.noaa.gov/npfmc/PDFdocuments/newsletters/NEWS407.pdf>.

¹⁶²⁴ Federal Register. March 22, 2012. Dept. of Commerce, NOAA, 50 CFR Part 300, Pacific Halibut Fisheries; Catch Sharing Plan. Retrieved May 2, 2012 from <http://www.fakr.noaa.gov/frules/77fr16740.pdf>.

¹⁶²⁵ Meyer, S. October 2010. "Changes Coming for Alaska's Charter Halibut Fishery." Alaska Dept. of Fish and Game website. Retrieved October 8, 2012 from http://www.adfg.alaska.gov/index.cfm?ADFG=wildlifeneews.view_article&articles_id=482&issue_id=91.

Table 11. Sport Fishing Trends, Sitka: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sportfishing Licenses to Residents ²	Sport Fishing Licenses Sold in Sitka ²
2000	98	177	3,517	8,425
2001	100	177	3,491	10,729
2002	104	180	3,082	12,519
2003	95	180	3,120	13,980
2004	91	191	3,179	18,095
2005	102	179	3,332	20,939
2006	104	192	3,346	21,520
2007	104	176	3,086	21,808
2008	99	166	2,905	20,887
2009	87	142	3,017	15,685
2010	79	132	3,006	15,117

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	46,485	38,117	1,742	4,547
2001	56,533	31,124	1,991	2,742
2002	39,772	23,589	2,003	2,392
2003	46,777	19,460	1,524	2,082
2004	50,721	27,597	2,003	1,310
2005	58,394	25,770	1,970	2,356
2006	67,692	18,512	1,920	1,173
2007	64,443	24,728	1,350	1,860
2008	56,022	25,722	1,676	2,924
2009	37,759	18,661	1,664	2,382
2010	40,227	23,382	1,541	1,002

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADF&G.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

The Alaska Statewide Harvest Survey, conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Sitka: all five species of salmon, rainbow trout, Dolly Varden, cutthroat trout, brook trout, Arctic grayling, Pacific halibut, rockfish, lingcod, Pacific cod, smelt, steelhead, Dungeness crab, Tanner crab, razor clam,

hardshell clam, shrimp, other fish, and other shellfish.¹⁶²⁶ Charter logbook data reported that Chinook salmon, chum salmon, coho salmon, halibut, lingcod, other rockfish, other salmon, pink salmon, pelagic rockfish, sablefish, shark, sockeye salmon, and yelloweye rockfish were kept/released by anglers on charter vessels operating out of Sitka between 2000 and 2010.¹⁶²⁷

In a survey conducted by the AFSC in 2011, community leaders reported that recreational fishing in Sitka takes place from charter/party boats, private boats owned by local residents, private boats owned by non-residents, and via shore-based or dock fishing by local residents and by non-residents. Community leaders also noted that Chinook, coho and sockeye salmon, halibut, rockfish, crab, sablefish, shrimp, and clams are targeted by recreational fishermen that based in Sitka and that there are a lot more charter boats/party boats, private/pleasure boats, and boats shorter than 35 ft in Sitka compared to five years ago. Community leaders also noted that unregulated charter halibut businesses for 10 to 15 years depleted local stock and, that while the reduction in charter fishing has a negative effect on the local economy in the short-term, the imposition of limits on charter fishing is overall good management of fish stocks.

Subsistence Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that the three most important subsistence marine or aquatic resources to residents of Sitka are salmon (all types), other fish (all types, such as halibut, rock fish, and lingcod), and traditional foods (including fish, seaweeds, herring eggs). Community leaders also noted that “the current management of the Sitka Sac Roe Herring Fishery has had a negative impact on the subsistence herring egg harvest. The frequency and intensity of test fishing and commercial openings just prior to major spawning events [have] disrupted traditional spawning patterns.”

Data were not available on the percentage of subsistence participation by household and species between 2000 and 2010, with the exception of data showing that between 88% and 99% of households participated in non-salmon fish subsistence (not including halibut) in 2004, 2005, and 2007 (Table 12). Data for subsistence salmon fishing participation show an overall decrease in both the number of subsistence salmon permits issued to Sitka households and the number reported as fished between 2000 and 2008 (the most recent year for which data were available). Harvest numbers show that sockeye salmon was the most heavily harvested species in each year during the period, along with smaller harvests of pink, chum, Chinook, and coho salmon each year. The data also show a substantial decrease in the number of sockeye salmon harvested each year. Data were also available regarding total harvest of non-salmon fish (not including halibut) for 2004, 2005, and 2007 (Table 13).

Data regarding subsistence harvest of halibut show that, despite a relatively consistent number of Subsistence Halibut Registration Certificate (SHARC) cards issued to Sitka residents between 2003 and 2010, the number of SHARC cards actively fished declined over the period. The total lbs harvested per active SHARC card also declined. In 2000, when 821 cards were

¹⁶²⁶ ADF&G. (2011). *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey Project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADF&G.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁶²⁷ ADF&G. (2011). *Alaska sport fish charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential]

actively fished, an average of 213 lbs of halibut was harvested per SHARC. In 2010, an average of 152 lbs of halibut were harvested on the 480 total cards fished (Table 14).

Data were also available regarding harvest of some marine mammal species between 2000 and 2010. The number of sea otters harvested for subsistence use varied between 81 and 205 per year, and the number of harbor seals harvested for subsistence varied between 23 and 277. In 2002, six Steller sea lions were harvested for subsistence purposes in Sitka, and one walrus was reported harvested in 2003. Data were not reported by management agencies regarding harvest of beluga whale or spotted seals. Information about subsistence harvest marine mammals in Sitka between 2000 and 2010 is presented in Table 15.

While no data were reported in Table 13 regarding harvest of marine invertebrates by Sitka residents during the 2000-2010 period, information is available from an earlier household subsistence survey conducted by the ADF&G Division of Subsistence. In 1996, the following species of marine invertebrates were reportedly used for subsistence in Sitka: abalone, basket cockles, black (small) chitons, blue king crab, blue mussels, brown king crab, butter clams, Dungeness crab, geoducks, green sea urchin, heart cockles, horse clams (gaper), limpets, octopus, Pacific littleneck clams (steamers), purple sea urchins, razor clams, red (large) chitons, red king crab, red sea urchin, rock scallops, shrimp, squid, starfish, Tanner crab, unknown clams, unknown cockles, unknown crab, unknown king crab, unknown mussels, unknown scallops, unknown sea cucumber, unknown sea urchin, unknown Tanner crab, weathervane scallops, and yein sea cucumber.

The 1996 ADF&G subsistence survey also noted species of marine mammals and non-salmon fish (not including halibut) harvested for subsistence use that year. Marine mammal species included fur seal, harbor seal, harbor seal (saltwater), and Steller sea lion. Non-salmon fish reported as harvested for subsistence use included: black rockfish, brook trout, buffalo sculpin, capelin (grunion), cutthroat trout, dogfish, Dolly Varden, eulachon (hooligan candlefish), grayling, herring, herring roe on hair seaweed, herring roe on hemlock branches, herring roe/unspecified, herring spawn on kelp, lingcod, Pacific cod (gray), Pacific tom cod, rainbow trout, red Irish lord, red rockfish, rock greenling, sablefish (black cod), salmon shark, sea bass, sea perch, silver smelt, skates, steelhead, unknown bass, unknown cod, unknown flounder, unknown perch, unknown rockfish, unknown sculpin, unknown shark, unknown sole, and walleye pollock.¹⁶²⁸

¹⁶²⁸ Alaska Department of Fish and Game. 2011. *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADF&G.alaska.gov/sb/CSIS/> (Accessed February 2011).

Additional Information

In 2005, Sitka was the site of a workshop that gathered approximately 40 American and Canadian practitioners, fishermen, and community leaders to discuss issues, strategies, and next steps in community-based fisheries management (CBFM). The workshop was a follow-up meeting to one held in October 2004 in Maine. One outcome of this meeting was the “Sitka Declaration,” endorsing CBFM approach, and proposing addressing issues of access to fisheries resources through the following means:

- Endow communities with access privileges and the authority to make subsequent allocations;
- If used, individual access rights are defined for a finite period (not in perpetuity);
- Discourage absentee ownership;
- Recognize the specific rights of, and honor prior commitments to, First Nations, treaty tribes, and indigenous peoples;
- Management structures and practices be transparent;
- Recognize all users, including aboriginal and customary and traditional users, commercial and recreational sectors;
- Promote active participation by 2nd generation access privilege holders;
- Provide affordable entry level opportunities for coastal community residents;
- Provide incentives for conservation practices;
- Protect access privileges of crew and skippers;
- Prohibit processing shares or linkages;
- Ensure that the privilege of access shall be complemented by a clearly defined and binding schedule of enforcement;
- The design of limited access programs should not disadvantage those who fished conservatively (including not fishing at all for conservation and economic reasons).^{1629,1630}

¹⁶²⁹ Ecotrust. 2005. *Sitka Declaration*. Retrieved July 13, 2012 from http://www.ecotrust.org/cbfm/Sitka_Declaration_2005.pdf.

¹⁶³⁰ Ecotrust. 2005. *Sitka Workshop*. Retrieved July 13, 2012 from http://www.ecotrust.org/cbfm/Sitka_Workshop_2005.pdf.

Table 12. Subsistence Participation by Household and Species, Sitka: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	97%	n/a
2005	n/a	n/a	n/a	n/a	99%	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	88%	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADF&G.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Sitka: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	1,205	1,166	20	92	18	138	25,062	n/a	n/a
2001	1,039	1,012	12	170	10	716	29,722	n/a	n/a
2002	1,127	998	44	172	128	242	38,624	n/a	n/a
2003	1,500	1,432	18	104	56	412	37,531	n/a	n/a
2004	783	748	36	134	28	273	18,484	n/a	381,226
2005	680	669	6	27	127	373	11,484	n/a	79,063
2006	817	785	6	47	87	187	19,989	n/a	n/a
2007	800	429	14	30	34	332	15,776	n/a	87,211
2008	612	583	13	75	606	126	9,219	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.ADF&G.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Sitka: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1,639	821	174,880
2004	1,871	904	221,965
2005	1,974	814	144,561
2006	1,895	915	163,372
2007	1,954	921	142,049
2008	1,662	845	109,581
2009	1,731	844	97,424
2010	1,635	480	73,139

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Sitka: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	155	n/a	n/a	n/a	277	n/a
2001	n/a	114	n/a	n/a	n/a	241	n/a
2002	n/a	99	n/a	n/a	6	170	n/a
2003	n/a	83	1	n/a	n/a	220	n/a
2004	n/a	81	n/a	n/a	n/a	141	n/a
2005	n/a	104	n/a	n/a	n/a	23	n/a
2006	n/a	104	n/a	n/a	n/a	141	n/a
2007	n/a	252	n/a	n/a	n/a	128	n/a
2008	n/a	130	n/a	n/a	n/a	141	n/a
2009	n/a	141	n/a	n/a	n/a	n/a	n/a
2010	n/a	205	n/a	n/a	n/a	n/a	n/a

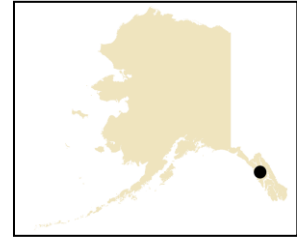
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Tenakee Springs (TEN-uh-kee)



People and Place

*Location*¹⁶³¹

Tenakee Springs is located on the east side of Chichagof Island, on the north shore of Tenakee Inlet. It lies 45 miles southwest of Juneau and 50 miles northeast of Sitka. Tenakee Springs is a Second-class city and is not located within an organized borough. The community encompasses 13.8 square miles of land and 5.3 square miles of water.

*Demographic Profile*¹⁶³²

In 2010, there were 131 inhabitants in Tenakee Springs, making it the 224th largest of 352 total Alaskan communities with recorded populations that year. Overall between 2000 and 2009, the population of Tenakee Springs did not have a net change according to the U.S. Census and the Alaska Department of Labor Estimate of Permanent Residents (Table 1). The average annual growth rate during this period was 0.01%, indicating an extremely slow rate of growth. However, between 2009 and 2010, the population of Tenakee Springs increased by 20.6%, from 104 to 131. In a survey conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that approximately 50 people come to Tenakee Springs each year as seasonal workers or transients during the months of June, July, and August, and that the annual peak in population is “somewhat” driven by employment in the fishing sectors. Given this, the increase in population between 2009 and 2010 could be due to the 2010 Census counting seasonal workers in the total population count, whereas the Alaska Department of Labor only counts permanent residents.

In 2010, a majority of Tenakee Springs residents identified themselves as White (94.7%). Other ethnic groups present in Tenakee Springs that year included: American Indian and Alaska Native (0.8%), Hispanic or Latino (1.5%), two or more races (3.1%), Asian (0.8%), and Black or African American (0.8%). Between 2000 and 2010, the percentages of the population identifying themselves as White and Asian increased, with corresponding decreases in the percentages of the population identifying themselves as two or more races, some other race, Native Hawaiian and Other Pacific Islander, Asian, American Indian and Alaska Native, and Hispanic or Latino. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹⁶³¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶³² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

The average household size in Tenakee Springs in 2010 was 1.82, a slight increase from 1.8 persons per household in 1990 and 1.76 in 2000. The total number of households in Tenakee Springs increased from 51 in 1990 to 59 in 2000 to 72 occupied housing units in 2010. Of the 180 housing units surveyed for the 2010 Decennial Census, 59 were owner-occupied, 13 were renter-occupied, and 108 were vacant or used only seasonally. Throughout this period no residents of Tenakee Springs were reported to be living in group quarters.

Table 1. Population in Tenakee Springs from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	94	-
2000	104	-
2001	-	105
2002	-	98
2003	-	105
2004	-	104
2005	-	98
2006	-	104
2007	-	102
2008	-	99
2009	-	104
2010	131	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Tenakee Springs: 2000-2010 (U.S. Census).

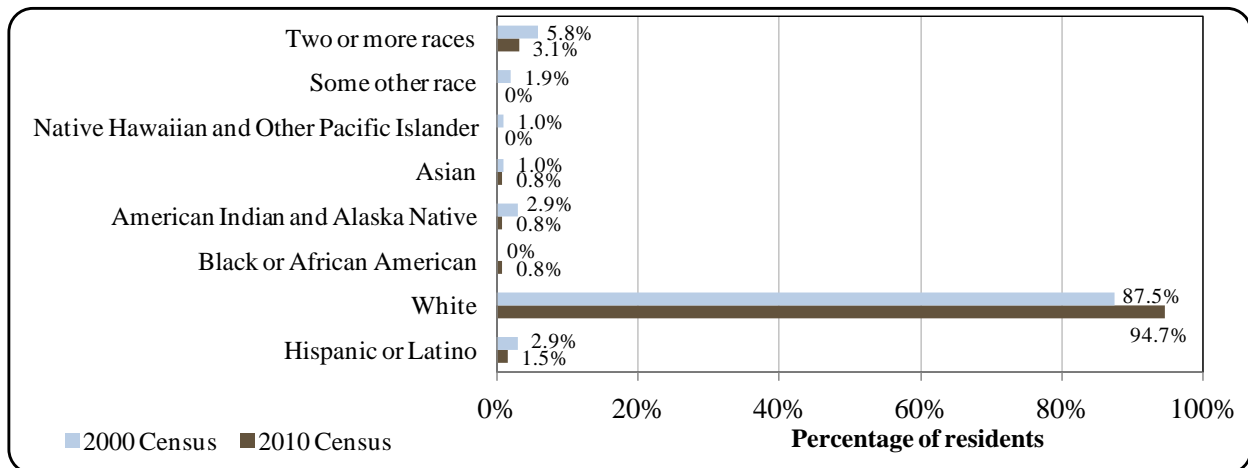
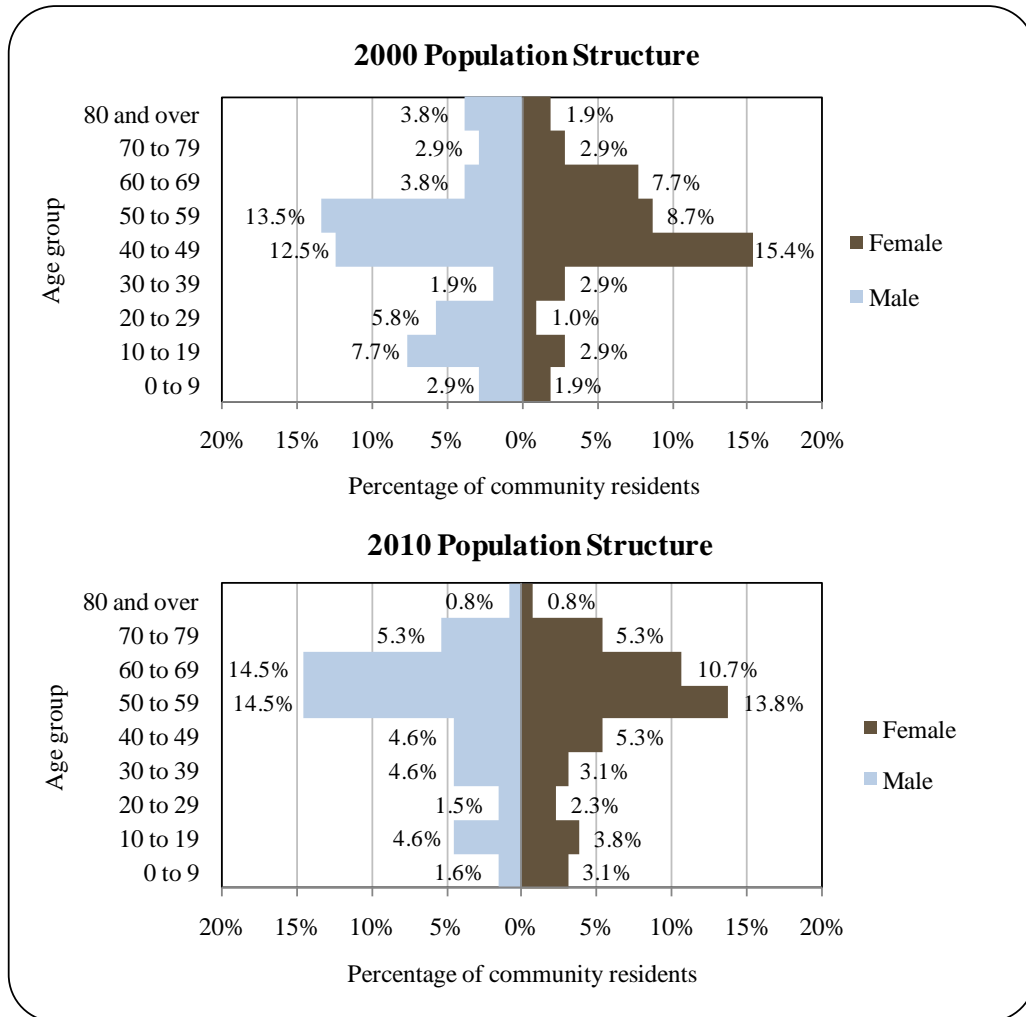


Figure 2. Population Age Structure in Tenakee Springs Based on the 2000 and 2010 U.S. Decennial Census.



The gender makeup in Tenakee Springs in 2010 was 51.9% male and 48.1% female, very similar to the state as a whole (52% male, 48% female). The median age was estimated to be 55.5 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of the population fell within the age group 50 to 59 years old, with the second largest percentage falling within the age group 60 to 60 years old. Relatively few individuals were over age 80 or under age 10. The overall population structure of Tenakee Springs in 2000 and 2010 is shown in Figure 2.

According to the 2006-2010 American Community Survey (ACS),¹⁶³³ in terms of educational attainment, 81% of Tenakee Springs residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents

¹⁶³³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

overall. Also in 2010, 6.3% of residents aged 25 and over were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 12.7% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 9.5% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 6.3% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 6.3% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 25.4% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 33.3% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture^{1634,1635}

The word Tenakee is from the Tlingit word "tinaghu," meaning "Coppery Shield Bay." This refers to three copper shields, highly prized by the Tlingits, that were lost in a storm. Early prospectors and fishermen came to the site to wait out the winters and enjoy the natural hot springs in Tenakee. Around 1895, a large tub and building were constructed to provide a warm bathing place for the increasing number of visitors. During its early days, Tenakee was known as "Robbers Roost" stemming from bank robbers and other outlaw types who reportedly resided there. Gambling and prostitution were part of life, and there was no reliable law enforcement until 1917 when a Deputy U.S. Marshall began making regular visits.

In 1899, Ed Snyder established Snyder's Mercantile, which still operates today. A post office opened in 1903. Originally called Tenakee, the name was altered to Tenakee Springs in 1928. Improvements to the hot springs facilities were made in 1915 and 1929; the existing bathhouse was constructed in 1940. Three canneries operated in the area between 1916 and 1974. A logging camp operated for a time at Corner Bay. The city incorporated in 1971.

Tenakee Springs has a year-round population and also serves as a summer retreat for residents of Juneau, Sitka, Washington, and Oregon. Many residents practice a subsistence lifestyle and actively exchange resources with their neighbors. The 104 °F sulfur hot springs are the social focus of the community. Salmon and crab canneries operated in the inlet beginning in 1916 and ceased operations in 1974. Commercial fishing remains an important part of Tenakee and the livelihood of some Tenakee residents.

Natural Resources and Environment¹⁶³⁶

Tenakee Springs has a maritime climate with cool summers and mild winters. Summer temperatures range from 45 to 65 °F (7.2 to 18.3 °C) and winters from 24 to 39 °F (-4.4 to 3.9 °C). The highest recorded temperature is 84 °F (28.9 °C), and the lowest recorded temperature is 3 °F (-16.1 °C). Total precipitation averages 69 inches a year, with 62 inches of snow.

In a survey conducted by the AFSC in 2011, community leaders reported that the economy of Tenakee Springs relies on the following natural resource-based industries: fishing, ecotourism, and sport hunting and fishing.

¹⁶³⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶³⁵ Tenakee Springs Business Association. (2009). *Tenakee Springs History*. Retrieved July 11, 2012 from: <http://www.tenakeespringsak.com/tenakee-springs-history/>.

¹⁶³⁶ Ibid.

Tenakee Springs is located near the Tongass National Forest (Tongass). The Tongass is the largest unit in the national forest system, at almost 17 million acres. National Forest employees work to balance multiple uses of the forest resources. The Tongass has healthy fish and wildlife populations, clean water, trees to support local industry, and recreation opportunities unique to Alaska. The roads that exist in Southeast Alaska have been developed from forest roads that were originally built to reach timber.

Though home to the world's largest temperate rain forest, almost half of the Tongass is covered by ice, water, wetlands and rock. Few places in the world have the geologic and climatic variations that sculpt this landscape. The snow and ice of the 1,500-square-mile Juneau Ice Field are less than eight miles from the salt water in Gastineau Channel.

The Tongass is home to numerous plant species, including ferns, dwarf dogwood, false lily of the valley, marsh marigold, skunk cabbage, western hemlocks, Sitka spruce, sub-alpine fir, red cedar, yellow cedar, and hardwoods such as alder. The largest known concentrations of bald eagles gather each year in the Tongass, and thousands of shorebirds use the forest as a resting place during their annual migrations. Marine mammals such as sea otters, whales, porpoises, and seals utilize inside waters. Terrestrial species that inhabit this area include Sitka black-tailed deer, brown bears, mountain goats, moose, wolves, beaver, fox, and porcupines. All five species of Pacific salmon (chum, coho, king, pink, and sockeye) can be found within Tongass, along with Dolly Varden, rainbow trout, steelhead trout, and cutthroat trout.

People have lived and worked in this area for centuries. For years, the Tlingit and Haida peoples have fished for salmon and herring and gathered berries and other plants. Each generation shares its knowledge of the land with the next. Today, many rural residents depend on a subsistence lifestyle, just as Alaska Natives have for centuries. Water routes in the National Forest are the way many tourists see coastal Alaska. Local residents and tourists enjoy sailing, motor boating, kayaking and fishing.¹⁶³⁷

Environmental hazards which threaten Tenakee Spring include landslides and avalanches, earthquakes, and coastal flooding. Many historic avalanche or mass-wasting sites are located on steep to moderate slopes remain sparsely vegetated, increasing the probability of future slide or avalanche events. The nearest active fault line to Tenakee Springs is the Fairweather fault, approximately 100 miles west of Juneau. The U.S. Army Corps of Engineers classify Juneau as a Seismic Risk Zone 3, indicating that an earthquake of a magnitude 6.0 or greater may occur.¹⁶³⁸

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Tenakee Springs as of 2010.¹⁶³⁹

Current Economy¹⁶⁴⁰

Tenakee Springs has long been considered a retirement and vacation community, though fishing is an important source of income. Tourism is becoming increasingly important. Local employers include various city department and the store, school, bakery, and post office. In

¹⁶³⁷ U.S. Forest Service, Tongass National Forest, Introduction to the Tongass. Retrieved March 8, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/faqs/intro.shtml.

¹⁶³⁸ U.S. Division of Homeland Security and Emergency Management. (2013). *State of Alaska Hazard Mitigation Plan 2013*. Retrieved from: <http://www.ready.alaska.gov/plans/documents/2013%20State%20Mitigation%20Plan%20Draft.pdf>.

¹⁶³⁹ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved September 11, 2013 from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

¹⁶⁴⁰ Unless otherwise noted, all monetary data are reported in nominal values.

addition, there are several skilled carpenters and contractors. There are 3 small lumber mills in town.¹⁶⁴¹ Top employers for 2010 included City of Tenakee Springs, State of Alaska, Chatham School District, TKE Merc LLC, Pinfish Enterprise, TLC Management LLC, Alaska Seaplane Service LLC, and the City and Borough of Juneau.

In 2010, the per capita income in Tenakee Springs was estimated to be \$28,145 and the median household income was estimated to be \$60,114, compared to \$20,482 and \$33,125 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁶⁴² the real per capita income in 2000 is shown to have been \$26,394 and the real household income was \$43,559. This shows that both per capita income and household income increased between 2000 and 2010. In 2010, Tenakee Springs ranked 78th of 305 Alaskan communities with per capita income that year, and 78th of 299 Alaskan communities with household income data. However, Tenakee Springs small population size may have prevented the ACS from accurately portraying economic conditions.¹⁶⁴³ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Tenakee Springs in 2010 was \$7,210, which indicates an overall increase/decrease compared to the real per capita income values reported by the U.S. Census in 2000.¹⁶⁴⁴ This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁶⁴⁵ However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in the same year, 61.1% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 18.2%, compared to the statewide unemployment rate of 5.9%. Approximately 24.4% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Tenakee Springs are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Tenakee Springs. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 3.9%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was self-employed (47.2%), while 27.8% were employed in the public sector and 25% were employed in the private sector. Out of 36 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in transportation, warehousing, and utilities (21.6%), agriculture, forestry, fishing, hunting, and mining (21.6%), public administration (10.8%), manufacturing (10.8%), and construction (10.8%). Smaller percentages of the population were employed in other services, except public

¹⁶⁴¹ See footnote 1634.

¹⁶⁴² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁶⁴³ See footnote 1633.

¹⁶⁴⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁶⁴⁵ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

administration (8.1%), arts, entertainment, recreation, accommodations, and food services (8.1%), and retail trade (8.1%). Given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Tenakee Springs (U.S. Census).

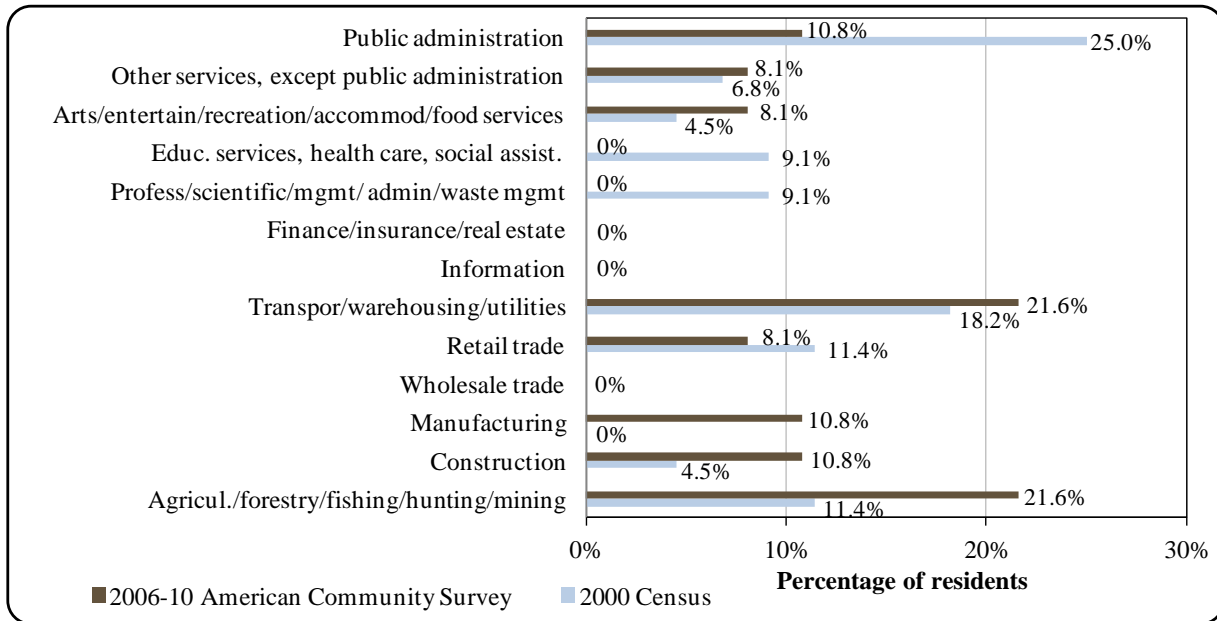
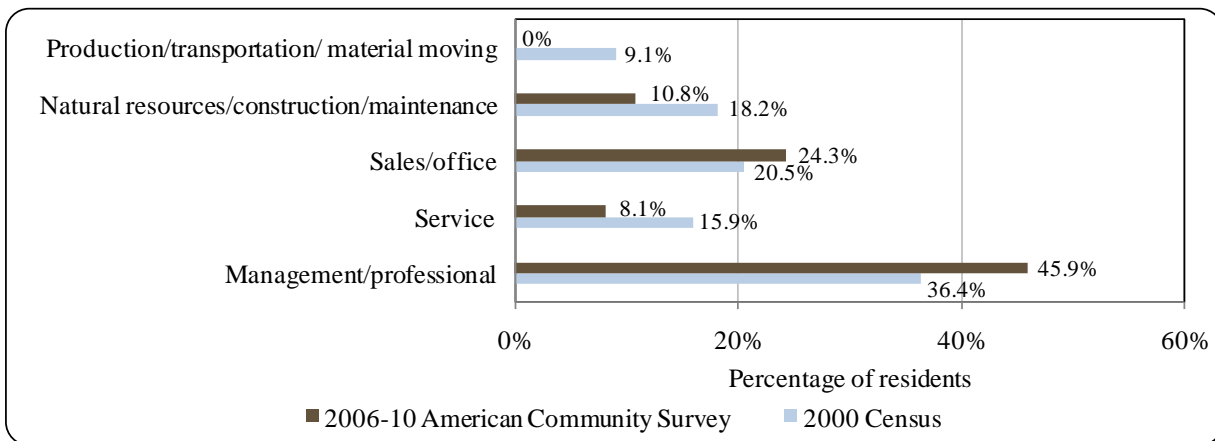


Figure 4. Local Employment by Occupation in 2000-2010, Tenakee Springs (U.S. Census).



Governance

Tenakee Springs is a Second-class city not under the jurisdiction of a borough. In 2010, the City administered a 2% sales tax as well as an accommodations tax. Specific budget information for 2000 through 2010 was collected from *Community Financial Statements*

(CFS).¹⁶⁴⁶ When adjusted for inflation,¹⁶⁴⁷ total municipal revenues increased by 46.0% between 2000 and 2010 from \$244,510, to \$461,704. Revenues increased at a relatively constant rate between those years, peaking in 2007 at \$515,170. In 2010, most (49.4%) revenues came from general funds, followed by gross fuel sale profits (15.3%), capital project revenues (14.4%), and net income from utility services (9.1%). Large general fund contributions came from state energy assistance funds (44.3%), special project funds (19.6%), and federal payments in lieu of taxes (10.9%). Overall, sales tax revenues accounted for 1.5% of total municipal revenues in 2010, compared to 2.4% in 2000. Sales tax revenues exceeded \$13,000 in 2006 through 2008, and peaked in 2007 at \$14,844. Tenakee Springs received state allocated Community Revenue Sharing in 2009 and 2010 although those funds were not explicitly itemized on CFS for those years; however, funds listed under Municipalities Energy Assistance Program are a close match.

Between 2001 and 2003, Tenakee Springs received fisheries-related grants for projects including a harbor shed office, city and harbor fire protection equipment purchase and replacement, and CP&I/design and engineering for a skiff float. Information about selected aspects of the community's revenue is presented in Table 2.

The nearest offices of the Alaska Department of Fish and Game (ADF&G), Department of Natural Resources, Department of Commerce, Community, and Economic Development, and the National Marine Fisheries Service (NMFS) are located in Juneau. The nearest offices of the Bureau of Citizenship and Immigration Services and U.S. Immigration and Customs Enforcement are located in Anchorage.

Tenakee Springs was not included in the Alaska Native Claims Settlement Act (ANCSA) and is not federally recognized as a Native village. However, many Native community members in Tenakee Springs are shareholders in the regional Native corporation for Southeast Alaska, the Sealaska Corporation. Sealaska is owned by over 20,000 tribal member shareholders and guided by the traditions of environmental stewardship and positively impacting their communities. Sealaska is made up of legendary traders who are deeply connected to their lands and have successfully adapted to constantly changing environments and global economies. Sealaska brings together the wisdom and foresight of their combined heritage to create an enduring corporation that provides business opportunities, benefits and cultural strength for their people. Today Sealaska is the largest private landowner and the largest for-profit private employer in Southeast Alaska. Sealaska is a diverse company with investments in forest products, construction aggregates, machining and fabrication, environmental remediation, information technology, plastics injection molding and manufacturing, global logistics, wood products and financial markets. Sealaska's status as a Minority Business Enterprise and Small Disadvantaged Business add to their strength as a government contractor and commercial diversity supplier.¹⁶⁴⁸

¹⁶⁴⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

¹⁶⁴⁷ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

¹⁶⁴⁸ Sealaska Native Corporation (2012). *Who We Are*. Retrieved on May 9, 2012 from http://www.sealaska.com/page/who_we_are.html.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Tenakee Springs from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$244,510	\$5,982	\$20,531	n/a
2001	\$229,167	\$7,314	\$19,740	\$15,000
2002	\$257,995	\$4,518	\$19,743	\$25,000
2003	\$263,797	\$6,612	\$19,896	\$32,997
2004	\$319,317	\$7,121	-	n/a
2005	\$347,691	\$6,958	-	n/a
2006	\$420,239	\$13,092	-	n/a
2007	\$515,170	\$14,844	-	n/a
2008	\$495,753	\$13,581	-	n/a
2009	\$353,065	\$7,174	\$101,050	n/a
2010	\$461,704	\$6,809	\$101,216	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

Tenakee Springs is dependent on seaplanes and the Alaska Marine Highway for transport. The state owns a seaplane dock and heliport. Scheduled or chartered float planes are dispatched from Juneau and Sitka. The state ferry provides passenger transportation only, since there are no vehicle landing facilities or local roads in Tenakee Springs. Barges deliver fuel and goods four to six times a year. The marine facilities include a small boat harbor and ferry terminal. The City of Tenakee Springs owns a fuel dock. There is a three mile long main street. Local transportation is primarily by bicycle or ATV, and there is a 1.5 mile trail which runs through the townsite. While there is no regularly scheduled commercial flight service between Tenakee Springs and Anchorage, round-trip airfare between nearby Sitka (accessible by scheduled or chartered float plane) and Anchorage in June 2012 was \$441, and round-trip airfare between nearby Juneau (also accessible by scheduled or chartered float plane) and Anchorage in June 2012 was \$366.¹⁶⁴⁹

¹⁶⁴⁹ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

*Facilities*¹⁶⁵⁰

There is no community water, sewer, or refuse service. Residents haul water from local streams or use individual wells. Most homes are fully plumbed. The City owns and operates diesel generators, and the city owns the electrical and fuel distribution systems. Law enforcement services are provided by state troopers in Juneau. Fire and rescue services are provided by the Tenakee Springs Volunteer Fire / Emergency Medical Service department. Tenakee Springs also has a public library.

In a survey conducted by the AFSC in 2011, community leaders reported that broadband internet access and a diesel powerhouse have been completed in the past 10 years, with improvements to existing dock structure, alternative energy infrastructure, emergency response, and fire department projects due for completion in the next 10 years. In the same survey, community leaders also noted that while the amount of dock space available for permanent vessels is variable, there are 400 feet of dock space available for transient vessels. Vessels up to 65 feet in length such as rescue vessels, ferries, and fuel barges are able to use mooring facilities in Tenakee Springs.

*Medical Services*¹⁶⁵¹

Medical care is provided by the Tenakee Springs Health Clinic, which is owned by the city. Health care is provided by the Tenakee Springs Volunteer Fire/EMS department. Medevac services are provided by floatplane or helicopter and the nearest hospitals are located in Sitka and Juneau.

*Educational Opportunities*¹⁶⁵²

The Tenakee Springs School provides instruction to students in kindergarten through 12th grade. In 2011 the school had 10 students and one teacher.

Involvement in North Pacific Fisheries

*History and Evolution of Fisheries*¹⁶⁵³

Tenakee Spring's participation in commercial fisheries began in the 1917 when Superior Pacing Company opened several salmon and crab canneries a few miles east of the community. Columbia Packing Company followed by opening a cannery in 1919. The canneries imported most of their labor from Seattle, and therefore, most of the wages migrated out of the community. Despite this, the population of Tenakee Springs grew to around 300 by the time Salt Sea Fisheries opened a cannery on the west end of town in the 1930s. This cannery operated until it went bankrupt in 1949.

¹⁶⁵⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁵¹ Ibid.

¹⁶⁵² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁶⁵³ Tenakee Springs. (2005). *Community Plan*. Retrieved July 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/TenakeeSprings-GCP-2005.pdf>.

The Columbia Cove Cannery closed in 1930, when its parent company, the Alaska Consolidated Canneries Corporation, began shuttering smaller operations. When the Superior Cannery closed in 1953, commercial fishing suffered immensely and Tenakee Springs was left without an economy. A small crab cannery was opened in 1949 and employed 15 to 20 people seasonally, but that was not enough to keep the community from atrophying.

The creek and river systems of Tenakee Inlet contain spawning habitat for three of the five species of Pacific salmon. Chinook are found in the Inlet in small numbers; however they do not spawn in any of the Inlet's drainages. Pink and chum salmon are monitored for escapement records and commercial fishing openings are determined by ADF&G fly-over observations of local streams. The Kadashan River's pink salmon run is considered one of the more important pink salmon runs in Southeast Alaska. The U.S. Forest Service constructed a fish ladder at Indian River in an effort to open coho spawning habitat and introduce Chinook salmon. Crab is also fished commercially within the Inlet. The catch is predominately Dungeness crab along with a less significant catch of king and Tanner crab.

Historically, there was a bait and food herring fishery in the Inlet. For several years prior to 1998, the fishery was closed due to a depleted stock. The fishery opened again in the winter of 1998. Quotas for bait herring began increasing in 2000. There is no predictable market for locally caught halibut. A commercially important local shrimp fishery has changed with the advent of limited entry and short seasons. The shrimp fleet is dominated by non-locals.

Tenakee Springs is located on the east side of Chichagof Island, on the north shore of Tenakee Inlet.¹⁶⁵⁴ The area is included in Federal Statistical and Reporting Area 659, Pacific Halibut Fishery Regulatory Area 2C, and the Eastern Gulf of Alaska/Southeast Outside Sablefish Regulatory Area. Tenakee Springs is eligible to participate in the Community Quota Entity (CQE) program, but is not eligible for the Community Development Quota program.

The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.¹⁶⁵⁵

Tenakee Springs participates in the Community Quota Entity (CQE) program through a non-profit called the Tenakee Springs Business Association. The CQE non-profit was established at the recommendation of the City of Tenakee Springs. As of Fall 2013, the Tenakee Springs Business Association had not yet purchased any commercial halibut IFQ or non-trawl groundfish

¹⁶⁵⁴ Ibid.

¹⁶⁵⁵ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEreport210.pdf>

License Limitation Program permits. However, the non-profit had acquired four halibut charter permits for lease to community members.¹⁶⁵⁶

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Tenakee Springs does not have a registered processing plant. However, there were landings made in the community in 2001, 2006 and 2007 indicating the presence of some level of fish buyer or dealer (Table 5). The nearest processing plants are located in Juneau and Sitka.

Fisheries-Related Revenue

Between 2000 and 2010, the city of Tenakee Springs received fisheries related revenue from the Shared Fisheries Business Tax, fuel transfer tax, bulk fuel transfers, and harbor usage fees. The amount of revenue received from the Shared Fisheries Business Tax increased substantially between 2000 and 2010. The city received revenue from the fuel transfer tax in 2005 and from 2006 to 2010; the amount received remained stable between 2007 and 2010. Since 2005, Tenakee Springs has received revenue from bulk fuel transfers, and the amount received increased during this period. The amount of revenue received from harbor usage fees also increased between 2000 and 2010. Information regarding known fisheries-related revenue received by Tenakee Springs between 2000 and 2010 is presented in Table 3. It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

In a survey conducted by the AFSC in 2011, community leaders reported that social services and police, enforcement, and fire protection are at least partially supported or funded by revenue that comes from fisheries-related sources.

Commercial Fishing

Commercial fishing is important to Tenakee Springs. However, it should be noted that many commercial fishermen reside in the community seasonally. As such, permit data may not capture those residents who report living elsewhere. In a survey conducted by the AFSC in 2011, community leaders reported that the following gear types are used by commercial fishing vessels that use Tenakee Springs as their base of operations during the fishing season: crab pots, longline, purse seine, and troll. In the same survey, community leaders noted that Tenakee Springs participates in the fisheries management process in Alaska by relying on regional organizations such as the Gulf of Alaska Coastal Communities Coalition, Southeast Conference, or Southwest Alaska Municipal Conference to provide information on fisheries management issues.

In 2010, a total of 29 Tenakee Springs residents held a total of 22 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for crab, other shellfish, halibut, herring, groundfish, and salmon. However, it should be noted that while that figure may be accurate according to CFEC records, the community itself is skeptical whether that number

¹⁶⁵⁶ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

truly represents the number of permits held by permanent residents. The total number of CFEC permits and permit holders, as well as the total number of CFEC permits reported as fished, decreased between 2000 and 2010. The number of crab CFEC permits and permit holders varied between 2000 and 2010, with at least 67% of permits reported as fished in any given year. Crab CFEC permits were issued in 2010 for the Dungeness crab fishery using 75 pots (or 25% of max) in southeastern Alaska and for 225 pots (or 75% of max) in southeastern Alaska. The number of other shellfish CFEC permits, permit holders, and permits reported as fished decreased between 2000 and 2010. In 2010, three other shellfish CFEC permits were issued for the shrimp pot fishery in the southeast, while one was issued for the Tanner crab ring net fishery in southeastern Alaska. The number of halibut CFEC permits and permit holders also decreased during this period, although 100% of these permits were reported as fished in each year except 2008 and 2009, when none of the active permits were reported as fished. The 2010 herring CFEC permit issued was for the statewide longline fishery using vessels under 60 feet. There was one herring CFEC permit held in Tenakee Springs in 2010, though that permit was not reported as fished and was issued for the herring spawn on kelp pound fishery in southern southeast Alaska. There were no herring CFEC permits held by Tenakee Springs residents between 2000 and 2009. There was one sablefish CFEC permit held in Tenakee Springs between 2000 and 2007, and that permit was reported as fished in each of those years. However, there were no sablefish CFEC permits held between 2008 and 2010. The number of groundfish CFEC permits varied slightly between 2000 and 2010, though none of those permits were reported as fished between 2002 and 2006. One CFEC permit was issued for the statewide lingcod hand troll fishery and one was issued for the statewide miscellaneous saltwater finfish longline fishery using vessels under 60 feet. The number of salmon CFEC permits and permit holders, as well as the number of permits reported as fished, decreased slightly between 2000 and 2010. The majority of the salmon CFEC permits in 2010 were issued for the statewide hand troll fishery, with the remainder issued for the drift gill net fishery in Bristol Bay and the statewide power gurdy troll fishery.

The number of Federal Fisheries Permits held by Tenakee Springs residents varied from one to three between 2000 and 2010, though these permits were only reported as fished between 2003 and 2008. There were four groundfish License Limitation Program (LLP) permits issued to three Tenakee Springs residents in each year between 2000 and 2010, though there was only one year in which one permit was reported as fished, in 2006. Information on commercial fishing permits and permit holders by species is presented in Table 4.

There were 15 crew license holders in Tenakee Springs in 2010, a number which varied from two crew license holders in 2002 to 18 in 2007. There were three fish buyers located in Tenakee Springs in 2010, a number which also varied between 2000 and 2010 (from zero between 2002 and 2005 and in 2008, to nine in 2006). However, there were no shore-side processing facilities located in Tenakee Springs between 2000 and 2010. The number of vessels owned primarily by Tenakee Springs residents decreased from 17 in 2000 to 9 in 2010. The number of vessels homeported in Tenakee Springs between 2000 and 2010 varied from 16 in 2002 to 9 in 2005, with 11 vessels homeported in the community in 2010.

The number of vessels landing catch in the community was highly variable during this period, ranging from one in 2000 and 2009 to 17 in 2006. There were no vessels recording landings in Tenakee Springs between 2002 and 2005, or in 2008. In 2010, there were two vessels landing catch in Tenakee Springs. For years in which landings were recorded in Tenakee Springs, landings and associated ex-vessel revenue information are only reportable for 2001, 2006, and 2007. In other years for which landings were recorded, the landings and ex-vessel

value are considered confidential due to a small number of participants. Both landings and ex-vessel revenue varied widely in the three years for which data were reported, and will be examined further below. Information on characteristics of the commercial fishing sector in Tenakee Springs between 2000 and 2010 is presented in Table 5. In 2010, Tenakee Springs ranked 65th in landings and 61st in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings.

Between 2000 and 2010, there were between two and five halibut quota share account holders in Tenakee springs, though the number of halibut quota shares varied widely during this period (from 217,900 in 2000 and 2001 to 463 in 2008 and 2009). Overall, there was a decreased in both the number of quota share account holders the number of quota shares held during this period. The total halibut IFQ allotment increased slightly in the middle of the decade before decreasing substantially in 2008 and 2009, then increasing again in 2010. Information about halibut IFQ in Tenakee Springs between 2000 and 2010 is presented in Table 6.

There was one sablefish quota share account holder in Tenakee Springs between 2000 and 2007, and during that time the number of sablefish quota shares held remained stable with the sablefish IFQ allotment varying only slightly. However, between 2008 and 2010, there were no sablefish IFQ shares held by Tenakee Springs residents. Information regarding sablefish IFQ in Tenakee Springs between 2000 and 2010 is presented in Table 7. There were no crab IFQ account share holders in Tenakee Springs between 2005 and 2010 (Table 8).

Between 2000 and 2010, there were no commercial landings reported in Tenakee Springs between 2002 and 2005 or in 2008. In the remaining years for which landings were recorded, both the landings and associated ex-vessel revenue are considered confidential due to a small number of participants with the exception of landings and revenue for other shellfish in 2006 and 2007. Landings and revenue for other shellfish varied considerably between these two years. Information on landed pounds and ex-vessel revenue by species in Tenakee Springs between 2000 and 2010 is presented in Table 9.

Landings and ex-vessel revenue recorded by Tenakee Springs residents are considered confidential for most species in most years due to a small number of participants (Table 10). For crab landed by community residents, landings and ex-vessel revenue increased between 2000 and 2003, while landings and ex-vessel revenue for other groundfish decreased during the same period. Landings and ex-vessel revenue for salmon were variable between 2000 and 2010 for years in which data are reportable, though overall the amount of landings decreased during this period while the total ex-vessel revenue increased.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Tenakee Springs: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$2,150	\$3,717	\$2,667	\$1,733	\$2,112	\$2,569	\$2,559	\$30,286	\$24,250	\$23,354	\$25,355
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	\$4,300	n/a	\$2,000	\$2,000	\$2,000	\$2,000
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	\$248,850	\$315,729	\$330,938	\$330,850	\$336,750	\$343,750
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$20,455	\$22,485	\$28,000	\$28,000	\$27,150	\$27,575	\$28,998	\$0	\$47,300	\$44,800	\$44,100
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>\$22,605</i>	<i>\$26,202</i>	<i>\$30,667</i>	<i>\$29,733</i>	<i>\$29,262</i>	<i>\$283,294</i>	<i>\$347,286</i>	<i>\$363,224</i>	<i>\$404,400</i>	<i>\$406,904</i>	<i>\$415,205</i>
<i>Total municipal revenue</i> ⁵	<i>\$244,510</i>	<i>\$229,167</i>	<i>\$257,995</i>	<i>\$263,797</i>	<i>\$319,317</i>	<i>\$347,691</i>	<i>\$420,239</i>	<i>\$515,170</i>	<i>\$495,753</i>	<i>\$353,065</i>	<i>\$461,704</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Tenakee Springs: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	4	4	4	4	4	4	4	4	4	4	4
	Active permits	0	0	0	0	0	0	1	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%
	Total permit holders	3	3	3	3	3	3	3	3	3	3	3
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	2	2	2	1	1	1	3	3	3	1	1
	Fished permits	0	0	0	1	1	1	1	2	1	0	0
	% of permits fished	0%	0%	0%	100%	100%	100%	33%	67%	33%	0%	0%
	Total permit holders	2	2	2	1	1	1	3	3	3	1	1
Crab (CFEC) ²	Total permits	5	6	7	5	4	4	3	3	3	4	4
	Fished permits	5	5	5	4	3	3	2	3	3	4	4
	% of permits fished	100%	83%	71%	80%	75%	75%	67%	100%	100%	100%	100%
	Total permit holders	6	6	6	4	3	3	2	3	3	4	4
Other shellfish (CFEC) ²	Total permits	7	4	5	4	3	3	3	3	3	3	3
	Fished permits	3	3	3	3	2	2	2	2	1	2	2
	% of permits fished	42%	75%	60%	75%	66%	66%	66%	66%	33%	66%	66%
	Total permit holders	7	4	5	4	3	3	3	3	3	3	3
Halibut (CFEC) ²	Total permits	4	2	3	2	1	1	1	1	0	0	1
	Fished permits	4	2	3	2	1	1	1	1	0	0	1
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	-	-	100%
	Total permit holders	4	2	3	2	1	1	1	1	0	0	1
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	1

Table 4 cont'd. Permits and Permit Holders by Species, Tenakee Springs: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	1	1	1	1	1	1	1	1	0	0	0
	Fished permits	1	1	1	1	1	1	1	1	0	0	0
	% of permits fished	100%	100%	100%	100%	100%	100%	100%	100%	-	-	-
	Total permit holders	1	1	1	1	1	1	1	1	0	0	0
Groundfish (CFEC) ²	Total permits	5	4	5	5	1	1	1	1	1	3	2
	Fished permits	2	1	0	0	0	0	0	1	1	1	1
	% of permits fished	40%	25%	0%	0%	0%	0%	0%	100%	100%	33%	50%
	Total permit holders	4	4	4	4	1	1	1	1	1	2	2
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	22	18	20	19	20	22	22	20	18	18	18
	Fished permits	6	4	5	4	3	4	5	5	3	4	4
	% of permits fished	27%	22%	25%	21%	15%	18%	23%	25%	17%	22%	22%
	Total permit holders	21	17	18	18	19	21	21	20	18	18	18
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>44</i>	<i>35</i>	<i>41</i>	<i>36</i>	<i>30</i>	<i>32</i>	<i>31</i>	<i>29</i>	<i>25</i>	<i>28</i>	<i>29</i>
	<i>Fished permits</i>	<i>21</i>	<i>16</i>	<i>17</i>	<i>14</i>	<i>10</i>	<i>11</i>	<i>11</i>	<i>13</i>	<i>8</i>	<i>11</i>	<i>12</i>
	<i>% of permits fished</i>	<i>48%</i>	<i>46%</i>	<i>41%</i>	<i>39%</i>	<i>33%</i>	<i>34%</i>	<i>35%</i>	<i>45%</i>	<i>32%</i>	<i>39%</i>	<i>41%</i>
	<i>Permit holders</i>	<i>27</i>	<i>23</i>	<i>24</i>	<i>23</i>	<i>22</i>	<i>24</i>	<i>23</i>	<i>22</i>	<i>20</i>	<i>21</i>	<i>22</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Tenakee Springs: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Tenakee Springs ²	Total Net Pounds Landed In Tenakee Springs ^{2,5}	Total Ex-Vessel Value Of Landings In Tenakee Springs ^{2,5}
2000	17	1	0	17	14	1	--	--
2001	16	4	0	15	15	4	6,438	\$7,768
2002	2	0	0	16	16	0	0	\$0
2003	7	0	0	15	13	0	0	\$0
2004	6	0	0	11	15	0	0	\$0
2005	9	0	0	8	9	0	0	\$0
2006	10	9	0	8	10	17	38,811	\$120,834
2007	18	7	0	8	10	8	6,448	\$30,708
2008	15	0	0	6	10	0	0	\$0
2009	11	1	0	8	12	1	--	--
2010	15	3	0	9	11	2	--	--

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Tenakee Springs: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	5	217,900	25,924
2001	5	217,900	28,781
2002	4	206,088	27,071
2003	4	206,088	27,067
2004	4	206,088	31,665
2005	4	206,088	32,583
2006	4	206,088	31,955
2007	3	114,894	16,279
2008	2	463	48
2009	2	463	39
2010	3	175,961	19,006

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Tenakee Springs: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	1	106,613	12,647
2001	1	106,613	11,960
2002	1	106,613	11,426
2003	1	106,613	12,654
2004	1	106,613	13,401
2005	1	106,613	12,690
2006	1	106,613	12,512
2007	1	106,613	11,979
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Tenakee Springs: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Tenakee Springs: 2000-2010.

	<i>Total Net Pounds¹</i>											
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	
Crab	0	0	0	0	0	0	0	0	0	0	0	
Finfish	--	--	0	0	0	0	--	--	0	--	--	
Halibut	--	--	0	0	0	0	--	--	0	--	--	
Herring	--	--	0	0	0	0	--	--	0	--	--	
Other Groundfish	--	--	0	0	0	0	--	--	0	--	--	
Other Shellfish	--	--	0	0	0	0	38,811	4,948	0	--	--	
Pacific Cod	--	--	0	0	0	0	--	--	0	--	--	
Pollock	--	--	0	0	0	0	--	--	0	--	--	
Sablefish	--	--	0	0	0	0	--	--	0	--	--	
Salmon	--	--	0	0	0	0	--	--	0	--	--	
<i>Total²</i>	--	0	0	0	0	0	38,811	4,948	0	--	--	
	<i>Ex-vessel Value (nominal U.S. dollars)</i>											
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Finfish	--	--	\$0	\$0	\$0	\$0	--	--	\$0	--	--	
Halibut	--	--	\$0	\$0	\$0	\$0	--	--	\$0	--	--	
Herring	--	--	\$0	\$0	\$0	\$0	--	--	\$0	--	--	
Other Groundfish	--	--	\$0	\$0	\$0	\$0	--	--	\$0	--	--	
Other Shellfish	--	--	\$0	\$0	\$0	\$0	\$120,834	\$30,633	\$0	--	--	
Pacific Cod	--	--	\$0	\$0	\$0	\$0	--	--	\$0	--	--	
Pollock	--	--	\$0	\$0	\$0	\$0	--	--	\$0	--	--	
Sablefish	--	--	\$0	\$0	\$0	\$0	--	--	\$0	--	--	
Salmon	--	--	\$0	\$0	\$0	\$0	--	--	\$0	--	--	
<i>Total²</i>	--	\$0	\$0	\$0	\$0	\$0	\$120,834	\$30,633	\$0	--	--	

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Tenakee Springs Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	34,682	42,603	38,121	62,570	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	31,758	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	2,401	1,115	1,704	993	--	--	--	--	--	--	--
Other Shellfish	8,037	3,217	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	565,805	781,079	998,208	1,265,011	--	94,159	130,325	83,996	--	225,057	270,219
<i>Total²</i>	<i>610,925</i>	<i>828,014</i>	<i>1,038,033</i>	<i>1,360,332</i>	--	<i>94,159</i>	<i>130,325</i>	<i>83,996</i>	--	<i>225,057</i>	<i>270,219</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$61,901	\$76,290	\$45,076	\$86,880	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	\$93,146	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$1,946	\$577	\$731	\$364	--	--	--	--	--	--	--
Other Shellfish	\$27,295	\$10,465	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$198,589	\$237,724	\$205,002	\$270,269	--	\$123,885	\$219,758	\$170,339	--	\$248,973	\$347,389
<i>Total²</i>	<i>\$289,731</i>	<i>\$325,055</i>	<i>\$250,810</i>	<i>\$450,660</i>	--	<i>\$123,885</i>	<i>\$219,758</i>	<i>\$170,339</i>	--	<i>\$248,973</i>	<i>\$347,389</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

With the exception of 2008, between two and three locally registered sport fish guide businesses were active in any given year between 2000 and 2010. The number of sport fish guide licenses issued to residents declined during those years, from five in 2000, to three in 2010. Also in 2010, there were 65 sportfishing licenses sold to community residents (irrespective of the location of the point of sale), though the number of licenses sold to residents varied between 2000 and 2010. The number of licenses sold within the community increased overall between 2000 and 2010, and, in 2010, 91 sportfishing licenses were sold in Tenakee Springs. From 2008 to 2010, there were a greater number of licenses sold within the community than the number sold to community residents, indicating the potential that visitors to Tenakee Springs were pursuing sportfishing activities.

Tenakee Springs is located within Alaska Sport Fishing Survey Area D – Sitka. Looking at this regional scale between 2000 and 2010, there was significantly greater saltwater sportfishing activity than freshwater, although both were important. In saltwater, non-Alaska resident anglers fished a greater number of anglers days on average than Alaska resident anglers, and the opposite was true in freshwater. On average, non-Alaska resident anglers fished 51,348 saltwater angler days and 1,762 freshwater angler days per year, while Alaska resident anglers fished an average of 25,151 saltwater days and 2,252 freshwater days per year. This information about the sportfishing sector in and around Tenakee Springs is presented in Table 11.

The Alaska Statewide Harvest Survey,¹⁶⁵⁷ conducted by ADF&G between 2000 and 2010, noted the following species caught by private anglers in Tenakee Springs: Chinook salmon, coho salmon, pink salmon, chum salmon, Dolly Varden, cutthroat trout, Pacific halibut, rockfish, Pacific cod, Dungeness crab, Tanner crab, hardshell clam, and shrimp. Data from charter log books reported for fishing charters out of Tenakee Springs between 2000 and 2010 reported the following species that were kept/released aboard charter vessels: Chinook salmon, chum salmon, coho salmon, halibut, lingcod, other rockfish, other salmon, pink salmon, pelagic rockfish, and yelloweye rockfish.¹⁶⁵⁸

Furthermore, in a survey conducted by the AFSC in 2011, community leaders reported that the following species are targeted by recreational fishermen that use boats based in Tenakee Springs: all five species of salmon, halibut, rockfish, crab, black cod/sablefish, shrimp, and clams. In the same survey, community leaders noted that recreational fishing in Tenakee Springs takes place from charter boats or party boats, private boats owned by local residents, private boats owned by non-residents, and shore-based or dock fishing by local residents.

¹⁶⁵⁷ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishing/survey/> (Accessed September 2011).

¹⁶⁵⁸ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000-2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Tenakee Springs: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Tenakee Springs ²
2000	2	5	75	49
2001	2	5	73	44
2002	2	5	39	46
2003	2	6	67	27
2004	2	6	72	63
2005	2	2	72	60
2006	3	4	76	70
2007	3	4	65	60
2008	1	3	57	138
2009	2	3	57	182
2010	2	3	65	91

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	46,485	38,117	1,742	4,547
2001	56,533	31,124	1,991	2,742
2002	39,772	23,589	2,003	2,392
2003	46,777	19,460	1,524	2,082
2004	50,721	27,597	2,003	1,310
2005	58,394	25,770	1,970	2,356
2006	67,692	18,512	1,920	1,173
2007	64,443	24,728	1,350	1,860
2008	56,022	25,722	1,676	2,924
2009	37,759	18,661	1,664	2,382
2010	40,227	23,382	1,541	1,002

¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Many residents practice a subsistence lifestyle and actively exchange resources with their neighbors.¹⁶⁵⁹ In a survey conducted by the AFSC in 2011, community leaders reported that the three most important subsistence marine or aquatic resources to the residents of Tenakee Springs are salmon, halibut, and crab. Data were not reported regarding subsistence participation by household between 2000 and 2010 (Table 12). However, data were reported for total harvest levels of a variety of species by residents during this time period.

In years for which data were reported between 2000 and 2010, an average of eight subsistence salmon permits were issued to Tenakee Springs residents, with an average of seven permits returned in any given year. Sockeye salmon were the primary species harvested under subsistence permits (an average of 43 per year), along with small amounts of Chinook, coho, chum, and pink salmon. Data were not reported between 2000 and 2010 for per capita subsistence harvest of marine invertebrates and non-salmon fish (excluding halibut). Information about the subsistence harvest of these species is presented in Table 13.

Between 2003 and 2010, an average of 44 Subsistence Halibut Registration Certificates (SHARC) were issued to Tenakee Springs residents, with an average of 29 of those permits reported as fished during the same period. An average of 4,119 pounds of halibut were harvested using SHARC cards issued between 2003 and 2010. Information about subsistence halibut harvest is presented in Table 14. Data regarding marine mammal subsistence harvests are not available.

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Tenakee Springs during this period: abalone, chitons (bidarkis gumboots), clams, Dungeness crab, king crab, octopus, scallops, sea cucumber, sea urchin, shrimp, Tanner crab, and unknown marine invertebrates. Marine mammals reported as harvested for subsistence use included harbor seal and unknown marine mammals. Non-salmon fish reported as harvested for subsistence use included: cod, Dolly Varden, eulachon (hooligan candlefish), flounder, herring, herring spawn on kelp, rockfish, and unknown non-salmon fish.¹⁶⁶⁰

¹⁶⁵⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁶⁰ Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Tenakee Springs: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Tenakee Springs: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	10	10	n/a	n/a	n/a	n/a	22	n/a	n/a
2001	15	13	n/a	2	2	n/a	34	n/a	n/a
2002	6	6	6	n/a	2	n/a	50	n/a	n/a
2003	16	10	n/a	n/a	n/a	n/a	64	n/a	n/a
2004	7	7	n/a	2	1	1	57	n/a	n/a
2005	4	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	5	4	n/a	n/a	n/a	n/a	32	n/a	n/a
2007	3	3	1	n/a	1	n/a	n/a	n/a	n/a
2008	3	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Tenakee Springs: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	36	21	3,514
2004	38	30	5,597
2005	44	27	3,827
2006	44	33	4,898
2007	40	28	3,625
2008	45	33	3,789
2009	51	37	4,339
2010	53	23	3,363

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Tenakee Springs: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

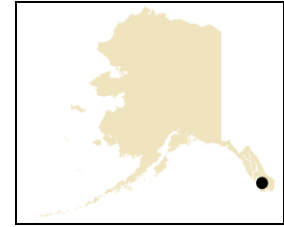
Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Thorne Bay



People and Place

*Location*¹⁶⁶¹

Thorne Bay is 47 air miles northwest of Ketchikan on the east coast of Prince of Wales Island. On the island road system, it lies 60 miles from Hollis and 36 miles east of the Klawock Junction. Thorne Bay is located in the Prince of Wales-Hyder Census Area and is not located within an organized Borough. The community encompasses 25.5 square miles of land and 4.8 square miles of water.

*Demographic Profile*¹⁶⁶²

In 2010, there were 471 inhabitants in Thorne Bay, making it the 125th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Thorne Bay decreased by 23.88%, with an average annual growth rate of -1.85% indicating a moderate rate of decline. The change in population from 1990 to 2010 is provided in Table 1. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that approximately 50 people come to Thorne Bay each year as seasonal workers or transients between April and September, with the population reaching its annual peak in August each year. This could account for the difference seen between the Alaska Department of Labor 2009 estimate and the U.S. 2010 Census count.

A majority of Thorne Bay residents identified themselves as White in 2010 (91.9%). Other ethnic groups present in Thorne Bay in that year included: two or more races (4.2%), some other race (0.4%), Native Hawaiian and Other Pacific Islander (0.4%), Asian (0.6%), American Indian and Alaska Native (2.1%), Black or African American (0.2%), and Hispanic or Latino (1.7%). Between 2000 and 2010, there were slight increases in the percentages of the population identifying themselves as two or more races, Native Hawaiian and Other Pacific Islander, Asian, Black or African American, and Hispanic or Latino. During the same period, there were decreases in the percentages of the population identifying themselves as some other race, American Indian and Alaska Native, and White. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

¹⁶⁶¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁶² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

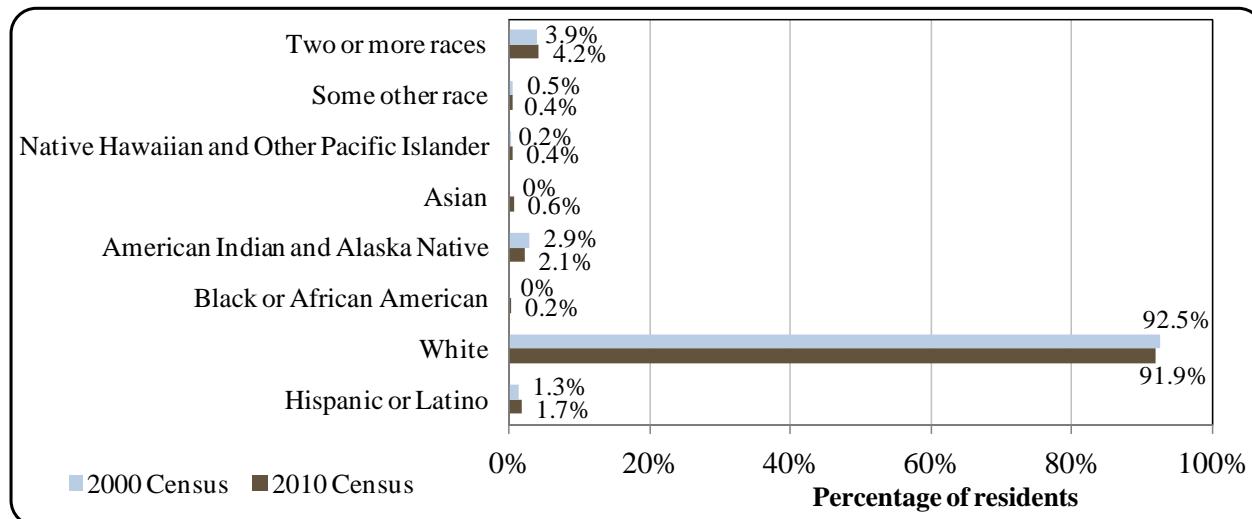
Table 1. Population in Thorne Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	569	-
2000	557	-
2001	-	521
2002	-	501
2003	-	481
2004	-	499
2005	-	486
2006	-	481
2007	-	465
2008	-	439
2009	-	424
2010	471	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

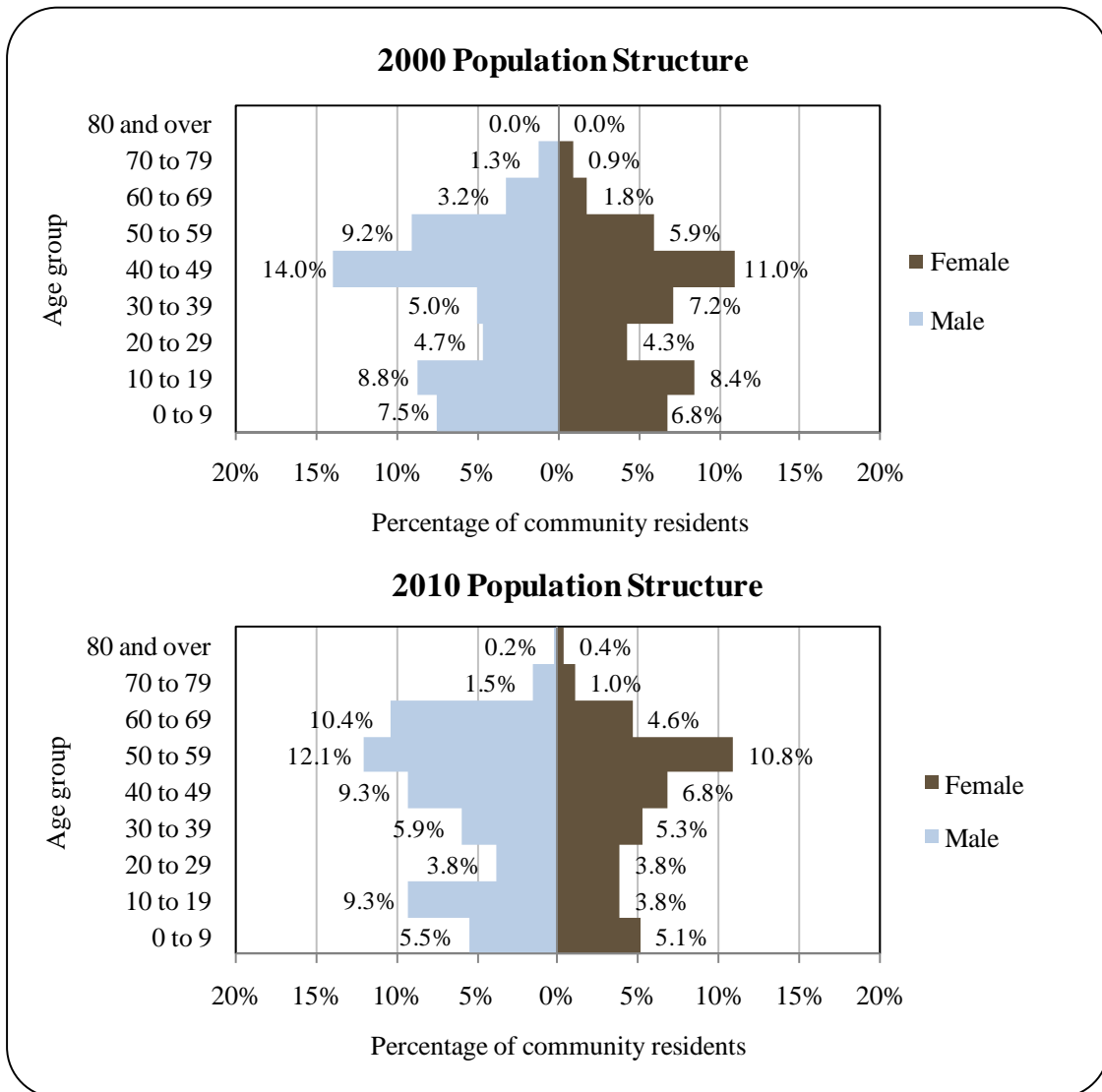
Figure 1. Racial and Ethnic Composition, Thorne Bay: 2000-2010 (U.S. Census).



The average household size in Thorne Bay in 2010 was 2.18, a decrease from 2.9 persons per household in 1990 and 2.54 in 2000. The total number of households in Thorne Bay increased from 203 in 1990 to 219 in 2000, then decreased slightly to 214 households by 2010. Of the 354 housing units surveyed for the 2010 Decennial Census, 156 were owner-occupied, 58 were renter-occupied, and 140 were vacant or used only seasonally. There was one resident of Thorne Bay reported to be living in group quarters in 1990 and four residents living in group quarters in 2010.

In 2010, the gender makeup in Thorne Bay was 58.2% male and 41.8% female, very similar to the state as a whole (52% male, 48% female). The median age was estimated to be 44.4 years, higher than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of residents fell within the age group 50 to 59 years old, with the next largest percentage falling within the age group 40-49 years old. Relatively few individuals were age 70 or older. The overall population structure of Thorne Bay in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Thorne Bay Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey (ACS),¹⁶⁶³ in terms of educational attainment, 93.1% of Thorne Bay residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 6.9% of residents aged 25 and older were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 31% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 22.8% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 10.4% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 20.1% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall, and 8.8% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*¹⁶⁶⁴

The bay itself was named after Frank Manley Thorn, superintendent of the U.S. Coast & Geodetic Survey from 1885 through 1889. The name was misspelled when published. The first major settlement in the area was built around the logging operation of Wes Davidson. Thorne Bay developed as a result of a long-term timber sales contract between the U.S. Forest Service and the Ketchikan Pulp Company. In 1960, a floating logging camp was built in Thorne Bay. In 1962 Ketchikan Pulp moved its main logging camp from Hollis to Thorne Bay. A shop, barge terminal, log sort yard, and camp were built to replace facilities at Hollis. Roads were then constructed to connect Thorne Bay with Hollis, Craig, and Klawock. During this time, Thorne Bay was considered the largest logging camp in North America. The community evolved from a company-owned logging camp to an incorporated city in 1982, partly due to the land selection program provided for in the Alaska Statehood Act.

Natural Resources and Environment

Prince of Wales Island, where Thorne Bay is located, is dominated by a cool, moist, maritime climate. Summer temperatures range from 49 to 63 °F (9.4 to 17.2 °C) and winter temperatures from 32 to 42 °F (0 to 5.6 °C). Average annual precipitation is 120 inches, with 40 inches of snow.¹⁶⁶⁵

Prince of Wales Island is located 600 miles north of Seattle, Washington in Southeast Alaska near Ketchikan Gateway Borough, and can be reached via the Inter-Island Ferry Authority. The Island of Prince of Wales is a unique and special place. It is a great place to showcase some of Southeast Alaska's unique qualities such as a temperate rainforest with all its natural beauty and wonder, bountiful wildlife, Native culture and historical artifacts. The Prince of Wales Island Scenic Byway covers two hundred sixty miles of mostly paved roads that lead to communities on the island that each present a different Alaskan experience. Prince of Wales has

¹⁶⁶³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁶⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁶⁵ Ibid.

the most extensive road system in the entire Tongass National Forest (National Forest), the largest national forest in the U.S. The approximately 1,500 miles of roads offer unparalleled access to recreational opportunities in the National Forest.¹⁶⁶⁶

Thorne Bay is located within the National Forest. The National Forest is the largest unit in the national forest system, at almost 17 million acres. National Forest employees work to balance multiple uses of the forest resources. The National Forest has healthy fish and wildlife populations, clean water, trees to support local industry, and recreation opportunities unique to Alaska. The roads that exist in Southeast Alaska have been developed from forest roads that were originally built to reach timber.

Though home to the world's largest temperate rain forest, almost half of the Tongass is covered by ice, water, wetlands and rock. Few places in the world have the geologic and climatic variations that sculpt this landscape. The snow and ice of the 1,500-square-mile Juneau Ice Field are less than eight miles from the salt water in Gastineau Channel.

The forest is home to numerous plant species, including ferns, dwarf dogwood, false lily of the valley, marsh marigold, skunk cabbage, western hemlocks, Sitka spruce, sub-alpine fir, red cedar, yellow cedar, and hardwoods such as alder. The largest known concentrations of bald eagles gather each year in the National Forest, and thousands of shorebirds use the forest as a resting place during their annual migrations. Marine mammals such as sea otters, whales, porpoises, and seals utilize the waters located inside the National Forest. Terrestrial species that inhabit this area include Sitka black-tailed deer, brown bears, mountain goats, moose, wolves, beaver, fox, and porcupines. All five species of Pacific salmon (chum, coho, king, pink, and sockeye) can be found within the National Forest, along with Dolly Varden, rainbow trout, steelhead trout, and cutthroat trout.

People have lived and worked in this area for centuries. For years, the Tlingit and Haida peoples have fished for salmon and herring and gathered berries and other plants. Each generation shares its knowledge of the land with the next. Today, many rural residents depend on a subsistence lifestyle, just as Alaska Natives have for centuries. Water routes in the National Forest are the way many tourists see coastal Alaska. Local residents and tourists enjoy sailing, motor boating, kayaking and fishing.¹⁶⁶⁷

In a survey conducted by the AFSC in 2011, community leaders reported that the economy of Thorne Bay is reliant on the following natural resource-based industries: logging, fishing, and sport hunting and fishing.

Thorne Bay is protected against many natural hazards due to its sheltered position. However, earthquakes have been classified as a moderate risk by the U.S. Army Corps of Engineers and it is projected that regional damage caused by an earthquake would be major.¹⁶⁶⁸ Damage from earthquakes would likely come from shaking, tsunamis, seiches, and landslides.

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in Thorne Bay as of 2010.¹⁶⁶⁹

¹⁶⁶⁶ Alaska Department of Transportation and Public Facilities (2011). *Alaska Scenic Byways: Prince of Wales Island Road System*. Retrieved from <http://dot.alaska.gov/stwdplng/scenic/byways-pow.shtml> on April 6, 2012.

¹⁶⁶⁷ U.S. Forest Service (n.d.). *Tongass National Forest: Introduction to the Tongass*. Retrieved March 8, 2012 from http://www.fs.fed.us/r10/tongass/forest_facts/faqs/intro.shtml.

¹⁶⁶⁸ City of Craig. (2000). *City of Craig Comprehensive Plan*. Retrieved February 29, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Craig-CP-2000.pdf>.

¹⁶⁶⁹ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved from: <http://www.dec.state.ak.us/spar/csp/list.htm#Southeast>.

Current Economy¹⁶⁷⁰

Employment is primarily in small sawmills, U.S. Forest Service management of the National Forest, the Southeast Island School District, commercial fishing, tourism and lodging, and both local and state government employment. To supplement incomes, residents fish and trap. Deer, salmon, halibut, shrimp, and crab are popular food sources. Additional economic activities include automobile and heavy equipment maintenance and repair, vehicle and boat fuel sales, transportation, and limited retail.¹⁶⁷¹ Top employers in 2010 included Southeast Island School District, City of Thorne Bay, Williams Inc., Cooke Bay Adventures LLC, Southeast Road Builders Inc., Adventure Alaska Southeast, State of Alaska, Tongass Federal Credit Union, M&M McDonald Inc., and Community Connections Inc.

In 2010, per capita income in Thorne Bay was estimated to be \$33,260 and the median household income was estimated to be \$54,318, compared to \$20,836 and \$45,625 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹⁶⁷² the real per capita income in 2000 is shown to have been \$27,399 and the real 2000 median household income was \$59,996. This shows that there was a real increase in per capita income during this period, while household income decreased. In 2010, Thorne Bay ranked 44th of 305 Alaskan communities with per capita income that year, and 104th of 299 Alaskan communities with household income data. However, Thorne Bay's small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹⁶⁷³ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Thorne Bay in 2010 was \$10,179, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.¹⁶⁷⁴ This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁶⁷⁵ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

Based on the American Community Survey, in the same year, 63.5% of the population was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 2.5%, compared to the statewide rate of 5.9%. Approximately 10.5% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Thorne Bay are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Thorne Bay. A more accurate estimate is based on the ALARI

¹⁶⁷⁰ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁶⁷¹ See footnote 1664.

¹⁶⁷² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁶⁷³ See footnote 1663.

¹⁶⁷⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁶⁷⁵ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

database, which indicates that the unemployment rate in 2010 was 15.8%.

Based on household surveys conducted for the 2006-2010 American Community Survey, the greatest percentage of workers was employed in the public sector (53.8%), while 28.2% were employed in the private sector and 18.1% were self-employed. Out of 238 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in agriculture, forestry, fishing, hunting, and mining (27.2%), educational services, health care, and social assistance (19.5%), and manufacturing (15.7%). Smaller percentages of the workforce were estimated to be employed in public administration (7.3%), other services except public administration (3.1%), finance, insurance, and real estate (1.5%), information (2.3%), transportation, warehousing, and utilities (8.8%), retail trade (8.8%), and construction (5.7%). Given the data reported in the *Commercial Fishing* section below, the number of individuals employed in farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Thorne Bay (U.S. Census).

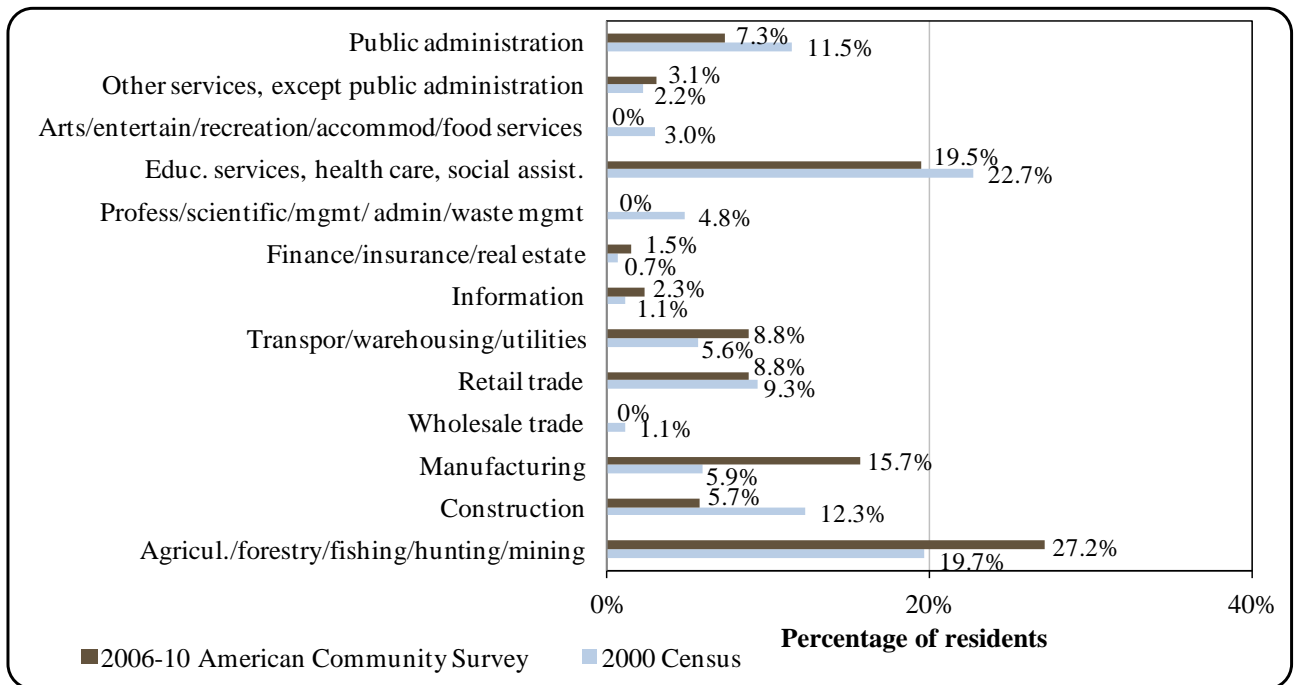
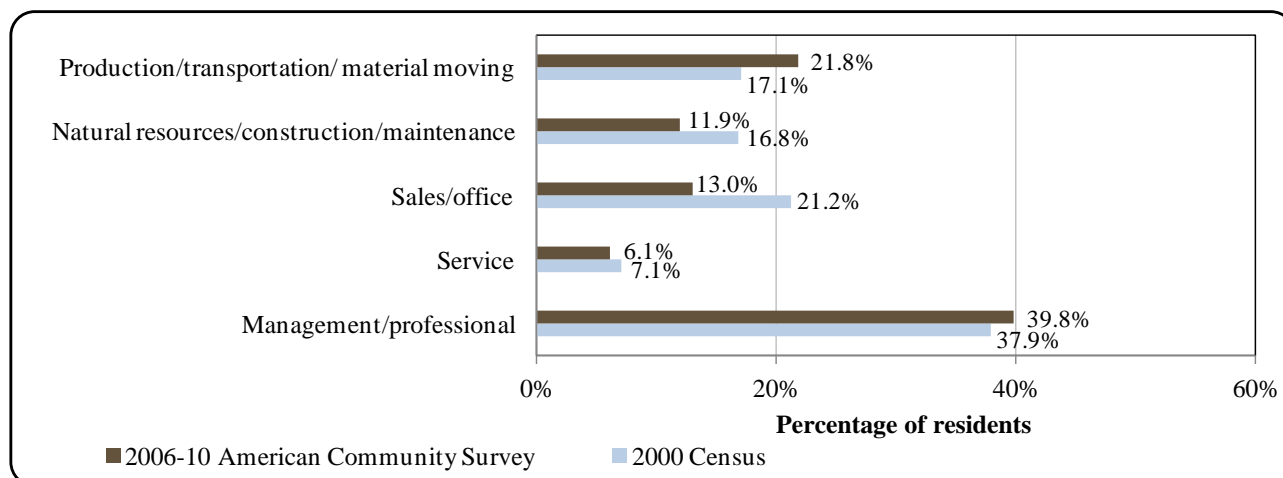


Figure 4. Local Employment by Occupation in 2000-2010, Thorne Bay (U.S Census).



Governance

Thorne Bay is a Second-class city that is not located within an organized borough. Total municipal revenues received by the city were variable between 2000 and 2010. Thorne Bay administers a 6% sales tax, which represents an increase from 3% in 2000. Municipal revenue data was taken from *Community Financial Statements (CFS)* for the years of 2007 through 2010, and from financial audits for the years of 2000 through 2006.¹⁶⁷⁶ When adjusted for inflation,¹⁶⁷⁷ total municipal revenues increased by 25.3% between 2000 and 2010 from \$468,761, to \$759,460. There are several years (2004 and 2007) when municipal revenues were significantly higher than normal. In 2004, \$378,750 in timber sales contributed greatly to general fund revenues, and in 2007 Thorne Bay received \$128,190 in National Forest Receipts as well as locally generated funds that were higher than normal. In 2010, Thorne Bay collected the majority (34.5%) of its municipal revenues from sales taxes, followed by land sales (29.8%), state allocated Community Revenue Sharing (15.6%), and federal payments in lieu of taxes (13.0%). Compare this to 2000 when sales taxes accounted for 20.1% of total municipal revenues, and State Revenue Sharing accounted for 4.9%.

In addition, Thorne Bay received a number of fisheries-related grants between 2000 and 2010 for projects including construction of Davidson Landing Dock, harbor shack construction, harbor rehabilitation and expansion – electrical upgrades, Thorne Bay – Davidson Landing harbor reconstruction, purchase and installation of a dock hoist, a new harbor shack, and construction of mooring floats for Thorne Bay – Davidson Landing. Information about selected aspects of Thorne Bay’s community revenue is presented in Table 2.

Thorne Bay was not included under the Alaska Native Claims Settlement Act (ANCSA) and is not federally recognized as a Native village. However, many Native community members in Thorne Bay are shareholders in the regional Native corporation for Southeast Alaska, the Sealaska Corporation. Sealaska is owned by over 20,000 tribal member shareholders and guided by the traditions of environmental stewardship and positively impacting their communities.

¹⁶⁷⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

¹⁶⁷⁷ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Sealaska is made up of legendary traders who are deeply connected to their lands and have successfully adapted to constantly changing environments and global economies. Sealaska brings together the wisdom and foresight of their combined heritage to create an enduring corporation that provides business opportunities, benefits and cultural strength for their people. Today Sealaska is the largest private landowner and the largest for-profit private employer in Southeast Alaska. Sealaska is a diverse company with investments in forest products, construction aggregates, machining and fabrication, environmental remediation, information technology, plastics injection molding and manufacturing, global logistics, wood products and financial markets. Sealaska’s status as a Minority Business Enterprise and Small Disadvantaged Business add to their strength as a government contractor and commercial diversity supplier.¹⁶⁷⁸

The nearest offices of the Alaska Department of Fish and Game (ADF&G), Department of Natural Resources (DNR), Department of Commerce, Community, and Economic Development (DCCED), and the National Marine Fisheries Service (NMFS) are located in Juneau. The nearest offices of the Bureau of Citizenship and Immigration Services and U.S. Immigration and Customs Enforcement are located in Anchorage.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Thorne Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$468,761	\$94,195	\$23,006	n/a
2001	\$499,735	\$166,056	\$22,282	n/a
2002	\$690,014	\$100,467	\$22,315	n/a
2003	\$814,132	\$110,910	\$22,327	\$25,000
2004	\$1,367,540	\$156,704	-	n/a
2005	\$884,581	\$203,173	-	n/a
2006	\$957,636	\$226,917	-	\$70,000
2007	\$1,001,579	\$239,620	-	\$150,000
2008	\$820,813	\$279,356	-	\$297,229
2009	\$566,483	\$267,888	\$118,446	\$118,000
2010	\$759,460	\$261,652	\$117,264	\$559,496

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁶⁷⁸ Sealaska: A Native Corporation (2012). *Who We Are*. Retrieved on May 9, 2012 from http://www.sealaska.com/page/who_we_are.html.

Infrastructure

Connectivity and Transportation

Thorne Bay is accessed by float plane, the airport at Klawock, and the inter-island ferry at Hollis. The Thorne Bay Harbor provides slips for over 100 vessels. A seaplane base is state-owned. The Prince of Wales Island Road System connects the communities on Prince of Wales Island with one another.¹⁶⁷⁹ From nearby Ketchikan, round-trip airfare to Anchorage in June 2012 was \$461.¹⁶⁸⁰

*Facilities*¹⁶⁸¹

Water Lake, north of Thorne Bay, supplies water that is treated and stored in a tank before piped distribution to local houses. A gravity sewage system includes secondary treatment before discharge into the bay. On the north side of town, 100% of households are connected to the piped systems and are fully plumbed; on the south side, residents use rain catchment, streams, or springs and direct discharge or septic systems. The City provides refuse collection services, a regional baler, a recycling facility, and a landfill; it also participates in annual hazardous waste disposal events. The City also provides emergency medical services (boat and ambulance), fire protection, and an emergency medevac helipad.

Law enforcement services are provided by a Village Public Safety Officer, state troopers in Klawock, and a city public safety facility. Fire and rescue services are provided by the Thorne Bay Volunteer Rescue Squad/Emergency Medical Services and by the Prince of Wales Island Area EMS. Thorne Bay has a community hall, a school gym, and school and public libraries.

In a survey conducted by the AFSC in 2011, community leaders reported that Thorne Bay has 3,045 feet of dock space available for permanent vessels and 471 feet of dock space available for transient vessels, and that vessels up to 100 feet long can use moorage in Thorne Bay. Community leaders noted that the port of Thorne Bay is capable of handling fuel barges. In terms of infrastructure, community leaders indicated that water serving the dock space and broadband internet access projects have been completed within the past 10 years, with construction of new dock space in progress. Projects planned for completion within the next 10 years include a breakwater, haul out facilities, a community center/library, and a police department. For fishing-related businesses that are not located in Thorne Bay, community leaders indicated that residents travel to Craig, Ketchikan, or Wrangell.

*Medical Services*¹⁶⁸²

Medical care is provided by the Thorne Bay Health Center, which is owned by the city and operated by the Southeast Alaska Regional Health Consortium. The health center is a Community Health Aid Program site. Alternate health care is provided by the Thorne Bay

¹⁶⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁸⁰ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹⁶⁸¹ See footnote 1679.

¹⁶⁸² Ibid.

Volunteer Rescue Squad/Emergency Medical Services and the Prince of Wales Island Area EMS. Emergency services have limited highway, coastal floatplane, and helicopter access and are provided by volunteers. The nearest hospitals are located in Sitka and Juneau.

*Educational Opportunities*¹⁶⁸³

The Thorne Bay School provides instruction to students from pre-school through 12th grade. In 2011, the school had 77 students and 12 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial harvest of salmon began in Southeast Alaska in the late 1870s.¹⁶⁸⁴ In the 1880s, a commercial fishery began for halibut in the inside waters of Southeast Alaska, with sablefish targeted as a secondary fishery.¹⁶⁸⁵ Today, Southeast Alaska salmon fisheries utilize purse seine, drift gillnet, troll and set gillnet gear. The highest volume of salmon landings in the region are harvested by purse seine gear, although the species harvested are typically pink and chum, the salmon species with lowest ex-vessel value. Other salmon fisheries target the higher value species (i.e., sockeye, coho and Chinook). Because of Southeast Alaska's proximity to British Columbia, as well as many trans-boundary rivers that cross from Canada into Alaskan waters, salmon management in the region is governed to a large degree by the Pacific Salmon Treaty which was originally negotiated in 1985, and renegotiated in 1999 with increased emphasis on implementation of abundance-based management strategies.¹⁶⁸⁶

Shrimp trawl fisheries in Southeast Alaska primarily target northern shrimp (*Pandalus borealis*) and sidestripe shrimp (*Pandalopsis dispar*), although the market for northern shrimp has declined in recent years with the closure of the primary processing facility in Petersburg in 2006.¹⁶⁸⁷ A pot fishery for spot shrimp (*Pandalus platyceros*) has also grown in Southeast Alaska since the 1990s. Commercial dive fisheries for red sea cucumber (*Parastichopus californicus*) and sea urchin (*Strongylocentrotus spp.*) began near Ketchikan in the early 1980s. A dive fishery for geoduck clams began around the same time, and all three fisheries are now managed according to Fishery Management Plans. Sea cucumbers and sea urchin are handpicked by divers, while geoduck divers use handheld water jets to remove substrate from around the clams.¹⁶⁸⁸

A state-managed sablefish fishery currently takes place in the inside waters of Chatham

¹⁶⁸³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁶⁸⁴ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹⁶⁸⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁶⁸⁶ Ibid.

¹⁶⁸⁷ Alaska Dept. of Fish and Game (2012). *Northern Shrimp Species Description*. Retrieved April 2, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=northernshrimp.printerfriendly>.

¹⁶⁸⁸ See footnote 1685.

and Clarence Straits and Dixon Entrance. Pacific halibut fisheries in Southeast Alaska are managed by the International Pacific Halibut Commission (IPHC). Pacific cod and lingcod are also harvested in Southeast Alaska under state regulations, independent of federal fisheries for these species. Halibut and Pacific cod fisheries utilize longline gear, while the Southeast Alaska lingcod fishery uses dinglebar troll gear, a salmon power troll gear modified with a heavy metal bar to fish for groundfish. Management of the Southeast Alaska lingcod fishery includes a winter closure for all users (except longliners) to protect nest-guarding males. Demersal rockfish are caught as bycatch in the halibut longline and trawl fisheries. A small directed fishery for flatfish (other than halibut) has also taken place in Southeast inside waters in recent decades, but effort has declined since 1999.

Anadromous fish in the Thorne Bay area include all five species of Pacific salmon, and steelhead trout. These fish are important for commercial fishing, sportfishing, subsistence use, and charter boat operations. No seafood is being processed within Thorne Bay, although there is discussion of increasing mooring capacity and attracting a seafood processor. A local shellfish testing lab has been proposed in order to serve the many shellfish farmers on Prince of Wales Island, and within southeast Alaska as a whole. With its historic dependence on the timber industry, the commercial fishing industry has been slow to develop in Thorne Bay. Commercial fishing permits within the community were limited until the completion of the harbor facility. Gear types primarily consist of power and hand troll. Thorne Bay residents are also involved in the local halibut fishery.¹⁶⁸⁹

Thorne Bay is located on the east coast of Prince of Wales Island.¹⁶⁹⁰ The area is included in Federal Statistical and Reporting Area 659, Pacific Halibut Fishery Regulatory Area 2C, and the Eastern Gulf of Alaska/Southeast Outside Sablefish Regulatory Area.

Thorne Bay participates in the Community Quota Entity (CQE) program through the Thorne Bay Fisheries Association. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.¹⁶⁹¹ As of Fall 2013, the Thorne Bay Fisheries Association had not yet purchased any commercial halibut IFQ or non-trawl groundfish License Limitation Program permits. However,

¹⁶⁸⁹ City of Thorne Bay. (1999). *City of Thorne Bay Comprehensive Plan*. Retrieved July 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/ThorneBay-CP-1999.pdf>.

¹⁶⁹⁰ Ibid.

¹⁶⁹¹ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEreport210.pdf>

the non-profit had acquired four halibut charter permits for lease to community members.¹⁶⁹²

According to a survey conducted by the AFSC in 2011, community leaders reported that Thorne Bay does not actively participate in the fisheries management process in Alaska.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Thorne Bay does not have a registered processing plant. The nearest processing plant is located in Ketchikan.

Fisheries-Related Revenue

Between 2000 and 2010, Thorne Bay received fisheries-related revenue from the Shared Fisheries Business Tax and harbor usage fees. The annual amount received from the shared fisheries business tax decreased overall during this period, while the amount received from harbor usage fees increased. Also, between 2002 and 2004, Thorne Bay received revenue from the Fisheries Resource Landing Tax, and the amount remained stable throughout this period.¹⁶⁹³ Information on known fisheries-related revenue received by Thorne Bay between 2000 and 2010 is presented in Table 3.

Commercial Fishing

In 2010, a total of 29 permit holders held 51 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for crab, other shellfish, halibut, herring, groundfish, and salmon (Table 4). Overall between 2000 and 2010, the number of permit holders remained relatively stable while the total number of CFEC permits held decreased slightly. The total number of permits reported as fished varied throughout this period. The number of crab CFEC permits held decreased from two to one between 2000 and 2010, though none of these permits were reported as fished during the period. The crab CFEC permit issued in 2010 was for the southeastern Tanner crab ring net fishery. The number of other shellfish CFEC permits and permit holders decreased during the period, though the number of permits reported as fished was variable. Other shellfish CFEC permits were issued for the geoduck clam diving gear fishery in the southeast, the shrimp pot fishery in the southeast, and the sea cucumber diving gear fishery in the southeast.

The number of halibut CFEC permits and permit holder varied between two and four between 2000 and 2010, with between 67% and 100% of those permits reported as fished in any given year. All halibut CFEC permits issued in 2010 were for the statewide longline fishery using vessels under 60 feet.

The number of herring CFEC permits and permit holders decreased slightly during this period, though the number of permits reported as fished remained relatively stable. The herring CFEC permits issued in 2010 were for the herring spawn on kelp pound fishery in the southern southeast.

While the number of groundfish CFEC permits declined between 2000 and 2010, the

¹⁶⁹² NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

¹⁶⁹³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

number of permit holders remained relatively stable and only one permit was reported as fished in 2009 and 2010. Groundfish CFEC permits were issued in 2010 for the statewide lingcod dinglebar troll fishery, the statewide miscellaneous saltwater finfish hand troll fishery, the Gulf of Alaska miscellaneous saltwater finfish longline fishery using vessels under 60 feet, and the southeast demersal shelf rockfish longline fishery using vessels under 60 feet.

The number of salmon CFEC permits varied from 22 in 2008 and 2009 to 27 in 2003, with 24 permits held by 19 permit holders in 2010. The number of permits reported as fished varied between 9 and 13 during this period. Salmon CFEC permits issued in 2010 were for the southeastern drift gillnet fishery, the statewide hand troll fishery, and the statewide power gurdy troll fishery.

There were two Federal Fisheries Permits held by two permit holders in 2010, a slight increase from one permit/permit holder in 2000. These permits were only reported as fished in 2004 and 2006 to 2010. The number of groundfish License Limitation Program (LLP) permits held by Thorne Bay residents remained relatively stable between 2000 and 2010, as did the number of permit holders and the number of permits reported as fished (Table 4).

An average of 15 crew license holders were present in Thorne Bay in each year between 2000 and 2010. There were no fish buyers or shore-side processing facilities located in the community during this period, and no vessels recorded landings during this period. The number of vessels owned primarily by Thorne Bay residents decreased between 2000 and 2010, as did the number of vessels homeported in Thorne Bay. Information on characteristics of the commercial fishing sector in Thorne Bay between 2000 and 2010 is presented in Table 5.

The number of halibut quota share account holders decreased between 2000 and 2010, while the number of quota shares held decreased before increasing slightly again during this period, along with the annual halibut IFQ allotment. Information about halibut IFQ between 2000 and 2010 is presented in Table 6. Between 2000 and 2003, there was one sablefish quota share account holder that held 279 quota shares and received approximately 30 pounds of IFQ allotment each year. Information about sablefish IFQ between 2000 and 2010 is presented in Table 7. There were no crab quota share account holders in Thorne Bay between 2005 and 2010 (Table 8). There were no landings or associated ex-vessel revenue recorded in Thorne Bay between 2000 and 2010 (Table 9).

Landings by Thorne Bay residents are only reportable for shellfish, excluding crab, between 2000 and 2009 and for salmon between 2000 and 2010. For all other species in all years, the data are considered confidential due to a small number of participants. Landings and ex-vessel revenue for other shellfish and salmon were variable during this period. Information regarding landed pounds and ex-vessel revenue by community residents is presented in Table 10.

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing boats under 60 feet in length use Thorne Bay as their base of operations during the fishing season. Community leaders also noted that fishing boats that use Thorne Bay as their base of operations during the fishing season use the following gear types: longline, gillnet, troll, and diving. Community leaders also stated that, “The commercial IFQ program greatly reduced the number of commercial halibut fishermen and made it nearly impossible for new fishermen to enter the industry.”

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Thorne Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries											
Business Tax ¹	\$6,855	\$6,005	\$2,890	\$5,166	\$3,729	\$5,278	\$5,493	\$5,336	\$2,979	\$5,160	\$2,910
Fisheries Resource											
Landing Tax ¹	n/a	n/a	\$2,900	\$2,900	\$2,900	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$44,885	\$46,950	\$29,250	\$27,350	\$40,826	\$56,500	\$28,880	\$44,650	\$54,300	\$54,650	\$60,200
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$51,740</i>	<i>\$52,955</i>	<i>\$35,040</i>	<i>\$35,416</i>	<i>\$47,455</i>	<i>\$61,778</i>	<i>\$34,373</i>	<i>\$49,986</i>	<i>\$57,279</i>	<i>\$59,810</i>	<i>\$63,110</i>
<i>Total municipal revenue⁵</i>	<i>\$468,761</i>	<i>\$499,735</i>	<i>\$690,014</i>	<i>\$814,132</i>	<i>\$1.37 M</i>	<i>\$844,581</i>	<i>\$957,636</i>	<i>\$1.0 M</i>	<i>\$820,813</i>	<i>\$566,483</i>	<i>\$759,460</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Thorne Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	4	5	5	5	5	5	5	5	5	5	5
	Active permits	1	1	2	2	2	2	2	2	3	3	2
	% of permits fished	25%	20%	40%	40%	40%	40%	40%	40%	60%	60%	40%
	Total permit holders	4	5	5	5	5	5	5	5	5	5	5
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	1	1	1	1	1	1	1	2	2	2	2
	Fished permits	0	0	0	0	1	0	1	1	1	2	2
	% of permits fished	0%	0%	0%	0%	100%	0%	100%	50%	50%	100%	100%
	Total permit holders	1	1	1	1	1	1	1	2	2	2	2
Crab (CFEC) ²	Total permits	2	2	2	2	1	1	1	1	1	1	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	1	1	1	1	1	1	1
Other shellfish (CFEC) ²	Total permits	19	19	15	15	14	15	15	16	15	15	15
	Fished permits	8	6	7	8	8	7	6	8	6	6	5
	% of permits fished	42%	31%	46%	53%	57%	46%	40%	50%	40%	40%	33%
	Total permit holders	11	11	11	11	10	9	10	12	11	11	12
Halibut (CFEC) ²	Total permits	4	3	3	3	3	2	3	4	4	4	4
	Fished permits	4	3	3	3	2	2	3	4	3	3	4
	% of permits fished	100%	100%	100%	100%	67%	100%	100%	100%	75%	75%	100%
	Total permit holders	4	3	3	3	3	2	3	4	4	4	4
Herring (CFEC) ²	Total permits	4	4	3	2	2	2	2	2	2	2	2
	Fished permits	0	2	3	2	2	2	0	2	2	2	2
	% of permits fished	0%	50%	100%	100%	100%	100%	0%	100%	100%	100%	100%
	Total permit holders	3	3	3	2	2	2	2	2	2	2	2

Table 4 cont'd. Permits and Permit Holders by Species, Thorne Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	8	7	7	6	6	6	3	4	5	5	5
	Fished permits	0	0	0	0	0	0	0	0	0	1	1
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	20%
	Total permit holders	4	3	3	3	3	3	3	3	4	5	4
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	26	24	25	27	26	23	24	25	22	22	24
	Fished permits	12	10	9	12	11	10	10	13	9	10	10
	% of permits fished	46%	42%	36%	44%	42%	43%	42%	52%	41%	45%	42%
	Total permit holders	19	19	19	21	21	20	18	20	18	18	19
<i>Total CFEC Permits</i> ²	<i>Permits</i>	<i>63</i>	<i>59</i>	<i>55</i>	<i>55</i>	<i>52</i>	<i>49</i>	<i>48</i>	<i>52</i>	<i>49</i>	<i>49</i>	<i>51</i>
	<i>Fished permits</i>	<i>24</i>	<i>21</i>	<i>22</i>	<i>25</i>	<i>23</i>	<i>21</i>	<i>19</i>	<i>27</i>	<i>20</i>	<i>22</i>	<i>22</i>
	<i>% of permits fished</i>	<i>38%</i>	<i>36%</i>	<i>40%</i>	<i>45%</i>	<i>44%</i>	<i>43%</i>	<i>40%</i>	<i>52%</i>	<i>41%</i>	<i>45%</i>	<i>43%</i>
	<i>Permit holders</i>	<i>28</i>	<i>27</i>	<i>27</i>	<i>29</i>	<i>27</i>	<i>25</i>	<i>25</i>	<i>29</i>	<i>27</i>	<i>28</i>	<i>29</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Thorne Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Thorne Bay ²	Total Net Pounds Landed In Thorne Bay ^{2,5}	Total Ex-Vessel Value Of Landings In Thorne Bay ^{2,5}
2000	12	0	0	38	34	0	0	\$0
2001	14	0	0	33	34	0	0	\$0
2002	13	0	0	34	31	0	0	\$0
2003	11	0	0	34	29	0	0	\$0
2004	19	0	0	36	32	0	0	\$0
2005	15	0	0	22	19	0	0	\$0
2006	14	0	0	22	20	0	0	\$0
2007	19	0	0	21	17	0	0	\$0
2008	16	0	0	16	15	0	0	\$0
2009	16	0	0	14	15	0	0	\$0
2010	19	0	0	15	16	0	0	\$0

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Thorne Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	7	203,690	28,729
2001	7	203,690	29,989
2002	7	203,690	29,033
2003	7	203,690	29,032
2004	5	96,197	16,959
2005	6	99,804	18,316
2006	5	99,450	17,751
2007	6	144,219	20,608
2008	5	143,735	14,988
2009	5	143,735	12,116
2010	5	143,735	10,619

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Thorne Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	1	279	33
2001	1	279	31
2002	1	279	29
2003	1	279	33
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Thorne Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Thorne Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Thorne Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	37,339	35,427	60,879	49,510	32,416	32,389	40,016	33,759	28,861	35,691	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	212,207	290,684	183,556	315,878	311,464	276,791	215,042	250,821	218,007	246,975	245,401
<i>Total²</i>	<i>249,546</i>	<i>326,111</i>	<i>244,435</i>	<i>365,388</i>	<i>343,880</i>	<i>309,180</i>	<i>255,058</i>	<i>284,580</i>	<i>246,868</i>	<i>282,666</i>	<i>245,401</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	\$97,181	\$66,179	\$83,985	\$75,583	\$70,150	\$77,360	\$82,280	\$93,345	\$66,165	\$83,564	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$120,042	\$160,531	\$89,346	\$196,618	\$257,842	\$228,006	\$281,896	\$289,014	\$364,511	\$259,147	\$228,163
<i>Total²</i>	<i>\$217,223</i>	<i>\$226,710</i>	<i>\$173,331</i>	<i>\$272,201</i>	<i>\$327,992</i>	<i>\$305,366</i>	<i>\$364,176</i>	<i>\$382,359</i>	<i>\$430,676</i>	<i>\$342,712</i>	<i>\$228,163</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In 2010, there were eight active sport fish guide businesses registered in Thorne Bay, compared to four in 2000. Active sport fish guide businesses increased significantly in 2005, and remained relatively high in years following. Also in 2010, 16 sport fish guide licenses were held by residents, compared to 13 in 2000. The number of sport fish guide licenses peaked in 2002 through 2004 at between 21 and 25. The number of sportfishing licenses sold to Thorne Bay residents (irrespective of the location of the point of sale) decreased between 2000 and 2010, while the number of sportfishing licenses sold within the community increased during this period (Table 11). This may indicate a steady increase in the number of visits by recreational anglers from outside the community.

Thorne Bay is located within the Prince of Wales ADF&G Harvest Survey Area which includes all waters and drainages from Cape Chacon to Sumner Strait and from Clarence Island westward. In 2010 there were a total of 51,312 saltwater angler days fished, compared to 49,074 in 2000. In that year, non-Alaska residents accounted for 74.4% of angler days fished, compared to 67.3% in 2000. In terms of freshwater angler days fished, there were a total of 15,138 angler days fished in 2010, compared to 19,654 in 2000. In that year, non-Alaska residents accounted for 70.4% of angler days fished, compared to 45.9% in 2000. Information regarding recreational fishing trends in and near Thorne Bay can be found in Table 11.

The Alaska Statewide Harvest Survey,¹⁶⁹⁴ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Thorne Bay: all five species of salmon, rainbow trout, Dolly Varden, cutthroat trout, Pacific halibut, rockfish, lingcod, Pacific cod, steelhead trout, Dungeness crab, Tanner crab, razor clam, hardshell clam, shrimp, and other shellfish. Information from charter log books on species that were kept and released on fishing charters out of Thorne Bay noted the following species: Chinook salmon, chum salmon, coho salmon, halibut, lingcod, other rockfish, other salmon, pink salmon, pelagic rockfish, sablefish, shark, sockeye salmon, and yelloweye rockfish.¹⁶⁹⁵

In a survey conducted by the AFSC in 2011, community leaders reported that the following species are targeted by recreational fishermen that use boats based in Thorne Bay: all five species of salmon, halibut, rockfish, crab, black cod/sablefish, shrimp, and clam. In the same survey, community leaders indicated that recreational fishing in Thorne Bay takes place from charter boats or party boats, private boats owned by local residents, and private boats owned by non-residents. Community leaders also stated that, “New restrictions on charter halibut fishing have had an adverse impact on the charter boat fleet.”

¹⁶⁹⁴ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000-2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁶⁹⁵ Alaska Department of Fish and Game. (2011). Alaska sport fish charter logbook database, 2000-2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Thorne Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Thorne Bay ²
2000	4	13	399	262
2001	2	12	340	273
2002	3	21	331	426
2003	2	25	308	513
2004	4	22	335	614
2005	6	12	300	497
2006	7	12	330	708
2007	7	12	294	1,117
2008	6	16	286	1,380
2009	4	12	294	1,063
2010	8	16	292	1,267

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	33,043	16,031	9,024	10,630
2001	38,248	14,090	7,299	5,922
2002	36,736	12,590	9,957	8,981
2003	37,341	16,346	10,627	11,506
2004	40,803	16,770	11,518	3,969
2005	52,135	16,333	10,100	3,527
2006	46,207	11,828	11,073	5,161
2007	49,280	13,327	11,132	6,463
2008	46,717	17,930	11,302	7,185
2009	38,164	10,829	9,918	4,124
2010	37,416	13,896	10,660	4,478

¹ ADF&G. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² ADF&G. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ ADF&G. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

To supplement incomes, residents fish and trap. Deer, salmon, halibut, shrimp, and crab are popular food sources.¹⁶⁹⁶ In a survey conducted by the AFSC in 2011, community leaders reported that the three most important subsistence marine or aquatic resources to the residents of

¹⁶⁹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Thorne Bay are halibut, sockeye salmon, and crab. Between 2000 and 2010, data were not reported on subsistence participation by household and species (Table 12), or subsistence harvest of marine invertebrates, non-salmon fish (Table 13), or marine mammals (Table 15). However, data were reported for subsistence harvests of salmon and halibut.

In years for which data were reported between 2000 and 2010, an average of 105 subsistence salmon permits were issued to Thorne Bay households, though both the number of permits issued and the number of permits returned declined substantially during this period. Sockeye salmon were the primary species harvested for subsistence permits (an average of 761 sockeye per year); however, Chinook salmon, chum salmon, coho salmon, and pink salmon were also harvested (Table 13).

Between 2000 and 2010, an average of 120 Subsistence Halibut Registration Certificate (SHARC) were issued to Thorne Bay residents, with an average of 63 permits returned. In 2010, 114 SHARC were issued and 60 were returned, with 13,283 pounds of subsistence halibut reported harvested. Reported halibut harvests peaked in 2004 at 16,714 pound harvested on 67 SHARC. Information about subsistence halibut harvest is presented in Table 14.

The ADF&G Division of Subsistence reported that the following species of marine invertebrates were used for subsistence in Thorne Bay during this period: abalone, basket cockles, black (small) chitons, blue king crab, box crab, brown king crab, butter clams, Dungeness crab, geoduck, green sea urchin, heart cockles, horse clams (gaper), limpets, octopus, oyster, Pacific littleneck clams (steamers), purple sea urchins, razor clams, red (large) chitons, red king crab, red sea urchin, rock scallops, shrimp, squid, Tanner crab bairdi, unknown chitons, unknown clams, unknown cockles, unknown crab, unknown king crab, unknown mussels, unknown scallops, unknown sea cucumber, unknown sea urchin, weathervane scallops, and yein sea cucumber. Marine mammals reported as harvested for subsistence use included fur seal (other), harbor seal (saltwater), and Steller sea lion. Non-salmon fish reported as harvested for subsistence use included: black rockfish, brook trout, buffalo sculpin, cutthroat trout, dogfish, Dolly Varden, eulachon (hooligan candlefish), grayling, herring, herring roe on hair seaweed, herring roe on hemlock branches, herring roe unspecified, herring spawn on kelp, lingcod, Pacific cod (gray), Pacific tom cod, rainbow trout, red Irish lord, red rockfish, rock greenling, sablefish (black cod), sea perch, silver smelt, skates, steelhead, unknown cod, unknown flounder, unknown perch, unknown rockfish, unknown sculpin, unknown shark, unknown smelt, unknown sole, unknown trout, and walleye pollock.¹⁶⁹⁷

¹⁶⁹⁷ Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Thorne Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Thorne Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	182	162	n/a	2	32	36	1,338	n/a	n/a
2001	142	134	n/a	n/a	16	14	1,304	n/a	n/a
2002	184	164	n/a	n/a	46	60	1,526	n/a	n/a
2003	154	146	n/a	6	148	70	1,138	n/a	n/a
2004	79	77	3	n/a	26	9	589	n/a	n/a
2005	76	75	n/a	n/a	7	5	627	n/a	n/a
2006	54	54	n/a	n/a	76	n/a	162	n/a	n/a
2007	36	20	n/a	n/a	7	n/a	67	n/a	n/a
2008	35	33	n/a	n/a	161	53	99	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Thorne Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	99	61	13,268
2004	121	67	16,714
2005	134	67	10,422
2006	135	60	10,051
2007	129	55	8,990
2008	112	63	10,837
2009	115	67	11,663
2010	114	60	13,283

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Thorne Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Whale Pass



People and Place

*Location*¹⁶⁹⁸

The community of Whale Pass lies on the northeast coast of Prince of Wales Island (PWI). It is north of Whale Passage, on Forest Development Road (FDR) 25, about 64 road miles north of Klawock and 75 air miles northwest of Ketchikan. The area encompasses 35.6 square miles of land and 1.8 square miles of water. The community is located in the Prince of Wales-Hyder Census Area, is not incorporated into a municipality, and is not under the jurisdiction of a borough.

*Demographic Profile*¹⁶⁹⁹

In 2010, there were 31 residents ranking Whale Pass 316th of 352 Alaskan communities. Between 1990 and 2010, the population declined by 58.7%. Between 2000 and 2009, the population grew by 3.5% with an average annual growth rate of -0.97%, which was lower than the statewide average of 0.75% and indicative of a variable population trend. In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were 60 permanent and 10 seasonal or transient residents living in Whale Pass in 2010. On average, the community attracts seasonal workers from May through November with the population peaking between June and September. Peaks in population are mostly driven by employment in fisheries sectors. Information regarding population trends can be found in Table 1.

The racial composition of Whale Pass is predominately White. In 2010, 87.1% of residents identified themselves as White, compared to 96.6% in 2000; 9.7% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0% in 2000; and 3.2% identified themselves as two or more races, compared to 1.7% in 2000. Hispanics and Latinos made up 3.2% of the population in 2010, compared to 6.9% in 2000. Information regarding racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 1.55, a decline from 2.60 in 1990 and 2.64 in 2000. In that year, there were a total of 61 housing units, compared to 40 in 1990 and 51 in 2000. Of the households surveyed in 2010, 30% were owner-occupied, compared to 37% in 2000; 3% were renter-occupied, compared to 6% in 2000; 16% were vacant, compared to 45% in 2000; and 51% were occupied seasonally, compared to 12% in 2000. No residents were reported living in group quarters between 1990 and 2010.

¹⁶⁹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁹⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

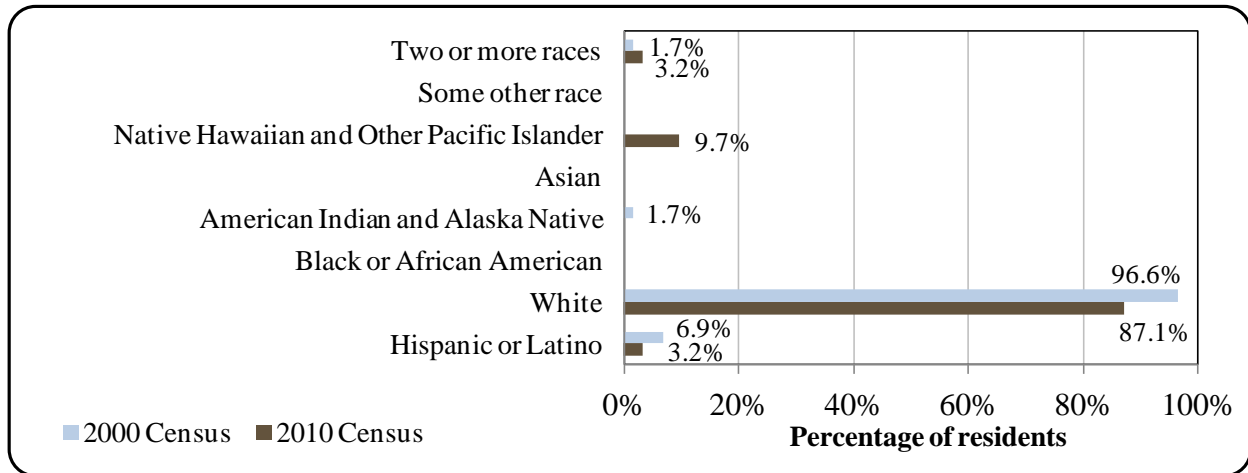
Table 1. Population in Whale Pass from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	75	-
2000	58	-
2001	-	53
2002	-	64
2003	-	67
2004	-	82
2005	-	76
2006	-	61
2007	-	57
2008	-	48
2009	-	60
2010	31	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Whale Pass: 2000-2010 (U.S. Census).



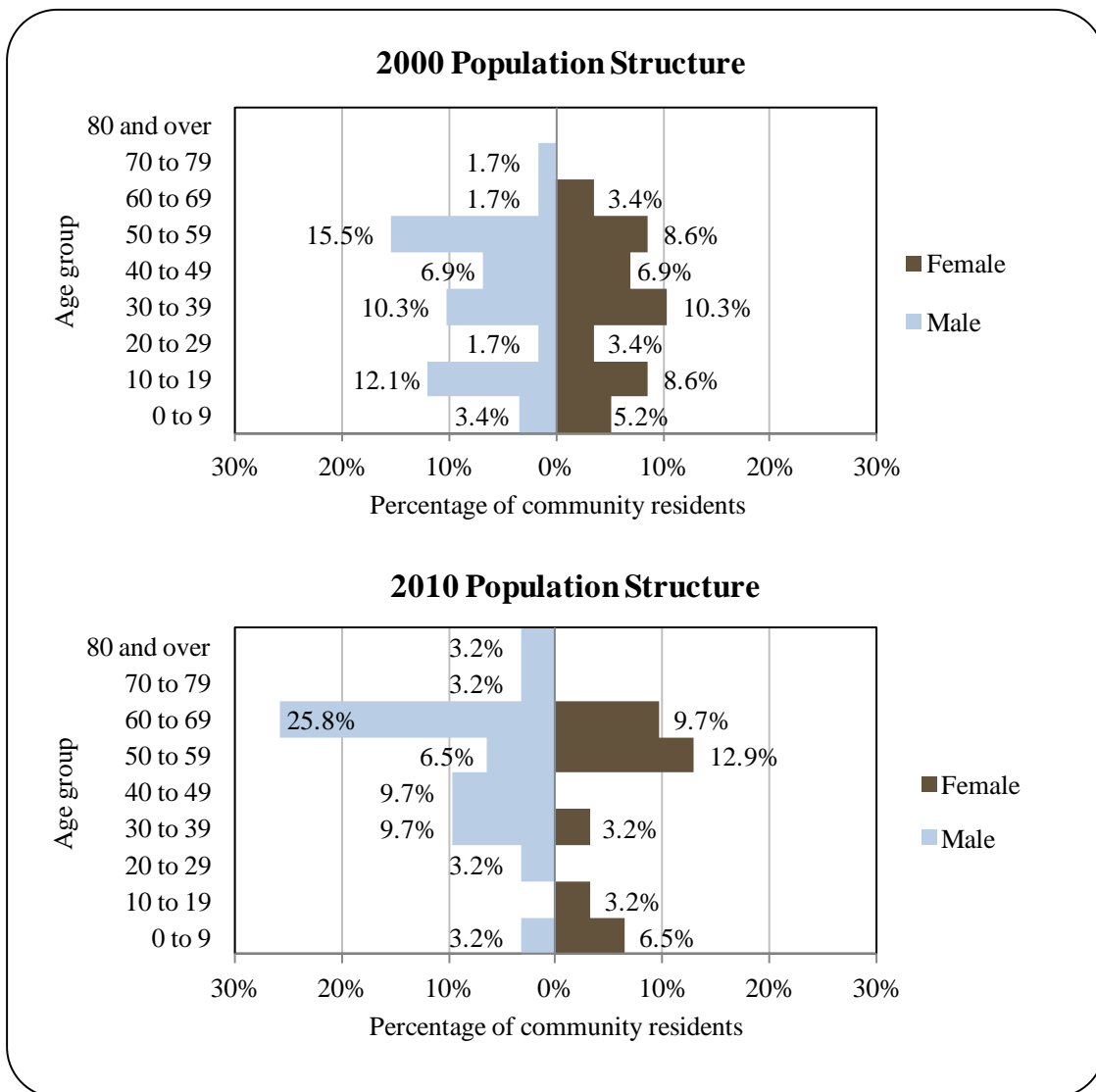
The gender distribution was significantly skewed in 2010 at 64.5% male and 35.5% female. This was substantially more uneven than the statewide distribution (52% male, 48% female) and distribution in 2000 (53.4% male, 46.6% female). In that year, the median age was 57.3 years, which was significantly older than the statewide median of 33.8 years and 2000 median of 37.0 years.

When compared with 2000, the population structure in 2010 was significantly more constricted, indicating an aging population. However, it should be noted that Whale Pass' small population may preclude any meaningful discernment of a trend. In that year, 12.9% of residents

were under the age of 20, compared to 29.3% in 2000; 41.9% were over the age of 59, compared to 6.8% in 2000; 42% were between the ages of 30 and 59, compared to 58.5% in 2000; and 3.2% were between the ages of 20 and 29, compared to 5.1% in 2000.

Gender distribution by age cohort was significantly less even in 2010 than in 2000 with notable male biases along most age ranges. In that year, the greatest absolute gender difference occurred in the 60 to 69 range (25.8% male, 9.7% female), followed by the 40 to 49 (9.7% male, 0% female) and 50 to 59 (12.9% female, 6.5% male) ranges. Of those three, the greatest relative gender difference occurred in the 40 to 49 range. It should be noted the because of the small and variable population, changes in gender distribution by age cohort were somewhat erratic making it difficult to discern a trend. Information regarding Whale Pass’ population structure can be found in Figure 2.

Figure 2. Population Age Structure in Whale Pass Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS) ¹⁷⁰⁰ estimated that 85% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 15% of residents had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall and an estimated 35% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall. No residents were estimated to have less than a ninth grade education or hold a post-secondary degree in 2010.

*History, Traditional Knowledge, and Culture*¹⁷⁰¹

Whale Pass was founded at the beginning of the twentieth-century as a community centered on the commercial fishing and timber industries. Logging thrived until the early 1980s when the local timber camp was closed. Whale Pass was permanently established through a land disposal sale around that time, and a homeowners association was created shortly thereafter. In 1980, the community was connected to the Prince of Wales road system. Today, Whale Pass primarily exists as a fishing town, participating in commercial, subsistence, and recreational fisheries. Logging activity in the area has been increasing as well.

Natural Resources and Environment

The area is dominated by a cool maritime climate. Summer temperatures range from 46 to 70 °F (8 to 21 °C); winter temperatures range from 15 to 42 °F (-9 to 6 °C).¹⁷⁰²

Whale Pass is located in the Tongass National Forest, which covers 16.8 million acres of rainforest in southeast Alaska. Like all of southeast Alaska, PWI's topography was sculpted by immense glaciations during the last ice age. Thousands of years of post-glacial ecological succession created one of the most biologically productive rainforests in the world. Vegetation is dominated by mixed spruce-hemlock stands with areas of red alder and cedar.¹⁷⁰³ Muskegs are found in depressions and shallow slopes where drainage is poor. The rainforests of Southeast Alaska are habitat to a wide range of wildlife. Terrestrial wildlife includes shrews, voles, marmots, ground squirrels, beaver, black bears, porcupine, Sitka black tail deer, marten, fishers, and river otter.¹⁷⁰⁴ Fish species include Pacific halibut, all five species of Pacific salmon, herring, Pacific lamprey, lingcod, Atka mackerel, Walleye pollock, black and yelloweye rockfish, sablefish, salmon sharks, smelt, cutthroat trout, steelhead trout, and Dolly Varden.¹⁷⁰⁵ Marine

¹⁷⁰⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷⁰¹ Whale Pass Community Action Team. (1997). *Whale Pass Land Acquisition Plan*. Retrieved April 17, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhalePass-OT-1997.pdf>.

¹⁷⁰² See footnote 1698.

¹⁷⁰³ U.S. Forest Service. (n.d.). *Tongass National Forest*. Retrieved February 13, 2012 from: http://www.fs.fed.us/r10/tongass/districts/pow/projects_plans/watershed/ws_explore.shtml

¹⁷⁰⁴ MacDonald, S.O. & Cook, J. A. (1996). The Land Mammal Fauna of Southeast Alaska. *The Canadian Field-Naturalist*, 110(4), 571-597.

¹⁷⁰⁵ Alaska Department of Fish and Game (n.d.). *Species: Fish*. Retrieved February 14, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=animals.listfish>.

mammals include porpoise, Steller sea lion, harbor seals, and several species of whale.¹⁷⁰⁶

Timber and minerals make up the majority of natural resources present on PWI. Although the timber industry has been decline, the regional Alaska Native Claims Settlement Act (ANCSA) Native corporation, Sealaska, has active timber developments on the Island.¹⁷⁰⁷ In addition, the U.S. Forest Service allocated 5,500 million board feet of timber in the Whale Pass area for sale in 2014 as part of their 2011-2015 timber sale schedule.¹⁷⁰⁸ Mineral developments in the area include the Niblack and Bokan Mountain mineral projects. The Niblak project is a copper-zinc-silver prospect which was in the final stages of exploration as of 2011.¹⁷⁰⁹ Bokan Mountain mineral area is a source of uranium and rare earths on the southern portion of PWI. Formerly the site of the Ross-Adams mine, this site produced an estimated 94,500 tons or uranium ore from 1957 to 1971. Exploration for additional minerals in the area began again in 2007.¹⁷¹⁰ A final natural resource is Whale Pass's plentiful ecosystem services and scenic beauty. Local ecosystem services range from providing essential habitat for many forms of plants and animals, to providing recreational opportunities for residents and non-residents alike.

Whale Pass' protected location reduces the impact of most natural hazards. Still, tsunami's caused by earthquakes or landslides remain a potential hazard.¹⁷¹¹

According to the Alaska Department of Environmental Conservation (DEC), there are no notable active environmental remediation sites located in Whale Pass as of 2010.¹⁷¹²

Current Economy¹⁷¹³

According to a survey conducted by the AFSC in 2011, community leaders reported that Whale Pass' economy is dependent on eco-tourism and sportfishing and hunting. Logging operations and related services provide the only steady employment. Subsistence activities and public assistance payments supplement income. Several residents hold commercial fishing permits as well. Top employers¹⁷¹⁴ in 2010 included: the Alaska Power & Telephone Company, Southeast Island School District, and Southern Southeast Regional Aquaculture Association.

In 2010,¹⁷¹⁵ the estimated per capita income was \$12,232 and the estimated median household income was \$18,611, compared to \$24,040 and \$62,083 in 2000, respectively. After

¹⁷⁰⁶ Ibid.

¹⁷⁰⁷ Sealaska Timber Corporation (n.d). *Homepage*. Retrieved February 14, 2012 from: <http://www.sealaskatimber.com>.

¹⁷⁰⁸ U.S. Forest Service (2011). *Schedule of Timber Sales (CY 2011-2015)*. Retrieved April 17, 2012 from: http://forestry.alaska.gov/pdfs/ketchikan_timber/2011-2015/2011-2015_Draft%20FYSTS.pdf.

¹⁷⁰⁹ Alaska Department of Natural Resources (n.d.). *Niblack Project*. (Retrieved February 14, 2012 from: <http://dnr.alaska.gov/mlw/mining/largemine/niblack/>).

¹⁷¹⁰ U.S. Forest Service (2010). *Bokan Mountain Uranium Mine*. Retrieved February 14, 2012 from: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5252645.pdf.

¹⁷¹¹ Alaska Department of Natural Resources (n.d.). *Coastal Hazards*. Retrieved February 14, 2012 from: http://www.alaskacoast.state.ak.us/ACMPGrants/EGS_05/pdfs/CoastalHazards.pdf.

¹⁷¹² Alaska Department of Environmental Conservation (n.d.). *List of Contaminated Site Summaries by Region*. Retrieved April 17, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>

¹⁷¹³ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁷¹⁴ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹⁷¹⁵ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

accounting for inflation by converting 2000 values into 2010 dollars,¹⁷¹⁶ the real per capita income (\$31,612) and real median household income (\$81,638) indicate a significant decline in both individual and household earnings. In 2010, Whale Pass ranked 238th of 305 communities from which per capita income was estimated, and 283rd of 299 communities from which median household income was estimated.

Whale Pass' small population size may have prevented the ACS from accurately portraying economic conditions.¹⁷¹⁷ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$245,995 in total wages in 2010.¹⁷¹⁸ When matched with the population in 2010, the per capita income equals \$7,935, which is lower than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Decennial Census figures.¹⁷¹⁹ In addition, the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁷²⁰ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy.

According 2006-2010 ACS estimates, no residents aged 16 and older were part of the civilian labor force in 2010. This estimate is likely inaccurate and conflicts with DOLWD reports which show positive employment for 2007 through 2010. Because ACS estimates were unable to capture conditions in 2010, ACS information on employment by industry and occupation type is unavailable for that year. According to DOLWD reports for 2010,¹⁷²¹ 12 residents were employed in the civilian labor force. Of those employed, 25% worked in public administration sectors; 16.7% worked in natural resources or mining sectors; 16.7% worked in information sectors; 16.7% worked in educational or health service sectors; 8.3% worked in construction sectors; 8.3% worked in trade transportation, or utilities sectors; and 8.3% worked in professional or business sectors. Information regarding employment trends can be found in Figures 3 and 4.

¹⁷¹⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁷¹⁷ See footnote 1700.

¹⁷¹⁸ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁷¹⁹ See footnote 1714.

¹⁷²⁰ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

¹⁷²¹ See footnote 1714.

Figure 3. Local Employment by Industry in 2000-2010, Whale Pass (U.S. Census).

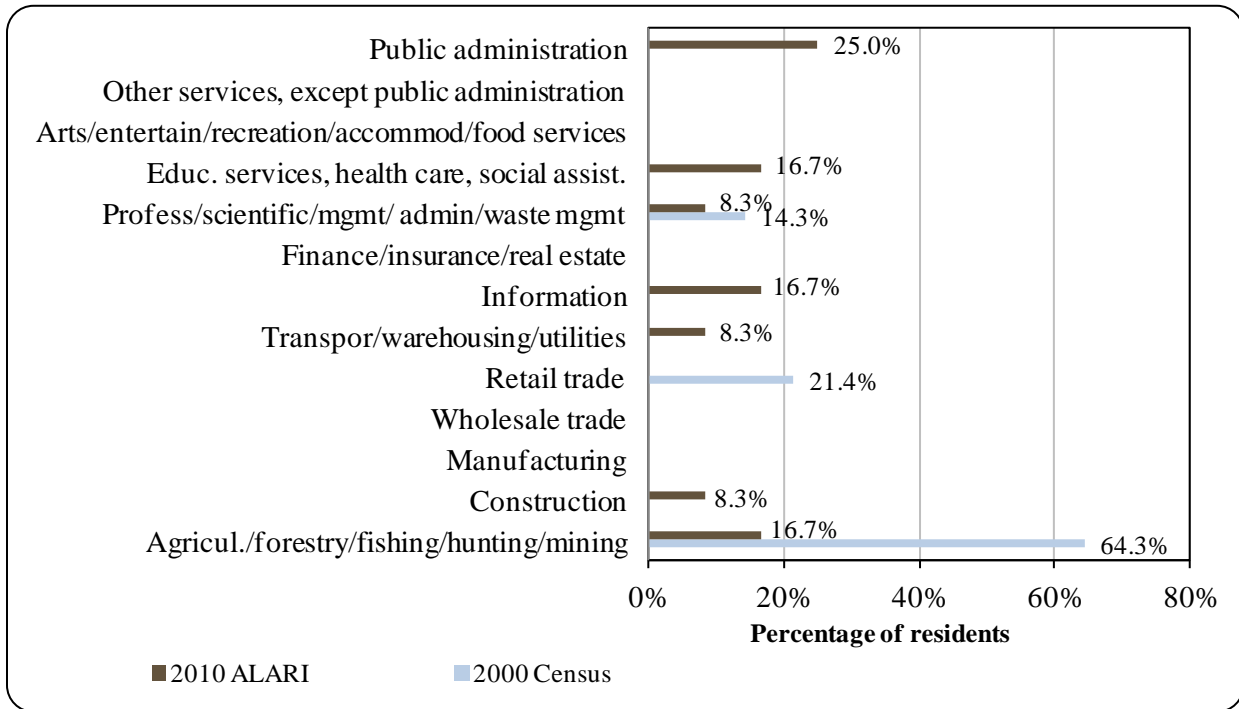
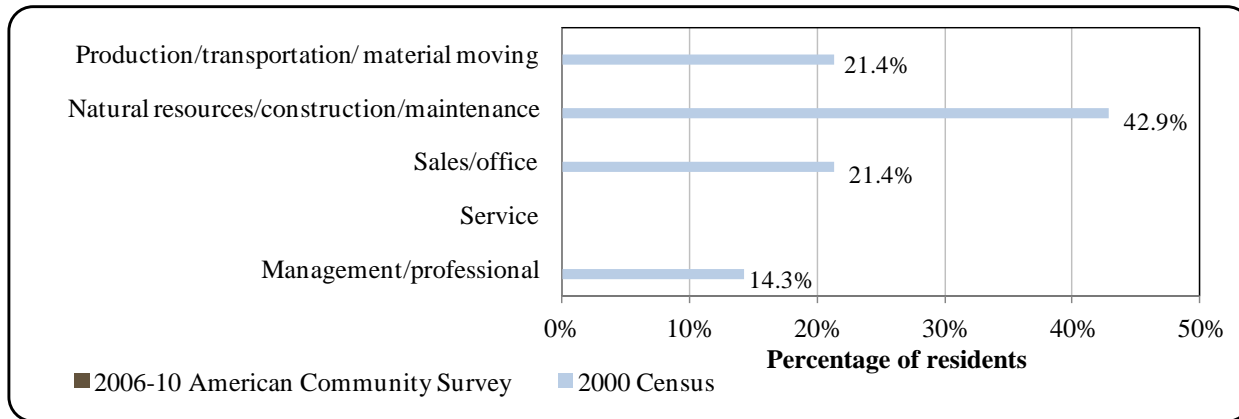


Figure 4. Local Employment by Occupation in 2000-2010, Whale Pass (U.S. Census).



Governance

Whale Pass is unincorporated and not under the jurisdiction of a borough. The Whale Pass Community Association is the local governing entity. The community is not recognized under the Alaska Native Claims Settlement Act (ANCSA) and there is no U.S. Bureau of Indian Affairs (BIA) recognized Native village council. The closest National Marine Fisheries Service (NMFS) and Alaska Department of Fish and Game (ADF&G) offices are located in Petersburg, 48 miles northwest. The closest U.S. Bureau of Citizenship and Immigration Services (BCIS) office is located in Ketchikan, 80 miles southeast.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Whale Pass from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	n/a	n/a	\$4,170	\$15,000
2001	n/a	n/a	\$3,707	\$43,000
2002	n/a	n/a	\$3,681	n/a
2003	n/a	n/a	\$3,631	n/a
2004	n/a	n/a	-	n/a
2005	n/a	n/a	-	n/a
2006	n/a	n/a	-	n/a
2007	n/a	n/a	-	n/a
2008	n/a	n/a	-	\$54,582
2009	n/a	n/a	n/a	\$5,418
2010	n/a	n/a	n/a	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Although Whale Pass does not keep a municipal budget, the community did received revenue from State Revenue Sharing between 2000 and 2003. In 2003, Whale Pass received \$3,631 in State Revenue Sharing, compared to \$4,170 in 2000. State and federal fisheries-related grants awarded to Whale Pass between 2000 and 2010 included: \$60,000 for a small boat harbor, \$43,000 for a small boat launch, and \$15,000 for dock upgrades. Information regarding municipal finances can be found in Table 2.

Infrastructure

Connectivity and Transportation

The community has access to the island road system. The state ferry terminal is located in Hollis. Float planes and boats are also prevalent means of transportation. The summer rate for roundtrip flights between Ketchikan and Whale Pass is \$312 via Taquan Air.¹⁷²² The Whale Pass Community Association operates the state-owned seaplane base, dock, boat slips, and launch ramp.¹⁷²³ In a survey conducted by the AFSC in 2011, community leaders reported that there is 200 feet of public dock space available for permanent moorage and 80 feet available for transient

¹⁷²² Taquan Air (n.d.). *Homepage*. Retrieved April 18th, 2012 from: www.taquanair.com.

¹⁷²³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

moorage. Vessels up to 80 feet long can use moorage in Whale Pass.

Facilities

Most homes draw untreated water from a creek and have individual water tanks. Privies and septic tanks are used for sewage disposal. Almost all houses have complete plumbing. One-third of the homes are used only seasonally. The community's landfill is no longer in operation. Electricity is provided regionally by diesel generator. Visitor accommodations include the Bear Valley Lodge and the Alaska Fish Tales Lodge. Public safety services are provided by state troopers based in Ketchikan. Fire and rescue services are provided by Whale Pass Volunteer Emergency Medical Services (EMS) and PWI Area EMS. Communications services include local and long distance telephone, local radio, and local television.¹⁷²⁴

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed since 2000 included a fish cleaning station, barge landing area, additional dock space, dock access improvements, new pilings, broadband internet access, road improvements, a community center/library, improvements to EMS, improvements to fire services, improvements to schools, improvements to telephone services, and improvements to mail services. Projects in progress as of 2010 included improvements to dock structure. Planned projects include dockside water and electric utilities, dockside fuel storage, a new breakwater, and harbor dredging. Fisheries-related businesses and services located in Whale Pass include fish lodges. Residents typically go to Craig, Wrangell, and Coffman Cove for businesses and services not available locally.

*Medical Services*¹⁷²⁵

Beyond local EMS, no medical services are available in Whale Pass. Seaview Medical Center in Craig or Ketchikan General Hospital are relied on for medical services.

*Educational Opportunities*¹⁷²⁶

Whale Pass School offers kindergarten through twelfth grade instruction. As of 2012, there were 12 students in attendance.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Whale Pass was built on the timber and fishing industry, and when logging declined in the area, commercial, recreation, and subsistence fishing helped to sustain the community. The Southern Southeast Regional Aquaculture Association has leased state land to develop a coho salmon enhancement recovery projects at the outlet of Neck Lake. Northeastern Whale Passage adjoining Kashevarof Passage is an important salmon trolling area for residents of Whale Pass.

¹⁷²⁴ Ibid.

¹⁷²⁵ Ibid.

¹⁷²⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

The area is also used by residents for personal use harvests and local sportfishing businesses. Neck Lake is a population recreation area and is accessible by road.¹⁷²⁷

Whale Pass is located in Federal Reporting Area 659, International Pacific Halibut Commission Regulatory Area 2C, and the Eastern Gulf of Alaska (GOA) Sablefish Regulatory District. According to a survey conducted by the AFSC in 2011, community leaders reported that since 2005, the community has seen an increase in the number of charter, pleasure, and commercial fishing vessels in the community. There have also been increased visits from vessels under 60 feet in length. Whale Pass participates in the fisheries management process in Alaska through regional advocacy organizations.

The community is eligible to participate in the Community Quota Entity (CQE) program. The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead to decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.¹⁷²⁸ As of 2013, 45 communities were considered eligible for the CQE program. Only two CQE non-profits had purchased commercial halibut IFQ and were actively leasing it to eligible community residents. Both of these CQE non-profits were located in the Kodiak area: Cape Barnabas, Inc. in Old Harbor and the Ouzinkie Company Holding Corporation in Ouzinkie.¹⁷²⁹

The Whale Pass Community Association is the CQE non-profit entity which represents Whale Pass. As of Fall 2013, the Association had not purchased any commercial IFQ. However, the non-profit did have four halibut charter permits available for lease to community members.¹⁷³⁰

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Whale Pass does not have a registered processing plant. The closest seafood processor is located in Wrangell.

¹⁷²⁷ Alaska Department of Natural Resources. (1998). *Prince of Wales Area Plan*. Retrieved April 18, 2012 from: http://dnr.alaska.gov/mlw/planning/areaplans/wales/plan/pow_plan_complete.pdf.

¹⁷²⁸ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>

¹⁷²⁹ NOAA Fisheries. (2013). *Community Quota and License Programs and Community Quota Entities*. Retrieved October 24, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

¹⁷³⁰ Ibid.

Fisheries-Related Revenue

With the exception of port/dock usage fees, the community of Whale Pass does not collect any fisheries-related revenue. In 2010, \$2,000 was collected in dock fess. Information regarding fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

*Commercial Fishing*¹⁷³¹

In a survey conducted by the AFSC in 2011, community leaders reported that King salmon seasons typically run from May through June, halibut seasons typically run from May through November, coho salmon seasons typically run from June through October, and Dungeness crab seasons typically run from May through October.

In 2010, three area residents, or 9.7% of the population, held three permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, one resident held one CFEC permit. Of the CFEC permits issued that year, 67% were for salmon, compared to 100% in 2000; and 33% were for other shellfish, compared to 0% in 2000. Between 2000 and 2010, no area residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) groundfish or crab permits. No area residents held halibut quota in 2010, compared to 4,289 shares held by one account in 2000. No area residents have held sablefish or crab quota since the programs began.

No Whale Pass area residents held commercial crew licenses between 2001 and 2010. Area residents held majority ownership of three vessels in 2010, compared to one in 2000. While there were landings reported in Whale Pass between 2000 and 2010, details regarding poundage and value of landings is considered confidential. In addition, landings reported by individual residents of Whale Pass are considered confidential as well. Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹⁷³¹ ADF&G commercial fishery statistics are reported in aggregate for the communities of Whale Pass, Port Protection, Tokean, Tuxekan, and Noyes Island. Given this, the Whale Pass and Port Protection profiles report combined numbers for commercial fishery data, as well as recreational and subsistence information.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Whale Pass: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$2,000*
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$2,000</i>
<i>Total municipal revenue⁵</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Note: n/a indicates that no data were reported for that year.

*Source: AFSC 2011 Alaskan Community Survey.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species in the Area Around Whale Pass: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	2	2	2	2	1	0	0	1	1	1
	Fished permits	0	0	0	1	0	0	0	0	1	1	1
	% of permits fished	n/a	0%	0%	50%	0%	0%	n/a	n/a	100%	100%	100%
	Total permit holders	0	2	2	2	2	1	0	0	1	1	1
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species in the Area Around Whale Pass: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	2	1	1	1	1	1	1	1	2	2
	Fished permits	0	1	0	0	0	0	1	0	0	1	1
	% of permits fished	0%	50%	0%	0%	0%	0%	100%	0%	0%	50%	50%
	Total permit holders	1	2	1	1	1	1	1	1	1	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>1</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>3</i>
	<i>Fished permits</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>2</i>	<i>2</i>
	<i>% of permits fished</i>	<i>0%</i>	<i>25%</i>	<i>0%</i>	<i>33%</i>	<i>0%</i>	<i>0%</i>	<i>100%</i>	<i>0%</i>	<i>50%</i>	<i>67%</i>	<i>67%</i>
	<i>Permit holders</i>	<i>1</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>3</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in the Area Around Whale Pass: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing catch ²	Total Net Pounds Landed ^{2,5}	Total Ex-Vessel Value of Landings ^{2,5}
2000	1	2	0	1	29	7	--	--
2001	0	1	0	2	30	7	--	--
2002	0	1	0	1	22	9	--	--
2003	0	1	0	1	24	5	--	--
2004	0	1	0	1	21	11	--	--
2005	0	1	0	1	14	14	--	--
2006	0	1	0	2	14	11	--	--
2007	0	3	0	3	13	13	--	--
2008	0	1	0	2	12	5	--	--
2009	0	1	0	2	15	4	--	--
2010	0	2	0	3	16	74	--	--

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in the Whale Pass Area: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	1	4,289	604
2001	1	4,289	631
2002	3	5,457	754
2003	3	5,457	754
2004	3	5,457	914
2005	2	1,168	160
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation in the Whale Pass Area: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation in the Whale Pass Area: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in the Area Around Whale Pass: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Whale Pass Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

*Recreational Fishing*¹⁷³²

Recreational fishing is a popular activity in Whale Pass and the tourism industry continues to grow in the community. There are several lodges which provide sportfishing guide and accommodations services. In addition, there are a number of cabins throughout the area available for rent. Neck Lake, Whale Passage, and Kashevarof Passage are all popular recreational fishing areas.

In 2010, there were two active sport fish guide businesses and six sport fish guides located in Whale Pass, compared to none in 2000. In addition, residents held 13 sportfishing licenses, compared to six in 2000. In 2010, ADF&G charter log records indicate that 21 coho

¹⁷³² Community-level recreational fishery statistics reported for Whale Pass are the same as those reported in the profile of Port Protection. Recreational data are aggregated for these communities to be consistent with ADF&G commercial fishery statistics, which are reported in aggregate for the communities of Whale Pass, Port Protection, Tokean, Tuxekan, and Noyes Island.

salmon, 91 halibut, 21 rockfish, and 6 unspecified salmon were taken.¹⁷³³ No sportfishing licenses were sold in the Whale Pass area between 2000 and 2010, indicating that private anglers participating in local sportfishing are obtaining their licenses elsewhere.

Whale Pass is located within the Prince of Wales ADF&G Harvest Survey Area which includes all waters and drainages from Cape Chacon to Sumner Strait and from Clarence Island westward. In 2010 there was a total of 51,312 saltwater angler days fished, compared to 49,074 in 2000. In that year, non-Alaskan residents accounted for 74.4% of angler days fished, compared to 67.3% in 2000. In terms of freshwater, there was a total of 15,138 angler days fished in 2010, compared to 19,654 in 2000. In that year, non-Alaskan residents accounted for 70.4% of angler days fished, compared to 45.9% in 2000.

According to ADF&G Harvest Survey records,¹⁷³⁴ local private anglers target coho salmon, cutthroat trout, Pacific halibut, rockfish, smelt, Dungeness crab, hardshell clams, and other finfish and shellfish. Local sportfishing is done by charter and private vessels owned by both Alaskan and non-Alaskan residents. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers also target pink, chum, and Chinook salmon, and shrimp. Information regarding recreational fishing trends can be found in Table 11.

*Subsistence Fishing*¹⁷³⁵

Although not a traditional subsistence based community, residents of Whale Pass rely on subsistence and personal use resources to supplement diets and incomes. In a survey conducted by the AFSC in 2011, community leaders reported that residents rely on coho salmon and halibut for subsistence. Specific data on subsistence participation by household and subsistence harvest of marine invertebrates, non-salmon/halibut fish and marine mammals is unavailable. However, the ADF&G *Community Subsistence Information System*¹⁷³⁶ reports that non-salmon/halibut species used or harvested by residents include abalone, cockles, chitons, blue king crab, box crab, brown king crab, butter clams, Dungeness crab, geoducks, green sea urchin, horse clams, limpets, octopus, oyster, Pacific littleneck clams, purple sea urchins, razor clams, red chitons, red king crab, red sea urchin, rock scallops, shrimp, squid, Tanner crab, mussels, sea cucumber, fur seal, harbor seal, Steller sea lion, black rockfish, brook trout, sculpin, cutthroat trout, dogfish, Dolly Varden, euclachon, grayling, herring, lingcod, Pacific cod, Pacific tom cod, rainbow trout, Irish lord, red rockfish, rock greenling, sablefish, sea perch, silver smelt, skates, steelhead, flounder, shark, sole, and walleye pollock.

Data on subsistence salmon and halibut harvests are limited. In 2004, the last year for

¹⁷³³ Ibid.

¹⁷³⁴ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁷³⁵ Community-level subsistence fishery statistics reported for Whale Pass are the same as those reported in the profile of Port Protection. Subsistence data are aggregated for these communities to be consistent with ADF&G commercial fishery statistics, which are reported in aggregate for the communities of Whale Pass, Port Protection, Tokean, Tuxekan, and Noyes Island.

¹⁷³⁶ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

which salmon harvest data are available, area residents reported harvesting 123 salmon of which 86 were sockeye. Reports of subsequent harvests are unavailable. In 2010, 10 area residents held Subsistence Halibut Registration Certificates (SHARC) issued by NMFS, compared to three in 2000. In that year, an estimated 235 pounds of halibut was harvested on six SHARC, a significant decline from 959 harvested pounds reported the prior year. Information regarding subsistence trends can be found in Tables 12 through 15.

Table 11. Sport Fishing Trends, Whale Pass: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Whale Pass ²
2000	0	0	6	0
2001	0	0	3	0
2002	0	0	6	0
2003	0	0	6	0
2004	0	0	12	0
2005	2	4	10	0
2006	1	3	7	0
2007	1	3	5	0
2008	2	5	8	0
2009	3	4	8	0
2010	2	6	13	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	33,043	16,031	9,024	10,630
2001	38,248	14,090	7,299	5,922
2002	36,736	12,590	9,957	8,981
2003	37,341	16,346	10,627	11,506
2004	40,803	16,770	11,518	3,969
2005	52,135	16,333	10,100	3,527
2006	46,207	11,828	11,073	5,161
2007	49,280	13,327	11,132	6,463
2008	46,717	17,930	11,302	7,185
2009	38,164	10,829	9,918	4,124
2010	37,416	13,896	10,660	4,478

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Whale Pass: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Whale Pass: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	6	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	4	4	n/a	n/a	n/a	n/a	62	n/a	n/a
2004	7	5	n/a	9	6	22	86	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	4	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Whale Pass: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	3	n/a	n/a
2004	7	n/a	n/a
2005	7	n/a	53
2006	3	n/a	n/a
2007	4	n/a	n/a
2008	5	n/a	n/a
2009	10	7	959
2010	10	6	235

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Whale Pass: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that the dock water and electricity upgrades is the most pressing issue facing the portion of Whale Pass' economy that based on fishing.

When asked to describe effects fisheries policy or management actions have had on Whale Pass, community leaders reported charter fishing rules regarding halibut limits have been

beneficial for Whale Pass, as there has already been a local effort to release larger “breeder” fish.

When asked which past or current fisheries policy or management action affected Whale Pass the most, community leaders expressed concern over commercial Dungeness crab fishing in Whale Passage and its effect on local transportation. Specifically, there is concern over how pot buoys are affecting residents as they community by skiff.

When asked about potential future fisheries policy or management actions which concern Whale Pass the most, community leaders reported that Whale Pass supports closing commercial Dungeness crab fishing in Whale Passage.

Wrangell (RANG-gull)



People and Place

*Location*¹⁷³⁷

The City and Borough of Wrangell is located on the northwest tip of Wrangell Island, 155 miles south of Juneau and 89 miles northwest of Ketchikan. It is near the mouth of the Stikine River, a historic trade route to the Canadian Interior. The area encompasses 2,582 square miles of land and 883 square miles of water. The city was first incorporated in 1903 and is now a unified home rule city within its own borough.

*Demographic Profile*¹⁷³⁸

In 2010, there were 2,369 residents ranking Wrangell 39th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 4.4%. Between 2000 and 2009, the population declined by 18.0% with an average annual growth rate of -1.49%. However, a significant difference between the 2009 Alaska Department of Labor and Workforce Development (DOLWD) population estimate and the 2010 U.S. Census indicates possible discrepancies between U.S. Census and DOLWD figures. Further information regarding population trends can be found in Table 1.

In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were an estimated 200 seasonal or transient workers living in Wrangell in 2010. On average, seasonal workers live in Wrangell from May through September. The population peaks from June through August and is mostly driven by employment in fisheries sectors.

The racial and ethnic composition of Wrangell is predominately White and Tlingit Native. In 2010, 72.6% of residents identified themselves as White, compared to 73.5% in 2000; 16.2% identified themselves as American Indian or Alaska Native, compared to 15.5% in 2000; 9.4% identified themselves as two or more races, compared to 9.7% in 2000; and 1.4% identified themselves as Asian, compared to 0.6% in 2000. Residents who identified themselves as Black or African American or some other race each made up less than one-percent of the population in 2010. Hispanic or Latino residents made up 1.6% of the population that year, compared to 1.0% in 2000. Further information regarding Wrangell's racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 1.60, compared to 2.60 in 1990 and 2.09 in 2000. In that year, there were 1,428 total housing units, compared to 1,054 in 1990 and 1,092 in 2000. Of the households surveyed in 2010, 49% were owner-occupied, compared to 56% in

¹⁷³⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷³⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

2000; 25% were renter-occupied, compared to 27% in 2000; 9% were vacant, compared to 16% in 2000; and 17% were occupied seasonally, compared to 1% in 2000. Nineteen residents were living in group quarters in 2010.

The gender distribution in 2010 was slightly skewed at 52.4% male and 47.6% female. This was similar to the statewide distribution (52.0% male, 48.0% female) and distribution in 2000 (51.5% male, 48.5% female). In that year, the median age was 46.7 years, which was significantly older than the statewide median of 33.8 years and 2000 median of 39.1 years.

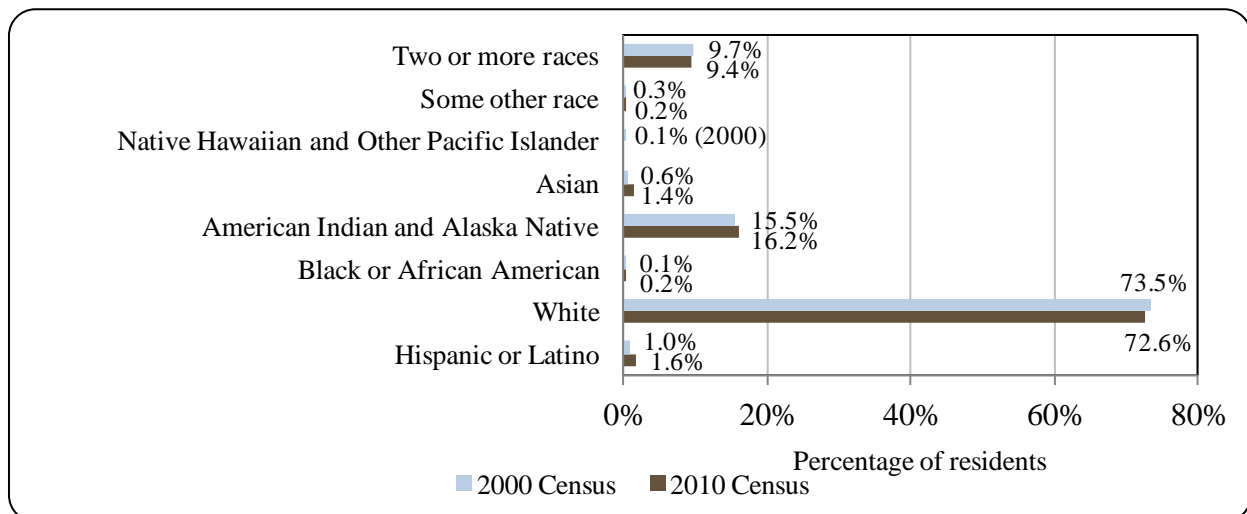
Table 1. Population in Wrangell from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	2,479	-
2000	2,308	-
2001	-	2,223
2002	-	2,180
2003	-	2,122
2004	-	2,022
2005	-	1,976
2006	-	1,909
2007	-	1,940
2008	-	1,939
2009	-	1,892
2010	2,369	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

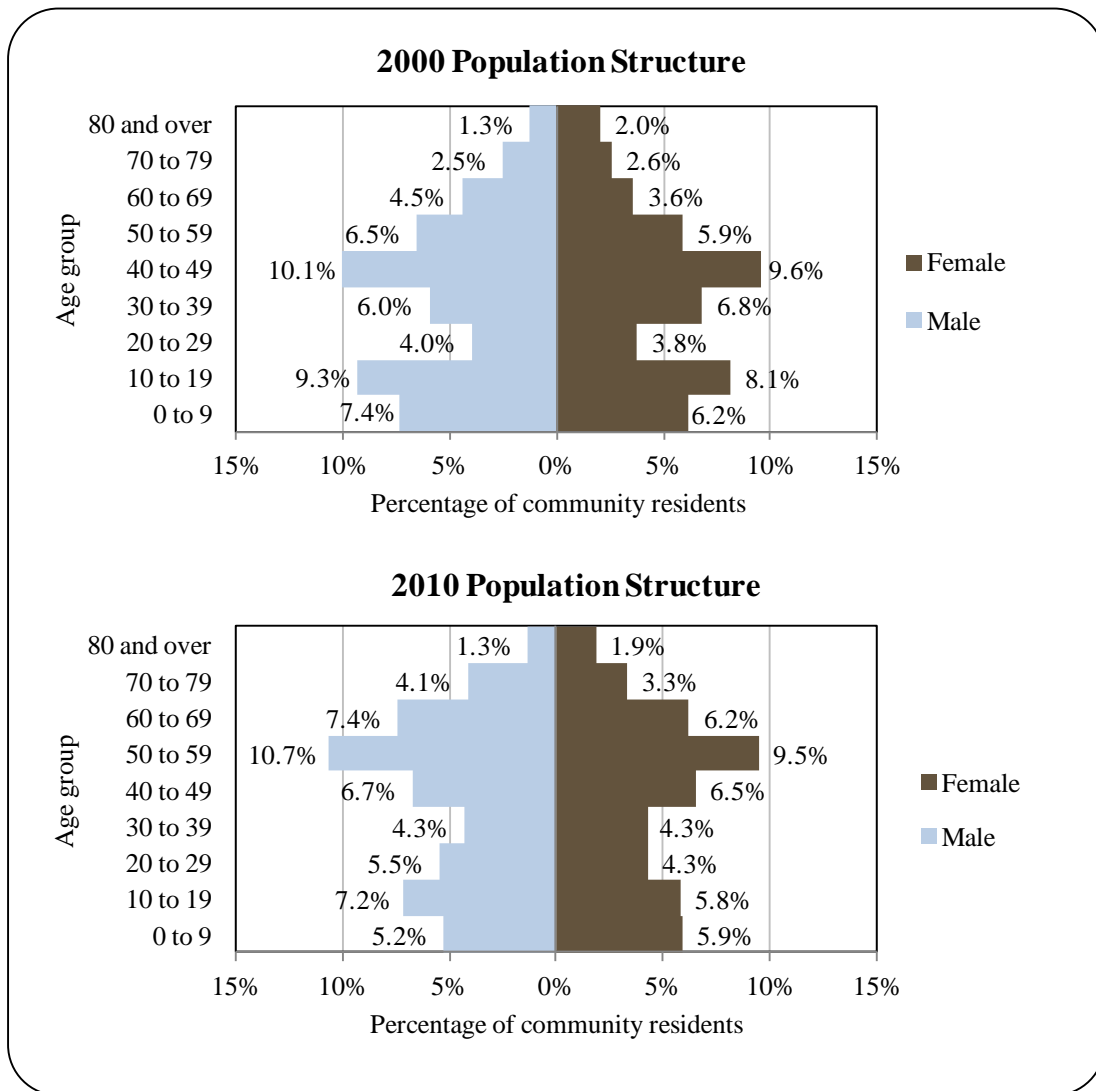
Figure 1. Racial and Ethnic Composition, Wrangell: 2000-2010 (U.S. Census).



When compared with 2000, the population structure in 2010 was somewhat less expansive. In addition, cohorts showed age transitions consistent with a stable population, meaning that as cohorts aged while their overall structure. In 2010, 24.1% of residents were under the age of 20, compared to 31% in 2000; 24.2% were over the age of 59, compared to 16.5% in 2000; 42.0% were between the ages of 30 and 59, compared to 44.9% in 2000; and 9.8% were between the ages 20 and 29, compared to 7.8% in 2000.

Gender distribution by age cohort was slightly less even in 2010 than in 2000, with slight male biases along most age ranges. In that year, the greatest absolute gender difference occurred in the 10 to 19 range (7.2% male, 5.8% female), followed by the 50 to 59 (10.7% male, 9.5% female) and 20 to 29 (5.5% male, 4.3% female) ranges. Of those three, the greatest relative gender difference occurred in the 20 to 29 range. Further information regarding trends in population structure can be found in Figure 2.

Figure 2. Population Age Structure in Wrangell Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹⁷³⁹ estimated that 89.6% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 1.9% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 8.5% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 28.9% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 7.3% held an Associate's degree, compared to an estimated 8.0% of Alaskan residents overall; an estimated 15.0% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 1.2% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*¹⁷⁴⁰

According to clan history, Tlingit people originally migrated into the area from the Stikine River during a time when the river still flowed underneath glaciers. Petroglyphs throughout the borough and shell midden sites located on Etolin Island are evidence of prolonged settlement in the area. The community has always been home to the Tlingit *Kiks.ádi* and *Naanyaa.aayí* clans, as well as the only home of the *Kayaashkiditaan*, *S'iknax.ádi*, *Xook'eidí*, *Kaasx'agweidí*, and *Taalkweidí* clans.

The Stikine River was a trade route to interior Canada used by the Tlingit since arriving in the area. Tlingits were trading furs with Russians in the area as early as 1811. In 1834, the Russians built a fort near Chief Shakes Tribal House on Shakes Island in the Wrangell Inner Harbor. The fort was later leased to the Hudson's Bay Company and renamed Fort Stikine. By 1849, sea otter and beaver stocks were depleted and Fort Stikine was abandoned. A U.S. military post was established at the site following the Alaska Purchase in 1867. The gold rushes of 1861, 1874-1877, and 1897 brought many prospectors to the area as the community grew around the fort.

In 1877, a Presbyterian church was founded in Wrangell. Reverend S. Hall Young was stationed in Wrangell and worked among both miners and the Tlingit, establishing the Fort Wrangell Tlingit Industrial School. Trades such as printing, boatbuilding and construction were taught there. This institution was later developed into the Wrangell Institute, a boarding school for Alaska Natives through the mid twentieth century.

By the beginning of the twentieth century, Wrangell had a population of 850 and the City was incorporated in 1903. Fishing and forestry were principal industries, and four canneries and a cold storage plant were constructed by the end of the 1920s. In the 1930s, cold packing of crab and shrimp was occurring. Abundant spruce and hemlock resources helped expand the lumber and wood products industry and Wrangell became a trading center for central southeast Alaska.

Historic Wrangell was built on boards and pilings over the water. Unfortunately, two major fires in 1906 and 1952 destroyed many of the historic buildings. Residential areas were

¹⁷³⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷⁴⁰ Sheinberg Associates (2010). *City and Borough of Wrangell Comprehensive Plan, June 2010*. Retrieved April 30, 2012 from: http://www.wrangell.com/sites/default/files/fileattachments/wrangell_comp_plan_2010_lq.pdf.

established on the hill surrounding the harbor. In 1994, the Alaska Pulp Corporation sawmill was closed. It had been the community's largest employer. In 1998, Silver Bay Logging reopened the sawmill on a smaller scale, but finally ceased mill operations in the late 2000s. Today, commercial fishing remains an important industry in Wrangell.

In 2008, it was decided by local election that the City of Wrangell should dissolve and incorporate as the unified City and Borough of Wrangell. The communities of Meyers Chuck, Union Bay, Thoms Place, Olive Cove, and Farm Island were included in the unification. Historic properties registered on the National Register of Historic Places include Chief Shakes Historic Site, Etolin Canoe, the vessel Judith Ann, Saint Philip's Episcopal Church, and Wrangell Public School.¹⁷⁴¹

Natural Resources and Environment

Wrangell is in the maritime climatic zone and experiences cool summers, mild winters, and year-round rainfall. Summer temperatures typically range from 42 to 64 °F (6 to 18 °C); winter temperatures range from 21 to 44 °F (-6 to 7 °C). Average annual precipitation is 82 inches, with 64 inches of snowfall. Fog is common from September through December.

The City lies within the Tongass National Forest, which covers 16.8 million acres of rainforest in southeast Alaska. Like all of southeast Alaska, Wrangell Island's topography was sculpted by immense glaciation during the last ice age. Thousands of years of post-glacial ecological succession created one of the most biologically productive rainforests in the world. Vegetation is dominated by mixed spruce-hemlock stands with areas of red alder and cedar.¹⁷⁴² Muskegs are found in depressions and shallow slopes where drainage is poor. The rainforests of southeast Alaska are habitat to a wide range of wildlife. Terrestrial mammals include Sitka blacktail deer, brown bear, black bear, otter, beaver, mink, porcupine, weasel, and other rodents. Marine mammals include seals, sea lion, whale, porpoise, and sea otter. Freshwater and anadromous fish include Dolly Varden, trout, and all five species of Pacific salmon.¹⁷⁴³ Marine fish include halibut, sablefish, rockfish, pollock, Atka mackerel, Pacific lamprey, crab, shrimp, and herring.¹⁷⁴⁴

Wrangell has a history of involvement in mining and mineral exploration activities. Gold was discovered around the Stikine River in 1862 and the community is famous for garnets. In 1907, Wrangell's Garnet Ledge mine was owned by the first all-women mining corporation in the United States. As of 2010, the mine was owned by the Presbyterian Church. Three areas within the Borough received detailed exploration efforts as of 2010: Union Bay, Groundhog Basin-Berg Basin, and Zarembo Island. Other regional prospects and developments include Woewodski Island prospects and former mines, and Castle Island Barite. Galore Creek in British Columbia, Canada, is the largest development-stage project in the region. If completed, the mine will operate on one of the world's largest and highest-grade copper-silver-gold deposits.¹⁷⁴⁵

Timber resources were historically a pivotal part of Wrangell's economy before the

¹⁷⁴¹ National Park Service (n.d.). *National Register of Historic Places*. Retrieved April 30, 2012 from: <http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome>.

¹⁷⁴² U.S. Forest Service (n.d.). *Tongass National Forest*. Retrieved February 13, 2012 from: http://www.fs.fed.us/r10/tongass/districts/pow/projects_plans/watershed/ws_explore.shtml

¹⁷⁴³ Ibid.

¹⁷⁴⁴ Alaska Department of Fish and Game (n.d.). *Salmon shark species profile*. Retrieved April 9, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=salmonshark.main>.

¹⁷⁴⁵ See footnote 1740.

Alaska Pulp Corporation ceased operations. Between 1999 and 2008, timber harvests within the Borough averaged 61 million board feet.¹⁷⁴⁶ There is potential to create a small wood manufacturing industry and as of 2012, the Borough was working with the U.S. Forest Service (USFS) on a long term harvesting plan.¹⁷⁴⁷

Environmental services and recreational resources are an important part of Wrangell's quality of life and tourism economy. There are a variety of outdoor recreation areas within the City and Borough, the most notable being the Stikine River. Natural spaces provide opportunities for hunting, fishing, hiking, biking, camping, sea kayaking, wildlife viewing, and ATV and snowmobile use. In addition, the USFS maintains 15 trails, several campgrounds, 22 cabins, and a variety of picnic areas and waysides. The Stikine River is the fastest free flowing navigable river in North America. The portion in the United States lies within the Stikine-LeConte Wilderness Area. Chief Shakes Hot Springs is a popular destination on the Stikine.¹⁷⁴⁸

Environmental hazards which may impact Wrangell include severe storm events, flooding, earthquakes, avalanches, tsunamis, and ground failures. In 1978, a disaster declaration was made for the Wrangell/Craig area during an intense storm which brought high winds, heavy rains, and large sea waves. The storm caused considerable damage to infrastructure in Wrangell.¹⁷⁴⁹

There are several notable environmental cleanup sites documented by the Alaska Department of Environmental Conservation (DEC) located in Wrangell. Contamination of the Wrangell Institute is the result of leaks and spills along the heating fuel transfer and fueling systems. As of 2007, there were approximately 6,000-8,000 cubic yards of petroleum contaminated soil remaining at the site, south of downtown Wrangell. Groundwater in the area is also contaminated with diesel-range organics and hydrocarbons. The update regarding cleanup efforts was posted in 2007, and cleanup was still underway as of 2010. The Wrangell Junkyard operated from the early 1960s to the mid-1990s and accepted a range of hazardous materials for disposal. The site contains significant numbers of broken and burned batteries and high concentrations of lead in the soil. Lead has migrated off-site to nearby intertidal sediments. Last update regarding cleanup efforts was posted in 2003, and cleanup was still underway as of 2010.¹⁷⁵⁰

Current Economy¹⁷⁵¹

Wrangell's economy is based on commercial fishing, tourism, and timber from the Tongass National Forest. Fishing and fish processing are an important segment of the economy.¹⁷⁵² In a survey conducted by the AFSC in 2011, community leaders reported that

¹⁷⁴⁶ Ibid.

¹⁷⁴⁷ Wrangell Sentinel (2012). *Economic Development Committee Discusses Wrangell Island Timber Sale*. Retrieved May 1, 2012 from: <http://www.wrangellsentinel.com/story/2012/04/12/news/economic-development-committee-discusses-wrangell-island-timber-sale/146.html>.

¹⁷⁴⁸ See footnote 1740.

¹⁷⁴⁹ Division of Homeland Security and Emergency Management (2010). *State of Alaska Hazard Mitigation Plan*. Retrieved May 1, 2012 from: <http://www.ready.alaska.gov/plans/documents/>.

¹⁷⁵⁰ Alaska Department of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved May 1, 2012 from: http://dec.alaska.gov/spar/csp/sites/wrang_junkyard.htm.

¹⁷⁵¹ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁷⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Wrangell's economy is reliant on logging, fishing, ecotourism, sportfishing, and hunting. The City's economy was significantly impacted by the closures of both the Alaska Pulp Corporation mill and Silver Bay Logging mill. In 2010, very little timber related employment existed. Construction employment is largely related to capital improvement projects and Downtown's Front Street revitalization. Seafood processing employment made gains in 2009 with the purchase of the former Wrangell Seafoods plant by Trident Seafoods. Other industries providing local employment include mining, the arts, entertainment, recreation, and tourism. In addition, an array of improvements and expansions to local health care services is predicted to improve employment in those sectors. Tourism provides a significant source of income and employment for Wrangell. In 2009, the city attracted 23,000 independent travelers, 4,400 small cruise ship passengers, and 470 pleasure vessel calls.¹⁷⁵³ In addition, the City is capable of handling periodic visits by larger cruise vessels. Cruise ship calls peaked from 2003 to 2005, when passenger traffic averaged 46,140 visits per year. By contrast, 3,332 cruise ship passengers visited Wrangell in 2010.¹⁷⁵⁴ Top employers¹⁷⁵⁵ in 2010 included: the City of Wrangell, Alaska Island Community Services, Wrangell Public Schools, Wrangell Medical Center, State of Alaska, City Market Inc., Sea Level Seafoods LLC, Benjamin's Store Inc., Southeast Properties LLC, and Ottesens Inc.

According to the 2006-2010 ACS,¹⁷⁵⁶ the estimated per capita income was \$28,731 and the estimated median household income was \$50,389, compared to \$21,851 and \$43,250 in 2000, respectively.¹⁷⁵⁷ However, after adjusting for inflation by converting 2000 values into 2010 dollars,¹⁷⁵⁸ the real per capita income (\$28,734) and real median household income (\$56,873) indicate an overall decline in both individual and household earnings. In that year, Wrangell ranked 71st of 305 communities from which per capita income was estimated, and 131st of 299 communities from which median household income was estimated.

It should be noted that Wrangell's small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹⁷⁵⁹ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to ALARI, wages collected by Wrangell residents in 2010 totaled \$25.0 million.¹⁷⁶⁰ When compared with the total

¹⁷⁵³ Sheinberg Associates (2010). *City and Borough of Wrangell Comprehensive Plan, June 2010*. Retrieved April 30, 2012 from: http://www.wrangell.com/sites/default/files/fileattachments/wrangell_comp_plan_2010_lq.pdf.

¹⁷⁵⁴ Cruise Line Agencies of Alaska (n.d.) Retrieved May 1, 2012 from: http://www.claalaska.com/pdf/2011/WRG_2011.pdf.

¹⁷⁵⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹⁷⁵⁶ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁷⁵⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷⁵⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁷⁵⁹ See footnote 1757.

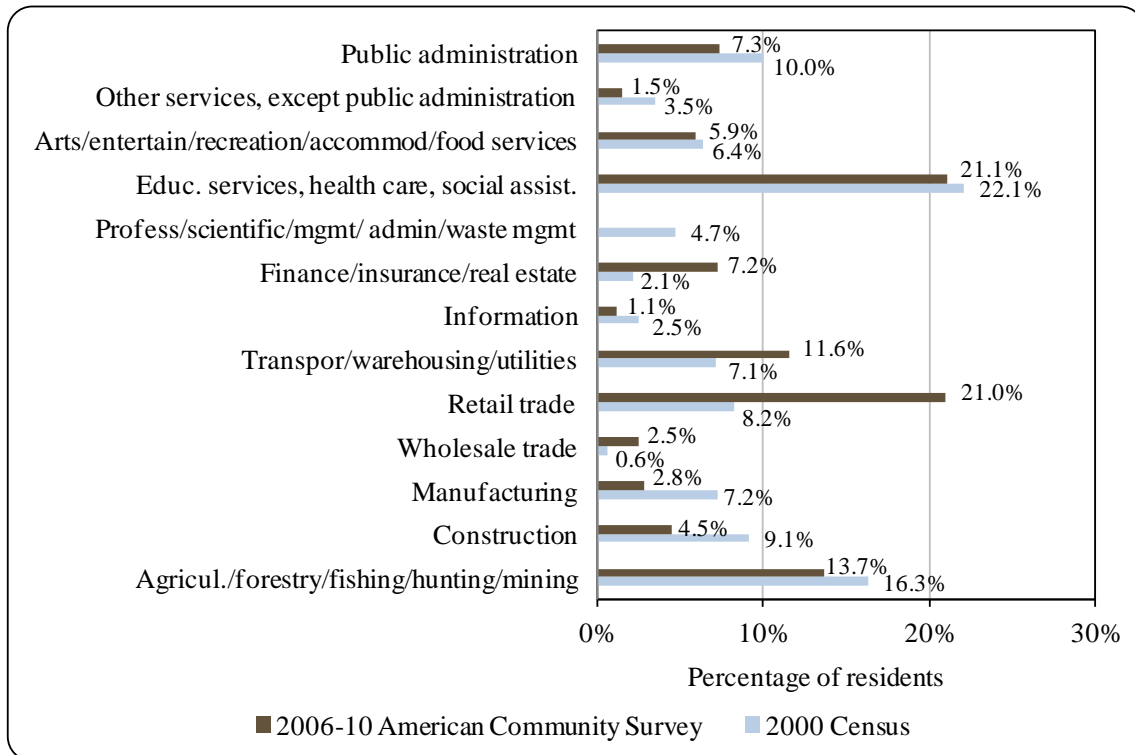
¹⁷⁶⁰ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

population reported in the 2010 Census, the per capita was an estimated \$10,552, which indicates a significant decrease in per capita income compared to the real per capita income values reported by the U.S. Census in 2000.¹⁷⁶¹ However, differences between the 2010 Census and DOLWD population estimates may have impacted this estimate.

According to 2006-2010 ACS estimates, 64.2% of residents aged 16 and over were part of the civilian labor force. Between 2006 and 2010, unemployment was estimated at 4.1%, compared to an estimated 5.9% statewide; and an estimated 8.3% of residents lived below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed in 2010, an estimated 41.2% worked in the private sector, an estimated 47.4% worked in the public sector, and an estimated 11.4% were self-employed.

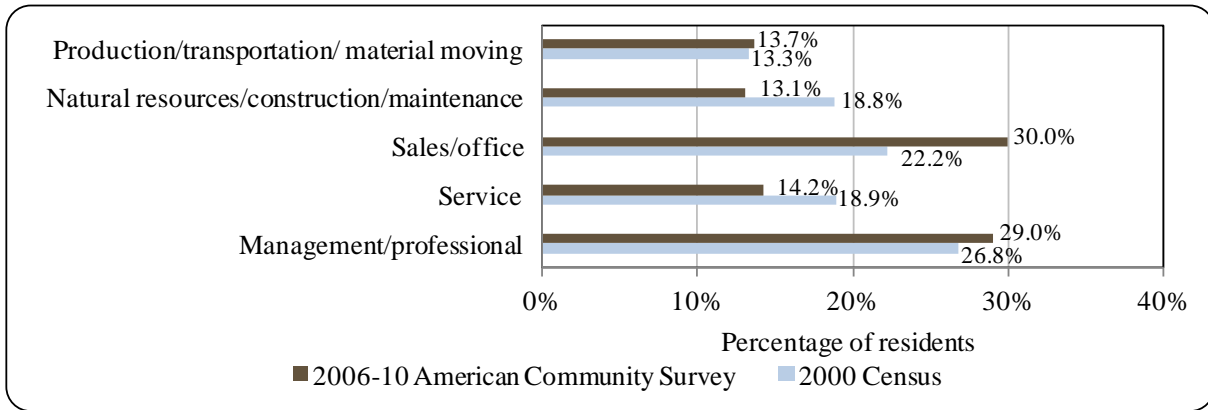
Wrangell City and Borough supports a diverse economy, which is represented through many different industry sectors and occupation types. By industry, most (21.1%) employed residents were estimated to work in education service, health care, and social assistance sectors; followed by retail trade sectors (21.0%) and agriculture, forestry, fishing, hunting, and mining sectors (13.7%). By occupation type, most (30.0%) employed residents were estimated to hold sales or office positions in that year; followed by management or professional positions (29.0%); service positions (14.2%); production, transportation, or material moving positions (13.7%); and natural resource, construction, or maintenance positions (13.1%).

Figure 3. Local Employment by Industry in 2000-2010, Wrangell (U.S. Census).



¹⁷⁶¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 4. Local Employment by Occupation in 2000-2010, Wrangell (U.S. Census).



Employment data compiled by ALARI reported that in 2010, most (29.6%) employed residents worked in local government; followed by trade, transportation, and utilities (19.1%) and education and health services (12.9%).¹⁷⁶² According to 2010 ALARI estimates, only 2.9% of those employed worked in natural resources or mining sectors. It should be noted that ALARI data is based on information gathered from workers covered by unemployment insurance within Alaska. Because of this, federal workers and self-employed residents are not included.

Many residents working in fisheries sectors may consider themselves to be self-employed, and thus are not captured in DOLWD reports. In addition, many positions in fisheries sectors are seasonal. Because of this, many fisheries workers may have been reported in other sectors. Finally, it should be noted that 2010 ACS estimates take into account the entire Borough, which includes the communities of Meyers Chuck, Union Bay, Thoms Place, Olive Cove, and Farm Island. Residents from these communities may have been captured and extrapolated depending on survey outcomes. Information regarding employment trends can be found in Figures 3 and 4.

Governance

In 2006, Wrangell was reorganized as a Unified Home Rule Borough, which now includes the City of Wrangell and several neighboring communities. The tribal community is recognized by the U.S. Bureau of Indian Affairs as an Alaska Native Village, and is represented by Wrangell Cooperative Association. However, the community was not included in the Alaska Native Claims Settlement Act (ANCSA) and does not possess an ANCSA chartered Native village corporation. The regional ANCSA chartered corporation is Sealaska. The closest U.S. Bureau of Citizenship and Immigration Services is located in Ketchikan, 89 miles southeast. The closest National Marine Fisheries Service (NMFS) and Alaska Department of Fish and Game (ADF&G) offices are located in Petersburg, 27 miles northwest.

In 2010, the Borough administered a 7% sales tax, 12.75 mill median property tax, and 6% Bed Tax. Total municipal and borough revenues were taken from financial audits and report total governmental revenues.¹⁷⁶³ When adjusted for inflation,¹⁷⁶⁴ total revenues declined 33.7%

¹⁷⁶² See footnote 1755.

¹⁷⁶³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

from \$11.92 million, to \$10.22 million. In 2010, general fund revenues accounted for 34.3% of total governmental funds. In that year, most (42.7%) of general fund revenues were collected from property taxes, penalties, and interest; followed by intergovernmental funds (30.7%) and payments in lieu of taxes (11.3%). Sales tax accounted for 21.7% of total governmental funds (compared to 15.6% in 2000.) National forest receipts accounted for 16.9%, and Permanent Fund special revenues accounted for 5.5%. Finally, nonmajor funds accounted for 21.7% of total revenues. Overall, state allocated Community Revenue Sharing accounted for 5.7% of total revenues, compared to 1.0% from State Revenue Sharing in 2000.

State and federal fisheries-related grants awarded to Wrangell between 2000 and 2010 included: \$1.9 million for a haulout facility, \$6.0 million for several cold storage projects, \$238,000 for a dock rehabilitation project, \$6.0 million for vessel float construction, \$125,000 for container storage area construction, \$1.26 million for a value-added seafood center/cold storage facility, \$125,000 for salmon marketing, \$20.4 million for harbor improvement projects, \$30,400 for a boat travel life and marine repair yard feasibility study, and \$4.7 million for Wrangell Narrows maintenance dredging. Further information regarding borough finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Wrangell from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$11,924,078	\$1,862,377	\$117,236	\$4,661,000
2001	\$10,997,863	\$1,882,866	\$107,689	n/a
2002	\$11,765,976	\$1,829,137	\$115,567	\$3,350,000
2003	\$6,927,443	\$1,761,568	\$104,018	\$17,071,950
2004	\$13,574,165	\$1,872,949	-	\$1,380,000
2005	\$7,015,386	\$2,030,692	-	\$2,375,000
2006	\$7,118,271	\$2,104,741	-	\$1,950,000
2007	\$10,166,598	\$2,133,767	-	\$5,900,000
2008	\$10,430,979	\$2,361,803	-	\$1,000,000
2009	\$9,445,109	\$2,266,131	\$587,742	\$5,000,000
2010	\$10,223,129	\$2,205,839	\$583,212	\$238,000

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁷⁶⁴ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

Connectivity and Transportation

The City is accessible by air and water. The state-owned 5,999-foot long by 150-foot wide paved lighted runway allows for jet service. A seaplane base is adjacent to the runway. Charter air taxi services are also available.¹⁷⁶⁵ Between 1990 and 2008 the number of jets serving Wrangell has varied from a low of 674 in 1999 to a high of 704 in 2007. As of 2010, Alaska Airlines provided jet service twice daily, towards Anchorage and Seattle. Other air carriers present include Sunrise Aviation and Temsco Helicopters.¹⁷⁶⁶ Roundtrip Airfare between Wrangell and Anchorage in June 2012 was \$449.¹⁷⁶⁷

Residents or visitors coming to Wrangell by water arrive by Alaska Marine Highway System ferry, by small or large cruise ship, and on private boats. In 2009, there were a total of 361 ferry port departures from Wrangell, compared to 384 in 2000. Ferry port departures peaked in 2003 at 490.¹⁷⁶⁸

Alaska Marine Lines and Northland/Boyer Barge Lines provide regular barge service to Wrangell. Retail goods, class C mail, construction material, vehicles, household items, and fuel are shipped in to Wrangell. Solid waste is shipped to Washington State, as are empty tanks and containers. There are two fuel barges each month. Seafood is shipped from Wrangell either by air or in a refrigerated container that is sent by barge or ferry to Seattle or Prince Rupert.¹⁷⁶⁹

Facilities

Approximately 95% of households are fully plumbed. Two surface reservoirs south of town supply 64 million gallons of water, which is filtered, treated, and piped to households. Sewage receives secondary treatment at the Shoemaker Bay plant. About 20% of residences have individual septic tanks or marine outfalls. The City provides garbage collection service and an annual hazardous waste disposal event that recycles paper, cardboard, and aluminum. Wrangell Municipal Light & Power purchases electricity from the state-owned Tyee Lake Hydro Facility, located 40 miles southeast. The City also owns five standby diesel-fueled generators. Visitor services include cab service, car rental service, and several hotels and other accommodations. Public safety services are provided by city police and Alaska state troopers. Fire and rescue services are provided by Wrangell Volunteer Fire Department and Rescue. Additional public facilities include a state court and magistrate, jail, youth center, community hall, assisted living services, recreation facilities, theater, and several museums and libraries. Communication services include local and long distance telephone, broadband internet, local and cable television, and radio.¹⁷⁷⁰

The City and Borough of Wrangell operates three harbor facilities that can accommodate small vessels, transient boats, and larger commercial vessels including tugs, barges, and commercial fishing boats. The Downtown or Etolin Harbor includes Inner Harbor, Reliance

¹⁷⁶⁵ See footnote 1763.

¹⁷⁶⁶ Sheinberg Associates (2010). *City and Borough of Wrangell Comprehensive Plan, June 2010*. Retrieved April 30, 2012 from: http://www.wrangell.com/sites/default/files/fileattachments/wrangell_comp_plan_2010_lq.pdf.

¹⁷⁶⁷ Airfare was calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).

¹⁷⁶⁸ See footnote 1766.

¹⁷⁶⁹ Ibid.

¹⁷⁷⁰ See footnote 1763.

Harbor, the Standard Oil float, and Fish and Game float. Downtown harbor is adjacent to downtown and includes 230 slips for small and large vessel moorage plus a transient moorage float and deep draft vessel float. Tidal grids, hydraulic hoists, an airplane float, two fuel docks, a work float, and a net rack are located in this harbor. Utilities include power, water, waste oil collection, and garbage collection. Shoemaker Bay Harbor includes 250 slips for small and large commercial fishing and recreational vessels. Support facilities include tidal grids, a hydraulic hoist, a boat launch, and a work float. This harbor is part of a recreation complex which includes a park and shelter, tennis courts, playground, campground, and trails. Electricity, restrooms, water, waste oil collection, and garbage collection is available. Heritage Harbor includes 165 slips for small and large vessel moorage, and two transient moorage floats measuring 375-foot and 310-foot. Electricity is available. The City Dock is a T-shaped dock located at the north end of downtown. The dock face is 405 feet with a breasting pier head of 565 feet. An additional stern mooring dolphin 225 feet off the northeast end allows moorage for vessels up to 950 feet long. The inside face of the dock permits moorage for smaller cruise ships and yachts, and a float is available for charter vessel moorage during the summer. Water and electricity are available. The city maintains boat launches at Heritage Harbor, Shoemaker Bay, and Downtown harbor. There is a boat launch and log transfer facility owned by the USFS at Earl West Cove on the east side of Wrangell Island, as well as at Pats Creek.

In a survey conducted by the AFSC in 2011, community leaders reported that there are 22,054 feet of public dock space available for permanent moorage and 3,300 feet of public dock space is available for transient moorage. Port facilities are capable of handling regulated vessels such as rescue vessels, cruise ships, ferries, fuel barges, and vessels containing hazardous materials. Infrastructure projects completed between 2000 and 2010 included a fish cleaning station, additional dock spaces, dockside electric and water utilizes, breakwater, haul out facilities, Environmental Protection Administration (EPA) certified vessel cleaning station, broadband internet access, road improvements, water and sewer pipeline improvements, and water and sewer treatment improvements. Infrastructure projects in progress as of 2010 included: pilings, road improvements, and water and sewer pipeline improvements. Additional public facilities available include a food bank and publicly-subsidized housing. Fisheries support services available in Wrangell include: seafood processing, fishing gear sales, boat repair (electrical, welding, mechanical services, machine shop, hydraulics), tackle and bait sales, dry dock storage, fish lodges, fishing business attorney, fishing related bookkeeping, boat fuel sales, fishing gear repairs, fishing gear storage, ice sales, and water taxi.

*Medical Services*¹⁷⁷¹

Wrangell Medical Center is a critical access hospital and long term care facilities with a total of 22 beds, 8 for acute care and 14 for long term care. Emergency care, minor surgery, radiology and imaging, echocardiograms, physical therapy and community outreach are provided by the center. Visiting specialists compliment services not available locally.

The Alaska Island Community Services is a non-profit organization providing community-based behavioral health programs.

¹⁷⁷¹ See footnote 1766.

*Educational Opportunities*¹⁷⁷²

The Alaska Virtual Academy offers home school Kindergarten through 8th grade instruction. In 2011, there were 32 students enrolled and one instructor. Evergreen elementary offers preschool through 5th grade instruction. In 2011, there were 132 students enrolled and 13 instructors. Stikine Middle School offers 6th through 8th grade instruction. In 2011, there were 68 students enrolled and 11 instructors. Wrangell High School offers 9th through 12th grade instruction. In 2011, there were 114 students enrolled and 13 instructors.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

As with many southeast communities, local Tlingits have relied on subsistence fishing since they moved into the area through the Stikine River corridor thousands of years ago. Not long after the 1867 Alaska Purchase, the commercial fishing industry got its start with the establishment of several canneries throughout southeast Alaska. The canneries were responsible for the eventual development of large fish traps, which lead to serious declines in salmon runs. By 1929 there were two salmon canneries, two shrimp canneries, and one crab cannery located in Wrangell. At their peak, these canneries employed over 150 people.¹⁷⁷³ Today, salmon remains the southeast region's major fishery, followed by sablefish and halibut. Shellfish fisheries are also popular and include Dungeness, Tanner, and king crab, as well as shrimp, sea cucumbers, and geoducks. Other area fisheries include several mariculture operations in the waters off west Etolin Island. An important part of the local commercial fishing industry is the Southern Southeast Regional Aquaculture Association (SSRAA), a non-profit corporation. Wrangell-based SSRAA programs include a hatchery at Burnett Inlet and salmon releases at Anita Bay.¹⁷⁷⁴

In a survey conducted by the AFSC in 2011, community leaders reported that Wrangell participates in the fisheries management process in Alaska through a representative who sits on regional fisheries advisory and/or working groups run by ADF&G and a representative who participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process. Wrangell also relies on regional organizations to provide information on fisheries management issues. The city is located in Federal Reporting Area 659, International Pacific Halibut Commission Regulatory Area 2C, and the Eastern Gulf of Alaska (GOA) Sablefish Regulatory District. Wrangell is not eligible for participation in the Community Development Quota program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, a number of shoreside processing plants are located in Wrangell. Breakwater Seafoods operates a seafood processing plant in Wrangell. This is a smaller operation run by two owner-operators and is busy from February to

¹⁷⁷² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁷⁷³ City of Wrangell. (n.d.). *History of Wrangell*. Retrieved May 14, 2012 from: www.wrangell.com.

¹⁷⁷⁴ See footnote 1766.

October. They buy and sell king crab, generally shipping it live by airfreight to west coast markets.¹⁷⁷⁵ G&G Alaska Smokery Inc. operates a small family-owned seafood processing plant in Wrangell. The plant began operations in 1988 and primarily provides freezing and packaging services.¹⁷⁷⁶ Sea Level Seafoods has owned and operated a seafood processing facility in Wrangell for over 30 years. The facility's primary focus is salmon. All five species of Pacific salmon are processed at the facility, as well as salmon roe. In addition to salmon, the facility also processes halibut, sablefish, various types of groundfish and Dungeness crab.¹⁷⁷⁷ The plant employs between 6 and 60 workers each year, with the largest workforce between June and September.¹⁷⁷⁸ Trident Seafoods Corporation was founded in 1973, and by the year 2000 was employing 4,000 people annually throughout Alaska and the Pacific Northwest. Throughout Alaska Trident processes cod, pollock and crab in the winter and herring and salmon in the summer. The Wrangell facility began operations in 2009 and provides room and board at a nominal cost as well as free roundtrip airfare between Wrangell and Seattle.¹⁷⁷⁹ The plant employs up to 210 workers in the months of July and August.¹⁷⁸⁰ Greater Glacier Seafood is located on the Canadian side of the Stikine River and processes salmon.¹⁷⁸¹

Fisheries-Related Revenue

Wrangell received \$1.05 million in fisheries-related revenue in 2010 (Table 3). Harbor usage fees contributed the greatest amount of revenue, followed by port/dock usage fees, Shared Fisheries Business Tax, public fishing gear storage fees, and raw fish tax. This represented close to a 53% increase in fisheries-related revenue from 2000, after adjusting for inflation.¹⁷⁸² Fisheries-related revenue peaked in 2009 at \$1.17 million. It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that the commercial gillnet season typically runs from June to August, the crab season starts in June, and the shrimp season starts in May. Types of fishing gear used by residents include trawl, pots, longline, gillnet, purse seine, and troll. Between 2005 and 2010, there were increases in the number of visits by commercial fishing vessels of all sizes.

In 2010, 280 residents, or 11.8% of the population, held 481 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 284 residents held 576 CFEC

¹⁷⁷⁵ Ibid.

¹⁷⁷⁶ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

¹⁷⁷⁷ Pacific Seafoods (n.d.). *Sea Level Seafoods*. Retrieved July 17, 2012 from <http://www.pacseafood.com/Default.aspx?page=109>.

¹⁷⁷⁸ See footnote 1776.

¹⁷⁷⁹ Trident Seafoods (n.d.). *Alaska Plants*. Retrieved September 12, 2011 from http://www.tridentseafoods.com/company/plants_alaska.php.

¹⁷⁸⁰ See footnote 1776.

¹⁷⁸¹ Sheinberg Associates (2010). *City and Borough of Wrangell Comprehensive Plan, June 2010*. Retrieved April 30, 2012 from: http://www.wrangell.com/sites/default/files/fileattachments/wrangell_comp_plan_2010_lq.pdf.

¹⁷⁸² Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

permits. Of the CFEC permits held in 2010, 46% were for salmon; compared to 37% in 2000; 14% were for crab, compared to 17% in 2000; 18% were for other shellfish, compared to 17% in 2000; 13% were for halibut, compared to 18% in 2000; 4% were for groundfish, compared to 8% in 2000; 2% were for sablefish, compared to 1% in 2000; and 2% were for herring, compared to 2% in 2000. In addition, 19 residents held 19 License Limitation Program (LLP) groundfish permits, one resident held one LLP crab permit, and 14 residents held 14 Federal Fisheries Permits (FFP) in 2010 (Figure 4). Residents held 5.78 million shares of halibut quota on 69 accounts in 2010, which accounted for 2.8% of total halibut quota statewide. In 2000, residents held 5.69 million shares of halibut quota on 104 accounts, which accounted for 2.7% of total halibut quota statewide. Residents held 1.50 million shares of sablefish quota on nine accounts, which accounted for 1.1% of total sablefish quota statewide. In 2000, residents held 481,811 shares of sablefish quota on three accounts. This accounted for less than one-percent of total sablefish quota statewide. No residents held crab quota between 2005 and 2010 (Tables 6-8).

Residents held 220 commercial crew licenses in 2010, compared to 234 in 2000. In that year, residents held majority ownership of 207 vessels, compared to 242 in 2000 (Table 5). Of the CFEC permits issued in 2010, 55% were actively fished, compared to 56% in 2000. This varied by fishery from 100% of sablefish permits, to 89% of halibut, 64% of crab, 56% of salmon, 44% of herring, 27% of other shellfish, and 5% of groundfish. A total of 52% of groundfish and 0% of crab LLP were actively fished in 2010. Finally, 50% of FFP were fished that year (Table 4). Fisheries prosecuted by Wrangell residents in 2010 included: southeast Alaska pot Dungeness crab, southeast Alaska pot king crab, southeast Alaska pot Tanner crab, statewide longline and mechanical jig halibut, southeast Alaska purse seine herring roe, southeast Alaska gillnet herring roe and food/bait, statewide dinglebar troll lingcod, southeast beam trawl and pot shrimp, southeast Alaska dive sea cucumber, statewide longline sablefish, northern southeast Alaska longline sablefish, southern southeast Alaska longline sablefish, southeast Alaska purse seine and drift gillnet salmon, and statewide hand and power troll salmon.¹⁷⁸³

In 2010, 4.93 million pounds of fish valued at \$9.17 million were landed in Wrangell, compared to 5.21 million pounds valued at \$5.66 million in 2000 (Table 5). In that year, Wrangell ranked 28th of 67 communities in terms of total landings and 24th in terms of total ex-vessel revenue. Landings peaked in 2005 at 14.29 million pounds valued at \$10.32 million. Earnings peaked in 2008 at 4.67 million pounds valued at \$14.34 million. By fishery, 2.81 million pounds of salmon were landed in 2010 valued at \$2.71 million, compared to 2.69 million pounds valued at \$906,642 in 2000; and increase of \$0.51 per pound landed after adjusting for inflation¹⁷⁸⁴ and without considering the species composition of landings. Other shellfish landings in 2010 totaled 156,279 pounds valued at \$342,751, compared to 453,157 pounds valued at \$839,719 in 2000. All other landings in 2010 are considered confidential.

In terms of non-confidential landings reported by residents of Wrangell, salmon was the most landed species in 2010, followed by crab and halibut. In that year, 6.39 million pounds of salmon valued at \$5.11 million, compared to 5.91 million pounds valued at \$2.22 in 2000; an increase of \$0.28 per pound landed after adjusting for inflation.¹⁷⁸⁵ Crab landings totaled 868,987

¹⁷⁸³ CFEC (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁷⁸⁴ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

¹⁷⁸⁵ Ibid.

pounds valued at \$1.76 million, compared to 539,023 pounds valued at \$967,982 in 2000; a decrease of \$0.45 per pound after accounting for inflation¹⁷⁸⁶ and without considering the species composition of landings. Halibut landings totaled 442,274 pounds valued at \$1.99, compared to 761,277 pounds valued at \$2.04 million in 2000; an increase of \$0.81 per pound after adjusting for inflation.¹⁷⁸⁷ Other shellfish landings totaled 183,326 pounds valued at \$434,606, compared to 1.09 million pounds valued at \$1.32 million in 2000. Sablefish landings totaled 100,656 pounds valued at \$443,644, compared to 91,351 pounds valued at \$237,809 in 2001; an increase of \$0.69 per pound after adjusting for inflation.¹⁷⁸⁸ Finally, other groundfish landings totaled 50,993 pounds valued at \$43,597, compared to 109,875 pounds valued at \$96,225 in 2000.

¹⁷⁸⁶ Ibid.

¹⁷⁸⁷ Ibid.

¹⁷⁸⁸ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Wrangell: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$13,468	\$18,298	\$12,125	\$11,866	\$8,835	\$13,552	\$13,413	\$12,498	\$9,374	\$9,000	\$9,000
Shared Fisheries											
Business Tax ¹	\$67,332	\$73,771	\$71,366	\$84,839	\$83,666	\$74,408	\$157,974	\$132,061	\$249,461	\$236,407	\$139,907
Fisheries Resource											
Landing Tax ¹	n/a	n/a	n/a	\$22	\$28	n/a	\$28	\$142	\$87	\$246	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$277,700	\$294,400	\$310,000	\$303,000	\$296,300	\$355,300	\$362,800	\$545,934	\$490,450	\$658,600	\$536,150
Port/dock usage ²	\$171,000	\$161,500	\$200,300	\$184,300	\$170,200	\$222,700	\$242,700	\$233,120	\$200,100	\$265,230	\$266,040
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$100,000*
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$529,500</i>	<i>\$547,969</i>	<i>\$593,791</i>	<i>\$584,027</i>	<i>\$559,030</i>	<i>\$665,960</i>	<i>\$776,915</i>	<i>\$923,754</i>	<i>\$949,472</i>	<i>\$1.17 M</i>	<i>\$1.05 M</i>
<i>Total municipal revenue⁵</i>	<i>\$11.92 M</i>	<i>\$11.0 M</i>	<i>\$11.77 M</i>	<i>\$6.93 M</i>	<i>\$13.57 M</i>	<i>\$7.02 M</i>	<i>\$7.12 M</i>	<i>\$10.17 M</i>	<i>\$10.43 M</i>	<i>\$9.45 M</i>	<i>\$10.22</i>

Note: n/a indicates that no data were reported for that year.

*Source: AFSC 2011 Community Surveys.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city brings in each year from all sources, including fisheries-related revenue streams. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Wrangell: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	14	15	15	17	17	17	17	17	18	18	19
	Active permits	8	10	9	11	10	11	10	10	9	10	10
	% of permits fished	57%	66%	60%	64%	58%	64%	58%	58%	50%	55%	52%
	Total permit holders	14	15	15	17	17	17	17	17	18	18	19
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	0	1
Federal Fisheries Permits ¹	Total permits	15	16	16	15	16	16	13	15	16	14	14
	Fished permits	0	0	0	3	4	5	5	7	9	9	7
	% of permits fished	0%	0%	0%	20%	25%	31%	38%	47%	56%	64%	50%
	Total permit holders	15	16	16	15	16	16	12	14	15	14	14
Crab (CFEC) ²	Total permits	96	90	89	85	88	80	76	76	72	67	69
	Fished permits	69	55	62	60	59	54	48	50	52	47	44
	% of permits fished	72%	61%	70%	71%	67%	68%	63%	66%	72%	70%	64%
	Total permit holders	74	71	77	77	75	73	74	71	70	66	64
Other shellfish (CFEC) ²	Total permits	99	107	96	90	93	91	89	86	86	88	86
	Fished permits	51	46	40	43	43	41	33	29	26	27	24
	% of permits fished	51%	42%	41%	47%	46%	45%	37%	33%	30%	30%	27%
	Total permit holders	85	87	82	80	82	80	78	76	75	77	76
Halibut (CFEC) ²	Total permits	103	97	91	83	82	78	72	72	68	66	61
	Fished permits	88	81	80	75	70	66	66	67	60	52	54
	% of permits fished	85%	84%	88%	90%	85%	85%	92%	93%	88%	79%	89%
	Total permit holders	102	96	88	81	80	76	70	70	66	64	59
Herring (CFEC) ²	Total permits	9	9	15	14	12	11	13	12	10	10	9
	Fished permits	3	1	3	6	6	5	4	4	4	6	4
	% of permits fished	33%	11%	20%	43%	50%	45%	31%	33%	40%	60%	44%
	Total permit holders	8	8	13	12	10	9	11	10	11	10	9

Table 4 cont'd. Permits and Permit Holders by Species, Wrangell: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	6	6	7	10	12	12	12	13	12	12	12
	Fished permits	5	6	7	10	12	12	11	11	11	11	12
	% of permits fished	83%	100%	100%	100%	100%	100%	92%	85%	92%	92%	100%
	Total permit holders	4	4	5	8	9	9	9	9	9	10	10
Groundfish (CFEC) ²	Total permits	48	50	48	48	44	45	27	24	29	20	21
	Fished permits	5	3	3	3	1	6	1	1	1	1	1
	% of permits fished	10%	6%	6%	6%	2%	13%	4%	4%	3%	5%	5%
	Total permit holders	34	35	31	33	28	26	15	13	13	9	11
Other Finfish (CFEC) ²	Total permits	3	2	1	1	1	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	3	2	1	1	1	1	0	0	0	0	0
Salmon (CFEC) ²	Total permits	212	206	205	204	215	218	218	223	224	223	223
	Fished permits	102	96	79	91	97	111	111	122	127	121	124
	% of permits fished	48%	47%	39%	45%	45%	51%	51%	55%	57%	54%	56%
	Total permit holders	194	193	187	192	201	201	200	205	205	202	199
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>576</i>	<i>567</i>	<i>552</i>	<i>535</i>	<i>547</i>	<i>536</i>	<i>507</i>	<i>506</i>	<i>501</i>	<i>486</i>	<i>481</i>
	<i>Fished permits</i>	<i>323</i>	<i>288</i>	<i>274</i>	<i>288</i>	<i>288</i>	<i>295</i>	<i>274</i>	<i>284</i>	<i>281</i>	<i>265</i>	<i>263</i>
	<i>% of permits fished</i>	<i>56%</i>	<i>51%</i>	<i>50%</i>	<i>54%</i>	<i>53%</i>	<i>55%</i>	<i>54%</i>	<i>56%</i>	<i>56%</i>	<i>55%</i>	<i>55%</i>
	<i>Permit holders</i>	<i>284</i>	<i>287</i>	<i>285</i>	<i>286</i>	<i>293</i>	<i>295</i>	<i>293</i>	<i>291</i>	<i>289</i>	<i>286</i>	<i>280</i>

¹National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Wrangell: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Wrangell ²	Total Net Pounds Landed in Wrangell ^{2,5}	Total Ex-Vessel Value of Landings in Wrangell ^{2,5}
2000	234	40	3	242	250	229	5,213,844	\$5,657,680
2001	208	45	3	230	235	273	9,902,183	\$7,072,333
2002	194	48	3	238	231	246	11,008,663	\$7,780,164
2003	182	43	3	224	213	206	10,454,786	\$6,782,646
2004	195	41	3	230	221	285	10,929,078	\$9,566,562
2005	200	43	3	217	202	332	14,290,750	\$10,320,553
2006	210	53	3	204	199	353	11,349,051	\$13,632,936
2007	239	53	3	208	204	337	10,287,307	\$14,341,954
2008	232	40	3	210	201	291	4,666,567	\$10,740,906
2009	225	43	3	219	223	257	5,239,575	\$7,585,185
2010	220	37	3	207	212	267	4,931,863	\$9,170,077

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Wrangell: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	104	5,694,096	786,869
2001	102	5,678,137	820,489
2002	95	5,685,766	799,597
2003	93	5,632,357	792,167
2004	87	5,230,332	900,714
2005	79	5,094,905	911,014
2006	77	5,117,377	887,582
2007	75	5,160,704	736,728
2008	71	5,121,319	549,576
2009	73	5,105,148	449,572
2010	69	5,778,992	479,945

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Wrangell: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	3	481,811	57,155
2001	4	655,590	73,525
2002	4	655,590	70,246
2003	8	974,076	115,610
2004	8	974,076	122,434
2005	8	974,076	115,941
2006	8	1,156,661	135,738
2007	8	1,156,661	129,955
2008	9	1,089,913	117,000
2009	9	1,139,173	104,290
2010	9	1,501,025	131,150

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Wrangell: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Wrangell: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	74,385	--	60,108	--	--	--	--	--	--	--
Other Shellfish	453,157	245,388	276,452	274,190	343,448	496,535	452,504	167,994	176,277	188,020	156,279
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	2,693,324	7,411,226	6,521,223	8,003,426	7,512,325	10,974,114	7,902,986	6,908,853	1,922,538	3,306,527	2,808,096
<i>Total²</i>	<i>3,146,481</i>	<i>7,730,999</i>	<i>6,797,675</i>	<i>8,337,724</i>	<i>7,855,773</i>	<i>11,470,649</i>	<i>8,355,490</i>	<i>7,076,847</i>	<i>2,098,815</i>	<i>3,494,547</i>	<i>2,964,375</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	\$46,506	--	\$74,792	--	--	--	--	--	--	--
Other Shellfish	\$839,719	\$524,057	\$544,080	\$552,472	\$751,012	\$790,196	\$944,328	\$492,721	\$448,580	\$502,694	\$342,751
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$906,642	\$1,993,080	\$945,154	\$1,295,479	\$2,129,398	\$3,583,453	\$4,533,201	\$3,832,462	\$2,322,842	\$2,480,502	\$2,711,883
<i>Total²</i>	<i>\$1,746,360</i>	<i>\$2,563,643</i>	<i>\$1,489,234</i>	<i>\$1,922,744</i>	<i>\$2,880,410</i>	<i>\$4,373,650</i>	<i>\$5,477,529</i>	<i>\$4,325,183</i>	<i>\$2,771,422</i>	<i>\$2,983,196</i>	<i>\$3,054,634</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Wrangell Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	539,023	878,061	1,788,183	905,292	1,040,510	853,792	854,294	1,137,417	1,026,334	667,299	868,987
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	761,277	780,007	807,943	821,058	919,226	794,082	847,148	736,048	523,603	461,306	442,274
Herring	78,488	--	--	450,550	--	376,344	--	--	332,765	--	--
Other Groundfish	109,875	51,256	75,785	61,611	58,230	63,300	57,489	64,358	47,646	42,745	50,993
Other Shellfish	1,087,125	992,696	867,587	731,562	865,514	720,002	359,245	159,711	210,811	249,926	183,326
Pacific Cod	--	--	--	--	--	27,006	2,777	1,103	7,597	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	91,351	119,556	82,787	143,691	131,113	128,394	192,947	120,878	114,028	100,656
Salmon	5,907,387	8,051,154	5,420,653	7,612,454	7,055,569	9,318,810	6,816,469	7,782,980	4,103,191	6,411,658	6,386,199
<i>Total²</i>	<i>8,483,175</i>	<i>10,844,525</i>	<i>9,079,707</i>	<i>10,665,314</i>	<i>10,082,740</i>	<i>12,284,449</i>	<i>9,065,816</i>	<i>10,074,564</i>	<i>6,372,825</i>	<i>7,946,962</i>	<i>8,032,435</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$967,982	\$1,724,116	\$2,123,653	\$1,443,278	\$1,590,144	\$1,199,606	\$1,339,188	\$2,540,793	\$2,485,128	\$1,334,444	\$1,756,688
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$2,044,744	\$1,700,483	\$1,813,310	\$2,402,038	\$2,776,537	\$2,475,786	\$3,229,447	\$3,274,993	\$2,294,949	\$1,428,689	\$1,992,209
Herring	\$25,014	--	--	\$186,290	--	\$97,384	--	--	\$130,822	--	--
Other Groundfish	\$96,255	\$32,101	\$80,662	\$67,518	\$63,106	\$77,900	\$81,037	\$83,762	\$40,728	\$36,890	\$43,597
Other Shellfish	\$1,320,850	\$788,679	\$848,317	\$854,668	\$934,473	\$916,129	\$778,381	\$468,774	\$512,998	\$641,037	\$434,606
Pacific Cod	--	--	--	--	--	\$13,027	\$835	\$509	\$3,200	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	\$237,809	\$369,414	\$261,418	\$379,045	\$386,537	\$424,003	\$512,172	\$395,063	\$384,290	\$443,644
Salmon	\$2,224,368	\$2,572,555	\$1,607,586	\$2,219,353	\$3,204,019	\$4,065,791	\$4,768,101	\$4,417,659	\$4,252,990	\$3,966,347	\$5,107,353
<i>Total²</i>	<i>\$6,679,213</i>	<i>\$7,055,742</i>	<i>\$6,842,942</i>	<i>\$7,434,562</i>	<i>\$8,947,325</i>	<i>\$9,232,161</i>	<i>\$10,620,991</i>	<i>\$11,298,662</i>	<i>\$10,115,878</i>	<i>\$7,791,696</i>	<i>\$9,778,097</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Sportfishing is an important part of Wrangell's tourism economy as well as a source of recreation for locals. There are many guide businesses and lodges operated by residents which offer a wide range of services. Locally operated charter fishing businesses include Alaska Charters & Adventures and Summit Charters.¹⁷⁸⁹ Wrangell sponsors an annual King Salmon Derby which runs from mid-May to mid-June.¹⁷⁹⁰

In a survey conducted by the AFSC in 2011, community leaders reported that recreational anglers fish using private boats owned by local residents and non-residents. In addition, shore-based fishing is done by both local residents and non-residents. Local private anglers target all five species of Pacific salmon, halibut, rockfish, crab, sablefish, shrimp, and clams.

In 2010, there were 6 registered sport fish guide businesses active and 13 registered sport fish guides, compared to 8 and 21 in 2000, respectively. Also in that year, 943 sportfishing licenses were sold to residents, compared to 1,115 in 2000. Finally, 625 sportfishing licenses were sold within the community, compared to 432 in 2000.

Wrangell is located in the Kake/Petersburg/Wrangell/Stikine ADF&G Harvest Survey Area which includes all waters and drainages from Ernest Sound to Cape Fanshaw, including Wrangell, Etolin, Zarembo, Mitkof, Kupreanof, Kuiu, and Coronation islands, and Ernest Sound. In 2010, there were a total of 39,709 saltwater and 7,313 freshwater angler days fished, compared to 42,768 and 10,532 in 2000, respectively. In that year, non-Alaskan residents accounted for 53.6% of saltwater angler days fished and 45.9% freshwater angler days fished, compared to 31.2% and 41.2% in 2000, respectively. According to ADF&G Harvest Survey data, private anglers based in Wrangell target all five species of Pacific salmon, rainbow and cutthroat trout, Dolly Varden char, Pacific halibut, rockfish, lingcod, Pacific cod, shark, smelt, Dungeness and Tanner crab, shrimp, hardshell clams, and other shellfish.¹⁷⁹¹ According to 2010 charter logbooks reported to ADF&G, locally operated charter vessels fished for and kept 90 king salmon, 143 coho salmon, 232 halibut, 5 lingcod, 54 rockfish, 1 sablefish, and 11 unidentified salmon.¹⁷⁹² Information regarding sportfishing trends can be found in Table 11.

¹⁷⁸⁹ Wrangell Chamber of Commerce (n.d.). *Wrangell Chamber of Commerce*. Retrieved May 15, 2012 from: <http://www.wrangellchamber.org/>.

¹⁷⁹⁰ Southeast Alaska Tourism Council (n.d.). *Sportfishing*. Retrieved May 15, 2012 from: <http://www.alaskainfo.org/content/sportfishing-wrangell>.

¹⁷⁹¹ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁷⁹² Ibid.

Table 11. Sport Fishing Trends, Wrangell: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Wrangell ²
2000	8	21	1,115	432
2001	9	20	1,069	440
2002	6	20	1,070	456
2003	9	22	979	462
2004	7	24	981	537
2005	8	19	943	758
2006	11	17	923	702
2007	9	13	921	594
2008	10	15	912	604
2009	8	11	956	575
2010	6	13	943	625

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	13,338	29,430	4,343	6,189
2001	19,144	12,469	4,831	5,255
2002	13,737	23,403	3,468	4,628
2003	12,401	13,077	3,380	7,584
2004	21,412	15,646	4,813	5,848
2005	17,196	15,351	3,835	3,465
2006	20,822	20,572	4,578	3,548
2007	19,957	19,407	4,176	3,226
2008	23,754	16,530	3,043	5,945
2009	19,188	26,448	2,564	6,071
2010	21,290	18,419	3,358	3,955

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence is an important way of life for many residents of Wrangell. In a survey conducted by the AFSC in 2011, community leaders reported that the three most important subsistence species harvested locally were salmon, halibut, and crab. Residents of Wrangell are dependent on salmon stocks in Salmon Bay on Prince of Wales Island, Crystal Creek, Thoms Creek, Warl West Cove, Mill Creek, and the Stikine River.¹⁷⁹³ In 2004, the U.S. and Canada negotiated a modified Pacific salmon treaty that allowed for a U.S. subsistence sockeye salmon fishery on the Stikine River. Permitted subsistence gear includes gaffs, spears, beach seines, dip nets, drift gillnets, and cast nets.¹⁷⁹⁴ According to the ADF&G *Community Subsistence Information System*,¹⁷⁹⁵ residents harvested or used non-salmon/halibut species including abalone, chitons, clams, Dungeness crab, king crab, octopus, scallops, sea cucumber, sea urchin, Tanner crab, harbor seal, cod, Dolly Varden, eulachon, flounder, herring, and rockfish.

Subsistence data is limited and no information is available regarding household participation in subsistence activities (Table 12). Of the species listed by ADF&G in Table 13, sockeye salmon are harvest most often. In 2008, residents reported harvesting 594 total salmon, compared to 2,455 in 2000. This sharp drop can be attributed to a reduction in the number of reported sockeye salmon harvests in those years. Reported salmon harvests peaked in 2002 at 3,120 fish.

In 2010, 476 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 466 in 2003. In that year, an estimated 35,208 pounds of halibut were harvested on 287 SHARC, compared to an estimated 33,006 pounds harvested on 223 SHARC cards in 2003. Subsistence halibut harvesting peaked in 2004 at an estimated 57,978 pound harvested on 286 SHARC cards. There was a significant declined in estimated halibut harvests in 2010, compared to 2009.

Data regarding marine mammal subsistence activity is somewhat limited. In 2010, an estimated 16 sea otters were harvested, compared to an estimated six in 2000. In 200, 33 harbor seals (2,800 pounds) were harvested, compared to an estimated 29 (2,336) in 2000. Information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that current challenges facing Wrangell's fishing economy included a lack of waterfront space to expand marine and fishing industries, issues related to permitting, Individual Fishing Quota (IFQ) reduction for halibut, and the high cost of fuel. Effects seen as a result of fisheries policies or management actions include IFQ reductions and the elimination of the King salmon gillnet fishery in front of town.

¹⁷⁹³ Fall, J.A., et al. (2001). *Alaska Subsistence Fisheries 2001 Annual Report*. Retrieved May 15, 2012 from: <http://www.arlis.org/docs/vol1/A/51457095etc/51457095-2001tp.pdf>.

¹⁷⁹⁴ Fall, J.A. et al. (2007). *Alaska Subsistence Fisheries 2007 Annual Report*. Retrieved May 15, 2012 from: <http://www.subsistence.ADFG.state.ak.us/techpap/TP346.pdf>.

¹⁷⁹⁵ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Wrangell: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Wrangell: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	261	241	96	80	20	56	2,203	n/a	n/a
2001	222	214	166	166	6	74	1,412	n/a	n/a
2002	223	194	272	200	22	62	2,564	n/a	n/a
2003	202	186	118	149	n/a	30	1,316	n/a	n/a
2004	103	99	33	165	5	46	1,053	n/a	n/a
2005	98	95	27	106	11	319	582	n/a	n/a
2006	80	73	19	105	n/a	35	615	n/a	n/a
2007	83	65	39	80	21	85	411	n/a	n/a
2008	83	76	16	84	22	42	430	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Wrangell: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	466	223	33,006
2004	530	286	57,978
2005	530	228	36,433
2006	504	242	41,929
2007	533	261	40,589
2008	481	259	44,417
2009	530	287	46,668
2010	476	182	35,208

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Wrangell: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	6	n/a	n/a	n/a	29	n/a
2001	n/a	n/a	n/a	n/a	n/a	16	n/a
2002	n/a	n/a	n/a	n/a	n/a	20	n/a
2003	n/a	13	n/a	n/a	n/a	68	n/a
2004	n/a	n/a	n/a	n/a	n/a	33	n/a
2005	n/a	3	n/a	n/a	n/a	33	n/a
2006	n/a	7	n/a	n/a	n/a	33	n/a
2007	n/a	9	n/a	n/a	n/a	33	n/a
2008	n/a	8	n/a	n/a	n/a	33	n/a
2009	n/a	18	n/a	n/a	n/a	n/a	n/a
2010	n/a	16	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Yakutat (YACK-uh-tat)



People and Place

*Location*¹⁷⁹⁶

Yakutat is isolated among the lowlands along the Gulf of Alaska, 225 miles northwest of Juneau and 220 miles southeast of Cordova. It is at the mouth of Yakutat Bay, one of the few refuges for vessels along this stretch of coast. The Hubbard and Malaspina Glaciers are nearby. Its boundaries are the Canadian border to the north, Cape Suckling to the west, and Cape Fairweather to the east. Yakutat Borough is within and surrounded by the Tongass National Forests, Wrangell St-Elias National Park and Preserve, and Glacier Bay National Park and Preserve. The area encompasses 7,650.5 square miles of land and 1,808.8 square miles of water. Yakutat was incorporated as a city in 1948, but was dissolved and reorganized into its own borough in 1992.

*Demographic Profile*¹⁷⁹⁷

In 2010, there were 662 residents, ranking Yakutat 96th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 24.0%. Between 2000 and 2009, the population declined by 10.6% with an average annual growth rate of -0.98%, which was lower than the statewide average of 0.75% and indicative of variable population change. Information regarding population trends can be found in Table 1.

In a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were 628 permanent residents living in Yakutat in 2010, according to an April 2010 comprehensive plan. In addition, there were an estimated 200 seasonal or transient workers living in the community that year. On average, seasonal workers live in Yakutat from mid-May through mid-September. The population of Yakutat reaches its annual peak between July and September and is mostly driven by employment in fisheries sectors.

Yakutat's racial and ethnic composition is a mix of White, Tlingit, and Athabascan influences. In 2010, 42.4% of residents identified themselves as White, compared to 41.5% in 2000; 35.8% identified themselves as American Indian or Alaska Native, compared to 47.1% in 2000; 15.4% identified themselves as two or more races, compared to 9.0% in 2000; 4.1% identified themselves as Asian, compared to 1.5% in 2000; and 1.8% identified themselves as Native Hawaiian or Other Pacific Islander, compared to 0.9% in 2000. Residents who identified themselves as Black, African American, or some other race each made up less than one-percent of the population in 2010. Finally, 2.6% residents identified themselves as Hispanic or Latino in

¹⁷⁹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁹⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

2010, compared to 0.9% in 2000. Further information regarding Yakutat’s racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 2.39, compared to 2.90 in 1990 and 2.61 in 2000. In that year, there were 383 total housing units, compared to 189 in 1990 and 385 in 2000. Of the households surveyed in 2010, 40% were owner-occupied, compared to 41% in 2000; 31% were renter-occupied, compared to 27% in 2000; 12% were vacant, compared to 11% in 2000; and 18% were occupied seasonally, compared to 18% in 2000. In addition, 18 residents were living in group quarters in 2010, compared to 0 in 2000.

Table 1. Population in Yakutat from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	534	-
2000	680	-
2001	-	642
2002	-	664
2003	-	635
2004	-	621
2005	-	642
2006	-	634
2007	-	618
2008	-	590
2009	-	608
2010	662	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Yakutat: 2000-2010 (U.S. Census).

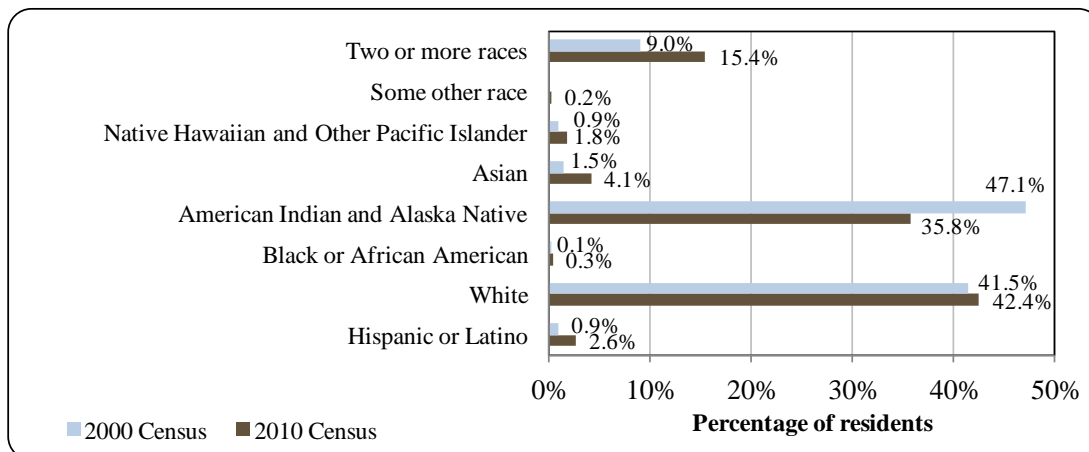
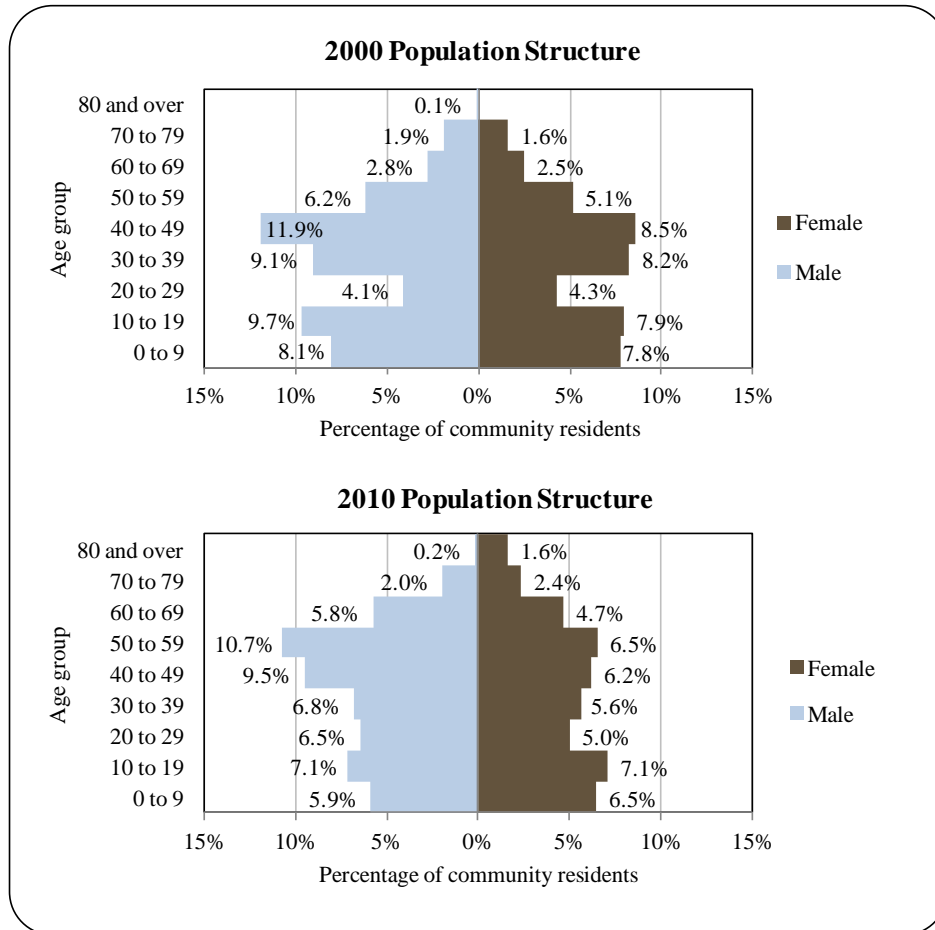


Figure 2. Population Age Structure in Yakutat Based on the 2000 and 2010 U.S. Decennial Census.



Gender distribution in 2010 was somewhat skewed at 54.4% male and 45.6% female. This was more skewed than the distribution statewide (52.0% male, 48.0% female) and similar to the distribution in 2000 (54.0% male, 46.0% female). The median age that year was 39.7 years, which was somewhat older than both the statewide median of 33.8 years and 2000 median of 35.2 years.

Compared with 2000, the population structure was more stationary in 2010. In addition, cohorts showed age transitions consistent with a stable population, meaning that as many cohorts retained their overall structure as they aged. In 2010, 26.6% of residents were under the age of 20, compared to 33.5% in 2000; 16.7% were over the age of 59, compared to 8.9% in 2000; 45.3% were between the ages of 30 and 59, compared to 49.0% in 2000; and 11.5% were between the ages of 20 and 29, compared to 8.4% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000, showing male biases along most age ranges. The greatest absolute gender difference occurred in the 50 to 59 range (10.7% male, 6.5% female), followed by the 40 to 49 (9.5% male, 6.2% female) and 80 and over range (1.6% female, 0.2% male). Of those three, the greatest relative difference occurred in the 80 and over range. Further information regarding Yakutat’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹⁷⁹⁸ estimated that 92.4% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 4.5% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 3.1% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 32.7% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 9.4% held an Associate's degree, compared to an estimated 8.0% of Alaskan residents overall; an estimated 13.6% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 4.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*¹⁷⁹⁹

Before European and Russian contact, the Alaska Native cultures in the area traded copper, furs, tanned skins with the Ahtna and Tutchone Athabaskans for shells, slaves, Haida canoes, and Tsimshian carvings. People in the Yakutat area later acted as middlemen, handling goods from Russian posts around Prince William Sound (PWS) and Sitka. Trading was also conducted with the Hudson's Bay Company and other fur traders.

Traditionally, there was a mix of Alaska Native cultures and languages in the area, including Athabaskan, Eyak, and inland and coastal Tlingit. It is not known when the first Native peoples moved to the Yakutat area, although archaeological and oral histories show evidence of a local group distinct from interior Athabaskans. Some of the earliest archeological sites at Ground Hog Bay and Hidden Falls (both located south of the Malaspina Forelands), have been assigned to the Paleomarine tradition, which dates from around 8,000 years ago. Early settlements in the area were scattered along the Gulf of Alaska (GOA) between Yakutat Bay and Dry Bay.

In the late 1700s Russian explorers first came to the area and recorded information about the Native people they met. Then, there were two distinct divisions: the Dry Bay people and the Yakutat Bay people. The Yakutat Bay people were a mix of Eyak and Atna Athabaskans from the Copper River Valley. Groups in the area were connected through trading, conflict, potlatches, and intermarriage.

According to oral histories, at least one contact between the people of Yakutat and Europeans occurred before the first recorded Russian contact. However, the first recorded contact occurred in 1783 when Potap Zaikov led a Russian exploring party into PWS and Controller Bay, with several hundred Aleuts. In 1793, the Russians sent a party of Aleut otter hunters to Yakutat and in 1796, the Russian Fort *Nova Rossiysk* was built between the Ankau Lagoons and the GOA coast. In 1800, a second post was built around Monti Bay.

The Russian fort at Yakutat was never a success. During the first winter of occupation, thirteen hunters and seven settlers (not including women and children) died of scurvy.

¹⁷⁹⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷⁹⁹ City of Yakutat & Sheinberg Associates (2010). *City and Borough of Yakutat Comprehensive Plan*. Retrieved May 17, 2012 from: <http://www.yakutatak.govoffice2.com/vertical/sites/%7B6349CA29-2633-4DA2-A860-125A317CCB51%7D/uploads/%7B426BE8EA-3A9F-4576-BC57-1533E8A87139%7D.PDF>.

Conditions were terrible and relations with the local Native people were tense. Grievances included the failure to pay for occupied land and the closure of a stream between the Ankau Lagoons and Summit Lake, which cut off the local fish supply. There also other assaults on the local Native population including child enslavement under the guise of education, and the taking of local Indian women. In response to these grievances, the fort was overrun in 1805 and all but a few of the occupants were killed.

For many years following the fall of Nova Rossiysk, few Europeans traveled to Yakutat. A major smallpox epidemic that hit Yakutat between 1836 and 1839 went largely unnoticed by the outside world. An 1861 Russian-American Company census in the Yakutat area counted 163 females, 168 males, and 49 slaves.

The Alaska purchase in 1867 produced no immediate change in Yakutat. The 1880 census revealed 300 Native Alaskans living in the area, but no Europeans. American traders first began to appear shortly after the 1880 census, and were followed by gold prospectors. The Alaska Commercial Company opened a store in 1884. Between 1883 and 1886, gold miners worked the black sands of Khantaak Island and the ocean beach.

The Swedish Free Mission Church came to Yakutat in 1887 and began work on a church, school, and sawmill. The mission had a strong influence on residents in the area, and attracted many to what is presently known as the “Old Village” site. This influence included banning fishing on Sundays, encouraging households to follow the western-style nuclear family, and discouraging the use of traditional language and practices.

Following the influx of missionaries and miners, the logging, fishing, and fish processing industries soon established themselves in Yakutat. In the early 1900s, F.S. Stimson of Seattle incorporated the Stimson Lumber Company and the Yakutat and Southern Railway for the purposes of operating a salmon cannery, sawmill, railroad, and general store. The railroad was instrumental in building the cannery, wharves, and other facilities.

For a few years in the early 1900s, as many as 250 prospectors and gold miners lived at Cape Yakataga. A 1915 Engineering and Mining Journal states that in 1914, over \$14.5 million in gold was produced in the region.

In 1940, construction of a base and airfield was built for a garrison of approximately 10,000 during its peak. In the 1950s, a Distant Early Warning White Alice communications site was built at Cape Yakataga with barracks, bridges, and an airstrip. The base in Yakutat was closed following WWII.

Yakutat was originally incorporated as a 1st class city in 1948. In 1970, cannery operators went bankrupt and the plant closed. Until the community-operated cold storage plant and associated dock were completed in 1971, welfare was a major source of cash income for many Yakutat fishermen. The community-owned cold storage operation continued to run until the processing and storage building burned in 1977.

The passage of the Alaska Native Claims Settlement Act (ANCSA) in 1971 had a major impact on Yakutat. Yak-Tat Kwaan, Inc. selected 23,040 acres of land in the immediate Yakutat area. The regional ANCSA chartered corporation, Sealaska Inc., owns subsurface rights to Yak-Tat Kwaan lands. In 1993, the Yakutat Tlingit Tribe was officially recognized by the U.S. Bureau of Indian Affairs as a tribal government.

Historic sites in the area include old Tlingit village sites, a Tlingit fort site, Tlingit hunting camps, the cannery railroad, old navel guns, a shaman grave, cannery sites, ship yards, an old fox farm, a White Alice military communications site, and a shipwreck site. The New Russia settlement archaeological site is listed on the National Register of Historic Places

(NRHP) and is designated as National Historic Landmark. The Alaska Heritage Resource Survey lists 48 sites in the Yakutat-to-Dry Bay vicinity.

Natural Resources and Environment

Yakutat has a maritime climate characterized by relatively mild, often rainy weather. Summer temperatures range from 42 to 60 °F (6 to 16 °C) and winter temperatures from 17 to 39 °F (-8 to 4 °C). Yakutat receives some of the heaviest precipitation in the state, averaging 132 inches of precipitation and 219 inches of snowfall each year.¹⁸⁰⁰

The Yakutat area is environmentally diverse. Habitats range from glaciers, and mountain ranges to floodplains, estuaries, wetlands, tidelands, islands, lagoons, rivers, and lakes. Between the Saint Elias Mountains and the GOA there are gently sloping outwash plains known as the Yakutat, Malaspina, and Yakataga Forelands.

The mountainous landscape was shaped by tectonic collision, and is constantly being modified by glaciations, erosion, deposition, and wave and wind action. The Hubbard Glacier, located in Yakutat Bay, has a tidewater terminus over six miles wide and 92 miles long. Tectonic events and isostatic rebound cause by glacial recession has resulted in uplifting and depression of the land surrounding Yakutat. As of 1983, the land in the Yakutat area had been emerging at an average rate of 0.21 inches per year. Lowland areas along the western shore of Yakutat Bay contain glacier moraine deposits of unconsolidated sand, gravel, silt, and clay.¹⁸⁰¹

Much of the vegetation in the area is classified as muskeg or bog environments. Stands of Sitka spruce and Western Hemlock are scattered throughout the area with some old growth spruce and hemlock stands. Most old growth forest stands west of the Situk River have been heavily logged.¹⁸⁰² The Alaska Department of Fish and Game (ADF&G) has identified over 90 anadromous fish streams in the Borough, supporting all five species of Pacific salmon.¹⁸⁰³ Other freshwater species include sculpins, suckers, northern pike, sticklebacks, burbot, lampreys, cutthroat and rainbow trout, whitefish, Dolly Varden, lake trout, and Arctic grayling.¹⁸⁰⁴ Additional wildlife includes moose, bear, deer, mountain goat, wolf, wolverine, mink otter, marten, fox, ermine, coyote, weasel, and lynx. Marine mammals in the area include seals, sea lions, dolphins, porpoises, and whales (minke, humpback, gray, and orca). More than 200 species of birds can be found throughout the Borough boundaries.¹⁸⁰⁵

Mineral extraction was active in the area until the end of the 1800s when there were sporadic attempts to recover gold from local beaches. According to the U.S. Geological Survey (USGS), the area directly along and adjacent to the GOA coastline between Yakutat Bay and the Borough boundary to the south is considered a significant metalliferous placer district. The USGS considers the coast a placer titanium and placer platinum element group district. In 2008 and 2009 there was increased mineral exploration in the Borough. Oklahoma City based Geohedral staked mining claims on almost 60,000 acres in the Yakutat Forelands. In 2009, the

¹⁸⁰⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸⁰¹ See footnote 1799.

¹⁸⁰² City of Yakutat & Sheinberg Associates (2006). *City and Borough of Yakutat Comprehensive Development Plan*. Retrieved May 17, 2012 from <http://www.commerce.state.ak.us/dca/plans/Yakutat-CP-2006.pdf>.

¹⁸⁰³ See footnote 1799.

¹⁸⁰⁴ National Park Service (n.d.). *Freshwater Fishes*. Retrieved May 17, 2012 from <http://www.nps.gov/wrst/naturescience/upload/Fish%20checklist.pdf>.

¹⁸⁰⁵ See footnote 1802.

company announced that exploration had revealed an estimated 35 million ounce gold deposit. In addition to gold, magnetite, ilmenite, garnet, and zircon are widely distributed throughout the borough. Gravel extraction is also a potential industry in Yakutat. Yak-Tat Kwaan and Sealaska have both expressed interest in the development and marketing of sand and gravel resources.¹⁸⁰⁶

Commercial timber harvests began in the Borough in the late 1960s, with major timber sales taking place at White River, on Chugach Alaska Corporation land in east Icy Bay, on Alaska Mental Health Trust lands between the Cape and west Icy Bay, and in various locations near the Yakutat town site. As of 2010, there was very little timber harvesting taking place or being planned due to poor timber markets. The Icy Bay logging clamp is closed, as are many of the logging roads in the area.¹⁸⁰⁷

Since the Katalla oil field was discovered near the Copper River in the early 1900s, petroleum exploration has been popular in the area. There were two competitive offshore lease sales between 1960 and 1967 in Yakutat Bay, as well as a number of state and federal oil and gas leases in the 1950s and 1960s on the Yakutat Forelands. The area along the coast and offshore is considered a major resource area for oil and gas. As of 2010, oil and gas reserves in the area were not considered economically viable, although oil seeps and gas releases continue to be observed.¹⁸⁰⁸

Potential environmental hazards include earthquakes, ground instability, tsunamis, seafloor instability, glacial advance, glacial outburst flooding, coastal erosion, and extreme weather events. The Hubbard Glacier at the northern end of Yakutat Bay has been advancing rapidly since 1971 and closed off the Russell Fjord in 1986 and 2003. In 2003, meltwater and mountain streams were filling the Russell Fjord at a rate of nearly 10 inches per day. The ice dam eventually burst causing a deluge out of Disenchantment Bay, through Yakutat Bay and out to sea. There is concern that future outbursts may threaten fish habitat and airport facilities.¹⁸⁰⁹

According to the Alaska Department of Environmental Conservation, there were no notable contaminated sites or active cleanup projects within the Yakutat Borough as of May 17, 2012.¹⁸¹⁰

Current Economy¹⁸¹¹

Yakutat's economy is dependent on fishing, fish processing, and government. North Pacific Processors is the major private employer. Recreational fishing opportunities, both saltwater and freshwater, are world-class. Most residents depend on subsistence hunting and fishing. Salmon, trout, shellfish, deer, moose, bear, and goats are harvested.¹⁸¹² In a survey conducted by the AFSC in 2011, community leaders reported that Yakutat's economy is reliant

¹⁸⁰⁶ City of Yakutat & Sheinberg Associates (2010). *City and Borough of Yakutat Comprehensive Plan*. Retrieved May 17, 2012 from: <http://www.yakutatak.govoffice2.com/vertical/sites/%7B6349CA29-2633-4DA2-A860-125A317CCB51%7D/uploads/%7B426BE8EA-3A9F-4576-BC57-1533E8A87139%7D.PDF>.

¹⁸⁰⁷ Ibid.

¹⁸⁰⁸ Ibid.

¹⁸⁰⁹ Ibid.

¹⁸¹⁰ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved May 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm#Southeast>.

¹⁸¹¹ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁸¹² See footnote 1800.

on fishing, sportfishing, and hunting. Top employers¹⁸¹³ in 2010 included Yakutat Tlingit Tribe, City and Borough of Yakutat, Yakutat School District, Yakutat Seafoods LLC, Mallott's General Store Inc., State of Alaska, AK Commercial Co., Glacier Bear Lodge Inc., Yakutat Tlingit Tribe Non-profit, and Alaska Airlines Inc. Yakutat's economy is less diversified than the state as a whole. Strong employment sectors include government, manufacturing, commercial fishing, and seafood processing. Yakutat has significantly fewer jobs in professional, education and health service sectors than the statewide average. Employment remains largely seasonal in nature. In 2008, the number of jobs almost doubled in the summer.¹⁸¹⁴

Tourism is important to Yakutat, and the Borough offers a wide variety of recreational and tourism opportunities including rafting trips, sportfishing, surfing, and cruise trips. There are many seasonally operated tourism support businesses in Yakutat including flying services, restaurants, fuel sales, and retail stores. In 2010, there were 41 businesses within the Yakutat Borough that provided lodging of some type. Of those businesses, 27 were located in the community and 14 elsewhere in the Borough. Cruise ships travel along the coast and into Yakutat and Disenchantment Bay and occasionally Icy Bay. However, the number of cruise ships visiting the area dropped from 41 in 2008 to 16 in 2010.¹⁸¹⁵

Large scale mineral and timber industries have had relatively little interest in Yakutat because of depressed market conditions. However, these industries have the potential to become more dominant if market conditions or technology improves. Various placer mineral deposits on Yakutat beaches provide opportunities for small-scale prospecting. In addition, small-scale timber harvesting has wide local support.¹⁸¹⁶

According to the 2006-2010 ACS,¹⁸¹⁷ the estimated per capita income was \$28,782 and the estimated median household income was \$72,813, compared to \$21,330 and \$47,054 in 2000, respectively. However, after adjusting for inflation by converting 2000 values to 2010 dollars,¹⁸¹⁸ the real per capita income (\$28,049) and real median household income (\$61,875) indicate that increases in both individual and household earnings. In 2010, Yakutat ranked 69th of 305 communities from which per capita income was estimated, and 39th of 299 communities from which median household income was estimated.

However, Yakutat's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁸¹⁹ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, there was \$7.68 million in wages earned by

¹⁸¹³ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁸¹⁴ See footnote 1806.

¹⁸¹⁵ Ibid.

¹⁸¹⁶ Ibid.

¹⁸¹⁷ U.S. Census Bureau (n.d.). Profile of selected social, economic and housing characteristics of all places within Alaska. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁸¹⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁸¹⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Yakutat residents in 2010,¹⁸²⁰ resulting in a per capita income of \$11,598, when compared against 2010 Census population figures.¹⁸²¹ Overall, comparative differences between ACS and ALARI estimates indicate a significantly lower per capita income than was reported in both 2000 and 2010. In addition, it should be noted that Yakutat was not considered “distressed” by the Denali Commission meaning that less than 30% of residents 16 years old and over earned less than \$16,120 in 2010.¹⁸²²

According to 2006-2010 ACS estimates,¹⁸²³ 75.4% of residents aged 16 and older were part of the civilian labor force. Between 2006 and 2010, unemployment was estimated at 2.8%, compared to an estimated 5.9% statewide; and an estimated 4.3% of residents lived below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. Of those employed in 2010, an estimated 41.2% worked in the private sector, an estimated 47.4% worked in the public sector, and an estimated 11.4% were self-employed.

By industry, most (27.8%) employed residents were estimated to work in public administration sectors in 2010; followed by education services, health care, and social assistance sectors (14.7%); and agriculture, forestry, fishing, hunting, and mining sectors (11.8%) (Figure 3). By occupation type, most (36.3%) employed residents were estimated to hold management or professional positions; followed by sales or office positions (22.2%); service positions (16.7%); natural resources, construction, or maintenance positions (14.7%); and production, transportation, or material moving positions (10.1%) (Figure 4). Overall, there was a significant drop in the proportion of residents estimated to be working in agriculture, forestry, fishing, hunting, and mining sectors; while there was a significant increase in the proportion of residents working in public administration sectors. This could be attributed to the closure of the Icy Bay logging camp.

By comparison, the ALARI database estimated that in 2010, most (40.2%) employed residents worked in local government sectors; followed by trade, transportation, and utilities sectors (18.1%); and leisure and hospitality sectors (14.3%). In that year, only an estimated 0.3% of residents worked in natural resources and mining sectors. However, this number may not accurately portray conditions since self-employed residents or residents who reported other professions as their principal employer may not have been represented in ALARI estimates. In addition, the seasonality of many fisheries sectors may have prevented the ACS from accurately representing the local fishing economy.

¹⁸²⁰ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁸²¹ See footnote 1813.

¹⁸²² Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

¹⁸²³ See footnote 1819.

Figure 3. Local Employment by Industry in 2000-2010, Yakutat (U.S. Census).

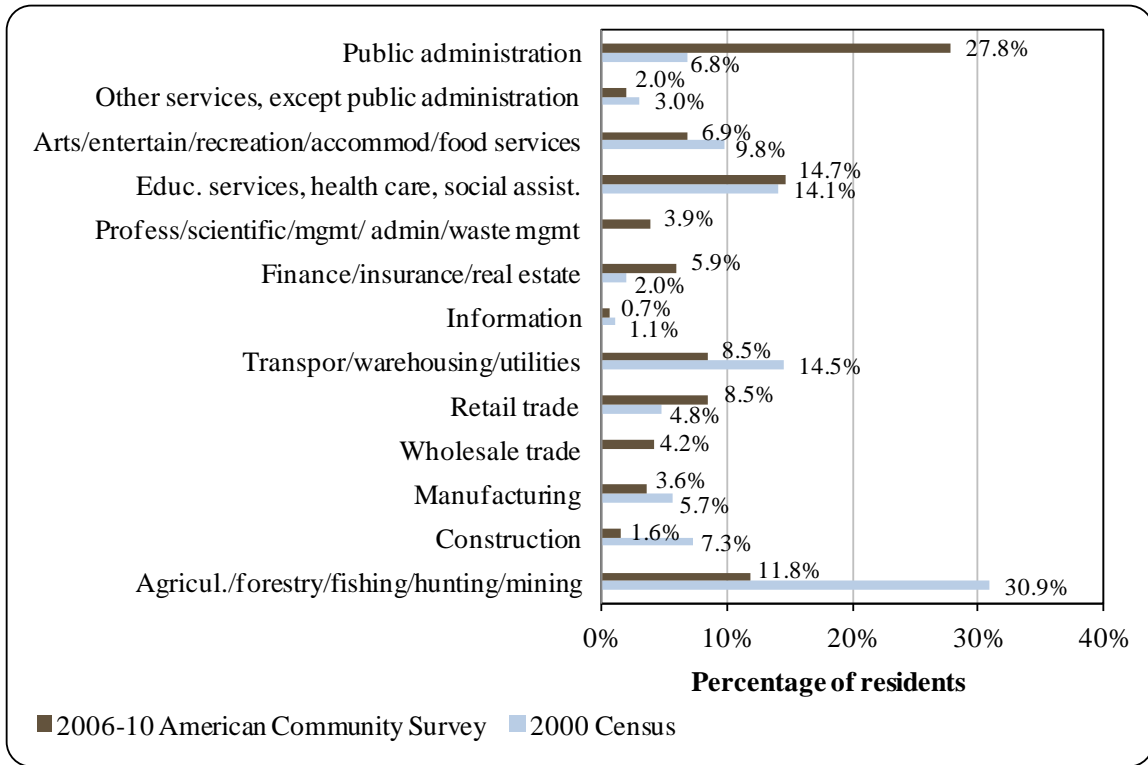
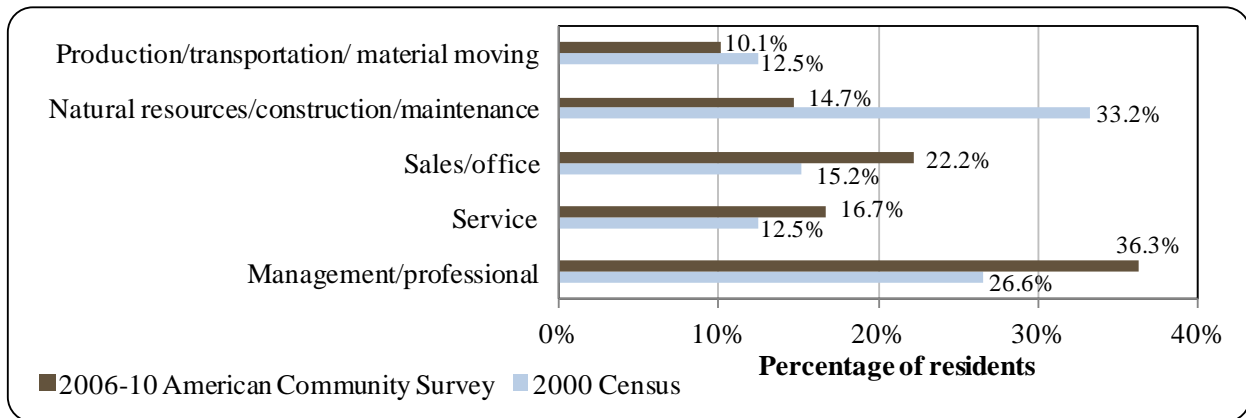


Figure 4. Local Employment by Occupation in 2000-2010, Yakutat (U.S. Census).



Governance

Yakutat is a City located within its own borough. In addition, there is a BIA recognized tribal council and Yak-Tat Kwaan Incorporated is the local ANCSA chartered Native village corporation. Sealaska Inc. is the regional ANCSA chartered Native corporation. There is an ADF&G office located in Yakutat. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Juneau, 225 miles to the southeast.

In 2010, Yakutat administered a 4% sales tax, 10.0 mills property tax, 1% raw fish tax, 8% accommodations and car rental tax, and 4% severance tax. Municipal revenue totals were taken from financial audits and report total governmental funds.¹⁸²⁴ When adjusted for inflation,¹⁸²⁵ total municipal revenues declined by 26.5% from \$3.90 million, to \$3.71 million. In 2010, general fund revenues accounted for 67.2% of total governmental funds. In that year, most (46.8%) general fund revenues were collected from local taxes, followed by state revenue sharing 28.6% and federal revenues (10.7%). National forest receipts accounted for 20.7% of total governmental funds, and fishery enhancement revenues accounted for 6.2%. Overall, sales taxes accounted for 16.9% of total revenues in 2010, compared to 14.9% in 2000. In addition, state allocated Community Revenue Sharing accounted for 11.2% of revenues that year, compared to less than one-percent from State Revenue Sharing in 2000.

State and federal fisheries-related grants awarded to Yakutat between 2000 and 2010 include: \$760,000 for design and implementation of a fuel dock with cruise ship platform; \$1.25 million for a multi-purpose dock; \$60,000 for salmon brand marketing; \$12,937 for a seafood processing facility; \$6,900 for an experimental tooth entanglement net fishery; \$2.46 million for a multi-purpose dock for fuel, fisheries, and gravel; and \$26,332 for a fish waste grinder. Further information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Yakutat from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$3,902,503	\$579,597	\$23,166	n/a
2001	\$4,746,671	\$630,269	\$22,366	n/a
2002	\$4,558,751	\$543,497	\$22,360	n/a
2003	\$4,319,312	\$559,038	\$22,441	\$26,332
2004	\$2,722,891	\$589,248	-	\$2,651,337
2005	\$2,890,305	\$705,495	-	n/a
2006	\$3,091,421	\$769,777	-	n/a
2007	\$3,376,792	\$810,983	-	n/a
2008	\$3,375,788	\$733,548	-	\$696,000
2009	\$7,709,605	\$673,143	\$414,098	\$1,205,000
2010	\$3,711,776	\$627,784	\$415,495	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁸²⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

¹⁸²⁵ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

*Connectivity and Transportation*¹⁸²⁶

Yakutat has no road access. The airport has daily commercial jet service to Juneau and Anchorage. There are also air taxis and float plane services to Yakutat. The state owns two jet-certified runways; one is concrete and 6,475-foot long by 150-foot wide, and the other is asphalt and 7,745-foot long by 150-foot wide. The airport is located three miles southeast of town, and a seaplane base is available one mile northwest. The U.S. Forest Service owns five airstrips in the vicinity, and the National Park Service operates one at East Alsek River. The Borough operates the state-owned boat harbor and the Ocean Cape Dock. The state ferry provides service to Yakutat. Yakutat's Monti Bay is the only sheltered deep water port in the Gulf of Alaska. Barges deliver goods monthly during the winter and more frequently in summer. Roundtrip airfare between Yakutat and Anchorage in August 2012 was \$325.¹⁸²⁷

Facilities

Water is derived from four wells and is treated and piped to all homes and schools in the community. Several wooden storage tanks provide pressure to the water system. Piped sewage receives primary treatment; a secondary treatment facility is nearing completion. A private firm collects refuse, and the Borough operates the unpermitted landfill. Electricity is provided by Yakutat Power, Inc., using four diesel-fueled generators. Taxi service is provided by Yakutat Taxi. Car rental service is provided by Situk Leasing. Visitor accommodations include Glacier Bear Lodge, Leonard's Landing Lodge & Cabins, Bayview Lodge, Red Roof Inn, Yakutat Lodge, Copperhouse, The Mooring Lodge, Moose Mansion, Blue Heron Inn B&B, Shirley's B&B, Skyview B&B, and Yakutat B&B. Public safety services are provided by Borough Police Department and local state troopers. Fire and rescue services are provided by Yakutat Volunteer Fire Department and Emergency Medical Service. Judicial services are provided by State Magistrate Borough Jail. Additional public facilities include a community hall, city hall, Alaska Native Brotherhood hall, senior services, gym, and school library. Communications services include local and long distance telephone, internet, local television, and radio services.¹⁸²⁸ In a survey conducted by the AFSC in 2011, community leaders reported that additional public services in Yakutat include a food bank and publicly-subsidized housing.

Yakutat supports extensive port and harbor facilities. The Multi-Purpose Dock was in the finishing stages of completion in 2010. Facilities include a fish market, gravel loading conveyor, and dockside fueling. The Cannery Dock, located at the head of Monti Bay, was reconstructed in 1984 by the City and Borough of Yakutat. The dock is used primarily by barges and commercial fishing vessels although it is occasionally used by small cruise ships and Alaska Marine Highway System (AMHS) ferries. Yak-Tat Kwaan (Arco) Dock is located 400 feet west of the Delta Western fuel dock on the south shore of Monti Bay. This dock was constructed to facilitate offshore petroleum exploration. As of 2010, it was not used consistently. The Cold Storage Dock located on the north shore of Monti Bay is used as an alternate dock for commercial fishing

¹⁸²⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸²⁷ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

¹⁸²⁸ See footnote 1826.

vessels and small cruise ships. Mean low water depth is in excess of 50 feet. The Log Transfer Facilities is located at the head of Sawmill Cove. This facility has shallow water and sandy-bottom access for barges. The Small Boat Harbor is located north of Monti Bay at the end of Mallott Ave. and is owned and operated by the City and Borough. The harbor is primarily used by smaller commercial fishing vessels. The harbor facilities consist of six main floats, a launch ramp, and a tidal grid. A seaplane float is located at the end of the central main float. As of 2010, upgrades were needed to provide more space and additional services.¹⁸²⁹

In the 2011 AFSC survey, community leaders reported that infrastructure projects completed between 2000 and 2010 included a barge landing area, construction of new dock space, improvements of existing dock space, and public safety improvement. Projects under development in 2010 included road system improvements, dockside fuel services, a vessel haul out facility, and an alternative energy project (biowaste). Future infrastructure projects include an U.S. Environmental Protection Service-certified vessel cleaning station, broadband internet access, and a new landfill. As of 2010, there was 146 feet of public dock space available for transient moorage and vessels up to 380 feet long could use moorage in Yakutat. Port facilities are capable of handling rescue vessels, cruise ships, ferries, fuel barges, and vessels carrying hazardous materials. Fisheries-related businesses and services available in Yakutat include fish processing, fishing gear sales, boat repair (electrical and welding), a tidal grid for small vessels (less than 60 tons), bait and tackle sales, commercial cold storage, fish lodges, fishing-related bookkeeping, sales of boat fuel and ice, fishing gear storage, and air taxi services. Residents typically travel to Juneau, Anchorage, or Sitka for services that are not available locally.

*Medical Services*¹⁸³⁰

The Yakutat Community Health Center provides basic and emergency health care. The facility is also Community Health Aid Program site. Long term and acute health services are available in Juneau and Anchorage.

*Educational Opportunities*¹⁸³¹

The Yakutat School provides preschool through 12th grade instruction. As of 2011, there were 119 students enrolled and 14 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial fishing in Yakutat is heavily dependent on salmon, halibut, sablefish, and shellfish. Yakutat is located in International Pacific Halibut Commission (IPHC) Regulatory Area 3A, the Eastern GOA Sablefish Regulatory District, and the Yakutat Salmon Fishery

¹⁸²⁹ City of Yakutat & Sheinberg Associates (2010). *City and Borough of Yakutat Comprehensive Plan*. Retrieved May 17, 2012 from: <http://www.yakutatak.govoffice2.com/vertical/sites/%7B6349CA29-2633-4DA2-A860-125A317CCB51%7D/uploads/%7B426BE8EA-3A9F-4576-BC57-1533E8A87139%7D.PDF>.

¹⁸³⁰ See footnote 1826.

¹⁸³¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Management Area, and is at the border of Federal Reporting Areas 640 and 650. Yakutat also has a history of mariculture; in the late 1980s there was at least one oyster farm, although it was soon closed due to logistical problems. In addition to employment in fisheries, in 2007, 16% of the community's average annual employment was directly related to seafood processing.¹⁸³²

Between 2000 and 2010, the greatest number of commercial fishery permits held by Yakutat residents were for salmon fisheries, and a majority of these permits were held for Yakutat-area set gillnet fisheries. Within the Yakutat Salmon Fishery Management Area, which extends between Cape Suckling and Cape Fairweather, set gillnet gear is the only permitted net gear, along with a power and hand-troll salmon fishery. Of the numerous salmon-producing river systems that empty into the Yakutat area, Situk-Ahrnklin Inlet is the site of the oldest and historically most productive fishery. It is located close to the community – about nine miles by road – and normally the greatest number of set gillnet permits are fished in this area (up to 100 permits each year). Sockeye salmon are the primary summer target, while coho salmon dominate the fall catch. The Tsiu River, which empties into the GOA further northwest toward Cordova, also provides a lucrative fishery for a smaller number of set gillnetters. Other Yakutat-area salmon rivers include the Asek, Akwe, Dangerous, Yatze, and Kaliak.^{1833,1834,1835}

Seven major crab species are targeted in Alaskan waters: red king crab, *Paralithodes camtschaticus*; blue king crab, *P. platypus*; golden king crab, *Lithodes aequispinus*; Tanner crab, *Chionoecetes bairdi*; snow crab, *C. opilio*; hair crab, *Erimacrus isenbeckii*; and Dungeness crab, *Cancer magister*. The history of crab fisheries extends back 1930, however substantial commercial harvests were not undertaken until the 1950s, when king crab fisheries were developed in the Bering Sea. The GOA supports commercial stocks of red, brown, and blue king crab as well as Tanner and hair crab. The GOA supports commercial stocks of red, brown, and blue king crab as well as Tanner and hair crab. GOA crab stocks are managed exclusively by the State of Alaska. GOA king and Tanner crab stocks are small and most are depressed.¹⁸³⁶

Commercial king crab fishing in Southeast Alaska started in 1960 when a small harvest occurred in the Petersburg/Wrangell area. From 1962 to 1968, harvests varied from 100,000 pounds to 2 million. In 1969, the number of fishery entrants rose from 19 permit holders to 39. Harvest effort in the Yakutat area has remained somewhat low and intermittent, with an average harvest of 3,000 pounds during a period of 21 seasons starting in 1972.¹⁸³⁷ The Yakutat Tanner crab fishery was closed as of 2012 due to low stock assessments.¹⁸³⁸

¹⁸³² See footnote 1829.

¹⁸³³ Woods, G.F. and N.L. Zeiser. (2013). *2013 Yakutat Set Gillnet Fishery Management Plan*. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report No. 1J13-08. Retrieved November 12, 2013 from <http://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2013.08.pdf>.

¹⁸³⁴ Alaska Department of Fish and Game. (2013). *Salmon Fishery Update: Southeast Alaska & Yakutat Commercial Fisheries*. Final Update: September 13, 2013. Retrieved November 12, 2013 from http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareasoutheast.salmonfishery_updates.

¹⁸³⁵ Personal communication from a Yakutat set gillnet fisher, November 7, 2013.

¹⁸³⁶ Woodby, D. et al. (2005). *Commercial Fisheries of Alaska*. Retrieved July 18, 2012 from: <http://www.sf.ADFG.state.ak.us/FedAidPDFs/sp05-09.pdf>.

¹⁸³⁷ Stratman, J.; Bishop, G.; Messmer, A.; and Siddon, C. (2011). *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat King Crab Fisheries*. Retrieved July 18, 2012 from: http://google.state.ak.us/search?q=+Yakutat+tanner+crab+fishery&site=DFG&client=DFG&proxystylesheet=DFG&sort=date%3AD%3AL%3Ad1&output=xml_no_dtd&ie=UTF-8&oe=UTF-8.

¹⁸³⁸ Stratman, J., G. Bishop, A. Messmer and C. Siddon (2011). *2012 Report to the Board of Fisheries on Southeast Alaska/Yakutat Tanner Crab Fisheries*. Retrieved July 18, 2012 from:

Sablefish are distributed throughout the GOA. The first sablefish fishery was established in Southeast Alaska in 1880 as a secondary target species, caught along with halibut. In 1958, Japanese longliners began harvesting sablefish within the GOA; and by the 1970s, Japanese, Russian, Korean, and Taiwanese longliners were fishing for sablefish and cod extensively.¹⁸³⁹

Yakutat is eligible for participation in the Community Quota Entity program and is represented by the Yakutat Community Holding Corporation. However, as of Fall 2013, the CQE non-profit had not yet acquired commercial halibut Individual Fishing Quota (IFQ), charter halibut permits, or non-trawl groundfish License Limitation Program permit for lease to eligible community members.¹⁸⁴⁰

The impetus for the CQE program followed the implementation of the halibut and sablefish Individual Fishing Quota (IFQ) program in 1995. The IFQ program restructured fixed gear halibut and sablefish fisheries into a catch share program which issued transferable quota shares that allocated and apportionment of the annual Total Allowable Catch to eligible vessels and processors. Although the IFQ program resulted in many benefits to fishermen, processors, and support businesses, and unintended consequence was that many quota holders in smaller Alaskan communities either transferred quota outside the community or moved out themselves. In addition, as quota became increasingly valuable, entry into halibut or sablefish fisheries became difficult. In many cases, it was more profitable for small-scale operators to sell or lease their quota rather than fish it due to low profit margins and high quota value. These factors lead decreased participation in communities traditionally dependent on the halibut or sablefish fisheries. To address this issue, the North Pacific Fishery Management Council implemented the CQE program in 2005. Under the program, eligible communities could form a non-profit corporation to purchase and manage quota share on their behalf.¹⁸⁴¹

In a survey conducted by the AFSC in 2011, community leaders reported that fluctuations in harvest levels, profitability, and employment are current challenges facing Yakutat's fishing-based economy. They also indicated that Yakutat participates in the fisheries management process in Alaska through a representative that participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process. In addition, Yakutat relies on regional organizations to provide information about fisheries management issues. Finally, the community participates through the Yakutat ADF&G Advisory Council.

Processing Plants

Captain's Glacier Fresh Salmon, which opened in Yakutat in 2004, specializes in fresh salmon which it buys from various commercial vessels and ships throughout the United States. The processor focuses on salmon, but keeps halibut permits active.¹⁸⁴²

Mystic Salmon is an independent, family owned and operated fish business in

http://google.state.ak.us/search?q+=Yakutat+tanner+crab+fishery&site=DFG&client=DFG&proxystylesheet=DFG&sort=date%3AD%3AL%3Ad1&output=xml_no_dtd&ie=UTF-8&oe=UTF-8.

¹⁸³⁹ See footnote 1836.

¹⁸⁴⁰ NOAA Fisheries. (2013). Community Quota and License Programs and Community Quota Entities. Retrieved October 30, 2013 from <http://alaskafisheries.noaa.gov/ram/cqp.htm>.

¹⁸⁴¹ North Pacific Fishery Management Council (2010). *Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program*. Retrieved October 23, 2012 from: <http://www.fakr.noaa.gov/npfmc/PDFdocuments/halibut/CQEREport210.pdf>

¹⁸⁴² This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

Yakutat.¹⁸⁴³ The plant began operations in 2003. The company catches and processes salmon to be sold fresh to restaurants and distributors around the United States. Chinook salmon are processed May-July and December-April, sockeye from June to mid-August, and coho from August to mid-October.¹⁸⁴⁴ From June to September, the plant employs two to five people.¹⁸⁴⁵

Yakutat Seafoods LLC is located in Yakutat and is a subsidiary of E&E Foods. The plant began operations in 2005.¹⁸⁴⁶ E&E processes the following products in or near the Southeast Alaska region: sockeye salmon (May-September), chum salmon (June-November), King salmon (year-round), coho salmon (June-October), pink salmon (June-September), salmon roe (May-November), sablefish (March-November), lingcod (April-June), Pacific cod (January-May), Dungeness crab (June to mid-December), Tanner crab (January-March), and halibut (March to mid-November).¹⁸⁴⁷ The plant employs between 20 and 80 workers each year.¹⁸⁴⁸

Fisheries-Related Revenue

In 2010, Yakutat received fisheries-related revenue from raw fish taxes, Shared Fisheries Business Taxes, and Fisheries Resource Landing Taxes. In that year, fisheries-related revenues totaled \$276,890, most of which came from Shared Fisheries Business Taxes. Information on revenues from harbor usage and port/dock usage fees are not available for 2009 or 2010, although they did make up a significant portion of fisheries-related revenues in prior years. However, in a survey conducted by the AFSC in 2011, community leaders reported that annual revenue collected by public moorage fees was \$250. It is unclear whether that figure reflects an annual fee per slip. Fisheries-related revenues peaked in 2006 at \$3.01 million, which was significantly greater than all other years between 2000 and 2010. Fisheries-related taxes and fees are put towards public services including schools. Taxes on gross salmon sales are put towards salmon habitat restoration projects. It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget. Further information regarding fisheries-related revenue trends can be found in Table 3.

Commercial Fishing

In 2010, 192 residents, or 29.0% of the population, held 271 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 201 residents held 288 CFEC permits. Of the permits held in 2010, 78.2% were for salmon, compared to 70.1% in 2000; 10.7% were for halibut, compared to 11.1% in 2000; 8.5% were for groundfish, compared to 6.9% in 2000; 2.2% were for other shellfish, compared to 6.3% in 2000; and 0.4% were for

¹⁸⁴³ Mystic Salmon (n.d.). *Mystic Salmon Quality*. Retrieved July 17, 2012 from: <http://www.mysticsalmon.com/quality.html>.

¹⁸⁴⁴ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

¹⁸⁴⁵ Ibid.

¹⁸⁴⁶ Ibid.

¹⁸⁴⁷ E&E Seafoods (n.d.). *A hard working fleet*. Retrieved July 17, 2012 from <http://eefoods.com/company/fleet.html/>.

¹⁸⁴⁸ This information is based on the results of a survey of processing plant managers conducted by the Alaska Fisheries Science Center in 2011.

sablefish, compared to 0.7% in 2000. In addition, 15 residents held 17 License Limitation Program (LLP) groundfish permits and five residents held five Federal Fisheries Permits (FFP).

Residents held 1.30 million shares of halibut quota on 30 accounts in 2010, compared to 1.27 million shares held on 33 accounts in 2000. Residents also held 1,082 shares of sablefish quota on one account that year, compared to 78,882 shares held on two accounts in 2000. Finally, 4.01 million crab quota shares were held on one account in 2010, compared to 4.10 million shares held on one account in 2000.

In 2010, residents held 40 commercial crew licenses, compared to 56 in 2000. Also in that year, residents held majority ownership of 110 vessels, compared to 126 in 2000. Of the CFEC permits held in 2010, 75% were actively fished, compared to 62% in 2000. This varied by fishery from 100% of sablefish permits; to 93% of halibut, 76% of salmon, 57% of groundfish, and 33% of other shellfish permits. In addition, 60% of FFPs and 5% of LLP groundfish permits were actively fished. Fisheries prosecuted by Yakutat residents in 2010 included: statewide longline halibut, statewide hand and dinglebar troll lingcod, GOA longline miscellaneous saltwater finfish, Yakutat pot shrimp, statewide longline sablefish, southeast Alaska drift gillnet salmon, Yakutat set gillnet salmon, and statewide hand and power troll salmon.¹⁸⁴⁹

In 2010, 6.32 million pounds of fish were landed in Yakutat valued at \$15.56 million, compared to 4.50 million pounds valued at \$7.30 million in 2000. In that year, Yakutat ranked 26th of 67 Alaskan communities in terms of total landings, and 20th in terms of total ex-vessel revenue. Both pounds landed and earnings made peaked in 2010. By species, most data from 2010 is considered confidential, with the exception of salmon landings. In that year, 3.60 million pounds of salmon was landed valued at \$3.81 million, compared to 2.57 million pounds valued at \$1.52 million in 2000; an increase of \$0.25 per pound after adjusting for inflation¹⁸⁵⁰ and without considering the species composition of landings. In 2007, 1.73 million pounds of halibut was landed valued at \$7.48 million, compared to 929,187 pounds valued at \$2.44 million in 2000; an increase of \$1.11 per pound after adjusting for inflation.¹⁸⁵¹ Also in that year, 219,144 pounds of groundfish was landed valued at \$178,289, compared to 175,278 pounds valued at \$64,687 in 2001. In 2006, 4,885 pounds of shellfish was landed valued at \$14,545, compared to 5,588 pounds valued at \$29,717 in 2000.

In terms of non-confidential landings by residents of Yakutat, salmon was the most landed species in 2010, followed by halibut and other groundfish. In that year, residents landed 501,534 pounds of salmon valued at \$1.16 million, compared to 384,596 pounds valued at \$313,893 in 2000; an increase of \$1.20 per pound after adjusting for inflation¹⁸⁵² and without considering the species composition of landings. In addition, residents landed 177,159 pounds of halibut valued at \$840,692 in 2010, compared to 92,924 pounds valued at \$243,833 in 2000; an increase of \$1.14 per pound after adjusting for inflation.¹⁸⁵³ Finally, residents landed 31,943 pounds of other groundfish valued at \$34,430 in 2010, compared to 7,763 pounds valued at \$1,733 in 2000. Information about commercial fishing trends can be found in Tables 4 to 10.

¹⁸⁴⁹ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹⁸⁵⁰ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

¹⁸⁵¹ Ibid.

¹⁸⁵² Ibid.

¹⁸⁵³ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Yakutat: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$28,748	\$17,888	\$10,461	\$13,346	\$11,362	\$26,300	\$20,540	\$22,993	\$33,693	\$27,967	\$24,747
Shared Fisheries Business Tax ¹	\$103,229	\$141,393	\$128,459	\$75,571	\$93,979	\$49,408	\$37,685	\$155,501	\$202,916	\$248,657	\$241,809
Fisheries Resource Landing Tax ¹	\$438	\$2,577	n/a	\$10,074	\$7	\$1,980	\$2,441	\$22,958	\$13,698	\$38,345	\$10,334
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$44,200	\$34,200	\$45,500	\$45,500	\$44,500	\$45,000	\$2.95 M	\$61,446	\$88,921	n/a	n/a
Port/dock usage ²	\$275,000	\$290,186	\$266,186	\$135,062	\$91,000	\$154,600	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>\$451,615</i>	<i>\$486,244</i>	<i>\$450,606</i>	<i>\$279,553</i>	<i>\$240,848</i>	<i>\$277,288</i>	<i>\$3.01 M</i>	<i>\$262,898</i>	<i>\$339,228</i>	<i>\$314,969</i>	<i>\$276,890</i>
<i>Total municipal revenue</i> ⁵	<i>\$3.90 M</i>	<i>\$4.75 M</i>	<i>\$4.56 M</i>	<i>\$4.32 M</i>	<i>\$2.72 M</i>	<i>\$2.89 M</i>	<i>\$3.10 M</i>	<i>\$3.38 M</i>	<i>\$3.38 M</i>	<i>\$7.71 M</i>	<i>\$3.71 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Yakutat: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	19	19	19	19	18	18	18	18	18	17	17
	Active permits	5	4	1	3	2	3	4	1	1	1	1
	% of permits fished	26%	21%	5%	15%	11%	16%	22%	5%	5%	5%	5%
	Total permit holders	16	16	16	16	15	15	15	15	15	15	15
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	6	6	6	4	4	6	5	8	9	5	5
	Fished permits	0	0	0	0	0	0	1	0	3	1	3
	% of permits fished	0%	0%	0%	0%	0%	0%	20%	0%	33%	20%	60%
	Total permit holders	6	6	6	4	4	6	5	8	9	5	5
Crab (CFEC) ²	Total permits	13	3	2	0	1	0	0	1	2	0	0
	Fished permits	3	0	1	0	0	0	0	1	1	0	0
	% of permits fished	23%	0%	50%	n/a	0%	n/a	n/a	100%	50%	n/a	n/a
	Total permit holders	9	3	2	0	1	0	0	1	2	0	0
Other shellfish (CFEC) ²	Total permits	18	19	17	12	9	9	7	10	8	5	6
	Fished permits	6	8	9	4	3	4	3	5	3	3	2
	% of permits fished	33%	42%	52%	33%	33%	44%	42%	50%	37%	60%	33%
	Total permit holders	18	19	17	12	9	9	7	10	7	5	6
Halibut (CFEC) ²	Total permits	32	29	27	28	26	30	35	31	30	31	29
	Fished permits	27	26	26	23	23	26	31	28	29	30	27
	% of permits fished	84%	90%	96%	82%	88%	87%	89%	90%	97%	97%	93%
	Total permit holders	31	29	27	27	26	30	34	31	30	31	29
Herring (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	0
	Fished permits	1	1	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	100%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	1	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Yakutat: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	2	1	1	1	0	0	0	0	0	0	1
	Fished permits	1	1	1	0	0	0	0	0	0	0	1
	% of permits fished	50%	100%	100%	0%	n/a	n/a	n/a	n/a	n/a	n/a	100%
	Total permit holders	2	1	1	1	0	0	0	0	0	0	1
Groundfish (CFEC) ²	Total permits	20	15	14	10	24	40	27	30	28	29	23
	Fished permits	3	4	4	0	8	7	16	14	13	13	13
	% of permits fished	15%	27%	29%	0%	33%	18%	59%	47%	46%	45%	57%
	Total permit holders	14	13	11	9	16	27	22	23	22	25	19
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	202	204	198	204	208	219	219	221	226	211	212
	Fished permits	138	138	115	126	144	154	148	157	171	158	161
	% of permits fished	68%	68%	58%	62%	69%	70%	68%	71%	76%	75%	76%
	Total permit holders	191	192	177	196	181	186	183	192	192	184	188
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>288</i>	<i>272</i>	<i>259</i>	<i>255</i>	<i>268</i>	<i>298</i>	<i>288</i>	<i>293</i>	<i>294</i>	<i>276</i>	<i>271</i>
	<i>Fished permits</i>	<i>179</i>	<i>178</i>	<i>156</i>	<i>153</i>	<i>178</i>	<i>191</i>	<i>198</i>	<i>205</i>	<i>217</i>	<i>204</i>	<i>204</i>
	<i>% of permits fished</i>	<i>62%</i>	<i>65%</i>	<i>60%</i>	<i>60%</i>	<i>66%</i>	<i>64%</i>	<i>69%</i>	<i>70%</i>	<i>74%</i>	<i>74%</i>	<i>75%</i>
	<i>Permit holders</i>	<i>201</i>	<i>203</i>	<i>187</i>	<i>202</i>	<i>191</i>	<i>196</i>	<i>192</i>	<i>200</i>	<i>198</i>	<i>189</i>	<i>192</i>

¹ National Marine Fisheries Service. 2011. Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Yakutat: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Yakutat ²	Total Net Pounds Landed in Yakutat ^{2,5}	Total Ex-Vessel Value of Landings in Yakutat ^{2,5}
2000	56	21	5	141	126	115	4,503,096	\$7,295,593
2001	44	28	5	143	131	106	5,006,553	\$5,680,606
2002	18	29	4	146	135	81	4,299,092	\$5,177,866
2003	32	26	4	139	130	50	2,687,776	\$3,226,863
2004	31	34	6	154	147	120	3,501,434	\$4,303,816
2005	50	28	5	116	111	158	4,383,513	\$9,955,969
2006	54	28	5	112	111	152	5,039,376	\$12,483,659
2007	58	21	7	112	112	170	6,158,212	\$15,982,883
2008	34	17	5	117	120	150	5,672,787	\$14,727,466
2009	64	19	5	105	114	143	5,129,866	\$11,400,578
2010	40	18	4	110	119	154	6,315,177	\$15,560,937

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. 2011. Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Yakutat: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	33	1,273,841	126,427
2001	34	1,045,136	123,934
2002	33	937,855	114,943
2003	31	953,313	116,679
2004	27	893,861	121,171
2005	31	1,161,618	160,054
2006	35	1,233,037	168,084
2007	32	1,276,818	180,912
2008	33	1,210,240	158,489
2009	31	1,271,478	149,175
2010	30	1,300,941	140,602

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Yakutat: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	2	78,882	6,281
2001	3	78,934	5,862
2002	3	78,934	5,518
2003	2	1,134	116
2004	2	1,134	131
2005	2	1,134	130
2006	2	1,134	114
2007	1	1,082	105
2008	1	1,082	93
2009	1	1,082	85
2010	1	1,082	77

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Yakutat: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	1	4,098,229	125,908
2006	1	4,475,470	120,274
2007	1	4,475,470	194,937
2008	1	4,475,470	182,486
2009	1	4,014,849	136,833
2010	1	4,014,849	150,853

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Yakutat: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	929,187	1,076,552	861,806	412,547	335,767	1,368,963	1,629,293	1,727,091	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	175,278	--	30,149	48,162	153,582	202,785	219,144	--	--	--
Other Shellfish	5,588	20,611	7,614	2,274	2,293	--	4,885	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	672,086	--	--	--	--	--	--	--	--	--
Salmon	2,571,014	3,048,182	--	--	2,947,497	1,872,485	2,289,369	2,969,536	2,355,718	2,425,083	3,598,556
<i>Total²</i>	<i>3,505,789</i>	<i>4,992,709</i>	<i>869,420</i>	<i>444,970</i>	<i>3,333,719</i>	<i>3,395,030</i>	<i>4,126,332</i>	<i>4,915,771</i>	<i>2,355,718</i>	<i>2,425,083</i>	<i>3,598,556</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	\$2,436,788	\$2,264,081	\$1,851,870	\$800,594	\$1,025,726	\$4,185,719	\$6,072,652	\$7,480,785	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	\$64,687	--	\$20,010	\$30,766	\$119,765	\$142,235	\$178,289	--	--	--
Other Shellfish	\$29,717	\$55,828	\$33,325	\$12,447	\$10,942	--	\$14,545	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	\$2,144,483	--	--	--	--	--	--	--	--	--
Salmon	\$1,519,788	\$1,132,203	--	--	\$2,588,155	\$1,811,659	\$2,748,851	\$3,570,624	\$2,837,107	\$2,424,231	\$3,812,520
<i>Total²</i>	<i>\$3,986,293</i>	<i>\$5,661,282</i>	<i>\$1,885,195</i>	<i>\$833,051</i>	<i>\$3,655,590</i>	<i>\$6,117,144</i>	<i>\$8,978,284</i>	<i>\$11,229,698</i>	<i>\$2,837,107</i>	<i>\$2,424,231</i>	<i>\$3,812,520</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Yakutat Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	195	--	--	--	--	--	--	--	--	--	--
Halibut	92,924	88,623	96,683	78,668	105,331	139,602	151,538	178,467	195,054	169,459	177,159
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	7,763	7,572	6,858	4,190	25,429	29,105	47,915	58,879	33,937	48,122	31,943
Other Shellfish	5,553	10,591	7,509	2,274	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	16,608	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	384,596	224,053	230,682	208,286	347,269	395,820	166,250	253,766	257,856	198,990	501,534
<i>Total²</i>	<i>491,031</i>	<i>330,839</i>	<i>341,732</i>	<i>293,418</i>	<i>478,029</i>	<i>564,527</i>	<i>365,703</i>	<i>491,112</i>	<i>503,455</i>	<i>416,571</i>	<i>710,636</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	\$36	--	--	--	--	--	--	--	--	--	--
Halibut	\$243,833	\$187,064	\$207,772	\$152,852	\$321,787	\$426,371	\$564,819	\$773,544	\$843,905	\$549,464	\$840,692
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	\$1,733	\$1,380	\$2,891	\$1,999	\$16,846	\$22,162	\$46,658	\$67,177	\$33,007	\$53,836	\$34,430
Other Shellfish	\$29,513	\$39,500	\$32,997	\$12,447	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	\$8,321	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	\$313,893	\$254,715	\$196,690	\$304,667	\$678,544	\$730,701	\$596,129	\$715,499	\$926,101	\$456,717	\$1,164,219
<i>Total²</i>	<i>\$589,009</i>	<i>\$482,659</i>	<i>\$440,350</i>	<i>\$471,965</i>	<i>\$1,017,176</i>	<i>\$1,179,234</i>	<i>\$1,207,606</i>	<i>\$1,556,219</i>	<i>\$1,811,335</i>	<i>\$1,060,016</i>	<i>\$2,039,341</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. 2011. Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Freshwater sportfishing in the Yakutat area provides a foundation for the local tourism economy. In town there are several lodges that offer guided sportfishing trips. In addition, there is a lodge located in Icy Bay and seven located around the Tsiu River area. Collectively these businesses generate an estimated \$1.5 million in annual revenue. Fishing activities are largely focused on the Alsek, East, Akwe, Italio, Dangerous, Antlen, Ahrnklin, Situk, Tsiu, Tsivat, Kaliakh, and Kikluh River drainages, where rainbow (steelhead) trout and salmon fishing runs occur from spring through fall.¹⁸⁵⁴ In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers target Chinook and coho salmon, rockfish, halibut, shrimp, and clams.

In 2010, there were 7 registered sport fish guide businesses active and residents held 28 sport fish guide licenses, compared to 23 and 32 in 2000, respectively. Also in that year, residents were sold 231 sportfishing licenses and 2,048 were sold in the community, compared to 326 and 2,557 in 2000, respectively.

Yakutat is located within the Yakutat ADF&G Harvest Survey Area which includes all state waters, including drainages, from but no including, Cape Suckling to and including Cape Fairweather. In 2010, there was a total of 9,015 saltwater and 25,550 freshwater angler days fished, compared to 7,462 and 22,747 in 2000, respectively. In that year, non-Alaskan residents accounted for 88.8% of saltwater and 83.2% of freshwater angler days fished, compared to 73.8% and 79.3% in 2000, respectively.

According to ADF&G Harvest Survey data,¹⁸⁵⁵ local private anglers target Chinook, coho, sockeye, and pink salmon, rainbow and cutthroat trout, halibut, rockfish, lingcod, Dungeness crab, hardshell clams, and shrimp. According to 2010 Charter Logbook records, charter vessels kept 115 Chinook salmon, 2,361 coho salmon, 4 sockeye salmon, 28 unidentified salmon, 3,359 halibut, 922 lingcod, and 2,341 rockfish.¹⁸⁵⁶ Information regarding recreational fishing trends can be found in Table 11.

¹⁸⁵⁴ City of Yakutat & Sheinberg Associates (2010). *City and Borough of Yakutat Comprehensive Plan*. Retrieved May 17, 2012 from: <http://www.yakutatak.govoffice2.com/vertical/sites/%7B6349CA29-2633-4DA2-A860-125A317CCB51%7D/uploads/%7B426BE8EA-3A9F-4576-BC57-1533E8A87139%7D.PDF>.

¹⁸⁵⁵ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹⁸⁵⁶ Alaska Department of Fish and Game. (2011). Alaska sport fish charter logbook database, 2000-2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Yakutat: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Yakutat ²
2000	7	34	326	2,557
2001	7	38	300	2,227
2002	8	42	288	3,219
2003	9	43	282	3,452
2004	9	40	276	3,705
2005	9	32	278	3,782
2006	10	34	249	3,521
2007	8	36	249	3,198
2008	9	34	265	2,814
2009	7	29	252	1,734
2010	7	28	231	2,048

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	5,504	1,958	18,048	4,699
2001	5,143	1,483	13,437	3,100
2002	3,059	1,966	8,700	5,294
2003	7,332	1,638	20,470	5,654
2004	6,180	1,135	22,863	3,057
2005	8,626	1,388	24,316	3,593
2006	8,916	1,218	26,623	6,877
2007	8,289	1,628	29,513	5,936
2008	7,219	1,111	22,235	3,783
2009	5,839	2,132	15,126	3,735
2010	8,001	1,014	21,263	4,287

¹ Alaska Department of Fish and Game. 2011. Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. 2011. Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. 2011. Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Subsistence Fishing

Subsistence harvesting of local resources has been practiced by Yakutat-Tlingit groups for generations. Residents use an approximate 200 mile stretch of coastline within the Borough for subsistence activities. Highly used areas include the coastal areas east of the Situk River west to Ocean Cape, all of the lands and waters of the Ankaug lagoon system, all areas of the shore and offshore in Yakutat Bay near the city, and virtually of the Situk River drainage. From the Situk River eastward across the Yakutat Foreland as far east as Harlequin Lake and Dangerous River, the shoreline and inland areas across Yakutat Bay from town, offshore areas west of Yakutat Bay, areas north of the Nunatak Fjord and east of the northern portion of Russell Fjord as well as the coastal and inland areas from Dry Bay and the Alsek River. Important water bodies include the Ahrnklin River, Akwe Lake, Akwe River, Alsek River, Ankaug Creek, Dangerous River, East Alsek River, Italio River, Lost River, Redoubt Lake Outlet, Tawah Creek, and Tsiu River.¹⁸⁵⁷ In a survey conducted by the AFSC in 2011, community leaders reported that the three most important subsistence marine resources are salmon, halibut, and seal.

Information regarding subsistence practices in Yakutat is limited. In 2000, 83% of households were estimated to participate in salmon subsistence activities, 89% were estimated to participate in halibut subsistence activities, 26% were estimated to participate in marine mammals subsistence activities, 63% were estimated to participate in marine invertebrate subsistence activities, and 24% were estimated to participate in non-salmon fish subsistence activities. That year, per capita subsistence harvest of those species was estimated at 321.46 pounds (Table 12).

Of the species listed by ADF&G in Table 13, sockeye salmon was harvested the most, followed by coho, Chinook, pink, and chum salmon. In 2008, residents reported harvesting 4,590 salmon, compared to 12,270 salmon reported in 2000. Reported salmon harvests peaked in 2001 at 14,544 fish.

In 2010, residents were issued 110 Subsistence Halibut Registration Certificates (SHARC), compared to 85 in 2003. In that year an estimated 14,337 pounds of halibut was harvested on 34 SHARC, compared to an estimated 10,253 pounds on 39 SHARC in 2003 (Table 14).

Between 2000 and 2008, an estimated 1,423 harbor seals were harvested. In 2006, an estimated 11,662 pounds of harbor seals were harvested, compared to an estimated 38,194 pounds harvested in 2000. In addition, between 2000 and 2010, an estimated 444 sea otters were harvested (Table 15).

According to ADF&G's Community Subsistence Information System,¹⁸⁵⁸ residents have either harvested or used abalone, chitons, blue king crab, brown king crab, butter clams, cockles, Dungeness crab, geoducks, sea urchins, horse clams, octopus, Pacific littleneck clams, razor clams, red king crab, shrimp, squat, Tanner crab, oyster, scallops, sea cucumber, bowhead whale, harbor seals, Steller sea lion, burbot, rockfish, trout, sculpin, capelin, dogfish, Dolly Varden, eel, hooligan, grayling, herring, lingcod, perch, sheefish, smelt, skates, whitefish, flounder, sole, Pacific cod, and pike.

¹⁸⁵⁷ See footnote 1854.

¹⁸⁵⁸ Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Yakutat: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	83%	89%	26%	63%	24%	321.46
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Yakutat: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	230	218	1,860	58	2,352	316	7,684	34,445	15,386
2001	234	200	2,026	24	3,664	208	8,622	n/a	n/a
2002	206	194	2,684	12	3,536	310	7,218	n/a	n/a
2003	222	190	2,466	2	2,988	318	6,828	n/a	n/a
2004	118	93	1,104	33	1,019	57	4,642	n/a	n/a
2005	99	78	661	4	793	19	2,681	n/a	n/a
2006	116	98	921	5	710	54	3,717	n/a	n/a
2007	108	28	836	4	594	16	5,837	n/a	n/a
2008	111	88	802	8	909	166	2,705	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Yakutat: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	85	39	10,253
2004	107	52	23,279
2005	118	71	31,922
2006	113	64	18,193
2007	118	71	15,963
2008	100	52	10,615
2009	109	60	11,190
2010	110	34	14,337

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. 2011. Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Yakutat: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	24	n/a	n/a	n/a	193	n/a
2001	n/a	9	n/a	n/a	n/a	209	n/a
2002	n/a	42	n/a	n/a	n/a	110	n/a
2003	n/a	24	n/a	n/a	n/a	252	n/a
2004	n/a	12	n/a	n/a	n/a	148	n/a
2005	n/a	60	n/a	n/a	n/a	140	n/a
2006	n/a	59	n/a	n/a	n/a	137	n/a
2007	n/a	39	n/a	n/a	n/a	119	n/a
2008	n/a	8	n/a	n/a	n/a	115	n/a
2009	n/a	115	n/a	n/a	n/a	n/a	n/a
2010	n/a	52	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

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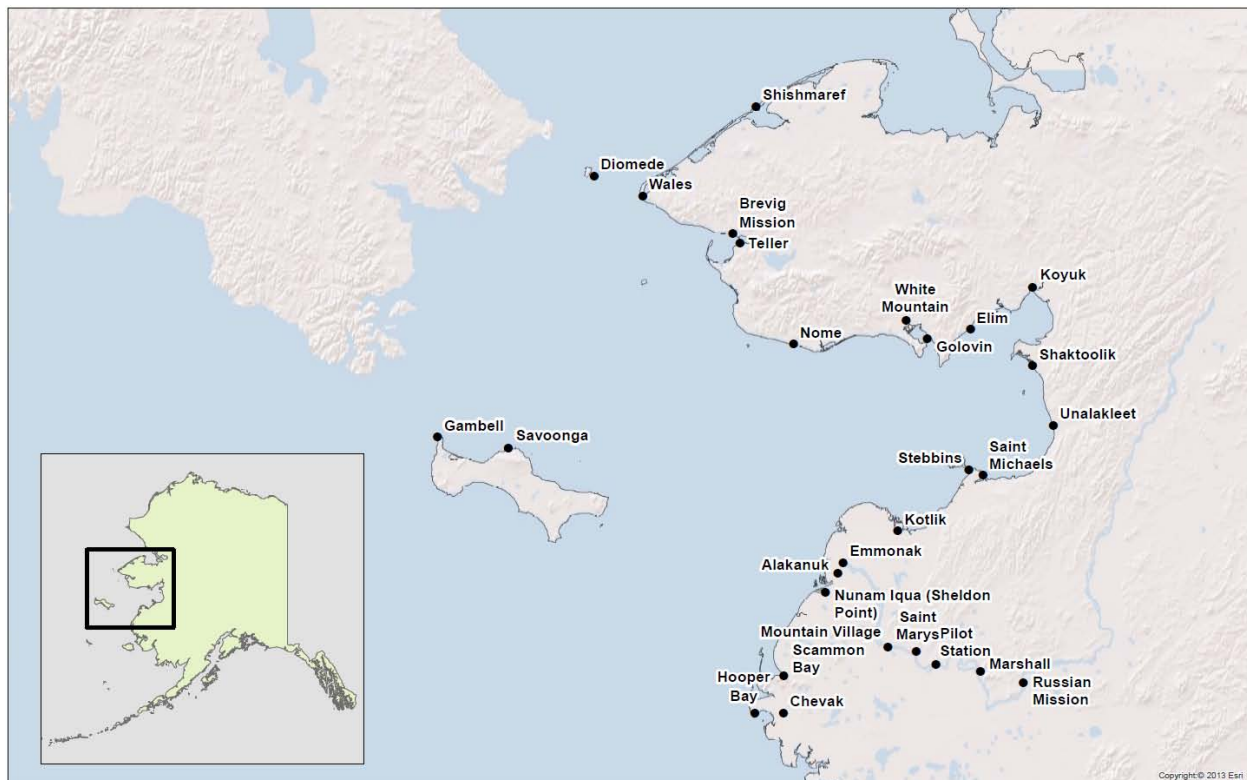
Regional Introduction: Norton Sound and the Bering Strait

Communities

Alakanuk
Brevig Mission
Chevak
Diomedede
Elim
Emmonak
Gambell
Golovin
Hooper Bay
Kotlik

Koyuk
Marshall
Mountain Village
Nome
Nunam Iqua (Sheldon Point)
Pilot Station
Russian Mission
Saint Mary's
Saint Michael
Savoonga

Scammon Bay
Shaktolik
Shishmaref
Stebbins
Teller
Unalakleet
Wales
White Mountain



People and Place

Location

The Norton Sound and Bering Strait region includes the lower Yukon River, Yukon Delta, Norton Sound, and Seward Peninsula areas. The region encompasses 47,952 square miles from Hooper Bay in the south, to Shishmaref in the north. The region's largest city, Nome, is located approximately 540 miles northwest of Anchorage.¹

Demographic Profile

The Norton Sound and Bering Strait region includes both the Nome and Wade Hampton Census Areas. A total of 29 communities met criteria for profiling, 14 of which had more than 500 residents in 2010. However, only 2 communities had populations in excess of 1,000 that year. The total regional population in 2010 was 16,951, 21.2% of which lived in Nome.

The majority of residents within the region are Alaska Native. In 2010, 88.4% of residents identified themselves as at least part American Indian or Alaska Native, 10.3% identified themselves as White, 1.1% identified themselves as Asian, 0.5% identified themselves as Black or African American, and 0.2% identified themselves as Native Hawaiian or Other Pacific Islander. In addition, 0.7% of residents identified themselves as Hispanic or Latino.²

The region's economy is heavily dependent on seasonal employment and subsistence. Opportunities for wage employment can be scarce throughout the region, and most permanent jobs are associated with local schools, Tribal offices, and other public sector positions. Trapping, reindeer herding, construction, and commercial fishing provide seasonal income; which many residents supplement with subsistence activities throughout the year. Nome serves as the regional center of supply, services, and transportation in the Norton Sound and Bering Strait region and many government offices are located in the city. State and local government services, the school district, retail businesses, utilities, transportation, mining, and medical services all provide local year-round employment opportunities.³ In 2010,⁴ the estimated per capita income for the region was \$15,909 and the estimated median household income was \$45,927. In that year, the Wade Hampton Census Area had one of the lowest per capita and mean household incomes in the state, at an estimated \$11,269 and \$37,995, respectively. Approximately half of residents aged 16 and over held wage employment in 2010, 36.9% of which worked in education services, health care, and social assistance sectors. Positions in public administration sectors made up 16.8% of total employment that year.

It should be noted that U.S. Census statistics do not represent the value of subsistence to the regional economy, and many residents who hold seasonal wage positions, including those in commercial fisheries, may have been misrepresented during Census sampling. Subsistence

¹ U.S. Census Bureau (2010). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 (Demographic Profile SF) Decennial Census. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Ibid.

³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). Community Database Online. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

resources are not only consumed by individual household units, but are traded throughout the community (and the region) for other goods and services, supplying an “informal” economy that is difficult to measure using traditional survey methods. However, the informal subsistence economy is essential in communities where standard wage employment is scarce, and living expenses are high.⁵

History

Approximately 10 to 25 thousand years ago, during the Pleistocene Ice Age, the level of the ocean was up to 300 feet lower than present levels. At that time, the Seward Peninsula was connected to the Asian continent via the Bering land bridge, which formed a flat, grassy, treeless plain.⁶ The land bridge is thought to have been a primary route by which humans migrated to the North American continent from Asia. Archaeologists have identified evidence of human inhabitation in the Bering Land Bridge National Preserve dating to 12,000 years before the present.⁷

Malemiut, Kauweramiut, and Unalikmiut Eskimos settled on the Seward Peninsula approximately 4,000 years ago. Today, many Alaska Native residents of Nome trace their ancestry to these three distinct groups of Eskimo people, and currently identify with Inupiat culture.⁸ Evidence of occupation of the Lower Yukon Delta and coastal regions date back approximately 3,000 years to the Norton Tradition of Yup'ik, although evidence of occupation in the mountainous regions to the south may date back 6,000 to 8,000 years.⁹ Trade routes with the Chukchi Tribe of Siberia predated European contact, and by the time Russian fur traders set up trading posts in the area an extensive trade network throughout the Norton Sound had already been established. The village of Pastuliarraq (near present day Kotlik) functioned as an economic hub for the Norton Sound region, connecting villages of the Yukon Delta with the villages of St. Michael, Klikitarik, Unalakleet, Shaktoolik, and Golovin Bay. At its height, Pastuliarraq traded 36,000 lbs of beluga whale oil and thousands of skins and furs for tobacco, metal tools, caribou hides, and firearms with the Siberian Chukchis. However, by the mid- to late 19th century, these routes were dismantled due to foreign competition and smallpox and influenza epidemics.¹⁰

Originally, the people of the Norton Sound and Bering Strait region were semi-nomadic, living in migratory hunting and fishing communities. However, as trade intensified, communities such as Pastuliarraq, Caniliaq, St. Michael, and Unalakleet grew as year-round trade centers. The region was decimated in 1838 by smallpox, and again in 1848 by influenza. It is estimated that approximately half of the region's inhabitants died or moved away. After the two outbreaks,

⁵ Goldsmith, S. 2008. Understanding Alaska's Remote Rural Economy. University of Alaska Research Summary No. 10. Retrieved November 30, 2012 from: http://www.iser.uaa.alaska.edu/Publications/researchsumm/UA_RS10.pdf.

⁶ National Park Service. 2010. *Shared Beringian Heritage Program*. Retrieved February 22, 2012 from <http://www.nps.gov/akso/beringia/>.

⁷ National Park Service 2009. Bering Land Bridge National Preserve. Retrieved February 17, 2012 from <http://www.nps.gov/bela/>.

⁸ Nome Planning Commission 2003. City of Nome Hazard Mitigation Plan. Retrieved February 17, 2012 from <http://www.nwcommission.org/images/Nome-HZM-Plan.pdf>.

⁹ Shaw, R. D. (1998). An Archaeology of the Central Yupik: a Regional Overview for the Yukon-Kuskokwim Delta, Northern Bristol Bay, and Nunivak Island. *Arctic Anthropology*, 35(1), 234-246.

¹⁰ Griffin, D. (1996). A Culture in Transition: a History of Acculturation and Settlement near the Mouth of the Yukon River, Alaska. *Arctic Anthropology*, 33(1), 98-115.

many residents from the Seward Peninsula began moving into the St. Michael area, due to declining caribou resources.¹¹

By the late 1880s, Morovian missionaries, which had been established in the Lower Kuskokwim River region, began to move into the Yukon Delta. This led to yet another influenza outbreak in 1900 and 1912, which killed as much of 70% of the indigenous population in some areas.¹² In the 1950s, the U.S. Bureau of Indian Affairs built schools at fish camp sites in an effort to encourage a more sedentary lifestyle. Years of assimilation efforts have created the blended tapestry of traditional Native Alaskan and Western lifestyles that is present today. Yup'ik continues to be spoken widely, and most families continue to rely on seasonal subsistence foods like seal, walrus, fish, and caribou. While communities are permanent, many still travel to subsistence camps during the summer and early fall.¹³

Natural Resources and Environment

The Nome Census Area is subarctic, with temperatures ranging from 44 to 65 °F in the summer, and -12 to 11 °F in the winter, depending on the area. Precipitation ranges from about 8-18 inches with 33-56 inches of snowfall. The Norton Sound is usually ice-free from May to October. The Wade Hampton Census Area, to the south, has a maritime climate, and tends to have more moderate weather. Winter temperatures range from -2 to 20 °F and summer temperatures range from 42-62 °F. Precipitation averages around 16 inches annually.¹⁴

Physical features within the region range from wet lowland tundra of the Yukon Delta, to the mountainous Seward Peninsula. The coastal geology of the Yukon Delta consists of alluvial and marine deposits of stratified silts and sand. The soil is fine grained and poorly consolidated, leaving it susceptible to coastal erosion, permafrost melt, and river channel migration. Depending on conditions, areas of continuous and discontinuous permafrost can be found with an active layer between 1.5 and 3 feet deep. Vegetation cover is primarily tundra and bush muskeg.

The Nulato Hills, north of the Yukon Delta, consist of gentle sloping northeast trending ridges 1,000 to 2,000 ft in altitude. Geology consists of Mesozoic sedimentary rocks comprised of shale, siltstone, and sandstone with some limestone intrusions.¹⁵ Alpine shrub tundra dominates the landscape, with intermittent mixed spruce-aspen-birch forests at lower elevations.¹⁶

The Seward Peninsula consists of considerable upland areas bordered by coastal lowlands. Upland areas have broad sloping hills up to 2,000 ft in elevations; and several groups of peaks below 4,700 ft in the south. Interior basins and narrow canyons cut through upland areas. Geology consists of Paleozoic bedrock with metamorphosed volcanic rocks and granitic intrusives. Most of the Seward Peninsula is covered in herbaceous or shrubland tundra, however

¹¹ Ibid.

¹² Alaska Dept. of Comm. and Rural Affairs. (2002). *Yukon Kuskokwim Delta Regional Strategic Plan*. Retrieved November 30, 2012 from: <http://www.commerce.state.ak.us/dca/plans/YukonKuskokwimDelta-EDP-2000.pdf>.

¹³ Ibid.

¹⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁵ U.S. Department of the Interior. (2000). *Environmental and Hydrologic Overview of the Yukon River Basin, Alaska and Canada*. Retrieved November 30, 2012 from: <http://pubs.usgs.gov/wri/wri994204/pdf/wri994204.pdf>.

¹⁶ U.S. Forest Service. (n.d.). *Ecological Subregions of the United States*. Retrieved November 30, 2012 from: <http://www.fs.fed.us/land/pubs/ecoregions/ch11.html>.

forestlands are found around Elim, Koyuk, Golovin, and White Mountain. Permafrost is continuous, with a 4-foot active layer in most parts (depending on conditions and location).¹⁷

The Norton Basin does not hold significant oil reserves, although it is estimated to contain valuable natural gas reserves. This area is rated as high to moderate in environmental sensitivity. No leases have been scheduled for the 2007-2012 or 2012-2017 Outer Continental Shelf Oil and Gas Leasing Programs.^{18,19}

Several small gold mines continue to operate in the Nome area. NovaGold Resources, Inc., a large gold mining operation, is currently developing a mine 8 miles north of Nome, providing some local employment.²⁰ In 2010, Cedar Mountain Exploration Inc. staked almost 150 gold mining claims on the Seward Peninsula, NANA²¹ Regional Corporation conducted exploration of a zinc-lead-silver prospect, and at least 28 individuals or other companies reported to have engaged in placer mining efforts for gold, tin, and polymetallic mineralization in the area.²²

Muskoxen were reintroduced to the Seward Peninsula as part of an Alaska-wide recovery effort. In 1934, 34 muskoxen were captured in East Greenland and transported to Nunivak Island. By 1968, the Nunivak Island herd numbered 750, and was used as a seed population to reintroduce muskoxen to areas around northern Alaska. By 2000, the population of muskoxen on the Seward Peninsula numbered 1,800.²³

Governance

There are no organized boroughs governing the Norton Sound and Bering Strait region of Alaska. As mentioned previously, local communities are dispersed throughout two census areas: the Nome and Wade Hampton Census Areas. Every community profiled was incorporated into a municipality and had federally recognized Tribal governments. In addition, each community had an ANCSA chartered Native village corporation. The regional ANCSA chartered Native corporation for Yukon Delta communities is Calista Corporation, while Bering Straits Native Corporation is the regional ANCSA corporation representing communities on the Seward Peninsula and along the eastern shore of Norton Sound. Regional ANCSA non-profit Native corporations include the Association of Village Council Presidents (Yukon Delta), and Kawerak Incorporated (Norton Sound).

¹⁷ U.S. Bureau of Land Management. (n.d.). *Kobuk-Seward Peninsula Proposed RMP/Final EIS*. Retrieved November 30, 2012 from: http://www.blm.gov/ak/st/en/prog/planning/ksp/ksp_documents/ksp_prmp_feis.html.

¹⁸ Minerals Management Service (2010). *Preliminary Revised Program Outer Continental Shelf Oil & Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/>.

¹⁹ Minerals Management Service (2011). *Proposed Outer Continental Shelf Oil & Gas Leasing Program 2012-2017*. Retrieved February 16, 2012 from <http://www.boemre.gov/>.

²⁰ See footnote 14.

²¹ The name of the regional Native corporation for the Northwest Arctic was originally derived from a pre-existing non-profit organization known as the Northwest Alaska Native Association (NANA). To avoid confusion, the non-profit was renamed Mauneluk, and later the Maniilaq Association, and the corporation is known as NANA Regional Corporation. Source: Maniilaq Association website (2003). *Company Information*. Retrieved February 2, 2012 from <http://www.maniilaq.org/companyInfo.html>.

²² Szumigala, D. J., L. A. Harbo, and J. N. Adleman. 2011. *Alaska's Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

²³ Alaska Dept. of Fish and Game (2008). *Muskox – Wildlife Notebook Series*. Retrieved December 15, 2011 from <http://www.adfg.alaska.gov/static/education/wns/muskox.pdf>.

Every community within the Norton Sound and Bering Strait region is eligible for participation in the federal Community Development Quota (CDQ) program, with the exception of Marshall, Pilot Station, Russian Mission, Saint Mary's, and Shishmaref. CDQ groups distribute a portion of commercial fishing proceeds to their various communities and sponsor economic and infrastructural development.

Involvement in North Pacific Fisheries

Commercial fishing is permitted along the entire 1,200 miles of the main stem of the Yukon River. The Lower Yukon Area includes the Yukon River drainage from its mouth to Old Paradise Village at river mile 301. All five species of Pacific salmon are found within the Lower Yukon Area, as well as Dolly Varden, Arctic grayling, Arctic lamprey, northern pike, sheefish, burbot, whitefish, and cisco. Chinook, chum, and coho salmon constitute the bulk of salmon harvest on the lower Yukon River. Periods of over-exploitation and fishery closures in the past have led to a conservative management plan adopted by the Alaska Board of Fisheries.

Escapement goals and poor runs have prevented a directed Chinook commercial fishery in recent years, although incidental harvests were allowed to be sold. However, in 2012, historically low Chinook returns prompted fishery closures and restrictions not seen in over 80 years. In that year, the commercial Chinook fishery, which had an average annual harvest value of \$1.5 million, was completely shut down. The commercial chum salmon fishery, which had been experiencing a rebound after years of depressed market conditions, was also severely restricted. Subsistence harvests were also severely restricted, causing concern in many communities over how to meet subsistence requirements before winter.²⁴ Summer chum salmon fisheries suffered low harvest numbers between 1998 and 2002 poor run strength and market conditions. Runs began improving in 2004, and by 2007 there was a directed commercial fishery in Districts 1 and 2 of the Yukon River Management Area. However, commercial harvests of chum salmon are largely dependent on the health of Chinook salmon runs, and season management is in part focused on limiting incidental Chinook harvests. Coho salmon are less abundant than fall chum, and are typically harvested incidentally during fall chum seasons. Non-salmon commercial finfish fisheries include whitefish, burbot, northern pike, blackfish, and Arctic lamprey. Most of these fisheries are limited compared with salmon fisheries. In 2010, two freshwater commercial fishery permits for Bering and least cisco, and one for Arctic lamprey were issued to Kwik'pak Fisheries in the Lower Yukon River.²⁵

All five species of Pacific salmon are found in the Norton Sound and Kotzebue Management Area, although only chum salmon are found in sufficient enough numbers to support a commercial fishery. Some concentrations of Chinook, coho, and sockeye salmon are found in the Norton Sound area and southern Seward Peninsula drainages. Commercial salmon fisheries within the Norton Sound region have been slow to develop due to the area's remoteness. However, efforts to attract seafood processors to the region have resulted in the growth of the fishery during recent years.

²⁴ Alaska Department of Fish and Game. (2012). *2012 Alaska Chinook Salmon Fishery Disaster*. Retrieved November 27, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=hottopics.federalchinookdisaster>.

²⁵ Estensen, J. L., S. Hayes., S. Beckelew., D. Green., and D. J. Bergstrom. 2012. *Annual Management Report Yukon and Northern Areas 2010*. Alaska Department of Fish and Game. Fishery Management Report No. 12-23. Retrieved December 3, 2012 from: <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareayukon.salmon#/management>.

Herring sac roe, spawn-on-kelp, and food and bait fisheries exist in Norton Sound, although they are highly susceptible to variable market conditions. In 2004, there were no local sac roe buyers due to a lack of market interest. Only one buyer was present in 2010, and 688 tons of herring were harvested from an 8,000 ton quota. Spawn-on-kelp fisheries are small, and harvests from 2001 to 2010 maxed at less than one ton.

Red king crab is also commercially harvested within the Norton Sound. Limits are set at 5% of biomass if between 1.5 and 2.5 million pounds, or 10% of biomass exceeding 2.5 million pounds. In 2010, concern of stock assessment reliability prompted the North Pacific Fishery Management Council to close federal crab fisheries north of Cape Prince of Wales. However, state waters north of that point remained open. CDQ crab allocations are split between North Sound and Yukon Delta CDQ groups. There is a small commercial blue king crab fishery near Saint Lawrence Island that has been developing in recent years, although no landings were reported in 2010. Small commercial harvests of sheefish, Dolly Varden, whitefish, saffron cod, rainbow smelt have also been reported, although these species are primarily harvested for subsistence purposes.²⁶

Shoreside seafood processors are located in Emmonak, Hooper Bay, Nome, Saint Michael, Savoonga, and Unalakleet.²⁷ In 2010, 4.67 million pounds of seafood valued at \$4.95 million ex-vessel was landed in the Norton Sound and Bering Strait region. At the same time, residents landed 1.75 million pounds of seafood valued at \$2.12 million ex-vessel.²⁸ Norton Sound and Bering Strait residents held a total of 1,209 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) in 2010, 55.3% of which were actively fished. At 65.9%, salmon accounted for the largest share of permits held in 2010, followed by herring (20.4%).²⁹ Finally, participation in federal catch share fisheries in the region is low with a total of 285 shares of halibut and 136 shares of sablefish quota held by residents in 2010.³⁰

Compared to other regions of Alaska, the sport fishing industry within the Norton Sound and Bering Strait region is small. Most sport fishing targets Chinook and coho salmon, and effort is primarily limited to smaller tributaries where salmon spawn. Recreational fishing in the Norton Sound region is also limited, and most residents engage in subsistence fisheries instead. Sport fishermen can harvest crab, and in 2005, nine harvest logs were issued; six of which went to non-residents.³¹ In 2010, a total of six sport fish guide businesses were registered within the

²⁶ Menard, J., Soong, J., and Kent, S. (2012). *2010 Annual Management Report Norton Sound, Port Clarence, and Kotzebue*. Alaska Department of Fish and Game. Fishery Management Report No. 12-31. Retrieved December 3, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR12-31.pdf>.

²⁷ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁸ Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). *Alaska fish ticket data*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁹ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³⁰ National Marine Fisheries Service. (2011). *Alaska Individual Fishing Quota (IFQ) permit data*. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³¹ Menard, J., Soong, J., and Kent, S. (2012). *2010 Annual Management Report Norton Sound, Port Clarence, and Kotzebue*. Alaska Department of Fish and Game. Fishery Management Report No. 12-31. Retrieved December 3, 2012 from: <http://www.adfg.alaska.gov/FedAidpdfs/FMR12-31.pdf>.

region. Those six businesses were registered in Nome, Saint Michael, and Unalakleet. In that year, a total of 2,990 sport fishing licenses were sold, 40.7% of which were sold in Nome. Finally, a total of 2,721 sport fishing licenses were held by residents in 2010, most of whom lived in Nome.³²

Subsistence is a significant part of life for Norton Sound and Bering Strait residents. For villages along the Yukon River, Chinook, chum, and coho salmon make up the vast majority of harvests. Subsistence efforts are conducted either from a home community or nearby fish camp between late May and early October. In addition, many commercial fishermen may withhold a portion of their catch for personal use. In addition to state fisheries, each community within the region is considered rural by the Federal Subsistence Board, qualifying residents to conduct subsistence activities on federal lands and waterways under the Alaska National Interest Lands Conservation Act of 1980. Other subsistence fisheries in the Yukon Delta region include herring (food/bait and spawn-on-kelp), whitefish, blackfish, cisco, sheefish, burbot, Northern pike, and Arctic grayling.³³ Norton Sound subsistence fisheries include red and blue king crab, pink and chum salmon, sheefish, Dolly Varden, whitefish, saffron cod, smelt, capelin, Northern pike, starry flounder, yellow fin sole, Arctic grayling, burbot, and halibut.³⁴

In 2008, residents reported harvesting 210,089 salmon using 1,707 subsistence salmon permits issued by the Alaska Department of Fish and Game. Chum salmon accounted for 41.7% of reported harvests, while pink salmon accounted for 34.2%. Most (12.5%) salmon harvests occurred in Nome, although Unalakleet, Emmonak, and Hooper Bay put up sizable harvests as well.³⁵ In addition, an estimated 6,185 pounds of halibut were harvested that year, most of which was harvested in Savoonga.³⁶ Finally, marine mammals made up a significant amount of subsistence harvests in communities, especially in the communities of Gambell and Savoonga on Saint Lawrence Island. In 2008, the two communities harvested an estimated 1,022 walrus. Harvests estimates for other marine mammals—including Steller sea lion, harbor seal, and spotted seal—are not available post 2008.^{37,38}

³² Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³³ Estensen, J. L., Hayes, S., Beckelew, S., Green, D., and Bergstrom, D. J. (2012). *Annual Management Report Yukon and Northern Areas 2010*. Alaska Department of Fish and Game. Fishery Management Report No. 12-23. Retrieved December 3, 2012 from:

<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareayukon.salmon#/management>.

³⁴ See footnote 26.

³⁵ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011, revised). *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³⁶ Fall, J.A. and D. Koster. (2011). *Subsistence harvests of Pacific halibut in Alaska, 2009*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³⁷ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. *The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008*. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

³⁸ U.S. Fish and Wildlife Service. (2011). *Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific Walrus and polar bear*. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Regional Challenges

Norton Sound and Bering Strait communities face many of the same challenges as those in other rural areas of Alaska. High cost of living and limited wage employment opportunities make purchasing fuel, food, and other supplies difficult. Dependence on subsistence resources such as salmon leaves communities vulnerable to changes in salmon availability and management actions. Periodic salmon crashes have at times left many communities dependent on government assistance, including a weak Chinook salmon return in 2012 which closed both subsistence and commercial Chinook harvests, and severely impacted chum harvests within the Yukon River drainage.³⁹

³⁹ Alaska Department of Fish and Game. (2012). *2012 Alaska Chinook Salmon Fishery Disaster*. Retrieved November 27, 2012 from: <http://www.adfg.alaska.gov/index.cfm?ADFG=hottopics.federalchinookdisaster>.

Alakanuk (ah-LUCK-uh-nuck)



People and Place

*Location*⁴⁰

Alakanuk is located at the east entrance of Alakanuk Pass, the major southern channel of the Yukon River, 15 mi from the Bering Sea. It is part of the Yukon Delta National Wildlife Refuge (YDNWR). It lies 8 mi southwest of Emmonak, approximately 162 mi northwest of Bethel and 492 mi west of Anchorage. It is the longest village on the lower Yukon; the development stretches over a 3-mi area along the pass. The area encompasses 32.4 sq mi of land and 8.7 sq mi of water. The community was incorporated as a Second-class city in 1969, is located in the Wade Hampton Census Area, and is not organized within a borough.

*Demographic Profile*⁴¹

In 2010, there were 677 residents, ranking Alakanuk 91st of 352 Alaskan communities in terms of population size. Between 1990 and 2010 the population grew by 24.4%. Between 2000 and 2009, the population grew by 5.2% with an average annual growth rate of 0.37%, slightly less than the statewide average of 0.75% and indicative of a slowing rate of growth. However, in a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the population of Alakanuk was in excess of 800 permanent residents; a notable difference when compared to U.S. Census figures. Alakanuk typically sees an influx of seasonal workers from June through October, with the population peaking in June. Population peaks are entirely driven by employment in fisheries sectors. Information regarding population trends can be found in Table 1.

The population of Alakanuk was predominately Yup'ik Eskimo in 2010. In that year 95.0% of residents identified themselves as American Indian or Alaska Native, compared to 95.4% in 2000; 2.5% identified themselves as two or more races, compared to 2.5% in 2000; 2.1% identified themselves as White, compared to 2.0% in 2000; and 0.4% identified themselves as Asian, compared to 0.2% in 2000. Information regarding racial and ethnic composition can be found in Figure 1.

In 2010, the average household size in Alakanuk was 4.23, compared 4.5 in 1990 and 4.69 in 2000. In that year, the total number of housing units was 186, compared to 140 in 1990 and 160 in 2000. Of the households surveyed in 2010, 59% were owner-occupied, compared to 66% in 2000; 27% were renter-occupied, compared to 21% in 2000; 13% were vacant, compared to 13% in 2000; and 1% was occupied seasonally, compared to 0% in 2000. There have not been any reports of anyone living in group quarters since 1990.

⁴⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

The gender distribution in Alakanuk was almost equal in 2010, at 50.7% male and 49.3% female. This was more even than both the statewide (52% male, 48% female) and 2000 (52.6% male, 47.4% female) distributions. The 2010 median age of 21.1 years was much younger than the statewide median (38.8 years) and slightly older than 20.4 years in 2000.

Table 1. Population in Alakanuk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	544	-
2000	652	-
2001	-	652
2002	-	658
2003	-	662
2004	-	669
2005	-	677
2006	-	664
2007	-	679
2008	-	670
2009	-	686
2010	677	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Alakanuk: 2000-2010 (U.S. Census).

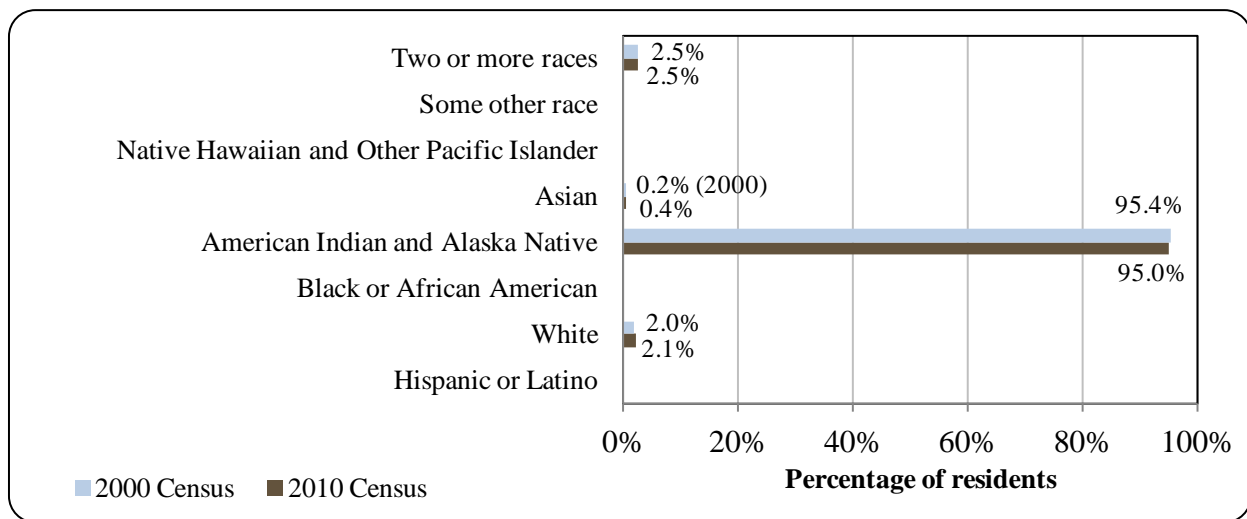
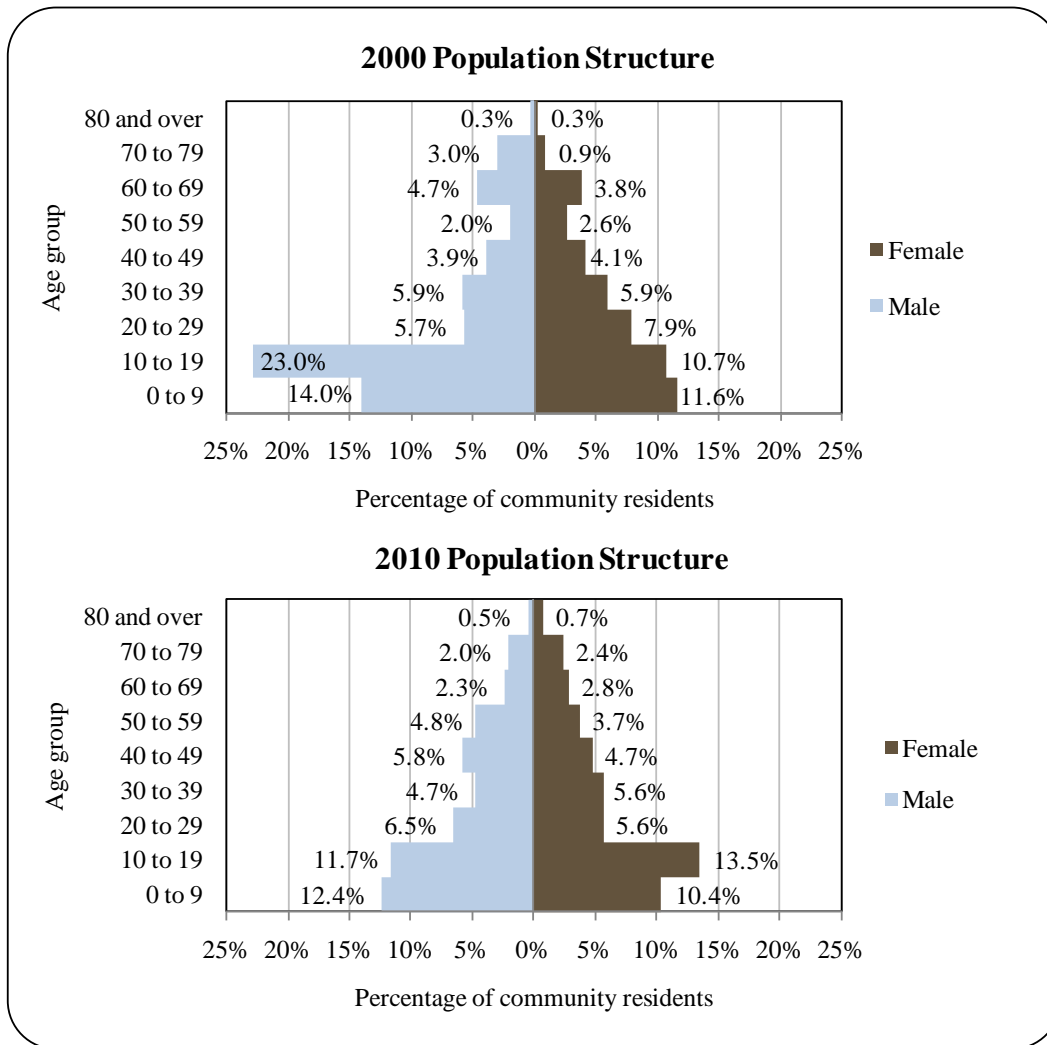


Figure 2. Population Age Structure in Alakanuk, 2000 and 2010 U.S. Decennial Census.



When compared with 2000, the population structure in 2010 was slightly less expansive with 48% of residents under the age of 20 years, compared to 59.3% in 2000. Also in that year, 10.7% of residents were over the age of 59, compared to 13.0% in 2000; 29.3% were between the ages of 30 and 59, compared to 24.4% in 2000; and 12.1% were between the ages of 20 and 29, compared to 13.6% in 2000.

Gender distribution by age cohort was significantly more even in 2010 than in 2000, with modest female biases among most age ranges. The greatest absolute gender difference in 2010 occurred in the 0 to 9 range (12.4% male, 10.4% female), followed by the 10 to 19 (13.5% female, 11.7% male) and 50 to 59 (4.8% male, 3.7% female) ranges. Of those three, the greatest proportional difference occurred in the 50 to 59 range. Information regarding population structure can be found in Figure 2.

According to the U.S. Census' 2006-2010 American Community Survey (ACS),⁴² an estimated 75.3% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 16% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 8.7% had a 9th to 12th grade education, but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 25.1% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 3% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 3% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 4.6% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Evidence of occupation of the Lower Yukon Delta and coastal regions date back approximately 3,000 years to the Norton Tradition of Yup'ik, although evidence of occupation in the mountainous regions to the south may date back 6,000 to 8,000 years.⁴³ Trade routes with the Chukchis of Siberia predated European contact, and by the time Russian fur traders set up trading posts in the area an extensive trade network throughout the Norton Sound had already been established.⁴⁴ The village of Pastuliarraq, next to the Pastolik River east of present day Kotlik, became a trading hub for region trading over 36,000 lbs of beluga whale oil annually.

The flow of goods between Alaska and Siberia was so extensive that a Russian trading post at St. Michael was built in hopes of intercepting trade.⁴⁵ By the mid- to late nineteenth century, these routes were dismantled due to smallpox and influenza epidemics as well as the emergence of St. Michael as an economic center.⁴⁶ Alakanuk was first reported in 1899, by G.R. Putnam of the U.S. Coast and Geodetic Survey.

Originally settled by a Yup'ik shaman named Anguksuar and his family, Alakanuk means "wrong way" in Yup'ik. A Catholic mission school was built near the village, but was relocated to St. Mary's in 1948 at which time many families moved from the old school site to Alakanuk.⁴⁷ Today, Alakanuk depends heavily on subsistence practices, which sustains the community both economically and culturally. The sale, importation, and possession of alcohol is prohibited.

⁴² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴³ Shaw, R. D. (1998). An Archaeology of the Central Yupik: a Regional Overview for the Yukon-Kuskokwim Delta, Northern Bristol Bay, and Nunivak Island. *Arctic Anthropology*, 35(1), 234-246.

⁴⁴ Griffin, D. (1996). A Culture in Transition: a History of Acculturation and Settlement near the Mouth of the Yukon River, Alaska. *Arctic Anthropology*, 33(1), 98-115.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment

The climate of Alakanuk is subarctic, averaging 60 inches of snowfall and 19 inches of total precipitation per year. Temperatures range from -25 to 79 °F (-32 to 26 °C). Heavy winds are frequent during the fall and winter. The Yukon River is used as an ice road during freeze-up, from November through May.⁴⁸

Alakanuk is located within the YDNWR, which occupies 26 million acres of the Yukon-Kuskokwim (Y-K) Delta region.⁴⁹ The local topography consists of shallow relief floodplains dotted with many lakes, sloughs, and old riverbeds. Soils are poorly drained coastal deposits, and a permafrost layer can generally be found at a depth of three feet. The delta's lowland tundra is dominated by wetlands and meadows supporting primarily sedges, forbs, and shrubs.⁵⁰ The YDNWR provides habitat for many types of terrestrial and aquatic wildlife. Terrestrial species include shrews, bats, rabbits, squirrels, mice, porcupines, wolves, foxes, lynx, bears, weasels, moose, caribou, and muskox. Aquatic mammals include walrus, seals, sea lions, and whales. Fish species include all five types of Pacific salmon, trout, smelt, lamprey, cisco, whitefish, stickleback, sheefish, char, blackfish, pike, perch, grayling, halibut, sole, flounder, greenling, and sculpin.⁵¹

Natural hazards threatening Alakanuk include severe storm events, flooding, river bank erosion and destabilization, and wildfires.⁵² Ice jams on the Yukon River often flood the area and local buildings have been retrofitted with stilts to combat inundation. Several buildings have had to be relocated due to flooding and erosion,⁵³ and approximately 25 homes are currently threatened.⁵⁴ Severe storms often affect utilities, resulting in outages.

While there are no U.S. Environmental Protection Agency (EPA) established superfund sites in the area, the Alaska Department of Environmental Conservation (DEC) had been conducting a cleanup operation of petroleum contaminants left over from a now shuttered Alaska National Guard site as of 2010.⁵⁵

Current Economy⁵⁶

Alakanuk's economy is heavily dependent on subsistence, commercial fishing, and public sector employment. In a survey conducted by the AFSC in 2011, community leaders stressed the importance of subsistence and commercial fishing to the community's economy.

⁴⁸ Ibid.

⁴⁹ U.S. Fish and Wildlife Service. (2009). *Yukon Delta National Wildlife Refuge Contaminant Assessment*. Retrieved December 13, 2011 from: http://alaska.fws.gov/fisheries/contaminants/pdf/cap_yukon_delta.pdf.

⁵⁰ U.S. Forest Service. (1992). *The Alaska Vegetation Classification*. Retrieved December 13, 2011 from: http://www.fs.fed.us/pnw/publications/pnw_gtr286/pnw_gtr286a.pdf.

⁵¹ U.S. Fish and Wildlife Service. (2008). *The Yukon Delta National Wildlife Refuge*. Retrieved December 13, 2011 from: <http://yukondelta.fws.gov/fish.htm>.

⁵² URS. (2007). *City of Alakanuk Hazard Mitigation Plan*. Retrieved December 13, 2011 from: http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Alakanuk_HMP.pdf.

⁵³ Federal Emergency Management Administration. (2009). *Superfund Sites*. Retrieved December 13, 2011 from: <http://www.ak-prepared.com/plans/mitigation/documents/Alakanuk%20BestPractice.pdf.pdf>.

⁵⁴ See footnote 47.

⁵⁵ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved December 13, 2011 from: http://146.63.9.103/applications/spar/ccreports/Site_Report.aspx?Hazard_ID=3060

⁵⁶ Unless otherwise noted, all monetary data are reported in nominal values.

Top employers⁵⁷ for 2010 included: Lower Yukon School District, Kwikpak Fisheries LLC, Alakanuk City Council, Alakanuk Native Corp., the Native Village of Alakanuk, AVCP Housing Authority, Rural AK Community Action Program, DF Jorgensen Company, Association of Village Council Presidents, and Knik Construction Inc.

In 2010,⁵⁸ the estimated per capita income was \$14,929 and the estimated median household income was \$34,375, compared to \$6,884 and \$26,356 in 2000, respectively. However, after accounting for inflation by converting 2000 values into 2010 dollars,⁵⁹ the real per capita income (\$9,052) and real median household income (\$34,645) indicate that while individual earnings increased, household earnings remained unchanged. In 2010, Alakanuk ranked 204th of 305 communities from which per capita income was estimated, and 218th of 299 communities from which median household income was estimated. However, it should be noted that income statistics are based on wage income and other money sources. Therefore, relatively low income or high poverty rates reported in the ACS do not consider the value of subsistence in the local economy.

Alakanuk's small population size may have prevented the 2006-2010 ACS from accurately portraying economic conditions.⁶⁰ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, total wages earned by residents in 2010 was \$4.01 million.⁶¹ When compared with the 2010 population, the estimated per capita income of \$5,926 indicates a decline in individual earnings compared to values reported by the U.S. Census in 2000.⁶² In addition, Alakanuk was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁶³

According to 2006- 2010 ACS estimates,⁶⁴ 60.5% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 19.9%, compared to an estimated 5.9% statewide; and an estimated 21.5% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed in the civilian labor force, an estimated 37% worked in the private sector while an estimated 63% worked in the public sector.

By industry, most (49.6%) of those employed were estimated to be working in education services, health care, and social assistance sectors in 2010; followed by arts, entertainment, recreation, accommodation, and food service sectors (12.6%) and retail trade sectors (11.9%). By occupation type, most (41.5%) of those employed in 2010 were estimated to hold management or

⁵⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁵⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁵⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁰ See footnote 42.

⁶¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁶² See footnote 57.

⁶³ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

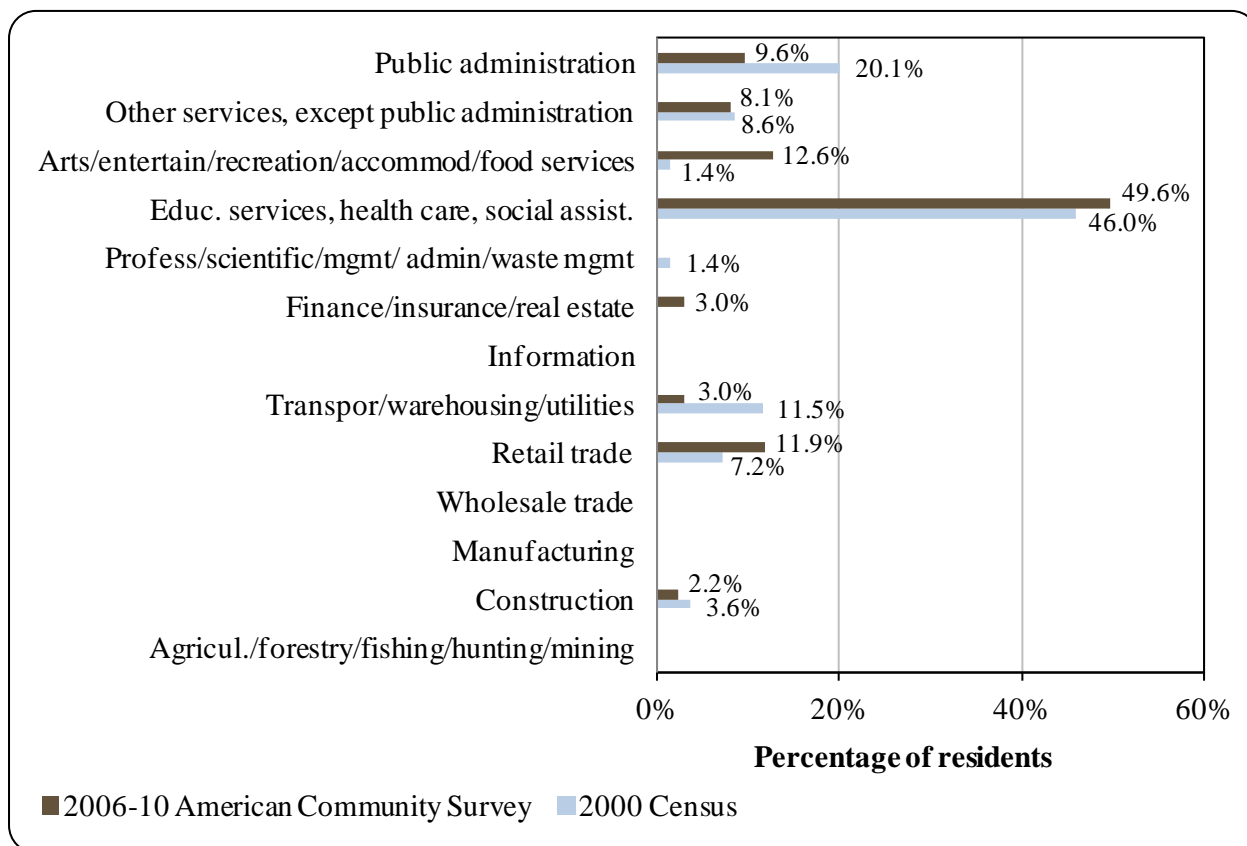
⁶⁴ See footnote 42.

professional positions; followed by service positions (23%), sales or office positions (19.3%), natural resources, construction, or maintenance positions (13.3%), and production, material moving, or transportation positions (3%). According to 2010 ALARI figures,⁶⁵ most (35.3%) employed residents were estimated to work in local government sectors; followed by trade, transportation, and utilities sectors (20.0%); manufacturing sectors (14.6%); and other undisclosed sectors (12.5%). Information regarding employment trends can be found in Figures 3 and 4.

Overall, the 2006-2010 ACS purported significant declines in public administration, transportation, warehousing, and utilities sectors and significant increases in arts, entertainment, recreation, accommodation, and food service sectors between 2000 and 2010. However, it should be noted that sampling techniques may not have captured the true scope of industry representation. This may account for the extreme variances reported in some sectors for those years.

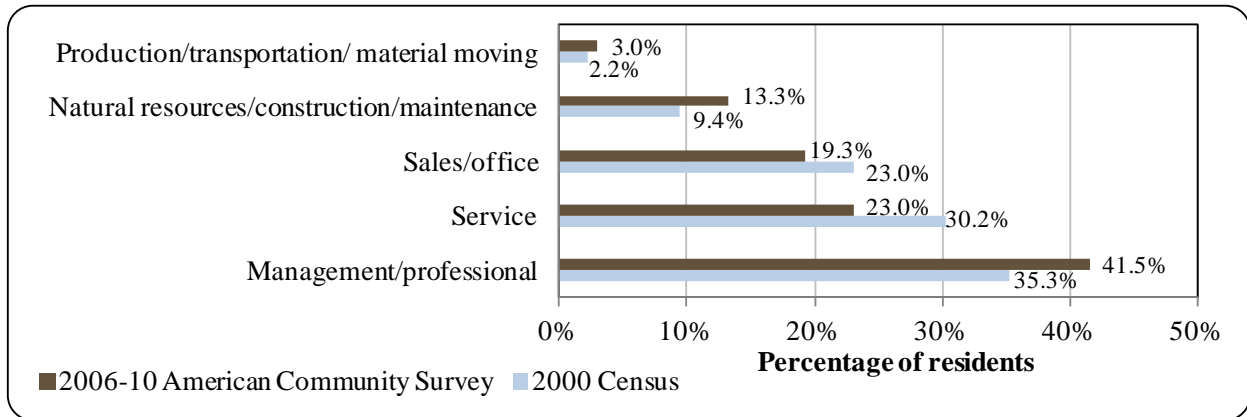
No individuals characterized themselves as working in natural resource based industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

Figure 3. Local Employment by Industry in 2000-2010, Alakanuk (U.S. Census Bureau).



⁶⁵ See footnote 57.

Figure 4. Local Employment by Occupation in 2000-2010, Alakanuk (U.S. Census Bureau).



Governance

Alakanuk is a Second-class city consisting of a mayoral form of government. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal government and an Alaska Native Claims Settlement Act (ANCSA) recognized village corporation (Alakanuk Native Corporation). The regional ANCSA Corporation representing Alakanuk is the Calista Corporation. The regional ANCSA non-profit corporation is the Association of Village Council Presidents. The closest Alaska Department of Fish and Game (ADF&G) and Bureau of Citizenship and Immigration Services offices are located in Nome, 128 mi north. The closest National Marine Fisheries Service (NMFS) office is located in Bethel, 162 mi south.

In 2010, the city administered a 4% sales tax. Total municipal revenues for that year was \$1.17 million, compared to \$798,771 in 2000; representing a 13.1% increase in total revenues after accounting for inflation.⁶⁶ Municipal revenues peaked in 2008 at \$1.49 million, and were at their lowest in 2002, at \$104,332. Between 2000 and 2003, Alakanuk collected an annual average of \$30,951 in State Revenue Sharing. In addition, the community collected approximately \$130,000 in Community Revenue Sharing in both 2009 and 2010. Federal and state grants received between 2000 and 2010 included \$131,160 in federal disaster relief for flood and erosion mitigation (Table 2).

⁶⁶ Inflation calculated using Anchorage CPI for 2010 from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Alakanuk From 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$798,771	\$88,872	\$29,000	n/a
2001	\$816,428	\$112,800	\$27,556	n/a
2002	\$104,322	\$56,579	\$27,600	n/a
2003	\$715,566	n/a	\$39,650	n/a
2004	\$645,584	\$0	-	n/a
2005	\$363,661	\$95,259	-	n/a
2006	\$365,615	\$92,532	-	n/a
2007	\$945,982	\$57,463	-	n/a
2008	\$1,492,488	\$57,463	-	\$47,080
2009	\$858,364	n/a	\$131,095	\$41,080
2010	\$1,168,441	\$150,981	\$130,179	\$43,000

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

A state-owned and -managed 2,200-ft long by 55-ft wide gravel airstrip is available. Alakanuk is easily accessible from the Yukon River and Bering Sea by barge and riverboat. Most passengers and mail arrive by air. There are no roads connecting Alakanuk with other population centers in the region, but ice roads are used in winter. Snowmobiles and boats are used for local travel.⁶⁷ Alakanuk is approximately 8 mi from Emmonak and 12 mi from Sheldon Point. Roundtrip airfare between Anchorage and Alakanuk in June 2012 was \$840.⁶⁸

*Facilities*⁶⁹

The city operates the piped water and sewer system and the central watering point. Approximately 90% of homes are connected. There is a sewage lagoon available for individuals to dump their “honeybuckets”. The city council is the policy-making body for the utility. Water

⁶⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁸ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

⁶⁹ See footnote 67.

is derived from the Alakanuk Slough and is treated, stored in a tank, and piped to most of the community. The landfill is active.

In a survey conducted by the AFSC in 2011, community leaders reported that port facilities in Alakanuk include 125 ft of dock space capable of mooring vessels up to 100 ft in length, although typically only vessels under 35 ft in length homeport in the community. In addition, facilities are equipped to handle rescue vessels, hazardous materials, cargo vessels, and fuel barges. Facilities in progress as of 2010 included a barge landing area, new dock space, dock improvements, new pilings, broadband internet, and roads. Fisheries related businesses and services located within the community include commercial and recreational fishing moorage, dry dock storage, boat fuel sales, and fishing gear storage. Public services available in the community include medical services, food bank, subsidized housing, sauna, and washeteria.

*Medical Services*⁷⁰

Medical services are provided by the Alakanuk clinic, a primary care facility and Community Health Aid Program (CHAP) site. Long-term and acute care is provided in Nome and Bethel.

*Educational Opportunities*⁷¹

There is currently one school in Alakanuk providing pre-school through twelfth grade instruction. As of 2011, there were 229 students enrolled and 16 teachers.

Involvement in North Pacific Fisheries

*History and Evolution of Fisheries*⁷²

The history and evolution of fisheries in Alakanuk is largely based on subsistence and commercial fishing within the Yukon Delta region. The salmon fishery is the largest commercial fishery in which residents participate, although other finfish species are targeted as well.

An attempt at creating a commercial salmon fishery at the mouth of the Yukon River first occurred between 1918 and 1924; however, it was halted because of negative impacts to upriver subsistence fisheries. A smaller commercial salmon fishery began in the 1930s and was later expanded in the 1960s. Commercial fishing peaked in the 1970s and 1980s and became integrated with the region's subsistence economy. Local residents held the majority of commercial fishing permits and operated within small family-based groups. Catch was sold to third-party buyers and income was reinvested into the local subsistence economy.

Salmon runs crashed in the 1990s with near complete shutdowns of the Yukon River commercial fisheries. Because of low salmon runs and strict escapement rules, many local commercial fishermen were unable to fish their permits and much of the Yukon drainage was declared an economic disaster area in 1998 and 2001.

⁷⁰ Ibid.

⁷¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁷² Wolfe, R. J.; Scott, C. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

In a survey conducted by the AFSC in 2011, community leaders reported that commercial salmon seasons typically run from June through August. The community itself participates in the fisheries management process through assigning representatives to ADF&G regional fisheries advisory/working groups as well as participating in the Federal Subsistence Board/Regional Advisory Council process. In addition, the community is eligible to participate in the Community Development Quota (CDQ) program and is represented by the Yukon Delta Fisheries Development Association (YDFDA). The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.⁷³ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ. Alakanuk is located within Federal Reporting Area 514, International Pacific Halibut Commission (IPHC) regulatory area 4E, and the Bering Sea Sablefish Reporting District.

Processing Plants

According to the 2010 ADF&G Intent to Operate list, Alakanuk did not have a registered processing plant. Kwikpak operates a seafood processor located in Emmonak, 8 mi to the northeast.

Fisheries-Related Revenue

The amount of municipal fisheries-related revenue Alakanuk received between 2000 and 2010 was minimal, indicating that it does not constitute a significant part of Alakanuk's annual budget. In 2010, \$99 was collected from Shared Fisheries Business Taxes, and \$9,000 was collected from public dock usage fees. In a survey conducted by the AFSC in 2011, community leaders reported that the community did not receive any funds from their representative CDQ entity in 2010, nor does the community administer any fisheries related fees to support local fisheries infrastructure. Information regarding fisheries-related revenue can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Since the 1990s, commercial fishing has been relatively depressed due to fishing restrictions and low fish runs. In addition, there are limited buyers on the Lower Yukon, making it difficult to sell landings. Seafood processors at Emmonak and St. Mary's provide the only market for Lower Yukon commercial fishermen, which is a significant reduction in processing capacity compared to previous years. Salmon prices are also depressed compared to previous years, and many residents claim they can no longer make a living from commercial fishing alone. Additional pressures including gear restrictions, fishery closures, and fuel prices contribute to economic hardships in the area.

⁷³ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

In 2010, 83 residents, or 12.3% of the population, held a total of 84 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC). Salmon made up 88% of CFEC permits issued in 2010, compared to 92% in 2000. In that same year, “other” finfish made up 7%, compared to 0% in 2000; herring made up 4%, compared to 5% in 2000; and crab made up 1%, compared to 3% in 2000. One resident held one License Limitation Program (LLP) groundfish permit and five residents held five LLP crab permits in 2010. No LLP permits were actively fished that year. In addition, no residents held halibut, sablefish, or crab quota share between 2010 and when the programs began. Fisheries prosecuted by residents of Alakanuk in 2010 included Lower Yukon gillnet salmon and statewide set gillnet fresh water finfish.⁷⁴

Residents held 56 commercial crew licenses in 2010, compared to 83 in 2000. In addition, residents held majority ownership of 13 commercial vessels, compared to 7 in 2000. Overall, approximately 64% of CFEC permits held were actively fished in 2010, compared to 70% in 2000. This varied by species from 68% of salmon permits being fished, to 67% of other finfish permits. No crab or herring permits were actively fished in 2010. No landings were made in Alakanuk between 2000 and 2010. Landings made by residents of Alakanuk were considered confidential in 2010. In 2007, 16,649 lbs of salmon were landed valued at \$15,941 ex-vessel; or \$17,884 after adjusting for inflation⁷⁵. Total pounds landed and ex-vessel revenue peaked in 2006, when 21,324 lbs of salmon was valued at \$19,286 ex-vessel; or \$22,129 after accounting for inflation.⁷⁶

In a survey conducted by the AFSC in 2011, community leaders reported that the number of commercial vessels in the community was about the same in 2010 as it was in 2005. Gillnets are typically the only gear type used on commercial vessels homeporting in Alakanuk. Information regarding commercial fisheries trends can be found in Tables 4 through 10.

⁷⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁷⁵ Inflation calculated using 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>

⁷⁶ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Alakanuk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$194	\$68	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	\$68	n/a	\$112	n/a	n/a	n/a	\$77	\$78	\$95	\$99
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$9,000*
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$194	\$136	n/a	\$112	n/a	n/a	n/a	\$77	\$78	\$95	\$9,099*
Total municipal revenue⁵	\$798,771	\$816,428	\$104,322	\$715,566	\$645,584	\$363,661	\$365,615	\$945,982	\$1.49 M	\$858,364	\$1.17 M

Note: n/a indicates that no data were reported for that year.

* Information taken from the 2011 AFSC Alaska Community Survey.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Alakanuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	1	1	1	1	1	1	1	1	1
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	0	1	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	4	4	5	5	5	5	5	5	5	5	5
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	5	5	5	5	5	5	5	5	5
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	3	3	6	3	3	3	2	2	2	2	1
	Fished permits	0	0	1	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	17%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	3	3	5	3	3	3	2	2	2	2	1
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	4	4	4	4	3	3	4	4	4	4	3
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	4	4	3	3	4	4	4	4	3

Table 4 cont'd. Permits and Permit Holders by Species, Alakanuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	1	1	9	8	5	4	13	6
	Fished permits	0	0	0	0	0	6	3	4	3	5	4
	% of permits fished	n/a	n/a	n/a	0%	0%	67%	38%	80%	75%	38%	67%
	Total permit holders	0	0	0	1	1	9	8	5	4	13	6
Salmon (CFEC) ²	Total permits	80	76	78	78	82	88	84	84	82	79	74
	Fished permits	61	0	65	66	69	79	73	68	60	50	50
	% of permits fished	76%	0%	83%	85%	84%	90%	87%	81%	73%	63%	68%
	Total permit holders	86	77	82	82	87	93	93	89	88	88	82
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>87</i>	<i>83</i>	<i>88</i>	<i>86</i>	<i>89</i>	<i>103</i>	<i>98</i>	<i>95</i>	<i>92</i>	<i>98</i>	<i>84</i>
	<i>Fished permits</i>	<i>61</i>	<i>0</i>	<i>66</i>	<i>66</i>	<i>69</i>	<i>85</i>	<i>76</i>	<i>72</i>	<i>63</i>	<i>55</i>	<i>54</i>
	<i>% of permits fished</i>	<i>70%</i>	<i>0%</i>	<i>75%</i>	<i>77%</i>	<i>78%</i>	<i>83%</i>	<i>78%</i>	<i>76%</i>	<i>68%</i>	<i>56%</i>	<i>64%</i>
	<i>Permit holders</i>	<i>86</i>	<i>77</i>	<i>83</i>	<i>82</i>	<i>87</i>	<i>98</i>	<i>98</i>	<i>90</i>	<i>89</i>	<i>92</i>	<i>83</i>

Note: n/a indicates that no data were reported for that year.

¹ National Marine Fisheries Service. (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Alakanuk: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Alakanuk ²	Total Net Lbs Landed In Alakanuk ^{2,5}	Total Ex-Vessel Value Of Landings In Alakanuk ^{2,5}
2000	83	0	0	7	7	0	0	\$0
2001	3	0	0	6	8	0	0	\$0
2002	48	0	0	10	12	0	0	\$0
2003	82	0	0	10	12	0	0	\$0
2004	87	0	0	9	11	0	0	\$0
2005	11	0	0	15	16	0	0	\$0
2006	85	0	0	14	15	0	0	\$0
2007	76	0	0	24	21	0	0	\$0
2008	74	0	0	18	15	0	0	\$0
2009	50	0	0	20	18	0	0	\$0
2010	56	0	0	13	14	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Alakanuk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Alakanuk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Alakanuk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Alakanuk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Alakanuk Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	15,808	21,324	16,649	--	--	--
<i>Total²</i>	--	--	--	--	--	15,808	21,324	16,649	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	\$13,626	\$19,286	\$15,941	--	--	--
<i>Total²</i>	--	--	--	--	--	\$13,626	\$19,286	\$15,941	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Because of its remote location, non-Alaska resident sport fishing in Alakanuk is limited. In a survey conducted by the AFSC in 2011, community leaders reported that local private anglers target chum, Chinook, and coho salmon. There were no sport fish guides or charter businesses operating in the community between 2000 and 2010. In addition no sport fishing licenses were sold within the community during that time. Residents held 129 sport fishing licenses in 2010, compared to 71 in 2000.

Alakanuk is located within the Yukon River Drainage ADF&G Harvest Survey Area which includes all Yukon River drainages from the south side of the Brooks Range to the Bering Sea; and from the Canadian border to the Bering Sea; and all drainages of the Koyukuk and Alatna Rivers. In 2010, there were 9,134 total freshwater angler days fished, compared to 11,223 in 2000. In that year, non-Alaska residents accounted for 43.6% of angler days fished, compared to 29.8% in 2000. ADF&G Harvest Survey data on species targeted by local private anglers are unavailable. Information regarding sport fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Alakanuk: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Alakanuk ²
2000	0	0	71	0
2001	0	0	59	0
2002	0	0	84	0
2003	0	0	23	0
2004	0	0	108	0
2005	0	0	55	0
2006	0	0	98	0
2007	0	0	51	0
2008	0	0	93	0
2009	0	0	104	0
2010	0	0	129	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	n/a	89	5,761	9,194
2003	n/a	17	3,344	5,756
2004	17	n/a	5,479	7,613
2005	n/a	n/a	4,182	4,783
2006	n/a	n/a	3,607	7,816
2007	n/a	n/a	3,168	8,226
2008	n/a	n/a	2,573	10,400
2009	n/a	n/a	2,969	7,639
2010	n/a	n/a	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

*Subsistence Fishing*⁷⁷

Residents of Alakanuk rely on subsistence resources extensively. In a survey conducted by the AFSC in 2011, community leaders listed fish, seals, and moose as the three most important subsistence resources targeted by residents. Salmon are a principle subsistence resource for Lower Yukon residents. Between 1961 and the 1980s, the total annual subsistence catch of Chinook salmon increased from approximately 10,000 to 20,000 fish, to approximately 40,000 to 50,000 fish. Between 1990 and 2008, Chinook harvests remained relatively stable. Annual chum salmon harvests in the area typically totaled over 150,000 fish before 1989. By 2000, the annual harvest fell to 19,300. Although chum runs have recovered, annual catches do not meet the number necessary for subsistence uses. Total coho salmon harvests increased from around 5,000 to 10,000 fish in the 1960s, to 30,000 to 40,000 by the 1980s. Coho harvests declined during the 1990s to levels barely supporting local subsistence needs.

In 2008, Alakanuk residents reported harvesting 9,193 salmon total, compared to 8,002 salmon in 2000. Reported salmon harvests peaked in 2007 at 11,105 fish. Gill nets are the dominant gear type used in harvesting salmon. In a 2008 survey, 75% of Alakanuk respondents reported problems meeting subsistence needs, and 65% reported that fewer salmon had caused changes for households. Fish camps are less popular with Lower Yukon communities, and only 15% of surveyed residents reported using them. This may be attributed to decline in fish trap and fish wheel use by Lower Yukon residents, reducing to need to maintain traps from a remote location. Declining commercial fishing activity and increasingly common fishery closures might also have contributed to the declining use of fish camps.

Many families on the Lower Yukon River prefer to harvest Chinook and summer chum salmon soon after river ice break-up. Additional subsistence harvesting also takes place as needed during commercial fishing seasons. Management practices typically try to limit harvesting during early runs following break-up in order to achieve escapement goals early; while still allowing opportunities for subsistence harvesting. However, Alakanuk residents report that schedules often fall short of supplying subsistence users with sufficient salmon.

Per capita harvest of wild foods was 322 lbs in 2007. Chinook salmon accounted for 13.8% of harvested wild foods. In addition, summer chum accounted for 22.3%, fall chum accounted for 9.7%; and coho salmon accounted for less than 2.0%. Finally, terrestrial mammals accounted for 18.2% while marine mammals accounted for 20.2% of wild food harvested that year. Halibut are not a substantial contributor to Alakanuk's subsistence economy. Only one resident held a Subsistence Halibut Registration Certificate (SHARC) between 2006 and 2008. No halibut was reported harvested during those years. In addition, an estimated 106 beluga whales were harvested between 2000 and 2006, with beluga whale harvests peaking in 2005 at 37 whales. According to ADF&G's *Community Subsistence Information System*,⁷⁸ residents have also harvested or used bearded seal, ringed seal, spotted seal, Steller sea lion, blackfish, whitefish, burbot, cisco, eel, herring, Pacific cod, pike, sculpin, sheefish, smelt, and stickleback. Information regarding subsistence resources can be found in Tables 12 through 15.

⁷⁷ Wolfe, R. J.; Scott, C. (2010). *Continuity and Change in Salmon Harvest Patterns, Yukon River Drainage, Alaska*. Final Report for Study 07-253, U.S. Fish and Wildlife Service.

⁷⁸ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Alakanuk: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Alakanuk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	152	32	1,109	6,771	84	38	n/a	n/a	n/a
2001	144	45	973	7,024	414	n/a	n/a	n/a	n/a
2002	131	39	1,773	7,860	183	130	n/a	n/a	n/a
2003	126	30	1,712	5,768	258	n/a	n/a	n/a	n/a
2004	124	58	1,328	7,569	209	233	n/a	n/a	n/a
2005	123	51	860	6,314	322	49	n/a	n/a	n/a
2006	123	47	690	8,414	101	115	n/a	n/a	n/a
2007	125	54	1,257	8,959	857	32	n/a	n/a	n/a
2008	123	48	1,238	7,304	157	494	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Alakanuk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	1	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Alakanuk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	9	n/a	n/a	n/a	n/a	n/a	n/a
2001	13	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	32	n/a	n/a	n/a	n/a	n/a	n/a
2005	37	n/a	n/a	n/a	n/a	n/a	n/a
2006	15	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders expressed concern over regulations pertaining to salmon bycatch in the Bering Sea pollock fishery. Specifically, community leaders expressed concern over the rolling “hot spot” system as bycatch limitation.

Brevig Mission (BREH-vig)



People and Place

*Location*⁷⁹

Brevig Mission is located at the mouth of Shelman Creek on Port Clarence, 5 mi northwest of Teller, 65 mi northwest of Nome, and 590 mi northwest of Anchorage. The area encompasses 2.6 sq mi of land and 0.1 sq mi of water. Brevig Mission was incorporated as a Second-class city in 1969, is located in the Nome Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*⁸⁰

In 2010, there were 388 residents, ranking Brevig Mission 140th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 96.0%. Between 2000 and 2009, the population grew by 29.7% with an average annual growth rate of 1.7%, well above the state average annual growth rate of 0.75% and indicative of steady growth. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there were eight seasonal or transient workers living in the community in 2010. Brevig Mission typically has seasonal or transient residents between August and May. In addition, the population of Brevig Mission reaches its annual peak between October and December although very little of that peak attributed to employment in the fishing sectors. Information regarding population trends can be found in Table 1.

The racial composition of Brevig Mission was predominately Inupiat Eskimo in 2010.⁸¹ In that year, 91.5% of residents identified themselves as American Indian or Alaska Native, compared to 90.6% in 2000; 4.6% identified themselves as White, compared to 8.0% in 2000; 0.5% identified themselves as Black or African American, compared to 0.0% in 2000; 2.8% identified themselves as two or more races, compared to 1.4% in 2000; and 0.5% identified themselves as some other race, compared to 0.0% in 2000. In addition, 0.5% of residents identified themselves as Hispanic or Latino, compared to 0.7% in 2000. Information regarding trends in Brevig Mission's racial and ethnic composition can be found in Figure 1.

In 2010, the average household size was 4.17, compared to 3.7 in 1990 and 4.06 in 2000. In addition, the number of household units in that year was 103, compared 64 in 1990 and 76 in 2000. Of the households surveyed in 2010, 30% were owner-occupied, compared to 80% in 2000; 60% were renter-occupied, compared to 9% in 2000; 9% were vacant, compared to 4% in 2000; and 1% were occupied seasonally, compared to 7% in 2000. There were no reports of residents living in group quarters between 1990 and 2010.

⁷⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸¹ See footnote 79.

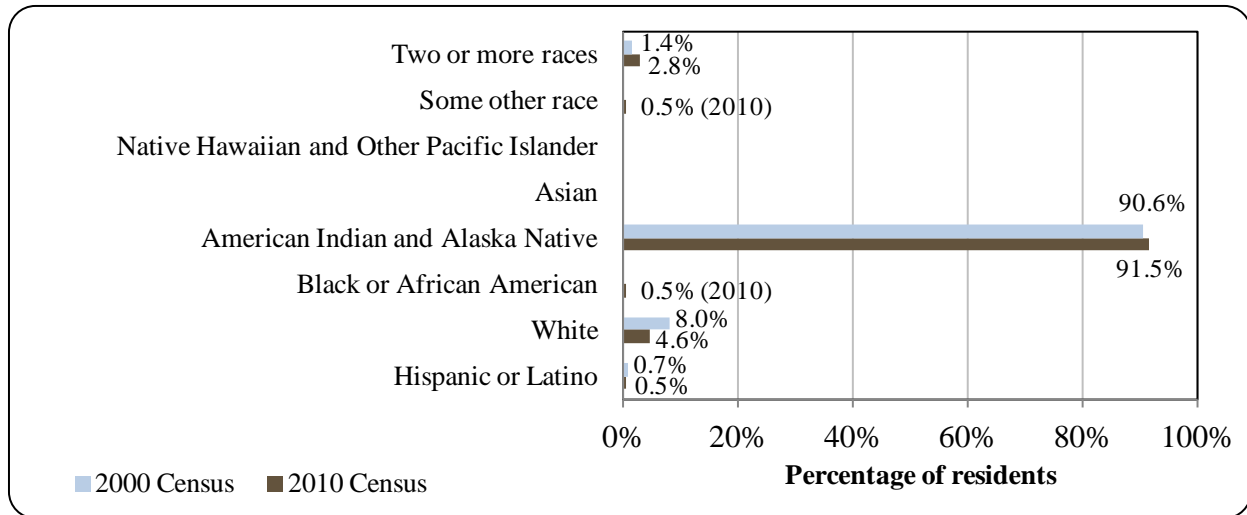
Table 1. Population in Brevig Mission from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	198	-
2000	276	-
2001	-	285
2002	-	308
2003	-	313
2004	-	319
2005	-	328
2006	-	325
2007	-	328
2008	-	350
2009	-	358
2010	388	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Brevig Mission: 2000-2010 (U.S. Census).

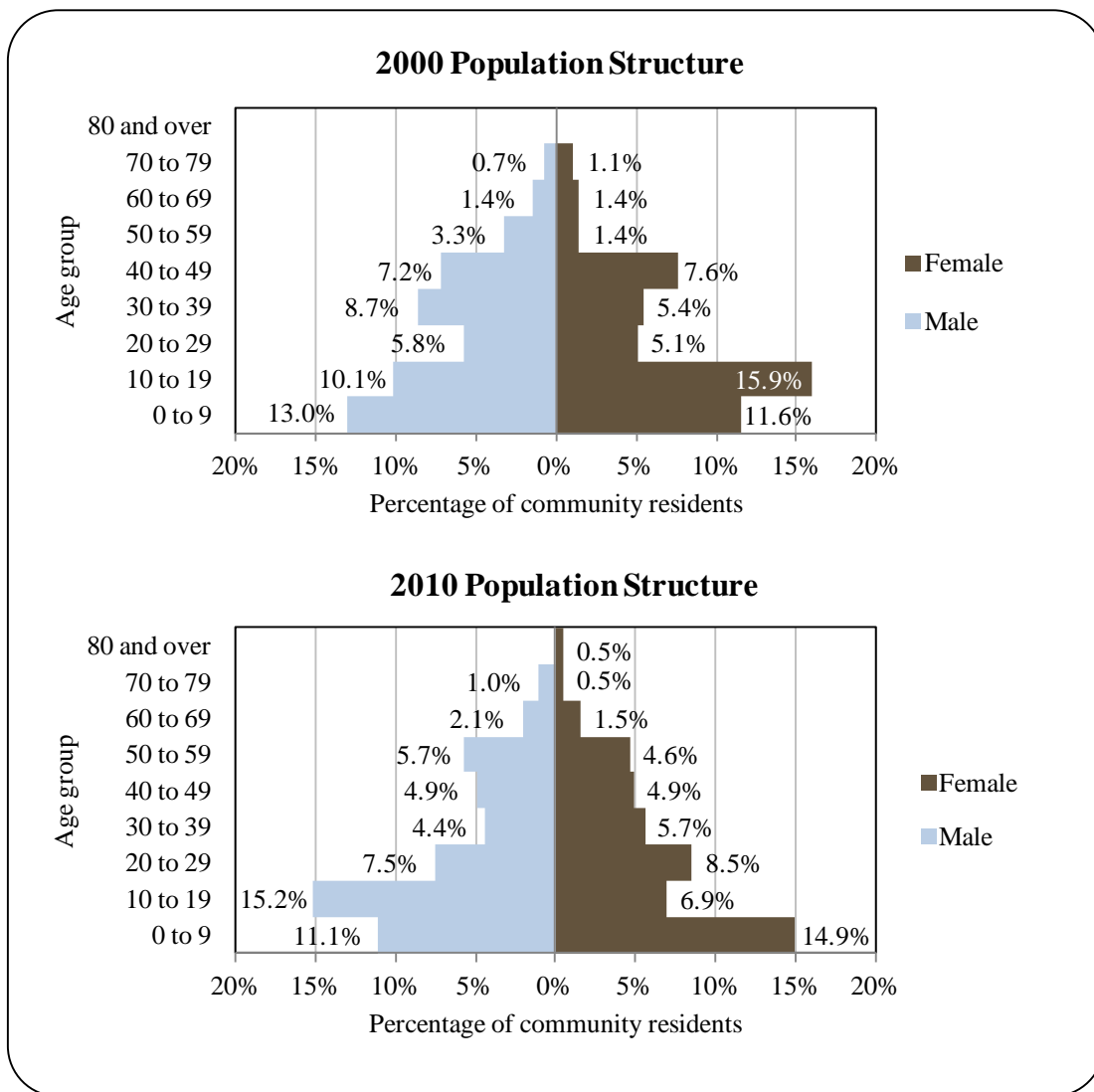


Gender distribution in Brevig Mission was relatively even at 51.8% male and 48.2% female. This was similar to the distribution statewide (52.0% male, 48.0% female) and slightly less even than the distribution in 2000 (50.4% male, 49.6% female). The median age that year was 20.8 years, which was significantly younger than the statewide median of 33.8 years and slightly older than the 2000 median of 19.6 years.

The population structure in both 2000 and 2010 was similarly expansive. In 2010, 48.1% of residents were under the age of 20, compared to 50.6% in 2000; 5.6% were over the age of 59, compared to 4.6% in 2000; 30.2% were between the ages 30 and 59, compared to 33.6% in 2000; and 16.0% were between the ages of 20 and 29, compared to 10.9% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 10 to 19 range (15.2% male, 6.9% female), followed by 0 to 9 (14.9% female, 11.1% male) and 30 to 39 (5.7% female, 4.4% male). Of those three, the greatest relative gender difference occurred within the 10 to 19 range. Information regarding trends in Brevig Mission’s population structure can be found in Figure 2.

Figure 2. Population Age Structure in Brevig Mission Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, The U.S. Census' 2006-2010 American Community Survey (ACS)⁸² estimated that 73.6% of the population aged 25 and older held a high school diploma or higher, compared to an estimated 90.7% of Alaska residents overall. Also in 2010, an estimated 11.6% had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 14.7% had a ninth grade to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 13.2% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 3.9% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 2.3% had a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall. No residents were estimated to hold an Associate's degree in 2010.

*History, Traditional Knowledge, and Culture*⁸³

The Brevig Mission area was occupied for centuries by Kauwerak Eskimos who lived in migratory hunting and fishing communities. Trade routes in the area were formed with Siberia, Little Diomed, and King Island prior to European occupation. In 1892, the Teller Reindeer Station was opened near Brevig Mission and was operated until 1900. Norwegian Reverend Tollef L. Brevig, a Lutheran missionary and the community's namesake, began serving the reindeer station in 1894 as pastor and teacher to the Laplanders and Eskimos in the area. A Lutheran mission was constructed at the present village site in 1900, and the village became known as Teller Mission (later changed to Brevig Mission). In 1934, 34 muskoxen were captured in Greenland and brought to Nunivak Island, where populations grew to around 750 by 1968. By the 1960s, muskoxen were introduced to the Seward Peninsula. In 1961, a Long Range Aids to Navigation (LORAN) station was built at Port Clarence across the bay, which housed around two dozen U.S. Coast Guard personnel year-round until it was decommissioned in 2010. During its time, some debate surrounded the station regarding its affect on beluga whale migration patterns. In 1963, a post office was established and the community was incorporated in 1969. Reindeer provided an economic base until 1974 when the industry declined. Today, Brevig Mission is a predominately Inupiat Eskimo village with a subsistence lifestyle. The sale, importation, and possession of alcohol are prohibited.

West of the existing village, there are the remains of an old village site located near the ocean bluff. The site contains house pits and cache remains and efforts to catalog the site are underway. The community maintains one property on the National Register of Historic Places (NRHP). The Teller Mission Orphanage, a Lutheran mission orphanage, was built in 1917 to replace the original building built by T. L. Brevig in 1907. The building was used as an orphanage for children in the area until 1933, when missionaries conceded that they were unable to provide the traditional subsistence education the children needed to survive in the area.⁸⁴

⁸² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸³ Kawerak, Inc. (2007). *Brevig Mission Local Economic Development Plan 2007-2012*. Retrieved January 10, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Brevig%20Mission-EP-2007.pdf>.

⁸⁴ National Park Service (n.d.). *National Register of Historic Places*. Retrieved January 10, 2012 from: <http://nrhp.focus.nps.gov/natregsearchresult.do?fullresult=true&recordid=22>.

Natural Resources and Environment

Brevig Mission has a maritime climate with continental influences when the Bering Sea freezes. Summer temperatures average 44 to 57 °F (7 to 14 °C). Winter temperatures average -9 to 8 °F (-23 to -13 °C). Annual precipitation averages 11.5 in, and annual snowfall averages 50 in. Port Clarence is generally ice-free between early June and mid-November.⁸⁵

The community lies on a gently sloping coastal plain, southwest of Red Mountain. Soils in the area are generally poorly drained mixtures of clay, sand, and gravel, with a peaty surface layer. Permafrost underlies much of Brevig Mission at variable depths. Vegetation on the Seward Peninsula consists of upland and lowland tundra. Upland areas are characterized by alpine dryas-lichen tundra and barrens. Lowland areas are characterized by moist sedge-tussock tundra. Patches of low-growing ericaceous and willow-birch shrubs occur in better-drained areas. There are very few trees in the area and vegetation is generally limited to shrubs, lichens, mosses, bushes, and grasses. Harvestable vegetation in the area includes a variety of berries, roots, mushrooms, and greens. Wildlife in the area includes a variety of terrestrial and aquatic life. Terrestrial wildlife includes moose, caribou, bear, wolf, lynx, wolverine, shorebirds and other waterfowl. Aquatic wildlife includes seal, beluga whale, all five species of Pacific salmon, whitefish, lingcod, tomcod, smelt, northern pike, and trout. No critical habitat areas, refuges, or sanctuaries are located in the area.⁸⁶

Natural hazards primarily include coastal erosion and flooding, riparian flooding, storm surges, and snow-drifting. During the spring breakup, both Reindeer Creek and Shelman Creek flood and are a potential threat to nearby properties. Coastal flooding due to storm surges is also a threat as the community lies within a designated 100-year floodplain. Snow-drifting occurs as a result of little vegetation and prevailing winds. While the community lacks a snow fence, impacts of snowdrifts are minimized by the community's staggered building layout.⁸⁷

Mineral resources in the area include a gold project under development outside of Nome. As of 2010, NovaGold Resources Inc.'s Rock Creek Mine was under temporary closure resulting from capital and permitting issues.⁸⁸ There is an estimated 320,000 ounces of gold reserves at the Rock Creek site.⁸⁹

According to the Alaska Department of Environmental Conservation (DEC), there are no significant environmental remediation sites active in Brevig Mission.⁹⁰

Current Economy⁹¹

Brevig Mission's economy is based primarily on subsistence activities supported by a seasonal and part-time cash economy. Year-round jobs are scarce, unemployment is high, and

⁸⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁶ See footnote 83.

⁸⁷ Northern Management. (2003). *Brevig Mission Land Use and Capital Plan*. Retrieved January 10, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Brevig%20Mission-LUP-2003.pdf>.

⁸⁸ AND. (2008). *NovaGold Forced to Suspend Operation of Rock Creek Mine*. Retrieved January 10, 2012 from: <http://www.adn.com/2008/11/24/600762/novagold-forced-to-suspend-operation.html>.

⁸⁹ Alaska Department of Natural Resources. (2010). *Alaska's Mineral Industry 2010*.

⁹⁰ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 20, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Western>.

⁹¹ Unless otherwise noted, all monetary data are reported in nominal values.

seasonal jobs in mining and construction have become limited due to complications concerning the Rock Creek Mine. Top employers in 2010⁹² included the City of Brevig Mission, Bering Strait School District, Brevig Mission Native Corp., Brevig Mission Traditional Council, Kawerak Inc., Norton Sound Health Corp., Norton Sound Economic Development Corp., and Bering Straits Regional Housing Authority.

In 2010,⁹³ the estimated per capita income was \$7,898 and the estimated median household income was \$29,750, compared to \$7,278 and \$21,875 in 2000, respectively. However, after accounting for inflation by converting the 2000 values into 2010 dollars,⁹⁴ the real per capita income (\$9,570) and real median household income (\$28,765) indicate a decline in individual earnings. In 2010, Brevig Mission ranked 296th of 305 Alaskan communities from which per capita income was estimated, and 248th of 299 Alaskan communities from which median household income was estimated; placing the community among the lowest in the state in terms of personal and household income.

Brevig Mission's small population size may have prevented the ACS from accurately portraying economic conditions.⁹⁵ Another way of understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$2.12 million in total wages in 2010.⁹⁶ When matched with the population in 2010, the per capita income equals \$5,462 suggesting that caution should be used when comparing 2010 ACS estimates with the 2000 Census. In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁹⁷ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS estimates, 67.9% of the population aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 23.9%, compared to an estimated 5.9% statewide; and 43.2% of residents were estimated to be living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. There is a possibility that unemployment and poverty statistics are inaccurate given the small population of Brevig Mission. Another estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 35.4%.

Of those employed in 2010, an estimated 65.9% worked in the public sector, an estimated 33.0% worked in the private sectors, and an estimated 1.1% were self-employed. By industry, most (51.1%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by public administration sectors (17.0%); and transportation, and utilities sectors (12.5%). By occupation type, most (35.2%) employed residents were estimated to hold management or professional positions that year; followed by

⁹² Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹³ U.S. Census. American Community Survey 2006-10 estimates.

⁹⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁹⁵ See footnote 82.

⁹⁶ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

⁹⁷ Denali Commission. (2011). Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

service positions (25.0%); sales or office positions (21.6%); production, transportation, or material moving positions (14.8%); and natural resources, construction, or maintenance positions (3.4%). Between 2000 and 2010, there were notable proportional increases in public administration, transportation, warehousing, and utilities sectors; while there were notable decreases in arts, entertainment, recreation, accommodation, and food service sectors.

No individuals characterized themselves as working in natural resource based industries that include fishing in 2010, and no residents held commercial fishing permits between 2000 and 2010. Information regarding employment trends can be found in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Brevig Mission (U.S. Census).

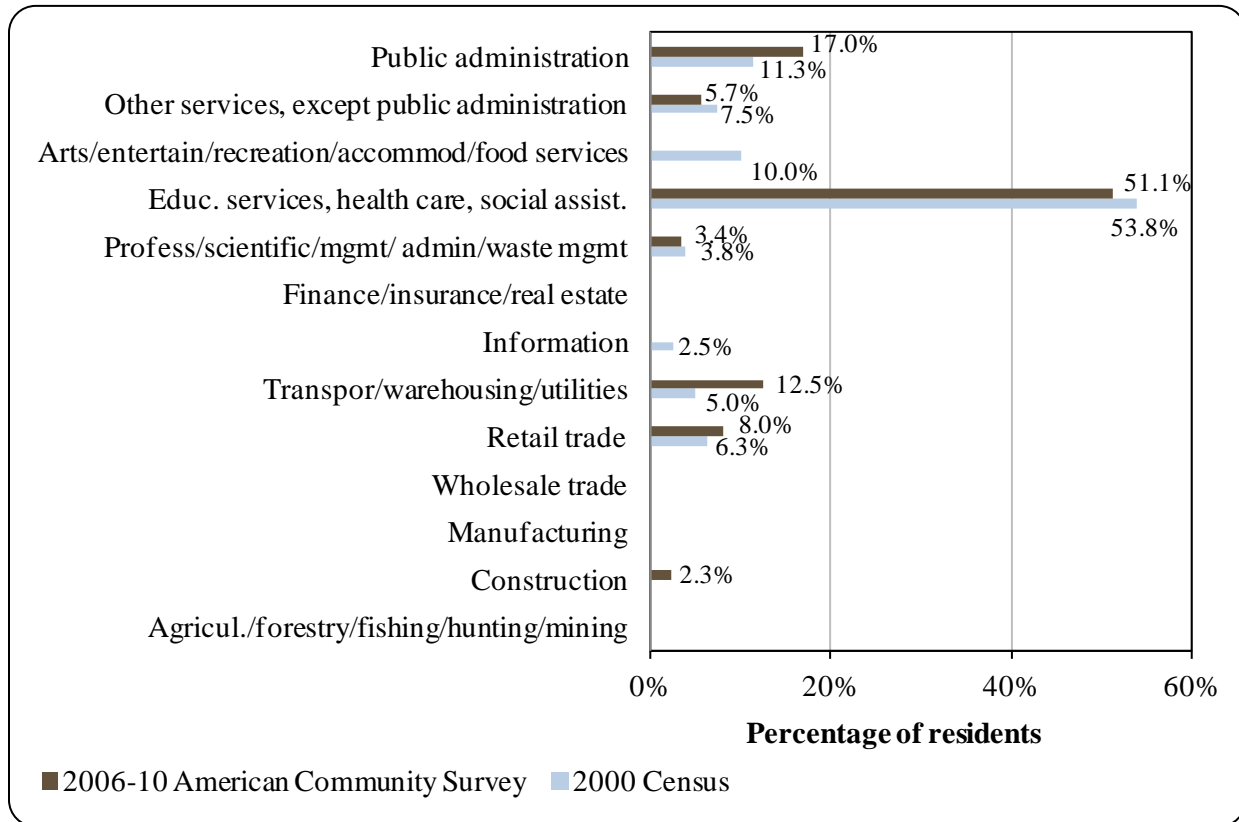
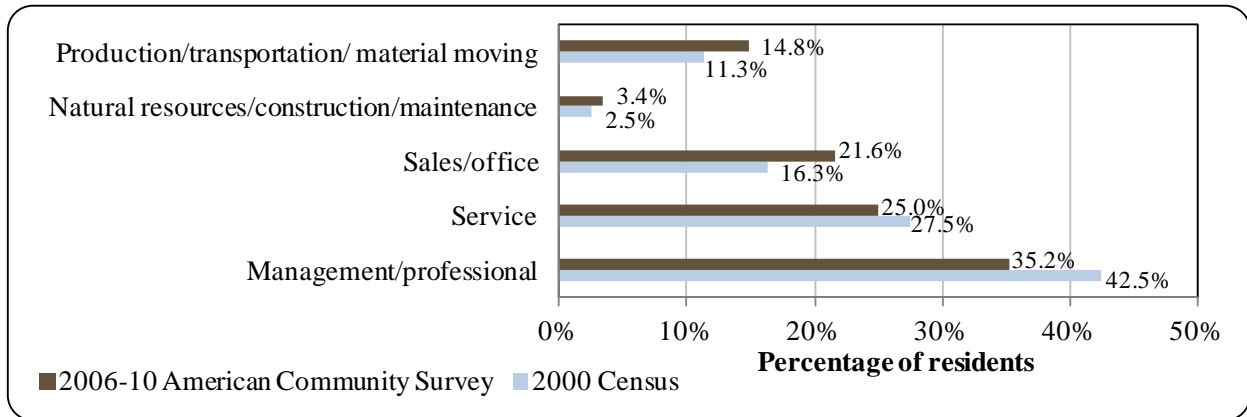


Figure 4. Local Employment by Occupation in 2000-2010, Brevig Mission (U.S. Census).



Governance⁹⁸

Brevig Mission is a Second-class city with a mayoral form of government. In addition, there is a U.S. Bureau of Indian Affairs (BIA) recognized Tribal village council (Native Village of Brevig Mission) and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Brevig Mission Native Corporation). Bering Straits Native Corporation is the regional ANCSA for-profit corporation.

In 2010, the city administered a 3% sales tax. When adjusted for inflation,⁹⁹ municipal revenues increased by 43.3% between 2000 and 2010, from \$710,818 to \$1.32 million. In 2010, most local revenues were collected from gaming fees, water/sewer service charges, equipment rentals, Alaska Village Electric Cooperative reimbursements, and leasing rents. Most outside revenues were collected from Community Revenue Sharing, Norton Sound Economic Development Corporation (NSED) benefits, and payments in lieu of taxes. Municipal revenues peaked in 2008 and 2009, although peaks were largely attributed to sizable project grants. Locally generated operating revenue remained relatively constant between 2003 and 2010.

In 2010, sales tax revenues accounted for 2.4% of total revenue, compared to 2.4% in 2000. State allocated Community Revenue Sharing accounted for 8.6% of municipal revenues in 2010, compared to 3.8% from State Revenue Sharing in 2000. Brevig Mission received approximately \$1.9 million in state and federal grants between 2000 and 2010 for fisheries-related projects. Funds awarded went to a bulk fuel project (\$1.4 million), subsistence activities (\$4,430), and several NSED projects (\$493,500). Information regarding municipal budget trends can be found in Table 2.

⁹⁸ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁹ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Brevig Mission from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$710,818	\$16,822	\$27,000	\$4,431
2001	\$719,757	\$21,659	\$30,000	n/a
2002	\$772,334	\$24,661	\$27,143	n/a
2003	\$2,064,713	\$29,146	\$27,143	\$35,000
2004	\$2,048,533	\$29,781	-	\$10,000
2005	\$1,514,900	\$29,430	-	\$38,000
2006	\$1,993,106	\$29,000	-	\$25,000
2007	\$2,685,661	\$23,030	-	\$141,999
2008	\$4,505,087	\$23,790	-	\$526,000
2009	\$5,146,912	\$26,552	\$112,904	\$998,500
2010	\$1,316,834	\$31,571	\$113,000	\$120,000

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*¹⁰⁰

There are no maintained roads connecting Brevig Mission with other villages. Access to the community is limited to water and air; however, in the winter it can also be accessed by ice road or winter trail. Teller, nine mi south, is connected to Nome via the Nome/Teller Highway which is seasonally maintained by the state. There is a state-owned 3000-ft long by 100-ft wide gravel airstrip with a 2,110-ft by 75-ft wide gravel crosswind strip allowing year-round, regular air service from Nome. Flights can also be chartered from Nome and Teller. Roundtrip airfare¹⁰¹ between Anchorage and Nome in June 2012 was \$442. Roundtrip airfare between Nome and Brevig Mission was \$245.¹⁰²

¹⁰⁰ Kawerak, Inc. (2007). *Brevig Mission Local Economic Development Plan 2007-2012*. Retrieved January 10, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Brevig%20Mission-EP-2007.pdf>.

¹⁰¹ Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

¹⁰² Bering Air. (n.d.) Retrieved November 22, 2012 from: <http://www.beringair.com/>.

*Facilities*¹⁰³

A piped water and sewer system was completed in 2002, and extensions were completed in 2007 connecting new housing units and the multi-purpose building. Water is supplied by two underground wells located near Shelmon Creek. Water is treated and stored in a 100,000-gallon tank, which is filled monthly. There is a Class-3 permitted landfill in the area managed by the City, and electricity is supplied by diesel generator. Brevig Mission community tank farm services the community's fuel needs, and fuel is barged in during the summer months. There are often fuel shortages in the community during winter months due to increased demand over the years. Brevig Mission's communications services include in-state and long-distance telephone services, internet, satellite and cable television, and radio. Public safety services are provided by a local Village Public Safety Officer (VPSO).

Municipal offices are located in the same building as the "washeteria," as well as the recently constructed multi-purpose building which also houses the local search and rescue operations and community center. The City owns the Post Office building and the VPSO holding cell, and manages staff at the water plant, power plant, and clinic. The Brevig Mission Traditional Council also has offices in the new multi-purpose building. There is a public library at the school and internet is provided to the public via computers at the Traditional Council office. Additional public facilities include a bingo hall and Lutheran Church.

In a survey conducted by the AFSC in 2011, community leaders reported that facilities constructed or improved upon between 2000 and 2010 included airport facilities, water and sewer pipelines, diesel generator, sewage treatment, water treatment, alternative energy, waste disposal, community center/library, public safety, emergency response services, fire department, school, communications services, post office, and "washeteria." In addition, there were plans as of 2010 to improve existing port facilities including the construction of additional dock space and barge landing area, improvements to existing dock infrastructure, and improvement of dock utilities and access. Vessels up to 125 ft in length can use moorage in Brevig Mission, although there is no public moorage available for permanent or transient vessels. Fisheries-related businesses and services located in the community include fishing gear sales, boat fuel sales, and air taxi services. Residents go to Nome, Unalakleet, and Anchorage for businesses and services not available locally. Between 2005 and 2010, the community has seen a slight increase in the number of private boats and vessels shorter than 35 ft long visiting the community.

*Medical Services*¹⁰⁴

The Brevig Mission Clinic is a Primary Health Care facility and Community Health Aid Program (CHAP) site. Acute, long term and other specialized care is provided in Nome.

*Educational Opportunities*¹⁰⁵

The Brevig Mission School offers preschool through twelfth grade instruction. As of 2011, there were 126 students enrolled and 14 teachers employed.

¹⁰³ See footnote 100.

¹⁰⁴ See footnote 98.

¹⁰⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Brevig Mission has historically been a subsistence community, and still is to this day. Locals do not participate in commercial fisheries and there is limited recreational fishing. While opportunities to participate in commercial fisheries are limited, the community is committed to developing a local industry using a holistic approach which includes the creation of cultural, social, and youth programs, building a tourism economy, providing commercial fisheries/crabbing opportunities, and developing dock and harbor infrastructure. In a survey conducted by the AFSC in 2011, community leaders reported that a current challenge to building commercial fisheries in the community includes educating local youth in how to become active in the commercial fishing industry.

According to a survey conducted by the AFSC in 2011, community leaders reported that the community is involved in fisheries management processes through a representative who participates in North Pacific Fishery Management Council (NPFMC) committees or advisory groups, as well as a representative who participates in the Federal Subsistence Board or Federal Subsistence Regional Advisory Council process. The community is eligible to participate in the Community Development Quota (CDQ) program and is represented by the NSEDC. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹⁰⁶ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

The community is located in Federal Reporting Area 514, International Pacific Halibut Commission (IHPAC) Regulatory Area 4E, Bering Sea Sablefish Regulatory District, and Alaska Sport Fishing Survey Area W (Seward Peninsula-Norton Sound).

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list, Brevig Mission does not have a registered processing plant. The closest seafood processor is located in Nome.

Fisheries-Related Revenue

Between 2000 and 2010, Brevig Mission received revenue from raw fish taxes and Shared Fisheries Business Taxes. However, very little revenue was received from those sources during that time. In a survey conducted by the AFSC in 2011, community leaders reported that in 2010, the community received \$25,000 in grants and \$100,000 in special allocations from NSEDC. Information regarding fisheries-related revenue trends can be found in Table 3.

¹⁰⁶ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Residents of Brevig Mission did not participate in commercial fisheries in 2010. Between 2000 and 2010, there were no Commercial Fisheries Entry Commission (CFEC) permits, Federal Fisheries Permits (FFP), or License Limitation Program (LLP) permits issued to residents. In addition, no residents have held halibut, sablefish, or crab quota shares since those programs began.

Between 2000 and 2010, no landings were made in the community and no landings were reported by residents. Information regarding commercial fishing trends can be found in Tables 4 through 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Brevig Mission: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$200	n/a	\$100	\$174	\$69	\$70	n/a	\$200	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$58	\$120	\$174	n/a	\$69	\$176	\$212	\$165	\$89	\$66	\$82
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$258	\$120	\$274	\$174	\$138	\$246	\$212	\$365	\$89	\$66	\$82
Total municipal revenue⁵	\$710,818	\$719,757	\$772,334	\$2.06 M	\$2.05 M	\$1.51 M	\$1.20 M	\$2.69 M	\$4.51 M	\$5.15 M	\$1.32 M

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Brevig Mission: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Brevig Mission: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹ National Marine Fisheries Service. (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Brevig Mission: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Brevig Mission ²	Total Net Pounds Landed In Brevig Mission ^{2,5}	Total Ex-Vessel Value Of Landings In Brevig Mission ^{2,5}
2000	0	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	1	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	1	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	1	0	0	0	0	0	0	\$0
2008	1	0	0	0	0	0	0	\$0
2009	1	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Brevig Mission: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Brevig Mission: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Brevig Mission: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Brevig Mission: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Brevig Mission Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that no sport fishing takes place in Brevig Mission, although it is possible that they are referring to commercial sport fishing, as several residents held sport fishing licenses in 2010. Between 2000 and 2010, there were no active sport fish business locally registered or sport fish guide licenses held by residents. In 2010, 23 sport fishing licenses were sold in the community and 21 sport fishing licenses sold to residents, compared to 15 and 11 in 2000, respectively.

Brevig Mission is located in the Seward Peninsula-Norton Sound ADF&G Harvest Survey Area which includes all waters north of the Yukon River drainage; north and west of Pastol Bay and south of the Selawik River drainage. This area has seen fluctuations in the number of resident and non-Alaska resident saltwater angler days fished, however, 2010 was the lowest year for both on record with 34 resident angler days fished and 43 non-resident angler days fished. Saltwater angler days fished peaked in 2000 with 2,663 resident angler days fished, and 196 non-Alaska resident angler days fished.

In 2010, there were 10,533 total freshwater angler days fished, compared to 15,584 in 2000. In that year, non-Alaska residents accounted for 41.1% of freshwater angler days fished, compared to 24.3% in 2000. Total freshwater angler days fished peaked in 2008 at 21,340 although yearly totals varied greatly. Further information regarding recreational fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Brevig Mission: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Brevig Mission ²
2000	0	0	11	15
2001	0	0	13	14
2002	0	0	13	14
2003	0	0	11	25
2004	0	0	10	10
2005	0	0	10	10
2006	0	0	32	32
2007	0	0	24	27
2008	0	0	31	35
2009	0	0	16	22
2010	0	0	21	23

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	0	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

*Subsistence Fishing*¹⁰⁷

Subsistence fishing and hunting is a central part of life in Brevig Mission. In a survey conducted by the AFSC in 2011, community leaders reported that all local species of fish and marine mammals are harvested by resident subsistence users. In the spring when sea ice recedes, walrus, bearded seal, and a variety of birds are hunted. Seal meat is dried and the blubber is rendered, the dried meat then stored in oil. In the fall, a variety of seals are hunted. The common seal is hunted for skin and meat for feeding dogs, although some parts are consumed by humans. Bearded seals are used for meat and blubber. Walrus flippers and blubber are fermented and the rest, including intestines, kidneys, and blubber are frozen. Walrus ivory is often used to carve tools, jewelry, and various pieces of art. Birds caught in the area include Canadian geese, snow geese, emperor geese, brandt geese, eider duck, mallard ducks, pintail ducks, and ptarmigan. Eggs are also gathered. In the winter, moose and caribou provide meat which is dried or frozen. Very few people have access to the privately owned reindeer herds. Wolves and wolverine are hunted for skins. During the summer months, a variety of salmon are dried, salted, or smoked. Northern pike are also caught. In the winter, tomcod and smelt are caught using ice-fishing hooks. From May through September, various greens and roots are picked. In late August and September salmonberries, blueberries, and blackberries are picked. According to ADF&G's *Community Subsistence Information System*,¹⁰⁸ species that are harvested or used by Brevig Mission residents include clams, king crab, mussels, shrimp, Tanner crab, bearded seal, bowhead whale, gray whale, ribbon seal, ringed seal, spotted seal, Steller sea lion, blackfish, burbot, cisco, Dolly Varden, flounder, grayling, herring, herring roe, northern pike, saffron cod, sculpin, sheefish, smelt, sole, sucker, trout, and whitefish.

Of the species documented by the ADF&G in Table 13, pink salmon were harvested the most, followed by chum and sockeye salmon. In 2008, residents reported harvesting 5,382 salmon, compared to a reported 2,863 in 2000. In 2008, the reported number of sockeye, coho, chum, and Chinook salmon harvested declined compared to previous years, as did the number of subsistence salmon permits issued. However, the number of pink salmon harvested increased that year to its highest reported level since 2000; accounting for 3.7% of statewide reported harvests for that species. There is no information regarding household participation in subsistence activities or halibut subsistence activities. Between 2000 and 2010, 113 walrus were harvested. Walrus harvests peaked in 2010 at 45 animals. Data on Steller sea lion, harbor seal, and spotted seal harvests are not available. Information regarding subsistence trends can be found in Tables 12 through 15.

¹⁰⁷ Kawerak, Inc. (2007). *Brevig Mission Local Economic Development Plan 2007-2012*. Retrieved January 10, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Brevig%20Mission-EP-2007.pdf>.

¹⁰⁸ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Brevig Mission: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Brevig Mission: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	69	57	32	486	530	808	1,007	n/a	n/a
2001	68	55	41	1,041	1,070	468	2,040	n/a	n/a
2002	71	67	65	1,534	1,741	2,347	2,127	n/a	n/a
2003	74	66	92	1,382	1,098	2,955	1,983	n/a	n/a
2004	42	41	120	1,132	682	2,860	2,763	n/a	n/a
2005	38	38	89	1,110	326	2,898	1,736	n/a	n/a
2006	45	45	89	1,700	705	2,068	1,470	n/a	n/a
2007	45	44	40	1,620	354	773	2,385	n/a	n/a
2008	39	39	70	940	387	3,089	896	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Brevig Mission: 2003-2010.

Year	SHARC Issued	SHARC Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: N/A Indicates That No Data Were Reported For That Year.

Source: Fall, J.A. And D. Koster. (2011). Subsistence Harvests Of Pacific Halibut In Alaska, 2009. Alaska Department Of Fish And Game Division Of Subsistence, Technical Paper No. 357, Anchorage. Data Compiled By Alaska Fisheries Information Network For Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Brevig Mission: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	7	n/a	n/a	n/a	n/a
2001	n/a	n/a	22	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	8	n/a	n/a	n/a	n/a
2004	n/a	n/a	3	n/a	n/a	n/a	n/a
2005	n/a	n/a	3	n/a	n/a	n/a	n/a
2006	n/a	n/a	2	n/a	n/a	n/a	n/a
2007	n/a	n/a	20	n/a	n/a	n/a	n/a
2008	n/a	n/a	1	n/a	n/a	n/a	n/a
2009	n/a	n/a	2	n/a	n/a	n/a	n/a
2010	n/a	n/a	45	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported concerns over bycatch. Specifically, there are concerns over how bycatch in the trawl pollock industry is affecting returns of king and sockeye salmon in the area. There is fear that if trends continue, sockeye and king salmon runs will decline to the point that there will no longer be a viable subsistence fishery for those species. There are also concerns over current subsistence regulations being too constrictive.

Chevak (CHEE-vack)



People and Place

*Location*¹⁰⁹

Chevak is located on the north bank of the Niglikfak River in the Yukon-Kuskokwim (Y-K) Delta, 17 mi east of Hooper Bay and 519 mi west of Anchorage. The area encompasses 1.1 sq mi of land and 0.1 sq mi of water. The community was incorporated as a Second-class city in 1967, is located in the Wade-Hampton Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*¹¹⁰

In 2010, there were 938 residents ranking Chevak 69th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 56.9%. Between 2000 and 2009 the population grew by 23.5% with an average annual growth rate of 1.59%; which was greater than the statewide average of 0.75% and indicative of an expansive population trend.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that there were over 960 permanent residents living in the community in 2010. Peaks in population can occur at any time of year, but are typically dependant on local construction projects and students returning from school. Peaks in the number of seasonal and transient workers are not thought to be associated with fishery sectors. Information regarding population trends can be found in Table 1.

Chevak is predominately a Cup'ik Eskimo community¹¹¹ with 94.9% of the residents identifying themselves as American Indian or Alaska Native in 2010, compared to 90.5% in 2000. Also in that year, 2.3% of the population identified themselves as White, compared to 3.7% in 2000; 2.5% identified themselves as two or more races, compared to 5.8% in 2000; 0.3% identified themselves as Asian, compared to 0.0% in 2000; and 0.1% identified themselves as some other race, compared to 0.1% in 2000. In addition, 0.1% of residents identified themselves as Hispanic or Latino in 2010, compared to 0.7% in 2000.

In 2010, the average household size was 4.49, compared to 4.0 in 1990 and 4.58 in 2000. The total number of household units that year was 219, compared to 164 in 1990 and 190 in 2000. Of the households surveyed in 2010, 72.6% were owner-occupied, compared to 64.2% in 2000; 22.8% were renter-occupied, compared to 23.7% in 2000; 3.2% were vacant, compared to 7.9% in 2000; and 1.4% were occupied seasonally, compared to 4.2% in 2000. There have been no reports of residents living in group quarters since 1990.

¹⁰⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹¹ See footnote 109.

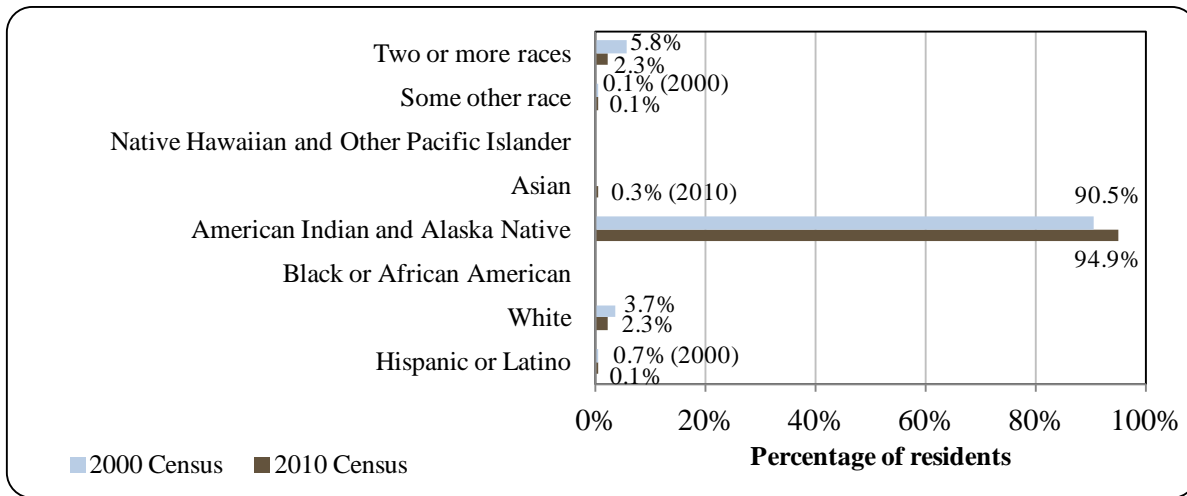
Table 1. Population in Chevak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	598	-
2000	765	-
2001	-	833
2002	-	854
2003	-	883
2004	-	903
2005	-	916
2006	-	914
2007	-	939
2008	-	920
2009	-	945
2010	938	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Chevak: 2000-2010 (U.S. Census).



Gender distribution in 2010 was slightly skewed towards males at 54.1% male and 45.9% female. This was slightly less even than the distribution statewide (52.0% male, 48.0% female), and similar to the distribution in 2000 (53.2% male, 46.8% female). The median age that year was 21.2 years, which was lower than the statewide median of 33.8 years higher than the 2000 median of 17.4 years.

Compared with 2000, the population structure in 2010 was less expansive. In addition, many cohorts displayed characteristics consistent with a stable population, meaning that as they aged, they maintained their overall structure. However, there was some attrition in younger cohorts, most notably the 10-19 range. In 2010, 47.0% of residents were under the age of 20, compared to 54.7% in 2000; 4.3% were of the age of 59, compared to 5.4% in 2000; 29.2% were between the ages of 30 and 59, compared to 28.3% in 2000; and 18.5% were between the ages of 20 and 29, compared to 11.7% in 2000.

Gender distribution by age cohort was less even in 2010 than in 2000, with male biases among most age ranges. In that year, the greatest absolute gender difference occurred in the 50 to 59 range (6.3% male, 3.0% female), followed by the 30 to 39 (6.1% male, 3.9% female) and 10 to 19 (12.1% male, 10.2% female) ranges. Of those three, the greatest relative gender difference occurred in the 50 to 59 range. Information regarding trends in Chevak's population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹¹² estimated that 76.5% of residents aged 25 years and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in 2010, an estimated 11% of residents had less than a ninth grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 12.4% had a ninth to twelfth grade education but not diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 17.7% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 1.9% had an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 5.2% had a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and no residents were estimated to have a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture^{113,114}

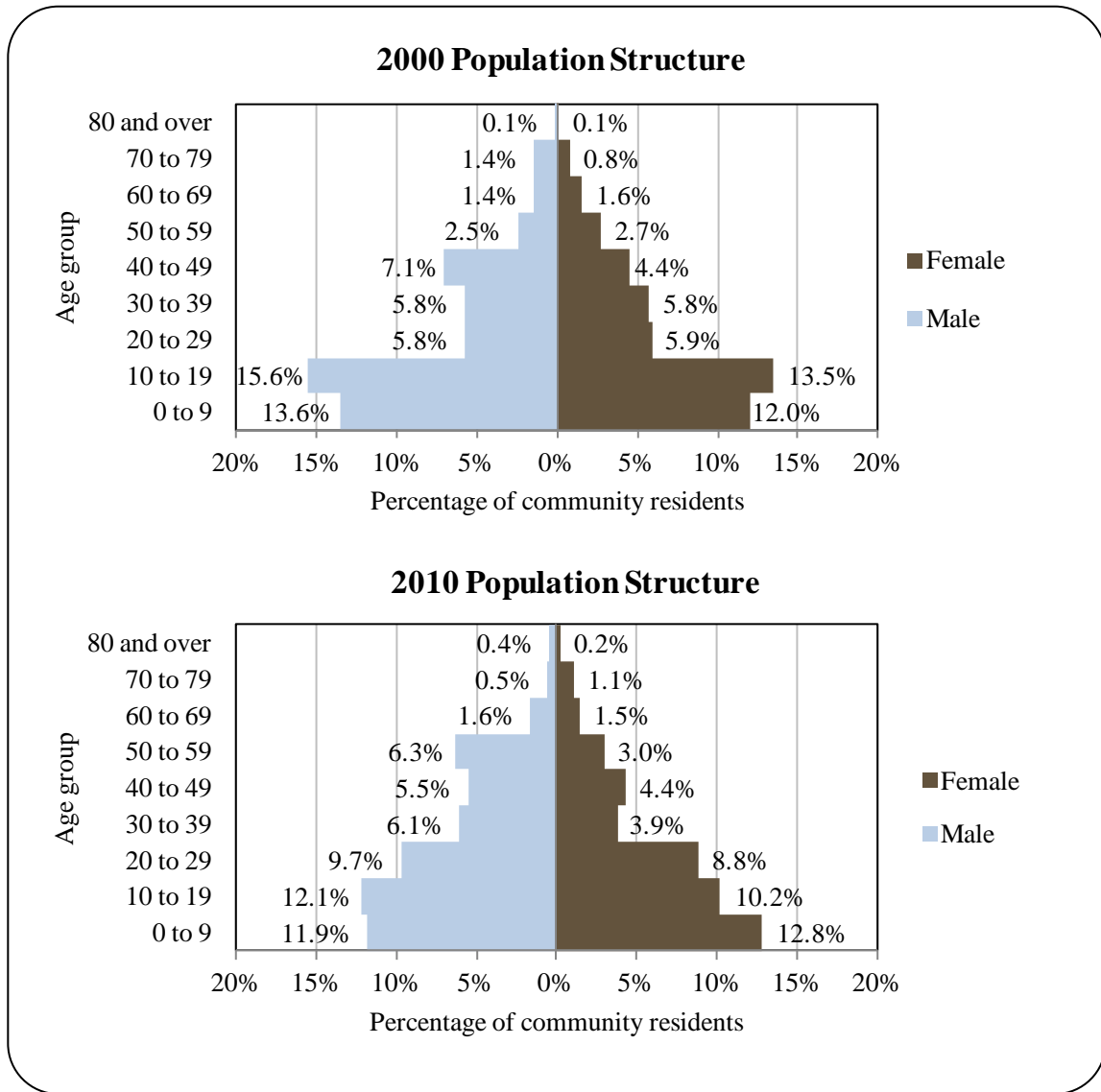
Eskimos have inhabited the Y-K Delta region for thousands of years. The original site, *Nunarururmiut*, was abandoned in the 1940s as a result of flooding and the need to establish a U.S. Bureau of Indian Affairs school. The name Chevak refers to "a connecting slough", on which Nunarururmiut was situated. The new site was first reported by the U.S. Coast and Geodetic Survey in 1948. A post office was established in 1951 and the city government was incorporated in 1967. Today, residents of Chevak continue to rely on the traditional subsistence practices characteristic of the region.

¹¹² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹¹³ See footnote 109.

¹¹⁴ Chevak Planning Committee. (2009). *Chevak Community Plan*. Retrieved January 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Chevak-CP-2009.pdf>.

Figure 2. Population Age Structure in Chevak Based on the 2000 and 2010 U.S. Decennial Census.



Natural Resources and Environment

Chevak lies within the transitional zone between maritime and continental climates, experiencing maritime influences in the summer and continental in the winter when ice forms over the Bering Sea. Temperatures range from -25 to 79 °F, with a July average of 52 °F and a January average of 10 °F. Snowfall averages 70 inches per year and annual precipitation is 20 inches. Freeze-up occurs in October with break-up in June.¹¹⁵

Chevak is located in the Yukon Delta National Wildlife Refuge (YDNWR). Lowlands consist of wet tundra and marshes, coastal floodplains, shallow circular and oxbow lakes, rivers,

¹¹⁵ Ibid.

and sloughs. Upland areas are populated with dwarf shrubs and sedges and very few trees are present, except for the occasional willow or birch stand. Soils in these areas consist of deposited silty and sandy loams on coastal floodplains, and peat tundra. A layer of continuous permafrost underlies areas not adjacent to water. There is an active permafrost layer 18 inches deep that is subject to melt and saturation as it thaws. The village itself is located on a bluff about 30 ft above the Niglikfak River.

The YDNWR region provides spawning, rearing, feeding, and wintering habitat for a range of terrestrial and aquatic wildlife.¹¹⁶ Terrestrial wildlife include: waterfowl and gamebirds, moose, wolf, wolverine, bear, mink, beaver, muskrat, otter, fox, beaver, muskrat, muskox, hares, voles, ermines, squirrels, lemmings, shrews, and weasels. Aquatic resources include: Pacific salmon, whitefish, burbot, northern pike, blackfish, smelt, lamprey, char, grayling, trout, sculpin, stickleback, and longnose sucker.¹¹⁷

In terms of local environmental hazards, Chevak's location inland protects it from coastal hazards, while its location on a bluff next to the Ninglikfak River protects it flooding. Ground saturation resulting from permafrost thaw does threaten local structures, and as a result buildings and water lines are elevated to reduce sinking. Riverbank erosion is another threat due to the community's location on an oxbow curve in the river. Chain and sandbag reinforcements have been installed in order to mitigate impacts. The Army Corps of Engineers lists the flooding potential of the village as low, and the United States Geological Survey registers Chevak within Seismic Risk Zone 2 indicating a low risk of earthquakes.¹¹⁸

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation sites active in 2010.¹¹⁹

Current Economy¹²⁰

The local economy in Chevak is similar to other communities in the region, with an emphasis on subsistence and economic self-sufficiency. In a survey conducted by the AFSC in 2011, community leaders reported that Chevak's economy is dependent on the commercial halibut industry and the CVRF, which is the community's Community Development Quota (CDQ) entity. Top employers¹²¹ in 2010 included: the Kashunamiut School District, AVCP Housing Authority, Chevak City Council, Chevak Company Store, Coastal Villages Seafoods Inc., Rural AK Community Action Program, Chevak Traditional Council, Our Cache, Yukon Kuskokwim Health Corporation, and Coastal Villages Region Fund (CVRF).

In 2010,¹²² the estimated per capita income in Chevak was \$7,990 and the estimated median household income was \$31,563, compared to \$7,550 and \$26,875 in 2000, respectively.

¹¹⁶ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge*. Retrieved November 22, 2011 from: <http://www.fws.gov/refuges/profiles/recEdMore.cfm?ID=74540>.

¹¹⁷ Ibid.

¹¹⁸ See footnote 114.

¹¹⁹ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 22, from: <http://dec.alaska.gov/spar/csp/list.htm#Western>.

¹²⁰ Unless otherwise noted, all monetary data are reported in nominal values.

¹²¹ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

However, after accounting for inflation by converting the 2000 values to 2010 dollars,¹²³ the real per capita income (\$9,928) and real median household income (\$35,340) indicate an overall decline in both individual and household earnings. In 2010, Chevak ranked 295th of 305 Alaskan communities from which per capita income was estimated, and 238th of 299 communities from which median household income was estimated; ranking the community among the lowest statewide in terms of individual income.

Chevak's small population size may have prevented the ACS from accurately portraying economic conditions.¹²⁴ Another way understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$6.48 million in total wages in 2010.¹²⁵ When matched with the population in 2010 per capita income equals \$6,903, suggesting that caution should be used when comparing 2010 ACS estimates with 2000 Census figures.¹²⁶ In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹²⁷ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

According to the 2006-2010 ACS estimates,¹²⁸ 64.4% of residents aged 16 years and older were part of the civilian labor force in 2010. that year, unemployment was estimated at 20.6%, compared to an estimated 5.9% statewide; and 46.8% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. It is possible that ACS unemployment estimates are inaccurate due to Chevak's small population size. The ALARI database estimated that in 2010, unemployment was 26.3% based on unemployment claimants.

Of those employed in 2010, an estimated 43.1% worked in the private sector, and estimated 55.7% worked in the public sector, and an estimated 1.2% were self-employed. By industry, most (37.8%) employed residents were estimated to work in education services in 2010, health care, and social assistance sectors; followed by public administration sectors (15.9%); transportation, warehousing, and utilities sectors (12.2%); and retail trade sectors (12.2%). By occupation type, most (33.7%) employed residents were estimated to hold management or professional positions that year; followed by service positions (24.4%); sales or office positions (22.8%); production, transportation, or material moving positions (10.6%); and natural resources, construction, or maintenance positions (8.5%). Overall, there was little variation in employment by industry sector and occupation type between 2000 and 2010. No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of

¹²³ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹²⁶ See footnote 121.

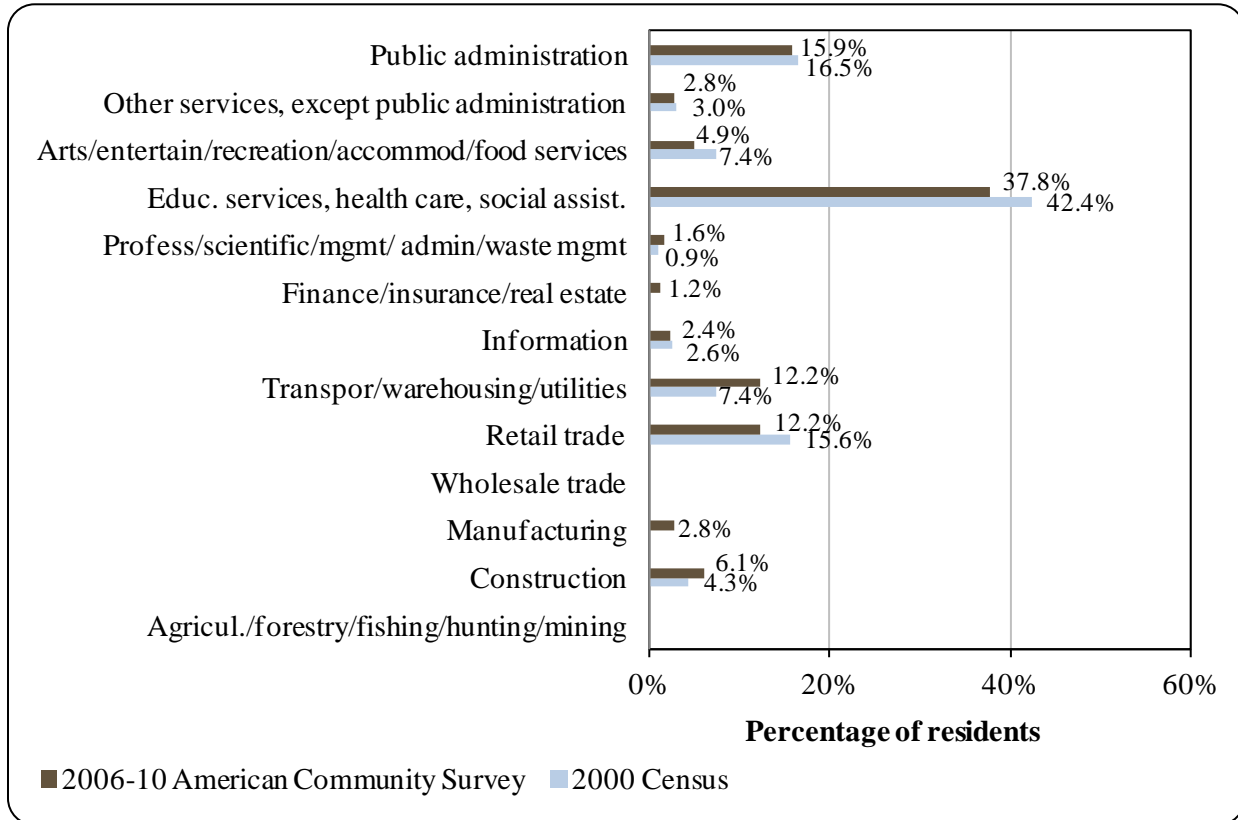
¹²⁷ Denali Commission. (2011). Distressed Community Criteria 2011 Update. Retrieved April 16, 2012 from: www.denali.gov.

¹²⁸ See footnote 124.

individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Information regarding employment trends can be found in Figures 3 and 4.

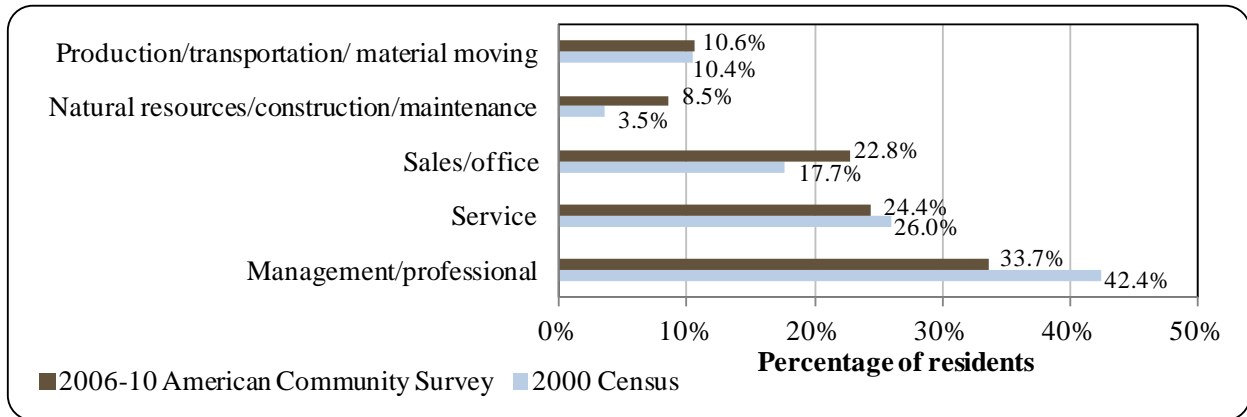
According to 2010 ALARI estimates,¹²⁹ most (46.3%) employed residents worked in local government sectors; followed by trade, transportation, and utilities sectors (18.0%); and financial service sectors (15.9%).

Figure 3. Local Employment by Industry in 2000-2010, Chevak (U.S. Census).



¹²⁹ See footnote 121.

Figure 4. Local Employment by Occupation in 2000-2010, Chevak (U.S. Census).



Governance

Chevak is a Second-class city with a mayoral form of government. In addition, there is a federally recognized Tribal government (Chevak Traditional Council), and Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation (Chevak Company Corporation). The regional ANCSA chartered Native corporation representing Chevak is the Calista Corporation. The closest Alaska Department of Fish and Game (ADF&G) and National Marine Fisheries Service (NMFS) offices are located in Bethel, 138 mi southeast. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Anchorage, 519 mi east.

In 2010, the community administered a 2.0% sales tax. When adjusted for inflation,¹³⁰ total municipal revenues declined by 40.8% between 2000 and 2010 from \$808,190, to \$619,185. Municipal revenues peaked in 2008 at \$1.56 million. Revenue peaks in 2007 and 2008 were largely attributed to significant enterprise revenues. In 2010, locally generated revenues were collected primarily from sales taxes, Alaska Village Electric Cooperative reimbursements, and health clinic leases. Outside revenues were collected primarily from Community Revenue Sharing and payments in lieu of taxes. In that year, sales tax revenues comprised 25.2% of total revenues, compared to 11.1% in 2000. In addition, state allocated Community Revenue Sharing comprised 23.1% of total revenues, compared to 3.4% from State Revenue Sharing in 2000. The community also received \$25,113 in state or federal fisheries-related grants for a dock and harbor upgrade project in 2003. Information regarding municipal finances can be found in Table 2.

¹³⁰ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Chevak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$808,190	\$89,352	\$27,615	n/a
2001	\$814,219	\$82,544	\$26,604	n/a
2002	\$793,188	\$83,266	\$27,000	n/a
2003	\$858,215	\$128,600	\$26,805	\$25,113
2004	\$543,693	\$95,246	-	n/a
2005	\$794,689	\$88,103	-	n/a
2006	\$507,101	\$65,290	-	n/a
2007	\$1,262,175	\$94,341	-	n/a
2008	\$1,555,721	\$123,326	-	n/a
2009	\$601,565	\$129,725	\$144,546	n/a
2010	\$619,185	\$155,991	\$143,035	n/a

Note: n/a indicates that no information was provided that year.

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*¹³¹

Local transportation is done by small boat, small aircraft, ATV, or “snowmachine.” The community is connected by a system of sand and gravel roads, and wooden boardwalks. Trails in the area are utilized for subsistence activities, and winter trails connect to Hooper Bay (17 mi), Scammon Bay (25 mi), and Newtok (50 mi). The airport, completed in 2006, is owned and maintained by the State of Alaska. The airstrip is 2,500 ft long by 28 ft wide, and provides regional charter and private air access year-round. Seaplanes use a dock located below the former Wayne Hill Co. building, and primary air carriers servicing Chevak are Grant Air and Hageland Aviation. Roundtrip airfare between Anchorage and Chevak in June of 2012 was \$802.¹³²

¹³¹ Chevak Planning Committee. (2009). *Chevak Community Plan*. Retrieved January 19, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Chevak-CP-2009.pdf>.

¹³² Airfare was calculated using lowest fare. Source: <http://www.travelocity.com> (retrieved November 22, 2011).

Facilities

Capital projects completed as of 2010 include an airport, school, landfill, water and sewer system, fishery support center, and multiple housing projects. Currently all homes and public buildings are connected to piped water and sewer systems. Facilities include a washeteria, watering point, treatment plant, 150,000 gallon water storage tank, sewage lagoon, and a vacuum sewer plant. Electricity is provided by diesel generator. A new power plant facility and wind generation project was completed by the Alaska Village Electric Corporation (AVEC) in 2009.¹³³

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed or under development as of 2010 included additional roads, airport improvements, water and sewer system improvements, alternative energy, broadband internet access, emergency response systems, fire department improvements, school improvements, telephone service, and post office improvements. Projects planned for completion between 2010 and 2020 include a barge landing area, dock improvements, community center improvements, and additional emergency response improvements. There is no dock space available for permanent moorage, and 15 to 20 ft of dock space available for transient moorage. Regulated vessels that use local port facilities include fuel and small freight barges. Fisheries-related businesses and services located in the community include boat repair (electrical, welding, mechanical, and machine shop), fishing-related bookkeeping, boat fuel sales, fishing gear repair, fishing gear sales, and small boat haulout facilities.

*Medical Services*¹³⁴

The Chevak Clinic provides basic health care and is a Community Health Aid Program (CHAP) site. Acute, long-term, and specialized health care is provided in Bethel.

*Educational Opportunities*¹³⁵

Chevak School offers preschool through 12th grade instruction. As of 2011, there were 306 students enrolled and 32 teachers employed. In addition, there is a Rural Alaska Community Action Program (RurAL CAP) Head Start program which Chevak children attend before becoming students with the Kashunamiut School District.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Chevak's involvement in North Pacific Fisheries is defined by its history of participation in subsistence fisheries as well as its more recent participation in commercial fisheries. Chevak is recognized as a rural community by the U.S. Fish and Wildlife Service (USFWS) and is

¹³³ See footnote 131.

¹³⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

allowed to harvest subsistence resources within the YDNWR. The community also has an active commercial fishing economy and 26 residents held permits issued by the Commercial Fisheries Entry Commission (CFEC) in 2010. In addition, the community is eligible to participate in the CDQ program and is represented by the Coastal Villages Region Fund (CVRF), which is the regional CDQ non-profit. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹³⁶ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

In a survey conducted by the AFSC in 2011, community leaders reported that Chevak participates in the fisheries management process in Alaska through its membership with the CVRF. Chevak is located within Federal Reporting Area 541, International Pacific Halibut Commission Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District.

Processing Plants

According to the 2010 Alaska Department of Fish and Game's Intent to Operate list Chevak does not have a registered processing plant. The closest seafood processor is located in Hooper Bay.

Fisheries-Related Revenue

Chevak received very little in fisheries-related revenue from taxes and fees between 2000 and 2010. In 2010, the community collected \$120 in Shared Fisheries Business Tax. In a survey conducted by the AFSC in 2011, community leaders reported that Chevak received \$40,000 from the CVRF in 2010. Information regarding known fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported that the community participates mostly in longline halibut fisheries. In 2010, residents participated in statewide hand-troll and mechanical jig halibut fisheries.¹³⁷ In that year, 26 residents, or 2.8% of the population held 26 CFEC permits; compared to 21 and 22 in 2000, respectively. Of the CFEC permits issued in 2010, 77% were for herring, compared to 91% in 2000; 15% were for halibut, compared to 0% in 2000; and 8% were for salmon, compared to 9% in 2000. In addition, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits

¹³⁶ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹³⁷ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

between 2000 and 2010. Finally, no residents held halibut, sablefish, or crab quota between 2010 and when the programs began.

The number of commercial crew licenses held by residents declined significantly between 2000 and 2001, from 25 to 1; and remained at low numbers throughout the decade. In addition, residents held majority ownership of seven vessels in 2010, compared to 14 in 2000. In that year, 8% of CFREC permits held were actively fished, compared to 45% in 2000. This varied by fishery from 50% of halibut permits, to 0% of herring and salmon permits. Herring permit activity dropped significantly after 2000, and permits for that species were not actively fished after 2004. Salmon permits were not actively fished after 2007.

No landings were made in Chevak between 2000 and 2010. Landings by residents in those years are considered confidential; with the exception of herring landings in 2000. In that year 178,918 lbs of herring were landed with an ex-vessel value of \$12,051, or \$16,571 after adjusting for inflation.¹³⁸ Information regarding commercial fishing trends can be found in Tables 4 through 10.

¹³⁸ Inflation calculated using Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, <http://www.bls.gov/ppi/#data>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Chevak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	\$74	n/a	\$122	n/a	n/a	n/a	\$92	\$94	\$114	\$120
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>\$74</i>	<i>n/a</i>	<i>\$122</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$92</i>	<i>\$94</i>	<i>\$114</i>	<i>\$120</i>
<i>Total municipal revenue</i> ⁵	<i>\$808,190</i>	<i>\$814,219</i>	<i>\$793,188</i>	<i>\$858,215</i>	<i>\$543,693</i>	<i>\$794,689</i>	<i>\$507,101</i>	<i>\$1.26 M</i>	<i>\$1.56 M</i>	<i>\$601,565</i>	<i>\$619,185</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Chevak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	11	1	1	2	6	5	3	4
	Fished permits	0	0	0	0	0	0	0	2	2	1	2
	% of permits fished	n/a	n/a	n/a	0%	0%	0%	0%	33%	40%	33%	50%
	Total permit holders	0	0	0	9	1	1	2	6	5	3	4
Herring (CFEC) ²	Total permits	20	20	20	20	20	20	21	21	21	20	20
	Fished permits	9	1	1	1	1	0	0	0	0	0	0
	% of permits fished	45%	5%	5%	5%	5%	0%	0%	0%	0%	0%	0%
	Total permit holders	20	21	20	20	21	20	21	21	21	20	20

Table 4 cont'd. Permits and Permit Holders by Species, Chevak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	1	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	2	2	2	3	3	3	3	2	2
	Fished permits	1	0	1	2	1	2	1	2	0	0	0
	% of permits fished	50%	0%	50%	100%	50%	67%	33%	67%	0%	0%	0%
	Total permit holders	2	2	2	2	3	3	3	3	3	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>22</i>	<i>22</i>	<i>22</i>	<i>33</i>	<i>24</i>	<i>24</i>	<i>26</i>	<i>30</i>	<i>29</i>	<i>25</i>	<i>26</i>
	<i>Fished permits</i>	<i>10</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>4</i>	<i>2</i>	<i>1</i>	<i>2</i>
	<i>% of permits fished</i>	<i>45%</i>	<i>5%</i>	<i>9%</i>	<i>9%</i>	<i>8%</i>	<i>8%</i>	<i>4%</i>	<i>13%</i>	<i>7%</i>	<i>4%</i>	<i>8%</i>
	<i>Permit holders</i>	<i>21</i>	<i>22</i>	<i>21</i>	<i>28</i>	<i>24</i>	<i>23</i>	<i>25</i>	<i>28</i>	<i>27</i>	<i>25</i>	<i>26</i>

¹National Marine Fisheries Service. (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Chevak: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Chevak ²	Total Net Pounds Landed In Chevak ^{2,5}	Total Ex-Vessel Value Of Landings In Chevak ^{2,5}
2000	25	0	0	14	12	0	0	\$0
2001	1	0	0	9	7	0	0	\$0
2002	3	0	0	5	3	0	0	\$0
2003	2	0	0	14	11	0	0	\$0
2004	2	0	0	9	7	0	0	\$0
2005	3	0	0	4	2	0	0	\$0
2006	6	0	0	4	2	0	0	\$0
2007	4	0	0	8	5	0	0	\$0
2008	2	0	0	7	4	0	0	\$0
2009	4	0	0	5	4	0	0	\$0
2010	7	0	0	7	7	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Chevak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Chevak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Chevak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Chevak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Chevak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	178,918	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>178,918</i>	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$12,051	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$12,051</i>	--	--	--	--	--	--	--	--	--	--

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing has not been a significant part of Chevak’s participation in North Pacific Fisheries. In a survey conducted by the AFSC in 2011, community leaders reported that residents recreationally fish for pleasure or personal use and that there are no guided or charter fishing businesses registered in the community.

Chevak is located within the Yukon Drainage ADF&G Harvest Survey Area which includes all drainages for the Yukon, Alatna, and Koyukuk Rivers. In 2010, there were 92 sport fishing licenses sold to residents, compared to 44 in 2000. The number of permits sold to residents peaked in 2008 at 128, which corresponded with the peak in resident freshwater angler days fished within the survey region. In 2010, there was a total of 9,134 freshwater angler days fished, compared to 11,223 in 2000. In that year, non-Alaska resident private anglers accounted for 43.6% of the total angler-days fished, compared to 29.8% in 2000. According to ADF&G

harvest survey data, resident private anglers target coho and pink salmon, rainbow trout, and Dungeness crab. Information regarding sport fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Chevak: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Chevak ²
2000	0	0	44	0
2001	0	0	19	0
2002	0	0	50	0
2003	0	0	60	0
2004	0	0	116	0
2005	0	0	101	0
2006	0	0	95	0
2007	0	0	111	0
2008	0	0	128	41
2009	0	0	98	62
2010	0	0	92	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	n/a	89	5,761	9,194
2003	n/a	17	3,344	5,756
2004	17	n/a	5,479	7,613
2005	n/a	n/a	4,182	4,783
2006	n/a	n/a	3,607	7,816
2007	n/a	n/a	3,168	8,226
2008	n/a	n/a	2,573	10,400
2009	n/a	n/a	2,969	7,639
2010	n/a	n/a	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence fishing is widely practiced in the area and is an important part of the local economy and culture. In a survey conducted by the AFSC in 2011, community leaders reported that residents harvest salmon, roe, herring, blackfish, tomcod, lush, northern pike, whitefish, sheefish, marine mammals, birds, and edible plants. ADF&G subsistence survey data are limited, and data on subsistence participation by household are unavailable. In 2008, 2 residents held subsistence salmon permits. In 2009, 5 residents held Subsistence Halibut Registration Certificates (SHARC), compared to 10 in 2003. In that year, an estimated 193 lbs of halibut was harvested on 3 SHARC, compared to 482 lbs harvested on 8 SHARC in 2005. No halibut harvests were reported for 2010 despite 2 residents holding SHARC. Between 2000 and 2010, 8 walrus were harvested. Walrus harvests peaked in 2000 at 3 animals. No data are available regarding subsistence sea lion and seal harvests. Information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders voiced several concerns over conditions impacting the local fishing economy. Concerns include insufficient CDQ halibut allocations, Bering Sea bycatch impacts to subsistence harvesting, limited gillnetting on the Yukon River, and the potential for pollock fishery closures. There is also concern whether bycatch distributed nationally through the “bycatch to food banks” program would be better utilized by local communities where cost of living is high.

Table 12. Subsistence Participation by Household and Species, Chevak: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Chevak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	2	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Chevak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	10	8	n/a
2004	13	1	n/a
2005	13	9	482
2006	11	9	433
2007	9	4	n/a
2008	6	3	11
2009	5	3	193
2010	2	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Chevak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	3	n/a	n/a	n/a	n/a
2001	n/a	n/a	2	n/a	n/a	n/a	n/a
2002	n/a	n/a	1	n/a	n/a	n/a	n/a
2003	n/a	n/a	1	n/a	n/a	n/a	n/a
2004	n/a	n/a	1	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Diomedes (DIE-oh-meed)

People and Place

*Location*¹³⁹

Diomedes is located on the west coast of Little Diomedes Island in the Bering Strait, 135 mi northwest of Nome. It is only 2.5 mi from Big Diomedes Island, Russia, and the international boundary lies between the two islands. The area encompasses 2.8 sq mi of land. Diomedes was incorporated as a Second-class city in 1970, is located in the Nome Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*¹⁴⁰

In 2010 there were 115 residents, which ranked Diomedes 230th of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population declined by 35.4%. Between 2000 and 2009, the population declined by 19.9% with an average annual growth rate of -1.5%, which was significantly lower than the statewide average of 0.75% and indicative of steady decline. Information regarding population trends can be found in Table 1.

Diomedes is predominately Inupiaq Eskimo with 92.2% of residents identifying themselves as American Indian or Alaska Native in 2010, compared to 92.5% in 2000. Also in that year, 4.3% of residents identified themselves as White, compared to 6.2% in 2000; and 3.5% identified themselves as two or more races, compared to 1.4% in 2000. Information regarding race and ethnicity in Diomedes can be found in Figure 1.

In 2010, the average household size was 3.03, compared to 4.30 in 1990 and 3.40 in 2000. In that year, there were a total of 47 housing units, compared to 41 in 1990 and 47 in 2000. Of the households surveyed in 2010, 51% were owner-occupied, compared to 55% in 2000; 30% were renter-occupied, compared to 36% in 2000; 17% were vacant, compared to 9% in 2000; and 2% were occupied seasonally, compared to 0% in 2000. No residents were reported to be living in group quarters between 1990 and 2010.

The gender distribution in 2010 was somewhat skewed at 53.0% male and 47.0% female. This was slightly less even than the distribution statewide (52% male, 48% female) and similar to the distribution in 2000 (53.4% male, 46.6% female). The median age that year was 25.3 years, which was significantly younger than the statewide median of 33.8 and somewhat older than the 2000 median of 22.5 years.

¹³⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

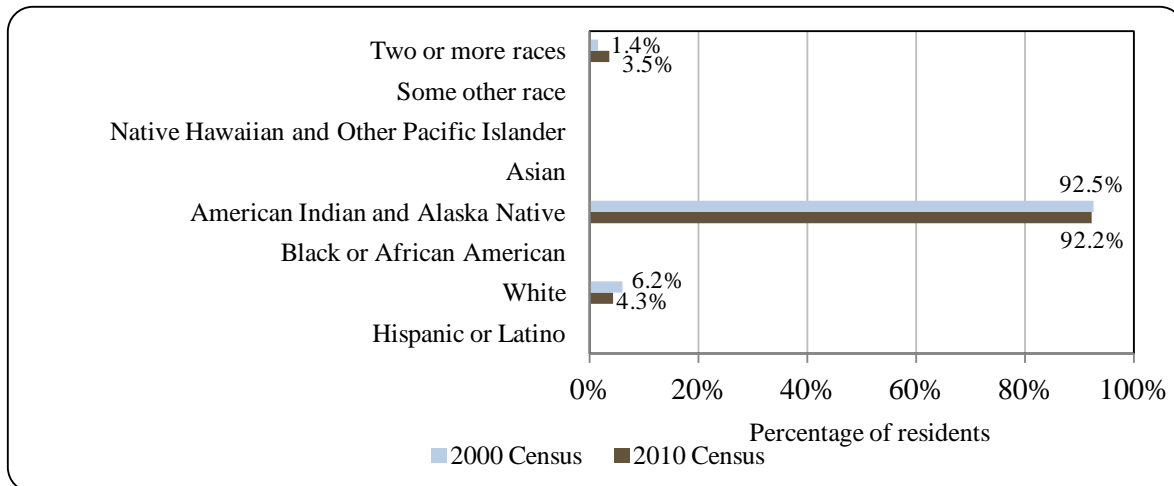
Table 1. Population in Diomede from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	178	-
2000	146	-
2001	-	139
2002	-	128
2003	-	137
2004	-	141
2005	-	132
2006	-	111
2007	-	143
2008	-	129
2009	-	117
2010	115	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Diomede: 2000-2010 (U.S. Census).



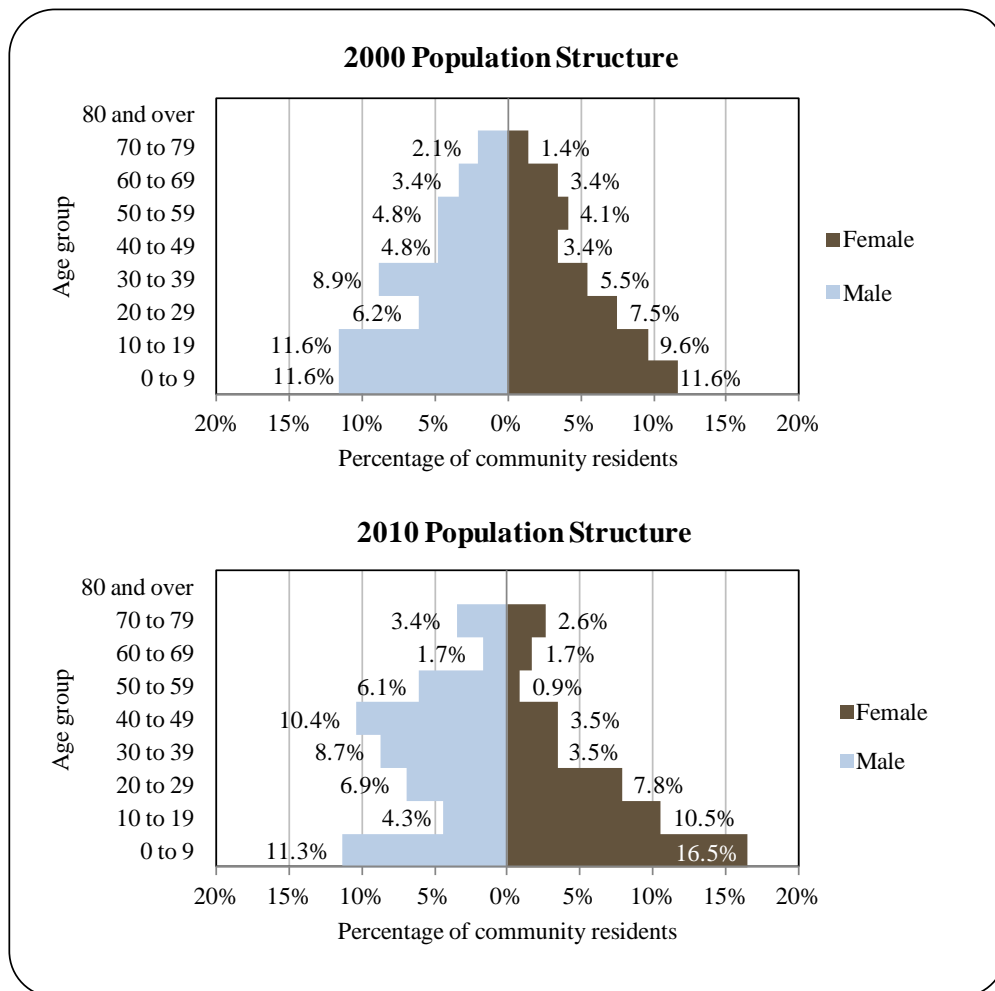
When compared to 2000, the population structure in 2010 was less expansive; although Diomede’s small population size makes it difficult to discern a trend. In that year, 42.6% of residents were under the age of 20, compared to 44.4% in 2000; 9.4% were over the age of 59, compared to 10.3% in 2000; 33.1% were between the ages of 30 and 59, compared to 31.5% in 2000; and 14.8% were between the ages of 20 and 29, compared to 13.7% in 2000.

Gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 40 to 49 range (10.4% male, 3.5% female),

followed by the 10 to 19 (10.5% female, 4.3% male) and 0 to 9 (16.5% female, 11.3% male) ranges. Of those three, the greatest relative gender difference occurred in the 40 to 49 range. Further information regarding trends in Diomedes’s population structure can be found in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)¹⁴¹ estimated that 72.5% of residents aged 25 and older held a high school diploma or higher degree, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 27.5% of residents had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 19.6% had some college but no degree compared to an estimated 28.3% of Alaska residents overall; an estimated 7.8% held a Bachelor’s degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 9.8% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

Figure 2. Population Age Structure in Diomedes Based on the 2000 and 2010 U.S. Decennial Census.



¹⁴¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

The present village site is believed to be at least 3,000 years old. The site was originally a spring hunting site, which gradually turned into a more permanent settlement. The Inupiaq name for the village is Inalik, meaning “the other one” or “the one over there.”¹⁴²

After World War II, the Soviet Union established a military base on Big Diomedes. This isolated the residents of Little Diomedes from their friends and relatives on Big Diomedes, and exchanges were only possible under the cover of fog or night. Residents who were caught visiting were taken captive and held as prisoners in Siberia. Eventually, the Native residents of Big Diomedes were forcibly removed and relocated to Siberia.¹⁴³

Diomedes is a traditional Ingalikmiut Eskimo village with a subsistence lifestyle. Seal, polar bear, blue crab, and whale meat are the preferred foods. Mainland Natives come to Diomedes to hunt polar bears. Seal and walrus hides are used to make parkas, hats, mukluks, furs, and skins for trade. The sale and importation of alcohol is banned in the village.¹⁴⁴

Natural Resources and Environment¹⁴⁵

Summer temperatures average 40 to 50 °F. Winter temperatures average from -10 to 6 °F. Annual precipitation averages 10 inches, and annual snowfall averages 30 inches. During summer months, cloudy skies and fog prevail. Winds blow consistently from the north, averaging 15 knots, with gusts of 60 to 80 mph. The Bering Strait is generally frozen between mid-December and mid-June.

The Diomedes Islands are believed to be relics of periglacial zones which existed during several glacial periods extending from the late Pleistocene to the present. Part of the York terrace, Little Diomedes was created by uplift which occurred some 2.6 million years ago. The granite terrace was subjected to both marine planation and later cryoplanation (surface leveling caused by intensive frost). Erosive forces resulted in the Island’s fractured terrace and channelized relief. Surface sediments taken from the Bering Sea indicates that soils consist of glacial moraine; however, steep relief and climatic conditions make deposition difficult on the island itself.¹⁴⁶ Vegetation is limited to mosses, lichens, and small flowering plants.¹⁴⁷

Terrestrial wildlife is practically non-existent with the exception of historical recollections of the occasional lemming or stray Arctic fox from the mainland. However, marine life is abundant. Marine mammals include orca whale, walrus, bowhead whale, beluga whale, hair seals, bearded seals, harbor seals, and ribbon seals. In addition to marine mammals, locals fish for sculpin, cod, and crab. Birds are plentiful, and cliffs are densely populated with murrelets, cormorants, kittiwakes, and puffins.¹⁴⁸

¹⁴² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴³ City of Diomedes. (2009). *A Local Economic Development Plan for Diomedes 2009 Updated Priorities*. Retrieved May 25, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Diomedes-EDP-2009.pdf>.

¹⁴⁴ See footnote 142.

¹⁴⁵ Ibid.

¹⁴⁶ Gualtieri, L. and Brigham-Grette, J. (2000). The Age and Origin of the Little Diomedes Island Upland Surface. *Arctic*, 54(1), 12-21. Retrieved May 29, 2012 from: <http://pubs.aina.ucalgary.ca/arctic/Arctic54-1-12.pdf>.

¹⁴⁷ Jenness, D. (1929). Little Diomedes Island, Bering Strait. *The Geographical Review*, 19(1), 78-86.

¹⁴⁸ Ibid.

Natural hazards primarily come in the form of extreme weather events. Cyclonic and anti-cyclonic storms often create destructive ocean swells which batter the community. Winter often brings extreme cold conditions. Diomedes' limited infrastructure makes the community especially susceptible to environmental hazards.¹⁴⁹

According to the Alaska Department of Environmental Conservation (DEC), there were no active environmental remediation sites active in Diomedes in 2010.¹⁵⁰

Current Economy¹⁵¹

Little Diomedes villagers depend almost entirely upon a subsistence economy for their livelihood. Employment is limited to the city and school. Seasonal mining, construction, and commercial fishing positions have been on the decline. The Diomedes people are excellent ivory carvers and the city serves as a wholesale agent for the ivory. Villagers travel to Wales by boat for supplies. Mail is delivered once per week.¹⁵² Top employers¹⁵³ in 2010 include: the city of Diomedes, Bering Strait School District, Native Village of Diomedes, Diomedes Joint Utilities, Norton Sound Economic Development Corporation, Kawerak Inc., Inalik Native Corporation, and Diomedes Native Store.

According to the 2006-2010 ACS,¹⁵⁴ the estimated per capita income was \$11,932 and the estimated median household income was \$46,250, compared to \$9,944 and \$23,750 in 2000, respectively.¹⁵⁵ However, after adjusting for inflation by converting 2000 values into 2010 dollars,¹⁵⁶ the real per capita income (\$13,076) and real median household income (\$31,231) indicate an increase in both individual and household earnings. In 2010, Diomedes ranked 242nd of 305 communities from which per capita income was estimated and 158th of 299 communities from which median household income was estimated.

It should be noted that Diomedes' small population size may have prevented the ACS from accurately portraying economic conditions.¹⁵⁷ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$1.00 million in total wages in 2010.¹⁵⁸ When compared against U.S. Census population figures for 2010, per capita income was \$8,714 which indicates an overall decrease in per capita income compared to the real per capita income values reported by the U.S. Census in 2000.¹⁵⁹ This is supported by

¹⁴⁹ See footnote 146.

¹⁵⁰ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved May 29, 2012 from: http://dec.alaska.gov/spar/csp/db_search.htm.

¹⁵¹ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁵² See footnote 142.

¹⁵³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁵⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁵⁵ See footnote 141.

¹⁵⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁵⁷ See footnote 141.

¹⁵⁸ Wage figures do not account for self-employed or federally employed residents.

¹⁵⁹ See footnote 153.

the fact that the community was identified as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁶⁰ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates,¹⁶¹ 57.4% of residents aged 16 and older were part of the civilian labor force. Between 2006 and 2010, unemployment was estimated at 0.0%, compared to an estimated 5.9% statewide; and an estimated 57.9% of residents were living below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 32.3% worked in the private sector and an estimated 67.7% worked in the public sector.

By industry, most (54.8%) residents were estimated to work in education services, health care, and social assistance sectors; followed by public administration sectors (12.9%) and finance, insurance, and real estate sectors (12.9%). No residents were estimated to work in agriculture, forestry, fishing, hunting, or mining sectors in 2010 (Figure 3). By occupation type, most (54.8%) employed residents were estimated to hold management or professional positions; followed by service positions (19.4%); production, transportation, or material moving positions (19.4%); and sales or office positions (6.5%). No residents were estimated to hold natural resources, construction, or maintenance positions in 2010 (Figure 4). In terms of changes in sector representation, there were notable declines in employment in public administration, transportation, warehousing, and utilities sectors between 2000 and 2010. In addition, there were notable increases in employment in education services, health care, social assistance, finance, insurance, and real estate sectors in those years.

Again, it should be noted that ACS sampling methods may not have captured accurate conditions in Diomedede. According to 2010 ALARI estimates, 80.4% of employed residents worked in local government sectors; 8.9% worked in trade, transportation, and utilities sectors; 5.4% worked in educational and health service sectors, 1.8% worked in professional and business service sectors; 1.8% worked in information sectors; and 1.8% worked in manufacturing sectors.¹⁶²

¹⁶⁰ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

¹⁶¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁶² See footnote 153.

Figure 3. Local Employment by Industry in 2000-2010, Diomedé (U.S. Census).

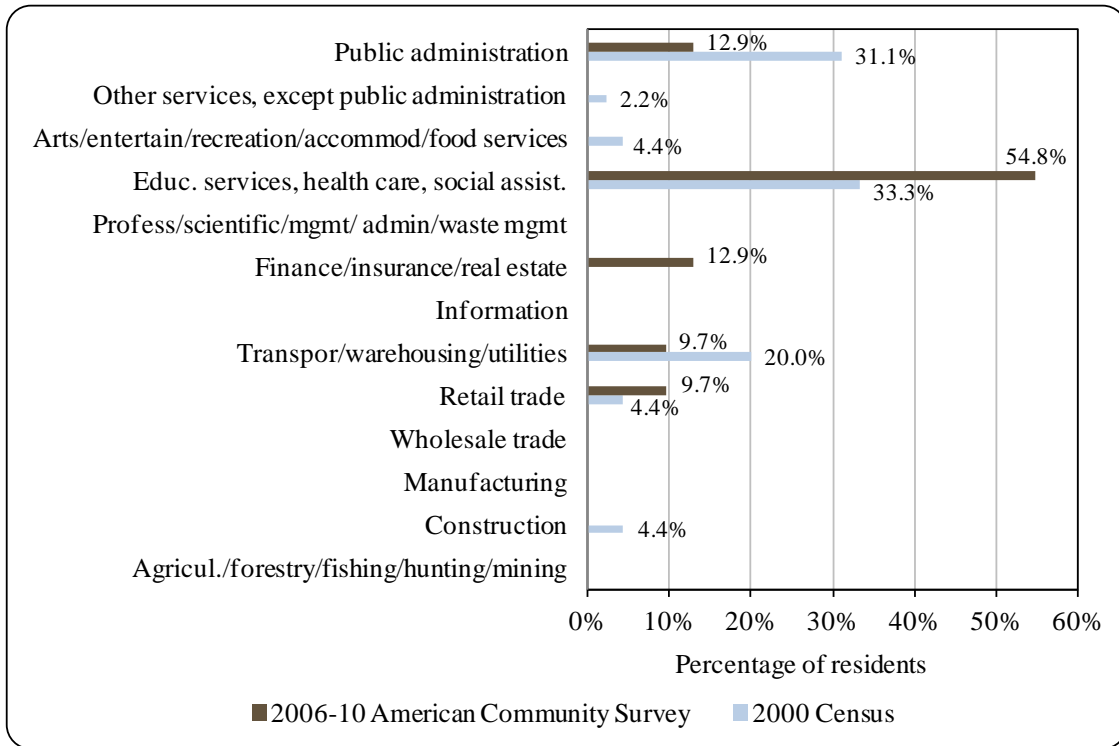
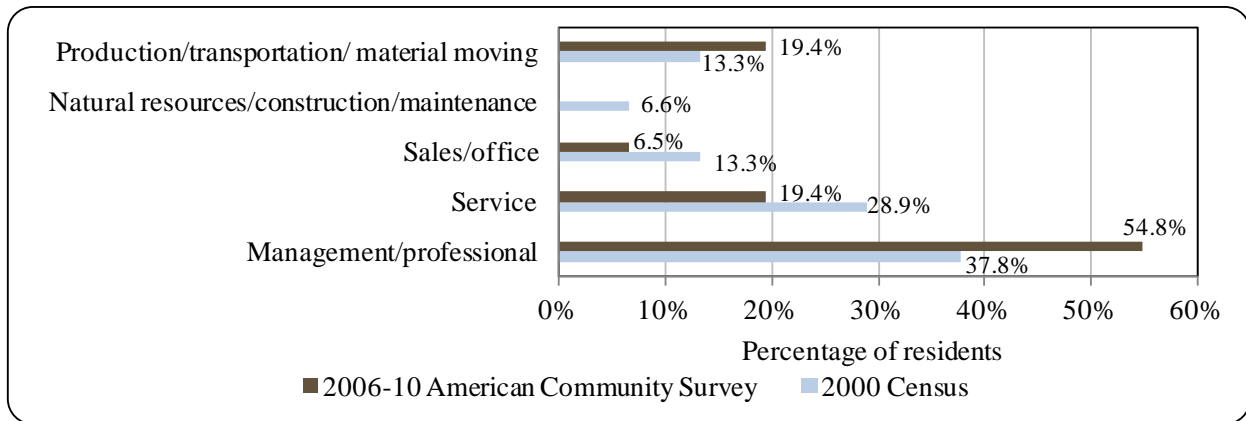


Figure 4. Local Employment by Occupation in 2000-2010, Diomedé (U.S. Census).



Governance

Diomedé is a Second-class city with a mayoral form of government. There is a U.S. Bureau of Indian Affairs recognized village council, and Diomedé Native Corporation is the Alaska Native Claims Settlement Act (ANCSA) chartered village corporation. Bering Straits Native Corporation is the regional ANCSA chartered corporation. The closest Alaska Department of Fish and Game (ADF&G) office is located in Nome, 134 mi southeast. The closest National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage, 679 mi southeast.

When adjusted for inflation, municipal revenues increased 35.4% between 2000 and 2010 from \$490,566, to \$858,768. Municipal revenues peaked in 2004 at \$954,643. Most locally generated revenues were collected from utility rents and contracted services, while outside revenues were collected solely from Community Revenue Sharing. In addition, Diomedes collected \$100,000 from their Community Development Quota (CDQ) entity.

In 2010, sales tax accounted for 2.1% of total municipal revenues, compared to 2.7% in 2000. State allocated Community Revenue Sharing accounted for 11.9% of total municipal revenues that year, compared to 6.2% from State Revenue Sharing in 2000. State or federal fisheries-related grants awarded between 2000 and 2010 include \$5.05 million for a harbor construction project and \$600,000 for a harbor/barge landing preliminary engineering project. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Diomedes from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$490,566	\$12,722	\$30,617	n/a
2001	\$583,176	\$12,970	\$30,617	n/a
2002	\$555,088	\$13,198	\$30,617	\$2,550,000
2003	\$719,289	\$15,603	\$26,503	\$2,500,000
2004	\$954,643	\$15,564	-	n/a
2005	\$798,400	\$18,299	-	n/a
2006	\$691,447	\$9,015	-	n/a
2007	\$520,195	\$17,625	-	\$600,000
2008	\$802,861	\$20,008	-	n/a
2009	\$860,242	\$13,228	\$103,421	n/a
2010	\$858,768	\$18,148	\$102,530	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*¹⁶³

Due to constant winds from the north, accessibility is often limited. A state-owned heliport allows for weekly mail delivery. There is no airstrip due to the steep slopes and rocky terrain; therefore skiplanes must land on an ice strip in winter. Few float plane pilots attempt to land on the rough and often foggy open sea during summer. Regular flights are scheduled from Nome, weather permitting. There is a breakwater and small boat harbor. Skin boats are still a popular method of sea travel to cover the 28 mi to Wales. Cargo barge stops are irregular, due to sea or ice conditions, but deliver at least annually. Lighterage services are available from Nome. Roundtrip service between Anchorage and Nome in June 2012 was \$442.¹⁶⁴ Chartered air service is available between Nome to Diomedes via Bering Air or Ryan Air.

*Facilities*¹⁶⁵

Water drawn from a mountain spring is treated and stored in a 434,000 steel tank, and families haul water from this source. The tank is filled for winter use, but the water supply typically runs out around March. The “washeteria” is then closed and residents are required to melt snow and ice for drinking water. All households use privies and “honeybuckets.” The “washeteria”/clinic is served by a septic system and seepage pit. Due to the soil condition, lack of ground cover and steep terrain, the community has found limited waste disposal methods. Refuse is disposed on the pack ice in winter; combustibles are burned. Public safety services are provided by state troopers in Nome. Fire and rescue services are provided by Diomedes Volunteer Fire Department. Additional public facilities include a community center and school library. Communications services include local and long distance telephone, local and cable television, and local radio.

*Medical Services*¹⁶⁶

Little Diomedes Clinic is a Community Health Aid Program Site and provides basic health care services. The closest hospital is located in Nome.

*Educational Opportunities*¹⁶⁷

Diomedes School provides preschool through 12th grade instruction. In 2011, there were 33 students enrolled and 6 teachers employed.

¹⁶³ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁶⁴ Airfare was calculated using lowest fare from www.travelocity.com (Retrieved November 22, 2011).

¹⁶⁵ See footnote 163.

¹⁶⁶ Ibid.

¹⁶⁷ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Residents of Diomedede have participated in subsistence fishing for thousands of years. Traditional harvesting practices continue to be important to the community. Commercial and recreational fishing are not significantly practiced.¹⁶⁸ Diomedede is located on the border of the Arctic Federal Management Area and Federal Reporting Area 514. Diomedede participates in the Community Development Quota program and is represented by the Norton Sound Economic Development Corporation. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹⁶⁹ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Diomedede does not have a registered processing plant. The closest seafood processor is located in Nome.

Fisheries-Related Revenue

No fisheries-related revenue was reported between 2000 and 2010 (Table 3).

Commercial Fishing

As is represented in Tables 4 to 10, commercial fishing was not being practiced by residents of Diomedede between 2000 and 2010.

¹⁶⁸ City of Diomedede. (2009). *A Local Economic Development Plan for Diomedede 2009 Updated Priorities*. Retrieved May 25, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Diomedede-EDP-2009.pdf>.

¹⁶⁹ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Diomede: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue⁵</i> (in millions)	<i>\$490,566</i>	<i>\$583,176</i>	<i>\$555,088</i>	<i>\$719,289</i>	<i>\$954,643</i>	<i>\$798,400</i>	<i>\$691,447</i>	<i>\$520,195</i>	<i>\$802,861</i>	<i>\$860,242</i>	<i>\$858,768</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Diomede: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Diomede: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Fished permits</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>% of permits fished</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	<i>Permit holders</i>	0	0	0	0	0	0	0	0	0	0	0

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Diomedes: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Diomedes ²	Total Net Pounds Landed In Diomedes ^{2,5}	Total Ex-Vessel Value Of Landings In Diomedes ^{2,5}
2000	0	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	0	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Diomedes: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Diomedes: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (lb)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Diomedes: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (lb)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Diomede: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Diomedes Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

In 2010, residents were sold three sport fishing licenses, compared to none in 2000. No sport fishing guide businesses or charter businesses operated in Diomedes between 2000 and 2010. No sport fishing licenses were sold in the community between 2000 and 2010. Diomedes is not located within a designated ADF&G Harvest Survey Area. Although the Northwest Alaska ADF&G Harvest Survey area neighbors Diomedes, it is unlikely that residents participate in recreational fishing there. Information regarding recreational fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Diomedé: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Diomedé ²	Saltwater Angler Days Fished – Non-residents ³	Saltwater Angler Days Fished – Alaska Residents ³
2000	0	0	0	0	n/a	n/a
2001	0	0	2	0	n/a	n/a
2002	0	0	1	0	n/a	n/a
2003	0	0	3	0	n/a	n/a
2004	0	0	4	0	n/a	n/a
2005	0	0	3	0	n/a	n/a
2006	0	0	3	0	n/a	n/a
2007	0	0	4	0	n/a	n/a
2008	0	0	1	0	n/a	n/a
2009	0	0	1	0	n/a	n/a
2010	0	0	3	0	n/a	n/a

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence fishing is a central part of Diomedé’s economy and culture. However, data on subsistence participation is extremely limited. No information is available regarding household participation in subsistence activities, participation in subsistence salmon, non-salmon, and marine invertebrate harvests, participation in subsistence halibut harvests, or participation in subsistence seal, sea lion, or walrus harvests. Between 2000 and 2006, residents reported harvesting 14 beluga whales. Although not captured in ADF&G subsistence databases, walrus, ice seals, and ringed seals are also harvested by residents.¹⁷⁰ Information regarding subsistence trends can be found in Tables 12 through 15.

¹⁷⁰ North Pacific Research Board. (n.d.). *Population Dynamics*. Retrieved July 5, 2012 from: http://www.nprb.org/documents/foundation/Part%20II/mammals/Population%20Dynamics_mammals.pdf.

Table 12. Subsistence Participation by Household and Species, Diomede: 2000-2010.

Year	% Households Participating In Salmon Subsistence	% Households Participating In Halibut Subsistence	% Households Participating In Marine Mammal Subsistence	% Households Participating In Marine Invertebrate Subsistence	% Households Participating In Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (Pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Diomede: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Diomede: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Diomede: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	6	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	4	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	4	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.



Elim (EE-lim)

People and Place

*Location*¹⁷¹

Elim is located on the northwest shore of Norton Bay on the Seward Peninsula, 96 mi east of Nome and 460 mi northwest of Anchorage. The area encompasses 2.4 sq mi of land. Elim was incorporated as a Second-class city in 1970, is located in the Nome Census Area, and is not under the jurisdiction of borough.

*Demographic Profile*¹⁷²

In 2010, there were 330 residents, ranking Elim 153rd of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 25%. Between 2000 and 2009, the population declined by 7.99% with an average annual growth rate of -1.48%, which was less than the statewide average of 0.75% and indicative of a steadily declining population in those years. In a survey conducted by NOAA's Alaska Fishery Science Center (AFSC) in 2011, community leaders reported that there were 340 permanent and 10 transient residents living in Elim in 2010. On average, Elim has seasonal workers living in the community from June through October. The population usually reaches its peak in July when residents return to Elim for subsistence fishing. Information regarding population trends can be found in Table 1.

The racial composition of Elim is predominately Inupiat Eskimo. Overall, the racial and ethnic composition of Elim has remained relatively unchanged between 2000 and 2010. In 2010, 89.7% of residents identified themselves as American Indian or Alaska Native, compared 92.7% in 2000. Also in that year, 7.3% of residents identified themselves as White, compared to 5.1% in 2000; 0.3% identified themselves as Asian; and 2.7% identified themselves as two or more races, compared to 2.2% in 2000. Hispanic or Latino residents made up 0.3% of the population in 2010. Information regarding race and ethnicity in Elim can be found in Figure 1.

In 2010, the average household size was 3.71, compared to 3.6 in 1990 and 3.73 in 2000. In that year, there were a total of 105 housing units, compared to 81 in 1990 and 106 in 2000. Of the households surveyed in 2010, 45% were owner-occupied, compared to 46% in 2000; 40% were renter-occupied, compared to 33% in 2000; 15% were vacant, compared to 14% in 2000; and 0% were occupied seasonally, compared to 7% in 2000. Since 1990, there have been no reports of residents living in group quarters.

¹⁷¹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Elim from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	264	-
2000	313	-
2001	-	317
2002	-	340
2003	-	342
2004	-	319
2005	-	303
2006	-	294
2007	-	309
2008	-	280
2009	-	288
2010	330	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

The gender distribution in Elim was somewhat skewed in 2010 at 55.2% male and 44.8% female, which was less even than the statewide distribution (52% male, 48% female) and more even than the distribution in 2000 (56.9% male, 43.1% female). The median age that year was 23.8 years, which was much younger than the statewide median of 33.8 years and similar to the 2000 median of 23.6 years.

When compared to 2000, the population structure in 2010 was somewhat similar. In that year, 43.1% of residents were under the age of 20, compared to 44.8% in 2000; 6.6% were over the age the age of 59, compared to 8.5% in 2000; 31.1% were between the ages of 30 and 59, compared to 33.1% in 2000; and 19.1% were between the ages of 20 and 29, compared to 13.4% in 2000. The increase in the proportion of residents aged 20 to 29 may be indicative of increased youth retention in the community; however, more information would be needed to make that determination.

Overall, gender distribution by age cohort was more even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred in the 40 to 49 age range (5.4% male, 2.4% female), followed by the 0 to 9 (14.6% male, 12.2% female) and 10 to 19 (9% male, 7.3% female) age ranges. Of those three, the greatest relative gender difference occurred in the 40 to 49 age range. Information regarding Elim’s population structure can be found in Figure 2.

Figure 1. Racial and Ethnic Composition, Elim: 2000-2010 (U.S. Census).

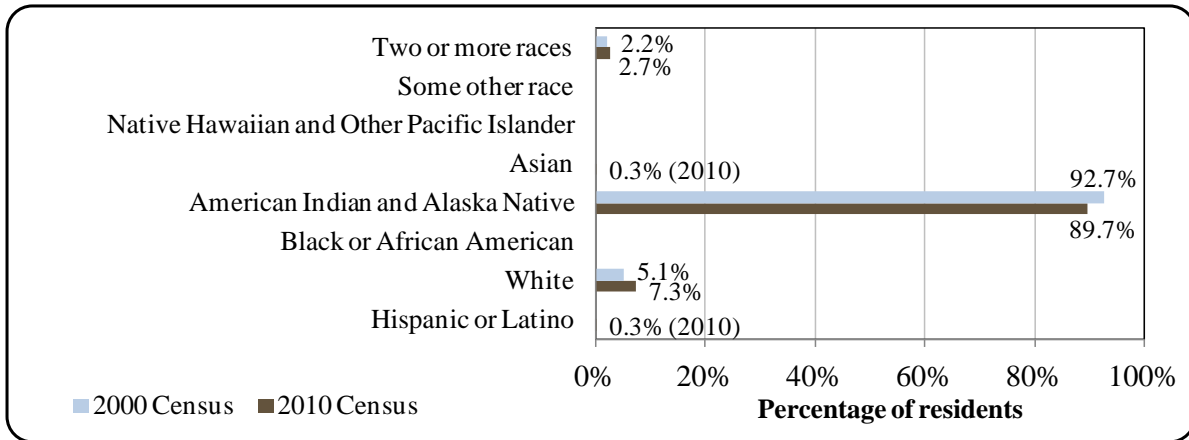
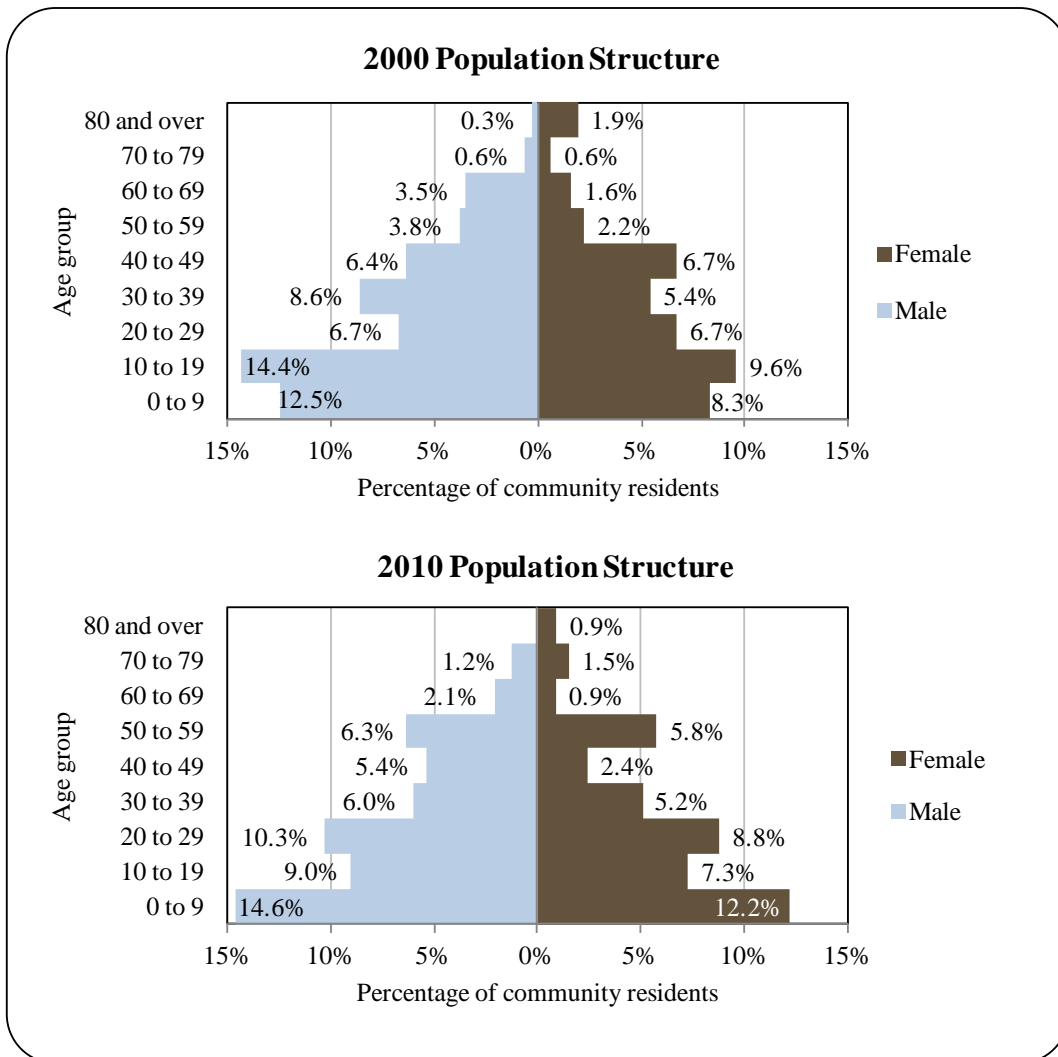


Figure 2. Population Age Structure in Elim Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)¹⁷³ estimated that 89.1% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, and estimated 2.4% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 8.5% of a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 38.8% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 2.4% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; and an estimated 8.5% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall. No residents were estimated to hold a graduate or professional degree.

*History, Traditional Knowledge, and Culture*¹⁷⁴

This settlement was formerly the Malemiut Inupiat Eskimo village of Nuviakchak. The Native culture was well-developed and well-adapted to the environment. Each tribe possessed a well-defined subsistence harvest territory. The area became a federal reindeer reserve in 1911. In 1914, Rev. L.E. Ost founded a Covenant mission and school, called Elim Mission Roadhouse. The city was incorporated in 1970. When the Alaska Native Claims Settlement Act (ANCSA) was passed in 1971, Elim decided not to participate and instead opted for title to the 298,000 acres of land in the former Elim Reserve. The Iditarod Sled Dog Race passes through Elim each year.

Natural Resources and Environment

Elim has a subarctic climate with maritime influences. Norton Sound is ice-free generally between mid-June and mid-November. Summers are cool and moist; winters are cold and dry. Summer temperatures average between 46 to 62 °F (8 to 17 °C); winter temperatures average -8 to 8 °F (-22 to -6 °C). Annual precipitation averages 19 inches, with about 80 inches of snow.¹⁷⁵

The terrain around Elim is a mix of coastal lowlands to more mountainous regions. The Seward Peninsula itself consists of an extensive upland area with interior basins, and coastal lowlands. The interior regions are drained through narrow canyons which cut through the uplands, transitioning across lowlands to the ocean. Soils across the more mountainous areas are characterized by thick colluvial and glacial deposits, gravel, and partially weathered bedrock in the uplands; and finer-grained valley sediments and organic materials in the valleys. Lowland tundra is covered by poorly drained peat deposits. Lowland and upland areas are underlain by a moderately thick to thin layer of permafrost. Vegetation includes mostly tall shrubs with spruce/shrub woodland areas to the north.¹⁷⁶

¹⁷³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁷⁴ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁷⁵ Ibid.

¹⁷⁶ U.S. Bureau of Land Management. (2007). *Kobuk-Seward Peninsula Proposed Resource Management Plan and Final Environmental Impact Statement*. Retrieved April 2, 2012 from: http://www.blm.gov/ak/st/en/prog/planning/ksp/ksp_documents/ksp_prmp_feis.html.

Freshwater streams and lakes on the Seward Peninsula provide habitat for all five species of Pacific salmon, Dolly Varden, Arctic char, sheefish, round and humpback whitefish, Bering and least cisco, northern pike, Arctic grayling, stickleback, sculpin, sucker, and blackfish. Muskoxen were introduced to the Seward Peninsula in 1970. In 2005, the population was estimated at 2,397 animals. Moose are an important subsistence resource and are widely distributed throughout the Seward Peninsula, favoring areas which contain willow and birch shrubs. The Western Arctic Caribou Herd winters in the Nulato Hills, southeast of Elim. As of 2009, the herd's population was estimated at 348,000.¹⁷⁷ Brown bears are widely distributed throughout the Seward Peninsula while black bears are found in forested areas. Gray wolves are found throughout the area wherever adequate numbers of prey species are found. These include moose, caribou, voles, lemmings, ground squirrels, snowshoe hares, beavers, and occasionally birds and fish. Furbearers include beaver, red fox, Arctic fox, lynx, marten, mink, muskrat, otter, coyote, wolverine, and wolf. Migratory birds occupy a wide variety of habitats throughout the Seward Peninsula.

Sparse forest cover makes much of the Seward Peninsula unsuitable for large-scale timber harvests. Southern Seward Peninsula is characterized by forested landscape; however, timber harvests remain small-scale. Forested areas on Elim Native Corporation (ENC) lands have been heavily impacted by spruce bark beetles. In 2004, the Alaska Department of Natural Resources (ADNR) Division of Forestry reported that 81,389 acres of ENC forested lands had been infested.

According to a 1995 assessment, the Norton Sound basin contains 2,707.8 billion cubic feet of potential undiscovered natural gas.¹⁷⁸ Beyond several exploration and test wells, there have been no oil or gas developments within the Norton Sound basin.¹⁷⁹ The Eagle Creek area, northwest of Elim, has historically been a placer gold mining site. Although inactive, the site may still be productive on a small scale.¹⁸⁰ Coal developments include McCarthy's Marsh Coal District to the northwest and Boulder Creek and Death Valley Coal Districts to the northeast.¹⁸¹

Environmental hazards affecting Elim include storm surges, coastal flooding and erosion. Most erosion occurs along the coast to an estimated 50 ft above the high water line. The lower areas of Elim Creek are subject to surge flooding as well. It is estimated that several structures will need to be relocated within the next 20 yr as a result of erosion. Mitigation measures in place include elevating structures and installing rip rap.¹⁸²

According to the Alaska Department of Environmental Conservation (DEC), there are no notable environmental cleanup sites present in Elim.¹⁸³

¹⁷⁷ Western Arctic Caribou Herd Working Group. (n.d.). *Homepage*. Retrieved April 2, 2012 from: <http://westernarcticcaribou.org>.

¹⁷⁸ U.S. Department of the Interior. (2005). *Engineering and Economic Analysis of Natural Gas Production in the Norton Basin*. Retrieved April 2, 2012 from: http://www.alaska.boemre.gov/re/Natural_gas_Norton.pdf.

¹⁷⁹ U.S. Bureau of Ocean Energy Management, Regulation and Enforcement. (n.d.). Retrieved April 2, 2012 from: <http://alaska.boemre.gov/>.

¹⁸⁰ U.S. Geological Survey. (n.d.). Retrieved April 2, 2012 from: http://ardf.wr.usgs.gov/ardf_data/Solomon.pdf.

¹⁸¹ See footnote 176.

¹⁸² Alaska Department of Community and Regional Affairs. (n.d.). Retrieved April 2, 2012 from: <http://www.commerce.state.ak.us/dca/planning/ACCIMP/Elim.html>.

¹⁸³ Alaska Department of Environmental Conservation. (n.d.). Retrieved April 16, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹⁸⁴

Elim's cash economy is limited and based mostly on commercial fishing and local public services. The sale or importation of alcohol is banned in the village. Many residents leave the community during months when wage employment is limited, and return in late summer or early fall for the beginning of the subsistence season.¹⁸⁵ The village wants to develop a fish processing plant. Residents rely on fish, seal, walrus, beluga whale, reindeer, moose, and home gardens for food.¹⁸⁶ Top employers¹⁸⁷ in 2010 included: Bering Strait School District, City of Elim, Norton Sound Economic Development Corporation, Elim IRA Council, Kawerak Inc., Elim Native Store, Norton Sound Health Corporation, Bering Straits Development Corporation, ENC, and Hageland Aviation Services, Inc.

In 2010,¹⁸⁸ the estimated per capita income was \$12,549 and the estimated median household income was \$45,833, compared to \$10,300 and \$40,179 in 2000, respectively. However, after accounting for inflation by converting 2000 values into 2010 dollars,¹⁸⁹ the real per capita income (\$13,544) and real median household income (\$52,835) indicate a decline in both individual and household earnings. In 2010, Elim ranked 231st of 305 Alaskan communities from which per capita income was estimated, and 160th of 299 Alaskan communities from which median household income was estimated.

Elim's small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹⁹⁰ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$2.27 million in total wages in 2010.¹⁹¹ When matched with the population in 2010, the per capita income equals \$6,870, which was less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Decennial Census figures.¹⁹² In addition, the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁹³ However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

¹⁸⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁸⁵ Kawerak, Inc. (2008). *Local Economic Development Plan for Elim 2005-2010*. Retrieved April 2, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Elim-EDP-2008.pdf>.

¹⁸⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁸⁷ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved January 20, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

¹⁸⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁸⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁹⁰ See footnote 173.

¹⁹¹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁹² See footnote 187.

¹⁹³ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

According to 2006-2010 ACS estimates,¹⁹⁴ 62.9% of residents aged 16 and over were part of the civilian labor force in 2010. In that year, unemployment was estimated at 19.1%, compared to an estimated 5.9% statewide; and an estimated 27% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 42.4% worked in the private sector and an estimated 57.6% worked in the public sector.

By industry, most (65.9%) employed residents were estimated to work in education services, health care, and social assistance sectors in 2010; followed by transportation, warehousing and utilities sectors (12.9%); retail trade sectors (8.2%); public administration sectors (7.1%); other service sectors (3.5%); and information sectors (2.4%) (Figure 3). By occupation type, 48.2% of those employed were estimated to hold management or professional positions; 27.1% were estimated to hold sales or office positions; 21.2% were estimated to hold service positions; and 3.5% were estimated to hold production, transportation, or material moving positions (Figure 4). Notable changes in employment by industry included proportional declines in public administration sectors; and increases in education services, health care, social assistance, transportation, warehousing, and retail trade sectors. Notable changes in occupation types included proportional declines in natural resource, construction, and maintenance positions; and proportional increases in sales and office positions. Between 2000 and 2010 there were no records of residents working in fishing sectors. However, the fishing industry is often characterized by seasonal or transient employment, and ACS and census sampling techniques may not have captured residents working within those sectors. According to 2010 ALARI estimates, most (56.9%) worked in local government sectors; followed by trade, transportation, and utilities sectors (16.0%); and education and health service sectors (14.6%).

No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly.

¹⁹⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 3. Local Employment by Industry in 2000-2010, Elim (U.S. Census).

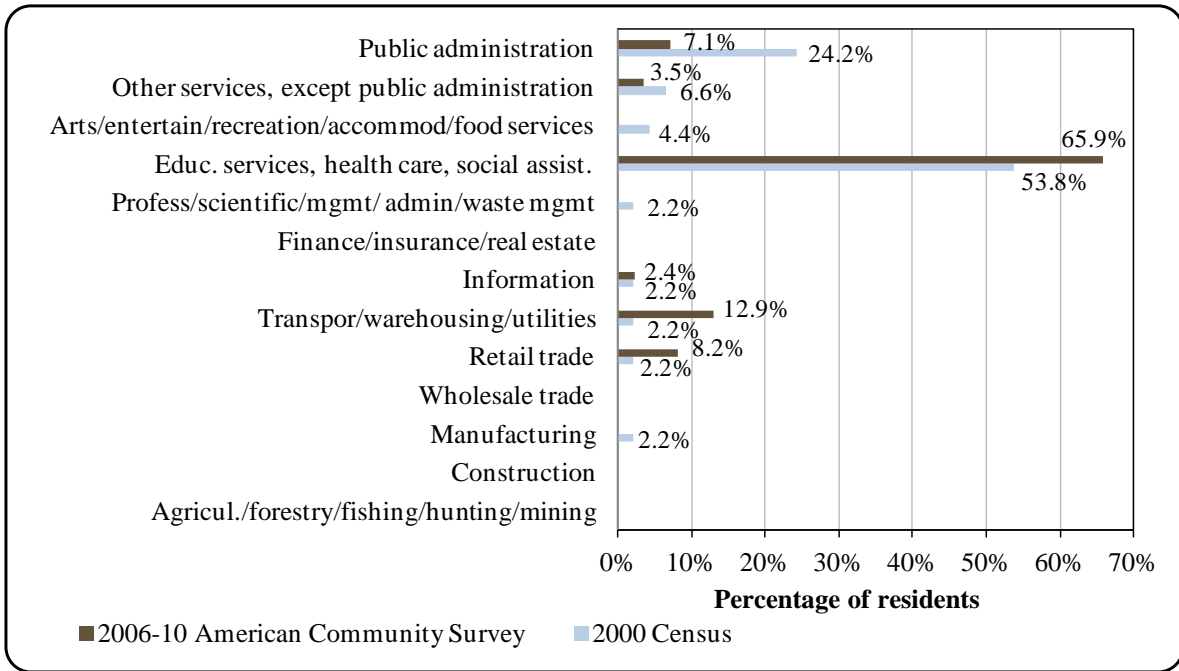
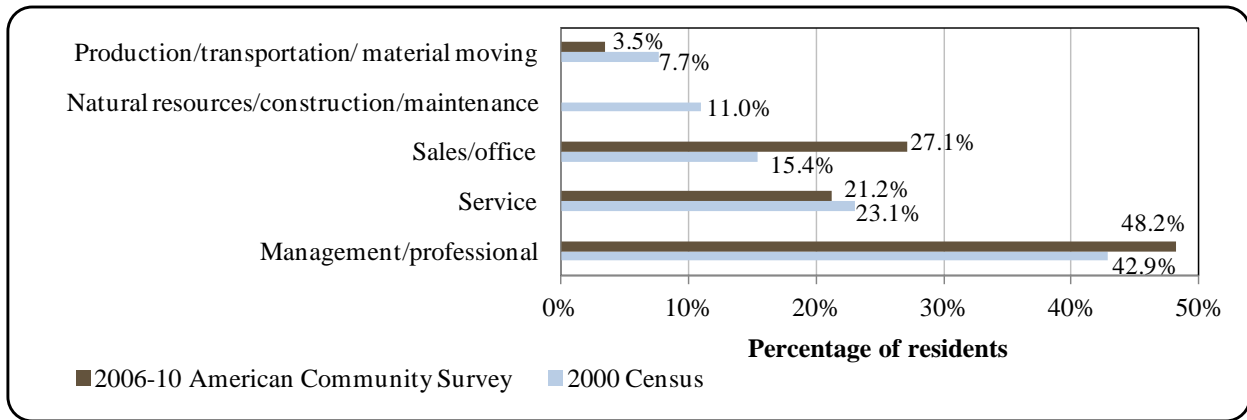


Figure 4. Local Employment by Occupation in 2000-2010, Elim (U.S. Census).



Governance

Elim is a Second-class city with a mayoral form of government. There is a U.S. Bureau of Indian Affairs recognized Native village council, and the ENC is the local ANCSA village corporation. Bering Straits Native Corporation is the regional ANCSA corporation and the regional Native non-profit corporation is Kawerak, Inc. The closest Alaska Department of Fish and Game (ADF&G) office is located in Unalakleet, 70 mi southeast. The closest U.S. Bureau of Citizenship and Immigration Services office is located in Nome, 96 mi west. The closest National Marine Fisheries Service (NMFS) office is located in Anchorage, 460 mi southeast.

In 2010, Elim administered a 3% sales tax. When adjusted for inflation,¹⁹⁵ total municipal revenues declined by 38.6% between 2000 and 2010 from \$785,518, to \$623,496. Revenues peaked in 2001 at \$1.79 million, thanks in large part to substation capital project grants. In 2010, most locally generated revenues were collected from utility rents, followed by sales taxes and Alaska Village Electric Cooperative reimbursements. Outside revenues were generated from Community Revenue Sharing, Community Development Quota (CDQ) entity grants, and payments in lieu of taxes.

In 2010, sales tax accounted for 10.7% of total revenues, compared to 4.3% in 2000. Also in that year, Elim received \$112,901 in state allocated Community Revenue Sharing, which accounted for 18.1% of the total municipal budget for that year. This represented a proportional decrease from 2000, when \$29,396 in State Revenue Sharing accounted for 3.9% of the total municipal budget. Fisheries-related grants received between 2000 and 2010 included: \$246,000 from the Norton Sound Economic Development Corporation (NSEDCC) for school renovations and community benefit, \$100,000 for a dock and breakwater project, \$400,000 for a fish passage culvert, and \$516,000 for a port feasibility and design project. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Elim from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$785,518	\$33,426	\$29,396	\$500,000
2001	\$1,789,217	\$31,506	\$28,355	n/a
2002	\$896,793	\$37,099	\$28,437	n/a
2003	\$637,962	\$37,073	\$28,563	n/a
2004	\$554,194	\$29,031	-	n/a
2005	\$408,846	\$34,636	-	n/a
2006	\$728,342	\$28,738	-	n/a
2007	\$539,516	\$34,022	-	n/a
2008	\$537,816	\$44,512	-	n/a
2009	\$581,702	\$58,303	\$111,151	\$123,000
2010	\$623,496	\$66,557	\$112,901	\$132,800

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹⁹⁵ Inflation calculated using the 2010 Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

*Connectivity and Transportation*¹⁹⁶

Elim is best reached by air and sea. It offers a 3,401-ft long by 60-ft wide gravel runway. ENC also owns a private 3,000-ft by 60-ft airstrip at Moses Point. Transportation services include Baker Aviation, Bering Air, Cape Smythe Air Service, Olson Air, Arctic Transportation Service, Hageland, Village Air, and Grant Aviation. Roundtrip airfare between Anchorage and Elim in June 2012 was \$722.¹⁹⁷ There is no dock in the village, so supplies must be lightered to shore by a company operating from Nome. Plans are underway to develop a harbor and dock; an access road is under construction. A cargo ship brings freight annually from Nome.

*Facilities*¹⁹⁸

Water is derived from a new well and is treated. Water and sewer systems built in 1974 have provided residents with piped water and sewer, indoor water heaters and plumbing, and in-home washers and dryers; however, the system needs repair and replacement. Waste flows to a sewage treatment plant with ocean outfall. The landfill is permitted. Public safety is provided by the Kawerak Village Public Safety Officer Program (VPSO), and local state troopers. Fire and rescue services are provided by the Elim Volunteer Fire/Search and Rescue. Electricity is provided by diesel generator. Communication services include local and long distance telephone, cable television, and internet. Additional facilities include a public library, school, clinic, community center, and youth center.

In a survey conducted by the AFSC in 2011, community leaders reported that a barge landing area, new dock space, broadband internet access, water treatment, and geothermal energy projects were all under development as of 2010. Fisheries-related businesses and services located within the community include boat repair (welding), commercial and recreational fishing vessel moorage, ice sales, and air taxi. Residents go to Nome and Unalakleet for services not available locally. Additional public services include a food bank and publicly-subsidized housing.

*Medical Services*¹⁹⁹

The Yukuniaraq Yunqcarvik Clinic provides basic health care and is a Community Health Aid Program (CHAP) site. Emergency services are also provided by a health aide. The nearest hospital is located in Nome.

¹⁹⁶ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁹⁷ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

¹⁹⁸ Kawerak, Inc. (2008). *Local Economic Development Plan for Elim 2005-2010*. Retrieved April 2, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Elim-EDP-2008.pdf>.

¹⁹⁹ See footnote 196.

*Educational Opportunities*²⁰⁰

Aniquiin School provides preschool through 12th grade instruction. As of 2012, there were 107 students enrolled and 10 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Archeological evidence dating back 2,000 years indicates that fishing has long been a part of life in Norton Sound. The largest pre-contact settlements were located on the Western Seward Peninsula, where marine mammals were the primary subsistence resource. The rest of the region's population existed in small, often seasonal settlements along the coast. In the 1800s, large-scale fur trading by Russians began, and by the mid-nineteenth century, commercial whalers had come to the region. Increased competition for walrus, caribou, and other species by outsiders may have increased the importance of salmon to area residents. In the late 1890s, gold was discovered on the Seward Peninsula, bringing thousands of new immigrants to the region. During the gold rush peak between 1900 and 1930, Nome's population grew to 30,000. The community of Council, which had not existed previously, grew to a population of 10,000. After the gold rush, the population greatly declined and people took over a life of fishing.²⁰¹ Commercial fishing in Norton Sound began in earnest with the passing of the Magnuson-Stevens Act in 1977, and was initially designed as an exploratory fishery by the Alaska Board of Fisheries.²⁰² Today, salmon, herring, and red king crab are popular fisheries targeted by residents of Elim.

Salmon stocks experienced a progressive collapse starting in the mid 1960s in the Nome subdistrict and progressing through the Seward Peninsula through the late 1990s.²⁰³ By 2010, Chinook and sockeye salmon populations remained low while coho runs to northern Norton Sound were below average. However, chum salmon runs that year were above average thanks to a strong 2006 brood year.

Commercial fishing of herring by domestic fishermen dates back to 1916 when a fall food fishery began in Golovin Bay. By 1981, the herring fleet in Norton Sound was harvesting approximately 20% of the observed biomass with over 300 fishermen participating in the

²⁰⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

²⁰¹ Adkison, M.; Brannian, L. K.; Holder, R. R.; Link, M.; & Mundy, P. R. (2003). *Research and Restoration Plan for Norton Sound Salmon*. Retrieved April 3, 2012 from: <http://69.93.224.39/~aykssi/wp-content/uploads/NS-RR-Plan-rev.pdf>.

²⁰² Powell, G. C.; Peterson, R.; & Schwarz, L. (1982). *The Red King Crab (Paralithodes camtschatica) In Norton Sound, Alaska: History of Biological Research and Resource Utilization Through 1982*. Retrieved April 3, 2012 from: <http://www.sf.adfg.state.ak.us/fedaiddpdfs/afrbIL.222.pdf>.

²⁰³ Tremaine, R. & Dunmall, K. (2004). *Norton Sound Fisheries Enhancement Summit*. Final Report. Retrieved April 3, 2012 from: <http://www.kawerak.org/servedivisions/nrd/fish/forms/2004/Summit%20summary%20FINAL.pdf>.

fishery.²⁰⁴ The observed herring biomass within the Norton Sound District was 53,786 tons in 2011.²⁰⁵

In 1976, red king crab (legal) biomass within the Norton Sound was approximately 1.7 million crabs. By 1982, that number had fallen to roughly 0.8 million crabs. In 1999, the estimated crab population reached a near historical high of 1.6 million, which fell again to approximately 0.8 million in 2002. In 2008, the legal population was estimated at 1.5 million. Total open access red king crab harvest for the Norton Sound District in 2008 was 364,235 lb. Total Community Development Quota (CDQ) red king crab harvest that year was 30,900 lb.²⁰⁶

Norton Sound has the northernmost fisheries for both Pacific herring and red king crab. Although the Norton Sound herring spawning biomass has been relatively stable in recent times, the market for herring roe has declined due to decreasing consumption in Japan. Processor interest in the Norton Sound sac roe fishery has declined more than in other areas of the State, largely due to the timing of the fishery, which takes place later than sac roe fisheries elsewhere in the state and conflicts with the opening of the first salmon fisheries of the season. In addition, ice floes are often present in Norton Sound during the herring season.²⁰⁷ In contrast, the Norton Sound red king crab stock has shown an increasing trend since a population low in the 1990s, and today provides small summer and winter fisheries. NMFS and ADF&G jointly manage Bering Sea king crab stocks.²⁰⁸ Elim king crab fishermen hold both state-issued king crab permits, as well as permits in the CDQ king crab fishery. The CDQ program “allocates a percentage of all Bering Sea and Aleutian Island quotas for groundfish, prohibited species, halibut, and crab to eligible communities.”²⁰⁹

In 1959 and 1960 an experimental salmon fishery was established in the Norton Sound area. State officials encouraged seafood processors to explore and develop fisheries in the region in hopes of providing economic benefits to local communities. In 1961, commercial harvesters began targeting Chinook and coho salmon in the Unalakleet and Shaktoolik areas. Back then, catch was cleaned and shipped to Anchorage for further processing. A single freezer ship processed pink and chum salmon in the area during 1961. By 1962, two floating processors were in operation, and commercial salmon fishing extended into Norton Bay, Moses Point, and Golovin Bay. Peak canning operations occurred in 1963. Commercial Chinook harvests peaked in the 1980s when the 10-year annual average harvest was about 8,000 fish. Commercial harvests of sockeye salmon have always been minor. Coho salmon harvests averaged about 40,000 annually during the 1980s. By the 1990s, that number increased to approximately 55,000 fish, but decreased by half by 2000. Pink salmon harvests are sporadic, and fluctuate by year. In 1994, almost one million pink salmon were commercially harvested while in more recent years, harvests have dropped to zero. Commercial harvests of chum salmon averaged 150,000 fish

²⁰⁴ Lean, C. (1989). *The Development of the Norton Sound Herring Fishery, 1979-1988*. Retrieved April 3, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidPDFs/RIR.3N.1989.04.pdf>.

²⁰⁵ Alaska Department of Fish and Game. (2012). *2012 Arctic-Yukon-Kuskokwim Herring Outlook*. Retrieved April 3, 2012 from: http://www.adfg.alaska.gov/static/fishing/PDFs/commercial/2012_ayk_herring_outlook.pdf.

²⁰⁶ Menard, J.; Soong, J.; & Kent, S. (2010). *2008 Annual Management Report Norton Sound, Port Clarence, and Kotzebue*. Retrieved April 3, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR10-49.pdf>.

²⁰⁷ Ibid.

²⁰⁸ Alaska Department of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=redkingcrab.main>.

²⁰⁹ NOAA Fisheries. (n.d.). *Community Development Quota (CDQ) Program*. Retrieved June 20, 2012 from <http://www.fakr.noaa.gov/cdq/default.htm>.

annually during the 1970s and 1980s. Stricter escapement goals reduced that number in the 1990s.²¹⁰

Elim is eligible for participation in the CDQ program and is represented by the NSEDC. In a survey conducted by the AFSC in 2011, community leaders reported that Elim is eligible participates in the fisheries management process in Alaska through a representative that sits on the NSEDC board. Elim is located in Federal Reporting Area 514, International Pacific Halibut Committee Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Elim does not have a registered processing plant. There are shore-based seafood processors located in Nome and Unalakleet. In 2011, Icicle Seafoods operated a processor barge in the Norton Sound area during herring season.²¹¹ In 2008, many Norton Sound crab fishermen delivered catch to buyers in Nome, Anchorage, or Dutch Harbor/Unalaska. Some sold their catch dockside as catcher-sellers.²¹²

Fisheries-Related Revenue

Between 2000 and 2010, Elim collected very little in fisheries-related taxes or fees. In 2010, \$78 was collected in Shared Fisheries Business Taxes, compared to \$60 in 2000. Fisheries related revenue peaked in 2006 at \$211. Other fisheries-related revenue collected by Elim between 2000 and 2010 came from raw fish taxes. In a survey conducted by the AFSC in 2011, community leaders reported that public services are not funded by fisheries-related taxes or fees. Information regarding fisheries-related revenue trends can be found in Table 3.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In a survey conducted by the AFSC in 2011, community leaders reported a substantial increase in the number of commercial fishing vessels and moderate increase in the number of vessels under 35 ft long in the community between 2005 and 2010. Residents held 21 commercial crew licenses in 2010, compared to 28 in 2000. Also in that year, residents held majority ownership of 6 vessels, compared to 15 in 2000.

In 2010, 34 residents, or 10.3% of the population, held 46 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 44 residents held 51 CFEC permits. Of the CFEC permits issued in 2010, 48% were actively fished, compared to 51% in 2000. This varied by fishery from 100% of crab permits, to 55% of salmon and 18% of herring permits. Fisheries prosecuted by Elim residents in 2010 included Norton Sound pot king crab, Norton

²¹⁰ Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 10, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

²¹¹ Norton Sound Economic Development Corporation. (n.d). *Norton Sound commercial herring fishery a go for 2011*. Retrieved April 3, 2012 from: <http://www.nsedc.com/pdf/Norton%20Sound%20Herring%20Fishery%20to%20Open.pdf>.

²¹² See footnote 206.

Sound gillnet herring roe and food/bait, and Norton Sound gillnet salmon.²¹³ Of the CFEC permits issued in 2010, 72% were for salmon, compared to 76% in 2000; 24% were for herring, compared to 22% in 2000; and 4% were for crab, compared to 2% in 2000.

Between 2000 and 2010, no residents held Federal Fisheries Permits (FFP) or License Limitation Program (LLP) permits groundfish or crab. In addition, no residents held halibut, sablefish, or crab quota share between 2010 and when the programs began.

Between 2000 and 2010, no landings were reported in Elim. However, landings were reported by residents of Elim during that time. All landings made by residents between 2000 and 2010 are considered confidential, with the exception of herring landings in 2005, 2001, and 2000. In 2005, 308,327 lb of herring valued at \$26,208 ex-vessel were landed by residents, compared to 585,496 lb valued at \$52,695 in 2000. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²¹³ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Elim: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	\$60	n/a	n/a	n/a	n/a	n/a	n/a	\$86	\$67	n/a
Shared Fisheries Business Tax ¹	\$60	\$124	\$179	n/a	\$72	\$181	\$211	\$161	\$86	\$65	\$78
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	\$60	\$184	\$179	n/a	\$72	\$181	\$211	\$161	\$172	\$132	\$78
<i>Total municipal revenue</i> ⁵	\$785,518	\$1.79 M	\$896,793	\$637,962	\$554,194	\$408,846	\$728,342	\$539,516	\$537,816	\$581,702	\$623,496

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Elim: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	1	4	3	2	3	3	2	1	0	1	2
	Fished permits	0	2	2	1	3	2	0	1	0	1	2
	% of permits fished	0%	50%	67%	50%	100%	67%	0%	100%	n/a	100%	100%
	Total permit holders	1	3	3	2	2	2	2	1	0	1	2
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	1	0	1	1	0	0	1	0	0	0
	Fished permits	0	0	0	1	1	0	0	1	0	0	0
	% of permits fished	n/a	0%	n/a	100%	100%	n/a	n/a	100%	n/a	n/a	n/a
	Total permit holders	0	1	0	1	1	0	0	1	0	0	0
Herring (CFEC) ²	Total permits	11	12	12	11	10	10	10	10	10	11	11
	Fished permits	10	7	2	2	0	5	2	0	2	0	2
	% of permits fished	91%	58%	17%	18%	0%	50%	20%	0%	20%	0%	18%
	Total permit holders	11	12	12	11	10	10	10	10	10	11	11

Table 4 cont'd. Permits and Permit Holders by Species, Elim: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	39	39	39	37	36	36	36	35	33	32	33
	Fished permits	16	5	0	0	0	0	4	11	13	14	18
	% of permits fished	41%	13%	0%	0%	0%	0%	11%	31%	39%	44%	55%
	Total permit holders	41	40	40	37	36	37	36	35	34	33	33
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>51</i>	<i>56</i>	<i>54</i>	<i>51</i>	<i>50</i>	<i>49</i>	<i>48</i>	<i>47</i>	<i>43</i>	<i>44</i>	<i>46</i>
	<i>Fished permits</i>	<i>26</i>	<i>14</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>7</i>	<i>6</i>	<i>13</i>	<i>15</i>	<i>15</i>	<i>22</i>
	<i>% of permits fished</i>	<i>51%</i>	<i>25%</i>	<i>7%</i>	<i>8%</i>	<i>8%</i>	<i>14%</i>	<i>13%</i>	<i>28%</i>	<i>35%</i>	<i>34%</i>	<i>48%</i>
	<i>Permit holders</i>	<i>44</i>	<i>43</i>	<i>43</i>	<i>40</i>	<i>38</i>	<i>40</i>	<i>38</i>	<i>37</i>	<i>35</i>	<i>34</i>	<i>34</i>

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Elim: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Elim ²	Total Net Pounds Landed In Elim ^{2,5}	Total Ex-Vessel Value Of Landings In Elim ^{2,5}
2000	28	0	0	15	10	0	0	\$0
2001	14	0	0	9	5	0	0	\$0
2002	5	0	0	9	5	0	0	\$0
2003	0	0	0	8	4	0	0	\$0
2004	3	0	0	3	2	0	0	\$0
2005	16	0	0	7	5	0	0	\$0
2006	9	0	0	6	5	0	0	\$0
2007	13	0	0	6	4	0	0	\$0
2008	16	0	0	6	4	0	0	\$0
2009	5	0	0	5	4	0	0	\$0
2010	21	0	0	6	5	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Elim: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Elim: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Elim: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Elim: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Elim Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	585,496	156,157	--	--	--	308,327	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>585,496</i>	<i>156,157</i>	--	--	--	<i>308,327</i>	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$52,695	\$12,961	--	--	--	\$26,208	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$52,695</i>	<i>\$12,961</i>	--	--	--	<i>\$26,208</i>	--	--	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Because of Elim’s remote location, recreational fishing by non-local residents is limited in the community. In most instances subsistence fishing is preferred by local residents. In 2010, 9 sport fishing licenses were sold to residents, compared to 14 in 2000. Sport fishing licenses sales to residents peaked in 2004 at 26 licenses. Between 2000 and 2010, no sport fish guide businesses were located in the community during this period.

Elim is located in the Seward Peninsula-Norton Sound ADF&G Sport Fishing Survey Area which includes all waters north of the Yukon River drainage and south of the Selawik River Drainage. In 2010, there were 77 total saltwater angler days fished in the region, compared to 2,859 in 2000. In that year, non-Alaska residents accounted for 55.8% of saltwater angler days fished in the region, compared to 6.9% in 2000. Although annual Alaska resident saltwater angler days fished varied between 2000 and 2010, there was a significant decline in 2010 compared to previous years. Also in 2010, there was a total of 10,533 freshwater angler days fished, compared to 15,584 in 2000. Of that total, non-Alaska residents accounted for 41.1%, compared to 24.3% in 2000. According to ADF&G Harvest Survey data,²¹⁴ resident private anglers target Chinook, coho, pink, and chum salmon, Dolly Varden, Pacific halibut, and Pacific cod. In a survey conducted by the AFSC in 2011, community leaders reported that private anglers also target crab. Kept/released data for charter operations is unavailable for Elim. Information regarding recreational fishing trends can be found in Table 11.

Table 11. Sport Fishing Trends, Elim: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Elim²
2000	0	0	14	0
2001	0	0	13	0
2002	0	0	24	0
2003	0	0	7	0
2004	0	0	26	0
2005	0	0	23	0
2006	0	0	18	0
2007	0	0	15	0
2008	0	0	21	0
2009	0	0	15	6
2010	0	0	9	0

²¹⁴ Alaska Department of Fish and Game. (2011). Alaska Sportfishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Elim: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	n/a	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence fishing is an important part of Elim’s culture and economy. Historically, the Norton Sound area supported an extensive trade network which connected communities of the area with each other as well as the Chukchi region of Siberia. Prior to the late nineteenth century, furs and marine mammal products (oil, hides, meat, bones, and ivory) were traded with Siberia for reindeer hides.

Wage employment is limited in the community, and local and regional reciprocal networks are used to meet individual and community needs. In a survey conducted 2004, residents were found to be using or trading chum, coho, Chinook, and pink salmon, Pacific cod, caribou, walrus, beluga whale, bowhead whale, shellfish, hardshell clams, king crab, and non-salmon fish. Trade and barter networks were found to extend to multiple communities including Point Hope, Kotzebue, Nome, Gambell, Savoonga, Wasilla, and Anchorage.²¹⁵

²¹⁵ Magdanz, J. S. et al. (2007). *Customary Trade and Barter in Fish in the Seward Peninsula Area, Alaska*. Retrieved July 3, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp328.pdf>.

Subsistence data are limited for 2000 through 2010. No information is available regarding subsistence participation at the household level. Halibut harvests remained undocumented for Elim between 1984 and 2009.²¹⁶ Between 2000 and 2008, between 84 and 56 salmon permits were issued for household harvests in Elim. (Table 13). Pink salmon are harvested most, followed by coho, chum, Chinook, and sockeye salmon. In 2008, residents reported harvesting 11,012 salmon, compared to 9,842 in 2000. Reported salmon harvests peaked in 2002 at 12,176 fish

Walrus and beluga whale are significant subsistence resources in Elim. Between 2000 and 2009, 122 beluga whales and 30 walrus were reported as harvested. Data regarding subsistence harvests of marine invertebrates, non-salmon fish, halibut, sea lion, and seal are unavailable. Information regarding subsistence trends can be found in Tables 12 through 15.

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that current challenges facing Elim’s fishing economy include high fuel prices and unpredictable salmon returns. When questioned on fisheries policies or management actions effects on Elim, community leaders reported concerns that salmon bycatch rules might be impacting salmon runs. In addition, there was concern over negative regional impacts caused by vessels intercepting salmon runs in the Aleutian Area M fishery. Finally, leaders expressed strong opposition to bottom trawling. Overall, the community would like to see salmon bycatch reduced and the closure of the Northern Bering Sea Trawl Area. In addition, the Kwiniuk River counting tower has been a benefit to the community.

Table 12. Subsistence Participation by Household and Species, Elim: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

²¹⁶ National Marine Fisheries Service. (2003). *Environmental Assessment of a Regulatory Amendment to Define a Halibut Subsistence Fishery Category in Convention Waters*. Retrieved July 3, 2012 from: <http://www.fakr.noaa.gov/analyses/subsistence/halibut0403.pdf>.

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Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Elim: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	84	80	272	1,316	1,517	6,691	46	n/a	n/a
2001	80	69	427	898	1,352	1,390	70	n/a	n/a
2002	82	76	565	1,451	1,801	8,345	14	n/a	n/a
2003	82	72	661	1,687	1,143	2,524	68	n/a	n/a
2004	58	58	410	663	704	7,207	n/a	n/a	n/a
2005	66	66	285	586	1,044	3,826	9	n/a	n/a
2006	65	59	205	572	945	3,715	9	n/a	n/a
2007	59	59	260	2,307	2,271	1,735	n/a	n/a	n/a
2008	56	56	269	1,284	1,804	7,655	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Elim: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Elim: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	30	n/a	1	n/a	n/a	n/a	n/a
2001	20	n/a	1	n/a	n/a	n/a	n/a
2002	13	n/a	n/a	n/a	n/a	n/a	n/a
2003	9	n/a	2	n/a	n/a	n/a	n/a
2004	22	n/a	8	n/a	n/a	n/a	n/a
2005	17	n/a	n/a	n/a	n/a	n/a	n/a
2006	11	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	11	n/a	n/a	n/a	n/a
2008	n/a	n/a	4	n/a	n/a	n/a	n/a
2009	n/a	n/a	3	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Emmonak (ee-MAHN-nuck)



People and Place

*Location*²¹⁷

Emmonak is located at the mouth of the Yukon River, 10 mi from the Bering Sea, on the north bank of Kwiguk Pass. It lies 160 mi northwest of Bethel and 490 mi northwest from Anchorage, in the Yukon Delta National Wildlife Refuge (YDNWR). The area encompasses 7.5 sq mi of land and 1.1 sq mi of water. The community was incorporated as a Second-class city in 1964, is located in the Wade Hampton Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*²¹⁸

In 2010, there were 762 residents ranking Emmonak 79th of 352 Alaskan communities in terms of population size. Overall since 1990, the population grew by 18.7%. Between 2000 and 2009, the population grew by 0.91% with an average annual growth rate of 0.18%, which was slightly less than the statewide average of 0.75% and indicative of modest growth. Information regarding population trends can be found in Table 1.

The racial composition of Emmonak is predominately Yup'ik Eskimo. Overall, racial and ethnic composition has remained relatively unchanged between 2000 and 2010 (Figure 1). In 2010, 96.3% of residents identified themselves as American Indian or Alaska Native, compared to 91.3% in 2000. Also in that year, 3.1% of residents identified themselves as White, compared to 5.6% in 2000; 0.4% identified themselves as two or more races, compared to 2.7% in 2000; and 0.1% identified themselves as Asian, compared to 0.1% in 2000. In addition, 0.1% of residents identified themselves as Hispanic or Latino, compared to 1% in 2000.

In 2010, the average household size was 4.12, an increase from 3.9 in 1990 and 4.06 in 2000. In that year, there were 213 total housing units, compared to 172 in 1990 and 218 in 2000. Of the households surveyed in 2010, 75% were owner-occupied, compared to 67% in 2000; 12% were renter-occupied, compared to 19% in 2000; 11% were vacant, compared to 9% in 2000; and 2% were occupied seasonally, compared to 4% in 2000. Since 1990, there have been no reports of residents living in group quarters.

The gender distribution in 2010 was somewhat skewed at 56.3% male and 43.7% female; which was less even than the distribution statewide (52% male, 48% female) and the distribution in 2000 (53.8% male, 46.2% female). The median age that year was 24.4, which was significantly younger than the statewide median of 33.8 and slightly older than the 2000 median of 23.

²¹⁷ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²¹⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

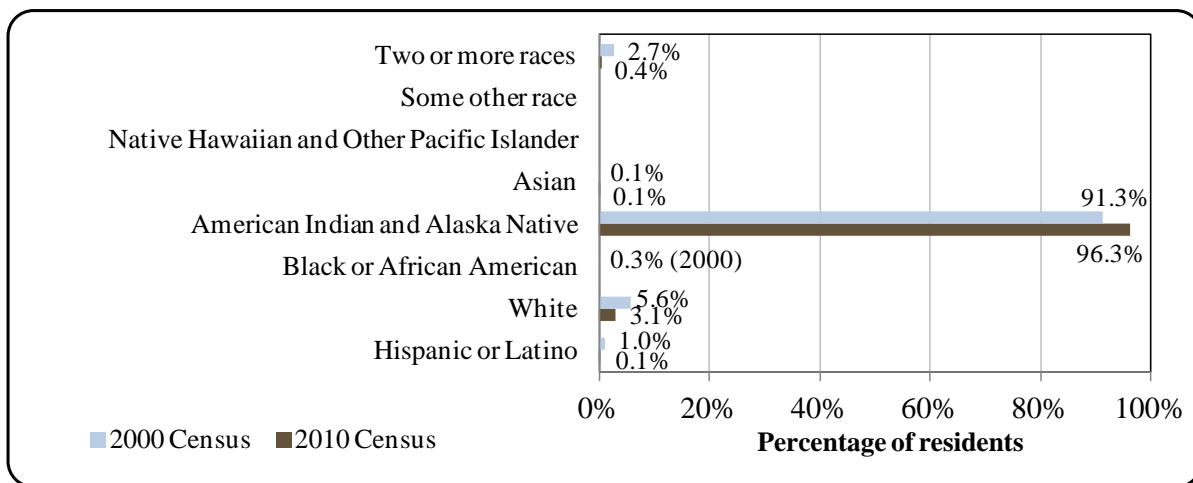
Table 1. Population in Emmonak from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Department of Labor Estimate of Permanent Residents ²
1990	642	-
2000	767	-
2001	-	764
2002	-	744
2003	-	758
2004	-	764
2005	-	740
2006	-	758
2007	-	775
2008	-	792
2009	-	774
2010	762	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Emmonak: 2000-2010 (U.S. Census).

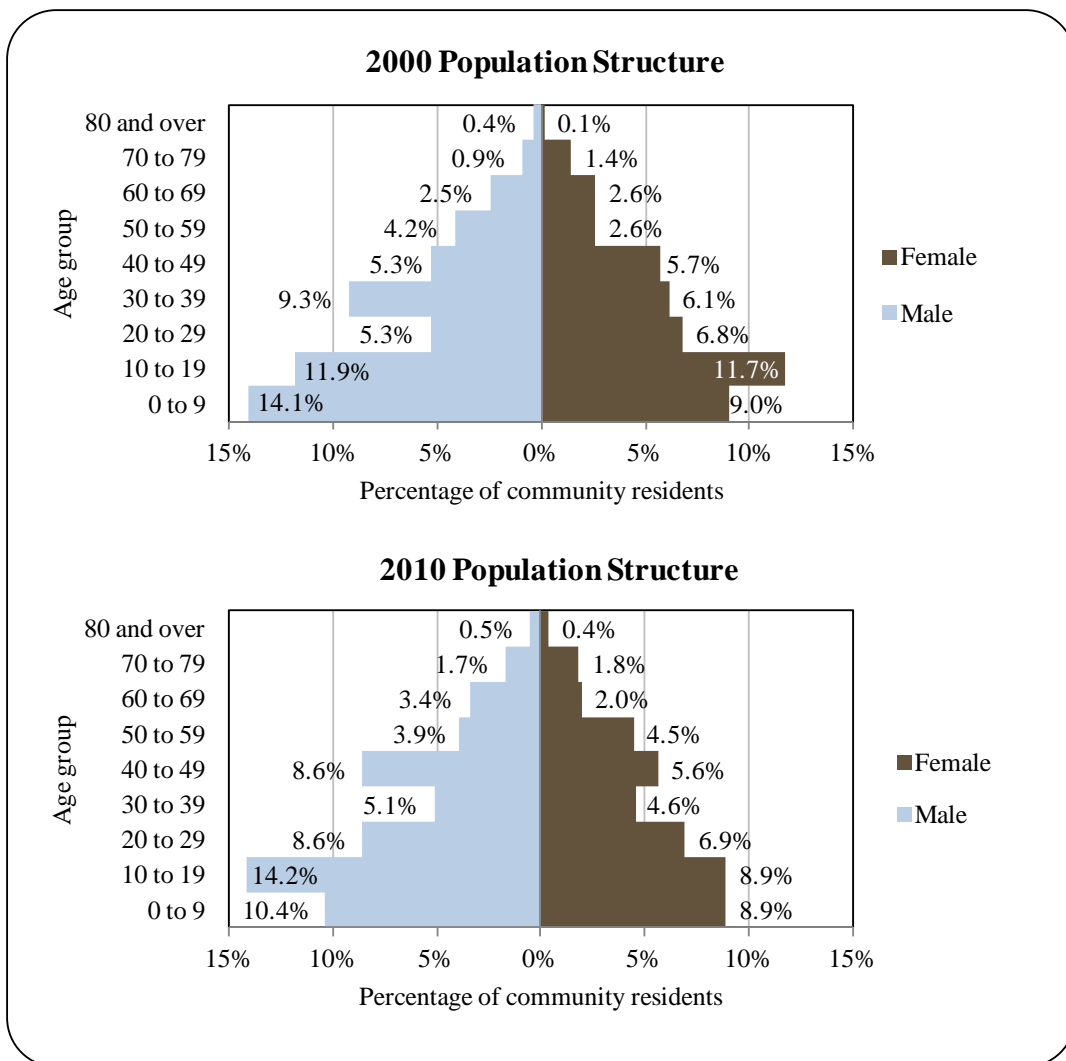


Compared with 2000, the 2010 population structure showed age transitions consistent with a stable population, meaning that cohorts aged while still mostly retaining their structural character. The overall population structures in both 2000 and 2010 can be characterized as expansive, with 42.4% of residents under the age of 20 in 2010, compared to 46.7% in 2000.

Also in that year, 9.8% of residents were over the age of 59, compared to 7.9% in 2000; 32.3% were between the ages of 30 and 59, compared to 33.2% in 2000; and 15.5% were between the ages of 20 and 29, compared to 12.1% in 2000.

Gender distribution by age cohort was slightly less even in 2010 than in 2000, and uneven cohorts were generally biased towards males. In that year, the greatest absolute gender difference occurred in the 10 to 19 range (14.2% male, 8.9% female), followed by the 40 to 49 (8.6% male, 5.6% female) and 20 to 29 (8.6% male, 6.9% female) ranges. Of those three, the greatest relative gender difference occurred in the 10 to 19 range. Information regarding population structure can be found in Figure 2.

Figure 2. Population Age Structure in Emmonak Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)²¹⁹ estimated that 75.5% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaska residents overall. Also in that year, an estimated 9.1% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaska residents overall; an estimated 15.4% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaska residents overall; an estimated 25.1% had some college but no degree, compared to an estimated 28.3% of Alaska residents overall; an estimated 3.3% held an Associate's degree, compared to an estimated 8% of Alaska residents overall; an estimated 9.6% held a Bachelor's degree, compared to an estimated 17.4% of Alaska residents overall; and an estimated 2.2% held a graduate or professional degree, compared to an estimated 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Evidence of occupation of the Lower Yukon Delta and coastal regions date back approximately 3,000 years to the Norton Tradition of Yup'ik, although evidence of occupation in the mountainous regions to the south may date back 6,000 to 8,000 years.²²⁰ Trade routes with the Chukchis of Siberia predated European contact, and by the time Russian fur traders set up trading posts in the area an extensive trade network throughout the Norton Sound had already been established. The village of Pastuliarraq, next to the Pastolik River and east of present day Kotlik, became a trading hub for region trading over 36,000 lb of beluga whale oil annually. The flow of goods between Alaska and Siberia was so extensive that a Russian trading post at St. Michael was built in hopes of intercepting trade. By the mid to late nineteenth Century, these routes were dismantled due to smallpox and influenza epidemics as well as the emergence of St. Michael as an economic center.²²¹

The village was originally called "Kwiguk," a Yup'ik word meaning "big stream". Villagers call themselves "Kuigpagmuit" or "people from the Yukon River". It has also been called "Emanguk" by the Census Bureau. The original settlement was 1.4 mi south of its present location and was first reported by the U.S. Coast and Geodetic Survey in 1899. A post office was established there in 1920. Later, commercial fishing became a major industry in the village, and the Northern Commercial Company built a cannery. In 1964, the cannery was washed away by floods. That same year, the city government was incorporated. Due to increasing flooding and erosion, the village was relocated 1.4 mi north of Kwiguk in 1964-65. The new location was renamed Emmonak, which means "blackfish".²²²

²¹⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²²⁰ Shaw, R. D. (1998). An Archaeology of the Central Yupik: a Regional Overview for the Yukon-Kuskokwim Delta, Northern Bristol Bay, and Nunivak Island. *Arctic Anthropology*, 35(1), 234-246.

²²¹ Griffin, D. (1996). A Culture in Transition: a History of Acculturation and Settlement near the Mouth of the Yukon River, Alaska. *Arctic Anthropology*, 33(1), 98-115.

²²² Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment

A maritime climate predominates in Emmonak. Temperatures range from -25 to 79 °F (-32 to 26 °C). Precipitation averages 19 inches per year, while snowfall averages 50 to 60 inches per year. Yukon River freeze-up occurs during October; break-up occurs in June.²²³

Emmonak is located in the YDNWR, which occupies 26 million acres of western Alaska. The area surrounding Emmonak is characterized by wet lowlands covered by numerous shallow lakes and ponds. Rivers and tributaries are also common features throughout the landscape. Soils are predominately silt and clay alluvium covered in peat. Vegetation is consistent with subarctic tundra, and underlain by permafrost of varying depths dependant on proximity to water. Riparian black spruce and poplar line rivers and tributaries, and a variety of scrub, peatland, heath meadow, marsh, and bog habitats populate the tundra.²²⁴

The YDNWR supports one of the largest aggregations of water birds in the world. Millions of waterfowl shorebirds and migratory birds frequent the area. The Yukon River supports runs of all five species of Pacific salmon. Freshwater fish include sheefish, whitefish, Alaska blackfish, burbot, northern pike, Dolly Varden, rainbow trout, and Arctic grayling. Marine species include herring, halibut, tomcod, and starry flounder. Marine mammals in the area include Pacific walrus, spotted seals, ringed seals, Pacific bearded seals, harbor and Dall porpoises, fur and harbor seals, and beluga, fin, gray, killer, and minke whales. Terrestrial mammals include moose, brown bears, shrews, muskrat, lemming, weasel, mink, otter, and caribou.²²⁵

Beyond fisheries and ecosystem services, there are no other viable environmental resources in the vicinity of Emmonak. Harvestable timber resources are not available, and the YDNWR precludes mineral and oil development.²²⁶

Environmental hazards present in the community include coastal and riverine flooding and erosion, wildfire, earthquakes, and severe weather events. Flooding and erosion present the greatest hazard to Emmonak due to a range of factors including its location on unconsolidated soils, permafrost melt, seasonal variations in Yukon River flow, and storm events. Climate change is expected to exacerbate flooding and erosion processes through changes in sea ice seasonality, increases in storm frequency and magnitude, and permafrost melt. Winter cyclonic storms bringing high winds, heavy snow, or extreme cold conditions can impact infrastructure and transportation systems. The possibility of wildfires occurring in the Emmonak area is present, but probability is unknown. Vegetation in the Yukon Delta region is consistent with subarctic moist tundra, and there is no historical precedence of wildfires in the area. In addition, while the possibility of an earthquake impacting Emmonak exists, probability of one occurring is low.²²⁷

²²³ Ibid.

²²⁴ U.S. Fish and Wildlife Service. (2004). *Land Conservation Plan for Yukon Delta National Wildlife Refuge*. Retrieved April 4, 2012 from: http://alaska.fws.gov/nwr/planning/pdf/YD_LCP.pdf.

²²⁵ Ibid.

²²⁶ Ibid.

²²⁷ City of Emmonak; WH Pacific; and Bechtol. (2008). *City of Emmonak Alaska: Local Hazards Mitigation Plan*. Retrieved April 4, 2012 from: http://www.commerce.state.ak.us/dca/planning/nfip/Hazard_Mitigation_Plans/Emmonak_LHMP.pdf.

According to the Alaska Department of Environmental Conservation, there were no significant environmental remediation projects active locally in 2010.²²⁸

Current Economy²²⁹

The city experiences a seasonal economy as a center for commercial fishing, purchasing, and processing on the lower Yukon River. Yukon Delta Fish Marketing Co-op and Bering Sea Fisheries process and export salmon from Emmonak. Subsistence activities, trapping, and public assistance support the cash economy. The majority of the community travels to fish camps during the summer months to dry salmon for winter use. Moose, beluga whale, seal, and waterfowl are also utilized.²³⁰ Top employers²³¹ in 2010 included: Kwikpak Fisheries LLC, City of Emmonak, Lower Yukon School District, Emmonak Tribal Council, Emmonak Corporation, Yukon-Kuskokwim Health Corporation, AK Commercial Company, Yukon River Towing LLC, Rural AK Community Action Program, and Chuloonawick Native Village.

In 2010,²³² the estimated per capita income was \$13,529 and the estimated median household income was \$55,313, compared to \$9,069 and \$32,917 in 2000, respectively. However, after accounting for inflation by converting 2000 values with 2010 dollars,²³³ the real per capita income (\$11,778) and real median household income (\$43,285) indicate an increase in both individual and household earnings. In that year, Emmonak ranked 219th of 305 communities from which per capita income was estimated, and 101st of 299 communities from which median household income was estimated.

Emmonak's small population size may have prevented the ACS from accurately portraying economic conditions.²³⁴ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, residents earned \$6.49 million in total wages in 2010.²³⁵ When matched with the population in 2010, the per capita income equals \$8,511, which was significantly less than the 2010 ACS estimate and suggests that caution should be used when comparing 2010 ACS and 2000 Decennial Census figures.²³⁶ In addition, the community was recognized as “distressed” by the Denali Commission indicating that over

²²⁸ Alaska Department of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved August 21, from: <http://www.dec.state.ak.us/spar/csp/list.htm>.

²²⁹ Unless otherwise noted, all monetary data are reported in nominal values.

²³⁰ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

²³¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²³² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²³³ Inflation calculated using the 2010 Anchorage CPI from the Alaska Department of Labor (Retrieved January 15, 2012 from <http://labor.alaska.gov/research/cpi/cpi.htm>).

²³⁴ See footnote 219.

²³⁵ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

²³⁶ See footnote 231.

70% of residents aged 16 and older earned less than \$16,120 in 2010.²³⁷ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

According to 2006-2010 ACS estimates, 58.1% of residents over the age of 16 were in the civilian labor force in 2010. In that year, unemployment was estimated at 12.5%, compared to an estimated 5.9% statewide; and an estimated 17.8% of residents lived below the poverty line, compared to an estimated 9.5% of Alaska residents overall. Of those employed, an estimated 39.8% worked in the private sector, 58% worked in the public sector, and 2.2% were self-employed. It should be noted that income and poverty statistics are based on wage income and other money sources; figures reported for Emmonak do not reflect the value of subsistence to the local economy.

Emmonak's economy is relatively diverse, although the majority of wage employment is seasonal. By industry, most (39.8%) employed residents in 2010 were estimated to work in education service, health care, or social assistance sectors; followed by public administration sectors (15.2%); retail trade sectors (12.1%); and agriculture, forestry, fishing, hunting, and mining sectors (6.9%) (Figure 3). By occupation type, most (39.4%) employed residents in 2010 were estimated to hold management or professional positions; followed by service (22.9%); sales or office (16%); production, transportation or material moving (12.6%); and natural resources, construction, or maintenance positions (9.1%) (Figure 4). Employment by industry varied little between 2000 and 2010, with a modest increases in education services, health care, social assistance, agriculture, forestry, fishing, hunting, and mining sectors; and slight declines in most other sectors. In addition, there was growth in the number of management, professional, service, production, transportation, and material moving positions; and declines in all others. According to 2010 ALARI estimates, most (39.8%) employed residents worked in local government sectors; followed by manufacturing sectors (20.7%); and trade, transportation, and utilities sectors (20.4%). Information regarding employment trends can be found in Figures 3 and 4.

²³⁷ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

Figure 3. Local Employment by Industry in 2000-2010, Emmonak (U.S. Census).

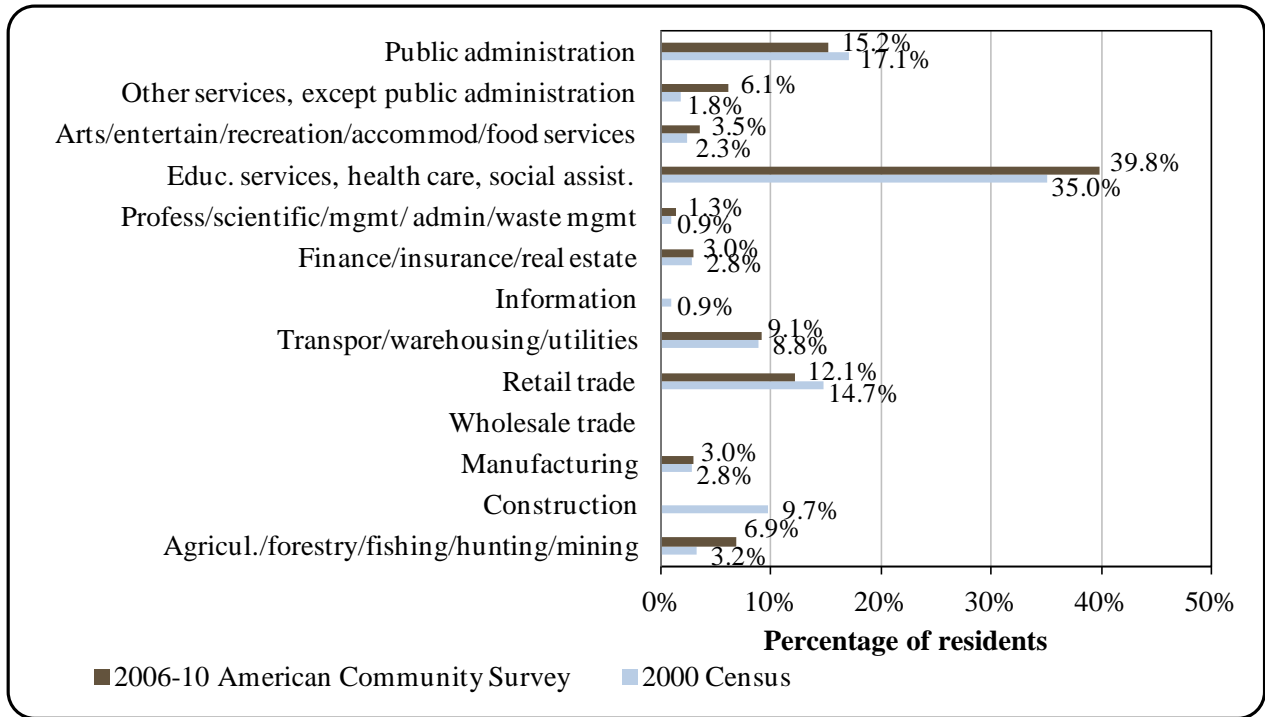
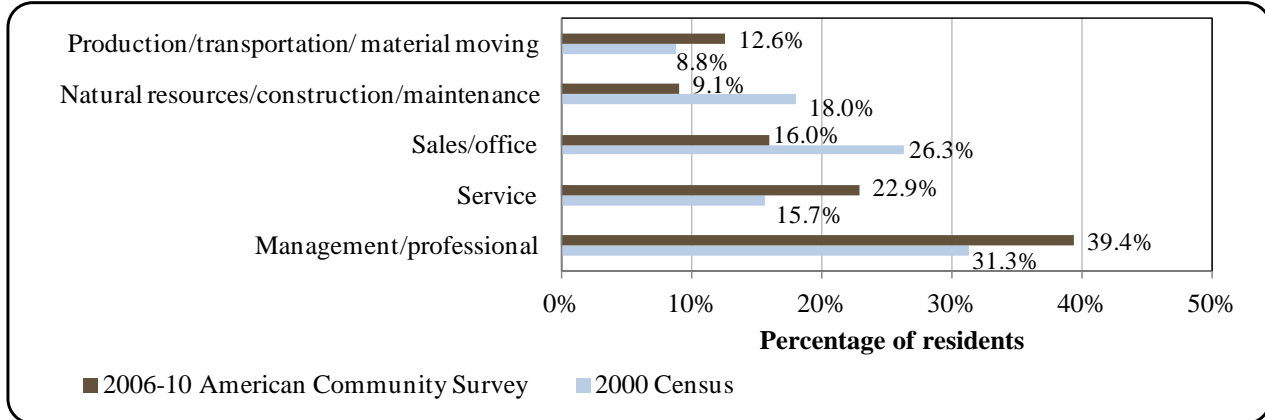


Figure 4. Local Employment by Occupation in 2000-2010, Emmonak (U.S. Census).



Governance

Emmonak is a Second-class city with a mayoral form of government. There is a U.S. Bureau of Indian Affairs recognized Native village council, and the Emmonak Corporation is the Alaska Native Claims Settlement Act (ANCSA) chartered Native village corporation.

There is a seasonally operated Alaska Department of Fish and Game (ADF&G) office located in the city. The closest permanent ADF&G office is located in Nome, 120 mi north. The closest U.S. Bureau of Citizenship and Immigration Services office is also located in Nome. The closest National Marine Fisheries Service (NMFS) office is located in Bethel 160 mi southeast.

In 2010, Emmonak administered a 3% sales tax. When adjusted for inflation,²³⁸ total municipal revenues increased by 71.6% between 2000 and 2010 from \$1.56 million, to \$3.46 million. Most revenues collected in 2010 came from grants, followed by gaming, rentals, utility and service payments, Community Revenue Sharing, and sales taxes. Inflation adjusted municipal revenues remained relatively constant between 2000 and 2010, averaging approximately \$2.22 million. In 2010, sales tax accounted for 5.7% of total revenues, compared to 10.4% in 2000. In 2010, Emmonak received \$134,817 in state allocated Community Revenue Sharing, which accounted for 3.9% of total revenues. This represented a proportional decrease from 2000, when \$67,195 in State Revenue Sharing accounted for 4.3%. Between 2000 and 2010, Emmonak received one fisheries-related grant. In 2009, \$516,000 was awarded by the state for a port feasibility and design project. Information regarding municipal finances can be found in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Emmonak from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,559,908	\$161,884	\$67,195	n/a
2001	\$1,433,560	\$135,774	\$50,662	n/a
2002	\$1,359,589	\$122,902	\$50,642	n/a
2003	\$1,842,018	\$137,760	\$47,676	n/a
2004	\$1,800,496	\$152,049	-	n/a
2005	\$1,484,840	\$150,592	-	n/a
2006	\$1,920,193	\$155,228	-	n/a
2007	\$2,706,792	\$146,648	-	n/a
2008	\$2,012,810	\$141,211	-	n/a
2009	\$2,330,170	\$181,396	\$136,505	\$516,000
2010	\$3,460,680	\$198,843	\$134,817	n/a

¹ Alaska Department of Community and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Department of Community and Economic Development (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from

http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Department of Revenue (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Community and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

²³⁸ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Infrastructure

*Connectivity and Transportation*²³⁹

Emmonak relies on air and water transportation. A state-owned 4,601 ft long by 100 ft wide gravel airstrip is available. Roundtrip airfare between Anchorage and Emmonak in June 2012 was \$840.²⁴⁰ There are no connecting roads, but winter trails to Kotlik, Alakanuk, and Nunam Iqua are used by snowmobiles. Skiffs and ATVs are used during the summer for local transportation.

*Facilities*²⁴¹

Water is derived from the Yukon River and is treated. Piped water and sewer services were expanded to the west side, so homes, businesses, and the school are now served with an above-ground circulating water system and vacuum sewage system. Electricity is provided by diesel generator. Visitor accommodations include City Hotel and Howie & Audrey's Bed and Breakfast. Public safety services are provided by local state troopers. Fire and rescue services are provided by Emmonak Volunteer Fire Department. Additional public facilities include a youth center, community center, gym, and library. Communications services include local and long distance telephone, cable television, radio, and internet.

*Medical Services*²⁴²

Pearl E. Johnson Sub-Regional Clinic provides general and emergency health care and is a Community Health Aid Program site. Nearby hospitals are located in Nome and Bethel.

*Educational Opportunities*²⁴³

Emmonak School offers preschool through 12th grade instruction. In 2011, there were 209 students enrolled and 17 teachers employed.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

People of the Yukon River Delta region have been sustained by salmon for millennia. Prior to Russian contact in the mid-1800s, fish were harvested and traded throughout the Yukon-

²³⁹ Alaska Department of Community and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

²⁴⁰ Airfare was calculated using lowest fare from www.travelocity.com. (Retrieved November 22, 2011).

²⁴¹ See footnote 239.

²⁴² Ibid.

²⁴³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Kuskokwim (Y-K) Delta area. Trade routes were also established with Inupiat and Athabascan peoples outside the Y-K Delta, and reached as far as Siberia.²⁴⁴

Management of Yukon River salmon dates back to 1919, when limits on commercial salmon harvesting were first established following concerns by subsistence users over weak salmon runs. In that year, canned salmon was limited to 30,000 cases. In that year, salmon runs were reported at their worst, and subsistence users upriver were struggling.²⁴⁵ In addition, pickled salmon was limited to 1,000 barrels and cured salmon was limited to 200 tierces. At that time, commercial fishing was prohibited above the mouth of the Clear River, which was 114 mi from the mouth of the Yukon River. By 1924, fishing on the Yukon River was prohibited until it was reopened again in 1935. Management of salmon fisheries was passed to the U.S. Department of the Interior in 1940, where it remained until the state assumed control in 1960.²⁴⁶

Today, residents of Emmonak primarily participate in commercial and subsistence salmon fisheries. The community is located in Federal Reporting Area 514, International Pacific Halibut Commission Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. Emmonak is also eligible for participation in the Community Development Quota (CDQ) program and is represented by the Yukon Delta Fisheries Development Association. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.²⁴⁷ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

Processing Plants

Kwik'pak Fisheries LLC began operations in 2011. During the plant's peak season, which includes salmon and freshwater whitefish, the plant employs a maximum of 185 workers²⁴⁸ who are primarily Eskimo (Siberian Yupik). In its galley, Kwik'pak serves its workers seal oil as a condiment and dip for meat and fish. The galley also serves such items as fish head soup, ducks, caribou, and moose which are brought in by workers' families to be prepared for consumption. In addition, the management of the Kwik'pak plant has made it a practice to employ local elders to captain tender boats, thereby allowing these elders to pass their traditional navigational skills and knowledge to younger generations. Plant management also honors local subsistence practices by allowing younger processing workers to leave work to help with their families' traditional harvesting practices.²⁴⁹ Kwik'pak Fisheries is a community-based business, formed by six local villages. It offers employment, training, and educational

²⁴⁴ Moncrieff, C.F. (2007). *Traditional Ecological Knowledge of Customary Trade of Subsistence Harvested Salmon on the Yukon River*. Retrieved April 5, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/04-265final.pdf>.

²⁴⁵ Ikuta, H. (2010). *Historical Perspectives on Yukon and Kuskokwim Chinook Salmon Subsistence Fishing*. Retrieved April 5, 2012 from: <http://www.avcp.org/apps/Agendas-Reports/>.

²⁴⁶ Pennoyer, S.; Middleton, K.R.; and Morris, M.E. (1968). *Arctic-Yukon-Kuskokwim Area Salmon Fishing History*. Retrieved April 5, 2012 from: <http://www.sf.adfg.state.ak.us/fedaidpdfs/afrbIL.070.pdf>.

²⁴⁷ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

²⁴⁸ This information is based on the results of a processing plant survey conducted by the Alaska Fisheries Science Center in 2011.

²⁴⁹ NOAA observation during a field visit, July 2009.

opportunities to area residents and their families and works to “enable Yupik families to continue the traditional lifestyle their people have practiced for thousands of years...fishing, hunting and living off the land.”²⁵⁰

Fisheries-Related Revenue

Emmonak receives fisheries-related revenue from both raw fish taxes and Shared Fisheries Business Taxes. In 2010, \$23,981 was collected through fisheries-related revenue streams, compared to \$20,253 in 2000. Fisheries-related revenue peaked in 2004 at \$27,711. Information regarding fisheries-related revenue can be found in Table 3.

Commercial Fishing

In 2010, 110 residents, or 14.4% of the total population, held 118 permits issued by the Commercial Fisheries Entry Commission (CFEC). In 2000, 110 residents held 112 CFEC permits. Fisheries prosecuted by residents in 2010 included: statewide set gillnet freshwater fish and lower Yukon gillnet salmon.²⁵¹ Of the CFEC permits held in 2010, 87% were for salmon, compared to 94% in 2000; 11% were for other finfish, compared to 0% in 2000; and 2% were for herring, compared to 4% in 2000. In addition, between 2000 and 2010, two residents held two License Limitation Program (LLP) permits for crab, although neither was active during that time. No residents held groundfish LLP or Federal Fisheries Permits (FFP) between 2000 and 2010. Also, no residents held halibut, sablefish, or crab quota shares between 2010 and when the programs began.

Residents held 111 commercial crew licenses (14.5% of the total population) in 2010, compared to 134 in 2000. Also in that year, residents held majority ownership of 23 vessels, compared to 21 in 2000. No landings were made in Emmonak in 2010 and landings made in 2009 are considered confidential; however, in 2008 1.98 million pounds were landed valued at \$1.39 million ex-vessel, compared to 529,925 lb valued at \$1,161,336 in 2002. By species, 1.95 million pounds of salmon valued at \$1.37 million ex-vessel were landed in Emmonak in 2008, compared to 326,906 lb valued at \$1.15 million 2002; a decrease of approximately \$4 per pound after accounting for inflation²⁵² and without considering the species composition of landings. Landings by residents were considered confidential for most species during most years. In 2007, residents landed 26,240 lb of salmon valued at \$25,316. Compared to 24,343 lb valued at \$31,423 in 2006. Information regarding commercial fishing trends can be found in Tables 4 through 10.

²⁵⁰ Kwikpak Fisheries. (n.d.). Retrieved from: <http://kwikpakfisheries.com/>.

²⁵¹ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²⁵² Inflation calculated using the 2010 Producer Price Index for unprocessed and packaged fish, Bureau of Labor Statistics, retrieved January 15, 2012 from <http://www.bls.gov/ppi/#data>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Emmonak: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$16,000	\$11,156	\$2,223	\$123	\$27,711	\$3,826	\$5,921	n/a	\$10,212	\$8,369	\$10,000
Shared Fisheries Business Tax ¹	\$4,253	\$11,233	\$2,223	\$123	\$0	\$3,826	\$5,921	\$8,898	\$10,299	\$8,472	\$13,981
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$20,253</i>	<i>\$22,389</i>	<i>\$4,446</i>	<i>\$245</i>	<i>\$27,711</i>	<i>\$7,652</i>	<i>\$11,842</i>	<i>\$8,898</i>	<i>\$20,511</i>	<i>\$16,842</i>	<i>\$23,981</i>
<i>Total municipal revenue⁵</i>	<i>\$1.56 M</i>	<i>\$1.43 M</i>	<i>\$1.36 M</i>	<i>\$1.84 M</i>	<i>\$1.80 M</i>	<i>\$1.48 M</i>	<i>\$1.92 M</i>	<i>\$2.71 M</i>	<i>\$2.01 M</i>	<i>\$2.33 M</i>	<i>\$3.46 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Community and Economic Development (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Department of Community and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Emmonak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	2	2	2	2	2	2	2	2	2	2	2
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	2	2	2	2	2
Federal Fisheries Permits ¹	Total permits	1	1	1	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	1	1	1	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	2	4	6	4	2	1	0	0	0	0	0
	Fished permits	0	0	2	0	1	0	0	0	0	0	0
	% of permits fished	0%	0%	33%	0%	50%	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	4	5	4	2	1	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	5	2	4	3	2	3	2	2	2	2	2
	Fished permits	1	1	3	0	0	0	0	0	0	0	0
	% of permits fished	20%	50%	75%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	2	4	3	2	3	2	2	2	2	2

Table 4 cont'd. Permits and Permit Holders by Species, Emmonak: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	8	23	19	19	14	13
	Fished permits	0	0	0	0	0	6	8	8	4	7	5
	% of permits fished	n/a	n/a	n/a	n/a	n/a	75%	35%	42%	21%	50%	38%
	Total permit holders	0	0	0	0	0	8	23	19	19	14	13
Salmon (CFEC) ²	Total permits	105	102	101	102	100	101	105	105	106	106	103
	Fished permits	86	0	90	91	90	93	97	99	93	79	77
	% of permits fished	82%	0%	89%	89%	90%	92%	92%	94%	88%	75%	75%
	Total permit holders	110	103	107	106	104	108	108	111	113	111	108
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>112</i>	<i>108</i>	<i>111</i>	<i>109</i>	<i>104</i>	<i>113</i>	<i>130</i>	<i>126</i>	<i>127</i>	<i>122</i>	<i>118</i>
	<i>Fished permits</i>	<i>87</i>	<i>1</i>	<i>95</i>	<i>91</i>	<i>91</i>	<i>99</i>	<i>105</i>	<i>107</i>	<i>97</i>	<i>86</i>	<i>82</i>
	<i>% of permits fished</i>	<i>78%</i>	<i>1%</i>	<i>86%</i>	<i>83%</i>	<i>88%</i>	<i>88%</i>	<i>81%</i>	<i>85%</i>	<i>76%</i>	<i>70%</i>	<i>69%</i>
	<i>Permit holders</i>	<i>110</i>	<i>104</i>	<i>109</i>	<i>108</i>	<i>104</i>	<i>109</i>	<i>115</i>	<i>116</i>	<i>116</i>	<i>114</i>	<i>110</i>

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Emmonak: 2000-2010.

Year	Crew License Holders¹	Count Of All Fish Buyers²	Count Of Shore-Side Processing Facilities³	Vessels Primarily Owned By Residents⁴	Vessels Homeported⁴	Vessels Landing Catch In Emmonak²	Total Net Pounds Landed In Emmonak^{2,5}	Total Ex-Vessel Value Of Landings In Emmonak^{2,5}
2000	134	3	2	21	23	0	0	\$0
2001	12	1	1	9	14	26	--	--
2002	85	6	2	11	17	30	529,925	\$1,161,336
2003	123	7	0	8	14	36	986,660	\$1,679,738
2004	103	6	2	11	17	12	1,311,750	\$2,973,314
2005	78	6	2	12	21	39	1,907,880	\$1,947,302
2006	115	5	2	13	24	45	2,533,937	\$3,783,610
2007	153	10	2	15	24	45	2,602,586	\$2,603,291
2008	132	7	1	16	31	31	1,967,190	\$1,394,197
2009	105	2	1	22	39	30	--	--
2010	111	1	1	23	40	0	0	\$0

Note: Cells showing "--" indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Emmonak: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Emmonak: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Emmonak: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Emmonak: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	326,906	819,522	--	1,901,565	2,522,674	2,593,127	1,945,981	--	--
<i>Total²</i>	--	--	<i>326,906</i>	<i>819,522</i>	--	<i>1,901,565</i>	<i>2,522,674</i>	<i>2,593,127</i>	<i>1,945,981</i>	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	\$1,151,591	\$1,639,500	--	\$1,941,109	\$3,775,117	\$2,594,263	\$1,372,988	--	--
<i>Total²</i>	--	--	<i>\$1,151,591</i>	<i>\$1,639,500</i>	--	<i>\$1,941,109</i>	<i>\$3,775,117</i>	<i>\$2,594,263</i>	<i>\$1,372,988</i>	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Emmonak Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	24,343	26,240	--	--	--
<i>Total²</i>	--	--	--	--	--	--	24,343	26,240	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	\$31,423	\$25,316	--	--	--
<i>Total²</i>	--	--	--	--	--	--	\$31,423	\$25,316	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing by non-local residents around Emmonak is limited due to the remote location of the community. There were not any sport fish guide businesses located in the community between 2000 and 2010. In 2010, 163 sport fishing licenses were sold to residents, and 301 total licenses were sold in the community, compared to 104 and 0 in 2000, respectively. Local sport fishing license sales peaked in 2009 at 319 sold (Table 11).

Emmonak is located in the Yukon River drainage ADF&G Sport Fishing Survey Area, which includes all Yukon River drainages from the south side of the Brooks Range to the Bering Sea; and from the Canadian border to the Bering Sea. In 2010, there were a total of 9,134 freshwater angler days fished, compared to 11,223 in 2000. In that year, non-Alaska residents accounted for 43.6% of angler days fished, compared to 29.8% in 2000. According to ADF&G Harvest Survey data,²⁵³ local private anglers target coho salmon and Arctic grayling. Information regarding recreational fishing trends can be found in Table 11.

Subsistence Fishing

Subsistence fishing is an important part of life for residents of Emmonak. In 1995, an estimated 80% of Emmonak households were participating in subsistence salmon fisheries.²⁵⁴ Subsistence salmon fishing occurs late May through early October. Many households within the Lower Yukon River area with commercial permits sell most of their catch to commercial buyers while retaining some to be processed by the family for local consumption. Common fishing methods used include weirs, traps, dip gill nets, set gill nets, drift gill nets, fish arrows, and fishwheels.²⁵⁵ According to a 2009 ADF&G report, in 2008, salmon and other fish made up an estimated 54% of the subsistence harvest in Emmonak. Also in that year, marine mammals made up an estimated 16% of the subsistence harvest while terrestrial mammals, birds, wild plants, and eggs made up the remainder. Between 1980 and 2008, per capita subsistence harvest levels declined from an estimated 612 lb, to an estimated 510 lb. Shellfish are also significantly harvested by Emmonak residents.^{256,257}

Although overall subsistence harvest percentages were available from the documents cited above, as of the writing of this profile, no data were reported in the Community Subsistence Information System regarding the percentage of Emmonak households involved in subsistence of

²⁵³ Alaska Department of Fish and Game. (2011). *Alaska Sportfishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

²⁵⁴ Borba, B. M.; and Hamner, H. H. (1996). *Subsistence and Personal Use Salmon Harvest Estimates, Yukon Area, 1995*. Retrieved April 6, 2012 from: <http://www.sf.adfg.state.ak.us/fedaidpdfs/RIR.3A.1996.28.pdf>.

²⁵⁵ Wolfe, R. J. (1982). *The Subsistence Salmon Fishery of the Lower Yukon River*. Retrieved July 5, 2012 from: <http://www.subsistence.adfg.state.ak.us/TechPap/tp060.pdf>.

²⁵⁶ Fall, J.A., Brown, C.L., Braem, N.S., Hutchinson-Scarborough, L.B., Koster, D.S., Krieg, T.M., Slayton, L., 2012. Subsistence Harvests and Use in Three Bering Sea Communities, 2008: Akutan, Emmonak, and Togiak. Alaska Department of Fish and Game. Division of Subsistence Technical Paper no. 371, Juneau.

²⁵⁷ Fall, J. A. (2011). *Continuity and Change in Subsistence Harvests in Three Bering Sea Communities: Akutan, Emmonak, and Togiak*. Retrieved July 5, 2012 from: <http://seagrant.uaf.edu/conferences/2011/wakefield-people/presentations/fall-akutan-emmonak-togiak.pdf>.

various marine species, or per capita subsistence harvest between 2000 and 2010.²⁵⁸ This is reflected in Table 12.

Although information is not presented at the household level, information is available regarding total reported salmon and marine mammal harvests by residents between 2000 and 2010. ADF&G provides estimated harvest levels of salmon for subsistence purposes based on the issuance and retrieval of subsistence salmon permits. Between 2000 and 2008, between 61 and 90 salmon permits were issued for household harvests in Emmonak (Table 13). Chum salmon are harvested most, followed by Chinook, coho, and pink salmon. In 2008, residents reported harvesting 15,370 fish, compared to 12,220 in 2000. Reported salmon harvests peaked in 2006 at 16,941 fish.

Some data were also available regarding marine mammal harvest by Emmonak residents. Between 2000 and 2009, an estimated 200 beluga whales and 2 walrus were harvested (Table 15). Data regarding subsistence harvests of halibut (Table 14), marine invertebrates and non-salmon fish (Table 13) and other marine mammals are not available.

Table 11. Sport Fishing Trends, Emmonak: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Emmonak²
2000	0	0	104	0
2001	0	0	106	0
2002	0	0	65	0
2003	0	0	98	0
2004	0	0	73	0
2005	0	0	134	153
2006	0	0	158	212
2007	0	0	152	201
2008	0	0	147	250
2009	0	0	188	319
2010	0	0	163	301

²⁵⁸ Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 11 Cont. Sport Fishing Trends, Emmonak: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	n/a	89	5,761	9,194
2003	n/a	17	3,344	5,756
2004	17	n/a	5,479	7,613
2005	n/a	n/a	4,182	4,783
2006	n/a	n/a	3,607	7,816
2007	n/a	n/a	3,168	8,226
2008	n/a	n/a	2,573	10,400
2009	n/a	n/a	2,969	7,639
2010	n/a	n/a	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 12. Subsistence Participation by Household and Species, Emmonak: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lb)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Emmonak: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lb of Marine Inverts ²	Lb of Non-Salmon Fish ²
2000	198	84	2,270	9,759	191	n/a	n/a	n/a	n/a
2001	183	65	2,473	9,514	342	9	n/a	n/a	n/a
2002	161	61	1,750	9,719	514	39	n/a	n/a	n/a
2003	159	61	2,763	8,958	571	4	n/a	n/a	n/a
2004	161	85	2,801	9,558	300	32	n/a	n/a	n/a
2005	163	80	1,730	14,030	191	54	n/a	n/a	n/a
2006	163	90	2,311	13,955	450	225	n/a	n/a	n/a
2007	156	89	2,326	11,616	1,032	51	n/a	n/a	n/a
2008	154	81	2,696	11,316	717	641	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Emmonak: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lb Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Emmonak: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	30	n/a	n/a	n/a	n/a	n/a	n/a
2001	30	n/a	n/a	n/a	n/a	n/a	n/a
2002	40	n/a	n/a	n/a	n/a	n/a	n/a
2003	30	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	40	n/a	n/a	n/a	n/a	n/a	n/a
2006	30	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	2	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Gambell (GAM-bull)



People and Place

*Location*²⁵⁹

Gambell is located on the northwest cape of St. Lawrence Island, 200 miles southwest of Nome, in the Bering Sea. The city is 36 miles from the Chukotka Peninsula, Siberia. Gambell is located in the Nome Census Area and the Cape Nome Recording District. The area encompasses 10.9 square miles of land and 19.5 square miles of water.

*Demographic Profile*²⁶⁰

In 2010, there were 681 residents in Gambell, ranking it the 90th largest community in Alaska in terms of population size. Overall, between 1990 and 2010, the population has increased by 29.7%. Between 2000 and 2009, the population increased by 2.62% with an average annual growth rate of 0.21%, which was under the statewide average of 0.75% (Table 1).

Very little change occurred in the distribution of races in the local population between 2000 and 2010. In 2010, the majority of Gambell residents identified themselves as American Indian and Alaska Native (95.6%), compared to 95.7% in 2000. Additionally, 3.8% identified themselves as White in 2010, compared to 3.5% in 2000; 0.4% identified themselves as Hispanic or Latino in 2010, compared to 0.3% in 2000; 0.4% identified themselves as of two or more races in 2010, compared to 0.3% in 2000; and 0.1% identified themselves as Asian in 2010, compared to 0.5% in 2000. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Gambell was 4.15, compared to 4.82 in 2000 and 4.30 in 1990. Also in 2010, there were a total of 164 occupied housing units, compared to 159 in 2000. Of those households surveyed in 2010, 68.5% were owner-occupied and 13.5% were renter-occupied. In that same year, 18% were vacant, compared to 14.9% in 2000. There were no residents living in group quarters in 2000 and 2010.

In 2010, the gender makeup in Gambell was 52.5% male and 47.4% female, very similar to the state as a whole (52% male, 48% female). The median age was estimated to be 24.4 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, males outnumbered females in all age groups except 0-9 years, and there were very similar numbers of males and females in the 50-59 and 60-69 age groups. In 2010, 8.9% of the Gambell population was age 60 or older. The overall population structure of Gambell in 2000 and 2010 is shown in Figure 2.

²⁵⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Gambell from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	525	-
2000	649	-
2001	-	642
2002	-	641
2003	-	646
2004	-	651
2005	-	660
2006	-	644
2007	-	661
2008	-	673
2009	-	666
2010	681	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Gambell: 2000-2010 (U.S. Census).

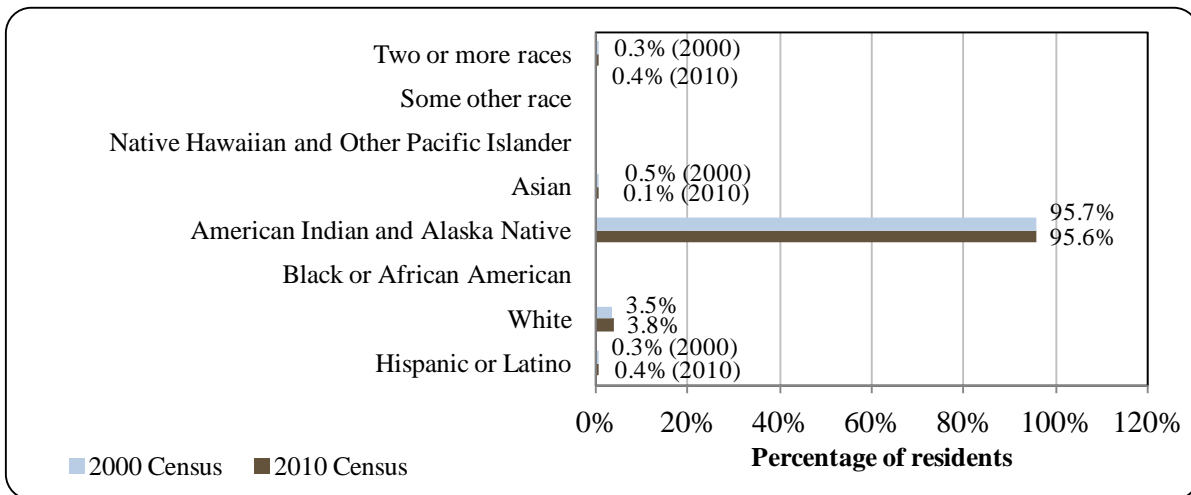
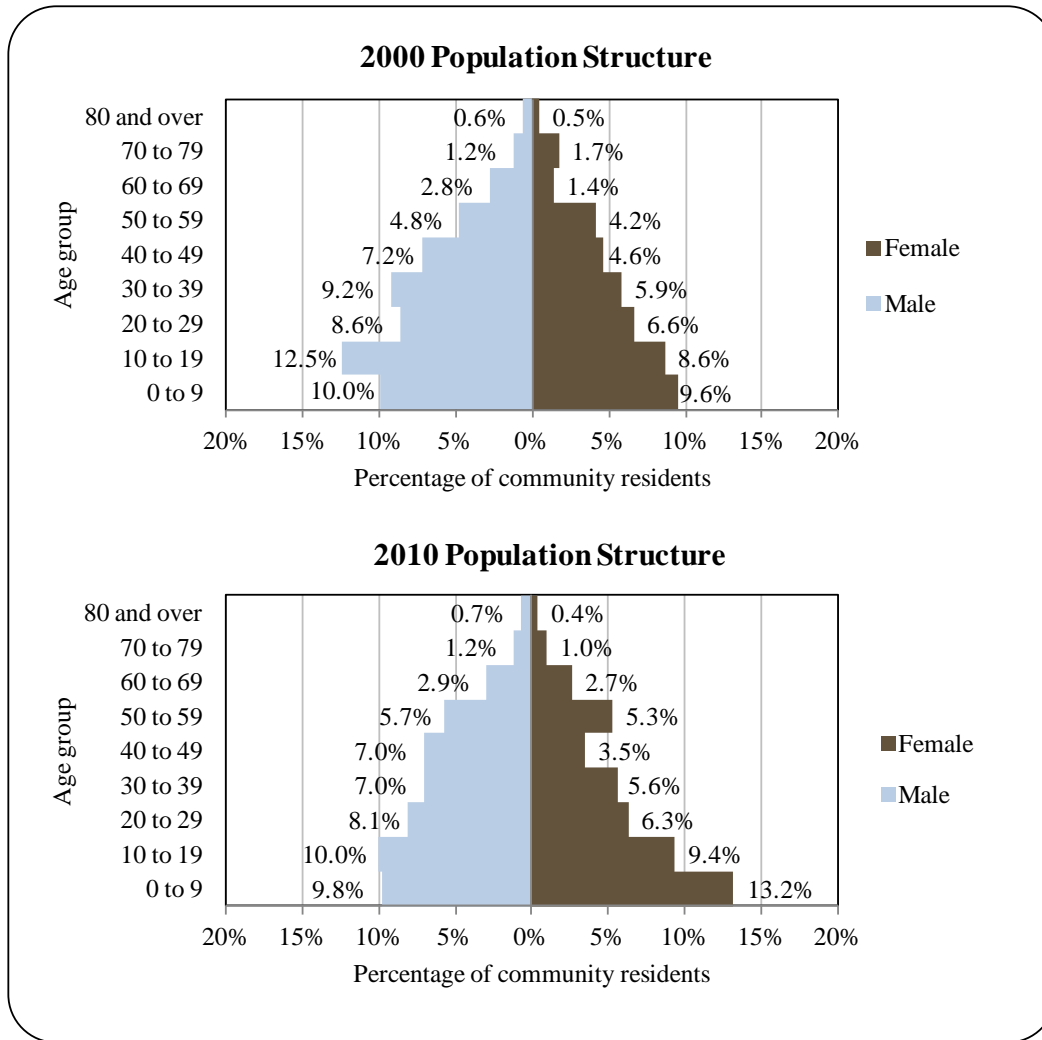


Figure 2. Population Age Structure in Gambell Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)²⁶¹ estimated that significantly fewer (75.3%) of Gambell residents aged 25 and over held a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 16.7% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 8% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 20.2% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 1% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 1.3% were estimated to have a Bachelor’s degree, compared to 17.4%

²⁶¹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

of Alaskan residents overall; and 1.3% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

St. Lawrence Island has been inhabited intermittently for the past 2,000 years by Yup'ik Eskimos. In the 18th and 19th centuries, over 4,000 people inhabited the Island in 35 villages. Sivuqaq is the Yup'ik name for the village and for the Island. The City was renamed for Mr. and Mrs. Vene C. Gambell, who were missionaries to the town.²⁶² Between 1878 and 1880, a tragic disease (unknown causes or illness) decimated the population and contributed to a potential famine due to ill hunters unable to fully provide for the remaining residents. Survivors gathered together at the present location and many settlements were discontinued as primary living areas. In 1900, reindeer were introduced for local use, and remain on the island today. In 1903, President Roosevelt established a reindeer reservation by proclamation. The City of Gambell was incorporated in 1963, joining the existing tribal government.²⁶³

Because of its proximity to the former Soviet Union, St. Lawrence Island has been an important defense site since World War II. The U.S. Army and the U.S. Navy independently built and maintained radar, sonar, and communication installations on the island, not only at Northwest Cape where Gambell is located, but at Northeast Cape as well. During World War II an airstrip and a facility with six houses and support buildings were constructed. With the beginning of the Cold War in 1946 St. Lawrence was selected for an Aircraft Control and Warning facility. The U.S. Army built a camp on the north side of Troutman Lake and other facilities on the gravel beach ridges between Gambell and Sevuokuk Mountain. The U.S. Air Force built a radar installation at the north end of Sevuokuk Mountain. The Gambell radar was used to track Soviet shipping.²⁶⁴ An Aircraft Control and Warning Station was operated by the U.S. Air Force in Gambell from 1948 to 1956 when it was abandoned. A similar facility was built at Northeast Cape which included a White Alice Communication Site.²⁶⁵

In the years leading up to the passage of the 1971 Alaska Native Claims Settlement Act (ANCSA), St. Lawrence Island's status as a federal reserve meant that Gambell and the neighboring community of Savoonga underwent a different process during land claims settlement than other Alaska Native villages. Under ANCSA, most Alaska Native villages received a combination of money and land entitlement. In addition, previous federal reserves were granted land ownership under ANCSA and controlled by Native corporations. Because Savoonga and Gambell were located within the St. Lawrence Island Reserve, they had the option to choose a larger land entitlement in lieu of the monetary portion of the ANCSA settlement.

²⁶² Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁶³ Northwest Planning and Grants Development (2003). *Community Strategic Development Plan for Gambell 2004-2009*. Report prepared for Community of Gambell and Kawerak Community Economic Development. Retrieved October 22, 2012 from <http://www.kawerak.org/ledps/gambell.pdf>.

²⁶⁴ Denfeld, D. Colt. (1994). *The Cold War in Alaska: A Management Plan for Cultural Resources*. U.S. Army Corps of Engineers Alaska District, Anchorage.

²⁶⁵ Alaska Dept. of Environmental Conservation 2012. *List of Contaminated Site Summaries By Region: Starrigavan Bay Sediments*. Retrieved October 22, 2012 from <http://dec.alaska.gov/spar/csp/sites/stlawrence.htm>.

Together, the communities of Gambell and Savoonga received title to the entire 1.136-million acres of land that made up the former St. Lawrence Island Reserve.²⁶⁶

Today, St. Lawrence Island remains jointly owned by Savoonga and Gambell. Gambell is a traditional St. Lawrence Yup'ik village with a subsistence lifestyle based on walrus and whale hunting. Due to the island's isolation, most residents are bilingual – Siberian Yup'ik is still the first language, with English as the second language. The sale, importation, and possession of alcohol are banned in the village.²⁶⁷

Natural Resources and Environment

Gambell has a maritime climate with continental influences in the winter. Wind and fog are common, and precipitation occurs 300 days per year. Average annual precipitation is 15 inches, with 80 inches of snowfall. The Bering Sea freezes during mid-November, with break-up at the end of May. Average summer temperatures range from 34 to 48 °F, and average winter temperatures vary between -2 and 10 °F. Extreme temperatures have been recorded from -30 to 65 °F.²⁶⁸

St. Lawrence Island is about 90 miles long and between 8 and 22 miles wide. The Island has no trees, and the only woody plants are Arctic Willow, standing no more than a foot (30 cm) high. The Island's abundance of seabirds and marine mammals is due largely to the influence of the Anadyr Current, an ocean current which brings cold, nutrient-rich water from the deep waters of the Bering Sea shelf edge. Reindeer were introduced on the island in 1900 in an attempt to bolster the economy. The reindeer herd grew to about 10,000 animals by 1917, but has since declined. Reindeer are herded as a source of subsistence meat to this day. To the south of the island is a persistent "polynya"—areas of open water in the sea ice which form in the lee of islands and coasts.²⁶⁹ The St. Lawrence Island Polynya are "most often created during northerly winds, but may also occur during southerly wind events, and they usually occur in the same places every year. The St. Lawrence Island Polynya is a very large, important polynya that covers hundreds of kilometers. Polynyas work like conveyor belts for ice creation. When a polynya appears, it exposes a large area of water to the cold wind. This water quickly cools and ice forms on the surface. The wind then blows this ice away from the coast, and more water appears so that new ice is constantly being formed and moved around by the wind. All this ice formation creates cold, salty, more dense water... This dense salty water sets up ocean currents that transport water, and possibly organic matter, to the south and then west of St. Lawrence Island, providing important conditions for creating healthy life on the bottom of the ocean, called the benthos."²⁷⁰

The St. Lawrence Island Reserve was created to protect and promote Siberian Yup'ik rights to the Island. This is one of the largest reserves in Alaska. The tribal government controls

²⁶⁶ Cook Inlet Region, Incorporated. 2012. *ANSCA – LAND*. Retrieved July 11, 2012 from http://www.ciri.com/content/history/anca_land.aspx.

²⁶⁷ See footnote 262.

²⁶⁸ Ibid.

²⁶⁹ Grebmeier, J.M., and L.W. Cooper. (1995). Influence of the St. Lawrence Island Polynya on the Bering Sea benthos. *Journal of Geophysical Research* 100:4439-4460.

²⁷⁰ McNutt, Lyn. (n.d.). *How does ice cover vary in the Bering Sea from year to year?* Retrieved August 6, 2012 from http://www.beringclimate.noaa.gov/essays_mcnutt.html.

access to and use of the island. It is the 6th largest island in the country and the 113th largest island in the world.²⁷¹

Two Formerly Used Defense Sites (FUDS) are located on Saint Lawrence Island. The U.S. military stationed forces in and around Gambell during and after World War II. The Air Force operated an Aircraft Control and Warning Station in Gambell from 1948 to 1956. The site was abandoned after a similar facility was constructed at Northeast Cape on the island. Located about 50 miles from Savoonga, the nearest village, the Northeast Cape site included a White Alice Communication Site and operated from 1957 to 1972. The landowners are the Sivuqaq Native Corporation (Gambell) and Savoonga's Native village corporation, Kukulget, Incorporated. The U.S. Army Corps of Engineers is responsible for cleanup at the sites through its FUDS program.²⁷²

The Gambell site is subdivided into 38 separate areas. The majority of contamination was petroleum-impacted soil. There were also areas of low concentrations of dioxin (below cleanup standards) and reported unexploded ordnance in Troutman Lake. Construction debris, military equipment and small quantities of hazardous substances have been removed through the Native American Lands Environmental Mitigation Program. Additional areas with buried material are reported to exist around the village and an investigation of the groundwater near the village water supply detected a low-level concentration of diesel range organics (DRO) in one monitoring well in 1998. Subsequent sampling has not found DRO in the well, and testing of the water supply well shows no detectable contamination. Groundwater samples near the village water supply detected a low-level concentration toxic substances in one well in 1998. Subsequent sampling has not detected harmful contaminants.²⁷³

The Alaska Department of Environmental Conservation continues to work with the community and the U.S. Army Corps of Engineers on the characterization and cleanup. As individual sites are addressed, they are cleaned to meet current environmental standards. The community has had concerns throughout cleanup and has been active during the process. The Restoration Advisory Board received federal "Technical Assistance for Public Participation" grants from 2001 to 2008 to hire someone to help residents understand the technical aspects of the process and to help review the many associated documents.²⁷⁴

Current Economy²⁷⁵

The economy in Gambell is largely based upon harvests from the sea, including seal, walrus, fish, and whales (bowhead and gray). Historically in the 1960s (although not common today), foxes were trapped as a secondary source of cash income. Some reindeer roam free on the Island, but most harvesting occurs near Savoonga. Ivory carving is a popular source of

²⁷¹ City of Gambell. (n.d.) *The Native Village of Gambell*. Retrieved August 28, 2010 from <http://www.kawerak.org/tribalHomePages/gambell/index.html>

²⁷² Alaska Dept. of Environmental Conservation 2012. *List of Contaminated Site Summaries By Region: Starrigavan Bay Sediments*. Retrieved October 22, 2012 from <http://dec.alaska.gov/spar/csp/sites/stlawrence.htm>.

²⁷³ Hogan, M., S. Christopherson, and A. Rothe. (2006). *Formerly Used Defense Sites (FUDS) in the Norton Sound Region: Location, History of Use, Contaminants Present, and Status of Clean Up Efforts*. Report prepared for Alaska Community Action on Toxics.

²⁷⁴ Alaska Department of Environmental Conservation. (n.d.). *Spill Prevention and Response*. Retrieved August 6, 2012 from <http://dec.alaska.gov/spar/csp/sites/stlawrence.htm>.

²⁷⁵ Unless otherwise noted, all monetary data are reported in nominal values.

income. The abundant number of sea and land bird colonies provides an opportunity for tourism by bird-watchers, particularly during the spring and fall migrations.²⁷⁶

Based on household surveys conducted for the 2006-2010 ACS,²⁷⁷ in 2010, per capita income in Gambell was estimated to be \$11,022 and the estimated median household income was \$23,958, compared to \$8,764 and \$31,458 reported in 2000, respectively. If inflation is taken into account by converting 2000 values into 2010 dollars,²⁷⁸ the real per capita income in 2000 is shown to have been \$11,525, and the real median household income \$41,367. These numbers suggest that per capita income remained stable over the period while median household income decreased. In 2010, Gambell ranked 256th of 305 communities for which per capita income was estimated, and 263rd of 299 communities for which median household income was estimated.

Gambell's small population size may have prevented the ACS from accurately portraying economic conditions.²⁷⁹ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Gambell in 2010 is \$5,680.^{280,281} This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing per capita income stability in Gambell between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,²⁸² indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, 58.4% of the Gambell population age 16 and older was estimated to be in the civilian labor force, lower than the statewide rate of 68.8%. That year, approximately 42.4% of local residents were living below the poverty line, more than 4 times the rate of Alaskans overall (9.6%), and the unemployment rate was estimated to be 16.7%, almost 3 times the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in

²⁷⁶ Northwest Planning and Grants Development (2003). *Community Strategic Development Plan for Gambell 2004-2009*. Report prepared for Community of Gambell and Kawerak Community Economic Development. Retrieved October 22, 2012 from <http://www.kawerak.org/ledps/gambell.pdf>.

²⁷⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁷⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

²⁷⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

²⁸⁰ See footnote 277.

²⁸¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

²⁸² Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Gambell in 2010 was 25.4%, more than twice the ALARI statewide unemployment rate estimate of 11.5%.²⁸³

Also based on the 2006-2010 ACS, just over half of the Gambell workforce was estimated to be employed in the private sector (51.9%), while 45.4% was estimated to be in the public sector, and 2.7% was estimated to be self-employed. Out of 183 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in educational services, health care and social services (35%), retail trade (18%), arts, entertainment, recreation, accommodation, and food services (13.7%), transportation, warehousing and utilities (8.2%), and public administration (7.7%) industries (Figure 3). In 2010, 2.2% of the workforce was also estimated to be working in the agriculture, forestry, and fishing industries. The number of individuals employed in the fishing industry is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly.

Compared with 2000, significant proportional increases occurred in employment in finance, insurance, and real estate, construction, and agriculture, forestry, fishing, hunting, and mining industries in 2010. Over the same period, there was a significant drop in the percentage of those estimated to be employed in transportation, warehousing, and utilities and arts, entertainment, recreation, accommodation, and food service industries between 2000 and 2010 (Figure 3). Similar changes were seen in the distribution of occupations held by residents in 2000 compared to 2010, with the greatest increases in the percentage of the workforce employed in service and natural resource/construction/maintenance occupations and the greatest decrease in management/professional occupations (Figure 4).

Economic data compiled in the ALARI database indicate that there were 437 employed residents in Gambell in 2010, of which 61.7% were employed in local government, 9.5% in education and health services, 6.8% in construction, 6.1% in leisure and hospitality, 4.9% in trade, transportation, and utilities, 2.7% in financial activities, 2.3% in professional and business services, 2.3% in state government, 0.4% in information, and 3.4% in other industries.²⁸⁴ ACS estimates conflict somewhat with economic data compiled in the ALARI database, which shows the greatest number of Gambell residents employed in education, health care, social assistance, transportation, utilities, and warehousing industries, and a much smaller number employed in public administration. It should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

²⁸³ See footnote 281.

²⁸⁴ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Gambell (U.S. Census).

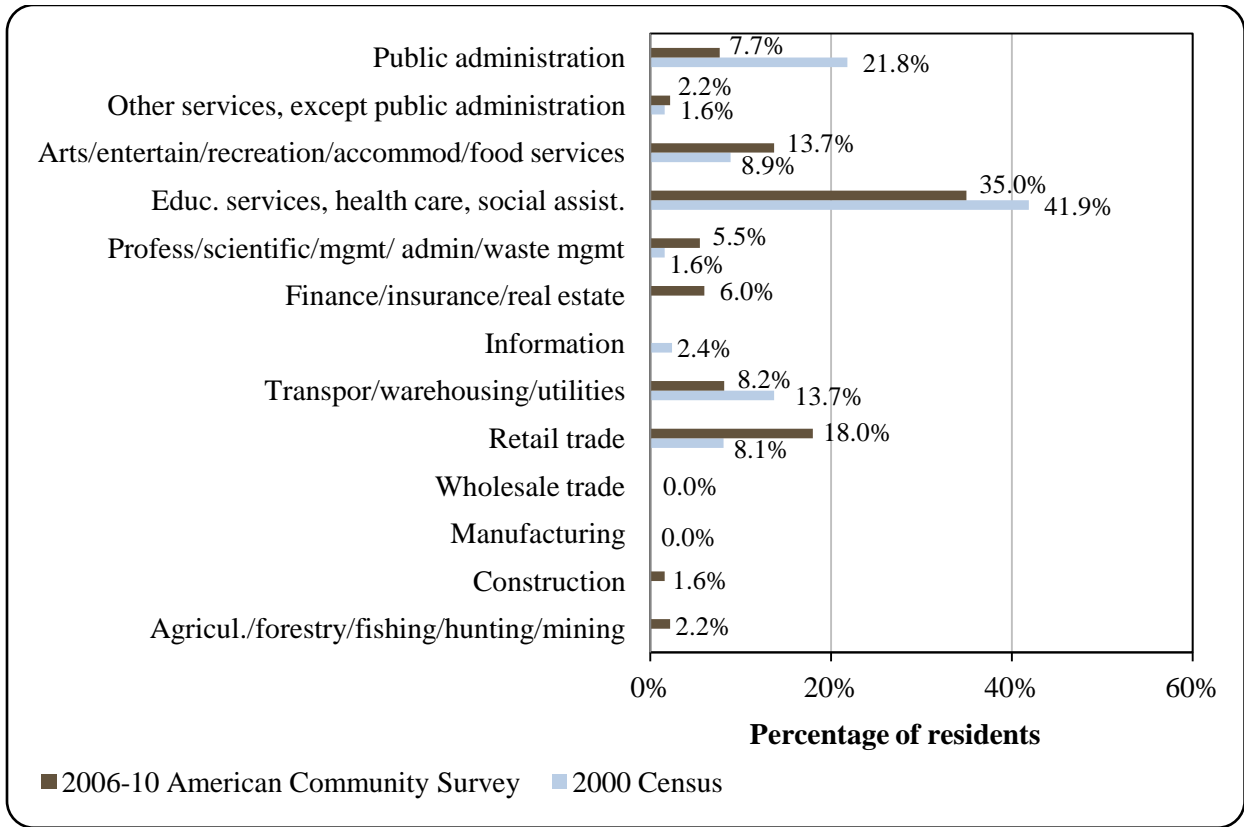
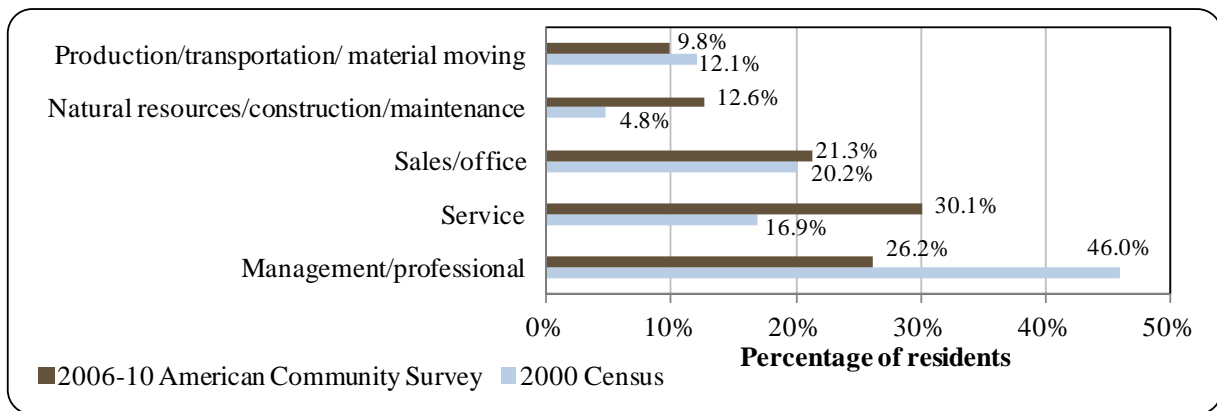


Figure 4. Local Employment by Occupation in 2000-2010, Gambell (U.S. Census).



Governance

Gambell is a 2nd Class City and is not located within an organized borough. The City was incorporated in 1963. The City administers a 3% sales tax and there is no property tax.²⁸⁵ In addition to sales tax revenues, other locally-generated income sources in Gambell between 2000 and 2010 included building and equipment rentals, contracted services, building leases, water, sewer and washeteria service fees, bingo and pull tab receipts, and proceeds from an ivory cooperative run by the City. Outside revenue sources included shared funds from various state and federal revenue sharing programs and grants in some years. The City of Gambell received contributions from the State Revenue Sharing program from 2000 to 2003 (just under \$30,000 per year) and larger contributions from the state Community Revenue Sharing program in 2009 and 2010. Other state revenue sharing came from the SAFE Communities program and fish tax refunds (see the *Fisheries-Related Revenue* section for more information). Federal shared revenues came from the Payment in Lieu of Taxes and COPS programs (Community Oriented Policing Services). State-funded capital project grants were received during the 2000-2010 period for projects including construction of a fire hall, landfill relocation, and equipment purchases. See Table 2 below for details on selected municipal, state, or federal revenue streams for Gambell from 2000 to 2010.

Table 2. Selected Municipal State, or Federal Revenue Streams for the Community of Gambell from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,970,048	\$82,055	\$28,992	n/a
2001	\$1,894,455	\$73,525	\$28,500	n/a
2002	\$2,454,367	\$65,630	\$26,000	n/a
2003	\$956,594	\$65,989	\$28,147	n/a
2004	\$942,384	\$65,989	n/a	n/a
2005	\$1,802,597	\$71,593	n/a	n/a
2006	\$1,842,287	\$61,174	n/a	n/a
2007	\$2,355,135	\$70,248	n/a	n/a
2008	\$1,920,258	\$70,357	n/a	n/a
2009	\$1,878,205	\$87,099	\$129,000	n/a
2010	\$1,215,983	\$87,463	\$150,000	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

²⁸⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

The Bureau of Indian Affairs (BIA) recognized traditional council for the community is the Native Village of Gambell. The local Native village corporation is Sivuqaq, Incorporated. The regional Native corporation to which Gambell belongs is the Bering Strait Native Corporation.²⁸⁶ Because of the unique history of St. Lawrence Island as a federal reindeer reserve (the St. Lawrence Island Reserve), the communities of Savoonga and Gambell opted to receive title to all 1,135,843 acres of the St. Lawrence Island Reserve in lieu of the monetary portion of ANCSA land claims (see the *History, Traditional Knowledge, and Culture* section).²⁸⁷ These combined lands are still held in common between Gambell and Savoonga, and are managed by the St. Lawrence Island Economic Development Corporation.²⁸⁸

Gambell is also a member of Kawerak Inc., a tribal non-profit organization with a mission to “assist, promote and provide programs and services to improve the social, economic, educational, cultural and governmental self-sufficiency for the betterment of the Native people within the region, and to preserve the traditional culture, languages and values.”²⁸⁹ Kawerak, Inc. is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.²⁹⁰ Kawerak, Inc. offers children and family services, community services, and education, employment and training opportunities for residents of the 18 member villages located in the Bering Strait region. The non-profit also includes a Natural Resources Division, which incorporates the Eskimo Walrus Commission, Reindeer Herders Association, and Subsistence Resources Division.²⁹¹

Offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Nome. The closest offices of the Alaska Department of Natural Resources, National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services are in Anchorage.

Infrastructure

Connectivity and Transportation

Gambell’s isolated location on an island with no port results in heavy dependence upon air transport. The state-owned airport has a 4,500 feet long by 96 feet wide asphalt runway. Regular flights from Nome and charters from Unalakleet are available.²⁹² As of June 2012, roundtrip airfare from Anchorage to Gambell costs \$881.²⁹³ Barge service is also available to bring freight from, Kotzebue, Nome, or Shishmaref.^{294,295} Residents use personal boats for local

²⁸⁶ See footnote 285.

²⁸⁷ Franklin, Jonathan. 1993. “Digging for Ivory: The Challenge of Preserving Native Alaskan Archaeological Sites.” *Stanford Environmental Law Journal*, 12 (164-210). Retrieved July 11, 2012 from <http://heinonline.org>.

²⁸⁸ See footnote 285.

²⁸⁹ Kawerak, Inc.. 2006. *Homepage*. Retrieved February 17, 2012 from <http://www.kawerak.org/>.

²⁹⁰ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

²⁹¹ See footnote 289.

²⁹² See footnote 285.

²⁹³ Airfare was calculated using lowest fare retrieved on November 22, 2011 from <http://www.travelocity.com>.

²⁹⁴ See footnote 285.

travel by sea, and snowmobiles for overland travel in winter. Currently, Gambell is connected to Savoonga via an unimproved road.²⁹⁶ In the community's strategic development plan, priority projects were identified to improve transportation accessibility and reduce costs. These priorities included meeting with airlines and the U.S. Post Office to discuss reduced freight costs, construction of additional roadways within the community, construction of an evacuation road from the shore to higher ground, construction of an improved road between Gambell and Savoonga, and development of a boat harbor and port to allow local residents to become involved in fisheries.²⁹⁷

Facilities

Water in Gambell is sourced from community wells as well as from Troutman Lake. It is filtered and chlorinated and stored in three water tanks. A city-operated piped water and sewer system distributes water to 116 homes, and sewage is collected in a community septic tank. A smaller number of homes (37) are not connected to the pipe system. These residents haul water and honeybuckets. Both the school buildings and the washeteria have individual water wells and septic tank systems. The City operates an unpermitted landfill but does not provide refuse collection services. Residents haul their own garbage to the landfill site. Electricity in Gambell is provided by a diesel powerhouse operated by the Alaska Village Electric Cooperative. Local police services are provided by the City Police Department, the Village Police Officer, and a Village Public Safety Officer. The nearest state trooper post is located in Nome. Fire and rescue services are provided by the Gambell Volunteer Fire Department, the City, and Project Code Red Equipment. Additional community facilities include a City Jail, a teen center, a community hall, and the school library. Telephone and cable service is available locally. Internet is available at the school only.²⁹⁸

With regard to fisheries-related infrastructure, no dock facilities are available in Gambell.²⁹⁹ Construction of a dock and port facilities has been identified as a development priority to provide greater opportunity for Gambell residents to participate in fisheries.³⁰⁰

Medical Services

The Bessie A. Kaningok Health Clinic is the primary healthcare facility in Gambell. The clinic is operated by the Norton Sound Health Corporation and is a Community Health Aid Program site.³⁰¹ The nearest hospital is the Norton Sound Regional Hospital in Nome, which is about 206 miles away.

²⁹⁵ Rodney P. Kinney Associates, Inc. 2007. *Gambell Long Range Transportation Plan*. Retrieved October 22, 2012 from <http://www.kawerak.org/servicedivisions/csd/trans/index.html>.

²⁹⁶ Ibid.

²⁹⁷ Northwest Planning and Grants Development (2003). *Community Strategic Development Plan for Gambell 2004-2009*. Report prepared for Community of Gambell and Kawerak Community Economic Development. Retrieved October 22, 2012 from <http://www.kawerak.org/ledps/gambell.pdf>.

²⁹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

²⁹⁹ Ibid.

³⁰⁰ See footnote 297.

³⁰¹ See footnote 298.

Educational Opportunities

Gambell is located in the Bering Strait School district. There is one school in Gambell which offers preschool through 12th grade education. As of 2011, the Gambell School had 201 students and 20 teachers.³⁰²

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The St. Lawrence Island Yup'ik people have long depended on subsistence hunting and gathering, practices which continue to this day. Historically, whales and other marine mammals were hunted, pink and chum salmon, inconnu, whitefish, herring, crab, and halibut were harvested, and birds and eggs were also an important part of the diet.³⁰³ Today, Gambell is a traditional St. Lawrence Yup'ik village with a subsistence lifestyle based on walrus and whale hunting. Whale, seal, walrus, and reindeer comprise 80% of islanders' diets. Seal, polar bear, caribou, and fish are also important for subsistence purposes.³⁰⁴ Gambell is located within Federal Statistical and Reporting Area 524, Pacific Halibut Fishery Regulatory Area 4D, and the Bering Sea Sablefish Regulatory Area. Gambell participates in the Community Development Quota (CDQ) program through the Norton Sound Economic Development Corporation (NSEDC). The community is not eligible for the Community Quota Entity program.

Gambell is a member of the Alaska Eskimo Whaling Commission (AEWC), which was formed to represent whaling communities in an effort to convince the United States Government to take action to preserve the Eskimos subsistence hunt of bowhead whales. The AEWC exists today as a tax-exempt non-profit corporation with several purposes: to preserve and enhance a vital marine resource, the bowhead whale, including the protection of its habitat; to protect Eskimo subsistence bowhead whaling; to protect and enhance the Eskimo culture, traditions, and activities associated with bowhead whales and subsistence bowhead whaling; and to undertake research and educational activities related to bowhead whales. The members of the AEWC are registered whaling captains and their crew members from ten whaling communities: Gambell, Savoonga, Wales, Little Diomedea, Kivalina, Point Hope, Wainwright, Barrow, Nuiqsut, and Kaktovik.³⁰⁵

Gambell is also a member of the Kawerak Corporation's Eskimo Walrus Commission (formed in 1978).³⁰⁶ The Marine Mammal Protection Act (MMPA) includes specific text providing a legislative basis for these and other cooperative management agreements. Specifically, in 1994, Section 119 of the reauthorization for the MMPA provided a legislative

³⁰² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

³⁰³ Alaska Native Heritage Center. (2008). *Inupiaq & St. Lawrence Island Yupik People – Who We Are*. Retrieved July 11, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/inupiaq/.

³⁰⁴ See footnote 298.

³⁰⁵ Alaska Eskimo Whaling Commission. (n.d.) *Overview of the Alaska Eskimo Whaling Commission*. Retrieved at <http://www.bluediamondwebs.biz/Alaska-aewc-com/aboutus.asp> (Accessed June 27, 2012).

³⁰⁶ Kawerak Corporation. (n.d.). *Eskimo Walrus Commission*. Retrieved July 15, 2012 from <http://www.kawerak.org/servedivisions/nrd/ewc/>.

basis for cooperative agreements between state and federal management agencies and Alaska Native organizations.³⁰⁷

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Gambell does not have a registered processing plant. The nearest shore-side processing plant is located in Savoonga. According to a survey of plant managers conducted by the Alaska Fisheries Science Center in 2011, the Savoonga Norton Sound Seafood Products (NSSP) plant processes halibut, red king crab, salmon, and herring, and was founded in 1992. NSSP is a subsidiary of the NSEDC, with plants located in Savoonga, Unalakleet, and Nome, and buying stations at Elim, Golovin, and Shaktoolik.³⁰⁸ According to the plant managers survey, the Savoonga NSSP plant employs between 4 and 10 employees, with the largest number of workers in the month of August.

Fisheries-Related Revenue

Between 2000 and 2010, the City of Gambell generated very little fisheries-related revenue, with total annual fisheries-related revenue ranging from \$88 to \$573 during that time period (Table 3).³⁰⁹ In 2010, fisheries-related revenues totaled \$108, compared to \$414 in 2000. It is important to note that the NSEDC uses fisheries revenue from its share of the CDQ program to provide grants for infrastructure, fuel and electrical assistance to member communities. The NSEDC also offers educational scholarships, vocational training, and fishing permit acquisition and financing assistance to residents of its member communities.

Commercial Fishing

Between 2000 and 2010, no Gambell residents were recorded as participating in commercial fisheries in the state, with one exception. During that time period, the number of crew license holders ranged from zero to two. Further information regarding commercial fishing trends can be found in Tables 4 through 10.

³⁰⁷ Glenn Gray and Associates. June 2007. *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

³⁰⁸ Norton Sound Economic Development Corporation. (n.d.). *Norton Sound Seafood Products (NSSP)*. Retrieved July 11, 2012 from <http://www.nsedc.com/nssp.html>.

³⁰⁹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Gambell: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$330	\$400	\$279	\$112	\$113	\$94	\$284	\$275	\$0	\$0	\$0
Shared Fisheries											
Business Tax ¹	\$84	\$173	\$244	\$112	\$93	\$236	\$283	\$221	\$117	\$88	\$108
Fisheries Resource											
Landing Tax ¹	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$0
<i>Total fisheries-related revenue⁴</i>	<i>\$414</i>	<i>\$573</i>	<i>\$523</i>	<i>\$225</i>	<i>\$206</i>	<i>\$331</i>	<i>\$568</i>	<i>\$496</i>	<i>\$117</i>	<i>\$88</i>	<i>\$108</i>
<i>Total municipal revenue⁵</i>	<i>\$1,970,048</i>	<i>\$1,894,455</i>	<i>\$2,454,367</i>	<i>\$956,594</i>	<i>\$942,384</i>	<i>\$1,802,597</i>	<i>\$1,842,287</i>	<i>\$2,355,135</i>	<i>\$1,920,258</i>	<i>\$1,878,205</i>	<i>\$1,215,983</i>

Note: n/a indicates that no data were reported for that year. -*indicates that due to inconsistencies between submitted budget and Alaska Taxable, a percentage total of municipal revenue from fisheries-related revenue could not be determined.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Gambell: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Gambell: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

¹ National Marine Fisheries Service. (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Gambell: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Gambell ²	Total Net Pounds Landed In Gambell ^{2,5}	Total Ex-Vessel Value Of Landings In Gambell ^{2,5}
2000	0	0	0	0	0	0	0	\$0
2001	1	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	2	0	0	0	0	0	0	\$0
2004	2	0	0	0	0	0	0	\$0
2005	0	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	2	0	0	0	0	0	0	\$0
2008	0	0	0	0	0	0	0	\$0
2009	0	0	0	0	0	0	0	\$0
2010	2	0	0	0	0	0	0	\$0

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ National Marine Fisheries Service. (2011). Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Gambell: 2000-2010.

Year	Number of Halibut Quota Share Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Gambell: 2000-2010.

Year	Number of Sablefish Quota Share Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Gambell: 2000-2010.

Year	Number of Crab Quota Share Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Gambell: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Gambell Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

As seen with commercial fisheries, recreational fishing activity by Gambell residents is also minimal. Between 2000 and 2010, there were no active sport fish guide business or licensed sport fish guides present in the community, and no sport fishing licenses sold in the community. During that time period, the number of sport fishing licenses purchased by Gambell residents (irrespective of point of sale) ranged from 2 in 2008 and 2010 to 10 in 2006 (Table 11). Additionally, no charter fishing activity was documented in Gambell between 2000 and 2010.

The ADF&G Statewide Harvest Survey does not include St. Lawrence Island (including Gambell) within a survey region; therefore there are no data available from the Statewide Harvest Survey for this area. The nearest survey area is Area W-Seward Peninsula and Norton Sound.

Table 11. Sport Fishing Trends, Gambell: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Gambell ²	Saltwater Angler Days Fished – Non-residents ³	Saltwater Angler Days Fished – Alaska Residents ³
2000	0	0	8	0	n/a	n/a
2001	0	0	8	0	n/a	n/a
2002	0	0	6	0	n/a	n/a
2003	0	0	7	0	n/a	n/a
2004	0	0	4	0	n/a	n/a
2005	0	0	5	0	n/a	n/a
2006	0	0	10	0	n/a	n/a
2007	0	0	7	0	n/a	n/a
2008	0	0	2	0	n/a	n/a
2009	0	0	7	0	n/a	n/a
2010	0	0	2	0	n/a	n/a

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Yup'ik peoples of St. Lawrence Island are strongly dependent on subsistence and consider fishing an integral part of their culture. Traditional subsistence patterns depend upon location and seasonal availability of resources, such as whales, marine mammals, fish, caribou, and plants. Subsistence on the Island is largely based on the hunting of whales and sea mammals; fishing for pink and chum salmon, herring, crab, and halibut, as well as cod and whitefish when coastal sea ice forms; and birds and eggs form an important part of the diet.³¹⁰ When hunting for bowhead whales, residents have historically used toggle-headed harpoons, lances, lines, and seal bladder and seal skin floats. Other tools used for subsistence fishing include scratching boards for attracting seals to breathing holes, bows, arrows, spears, spear throwers, bolas for taking birds, and snares. Fishing gear includes nets, traps made from branches and roots, and hooks.³¹¹

According to one Yup'ik elder from Gambell, “I’m here today because my forefathers depended on marine mammals. That’s the source of food that we have. Everything my body needs is in the food chain. Fish, seals, walrus ... it’s good for you. So here in the cold climate, eating marine mammal matches our body needs.”³¹² Pacific walrus, seals, whales, eiders, fish,

³¹⁰ Alaska Native Heritage Center (2008). *Inupiaq & St. Lawrence Island Yupik People – Who We Are*. Retrieved July 11, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/inupiaq/.

³¹¹ Ibid.

³¹² Active, John (1999). Why Subsistence is a Matter of Cultural Survival: A Yupik Point of View. *Alaska Native Writers, Storytellers and Orators* (Expanded Edition). Ronald SPatz, ed. Alaska Quarterly Review.

and shellfish are all seasonal sources of subsistence for many St. Lawrence Yup'ik residents living in both Gambell and Savoonga.³¹³

Data are not available regarding per capita subsistence harvest and the percentage of Gambell households that utilized various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, some data are available regarding annual subsistence harvests of salmon, halibut, and marine mammals during this time period. Between 2000 and 2010, harvest numbers were reported in 2005 only, when a small number of pink, chum, and coho salmon were reported harvested (Table 13). Gambell residents have also participated in subsistence halibut fishing. From 2003 to 2007, six or seven Subsistence Halibut Registration Certificates (SHARC) were issued each year to Gambell residents, while only one SHARC card was reportedly issued each year from 2008 to 2010. The only year in which data were reported regarding harvest was 2003, when all seven SHARC cards were returned and a total of 105 pounds of halibut were harvested for subsistence (Table 14).

By far the most important subsistence resources to local residents are marine mammals, especially walrus and polar bears. In 2010, Gambell residents harvested 509 walrus, representing 40% of all walrus taken in the state that year. Between 2000 and 2010, 60 polar bears were harvested for subsistence, representing 10.7% of polar bears taken during that time period. Each whale provides thousands of pounds of meat and “muktuk” (or blubber and skin), which is shared by all the people in the community. Portions of each whale are saved for celebrations at Nalukataq (the blanket toss or whaling feast), Thanksgiving, Christmas, and potlucks held throughout the year.³¹⁴ No information was reported by management agencies regarding subsistence harvest of beluga whale, sea otter, Steller sea lion, harbor seal, or spotted seal between 2000 and 2010 (Table 15).

³¹³ Bearing Sea Elders Advisory Group. (2011). *The Northern Bering Sea: Our Way of Life*. P.14.

³¹⁴ Alaska Eskimo Whaling Commission (n.d.) *Overview of the Alaska Eskimo Whaling Commission*. Retrieved at <http://www.bluediamondwebs.biz/Alaska-aewc-com/aboutus.asp> (Accessed June 27, 2012).

Table 12. Subsistence Participation by Household and Species, Gambell: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Gambell: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	4	4	n/a	1	1	22	n/a	n/a	n/a
2006	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011). Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Gambell: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	7	7	105
2004	7	n/a	n/a
2005	7	n/a	n/a
2006	6	n/a	n/a
2007	6	n/a	n/a
2008	1	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Gambell: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	705	4	n/a	n/a	n/a
2001	n/a	n/a	448	8	n/a	n/a	n/a
2002	n/a	n/a	662	21	n/a	n/a	n/a
2003	n/a	n/a	817	0	n/a	n/a	n/a
2004	n/a	n/a	383	0	n/a	n/a	n/a
2005	n/a	n/a	519	6	n/a	n/a	n/a
2006	n/a	n/a	469	12	n/a	n/a	n/a
2007	n/a	n/a	705	8	n/a	n/a	n/a
2008	n/a	n/a	625	0	n/a	n/a	n/a
2009	n/a	n/a	787	0	n/a	n/a	n/a
2010	n/a	n/a	509	1	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Golovin (GOLL-uh-vin)



People and Place

*Location*³¹⁵

Golovin is located on a point of land between Golovnin Bay and Golovnin Lagoon on the Seward Peninsula. It is 70 miles east of Nome. Golovin is located in the Nome Census Area, is incorporated as a Second-class city, and is not under the jurisdiction of a borough. The area encompasses 3.7 square miles of land and 0.0 square miles of water.

*Demographic Profile*³¹⁶

In 2010, there were 156 residents in Golovin, ranking it the 218th largest community in terms of population size. Overall since 1990, the population increased by 12.2%. Between 2000 and 2010, the population increased by 10.8% with an average annual growth rate of 0.70%, which was just under the statewide average of 0.75% (Table 1).

In 2010, the majority of Golovin residents identified themselves as American Indian and Alaska Native (92.9%), compared to 84% in 2000; 7.6% identified themselves as White, compared to 4.5% in 2000; 1.9% identified themselves as of two or more races, compared to 8.3% in 2000; 0.6% identified themselves as Hispanic or Latino, compared to 2.8% in 2000; 0.6% identified themselves as of some other race, compared to 0.0% in 2000; 0.0% identified themselves as Native Hawaiian and Other Pacific Islander, compared to 0.0% in 2000; 0.0% identified themselves as Asian, compared to 0.0% in 2000; and 0.0% identified themselves as Black or African American, compared to 0.0% in 2000. As seen in Figure 1, the largest changes presented as increases in the Alaska Native population and decreases in the two or more races and White populations.

In 2010, the average household size in Golovin was 3.18, compared to 3.2 in 2000 and 3.0 in 1990. Also in 2010, there were a total of 49 occupied housing units, compared to 45 in 2000. Of those households surveyed in 2010, 39.1% were owner-occupied and 37.5% were renter-occupied. In that same year, 23.4% were vacant, compared to 14.1% in 2000. There were no residents living in group quarters in 2000 and 2010.

In 2010, the gender makeup in Golovin was 53.2% male and 46.7% female, similar to the state as a whole (52% male, 48% female). The median age was estimated to be 25 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 10.3% of the Golovin population was age 60 or older, compared to 7% in 2000. The age groups that experienced the greatest change between 2000 and 2010 were the 60-69 and 10-19 age groups. For the 10-19 age group, males declined by 4.4% since 2000 and females increased by 3.2% since 2000. Males in the 60-69 age group increased by 5% since 2000 (Figure 2).

³¹⁵ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³¹⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Golovin from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	127	-
2000	144	-
2001	-	155
2002	-	149
2003	-	156
2004	-	161
2005	-	150
2006	-	154
2007	-	167
2008	-	161
2009	-	154
2010	156	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Golovin: 2000-2010 (U.S. Census).

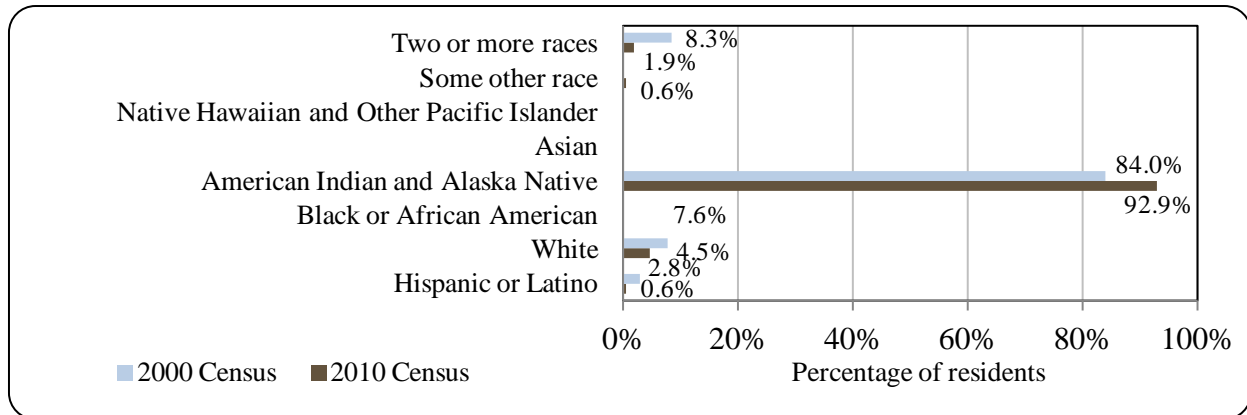
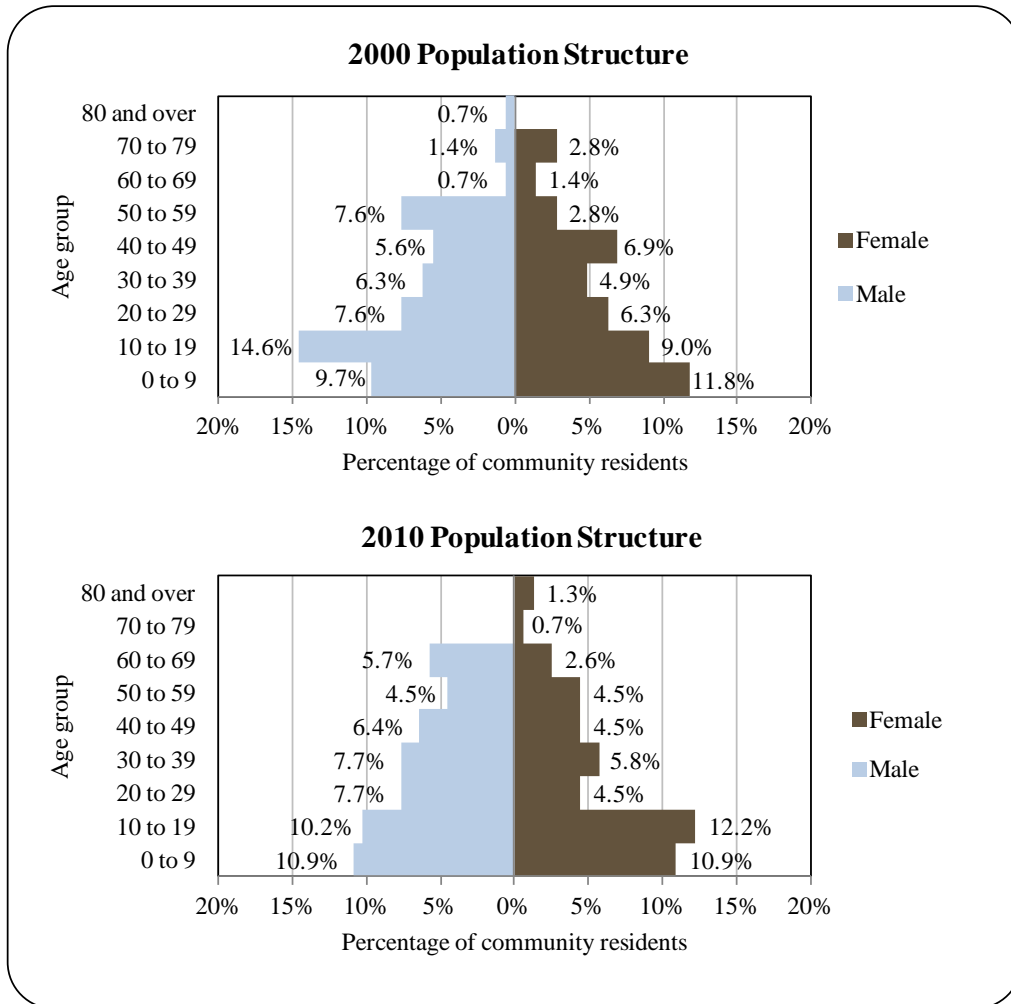


Figure 2. Population Age Structure in Golovin Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS)³¹⁷ estimated that 89.1% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 10.9% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 0% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 21.9% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 0% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents

³¹⁷ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

overall; and an estimated 0% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.³¹⁸

*History, Traditional Knowledge, and Culture*³¹⁹

The Seward Peninsula was once the backbone of the Bering Land Bridge that once connected Asia with North America during the last Ice Age. Indigenous people settled the area over 4,000 years ago, and their ethnicity is reflected in the area's demographics. Siberian Yup'ik people made their home on St. Lawrence Island and Malemiut, Kauweramiut and Unalikmiut Eskimos have occupied the Seward Peninsula historically, mostly around areas of abundant resources. Western Union surveyors seeking a route across Alaska and the Bering Sea reported gold around Council, northwest of Golovin, in 1867. However, it was not until a major strike at Anvil Creek in the fall of 1898 that rumors of gold became widespread. By 1899, over 8,000 prospectors flocked to the area, and by 1900, nearby Nome had swelled to over 20,000 residents.³²⁰

The Eskimo village of "Chinik," located at the present site of Golovin, was originally settled by the Kauweramiut Eskimos who later mixed with the Unaligmiut Eskimos. Golovin was named for Captain Vasili Golovnin of the Russian Navy. In 1887, the Mission Covenant of Sweden established a church and school south of the current site. Around 1890, John Dexter established a trading post that became the center for prospecting information for the entire Seward Peninsula. When gold was discovered in 1898 at Council, Golovin became a supply point for the gold fields. Supplies were shipped from Golovin across Golovnin Lagoon and up the Fish and Niukluk Rivers to Council. A post office was opened in 1899. Reindeer herding was an integral part of the missions in the area in the 1900s. The City was incorporated in 1971.³²¹

Natural Resources and Environment

Marine climatic influences prevail during the summer when the sea is ice-free. Summer temperatures average 40 to 60 °F; winter temperatures average -2 to 19 °F. Extremes from -40 to 80 °F have been recorded. Average annual precipitation is 19 inches, with 40 inches of snowfall. Golovnin Bay is frozen from early November to mid-May.

Freshwater streams and lakes on the Seward Peninsula provide habitat for all five species of Pacific salmon, Dolly Varden, arctic char, sheefish, round and humpback whitefish, Bering and least cisco, northern pike, Arctic grayling, stickleback, sculpin, sucker, and blackfish. Muskoxen were introduced to the Seward Peninsula in 1970. Moose are an important subsistence resource and are widely distributed throughout the Seward Peninsula, favoring areas which contain willow and birch shrubs. Brown bears are widely distributed throughout the Seward Peninsula while black bears are found in forested areas. Gray wolves are found throughout the

³¹⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³¹⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved February 15, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³²⁰ City of Nome (2003). *Nome Comprehensive Plan*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Nome-CP-2005.pdf>.

³²¹ See footnote 319.

area, wherever adequate numbers of prey species are found. These include moose, caribou, voles, lemmings, ground squirrels, snowshoe hares, beavers, and occasionally birds and fish. Furbearers include beaver, red fox, Arctic fox, lynx, marten, mink, muskrat, otter, coyote, wolverine, and wolf. Migratory birds occupy a wide variety of habitats throughout the Seward Peninsula.³²²

A wide variety of fish and wildlife are present specifically around Golovin. Moose, caribou, wolf, wolverine, lynx, beavers, porcupines, duck, geese, and other waterfowl are present. Seal, beluga whale, all species of salmon, whitefish, lingcod, tomcod, smelt, pike, and trout are present in the area waters of Golovin. No critical habitat areas, refuges, or sanctuaries are listed in the area surrounding the community. There are no known endangered species habitats located within the planning area and there is a problem occasionally with beavers damming the rivers.³²³

Golovin is located on a sand spit between Golovnin Bay and Golovnin Lagoon. The Fish River flows into Golovnin Lagoon and there is a large area of wetlands and tidal flats at the northwest end of the lagoon. The land to the north and east of Golovin is characterized by rolling hills with flat, marshy valleys in between. The soil at Golovin is sand and gravel and consequently permafrost is not typically a problem. Soils inland from the existing village, however, tend to be poorly drained, with a peaty surface layer and shallow permafrost. Vegetation is primarily tundra sedges, mosses, and low shrubs, with some spruce forests in upland areas to the north and east. Golovin is located within a zone of continuous permafrost, with an active layer of approximately four feet. Permafrost may extend to depths of 70 feet. The slopes within Golovin are generally less than 12 percent and erosion potential is moderate.³²⁴

Lowland tundra is covered by poorly drained peat deposits. Lowland and upland areas are underlain by a moderately thick to thin layer of permafrost. Vegetation includes mostly tall shrubs with spruce/shrub woodland areas to the north. Sparse forest cover makes much of the Seward Peninsula unsuitable for large-scale timber harvests. Southern Seward Peninsula is characterized by forested landscape; however, timber harvests remain small-scale.³²⁵

Environmental hazards affecting Golovin include storm surges, coastal flooding and erosion. Most erosion occurs along the coast to an estimated 50 feet above the high water line.³²⁶ According to the Alaska Department of Environmental Conservation, there are no notable environmental cleanup sites present in Golovin.³²⁷

The Army Corps of Engineers rates flood potential at Golovin as high, due primarily to storm surges and wind-driven waves. Most of the homes lie at least ten feet above sea level and outside the area subject to floods with a frequency of 100 years. Much of the area along Golovnin Lagoon, including the airport, are within the 100-year floodplain, but are protected from the wind-driven waves of Golovnin Bay. Flooding in both 1970 and 1974 inundated large

³²² Mikulski, Pearl (2009). *Golovin Local Economic Development Plan, 2009-2013*. Kawerak, Inc. Retrieved from: <http://www.kawerak.org/ledps/golovin.pdf>.

³²³ Ibid.

³²⁴ Ibid.

³²⁵ Bureau of Land Management (2007). *Kobuk-Seward Peninsula Proposed Resource Management Plan and Final Environmental Impact Statement*. Retrieved April 2, 2012 from: http://www.blm.gov/ak/st/en/prog/planning/ksp/ksp_documents/ksp_prmp_feis.html.

³²⁶ Ibid.

³²⁷ Alaska Department of Environmental Conservation (n.d.). *Spill Prevention and Response*. Retrieved April 16, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

areas along Golovnin Lagoon, although the extent of damage was limited. Erosion is a problem along Golovnin Bay during severe storms.³²⁸

Current Economy³²⁹

Golovin's economy is based on subsistence activities, reindeer herding, fish processing, and commercial fishing. The salmon fishery and reindeer herding offer some potential for cash income to augment subsistence food harvests, as fish, beluga whale, seal, moose, and reindeer are the main sources of meat.

In 2010,³³⁰ the estimated per capita income was \$12,298 and the estimated median household income was \$32,083, compared to \$13,281 and \$31,875 in 2000. After adjusting for inflation by converting 2000 values into 2010 dollars,³³¹ the real per capita income (\$17,464) and real median household income (\$41,915) indicate that individual earnings decreased and household earnings increased during this time period. In 2010, Golovin ranked 237th of 305 communities from which per capita income was estimated, and 237th of 299 communities for which median household income was estimated.

However, Golovin's small population size may have prevented the American Community Survey (ACS) from accurately portraying economic conditions.³³² Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development.³³³ According to the ALARI database, residents earned \$1,933,689 million in total wages in 2010.³³⁴ When paired with the 2010 Decennial Census population, the per capita income is \$12,395 which was significantly less than the 2010 ACS estimate and suggests that caution should be used when using ACS data.

Based on the 2006-2010 ACS, the greatest number of Golovin residents (51.4%) was employed in education, healthcare, or social assistance services, compared to 40.0% in 2000, followed by finance, insurance, and real estate (13.5%), compared to 0.0% in 2000. Additionally, in 2010, residents were employed in public administration (10.8%), compared to 16.4% in 2000, and information services (8.1%), compared to 0.0% in 2000. In 2010, 35.1% of Golovin residents had management and professional jobs, compared to 23.6% in 2000. Additionally, in 2010, residents had sales/office jobs (29.7%), compared to 36.4% in 2000, and service occupations (21.6%), compared to 20.0% in 2000. Between 2000 and 2010, there has been a

³²⁸ Ibid.

³²⁹ Unless otherwise noted, all monetary data are reported in nominal values.

³³⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³³¹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³³² While ACS estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³³³ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

³³⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

9.4% decrease in the number of residents having natural resource, construction, and maintenance jobs, and there has been a 9.1% decrease in production, transportation, and material moving jobs.

In 2010, 35.1% of residents had management/professional jobs, 21.6% had service jobs, and 29.7% had sales/office jobs. Between 2000 and 2010, there were significant increases in management/professional jobs and significant decreases in production, transportation, and material moving, as well as declines in sales/office jobs (Table 4). According to ALARI estimates, in 2010, 20.5% of residents had trade, transportation, and utilities jobs, 14.9% had local government jobs, and 13.4% had education and health services jobs. Further information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Golovin (U.S. Census).

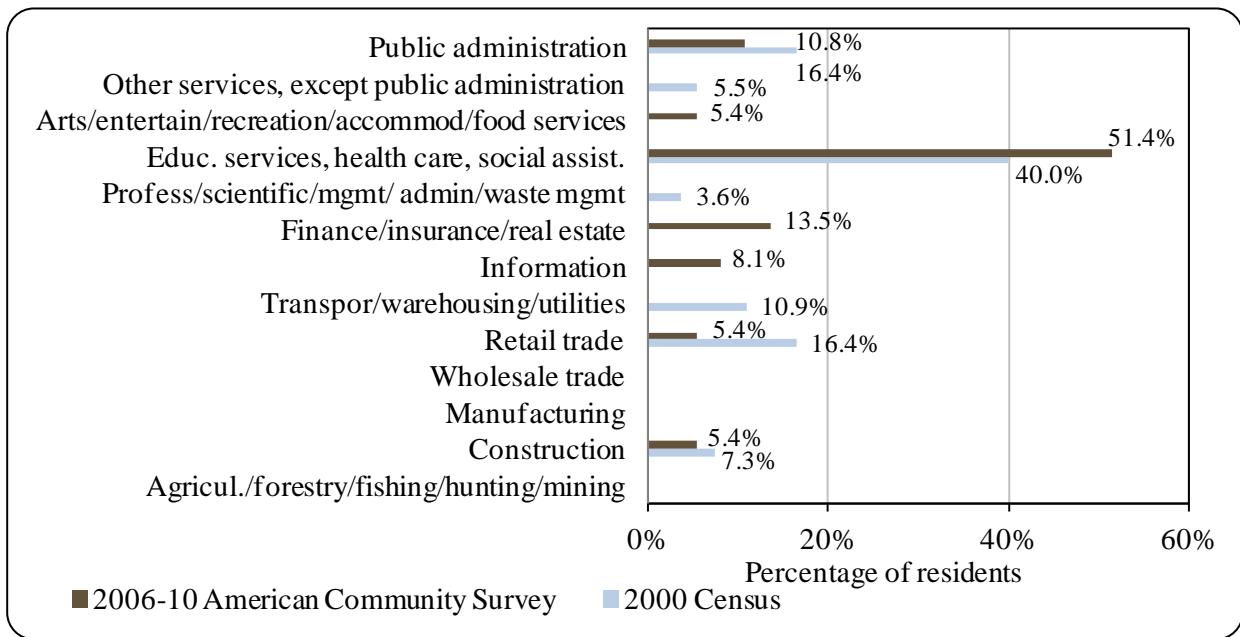
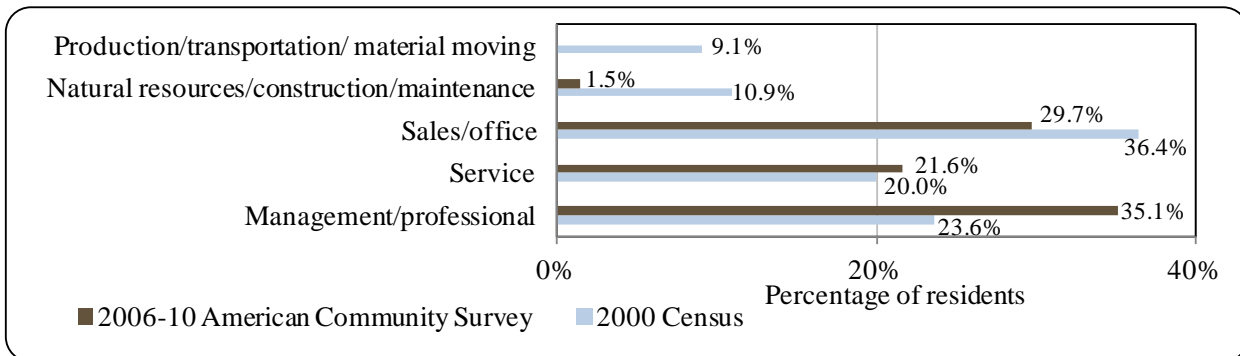


Figure 4. Local Employment by Occupation in 2000-2010, Golovin (U.S. Census).



Governance

Golovin is a Second-class city and is not located in an organized borough. There is a U.S. Bureau of Indian Affairs recognized tribal government located in Golovin. The Chinik Eskimo Community Traditional Council is charged with diverse powers under federal and state laws, including the protection of life, property, and the environment threatened by natural or technological disasters. The Traditional Council conducts tribal government affairs for their membership in the village. The Council owns and operates the Chinik Eskimo Community store, the Environmental Protection Agency EPA program, the Chinik Eskimo Community B&B, commercial accommodation rentals, public use computer work center, tribal enrollment program, and pull-tab sales. The Traditional Council works closely with Kawerak, Inc., the regional non-profit Native organization.³³⁵ The sale or importation of alcohol is banned in the village. Part of Golovin's municipal budget comes from State/Community Revenue Sharing and fisheries related grants.

Municipal revenue figures were taken from Certified Financial Statements (CFS) and audits. CFS were used for the years between 2005 and 2010, and for 2002; while audits were used for the remainder. When adjusted for inflation,³³⁶ total municipal revenues increased by 44.2% between 2000 and 2010 from \$645,108, to \$1.2 million. In 2010, 80.2% of total municipal revenues were collected from locally generated sources. In that year, enterprise revenues including utility rents, fuel sales, landfill fees, “washeteria” service charges, and harbor/dock charges accounted for the largest percentage of locally generated revenues. This was followed by lease, contracted service, and rental revenues. The City does not collect sales or property taxes. Most outside revenues were collected from state allocated Community Revenue Sharing and payments in lieu of taxes. Golovin's representative Community Development Quota (CDQ) corporation (Norton Sound Economic Development Corporation) also provided \$100,000 in community development grants. Finally, community capital project funds contributed a relatively small amount to municipal revenues.

In 2010, Community Revenue Sharing accounted for 8.7% of total municipal revenues, compared to 4.4% from State Revenue Sharing in 2000. Between 2000 and 2004, revenues from the state-community revenue sharing program ranged from \$28,647 and \$40,000. The City received fisheries-related grants between 2003 and 2005 for harbor restoration projects. Information regarding municipal finances can be found in Table 2.

Alaska Native Claims Settlement Act (ANCSA) chartered regional corporation representing Golovin is the Bering Straits Native Corporation, and the local ANCSA chartered non-profit is Kawerak, Inc. The ANSCA chartered village corporation is the Golovin Native Corporation. The closest National Marine Fisheries Service (NMFS) offices are located in Anchorage, and the nearest Department of Fish and Game (ADF&G) and Bureau of Citizenship and Immigration Services offices are located in Nome.

³³⁵ Mikulski, P. 2009. Golovin Local Economic Plan, 2009-2013. Kawerak, Inc. 7 p.

³³⁶ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Golovin from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$645,108	n/a	\$28,687	n/a
2001	\$627,145	n/a	\$28,687	n/a
2002	\$692,458	n/a	\$28,647	n/a
2003	\$590,971	n/a	\$28,647	\$20,000
2004	\$649,771	n/a	-	\$20,000
2005	\$825,215	n/a	-	\$20,000
2006	\$798,823	n/a	-	n/a
2007	\$884,422	n/a	-	n/a
2008	\$1,335,643	n/a	-	n/a
2009	\$1,821,635	n/a	\$104,606	n/a
2010	\$1,203,266	n/a	\$104,162	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). (2000-2009) *Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

Connectivity and Transportation

There are no roads connecting Golovin with other villages. Access to Golovin is primarily by air and sea. However, in the winter the village can also be accessed over land or ice. There are a few local roads in the village with culverts to help drainage. Locals are interested in a road to White Mountain. The roadways are typically less than 10 feet wide except for the major routes, which are between 10 and 20 feet in width. As most of the motor vehicles in the community are snowmobiles or all-terrain vehicles, there are few conflicts involving approaching vehicles attempting to pass each other.³³⁷

Golovin is serviced by different barging companies during the ice-free summer months. Barges cannot currently land at Golovin because there is no dock. Supplies are lightered from Nome and offloaded on the beach. The community is interested in the construction of a docking facility for barges. The City has requested funds for a small boat harbor feasibility study.³³⁸

Both scheduled and chartered flights are available from Nome. A state-owned airport with a 4,000 feet long by 75 feet wide gravel runway is available. Supplies are lightered from

³³⁷ Mikulski, Pearl (2009). *Golovin Local Economic Development Plan, 2009-2013*. Kawerak, Inc. Retrieved from: <http://www.kawerak.org/ledps/golovin.pdf>.

³³⁸ Ibid.

Nome and offloaded on the beach. A cargo ship brings supplies once each summer from Nome.³³⁹ As of June 2012, roundtrip airfare from Anchorage to Golovin costs \$701.³⁴⁰

*Facilities*³⁴¹

The school library serves the community but is closed in the summer when school is not in session. The Chinik Eskimo Community houses a beautiful showcase in the new EDA building for displaying local arts and crafts. The Chinik Eskimo Community runs the new EDA building as a community hall where Eskimo dances, family nights, parties, meetings, and classes, etc. are held. There are flat areas on the beach, near the school, and by the EDA building for picnics and outdoor summer events.

Medical Services

Golovin is an isolated village in Emergency Medical Services Region 5A in the Norton Sound Region. Emergency services provide coastal and air access and are supported by three part time health aides. The local clinic was upgraded in 1995 and a public health nurse comes to administer vaccinations annually. A medical doctor and a physical therapist come bi-annually to Golovin to see patients and physician's assistants come every three months.³⁴² Eye doctors, dentists, and audiologists come annually. It is estimated that 10-15 residents must go to Nome for treatment each month and 1-5 residents go to Anchorage for treatment each month.³⁴³ The nearest hospital is in Nome.

Educational Opportunities

The Bering Strait School District operates schools in 15 villages in the Bering Strait region. As of 2012, there was one school in the community offering K-12th grade education, and there were 67 students and six teachers.³⁴⁴

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on the Seward Peninsula. Settlements on the west coast of the Peninsula targeted marine mammals, and other people moved between seasonal settlements to

³³⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved February 15, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁴⁰ Airfare was calculated using lowest fare. <http://www.travelocity.com> (retrieved November 22, 2011).

³⁴¹ See footnote 339.

³⁴² See footnote 337.

³⁴³ Ibid.

³⁴⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

access fish and wildlife resources. Today, residents of Golovin are active in subsistence and recreational fishing.³⁴⁵

Communities in the Norton Sound region are very active in the commercial fishing sector; however, Golovin residents specifically are not very involved in commercial fishing. Commercial salmon fisheries began to develop shortly after the purchase of Alaska by the U.S. in 1867. However, the Norton Sound commercial salmon fishery developed later than in other regions of the State. In 1959 and 1960, biologists from the Division of Commercial Fisheries conducted an inventory of salmon resources and determined that harvestable surpluses were present in several Norton Sound river systems. They encouraged processors to develop the fishery after statehood as part of an effort to bring economic benefits to this area of rural Alaska. The first commercial harvest occurred in 1961, and salmon markets in the area have been sporadic since that time. Harvests increased through the 1990s, and have declined since then.³⁴⁶ Additionally, Norton Sound has the northernmost fisheries for both Pacific herring and red king crab. Although the Norton Sound herring spawning biomass has been relatively stable in recent times, the market for herring roe has declined due to decreasing consumption of herring roe in Japan.

Golovin is located within Federal Reporting Area 514, International Pacific Halibut Commission Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District. In addition, Golovin is eligible to participate in the Community Development Quota program through the NSEDC.

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Golovin does not have a registered processing plant. The nearest processing plant is in Nome.

Fisheries-Related Revenue

Between 2000 and 2010, Golovin received a total of \$60,000 from fishing-related grants (see Table 2 above) and the total known fisheries-related revenue in during that period were minimal, ranging from \$154 to \$7,962 (see Table 3). Raw fish tax collections played a significant role in revenues between 2000 and 2010, with collections during 2001, 2002, and 2004 making up 87.2% of total known fisheries-related revenue during that time period. Shared fisheries business tax collections were the only other source of known fisheries-related revenue received by Golovin, which in 2010 totaled \$66, compared to \$49 in 2000.

Commercial Fishing

Commercial fishing is not widely practiced in Golovin, as evidenced by the lack of overall activity between 2000 and 2010 (Tables 4 through 10). In 2010, there were 22

³⁴⁵ Scientific Technical Committee, Norton Sound Steering Committee (2003). *Research and Restoration Plan for Norton Sound Salmon*. Retrieved February 21, 2012 from <http://69.93.224.39/~aykssi/wp-content/uploads/NS-RR-Plan-rev.pdf>.

³⁴⁶ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

Commercial Fisheries Entry Commission (CFEC) permit holders, compared to 14 in 2000. In 2010, 21 residents, or 13.5% of the population, held 15 salmon permits issued by the (CFEC), of which 11 were fished. Between 2000 and 2010, there were four herring permit holders each year, but none were fished. Between 2003 and 2010, there was one crab permit holder each year, with the exception of 2006 when there were two crab permit holders. Each year crab permits were issued they were fished, although in 2006 only one of two permits was fished. More recently, residents participated in Norton Sound fisheries, including herring and salmon gill net fishing, and king crab fishing using pot gear.

Between 2000 and 2010, no residents held Federal Fisheries Permits, of License Limitation Program permits. In addition, no residents held halibut, crab, or sablefish quota between 2010 and when the programs began. However, the number of crew licenses held by residents increased dramatically from 2 in 2000 to 16 in 2010. In addition, five residents held primary ownership of vessels in 2010, which was same for 2000, and there were five vessels homeported in 2010, compared to eight in 2000.

No shoreside processors or fish buyers were present in Golovin between 2000 and 2010. Given this, no landings were reported in Golovin between 2000 and 2010. In addition, no landings were reported by residents between 2000 and 2010. Further information regarding commercial fishing trends can be found in Tables 4 through 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Golovin: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$593	\$4,676	\$4,676	\$114	\$7,905	\$400	n/a	\$138	\$100	\$100	\$88
Shared Fisheries Business Tax ¹	\$49	\$101	\$145	n/a	\$57	\$144	\$176	\$135	\$73	\$55	\$66
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$642</i>	<i>\$4,777</i>	<i>\$4,821</i>	<i>\$114</i>	<i>\$7,962</i>	<i>\$544</i>	<i>\$176</i>	<i>\$273</i>	<i>\$173</i>	<i>\$155</i>	<i>\$154</i>
<i>Total municipal revenue⁵</i>	<i>\$645,108</i>	<i>\$627,145</i>	<i>\$692,458</i>	<i>\$590,971</i>	<i>\$649,771</i>	<i>\$825,215</i>	<i>\$798,823</i>	<i>\$884,422</i>	<i>\$1.34 M</i>	<i>\$1.82 M</i>	<i>\$1.20 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Golovin: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	1	1	1	1	1
	Active permits	0	0	0	0	0	0	1	1	1	1	1
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	100%	100%	100%	100%	100%
	Total permit holders	0	0	0	0	0	0	1	1	1	1	1
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	1	1	1	2	1	1	1	1
	Fished permits	0	0	0	1	0	1	1	1	1	1	1
	% of permits fished	n/a	n/a	n/a	100%	0%	100%	50%	100%	100%	100%	100%
	Total permit holders	0	0	0	1	1	1	2	1	1	1	1
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	1	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	0%	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	1	0	0	0	0	0
Herring (CFEC) ²	Total permits	4	4	4	4	4	4	4	4	4	4	4
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	4	4	4	4	4	4	4	4	4

Table 4 cont'd. Permits and Permit Holders by Species, Golovin: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	14	13	14	15	15	16	15	14	14	14	15
	Fished permits	5	5	0	0	0	1	1	0	3	2	11
	% of permits fished	36%	38%	0%	0%	0%	6%	7%	0%	21%	14%	73%
	Total permit holders	14	13	14	15	15	16	15	14	16	14	21
<i>Total CFEC Permits</i> ²	<i>Permits</i>	18	17	18	20	20	22	21	19	19	19	20
	<i>Fished permits</i>	5	5	0	1	0	2	2	1	4	3	12
	<i>% of permits fished</i>	28%	29%	0%	5%	0%	9%	10%	5%	21%	16%	60%
	<i>Permit holders</i>	14	13	14	15	16	17	16	15	17	15	22

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Golovin: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Golovin ²	Total Net Pounds Landed in Golovin ^{2,5}	Total Ex-Vessel Value of Landings in Golovin ^{2,5}
2000	2	0	0	5	8	0	0	\$0
2001	6	0	0	6	9	0	0	\$0
2002	0	0	0	4	6	0	0	\$0
2003	3	0	0	4	5	0	0	\$0
2004	4	0	0	3	3	0	0	\$0
2005	7	0	0	3	4	0	0	\$0
2006	4	0	0	4	4	0	0	\$0
2007	4	0	0	3	2	0	0	\$0
2008	11	0	0	3	2	0	0	\$0
2009	13	0	0	2	3	0	0	\$0
2010	16	0	0	5	5	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ National Marine Fisheries Service. (2011). Alaska processors' Weekly Production Reports (WPR) data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Golovin: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Golovin: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Golovin: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Golovin: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Golovin Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Minimal recreational fishing occurs in Golovin specifically. In 2010, eight sport fishing licenses were sold to residents, compared to 19 in 2000. Sport fishing license sales to residents peaked in 2004 at 29 licenses. Between 2000 and 2010, no sport fish guide businesses were located in the community, nor were there any sport fish guide licenses issued or any sport fishing licenses sold in the community during that time period (Table 11).

However, there is a substantial amount of freshwater sport fishing occurring in the region surrounding the community. Golovin is located with Alaska Sport Fishing Survey Area W -- Seward Peninsula-Norton Sound. This survey area includes all waters north of the Yukon River drainage and south of the Selawik River Drainage. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. In 2010, there were 77 total saltwater angler days fished, compared to 2,859 in 2000. In that year, non-residents accounted for 55.8% of saltwater angler days fished, compared to 6.9% in 2000. Although annual resident saltwater angler days fished varied between 2000 and 2010, there was a significant decline compared to previous years in 2010. Also in 2010, there was a total of 10,533 freshwater angler days fished, compared to 15,584 in 2000. Of that total, non-residents accounted for 41.1%, compared to 24.3% in 2000. According to ADF&G Harvest Survey data,³⁴⁷ resident private anglers target Chinook, coho, pink, and chum salmon, Dolly Varden char, Pacific halibut, and Pacific cod. Further information regarding recreational fishing trends in Golovin can be found in Table 11.

Table 11. Sport Fishing Trends, Golovin: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Golovin²
2000	0	0	19	0
2001	0	0	15	0
2002	0	0	14	0
2003	0	0	21	0
2004	0	0	29	0
2005	0	0	11	0
2006	0	0	11	0
2007	0	0	13	0
2008	0	0	10	0
2009	0	0	13	0
2010	0	0	8	0

³⁴⁷ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Golovin: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	n/a	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence fishing is an important part of community life in Golovin. Subsistence fishing has been practiced widely by the area’s inhabitants for thousands of years. Chum and pink salmon harvests are cyclical, with more chum salmon being harvested on odd years. Beach seines are the most popular type of gear for catching salmon; however, set gill nets and rods and reels are also used. In a community survey conducted in 2001, elders commented that salmon harvests had been in decline over the years.³⁴⁸

ADF&G’s subsistence data are limited, and information on subsistence participation by household is unavailable. According to ADF&G *Community Subsistence Information System* (CSIS) data, Golovin residents harvest or use non-salmon/halibut species including clams, king crab, mussels, shrimp, Tanner crab, bearded seal, bowhead whale, gray whale, ribbon seal, ringed seal, spotted seal, Steller sea lion, blackfish, burbot, cisco, Dolly Varden, flounder, grayling, herring, herring roe, pike, saffron cod, sculpin, sheefish, smelt, sole, sucker, trout, and whitefish.

³⁴⁸ Magdanz, J. S., S. Tahbone, K. Kamletz, and A. Ahmasuk. 2001. Subsistence Salmon Fishing by Residents of Nome, Alaska, 2001. Technical Paper 274. Retrieved August 10, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/01-224final.pdf>.

Of the species listed by ADF&G in Table 13, residents reported harvesting pink salmon most often; followed by chum, coho, Chinook, and sockeye salmon. In 2008, residents reported harvesting a total of 3,393 salmon for subsistence, compared to 6,560 in 2000. In each year (with the exception of 2001), pink salmon were harvested at a significant majority.

Halibut are not fished extensively for subsistence purposes by Golovin residents (Table 14). Between 2003 and 2010, the number of Subsistence Halibut Registration Certificates (SHARC) held by residents ranged from one to two, although no halibut was reported harvested in any of those years.

Information regarding marine mammal subsistence harvests between 2000 and 2010 is limited. The only year in which marine mammal harvests were reported was 2005 when a total of five Beluga whales were harvested for subsistence (Table 15).

Table 12. Subsistence Participation by Household and Species, Golovin: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Golovin: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	45	42	42	866	1,328	4,306	18	n/a	n/a
2001	44	39	65	1,206	199	168	68	n/a	n/a
2002	47	39	42	1,144	979	7,827	66	n/a	n/a
2003	47	42	80	448	178	351	28	n/a	n/a
2004	43	43	143	290	98	7,694	45	n/a	n/a
2005	39	39	76	204	140	2,126	7	n/a	n/a
2006	36	34	112	362	760	5,283	31	n/a	n/a
2007	41	41	87	659	422	1,799	158	n/a	n/a
2008	39	39	68	260	840	2,889	92	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. (2011). Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Golovin: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	2	n/a	n/a
2008	2	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Golovin: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	5	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Hooper Bay (A.K.A. Naparyarmiut)



People and Place

Location^{349,350}

The City of Hooper Bay is located on the north shore of Hooper Bay, 20 miles south of Cape Romanzof and 25 miles south of Scammon Bay in the Yukon-Kuskokwim Delta. The community is separated into two sections, including Hooper Bay “old town” located on gently rolling hills, and a new development area built in the lowlands closer to the coast. Hooper Bay is located 500 miles west of Anchorage. Hooper Bay is located in the Wade Hampton Census Area and the Bethel Recording District. The area encompasses 8.7 square miles of land and 0.1 square miles of water.

*Demographic Profile*³⁵¹

In 2010, there were 1,093 residents in Hooper Bay, making it the 62nd largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 29.3%. According to Alaska Department of Labor estimates, between 2000 and 2009, the population increased by 14.2% (Table 1). The average annual growth rate during this period was 0.74%, close to the statewide average of 0.75%.³⁵² The change in population from 1990 to 2010 is provided below in Table 1. In a survey conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, community leaders estimated that an additional five people are present in Hooper Bay each year as seasonal workers or transients, primarily working as supervisors of construction projects. Community leaders also indicated that Hooper Bay reaches an annual population peak in August, and said that population fluctuations are somewhat driven by employment in fishing sectors.

In 2010, the majority of Hooper Bay residents identified themselves as American Indian and Alaska Native (94.6%), while 3.4% identified as two or more races, and 1.9% identified as White. Compared to 2000, a slightly higher percentage of the population identified as American Indian and Alaska Native in 2010, with slightly smaller percentages in the other two categories. Also in 2000, 0.1% of Hooper Bay residents identified themselves as Hispanic or Latino, while no Hispanic or Latino population appears to have been represented in 2010. In addition, in 2010, 0.1% of the Hooper Bay population identified themselves as ‘some other race’. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

³⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵⁰ ASCG Inc. 2004. *Hooper Bay Comprehensive Economic Development Strategy Plan*. Retrieved October 15, 2012 from <http://www.commerce.state.ak.us/dca/plans/HooperBay-EDP-2004.pdf>.

³⁵¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁵² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

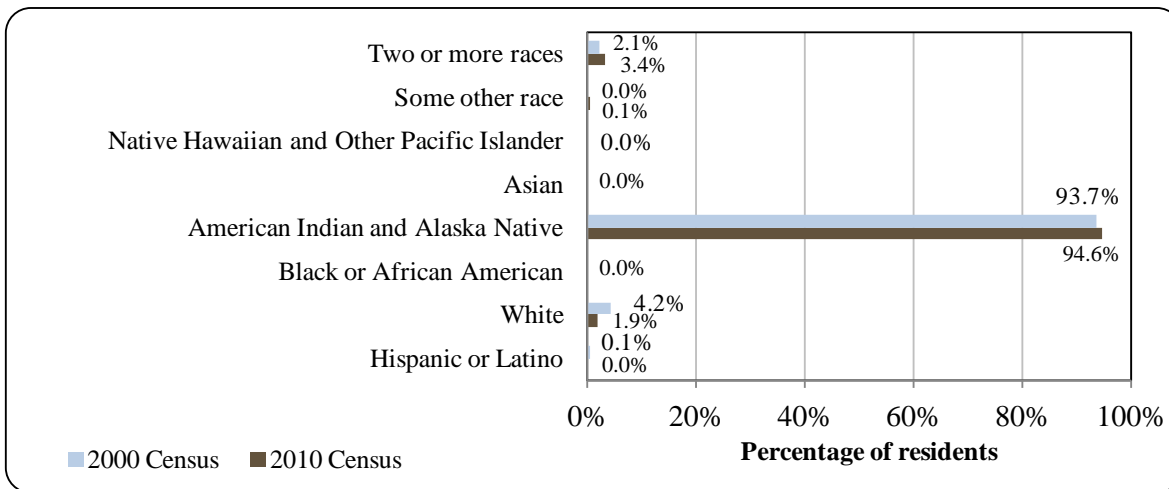
Table 1. Population in Hooper Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	845	-
2000	1,014	-
2001	-	1,043
2002	-	1,075
2003	-	1,108
2004	-	1,129
2005	-	1,133
2006	-	1,157
2007	-	1,145
2008	-	1,158
2009	-	1,158
2010	1,093	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

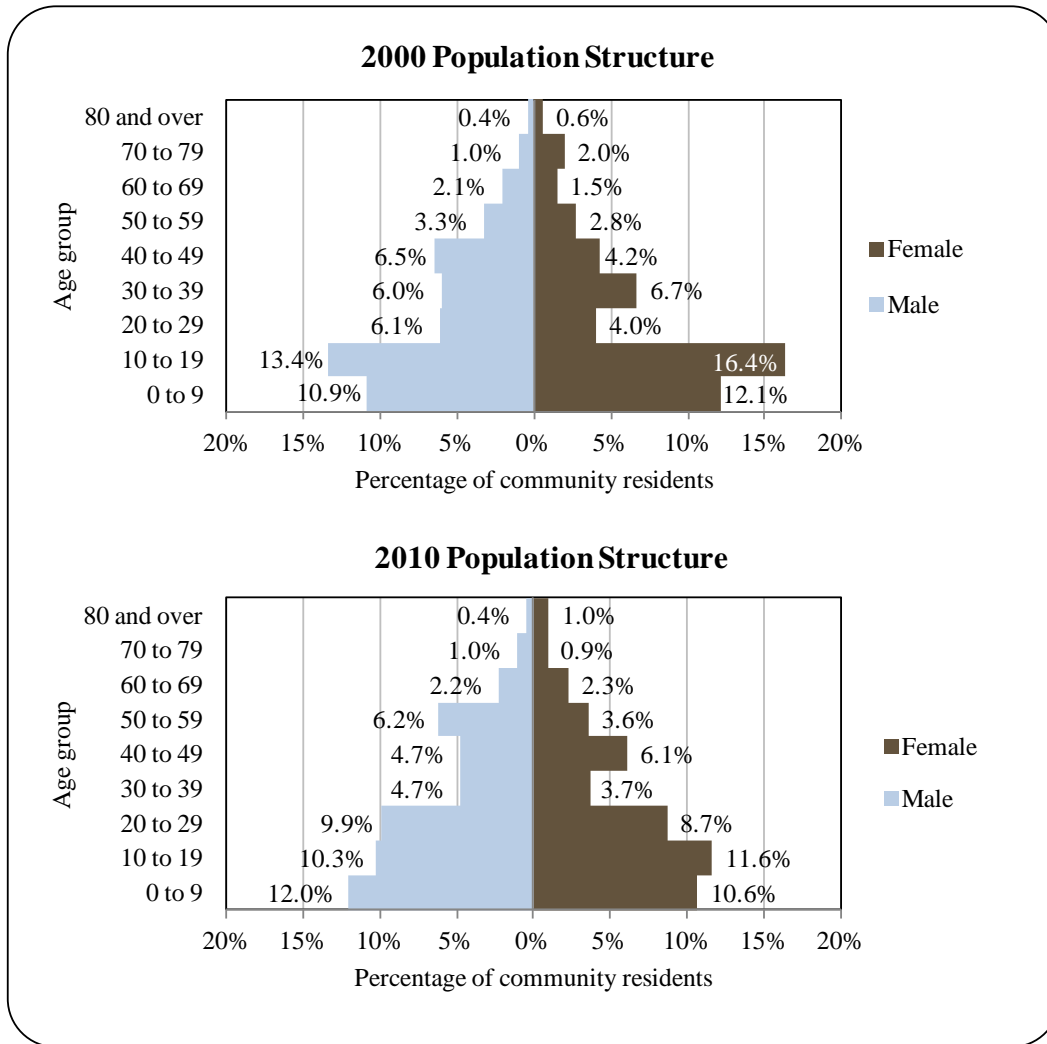
² Alaska Department of Labor. (2011). Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Hooper Bay: 2000-2010 (U.S. Census).



Between 1990 and 2010, the total number of households in Hooper Bay increased, from 190 in 1990 to 227 in 2000, and 256 occupied housing units in 2010. The average household size initially increased from 4.4 in 1990 to 4.97 in 2000, and then decreased to 4.27 in 2010. Of the 283 housing units surveyed for the 2010 U.S. Census, 67.1% were owner-occupied, 23.3% were rented, and 9.5% were vacant. Of these vacant housing units, one was vacant due to seasonal use. Between 1990 and 2010, no Hooper Bay residents lived in group quarters.

Figure 2. Population Age Structure in Hooper Bay Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup of Hooper Bay’s population was in 51.5% male and 48.5% female, very similar to the gender makeup in the state as a whole (52% male, 48% female). That year, the median age in Hooper Bay was estimated to be 22.1 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 7.8% of the Hooper Bay population was age 60 or older. The overall population structure of Hooper Bay in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, the U.S. Census’ 2006-2010 American Community Survey (ACS)³⁵³ estimated that 74% of residents aged 25 and over held a high school diploma or higher degree in 2010, significantly less than an estimated 90.7% of Alaskan residents overall.

³⁵³ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Also in that year, an estimated 11.8% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 14.2% of residents had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 20.2% of resident had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; no residents were estimated to hold a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and 1% of Hooper Bay residents were estimated to hold a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.³⁵⁴ The Nuvugmiut, Miluqautmiut, and Nenerrlugarmiut were all ancestral people of Hooper Bay.³⁵⁵ Early Eskimo names for the village included "Askinuk" or "Askinaghamiut," referring to the mountainous area between Hooper Bay and Scammon Bay. The traditional village was located on a hilly point of land near the present-day community.³⁵⁶ During an expedition through the Yukon-Kuskokwim delta in the winter of 1878-1879, American Edward Nelson provided the first written report of the village.³⁵⁷ The 1890 U.S. Census found 138 persons in Hooper Bay living in 14 homes.³⁵⁸

Ancestors of current Hooper Bay residents were involved in the centuries-long Bow and Arrow War Days, involving conflict between Yup'ik people living along the Bering Sea coast south of the Yukon River and riverine Yup'ik people living along the Yukon. Hooper Bay is located in the region known as 'the Triangle', which also includes the villages of Chevak and Scammon Bay and smaller villages that no longer exist today. People within the Triangle often banded together during raids to the north and came to each others' aid when under attack. The Bow and Arrow War Days continued up until the arrival of Russian explorers in the 1840s.³⁵⁹

Hooper Bay's modern name came into popular use after a post office was established in 1934 using the name. The present-day community is also known by the Eskimo name of "Naparyarmiut," derived from the nearby Napareayak slough. The City of Hooper Bay was incorporated in 1966. Today, Hooper Bay is the second-largest community in the Yukon-Kuskokwim delta after Bethel, and is the largest traditional village in the region.³⁶⁰ Residents of nearby villages travel to Hooper Bay to access businesses and services provided there.³⁶¹ Commercial fishing and subsistence harvest activities are fundamental to the economy and way

³⁵⁴ Alaska Native Heritage Center. (n.d.) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

³⁵⁵ Funk, C. 2010. The Bow and Arrow War Days on the Yukon-Kuskokwim Delta of Alaska. *Ethnohistory* 57(4).

³⁵⁶ ASCG Incorporated. 2004. *Hooper Bay Comprehensive Economic Development Strategy Plan*. Retrieved October 15, 2012 from <http://www.commerce.state.ak.us/dca/plans/HooperBay-EDP-2004.pdf>.

³⁵⁷ Baker, Marcus. 1906. *Geographic Dictionary of Alaska. Second Edition*. Prepared by James McCormick. Dept. of the Interior, U.S. Geological Survey.

³⁵⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁵⁹ See footnote 355.

³⁶⁰ See footnote 356.

³⁶¹ Crawford, Drew L., and Lingnau, Tracy L. 2004. *Hooper Bay Subsistence Salmon Monitoring Project, 2003*. Alaska Dept. of Fish and Game, Regional Information Report No. 3A04-15. Retrieved October 15, 2012 from <http://www.sf.adfg.state.ak.us/fedaidpdfs/RIR.3A.2004.15.pdf>.

of life in Hooper Bay. Members of the Village of Paimiut also live in Hooper Bay. The sale and importation of alcohol is banned in the village by local option.³⁶²

Natural Resources and Environment

Hooper Bay is located in a maritime climate zone, although winter ice pack and winds often lead to harsher conditions than other coastal areas. Sea ice is generally present between October and June. The mean annual snowfall is 75 inches, with total annual precipitation of 16 inches. Temperatures range between -25 and 79 °F.³⁶³ The community of Hooper Bay is located in the Yukon-Kuskokwim Delta, an alluvial flood plain characterized by numerous lakes and slough channels interwoven through the tundra wetland complex. North of the community, the Askinuk Mountains rise to over 2,300 feet above sea level. The Bering Sea coast is lined with long sand dunes,³⁶⁴ and the shore of Hooper Bay is lined by shallow low-lying marshes.³⁶⁵

Hooper Bay is located within the boundaries of the Yukon Delta National Wildlife Refuge (NWR). The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and cackling geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity. NWR lands are open to sport and subsistence hunting and fishing.”³⁶⁶ In addition, the Clarence Rhode National Wildlife Range is located just south of Hooper Bay, also within the Yukon Delta NWR. The Wildlife Range encompasses Nunivak Island and additional lands on the mainland. The Wildlife Range contains excellent coastal and upland habitat suitable as nesting grounds for waterfowl, shorebirds, and sandhill cranes. When the Alaska National Interest Lands Conservation Act of 1980 was passed, the Clarence Rhode National Wildlife Range and other protected areas were combined and enlarged to create the Yukon Delta NWR.^{367,368}

Natural hazard risks that are present in Hooper Bay include flood, wildland fire, earthquake, severe weather, and erosion. Hazards that have been rated as having the highest likelihood of occurrence in Hooper Bay are erosion, flooding, and severe weather. Land use in Hooper Bay has been largely dictated by physical factors, including presence of permafrost, drainage problems, wind direction, and potential for erosion and flooding. In the 1990s, a survey found that the Hooper Bay area is underlain by an extensive, continuous layer of permafrost. Village elders observe that the climate in Hooper Bay is warming and that the permafrost is melting. Warming temperatures have also led to increased occurrence of flooding and erosion. The possibility of relocating the village of Hooper Bay to higher ground is under discussion,

³⁶² See footnote 358.

³⁶³ See footnote 358.

³⁶⁴ See footnote 356.

³⁶⁵ See footnote 361.

³⁶⁶ U.S. Fish and Wildlife Service. (2011). *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

³⁶⁷ U.S. Fish and Wildlife Service. (n.d.). *Yukon Delta National Wildlife Refuge History, Continued*. Retrieved October 17, 2012 from <http://www.fws.gov/refuges/profiles/History.cfm?ID=74540>.

³⁶⁸ National Park Service. 2012. *Clarence Rhode National Wildlife Range*. Retrieved October 17, 2012 from <http://nature.nps.gov/nnl/site.cfm?Site=CLRH-AK>.

although these talks are in early stages and a water source would have to be identified before a serious relocation plan could be pursued.³⁶⁹

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Hooper Bay as of October, 2012.³⁷⁰

Current Economy³⁷¹

According to the 2011 AFSC survey, community leaders indicated that fishing is the most important natural resource-based industry in Hooper Bay. Coastal Villages Seafoods, a subsidiary of the Coastal Villages Region Fund (CVRF), the Community Development Quota (CDQ) non-profit for the Yukon-Kuskokwim Delta,³⁷² operates a halibut processing facility in the community.³⁷³ Despite the importance of commercial and subsistence fishing, a relatively low percentage of the local population works in fishing-related industries and occupations. Community leaders are looking for ways to increase employment opportunities in fisheries and have discussed improvements that need to be made, such as more efficient harvest methods, value-added processing, new marketing strategies, supporting fishing-related businesses and services in Hooper Bay, and fishery diversification.³⁷⁴ Between 2000 and 2010, the number of Hooper Bay residents holding state commercial fisheries permits was equivalent to approximately 6% of the total local population.

The public sector and service industries are major employers in Hooper Bay, and most wage employment is seasonal. Some community members also produce grass baskets and carve ivory for sale. Subsistence harvest provides an important supplement to wage employment. Important subsistence species in Hooper Bay include marine mammals such as walrus and beluga whale, salmon and other freshwater fish, waterfowl, and local plants and berries.³⁷⁵ In addition, between 2005 and 2010, approximately 10 major construction projects were built in Hooper Bay, generating many local construction and construction support jobs.³⁷⁶

Based on household surveys for the 2006-2010 ACS,³⁷⁷ in 2010, the per capita income in Hooper Bay was estimated to be \$8,635 and the median household income was estimated to be \$34,375. These estimates represent increases from the per capita and median household incomes reported in the year 2000 (\$7,841 and \$26,667, respectively). However, if inflation is taken into

³⁶⁹ City of Hooper Bay, ASGC Incorporated of Alaska, and Bechtol Planning and Development. 2007. *The City of Hooper Bay Local Hazards Mitigation Plan*. Retrieved October 15, 2012 from <http://www.commerce.state.ak.us/dcra/planning/nfip/mitigation.htm>.

³⁷⁰ Alaska Dept. of Environmental Conservation. 2012. *List of Contaminated Site Summaries By Region*. Retrieved October 3, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

³⁷¹ Unless otherwise noted, all monetary data are reported in nominal values.

³⁷² Coastal Villages Region Fund. (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

³⁷³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁷⁴ ASGC Incorporated. 2004. *Hooper Bay Comprehensive Economic Development Strategy Plan*. Retrieved October 15, 2012 from <http://www.commerce.state.ak.us/dca/plans/HooperBay-EDP-2004.pdf>.

³⁷⁵ See footnote 373.

³⁷⁶ See footnote 374.

³⁷⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

account by converting the 2000 values to 2010 dollars,³⁷⁸ real per capita and median household income are both shown to have decreased, from a real per capita income of \$10,311 and real median household income of \$35,067 in 2000. In 2010, Hooper Bay ranked 288th of 305 Alaskan communities with per capita income data that year, and 219th in median household income, out of 299 Alaskan communities with household income data.

However, Hooper Bay's small population size may have prevented the ACS from accurately portraying economic conditions.³⁷⁹ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census Bureau, the resulting per capita income estimate for Hooper Bay in 2010 is \$6,123.^{380,381} This estimate is lower than the 2000 per capita income reported in by the U.S. Census, providing additional evidence for a decline in per capita income in Hooper Bay between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is supported by the fact that the community was recognized as "distressed" by the Denali Commission in 2011,³⁸² indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a much lower percentage of Hooper Bay residents were estimated to be in the civilian labor force (54.8%) than in the civilian labor force statewide (68.8%). Also in 2010, 44.7% of Hooper Bay residents were estimated to be living below the poverty line, more than four times the statewide poverty rate estimate of 9.5%, and the unemployment rate was estimated to be 16.6%, almost three times the statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 28.9%, more than double the statewide unemployment rate estimate of 11.5%.³⁸³

Also based on the 2006-2010 ACS, a majority of workers was estimated to be employed in the public sector (71.8%), along with 28.2% in the private sector. Of the 291 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers was estimated to be employed in educational services, health care, and social assistance (31.6%) and public administration (31.3%), along with 13.4% estimated to be employed in transportation, warehousing, and utilities (Figure 3). The greatest shifts in employment by

³⁷⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

³⁷⁹ While ACS estimates can provide a good snap shot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

³⁸⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

³⁸¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

³⁸² Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

³⁸³ See footnote 380.

industry between 2000 and 2010 included a 37% decrease in employment in education services, health care and social assistance industries, a 62% decrease in employment in retail trade industries, a 71% increase in employment in public administration industries, and a more than 200% increase in employment in transportation, warehousing, and utilities industries.

The shifts in industry employment described above are reflected in shifts in distribution of employment by occupation in Hooper Bay between 2000 and 2010 (Figure 4). The percentage of the workforce employed in service occupations remained relatively stable over the decade. Declines were observed in the percentage of the workforce employed in management and professional occupations decreased (almost 50% decline) and the percentage in production, sales and office occupations (34% decline). Over the same period, large increases were estimated in the percentage of the workforce employed in production, transportation, and material moving occupations (more than 100% increase) and natural resource, construction, and maintenance occupations (more than 300% increase).

Figure 3. Local Employment by Industry in 2000-2010, Hooper Bay (U.S. Census).

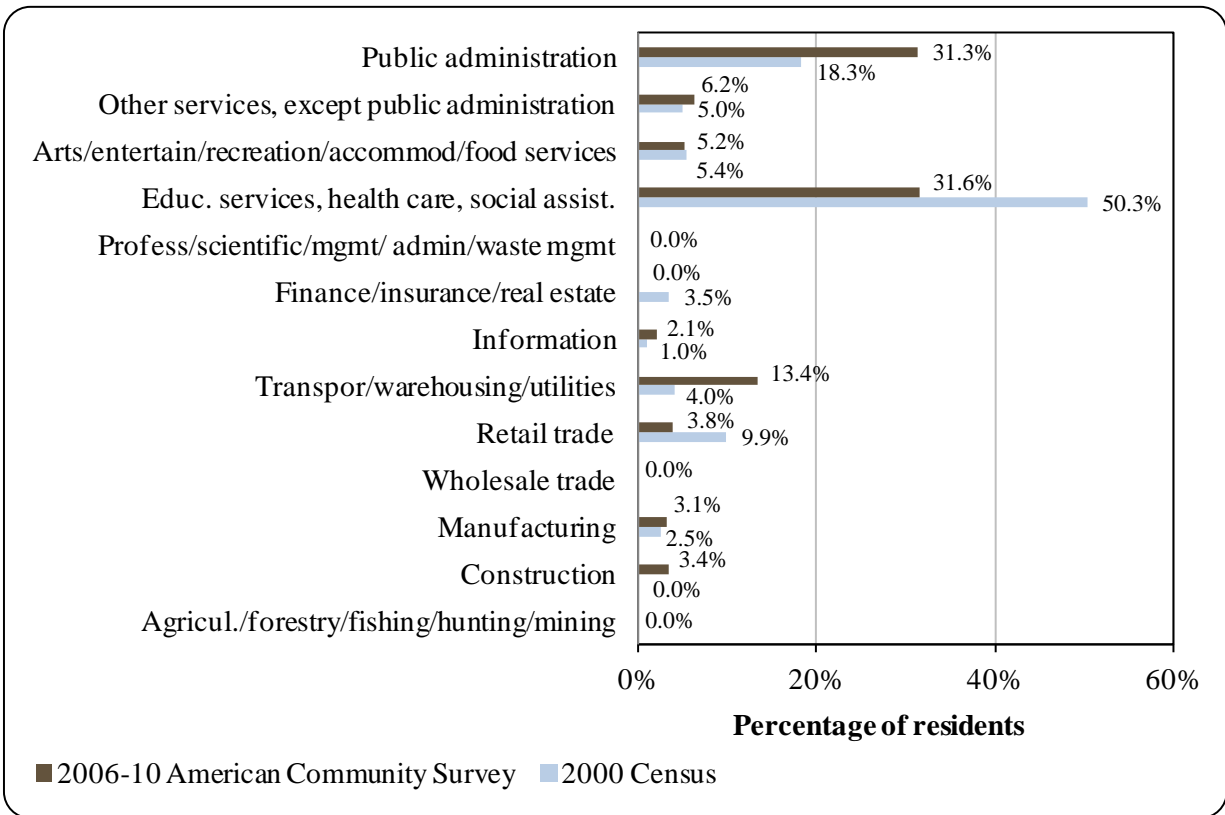
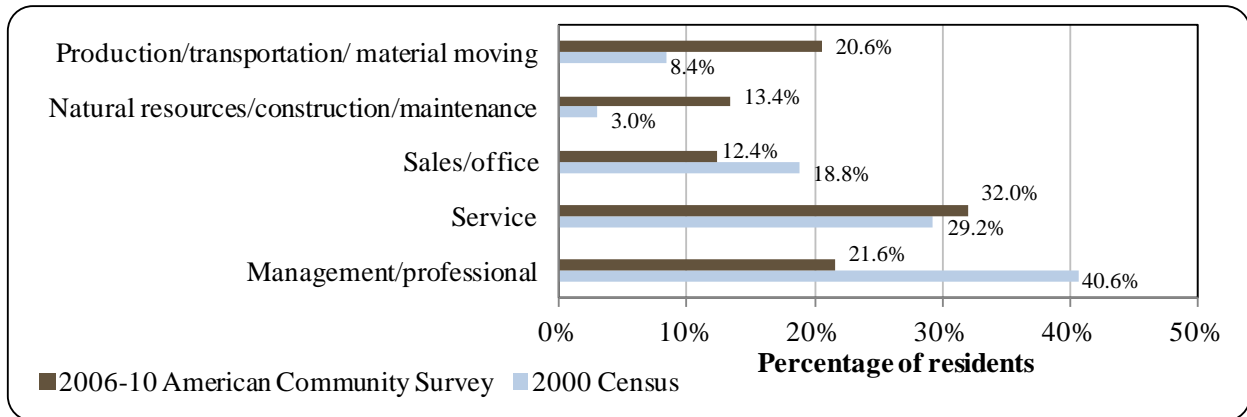


Figure 4. Local Employment by Occupation in 2000-2010, Hooper Bay (U.S. Census).



An alternative estimate of employment by industry is provided by economic data compiled in the ALARI database, which indicate that there were 486 employed residents in Hooper Bay in 2010. Compared to 2006-2010 ACS estimates, ALARI data show similar employment distribution in public administration and transportation and utilities industry categories, but suggest a smaller percentage of the workforce was employed in educational services and health care industries. ALARI data suggest that 44.2% were employed in local government, 11.9% in trade, transportation, and utilities, 10.7% in financial activities, 7.4% in education and health services, 5.6% in manufacturing, 4.3% in state government, 1.9% in professional and business services, 1.4% in information, 1.2% in construction, 0.6% in natural resources and mining, 0.2% in leisure and hospitality, 3.3% in unknown industries, and 7.2% in other industries.³⁸⁴ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

Governance

Hooper Bay is a 2nd Class City, and was incorporated in 1967. It is not located within an organized borough. The City has a manager, or “Strong Mayor,” form of government, with a seven-person city council that includes the Mayor, a nine-person school board, an appointed seven-member planning commission, and several municipal employees.³⁸⁵ The City collects a 4% sales tax and does not administer a property tax.³⁸⁶

In addition to sales tax revenues, other locally-generated income sources in Hooper Bay between 2000 and 2010 included contracted services (electric utility and health clinic operations), washeteria/sauna usage fees, bingo and pull tab receipts, and building and equipment rentals. Outside revenue sources included various shared funds from state and federal sources as well as grants in some years. Shared funds came from state programs including the State Revenue Sharing Program (\$25,000 to \$35,000 per year from 2000 to 2003), the SAFE

³⁸⁴ Ibid.

³⁸⁵ ASCG Incorporated. 2004. *Hooper Bay Comprehensive Economic Development Strategy Plan*. Retrieved October 15, 2012 from <http://www.commerce.state.ak.us/dca/plans/HooperBay-EDP-2004.pdf>.

³⁸⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Communities program, the Community Revenue Sharing program (over \$150,000 per year in 2009 and 2010), telephone / electric cooperative tax refunds, and fish tax refunds (see the *Fisheries-Related Revenue* section). No state or federal fisheries-related grants were reported to have been received by Hooper Bay during the 2000-2010 period. Further information about selected municipal revenue streams in Hooper Bay is presented in Table 2.

Hooper Bay was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Hooper Bay.³⁸⁷ The office of the Native Village of Paimiut is also located in Hooper Bay, and members of this federally recognized Tribe also live in the City.³⁸⁸ The Native village corporation for Hooper Bay is the Sea Lion Corporation, which manages 161,280 acres of land. The Native village corporation for Paimiut is the Paimiut Corporation, which manages 69,120 acres of land. The regional Native corporation to which both Villages belong is the Calista Corporation.³⁸⁹

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Hooper Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$892,685	\$127,138	\$26,772	n/a
2001	\$1,207,952	\$253,701	\$25,442	n/a
2002	\$1,158,182	\$196,782	\$25,950	n/a
2003	\$923,666	\$176,377	\$35,279	n/a
2004	\$1,079,793	\$153,668	n/a	n/a
2005	\$1,008,474	\$181,352	n/a	n/a
2006	\$1,038,552	\$200,699	n/a	n/a
2007	\$1,531,395	\$233,507	n/a	n/a
2008	\$1,386,373	\$212,642	n/a	n/a
2009	\$1,587,097	\$252,355	\$155,177	n/a
2010	\$1,756,142	\$248,060	\$154,076	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

³⁸⁷ Ibid.

³⁸⁸ University of Alaska, Center for Economic Development (n.d.). *Sea Lion Corporation*. Retrieved October 23, 2012 from <http://ced.uaa.alaska.edu/vibes/Indiv.%20case%20studies/Sea%20Lion%20Corporation.pdf>.

³⁸⁹ See footnote 386.

The Villages of Hooper Bay and Paimiut are also members of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”³⁹⁰ The AVCP is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.³⁹¹ AVCP is made up of 56 villages and 45 village corporations.³⁹²

The nearest Alaska Department of Fish and Game (ADF&G) office is located in the city of Emmonak, but is a seasonal office. A year-round ADF&G office is located in Bethel, along with the nearest office of the Alaska Department of Commerce, Community, and Economic Development. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage.

Infrastructure

Connectivity and Transportation

Hooper Bay is accessible by air or water transportation. A state-owned 3,300 ft long by 75 foot wide paved runway is located approximately one mi west of Hooper Bay, near the Bering Sea coast.³⁹³ As of June 2012, roundtrip airfare from Anchorage to Hooper Bay cost \$834.³⁹⁴ In summer months, barge lines deliver shipments of fuel and other bulk supplies.³⁹⁵ Most local overland transportation takes place using four-wheelers in summer and snowmobiles in winter. Winter trails exist to Scammon Bay (32 mi), Chevak (20 mi), and Paimiut (14 mi). Skiffs are also used in summer. There is no formal boat landing area in Hooper Bay. Boats are hauled up on shore to be stored during the winter.^{396,397}

Facilities

Water in Hooper Bay is sourced from three wells that were drilled northeast of town in 1997.³⁹⁸ The City operates a piped water and sewer system which serves the school, teacher

³⁹⁰ Association of Village Council Presidents. (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

³⁹¹ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

³⁹² Calista Corporation. (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

³⁹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

³⁹⁴ Airfare was averaged from prices found on travel websites, including <http://www.travelocity.com> (retrieved June 2004) and <http://www.cheaptickets.com> (retrieved October 2011).

³⁹⁵ See footnote 393.

³⁹⁶ ASCG Incorporated. 2004. *Hooper Bay Comprehensive Economic Development Strategy Plan*. Retrieved October 15, 2012 from <http://www.commerce.state.ak.us/dca/plans/HooperBay-EDP-2004.pdf>.

³⁹⁷ See footnote 393.

³⁹⁸ See footnote 396.

housing, the old clinic building, Head Start building, and the City washeteria.³⁹⁹ No homes in Hooper Bay are plumbed,⁴⁰⁰ and residents haul water from the washeteria or a second watering point located in the center of the village. Residents use honeybuckets for sewage disposal, and individually haul them to the city-operated sewage lagoon to dump. The sewage lagoon is located adjacent to the landfill, which was expanded in 1997. The landfill is operated by the City, but no refuse collection services are provided; residents haul garbage to the landfill individually.⁴⁰¹ According to the 2011 AFSC survey, community leaders reported that improvements to water treatment, sewage treatment, and the piped water and sewer system are currently in progress, and a new landfill/solid waste site is expected to be in place within the next 10 years. Electricity in Hooper Bay is provided a diesel generator operated by the Alaska Village Electric Cooperative (AVEC).⁴⁰² In 2004, AVEC began planning, design, construction, and commissioning of three 100-kW wind turbines to augment diesel power generation. The 32-meter high turbines are located adjacent to the sewage lagoon/landfill site, and are connected to the new power plant via a distribution line.⁴⁰³ The turbines replace about 24% of the energy previously generated by diesel, and excess energy is provided to the water treatment plant.⁴⁰⁴

Security is provided by the Hooper Bay Police Department and a Village Public Safety Officer (VPSO) stationed in Hooper Bay. The nearest state trooper post is located in Bethel. Fire and rescue services are provided by the City Volunteer Fire Department, the VPSO, and Project Code Red Equipment.⁴⁰⁵ Additional community facilities include a Traditional Council Building, the Native Village of Hooper Bay administration building, the City Office, public safety building, youth/elder center, community center, teen center, a building containing the fire hall, search and rescue, and substance abuse program offices, and a building containing the office of the Sea Lion Corporation and the post office.⁴⁰⁶ The school library is also available as a resource to the community. Telephone, internet, and cable services are all available in Hooper Bay.⁴⁰⁷

With regard to fishing-related infrastructure, a fishing dock is available in Hooper Bay,⁴⁰⁸ although community leaders reported in the 2011 AFSC survey that no public dock space is available for permanent or transient vessel moorage. However, they also indicated that a new dock is expected to be constructed within the next 10 years, along with a breakwater, jetty, dry dock storage, haul-out facilities, an EPA-certified boat cleaning station, and improvements to the existing dock structure. Currently, informal boat pullouts and some boat storage areas are available in Hooper Bay.⁴⁰⁹ In the 2011 AFSC survey, community leaders indicated that Hooper Bay currently has the capacity to handle fuel barges, and improvements to the barge landing area are currently in process. In addition, community leaders also reported that a variety of fisheries-related businesses and services are present in Hooper Bay, including boat repair (welding, mechanical services, machine shop, and hydraulics), marine refrigeration, sales of boat fuel and

³⁹⁹ See footnote 393.

⁴⁰⁰ See footnote 396.

⁴⁰¹ See footnote 393.

⁴⁰² Ibid.

⁴⁰³ Alaska Village Electric Cooperative. (2009). Hooper Bay's Wind Turbine Project. *Renewable Energy Projects*. Retrieved October 17, 2012 from <http://www.avec.org/renewable-energy-projects/>.

⁴⁰⁴ See footnote 393.

⁴⁰⁵ Ibid.

⁴⁰⁶ See footnote 396.

⁴⁰⁷ See footnote 393.

⁴⁰⁸ Ibid.

⁴⁰⁹ See footnote 396.

ice, fish processing, and cold storage. Some of these services are provided at a fishing support center operated in Hooper Bay by Coastal Villages Seafoods, Inc. The service center helps local fishing families maintain, repair, service, and modify their boats, motors, and fishing gear.⁴¹⁰

Medical Services

The Hooper Bay Subregional Clinic provides medical services to residents of Hooper Bay as well as Scammon Bay, Paimiut, and Chevak.⁴¹¹ The clinic is owned by the City of Hooper Bay and operated by the Yukon-Kuskokwim Health Corporation. It is a Community Health Aid Program facility. Emergency services have coastal and air access.⁴¹² The clinic is staffed by eight health aides, as well as midlevels, behavioral health aides, lab and x-ray technicians, and visiting specialists including dentists.⁴¹³

Educational Opportunities

There is one school in Hooper Bay that offers preschool through 12th grade education. As of 2011, the Hooper Bay School had 414 students and 29 teachers.⁴¹⁴ In addition, the Rural Alaska Community Action Program (RurAL CAP) runs Head Start (ages 3 to 5 years) and Early Head Start (birth to 3 years) programs in Hooper Bay.⁴¹⁵

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁴¹⁶ Traditional subsistence fishing activities continue to provide a primary source of food for residents of Hooper Bay.⁴¹⁷ In addition, between 2000 and 2010, Hooper Bay residents were engaged in commercial fisheries for herring, salmon, and halibut.

Hooper Bay is located in the Yukon-Kuskokwim delta, on Bering Sea coast approximately 80 miles southwest of the mouth of the Yukon River. This coastal area of the Bering Sea is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, the Bering Sea Sablefish Regulatory Area, and the Coastal District (District

⁴¹⁰ Coastal Villages Seafoods, Inc.. (2010). *Community Service Centers*. Retrieved October 16, 2012 from <http://coastalvillages.org/>.

⁴¹¹ Yukon-Kuskokwim Health Corporation. 2012. *Hooper Bay Subregional Clinic*. Retrieved October 16, 2012 from <http://www.ykhc.org/about-ykhc/medical-facilities/subregional-clinics/hooper-bay-subregional-clinic/>.

⁴¹² See footnote 393.

⁴¹³ Lower Yukon School District. (2011). Subregional Clinic Opens. *Hooper Bay School, Community Tab*. Retrieved October 17, 2012 from <http://hpb.lower yukon.org/>.

⁴¹⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁴¹⁵ Rural Alaska Community Action Program, Inc. *2010 Head Start Report*. Retrieved on December 20, 2011 from <http://www.ruralcap.com/>.

⁴¹⁶ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁴¹⁷ See footnote 414.

7) of the Yukon River commercial salmon fishery. The Coastal District is open to subsistence fishing only.⁴¹⁸ The subsistence fishery at Hooper Bay primarily targets chum and pink salmon bound for the Yukon River, and also chum salmon bound for Kotzebue and Norton Sound rivers.⁴¹⁹ Between 2000 and 2010, Hooper Bay residents participated in commercial salmon fisheries in the Lower Yukon River districts (Districts 1, 2, and 3), as well as Kuskokwim River and Bristol Bay salmon fishery (see the *Commercial Fishing* section).

Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁴²⁰ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission. In 1995, management of the Pacific halibut fishery shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut via Individual Fishing Quota (IFQ). In the Bering Sea – Aleutian Islands (BSAI) region, quota shares are also allocated to six Community Development Quota (CDQ) non-profit organizations representing 65 communities in Western Alaska.⁴²¹ CVRF receives halibut CDQ allocations in Pacific Halibut Management Areas 4D and 4E.⁴²² In Area 4E, 100% of halibut quota is allocated to the CDQ program, while 30% of Area 4D halibut quota is designated for CDQ.⁴²³ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.⁴²⁴

Commercial catch of herring for human consumption began in Alaska in 1878, harvest for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon-Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁴²⁵

In a survey conducted by the AFSC in 2011, community leaders reported that Hooper Bay participates in the fisheries management process in Alaska through sending a representative to participate in North Pacific Fishery Management Council (NPFMC) committees and/or advisory groups. When asked to describe current challenges facing Hooper Bay's fishing

⁴¹⁸ Clark, McGregor, Mecum, Krasnowski, and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afbr/clarv12n1.pdf>.

⁴¹⁹ Crawford, Drew L., and Lingnau, Tracy L. 2004. *Hooper Bay Subsistence Salmon Monitoring Project, 2003*. Alaska Dept. of Fish and Game, Regional Information Report No. 3A04-15. Retrieved October 15, 2012 from <http://www.sf.adfg.state.ak.us/fedaidpdfs/RIR.3A.2004.15.pdf>.

⁴²⁰ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁴²¹ Fina, Mark. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

⁴²² Coastal Villages Region Fund. 2012. *2012 Benefits Catalog*. Retrieved October 16, 2012 from http://www.coastalvillages.org/sites/www.coastalvillages.org/files/documents/benefits_catalog_2012.pdf.

⁴²³ Coastal Villages Seafood, Inc. (2010). *History*. Retrieved October 16, 2012 from <http://www.coastalvillages.org/about-us/history>.

⁴²⁴ International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved October 16, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

⁴²⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

economy, community leaders noted the lack of a commercial salmon fishery in the Coastal District of the Yukon River salmon fishery, and also indicated that reduced gillnet mesh sizes from 8 to 7 ¼ inches have negatively impacted the local Chinook salmon fishery. When asked to comment on potential future fishery policy decisions that concern Hooper Bay, community leaders again expressed concern that a coastal commercial salmon fishery may not be approved, and indicated that Hooper Bay is actively seeking to start a commercial salmon fishery.

It is important to note that Hooper Bay is not eligible to participate in the Community Quota Entity (CQE) program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Coastal Villages Seafood, Inc., a subsidiary of CVRF, currently operates a halibut processing plant in Hooper Bay. Although the Hooper Bay facility is focused on processing halibut in June and July, some salmon is also processed between June and August. Coastal Villages Seafoods also maintains a community service center in Hooper Bay to help local fishing families maintain, repair, service, and modify their boats, motors, and fishing gear. The local plant provides free room and board to its fish processing workers, as well as transportation to and from the plant site and a cash bonus for all those who complete their contracts.⁴²⁶

Fisheries-Related Revenue

According to information provided in Hooper Bay's annual municipal budget, the primary source of fisheries-related revenue in Hooper Bay is the Shared Fisheries Business Tax. In 2001, \$5,013 was reported as received from this source, although the total revenue was much smaller in other years during the 2000-2010 period. Total revenues received in other years from the Shared Fisheries Business Tax varied from \$1 to \$296, for those years in which data were available. Information about selected fisheries-related revenue sources is found in Table 3.⁴²⁷

It is also important to note that the CVRF uses fisheries revenue from the CDQ program to provide grants, scholarships and training, and other financial assistance to fishermen and residents of member villages.⁴²⁸

Commercial Fishing

According to the 2011 AFSC survey, community leaders reported that commercial fishing is the natural resource-based industry upon which Hooper Bay's economy is most dependent. In 2010, there were 69 Hooper Bay residents holding a total of 73 state Commercial Fisheries Entry Commission (CFEC) permits, 16 fishing vessels were primarily owned by Hooper Bay residents, and 6 residents held commercial crew licenses. Permit numbers remained

⁴²⁶ Coastal Villages Seafoods, Inc. (2010). *Community Service Centers and Commercial Fishing*. Retrieved October 16, 2012 from <http://coastalvillages.org/>.

⁴²⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

⁴²⁸ Coastal Villages Region Fund (n.d.). *Home page*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

relatively steady between 2000 and 2010, while crew license and vessel ownership number declined over the period (Table 5).

The number of vessels homeported in Hooper Bay also declined over the decade, from 29 in 2000 to 16 in 2010, although this number remained relatively stable between 2005 and 2010 (Table 5). This is reflected in results of the 2011 AFSC survey, in which community leaders indicated that the number of commercial fishing vessels present in Hooper Bay has not changed significantly in the last 5 years. However, community leaders did observe that a greater percentage of the fleet is focused on fishing for halibut than in previous years, and there has been an increase in smaller vessels (shorter than 35 feet in length) and a substantial decline in larger vessels in Hooper Bay within the last five years.

Of the 73 CFEC permits held in 2010, 54 were held for the Cape Romanzof herring gillnet fishery, 11 for salmon fisheries (6 Bristol Bay set gillnet, 3 Lower Yukon gillnet, and 2 Bristol Bay drift gillnet permits), and 8 were for halibut fisheries (3 statewide longline, 3 statewide mechanical jig, and 2 statewide hand troll permits). It is important to note that, in previous years of the 2000-2010 period, one salmon permit was also held by a Hooper Bay resident in the Kuskokwim River gillnet fishery.

The number of herring and salmon permit holders in Hooper Bay remained relatively stable between 2000 and 2010, as did the total number of herring and salmon permits held. However, the percentage of permits that was actively fished declined in both cases. The decline in permit activity was the most dramatic in the case of herring, from a 47% active rate in 2000 to 0% of permits actively fished between 2007 and 2010. The decline in active herring permits reflects the closure of the Yukon-Kuskokwim herring fishery beginning in the mid-2000s.⁴²⁹ Halibut permit activity was more variable, rising from 1 CFEC permit held in 2000 by 1 permit holder to 46 permits held by 35 permit holders in 2003, and then declining to 8 permits held by 8 permit holders in 2010. CFEC permit numbers are presented in Table 4.

Between 2000 and 2010, no Hooper Bay residents held federal fisheries permits (Table 4) or quota shares in federal catch share fisheries (Tables 6 through 8).

According to the Alaska processors' Weekly Production Reports, a shore-side processing facility was present in Hooper Bay each year from 2002 to 2010, while data from the Alaska Commercial Fisheries Commission indicates a fish buyer was only present from 2006 to 2008. Vessels were only recorded as landing catch in Hooper Bay during the years in which fish buyers were reported to be present (Table 5). Information regarding landings in Hooper Bay is considered confidential between 2002 and 2010 due to the small number of processing facilities present (Tables 5 and 9).

Table 10 presents information about landings and ex-vessel revenue earned by vessel owners residing in Hooper Bay, regardless of location of landings. For those years in which data can be reported between 2000 and 2010, Hooper Bay vessel owners landed an average of 171,986 net pounds of herring and 2,572 net pounds of halibut, valued at \$8,084 and \$9,836 in ex-vessel revenue, respectively. In other years, landings of herring and halibut are considered confidential due to the small number of participants. Data on salmon landings and ex-vessel revenue are considered confidential for all years during the 2000-2010 period.

⁴²⁹ Coastal Villages Region Fund. (2010). *Herring Fishery Cancelled*. Retrieved April 11, 2012 from <http://coastalvillages.org/current-issues/herring-fishery-cancelled>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Hooper Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	\$5,012	n/a	\$145	n/a	\$32	\$1	\$154	\$109	\$296	\$138
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	<i>n/a</i>	<i>\$5,012</i>	<i>n/a</i>	<i>\$145</i>	<i>n/a</i>	<i>\$32</i>	<i>\$1</i>	<i>\$154</i>	<i>\$109</i>	<i>\$296</i>	<i>\$138</i>
Total municipal revenue⁵	<i>\$892,685</i>	<i>\$1,207,952</i>	<i>\$1,158,182</i>	<i>\$923,666</i>	<i>\$1,079,793</i>	<i>\$1,008,474</i>	<i>\$1,038,552</i>	<i>\$1,531,395</i>	<i>\$1,386,373</i>	<i>\$1,587,097</i>	<i>\$1,756,142</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Hooper Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	0	10	46	22	19	11	8	8	12	8
	Fished permits	1	0	0	15	2	6	5	5	5	10	7
	% of permits fished	100%	-	0%	33%	9%	32%	45%	63%	63%	83%	88%
	Total permit holders	1	0	10	35	15	14	9	8	8	11	8
Herring (CFEC) ²	Total permits	51	52	52	52	52	52	54	54	54	54	54
	Fished permits	24	17	15	5	0	5	3	0	0	0	0
	% of permits fished	47%	33%	29%	10%	0%	10%	6%	0%	0%	0%	0%
	Total permit holders	54	53	52	53	54	53	54	54	54	54	54

Table 4 cont'd. Permits and Permit Holders by Species, Hooper Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	10	10	11	11	12	12	12	10	10	11	11
	Fished permits	2	0	1	2	1	1	1	0	0	1	1
	% of permits fished	20%	0%	9%	18%	8%	8%	8%	0%	0%	9%	9%
	Total permit holders	11	10	11	11	12	12	12	10	10	11	11
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>62</i>	<i>62</i>	<i>73</i>	<i>109</i>	<i>86</i>	<i>83</i>	<i>77</i>	<i>72</i>	<i>72</i>	<i>77</i>	<i>73</i>
	<i>Fished permits</i>	<i>27</i>	<i>17</i>	<i>16</i>	<i>22</i>	<i>3</i>	<i>12</i>	<i>9</i>	<i>5</i>	<i>5</i>	<i>11</i>	<i>8</i>
	<i>% of permits fished</i>	<i>44%</i>	<i>27%</i>	<i>22%</i>	<i>20%</i>	<i>3%</i>	<i>14%</i>	<i>12%</i>	<i>7%</i>	<i>7%</i>	<i>14%</i>	<i>11%</i>
	<i>Permit holders</i>	<i>63</i>	<i>60</i>	<i>66</i>	<i>82</i>	<i>72</i>	<i>71</i>	<i>67</i>	<i>67</i>	<i>67</i>	<i>71</i>	<i>69</i>

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Hooper Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Hooper Bay ²	Total Net Pounds Landed in Hooper Bay ^{2,5}	Total Ex-Vessel Value of Landings in Hooper Bay ^{2,5}
2000	84	0	0	34	29	0	0	\$0
2001	8	0	0	25	22	0	0	\$0
2002	50	0	1	32	27	0	0	\$0
2003	17	0	1	43	38	0	0	\$0
2004	7	0	1	24	21	0	0	\$0
2005	6	0	1	18	17	0	0	\$0
2006	11	1	1	15	15	5	-	-
2007	2	1	1	9	10	7	-	-
2008	4	1	1	8	8	10	-	-
2009	6	0	1	11	11	0	0	\$0
2010	6	0	1	16	16	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Hooper Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Hooper Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Hooper Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Hooper Bay: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	0	0	0	0	0	0	-	-	-	0	0
Finfish	0	0	0	0	0	0	-	-	-	0	0
Halibut	0	0	0	0	0	0	-	-	-	0	0
Herring	0	0	0	0	0	0	-	-	-	0	0
Other Groundfish	0	0	0	0	0	0	-	-	-	0	0
Other Shellfish	0	0	0	0	0	0	-	-	-	0	0
Pacific Cod	0	0	0	0	0	0	-	-	-	0	0
Pollock	0	0	0	0	0	0	-	-	-	0	0
Sablefish	0	0	0	0	0	0	-	-	-	0	0
Salmon	0	0	0	0	0	0	-	-	-	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Hooper Bay Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	1,747	-	2,254	322	3,539	2,187	1,596	6,359
Herring	429,284	144,774	147,293	44,630	-	93,951	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>429,284</i>	<i>144,774</i>	<i>147,293</i>	<i>46,377</i>	<i>0</i>	<i>96,205</i>	<i>322</i>	<i>3,539</i>	<i>2,187</i>	<i>1,596</i>	<i>6,359</i>
	<i>Ex-vessel Value (Nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	\$2,184	-	\$4,425	\$1,156	\$15,360	\$9,430	\$3,999	\$20,030
Herring	\$29,749	\$5,067	\$7,070	\$2,410	-	\$4,885	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>\$29,749</i>	<i>\$5,067</i>	<i>\$7,070</i>	<i>\$4,595</i>	<i>\$0</i>	<i>\$9,311</i>	<i>\$1,156</i>	<i>\$15,360</i>	<i>\$9,430</i>	<i>\$3,999</i>	<i>\$20,030</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses or licensed sport fish guides were present in Hooper Bay. In most years during the period, a greater number of sport fishing licenses was sold to Hooper Bay residents than the total number of sport fishing licenses sold in Hooper Bay overall (Table 11). This indicates that sport fishing is not a major tourism draw in the community.

Community leaders echoed this in the 2011 AFSC survey, reporting that minimal sport fishing activity takes place in Hooper Bay. However, community leaders did indicate that halibut is caught recreationally by Hooper Bay fishermen. In addition, the Alaska Statewide Harvest Survey,⁴³⁰ conducted by ADF&G between 2000 and 2010, reported sport harvest of Chinook and pink salmon in some years by private anglers. Given the lack of active sport fish guide businesses in Hooper Bay, no kept/released log book data were reported for local fishing charters between 2000 and 2010.⁴³¹

Hooper Bay is located within Alaska Sport Fishing Survey Area Y – Yukon River Drainage. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, saltwater sport fishing activity was minimal, with between 0 and 81 non-Alaska resident angler days fished per year, and between 0 and 89 Alaska resident angler days fished per year. The low numbers reported for saltwater sport fishing make sense given that a majority of residents in Yukon drainage communities live at a great distance from the ocean, and fishing activities take place primarily in fresh water. Between 2000 and 2010, Alaska resident anglers in the Yukon River drainage consistently fished more days in freshwater (4,783 – 10,400 angler days per year) than non-Alaska resident anglers (2,573 – 5,761 angler days per year) (Table 11).

Table 11. Sport Fishing Trends, Hooper Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Hooper Bay ²
2000	0	0	96	81
2001	0	0	99	83
2002	0	0	109	98
2003	0	0	106	105
2004	0	0	110	104
2005	0	0	101	92
2006	0	0	87	85
2007	0	0	94	89
2008	0	0	130	175
2009	0	0	114	113
2010	0	0	130	155

⁴³⁰ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁴³¹ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11, cont'd. Sport Fishing Trends, Hooper Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	n/a	89	5,761	9,194
2003	n/a	17	3,344	5,756
2004	17	n/a	5,479	7,613
2005	n/a	n/a	4,182	4,783
2006	n/a	n/a	3,607	7,816
2007	n/a	n/a	3,168	8,226
2008	n/a	n/a	2,573	10,400
2009	n/a	n/a	2,969	7,639
2010	n/a	n/a	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence harvest of wild resources is a fundamental part of Hooper Bay’s economy and way of life. Subsistence activities take place year-round, and are important both as a food source and for maintaining cultural traditions.⁴³² In the 2011 AFSC survey, community leaders reported that the most important subsistence fish species include salmon, cisco, whitefish, and halibut, and important marine mammals species include ringed and bearded seals and beluga whales.

Between 2000 and 2010, no information was reported by ADF&G regarding per capita subsistence harvest in Hooper Bay or the percentage of households utilizing various marine resources for subsistence purposes (Table 12). However, data are available regarding subsistence salmon permits, halibut subsistence harvests and some marine mammal harvests.

From 2000 to 2008, between 193 and 218 Hooper Bay households per year were issued subsistence salmon permits. The coastal subsistence salmon fishery at Hooper Bay primarily targets chum and pink salmon bound for the Yukon River, and also chum salmon bound for

⁴³² ASCG Inc. 2004. *Hooper Bay Comprehensive Economic Development Strategy Plan*. Retrieved October 15, 2012 from <http://www.commerce.state.ak.us/dca/plans/HooperBay-EDP-2004.pdf>.

Kotzebue and Norton Sound rivers.⁴³³ Reported salmon harvest based on returned subsistence salmon permits reflect this focus: chum salmon was the most heavily harvested species, with an average of 11,140 harvested per year, and the next most heavily harvested species was pink salmon (1,746 harvested per year on average). Smaller subsistence harvests of Chinook, coho, and sockeye salmon were also reported for most years during the 2000-2008 period. It is important to note that, in the 2011 AFSC survey, community leaders noted Chinook salmon as a particularly important subsistence resource in Hooper Bay. Table 13 presents further information about subsistence salmon fishing participation, as well as information about marine invertebrate and non-salmon fish subsistence harvest.

Participation in the Subsistence Halibut Registration Certificates (SHARC) program declined substantially in Hooper Bay between 2003 and 2010, from 94 permits issued to residents in 2003 and 2004 to 14 in 2010. The highest volume of halibut was reported harvested in 2005 (3,431 pounds), when 93 SHARC cards were issued and 34 were returned. In 2010, the last year for which data are available in the 2000-2010 period, 2 of the 14 issued permits were fished, and 185 pounds of halibut were harvested. Further information about the subsistence halibut fishery is presented in Table 14.

Some information is also available from management agencies regarding subsistence harvest of marine mammals in Hooper Bay between 2000 and 2010. Based on a NMFS study of beluga whale harvest, Hooper Bay residents were reported to harvest from 3 to 69 beluga whales per year between 2000 and 2006, with an average harvest of 32 during this period. Based on a U.S. Fish and Wildlife Service (FWS) study, the number of walrus harvested in Hooper Bay varied from 1 to 37 per year between 2000 and 2009, with an average harvest of 18. No data are available from the FWS regarding sea otter harvest in Hooper Bay during the 2000-2010 period, and no data are reported in ADF&G's Community Subsistence Information System regarding harvest of harbor seal, spotted seal, or Steller sea lion. Further information about marine mammal harvest in Hooper Bay is presented in Table 15.

Additional information about marine mammal harvest is available from a study conducted in Hooper Bay and nearby coastal communities by ADF&G in 1998. The study found that ringed seal was the most common seal harvested in Hooper Bay, along with bearded seal, and a smaller number of ribbon seal and Steller sea lions. Key respondents reported that seal hunting is best when north or northwesterly winds push sea ice toward shore, bringing seals closer to shore as well. Spring months, as well as September and October, are important seal hunting periods.⁴³⁴

⁴³³ Crawford, Drew L., and Lingnau, Tracy L. 2004. *Hooper Bay Subsistence Salmon Monitoring Project, 2003*. Alaska Dept. of Fish and Game, Regional Information Report No. 3A04-15. Retrieved October 15, 2012 from <http://www.sf.adfg.state.ak.us/fedaidpdfs/RIR.3A.2004.15.pdf>.

⁴³⁴ Coffing, Michael, Scott, Cheryl, and Utermohle, Charles. 1988. *The Subsistence Harvest of Seals and Sea Lions by Alaska Natives in Three Communities of the Yukon-Kuskokwim Delta, Alaska, 1997-98*. Alaska Dept. of Fish and Game, Technical Paper No. 255. Retrieved October 16, 2012 from <http://www.subsistence.adfg.state.ak.us/TechPap/tp255.pdf>

Table 12. Subsistence Participation by Household and Species, Hooper Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Hooper Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	218	47	114	9,256	218	901	n/a	n/a	n/a
2001	213	69	2,150	12,957	439	32	n/a	n/a	n/a
2002	201	63	282	9,824	125	5,475	n/a	n/a	n/a
2003	197	62	722	10,698	244	473	n/a	n/a	n/a
2004	193	77	1,042	3,506	9	5,418	n/a	n/a	n/a
2005	196	67	157	9,772	n/a	860	n/a	n/a	n/a
2006	196	59	376	19,614	175	1,433	n/a	n/a	n/a
2007	196	63	430	12,298	26	113	n/a	n/a	n/a
2008	203	84	388	12,336	66	1,013	8	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Hooper Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	94	33	788
2004	94	24	1,740
2005	93	34	3,431
2006	89	18	647
2007	89	25	3,304
2008	17	5	1,753
2009	17	11	1,187
2010	14	2	185

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Hooper Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	39	n/a	29	n/a	n/a	n/a	n/a
2001	69	n/a	22	n/a	n/a	n/a	n/a
2002	46	n/a	37	n/a	n/a	n/a	n/a
2003	8	n/a	10	n/a	n/a	n/a	n/a
2004	3	n/a	6	n/a	n/a	n/a	n/a
2005	29	n/a	17	n/a	n/a	n/a	n/a
2006	33	n/a	4	n/a	n/a	n/a	n/a
2007	73	n/a	5	n/a	n/a	n/a	n/a
2008	13	n/a	1	n/a	n/a	n/a	n/a
2009	26	n/a	4	n/a	n/a	n/a	n/a
2010	25	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Kotlik (KAWT-lick)



People and Place

Location

Kotlik is located on the east bank of the Kotlik Slough, in the north tributary of the Yukon Delta fan, 35 miles northeast of Emmonak in the Yukon-Kuskokwim Delta. The Yukon Delta fan has three main tributaries, the South Mouth, Middle Mouth and the North Mouth. Kotlik is the only community in the northern branch. The community is located at the confluence of the Kotlik River and the Little Kotlik River, and two sub-districts of the main community are built across these rivers.⁴³⁵ Kotlik lies 165 air miles northwest of Bethel and 460 miles from Anchorage. Kotlik is located in the Bethel Recording District. The area encompasses 3.8 square miles of land and 0.8 square miles of water.⁴³⁶

*Demographic Profile*⁴³⁷

In 2010, there were 577 inhabitants in Kotlik, making it the 103rd largest of 352 total Alaskan communities with recorded populations that year. Between 1990 and 2010, the population of Kotlik increased by 28% overall. A majority of this growth occurred between 1990 and 2000, and the population remained relatively stable afterward until it dipped 6.6% between 2009 estimates and the reported population in 2010. Nevertheless, according to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents increased by 4.57%, with an average annual growth rate of 0.80% (Table 1).

In 2010, the majority of Kotlik residents identified themselves as American Indian and Alaska Native (97.2%), along with 1.9% White residents, 0.3% Asian American residents, 0.3% individuals identifying with two or more races, and 0.2% identifying with “some other race.” Also in 2010, 0.2% of Kotlik residents identified as Hispanic. Those who identified themselves as White made up 1.65% less of the population in 2010 compared to 2000, and American Indian and Alaska Natives made up 3.63% more of the population. The percentage of individuals identifying with two or more races decreased between 2000 and 2010 by 2.58%, while the percentages of individuals identifying themselves as Hispanic, Asian, with two or more races, or with “some other race” all increased slightly (Figure 1).

In 2010, the average household size in Kotlik was 4.51, a decrease from 5.05 persons per household in 2000 and 4.50 in 1990. The total number of households in Kotlik increased from 101 in 1990, to 117 in 2000, and to 128 occupied housing units in 2010. Of the housing units surveyed for the 2010 U.S. Census, 67.2% were owner-occupied, 32.8% were renter-occupied,

⁴³⁵ Kotlik Tribal Council (n.d.). *Kotlik Community Development Plan*. Retrieved April 23, 2012 from http://docmeister.bizware.com/manual_index.php/kotlik?d_id=43&t=1335198983.

⁴³⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved April 23, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴³⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

and 13.5% were vacant or used only seasonally. Between 1990 and 2010, no residents of Kotlik lived in group quarters.

In 2010, the gender makeup in Kotlik was 53.2% male and 46.8% female, even more skewed toward males than the population of Alaska as a whole in 2010 (52% male, 48% female in 2010). The median age in Kotlik was 21.7 years in 2010, much lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years.

Table 1. Population in Kotlik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	461	-
2000	591	-
2001	-	625
2002	-	633
2003	-	605
2004	-	590
2005	-	609
2006	-	611
2007	-	598
2008	-	609
2009	-	618
2010	577	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Kotlik: 2000-2010 (U.S. Census).

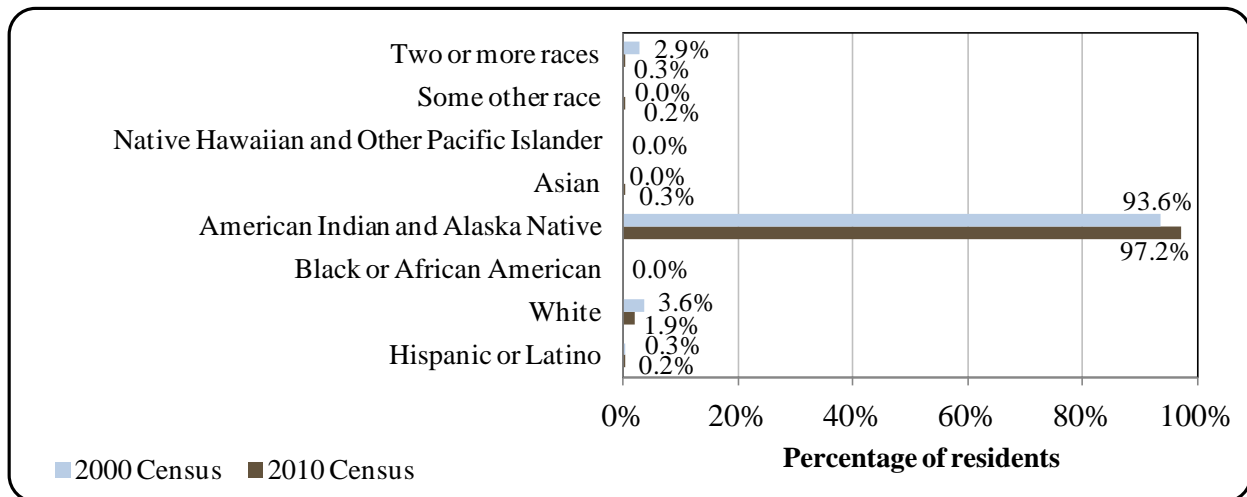
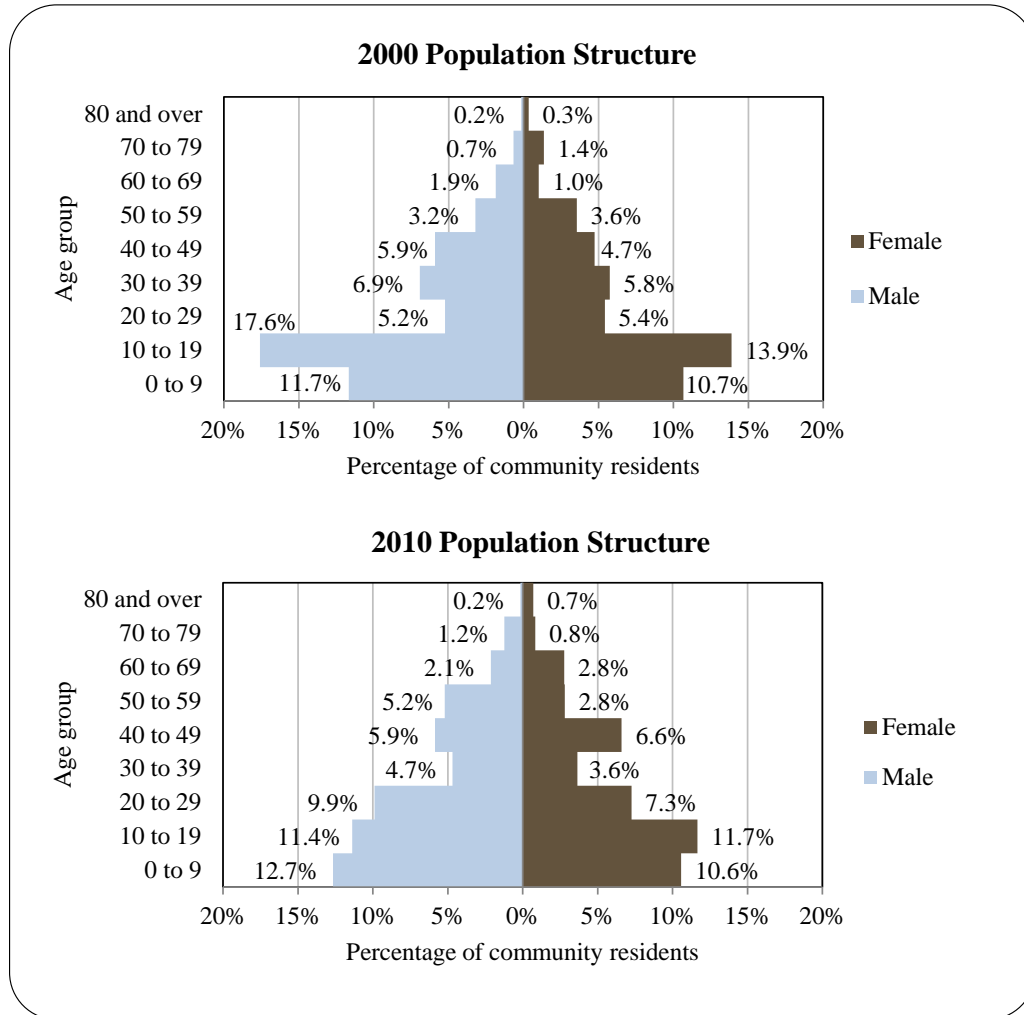


Figure 2. Population Age Structure in Kotlik Based on the 2000 and 2010 U.S. Decennial Census.



Compared with 2000, the population structure in 2010 was slightly more stationary, but still indicative of an extremely young population. Though biased towards people under the age of 30 in general, there was variation in the individual age cohorts. The population of those aged 20 to 29 rose while the percentage of those aged 0 to 9 remained relatively stable, and the population of those aged 10 to 19 dropped significantly. In 2010, there were more males than females in most age cohorts. In 2010, 7.8% of Kotlik residents were age 60 or older. The overall population structure of Kotlik in 2000 and 2010 is shown in Figure 2.

According to the 2006-10 American Community Survey (ACS),⁴³⁸ in terms of educational attainment, 69.8% of Kotlik residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents

⁴³⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

overall.⁴³⁹ Also in 2010, 26% of residents aged 25 and older were estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 4.2% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 11.7% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 1.5% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 3.8% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

A population in Kotlik was first recorded during the 1880 census. Prior to the U.S. purchase of Alaska in 1867, the Russian Orthodox Church established itself and created a cemetery in Kotlik. A few Russians also intermarried with native women and became permanent residents, and some current Kotlik residents are decedents of those marriages.⁴⁴⁰ The community grew during the mid-1960s when a Bureau of Indian Affairs school was constructed in Kotlik, and residents of the nearby villages of Channiliut, Hamilton, Bill Moore's Slough, and Pastolaik relocated to the village. Due to its location with easy access by large riverboats and barges, Kotlik became one of the larger ports and commercial centers of the lower Yukon River. The city was incorporated in 1970.⁴⁴¹

Due to its location, Kotlik has undergone periods of flooding every 2 to 13 years, and it is expected that these intervals of flooding will continue with periodic, significant events. In 1974, the community experienced a record rainfall flood which inundated the entire village with four feet of water; in 1987, a flood resulted from stream overflow and inundated the village to a depth of two feet; in 1989, there was a 50-year flood during which 58 people had to be evacuated and \$195,000 in damage occurred to 16 homes; and in 1992, the level of water rose 2 feet above the average first floor of affected homes, 108 people were evacuated, and 23 homes suffered damages totaling \$1.9 million.

The community's location along the coast also leaves it vulnerable to tsunamis. Tsunami events have not been officially documented in Kotlik; however, a community member reported that tsunami events have previously occurred on two occasions. The first account is of a tsunami occurring on November 10, 1952, approximately six miles below Kotlik. The day was very calm, and then suddenly someone noticed water coming to land. Abruptly, the ice burst, water rolled inside the slough, and water reached knee deep outside houses. Gasoline tanks drifted away with other various belongings. All homes in the community were affected by water saturating the floors. The entire population (approximately 200) stayed in the Catholic Church for a couple of nights until the water drained from their homes. The second account of a tsunami event occurred in January of 2005, after which water remained in low-lying areas of town for about six to seven hours.⁴⁴²

⁴³⁹ Ibid.

⁴⁴⁰ Kotlik Tribal Council (n.d.). *Kotlik Community Development Plan*. Retrieved April 23, 2012 from http://docmeister.bizware.com/manual_index.php/kotlik?d_id=43&t=1335198983.

⁴⁴¹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved April 23, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁴² Ibid.

The culture of Kotlik is predominately Yup'ik Eskimo, and community members practice a fishing, trapping and subsistence lifestyle. Traditional clothing and arts and crafts products are made from subsistence caught species. Several potlatches occur annually when residents of Stebbins and others in nearby villages are invited. Eskimo dancing and sharing of gifts and stories are emphasized. The highlight of the events is the introduction and initiation of young dancers whose traditional Eskimo names (a name taken at birth after a deceased member) are announced and acknowledged. During this presentation, gifts are given to the surviving relatives and friends of the deceased. This special honor pays tribute to the dead and is a means of healing for the surviving members. A trait instilled in all tribal members is to respect the environment, fish, wildlife and others. The Yup'ik people are instructed to greet strangers kindly and feed and house them if necessary.⁴⁴³

Natural Resources and Environment

Situated south of the Arctic Circle, Kotlik has a typical subarctic climate. Consistent with these characteristics, Kotlik has a large temperature range from -50 to 87 Fahrenheit (°F) with a short summer and a freeze period of about three months. The surrounding bodies of water, Norton Sound and the Yukon River, are generally ice-free from mid-June through October. Annually, there is an average of 60 inches of snowfall and a total of 16 inches of precipitation. The community is prone to floods during autumn as tides are extreme with fall storms. Concurrently, spring ice break-up normally does not cause floods as there are many drainages along the Yukon-Kuskokwim delta fan. The area also experiences high winds and poor visibility during the fall and winter. Kotlik is located near the boundary between continuous and discontinuous permafrost. Permafrost in this area is considered to be relatively warm and will melt when there are modifications made above it.⁴⁴⁴

Kotlik is located at the confluence of the Kotlik and Little Kotlik Rivers at the northern edge of the Yukon-Kuskokwim delta and floodplain system, roughly five miles from the Bering Sea. The delta system forms a wide plain of moderate relief between 10 and 15 feet above sea level in Southwestern Alaska. Low relief hills, remnants of dissected natural levees, are dispersed among flat-lying floodplain terraces and partially filled old river meanders. The region is primarily underlain by Pleistocene to recent fluvial deposits of dark gray silt and sandy silt, which are locally highly organic near the surface and typically become sandier with depth. These deposits appear to thicken westward; however, the thickness is not well defined. The region is relatively flat, poorly drained, and almost completely covered by tundra and numerous small lakes.⁴⁴⁵ The Nulato Hills are located about 25 to 30 miles to the east of Kotlik.⁴⁴⁶

Due to its location, Kotlik is vulnerable to riverine erosion, which results from the force of flowing water in and adjacent to river channels. This erosion affects the bed and banks of the channel and can alter or preclude any channel navigation or riverbank development. A large amount of the community's development is located along the south bank of the Kotlik River. Some homes are also located along the north bank of the river on East Island, and on the peninsula (i.e. West Island) between the Kotlik and Little Kotlik Rivers. All development along the banks of the river is susceptible to erosion, and some houses have needed to be moved

⁴⁴³ See footnote 440.

⁴⁴⁴ Ibid.

⁴⁴⁵ Ibid.

⁴⁴⁶ Ibid.

because of threats from erosion. The AC Store is so close to a bank experiencing effects from erosion that the store is now slanted. Bank slumping⁴⁴⁷ (also known as slab failure) is one of the most obvious elements of erosion on the riverbanks in Kotlik. Historical information provided by the 2003 Bank Feasibility Study and by the community itself indicates that erosion of the Kotlik River has been actively occurring each year since at least the early 1980s. Based on this reoccurrence level, the probability of erosion occurring in Kotlik is highly likely. Kotlik is also susceptible to earthquakes, nearby wildland fire, and severe winter storms, as well as flooding and tsunamis (see the section above on *History, Traditional Knowledge, and Culture*).⁴⁴⁸

The community of Kotlik is within the boundaries of the Yukon Delta National Wildlife Refuge (NWR). The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.”⁴⁴⁹ NWR lands are open to sport and subsistence hunting and fishing. Three properties of land reserved for U.S. Coast Guard lighthouse purposes within the NWR are located near Kotlik: the Yukon River North Entrance Light; the Pastolik River Light (discontinued in 1974); and the Point Romanzof Light. The U.S. Geological Survey (USGS) has reported numerous oil and gas seeps located around Kotlik.⁴⁵⁰

Current Economy⁴⁵¹

The economy of Kotlik is similar to other rural Alaska communities and can be described as mixed cash-subsistence. The economy relies on subsistence, government jobs, seasonal construction jobs, and commercial fishing.⁴⁵² Local jobs are available at the Kotlik School, the Kotlik City, the two stores, the Tank Farm, the Village Corporation office, Clinic, Headstart, the three tribal councils and the U.S. Postal Service.⁴⁵³ Several jobs are provided by the Alaska Rural Utilities Cooperative (ARUC) and Alaska Village Electric Cooperative (AVEC). Construction jobs are associated with new housing, water and sewer improvements, and previously with the new school (completed in 2003).⁴⁵⁴ There has also been a request for a fish and meat processing plant, which would create more job prospects during the winter, after the commercial fishing season has closed (see the section on *Processing Plants* below). Income is also derived from trapping fur bearing mammals such as mink, otter, beaver, muskrat, fox and to a lesser extent the lynx, wolverine and wolf.⁴⁵⁵

⁴⁴⁷ Bank slumping indicates the degree of riverbank erosion and is a natural and inevitable process that occurs when the riverbank becomes undercut to a degree that gravity pulls the overhanging material downward.

⁴⁴⁸ Kotlik Tribal Council (n.d.). *Kotlik Community Development Plan*. Retrieved April 23, 2012 from http://docmeister.bizware.com/manual_index.php/kotlik?d_id=43&t=1335198983.

⁴⁴⁹ U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge*. Retrieved April 26, 2012 from <http://yukondelta.fws.gov/>.

⁴⁵⁰ Ibid.

⁴⁵¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁴⁵² See footnote 448.

⁴⁵³ See footnote 440.

⁴⁵⁴ Ibid.

⁴⁵⁵ See footnote 441.

Kotlik's top employers in 2010 included the Lower Yukon School District, the Kotlik Tribal Council (KTC), Kwikpak Fisheries, LLC, AVCP Housing Authority, Kotlik City Council, AK Commercial Company, Yukon-Kuskokwim Health Corp., the Association of Village Council Presidents, the Native Village of Bill Moore's Slough, and Kotlik Laufkak, Inc.⁴⁵⁶ Based on household surveys conducted for the 2006-10 ACS, in 2010, the per capita income in Kotlik was estimated to be \$9,755 and the median household income was estimated to be \$33,750. This was an increase in per capita income, from \$7,707 in 2000, and a decrease in median household income, from \$37,750 in 2000. However, if inflation is taken into account by converting 2000 values to 2010 dollars,⁴⁵⁷ both per capita income and median household income in 2010 are revealed to be decreases from real income in 2000 (\$9,967 and \$48,818, respectively). In 2010, Kotlik ranked 279th of 305 Alaskan communities with per capita income data that year, and 224th in median household income, out of 299 Alaskan communities with household income data. Although Kotlik's small population size may have prevented the ACS⁴⁵⁸ from accurately portraying economic conditions, this decrease in per capita income is confirmed by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Kotlik in 2010 was \$5,860. This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁴⁵⁹ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

In 2010, 59.5% of residents aged 16 or older were estimated to be in the civilian labor force, compared to 68.8% in the civilian labor force statewide. In the same year, the unemployment rate was estimated to be 20.6% in Kotlik, compared to a statewide unemployment rate of 5.9%, and approximately 30.1% of local residents were estimated to be living below the poverty line in 2010, compared to 9.5% of Alaskan residents overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Kotlik are not reflective of the value of subsistence to the local economy.

Also based on the 2006-2010 ACS, 61.6% of the Kotlik workforce was estimated to be employed in the private sector, along with an estimated 27.2% in the public sector. An estimated 55% of the workforce was unpaid family workers, and an estimated 0% was self-employed. Of the 151 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number were estimated to be working in educational services, health care and social assistance (35.1%), transportation, warehousing, public administration (16.6%), and retail trade (15.2%). Only 2.6% of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting and mining; however, the number of individuals employed in farming,

⁴⁵⁶ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved April 7, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

⁴⁵⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁴⁵⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁵⁹ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

fishing and forestry industries is probably underestimated in census statistics (see *Commercial Fisheries* section below). Fishermen may hold another job and characterize their employment accordingly. As with income and poverty statistics, employment figures reported for Kotlik are not reflective of the value of subsistence to the local economy. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Kotlik (U.S. Census).

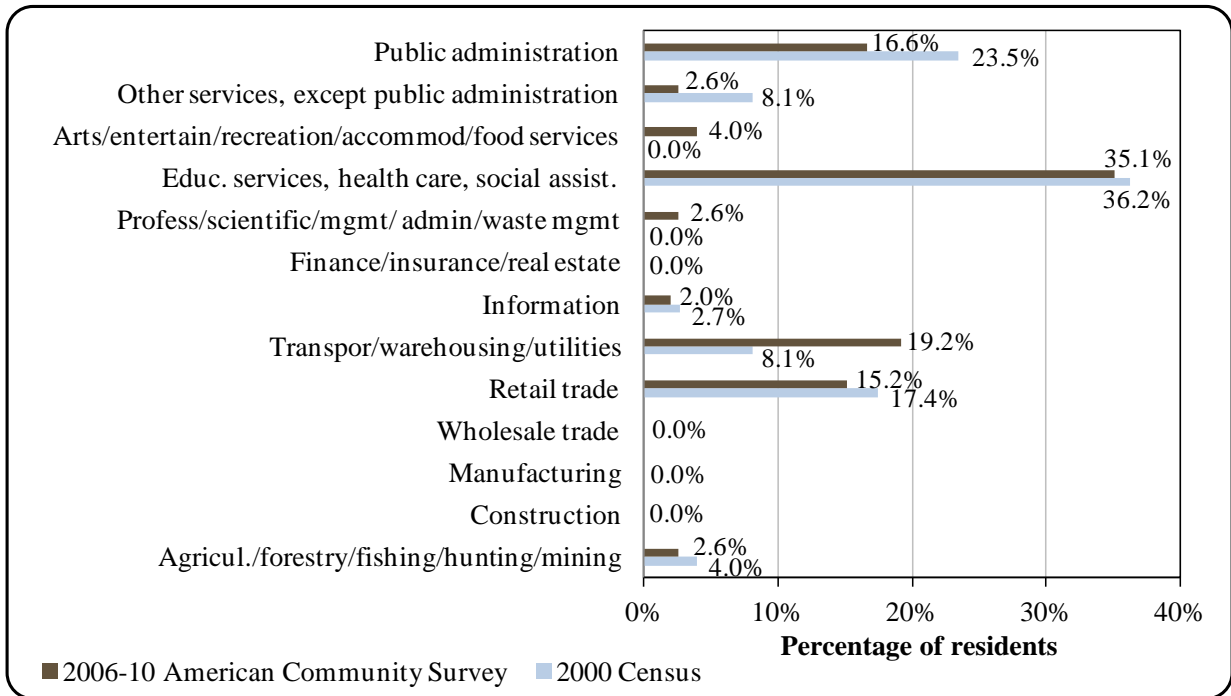
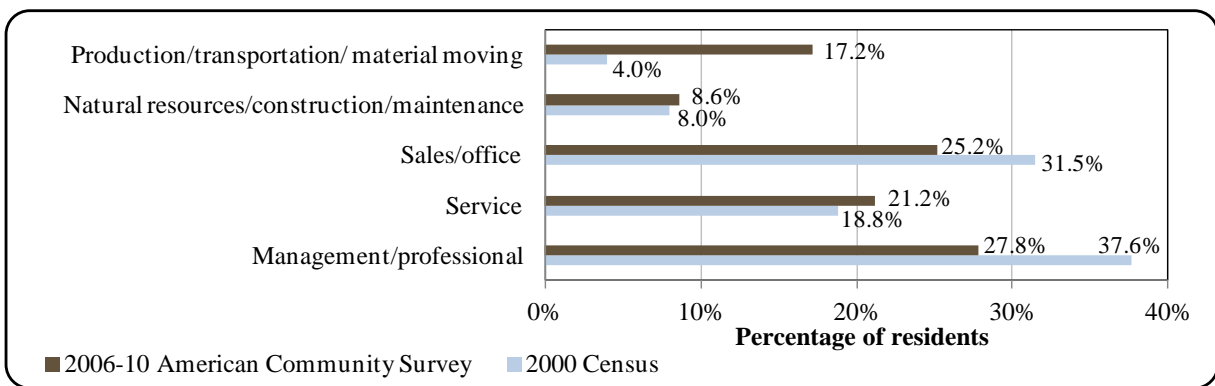


Figure 4. Local Employment by Occupation in 2000-2010, Kotlik (U.S. Census).



Governance

Kotlik was incorporated in 1970 as a Second-class city and is not located in an organized borough. There are three tribal councils in Kotlik: the KTC⁴⁶⁰, Bill Moore’s Slough Elders Council, and Hamilton Tribal Council, which formalized an Inter-tribal Court upon adoption of the Kotlik Tribal Court ordinances in 2003.⁴⁶¹ The KTC is governed by a five-member council and is the most active of the three.⁴⁶²

The City administers a 3% sales tax, but no other taxes. When adjusted for inflation,⁴⁶³ total municipal revenues declined by 50.4% between 2000 and 2010, from \$894,189 to \$574,041. Municipal revenues peaked in 2002 at \$1.13 million. In 2010, most (37.1%) locally generated revenues were collected from utility rents, followed by gaming revenues (20.6%) and sales taxes (20.0%). Most (58.2%) outside revenues were collected from Community Revenue Sharing, followed by payments in lieu of taxes (38.0%). Overall, sales taxes accounted for 12.4% of total municipal revenues in 2010, compared to 11.4% in 2000. Community Revenue sharing accounted for 22.1% of the total budget that year, compared to 3.0% from State Revenue Sharing in 2000.

Kotlik received State Revenue Sharing contributions between 2000 and 2003, and a fisheries-related grant in 2001 for three ice machines worth \$191,000 from the U.S. Economic Development Administration (EDA). Information about selected aspects of Kotlik’s municipal revenue is presented in Table 2.

Kotlik was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native Village. The authorized traditional entity, recognized by the BIA, is the Native Village of Kotlik. The local village Native Corporation is Kotlik Native Corporation, which manages approximately 115,200 acres of land. The regional Native Corporation to which Kotlik belongs is the Calista Corporation.⁴⁶⁴

Kotlik is also a member of the Association of Village Council Presidents (AVCP), a tribal non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁴⁶⁵ The AVCP is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁴⁶⁶ AVCP is made up of 56 villages and 45 village corporations.⁴⁶⁷

⁴⁶⁰ The Kotlik Tribal Council changed its name from the Kotlik Traditional Council in 2006.

⁴⁶¹ Kotlik Tribal Council (n.d.). *Kotlik Community Development Plan*. Retrieved December 5, 2012 from <http://docmeister.bizware.com/display.php/kotlik?2489>

⁴⁶² Ibid.

⁴⁶³ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>

⁴⁶⁴ See footnote 461.

⁴⁶⁵ Association of Village Council Presidents (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

⁴⁶⁶ U.S. Government Accountability Office 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁴⁶⁷ Calista Corporation (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Kotlik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State and Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$894,189	\$102,067	\$26,943	n/a
2001	\$893,766	\$87,905	\$25,924	\$191,000
2002	\$1,131,695	\$74,185	\$25,925	n/a
2003	\$1,104,732	\$77,830	\$26,108	n/a
2004	\$1,037,815	\$62,412	n/a	n/a
2005	\$946,049	\$73,614	n/a	n/a
2006	\$1,092,306	\$78,313	n/a	n/a
2007	\$1,288,139	\$87,878	n/a	n/a
2008	\$1,020,148	\$82,659	n/a	n/a
2009	\$726,039	\$84,201	n/a	n/a
2010	\$574,041	\$70,956	\$127,119	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

The nearest office of Alaska Department of Fish and Game (ADF&G) is located in Emmonak, but it is a seasonal office. ADF&G offices are available year-round in the communities of Nome and Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources (DNR) and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage.

Infrastructure

Connectivity and Transportation

There is no road access to Kotlik, although the village is easily accessible by barge. Residents use the river for commercial and private travel. Boardwalks are used in the community by pedestrians and small vehicles. Local residents travel in privately owned boats during the summer and use snowmachines and small all-terrain vehicles for travel during the winter. One resident maintains a dog team, although dogsleds are used solely for recreation. Bulk fuel and heavy cargo are brought in seasonally by barge.⁴⁶⁸ Air transportation of passengers, cargo, and mail is provided via the state-owned 4,422 feet long by 100 feet wide gravel airstrip. Era

⁴⁶⁸ See footnote 461.

Aviation and Grant Aviation provide scheduled commercial service to Kotlik, and Ryan Air Services provides cargo-only transport.⁴⁶⁹ The price of a roundtrip ticket from Kotlik to Anchorage in early June of 2012 was over \$800.⁴⁷⁰

*Facilities*⁴⁷¹

A diesel power plant, owned by AVEC and operated by REA Co-op, provides electricity to Kotlik. Piped water is provided by ARUC to most households, but some community members still collect rainwater, and melt ice. The city currently has no “washateria” for residents to haul water from. A piped sewer system serves some households, and a sewage lagoon is used for sewage treatment. Outhouses are also used and some community members haul Honeybuckets⁴⁷² to containers. Refuse collection services are provided by individuals, and the available Class 3 landfill is operated by the city. Police services are provided by City police and state troopers from St. Mary’s. Fire and rescue services are provided by a volunteer fire department with Project Code Red⁴⁷³ equipment. Kotlik also features a Federal Scout Readiness Center of the Alaska Army National Guard. Other community facilities include a City Hall/Community Hall, and youth services include a City Teen Center. The school allows public use of its library and gym. Communication services include cable television and internet,⁴⁷⁴ radio, local television, and local and long distance telephone.

Medical Services

The local health clinic, the Kotlik Clinic, is operated by the Yukon-Kuskokwim Health Corporation (YKHC). The Clinic is a Community Health Aide Program (CHAP) site. Emergency Services have coastal and air access and are provided by a health aide. The YKHC contracts with the Indian Health Service to operate the YKHC Hospital in Bethel, which is the regional hospital.⁴⁷⁵

Educational Opportunities

Kotlik has one school, the Kotlik School of the Lower Yukon School District, which offers a pre-school through 12th grade education. As of 2012, there were 14 teachers and 199 students attending the school.⁴⁷⁶

⁴⁶⁹ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Database Online*. Retrieved April 23, 2012 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁷⁰ These prices were calculated on November 21, 2011 using kayak.com.

⁴⁷¹ See footnote 469.

⁴⁷² An indoor bucket used as a toilet in houses that without plumbing.

⁴⁷³ A firefighting package created for and given to qualifying rural Alaskan communities by Alaska Village Initiates in partnership with multiple federal, state, and local agencies, including the Alaska State Fire Marshall. Source Alaska Village Initiatives. Retrieved April 26, 2012 from <http://akvillage.com/shop/scripts/codered.asp>.

⁴⁷⁴ See footnote 461.

⁴⁷⁵ See footnote 469.

⁴⁷⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Harvest of marine resources has been important to residents of the Kotlik area since prehistory. Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁴⁷⁷ Subsistence fishing and hunting continue to be an important supplement to cash employment for Kotlik residents.⁴⁷⁸ Between 2000 and 2010, residents of Kotlik were involved in commercial fisheries for herring and salmon, and also crab and groundfish to a lesser degree (Table 4).

Kotlik is located along the Yukon-Kuskokwim River Delta. The Yukon River commercial salmon fishery is divided into 7 districts, 10 sub-districts and 28 statistical areas. The Lower Yukon Areas (Districts 1, 2 and 3) to which Kotlik belongs include some coastal waters and extend up to river mile 301. The Coastal District (District 7) is open to subsistence fishing only. Set and drift gillnets are the only gear types allowed in the Lower Yukon Districts. Peak salmon harvests in the Yukon salmon fishery took place in the 1980s. Concern regarding possible overharvest of Chinook led to some reductions in harvest in the late 1980s and 1990s. Very poor returns in the late 1990s and the year 2000 led to very restrictive management, including a complete closure of the fishery in 2001 and continued conservative management since that time.⁴⁷⁹

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. There are six commercial gillnet sac roe districts (Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island and Cape Romanzof) along the Yukon/Kuskokwim coast. However, harvests of herring have been declining in this region in recent years, in part due to lack of processing capacity in the area. A significant subsistence herring harvest also occurs at Nelson Island, although fishing for herring in Kotlik is reportedly limited to Cape Romanzof, in addition to Norton Sound.⁴⁸⁰

Kotlik is located on the Kotlik and Little Kotlik Rivers in the Yukon-Kuskokwim River Delta. The coastal area adjacent to Kotlik is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Kotlik is a member of the Yukon Delta Fisheries Development Association (YDFDA), a Community Development Quota (CDQ) group whose mission is to create a self-sustaining, independent fishing company that will create income and employment opportunities for Yukon Delta residents.⁴⁸¹ In 2010, and for the ninth consecutive year, Kwipak Fisheries, LLC (a subsidiary of the YDFDA, established in 2001) was the only salmon buyer operating on the Lower Yukon River. Buying operations were conducted in Emmonak, Kotlik, Mountain Village,

⁴⁷⁷ Alaska Native Heritage Center (n.d.) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/Yup'ik/.

⁴⁷⁸ Kotlik Tribal Council (n.d.). *Kotlik Community Development Plan*. Retrieved December 5, 2012 from <http://docmeister.bizware.com/display.php/kotlik?2489>

⁴⁷⁹ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁴⁸⁰ Ibid.

⁴⁸¹ Yukon Delta Fisheries Development Association (n.d.). *Homepage* Retrieved May 2, 2012 from <http://www.ydfda.org/>.

and St. Mary's.⁴⁸² The mission of Kwikpak Fisheries, LLC is to ensure a fair commercial market to the Lower Yukon River regional fishermen it supports and to enable regional residents to prosper economically while remaining true to their culture and environment by providing responsible development of fur and timber resources. Kwikpak Fisheries, LLC also provides training in all aspects of the fish buying operation, including: operating equipment, maintaining ice machines, and dressing salmon.⁴⁸³ The Village is not eligible to participate in the Community Quota Entity program.

Processing Plants

The 2010 ADF&G's Intent to Operate list does not list a registered processing plant in Kotlik. However, processing facilities are available in nearby communities of Emmonak and Saint Mary's. Kotlik has requested a fish and meat processing plant with value added capacity. Possible sponsors for the plant include the EDA and the YDFDA. The Village envisions processing salmon by freezing it, along with several different methods of value-adding, such as canning, filleting, smoking, salting, pickling, or cutting and packaging the fish as steaks. Because these value-adding processes can be done after the commercial fishing season has closed, the plant would establish longer job prospects. Furthermore, various types of seafood such as crab, halibut, herring, cod, and pollock, as well as different types of meat such as reindeer, moose, seal, walrus, and beluga whale can be additional activities at the plant with incorporated modifications (such as a meat cutting saw).⁴⁸⁴

Fisheries-Related Revenue

In 2010, Kotlik collected \$444 in fisheries-related revenue.⁴⁸⁵ This amount was collected through Raw Fish Tax and Shared Fisheries Businesses Taxes. Further information regarding fisheries-related revenue accrued between 2000 and 2010 can be found in Table 3.

Commercial Fishing

Income derived from commercial fishing helps the Yup'ik people preserve their long-standing traditions of subsistence fishing. Commercial fishing for herring in the Norton Sound and Cape Romanzof gillnet fisheries and salmon in the Lower Yukon River (and Norton Sound, to a small extent) gillnet fisheries are the primary sources of income for a majority of the residents of Kotlik, and this is reflected in the values recorded by ADF&G between 2000 and 2010 for the community. Still, some residents also held permits in fisheries for freshwater fish statewide using gillnet and for king crab in Norton Sound, using pot gear and vessels under 60 feet. In 2010, 99 residents held 97 permits issued by the Commercial Fisheries Entry Commission (CFEC), compared to 91 and 91 in 2000, respectively. Of the CFEC permits issued in 2010, 80% were for salmon, compared to 82% in 2000; 7% were for herring, compared to

⁴⁸² Yukon Delta Fisheries Development Association (2010). *2010 Annual Report*. Retrieved May 4, 2012 from <http://www.ydfda.org/assets/pdf/YDFDA2010AnnualReport-FINAL.pdf>.

⁴⁸³ Kwik'Pak Fisheries LLC website. Retrieved May 4, 2012 from <http://www.kwikpakfisheries.com>.

⁴⁸⁴ See footnote 478.

⁴⁸⁵ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

14% in 2000; 1% was for crab, compared to 3% in 2000; and 13% were for freshwater fish, compared to 0% in 2000.

Between 2000 and 2010, no residents of Kotlik held License Limitation Program permits (LLP) or Federal Fisheries Permits (FFP) for groundfish or crab. In addition, no residents held quota share accounts or quota shares in federal fisheries for halibut, sablefish or crab between 2000 and 2010. There were 96 residents who held commercial crew licenses in 2010, compared to 92 in 2000. In addition, residents held majority ownership of 33 vessels in 2010, compared to 35 vessels in 2000. Of the CFEC permits issued in 2010, 77% were actually fished. This varied by fishery from 87% of salmon and 69% of freshwater fish permits, to 0% of both herring and crab permits.⁴⁸⁶

In 2010, no fish were landed in Kotlik. This represented a significant decrease in ex-vessel value of total landings from 2005, when 184,941 pounds were landed, with a total ex-vessel revenue value of \$55,984. Much of this can be attributed to the herring roe fishery which dominated landings in that year. Landings in Kotlik between 2000 and 2002 were reportedly made up entirely of herring, but between 2006 and 2009 landings were reportedly made up entirely of salmon.⁴⁸⁷ This may be indicative of the report mentioned above that catches of herring have been declining in recent years. Information regarding commercial fishing trends can be found in Tables 4 through 10.

⁴⁸⁶ Alaska Commercial Fisheries Entry Commission (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁸⁷ Ibid.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Kotlik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	\$106	\$106	n/a	n/a	\$73	\$100	\$349	\$349
Shared Fisheries											
Business Tax ¹	n/a	\$64	n/a	\$106	n/a	n/a	n/a	\$73	\$75	\$88	\$95
Fisheries Resource											
Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>\$64</i>	<i>n/a</i>	<i>\$212</i>	<i>\$106</i>	<i>n/a</i>	<i>n/a</i>	<i>\$146</i>	<i>\$175</i>	<i>\$437</i>	<i>\$444</i>
<i>Total municipal revenue⁵</i>	<i>\$894,189</i>	<i>\$893,766</i>	<i>\$1.13 M</i>	<i>\$1.10 M</i>	<i>\$1.04 M</i>	<i>\$946,049</i>	<i>\$1.09 M</i>	<i>\$1.29 M</i>	<i>\$1.02 M</i>	<i>\$726,039</i>	<i>\$574,041</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Kotlik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	0	1	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	2	2	2	2	2	2	2	2	2	2	2
	Active permits	0	1	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	2	2	2	2	2	2	2	2	2
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	3	3	1	5	1	1	1	2	2	1	1
	Fished permits	0	1	0	3	1	1	0	0	0	0	0
	% of permits fished	0%	33%	0%	60%	100%	100%	0%	0%	0%	0%	0%
	Total permit holders	3	3	1	4	1	1	1	2	2	1	1
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	13	14	14	14	11	12	12	7	7	7	7
	Fished permits	6	10	7	2	0	4	1	0	0	0	0
	% of permits fished	46%	71%	50%	14%	0%	33%	8%	0%	0%	0%	0%
	Total permit holders	13	14	14	15	12	12	12	7	7	7	7

Table 4 cont'd. Permits and Permit Holders by Species, Kotlik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	13	6	8	17	13
	Fished permits	0	0	0	0	0	0	5	4	6	12	9
	% of permits fished	-	-	-	-	-	-	38%	67%	75%	71%	69%
	Total permit holders	0	0	0	0	0	0	13	6	8	17	13
Salmon (CFEC) ²	Total permits	75	80	80	81	75	77	77	78	78	76	76
	Fished permits	64	0	69	78	67	72	72	73	70	61	66
	% of permits fished	85%	0%	86%	96%	89%	94%	94%	94%	90%	80%	87%
	Total permit holders	75	82	81	87	80	81	85	85	83	78	78
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>91</i>	<i>97</i>	<i>95</i>	<i>100</i>	<i>87</i>	<i>90</i>	<i>103</i>	<i>93</i>	<i>95</i>	<i>101</i>	<i>97</i>
	<i>Fished permits</i>	<i>70</i>	<i>11</i>	<i>76</i>	<i>83</i>	<i>68</i>	<i>77</i>	<i>78</i>	<i>77</i>	<i>76</i>	<i>73</i>	<i>75</i>
	<i>% of permits fished</i>	<i>77%</i>	<i>11%</i>	<i>80%</i>	<i>83%</i>	<i>78%</i>	<i>86%</i>	<i>76%</i>	<i>83%</i>	<i>80%</i>	<i>72%</i>	<i>77%</i>
	<i>Permit holders</i>	<i>79</i>	<i>86</i>	<i>85</i>	<i>92</i>	<i>84</i>	<i>85</i>	<i>92</i>	<i>89</i>	<i>88</i>	<i>85</i>	<i>83</i>

¹ National Marine Fisheries Service. (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Kotlik: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Kotlik ²	Total Net Pounds Landed in Kotlik ^{2,5}	Total Ex-Vessel Value of Landings in Kotlik ^{2,5}
2000	92	0	0	35	33	0	0	\$0
2001	16	0	0	34	30	0	0	\$0
2002	28	0	0	29	23	0	0	\$0
2003	84	0	0	35	28	0	0	\$0
2004	7	0	0	30	26	0	0	\$0
2005	64	0	0	30	25	0	0	\$0
2006	107	0	0	25	22	0	0	\$0
2007	98	0	0	26	24	0	0	\$0
2008	90	0	0	32	29	0	0	\$0
2009	69	0	0	33	27	0	0	\$0
2010	96	0	0	33	29	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Kotlik: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Kotlik: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Kotlik: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Kotlik: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Kotlik Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	408,299	405,603	112,913	--	--	108,869	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	2,910	--	76,072	20,877	36,650	21,818	18,103	--
<i>Total²</i>	<i>408,299</i>	<i>405,603</i>	<i>112,913</i>	<i>2,910</i>	<i>--</i>	<i>184,941</i>	<i>20,877</i>	<i>36,650</i>	<i>21,818</i>	<i>18,103</i>	<i>--</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$36,747	\$33,665	\$7,904	--	--	\$9,254	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	\$7,045	--	\$46,731	\$19,447	\$35,052	\$15,945	\$12,561	--
<i>Total²</i>	<i>\$36,747</i>	<i>\$33,665</i>	<i>\$7,904</i>	<i>\$7,045</i>	<i>--</i>	<i>\$55,984</i>	<i>\$19,447</i>	<i>\$35,052</i>	<i>\$15,945</i>	<i>\$12,561</i>	<i>--</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010 there were no sport fish guide businesses or licensed sport fish guides in Kotlik. Given this, no kept/release log book data were reported for fishing charters out of Kotlik between 2000 and 2010.⁴⁸⁸ However, starting in 2007, sport fishing licenses were sold in the community, with between 50 and 148 licenses sold per year. Between 2000 and 2010, Kotlik residents purchased between nine and 133 sport fishing licenses (irrespective of point of sale). In some years, the number of sport fishing licenses sold in Kotlik was greater than the number of licenses purchased by residents of Kotlik, indicating that a small number of non-Alaska resident sport fishermen may use Kotlik as a base of sport fishing activity.

The Alaska Statewide Harvest Survey,⁴⁸⁹ conducted by ADF&G between 2000 and 2010, did not report information about species targeted by private anglers in Kotlik. However, the survey did note several freshwater species targeted by sport fishermen out of nearby Emmonak. These included coho salmon and Arctic grayling.

Kotlik is located within Alaska Sport Fishing Survey Area Y – Yukon River Drainage. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, saltwater sport fishing activity was minimal, with between zero and 81 non-Alaska resident angler days fished per year, and between zero and 89 Alaska resident angler days fished per year. A majority of sport fishing activity occurred in freshwater, with Alaska resident anglers fishing consistently more angler days (4,783 – 10,400 angler days per year) than non-Alaska resident anglers (2,573 – 5,761 angler days per year). This information about the sport fishing sector in and near Kotlik is displayed in Table 11.

Table 11. Sport Fishing Trends, Kotlik: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Kotlik ²
2000	0	0	78	0
2001	0	0	77	0
2002	0	0	48	0
2003	0	0	31	0
2004	0	0	22	0
2005	0	0	9	0
2006	0	0	109	0
2007	0	0	133	148
2008	0	0	112	120
2009	0	0	131	112
2010	0	0	85	50

⁴⁸⁸ Alaska Department of Fish and Game (2011). Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴⁸⁹ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Kotlik: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence harvests in Kotlik include marine mammal species (beluga whale, seals and occasionally walrus), caribou, moose, migratory and resident birds, and various fin-fish species, and these harvests remain a fundamental aspect of Kotlik’s local economy and culture today.⁴⁹⁰ Before each commercial season begins, Yup’ik families travel to fish camps to catch, dry, and store the fish that will sustain them through the winter.

No information is available from ADF&G regarding the per capita subsistence harvest or the percentage of households using different subsistence resources between 2000 and 2010 (Table 12). However, results of a 1980 subsistence survey conducted by ADF&G provide information about household use of some species of marine mammal and non-salmon fish (not including halibut). That year, 100% reported harvest of bearded seal, 92.9% of Kotlik households reported harvesting ringed seal, and 64.3% reported harvest of spotted seal. The species of non-salmon fish that were harvested by the greatest percentage of households included cisco (100%), sheefish (78.6%), broad whitefish (50%), burbot (50%), blackfish (42.9%), cod

⁴⁹⁰ Kotlik Tribal Council (n.d.). *Kotlik Community Development Plan*. Retrieved December 5, 2012 from <http://docmeister.bizware.com/display.php/kotlik?2489>

(42.9%), Pacific tom cod (42.9%), pike (35.7%), and smelt (14.3%).⁴⁹¹ No further information is reported on subsistence harvests of marine invertebrates and non-salmon/halibut harvesting.

Data are also available through 2008 regarding subsistence salmon permits. Between 2000 and 2008, between 83 and 98 Kotlik households were issued subsistence salmon permits per year. Based on those permits that were returned, chum salmon was the most heavily harvested species in all years, followed by Chinook, coho and pink salmon. No sockeye were reported harvested for subsistence purposes between 2000 and 2010. This subsistence fishing participation information is presented in Table 13.

No information was reported regarding subsistence harvest of Pacific halibut by Kotlik residents between 2000 and 2010. With regard to subsistence harvest of marine mammals, an estimated total of 110 beluga whales were harvested between 2000 and 2010. Beluga whale harvests peaked in 2010 at an estimated 22 animals, which was significantly higher than prior years. No information was reported about harvest of other marine mammal species, or the total pounds of marine mammal harvested in those years. Information about subsistence harvest of Pacific halibut is presented in Table 14, and information about marine mammal subsistence is presented in Table 15.

Additional Information

While Bill Moore's Slough and Pastolik had only three to four families at their locales, Channiliut hosted the largest population of the area with about 100 people. The Catholic Church established itself there, and a one room Alaska Native School building was constructed. The BIA later became the primary entity to entice other native families from the area to live at Channiliut, and it is possible that an IRA form of tribal government may have been established there, as well. In the early 1950s, an intense fall flood drew floating chunks of ice which damaged a trading post and some homes in Channiliut. The damage created enough concern that the BIA built a new school about five miles up the Yukon River in Kotlik, and the people of Bill Moore's Slough, Pastolik, and Channiliut relocated there.⁴⁹²

⁴⁹¹ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁴⁹² See footnote 490.

Table 12. Subsistence Participation by Household and Species, Kotlik: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Kotlik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	94	30	1,931	9,969	787	263	n/a	n/a	n/a
2001	95	26	3,093	7,552	486	n/a	n/a	n/a	n/a
2002	90	26	1,686	6,229	542	849	n/a	n/a	n/a
2003	89	31	937	4,632	403	198	n/a	n/a	n/a
2004	87	42	1,148	3,029	593	318	n/a	n/a	n/a
2005	83	34	2,130	7,136	222	155	n/a	n/a	n/a
2006	98	48	1,750	5,776	234	219	n/a	n/a	n/a
2007	98	43	1,569	5,547	284	129	n/a	n/a	n/a
2008	94	39	2,066	4,962	313	1,161	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Kotlik: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Kotlik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	11	n/a	n/a	n/a	n/a	n/a	n/a
2001	6	n/a	n/a	n/a	n/a	n/a	n/a
2002	12	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	13	n/a	n/a	n/a	n/a	n/a	n/a
2006	12	n/a	n/a	n/a	n/a	n/a	n/a
2007	12	n/a	n/a	n/a	n/a	n/a	n/a
2008	8	n/a	n/a	n/a	n/a	n/a	n/a
2009	14	n/a	n/a	n/a	n/a	n/a	n/a
2010	22	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Koyuk (KOY-yuck)



People and Place

*Location*⁴⁹³

Koyuk is located at the mouth of the Koyuk River, at the northeastern end of Norton Bay on the Seward Peninsula of the Bering Strait region, 90 air miles northeast of Nome. Koyuk is located in the Cape Nome Recording District and is not in an organized borough. The area encompasses 4.7 square miles of land and 0 square miles of water.

*Demographic Profile*⁴⁹⁴

In 2010, there were 332 residents, ranking Koyuk 152nd of 352 Alaskan communities with recorded populations that year. Overall, between 1990 and 2010, the population grew by 55%. Between 2000 and 2009, the population increased by 20.54% with an average annual growth rate of 1.57%, double the statewide average of 0.75%. Data from the 2010 Decennial Census indicate that the population declined slightly from 2009 Alaska Department of Labor (DOL) population estimates, a drop somewhat greater than that seen in 2007 or 2008. In every other year since 2000, however, the population has climbed steadily. Information regarding population trends can be found in Table 1.

Koyuk is a traditional Unalit and Malemiut Eskimo village.⁴⁹⁵ In the 2010 Decennial Census, a majority of Koyuk residents identified themselves as American Indian and Alaska Native (88.9%), along with 3.6% identifying themselves as White, 0.3% identifying themselves as Asian American, and 7.2% individuals identifying with two or more races. No Koyuk residents identified themselves as Hispanic in 2010. Those who identified themselves as White made up 1.1% less of the population in 2010 compared to 2000, and American Indian and Alaska Natives made up 3% less of the population, while the percentage of individuals identifying with two or more races increased between 2000 and 2010 by 4.5%. Information regarding race and ethnicity can be found in Figure 1.

In 2010, the average household size in Koyuk was 3.73, a slight increase from 3.7 in 1990 and 3.71 in 2000. Also in 2010, there were a total of 99 housing units, compared to 70 in 1990 and 95 in 2000. Of those households surveyed in 2010, 36.4% were owner-occupied, compared to 26.3% in 2000; 53.5% were renter-occupied, compared to 57.9% in 2000; 7.1% were vacant, compared to 17.8% in 2000; and 3% were occupied seasonally, compared to 1.1% in 2000. There were no residents living in group quarters in 2010 or 2000.

⁴⁹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁴⁹⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁴⁹⁵ See footnote 493.

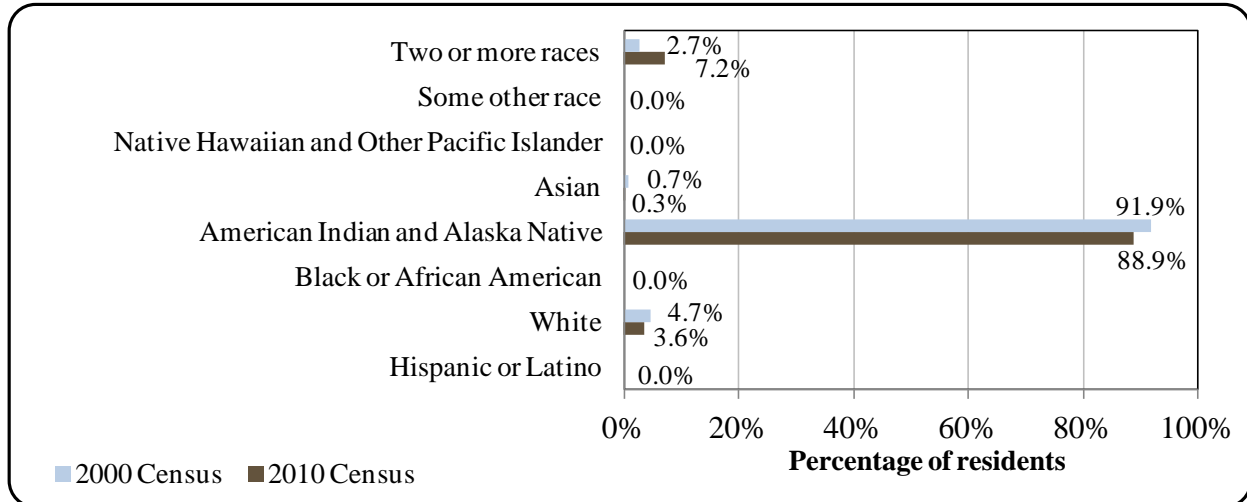
Table 1. Population in Koyuk from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	231	-
2000	297	-
2001	-	326
2002	-	329
2003	-	340
2004	-	349
2005	-	349
2006	-	370
2007	-	346
2008	-	333
2009	-	358
2010	332	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Koyuk: 2000-2010 (U.S. Census).



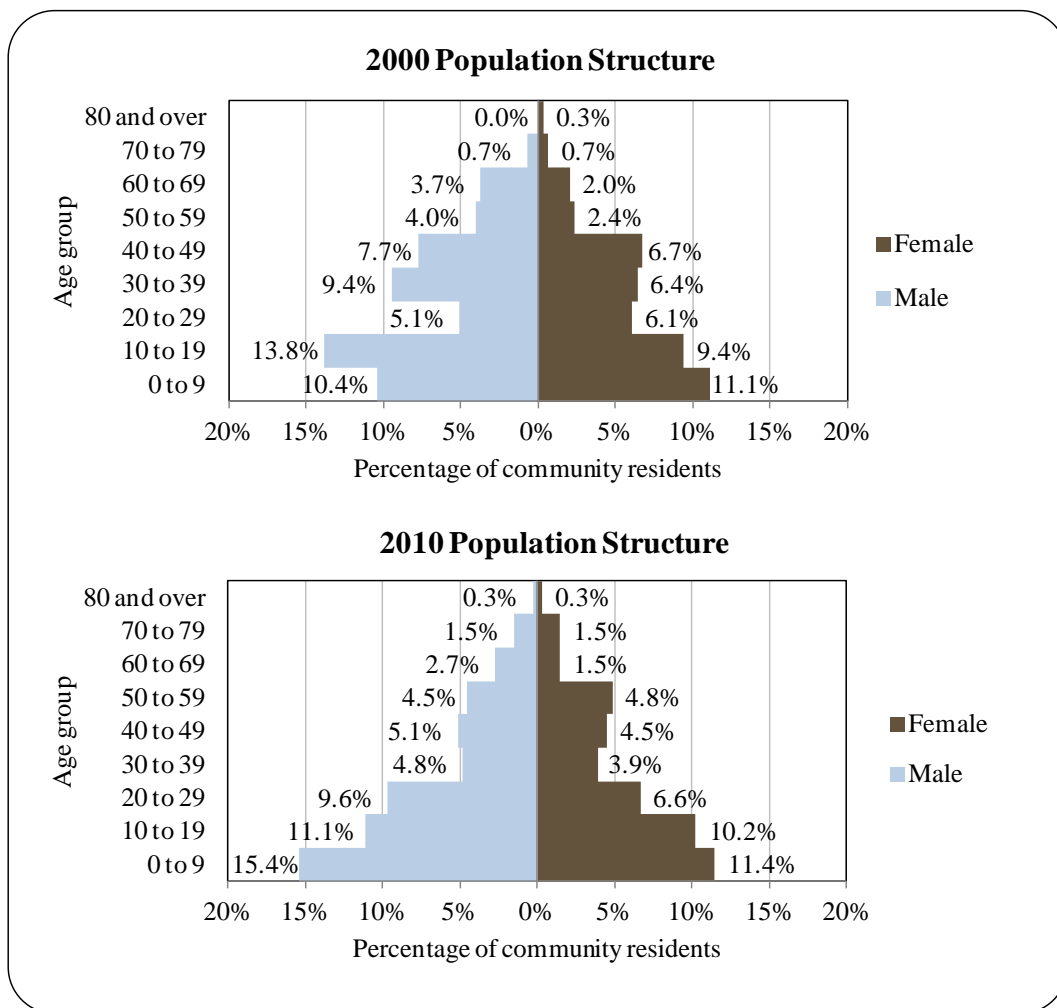
There were more males than females recorded in 2010 (55.1% male, compared to 44.9% female), outpacing the gender distribution statewide (52% male, 48% female), as well as Koyuk’s 2000 distribution (54.9% male, 45.1% female). The median age in 2010 was 22.1, which was much younger than the statewide median of 33.8 and the village’s median age in 2000 (24.7 years).

Compared with 2000, Koyuk’s population structure in 2010, and in particular the male cohort, was more expansive, a change indicative of a higher birth rate. In 2010, 48.2% of

residents were under the age of 20, compared to 44.8% in 2000. Also in 2010, 7.8% of residents were over the age of 59, compared to 7.4% in 2000. Possibly signifying a level of out-migration, only 27.7% of residents were between the ages of 30 and 59, compared to 36.7% in 2000. Nevertheless, the proportion of residents between the ages of 20 and 29 grew from 5.1% in 2000 to 9.6% in 2010, perhaps indicating greater youth retention in the community.

Gender distribution by age cohort was relatively even in both 2000 and 2010. In 2010, the greatest absolute gender difference occurred in the 60 to 69 range (2.7% male, 1.5% female), followed by the 20 to 29 range (9.6% male, 6.6% female) and 0 to 9 range (15.4% male, 11.4% female). Of those three, the greatest difference relative to cohort size occurred in the 0 to 9 range. In 2000, the greatest absolute gender difference also occurred in the 60 to 69 range (3.7% male, 2% female), followed by the 50 to 59 range (4% male, 2.4% female), the 30 to 39 range (9.4% male, 6.4% female), and the 10 to 19 range (13.8% male, 9.4% female). Of those four, the greatest difference relative to cohort size occurred in the 10 to 19 range. Information regarding population structure trends can be found in Figure 2.

Figure 2. Population Age Structure in Koyuk Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey (ACS),⁴⁹⁶ in terms of educational attainment, the U.S. Census' 2006-2010 American Community Survey (ACS) estimated that 73.3% of residents aged 25 and over held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 17% of residents had less than a 9th grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 9.8% had a 9th to 12th grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 10.5% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; an estimated 2.6% held an Associate's degree, compared to an estimated 8% of Alaskan residents overall; an estimated 1.3% held a Bachelor's degree, compared to an estimated 17.4% of Alaskan residents overall; and an estimated 0.7% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Approximately 10 to 25 thousand years ago, during the Pleistocene Ice Age, the level of the ocean was up to 300 feet lower than present levels. At that time, the Seward Peninsula was connected to the Asian continent via the Bering Land Bridge, which formed a flat, grassy, treeless plain.⁴⁹⁷ The Land Bridge is thought to have been a primary route by which humans migrated to the North American continent from Asia. Archaeologists have identified evidence of human inhabitation in the Bering Land Bridge National Preserve dating to 12,000 years before the present.⁴⁹⁸ Well-adapted to their environment, Malemiut, Kauweramiut, and Unalikmiut Eskimos settled on the Seward Peninsula approximately 4,000 years ago.

The site of "Iyatayet" on Cape Denbigh to the south of Koyuk has traces of human habitation that are 6,000 to 8,000 years old. Villagers were historically nomadic. Lt. Zagoskin of the Russian Navy identified the village of "Kuynkhak-miut" there in 1842-44. A Western Union Telegraph expedition in 1865 found the village of "Konyukmute." Around 1900, the present townsite, where supplies could easily be lightered to shore, began to be populated. Two boomtowns grew up in the Koyuk region around 1914: Dime Landing and Haycock. The "Norton Bay Station," 40 miles upriver, was established to supply miners and residents in 1915. In addition to gold, coal was mined a mile upriver to supply steam ships and for export to Nome.⁴⁹⁹

Today, many Native residents of the Seward Peninsula, including those of Koyuk, trace their ancestry to these three distinct groups of Eskimo people, and most identify with Inupiat culture. The people of Koyuk also speak a dialect of Inupiat/Inupiaq Eskimo and maintain a subsistence lifestyle. The first school began in the church in 1915; the U.S. Government built a

⁴⁹⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁴⁹⁷ National Park Service (2010). *Shared Beringian Heritage Program*. Retrieved February 22, 2012 from <http://www.nps.gov/akso/beringia/>.

⁴⁹⁸ National Park Service (2009). *Bering Land Bridge National Preserve*. Retrieved February 17, 2012 from <http://www.nps.gov/bela/>.

⁴⁹⁹ Nome Planning Commission (2003). *City of Nome Hazard Mitigation Plan*. Retrieved February 17, 2012 from <http://www.nwcommission.org/images/Nome-HZM-Plan.pdf>.

school in Koyuk in 1928. The sale and importation of alcohol was banned in the village in 1981.⁵⁰⁰

Natural Resources and Environment

Koyuk has a subarctic climate with a maritime influence. Average summer temperatures range from 46 to 62 °F; winter temperatures average -8 to 8 °F. Annual precipitation averages 19 inches, with 40 inches of snowfall. Extremes from -49 to 87 °F have been recorded. Norton Bay is usually ice-free from May to October.⁵⁰¹ The village is located on a hillside, overlooking Norton Bay. Koyuk has a low potential for river flooding but has experienced coastal flooding. Factors that affect the level of coastal flooding include wind conditions, exposure of the site, and ice conditions. Due to climate change, some coastal areas of Alaska are freezing later in the season, and the coast is subject to an increased flooding due to fall storms and associated storm surges. Severe coastal flooding has destroyed several villages and even forced some to relocate. Coastlines are subject to storms, storm surges and flooding, and are more vulnerable during the ice free part of year because when the water is frozen, wave action is not present.⁵⁰²

Seward Peninsula vegetation is classified as tundra. The diversity of soil environments and microclimatic zones creates a mosaic of vegetation types ranging from high elevation alpine tundra to tidal-influenced marshlands. The landscape is not dominated by one or two vegetation communities, but by an assortment of communities made up by a multitude of graminoid, shrub, forb, and lichen species.⁵⁰³

In the late 1800s, as whalers passed through the villages of the Peninsula, they would trade with the Natives, introducing liquor and repeating rifles, and hiring local men to hunt for them. As the whaling industry grew, hunting of local stocks of wildlife increased to supply the whalers with meat, fur, baleen, and walrus ivory. The marine and terrestrial animal populations eventually declined due to increased hunting pressure to supply the “White” commercial market. By the 1890s, muskoxen and caribou were virtually eliminated on the Seward Peninsula, and the marine mammal population declined significantly.⁵⁰⁴

By the 1890s, the Seward Peninsula was devoid of any large grazing herbivores, but there remained a vast tundra rangeland that could potentially be utilized in a managed grazing system. Thus, in 1891, reindeer were imported from Russia as a means for Alaska Natives to produce a predictable red meat supply and to provide economic development. By 1896, approximately 1,200 reindeer had been introduced and were grazing on the Seward Peninsula. The forage base encountered by the reindeer must have provided good nutrition because the reindeer population swiftly colonized the Seward Peninsula, and by 1924 had risen to 242,000 animals. The numbers

⁵⁰⁰ Alaska Department of Transportation & Public Facilities (2010). *The Economic Benefits and Socioeconomic Effects of the Yukon River Road Corridor*. Retrieved April 9, 2012 from http://dot.alaska.gov/nreg/westernaccess/documents/corridor_planning_report_appx_i.pdf.

⁵⁰¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁰² National Oceanic and Atmospheric Administration (2011). *Bering Straits Coastal Resource Service Area Coastal Management Plan*. Retrieved April 18, 2012 from http://alaskacoast.state.ak.us/District/DistrictPlans_Final/BSCRSA/Table_of_Contents.pdf.

⁵⁰³ Finstad, G. (2007). *Reindeer in Alaska: Under New Management*. Retrieved April 10, 2012 from http://www.uaf.edu/files/snras/MP_07_02.pdf.

⁵⁰⁴ Ibid.

and distribution of reindeer has varied dramatically since the 1920s; however, they have continued to be the dominant grazer and a major influence on the Seward Peninsula ecosystem. The variety of reindeer brought from Russia was bred by the Chukchi people in Chukotka of Siberia to have a strong herding instinct and weak migratory behavior. Chukotkan reindeer exhibit a high degree of site fidelity even if local areas become overgrazed. This breed was further developed in Russia through selective breeding at state farms in Chukotka, Yakutia, and on the Kamchatka Peninsula to produce carcasses noted for their very fine muscle fibers and a high ratio of muscle tissue to bone.⁵⁰⁵

Koyuk is located approximately 134 miles from the Bering Land Bridge National Preserve.⁵⁰⁶ The National Preserve was established with the passage of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) with the purpose of habitat protection and archaeological and paleontological study of the process of plant and animal migration, including man, between North America and the Asian Continent. Populations of wildlife residing within the Preserve include marine mammals, brown bears, moose, wolves, and muskoxen.⁵⁰⁷ Muskoxen were reintroduced to the Seward Peninsula as part of an Alaska-wide recovery effort. In 1934, 34 muskoxen were captured in East Greenland and transported to Nunivak Island. By 1968, the Nunivak Island herd numbered 750, and was used as a seed population to reintroduce muskoxen to areas around northern Alaska. By 2000, the population of muskoxen on the Seward Peninsula numbered 1,800.⁵⁰⁸ The Bering Strait region also provides essential habitat for rare migratory birds, including ducks, geese, swan, crane, eiders, murres, and auklets.⁵⁰⁹

The Norton Basin, located in the Norton Sound, south of the Seward Peninsula, does not hold significant oil reserves; although, it is estimated to contain valuable natural gas reserves. According to a 2005 report prepared by the Department of the Interior (DOI), the Norton Basin contains 2,707.80 billion cubic feet of potential undiscovered natural gas. Of this amount, at least 29.44 billion cubic feet is producible over 30 years and is located within 30 miles of Nome. To date, no company has drilled for natural gas in the Norton Basin,⁵¹⁰ and the area is rated as high to moderate in environmental sensitivity. No leases have been scheduled for the 2007-2012 or 2012-2017 Outer Continental Shelf Oil and Gas Leasing Programs.^{511,512} The Native Village of Koyuk, along with the Klawock Cooperative Association, the Kongiganak Traditional Council, the Nulato Tribal Council, the Native Village of Kipnuk, and the Native Village of Hooper Bay, is opposed to further leasing of the Outer Continental Shelf for the purpose of oil and gas extraction, citing the threat to their subsistence lifestyle and commercial fishing, as well as their concern over global warming. Of the DOI, local officials representing these communities have

⁵⁰⁵ Ibid.

⁵⁰⁶ Calculated using the Google Maps Distance Calculator. Retrieved April 17, 2012 from <http://www.daftlogic.com/projects-google-maps-distance-calculator.htm>.

⁵⁰⁷ National Park Service (2009). *Bering Land Bridge National Preserve*. Retrieved February 17, 2012 from <http://www.nps.gov/bela/>.

⁵⁰⁸ Alaska Dept. of Fish and Game (2008). *Muskox – Wildlife Notebook Series*. Retrieved December 15, 2011 from <http://www.adfg.alaska.gov/static/education/wns/muskox.pdf>.

⁵⁰⁹ See footnote 499.

⁵¹⁰ Minerals Management Service (2005). *Engineering and Economic Analysis of Natural Gas Production in the Norton Basin*. Retrieved April 24, 2012 from http://www.alaska.boemre.gov/re/Natural_gas_Norton.pdf.

⁵¹¹ Minerals Management Service (2010). *Preliminary Revised Program Outer Continental Shelf Oil & Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/>.

⁵¹² Minerals Management Service (2011). *Proposed Outer Continental Shelf Oil & Gas Leasing Program 2012-2017*. Retrieved February 16, 2012 from <http://www.boemre.gov/>.

requested a halt to all future lease sales in Cook Inlet and Chukchi, Beaufort, and Bering Seas; and cancellation of leases in Chukchi Sea Sale 193. They have also requested no oil and gas or seismic activity in the Arctic Ocean until a comprehensive study is done; and request that the DOI not approve Shell's 2010 exploration plan. Finally, they have requested permanent protection of the Arctic Ocean, Bering Sea, North Aleutian Basin, and Cook Inlet.⁵¹³ In addition to these nearby reserves, trace amounts of scheelite have been found 2.5 miles south-southeast of Koyuk,⁵¹⁴ and the area is thought to have high mineral potential due to the Koyuk River watershed. Furthermore, gold mining activity has occurred in portions of the Koyuk River Drainage Area.⁵¹⁵

The Alaska Department of Environmental Conservation (DEC) had at least one significant environmental cleanup operation underway as of March 2012 and also reported several smaller cleanup projects in and around Koyuk, most of which involved limited petroleum contamination of soils and groundwater. The significant cleanup site is named Granite Mountain AFS OT001 and is closed under the Comprehensive Environmental Response, Compensation, and Liability Act (the federal government's program to clean up the nation's uncontrolled hazardous waste sites⁵¹⁶) and state regulations. It is a closed inert waste monofill that contains inert waste, asbestos-containing material and polychlorinated biphenyl-contaminated soil. PCBs, or polychlorinated biphenyls are chemicals that were banned in the U.S. in 1979 amid suggestions they could have unintended impacts on human and environmental health.⁵¹⁷ The area was previously used seasonally by hunters and caribou, but studies indicated that contaminants were at the ground surface. A 2010 report prepared on behalf of the U.S. Air Force “found the monofill to be in good condition, with a hard packed rock cap and no evidence of settling, erosion, or water accumulation.”⁵¹⁸

Current Economy⁵¹⁹

The Koyuk economy is based on subsistence, supplemented by limited part-time jobs. The main sources of meat are fish, reindeer, seal, beluga whale, and moose.⁵²⁰ Furthermore, the herding of reindeer has been a source of income (though not a majority source⁵²¹) for some residents of Koyuk and the Seward Peninsula since the animals were introduced in 1891, as mentioned in the previous section. In 1944, when the Bureau of Indian Affairs took over

⁵¹³ Minerals Management Service (2011). *Proposed Outer Continental Shelf Oil & Gas Leasing Program: 2012-2017*. Retrieved April 12, 2012 from

http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf.

⁵¹⁴ mindat.org. Retrieved April 17, 2012 from <http://www.mindat.org/loc-201477.html>.

⁵¹⁵ See footnote 500.

⁵¹⁶ U.S. Environmental Protection Agency (n.d.). *Superfund quickfinder*. Retrieved April 24, 2012 from <http://www.epa.gov/superfund/>.

⁵¹⁷ National Oceanic and Atmospheric Administration (n.d.). *PCBs, or polychlorinated biphenyls, are industrial products or chemicals*. Retrieved April 24, 2012 from <http://oceanservice.noaa.gov/facts/pcbs.html>.

⁵¹⁸ Alaska Department of Environmental Conservation. *List of Contaminated Sites*. Retrieved April 6, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁵¹⁹ Unless otherwise noted, all monetary data are reported in nominal values.

⁵²⁰ See footnote 501.

⁵²¹ Bader, H. R. & Finstad, G. (2001). *Conflicts between Livestock and Wildlife: An Analysis of Legal Liabilities Arising from Reindeer and Caribou Competition on the Seward Peninsula of Western Alaska*. Retrieved April 19, 2012 from http://nationalaglawcenter.org/assets/bibarticles/baderfinstad_conflicts.pdf.

administration of the Alaska reindeer operation, the state and federal public lands of the Seward Peninsula were segregated into 13 discrete allotments where individuals were given exclusive reindeer grazing permits in an effort to privatize and improve reindeer management in the area.⁵²² By federal law, Alaskan Natives enjoy preferential treatment in the reindeer industry (free grazing privileges on federal lands, grants from the BIA, and restrictions upon sales of live reindeer to non-Native herders) in order to protect Native herders from highly capitalized non-Native competitors.⁵²³

Koyuk is located within the Olanna reindeer herder grazing allotment. The Olanna range consists of wet tundra merging with dry tundra on lower slopes of hills and mountains while upper slopes are bald limestone and lava beds. Local weather is influenced by onshore winds with cold persistent winds in winter with cool wet, foggy summers. In 1971, the reindeer producers organized into the Reindeer Herders Association (RHA) and initiated a plan to standardize and improve range management practices. Since the 1970s, the RHA has been particularly aggressive in its goal to modernize the Seward Peninsula reindeer industry and be on the “cutting edge” of developing new strategies, techniques, products, and technological advances.⁵²⁴ However, in recent years, reindeer herds in Koyuk have become threatened by competition and intermingling with indigenous caribou whose population has recently expanded in part due to federal and state management.⁵²⁵ For this reason, in 2005, Koyuk herders and members of the Reindeer Research Program at the University of Alaska Fairbanks constructed an enclosure outside of the village where reindeer herds could be kept whenever caribou migrate into the area.⁵²⁶

Koyuk’s top employers in 2010 included the Bering Strait School District; Koyuk Native Corporation; Kawerak Inc.; Koyuk Utilities Department; Norton Sound Economic Development Corporation; the Native Village of the Koyuk; the City of Koyuk; Norton Sound Health Corporation; the Koyuk Native Store; and Pinetree Bingo.⁵²⁷ In 2010, the per capita income in Koyuk was estimated at \$8,212, and the median household income was estimated at \$25,714, compared to \$8,736 and \$30,417 in 2000, respectively.⁵²⁸ After accounting for inflation by converting 2000 values to 2010 dollars,⁵²⁹ the real per capita income (\$11,297) and real median household income (\$39,335) indicate a fall in both individual and household earnings.⁵³⁰ In 2010, Koyuk ranked 292nd of 305 communities from which per capita income was estimated, and

⁵²² Finstad, G. (2007). *Reindeer in Alaska: Under New Management*. Retrieved April 10, 2012 from http://www.uaf.edu/files/snras/MP_07_02.pdf.

⁵²³ See footnote 521.

⁵²⁴ Finstad, G. & Kielland, K. (2011). *Landscape Variation in the Diet and Productivity of Reindeer in Alaska Based on Stable Isotope Analysis*. Retrieved April 19, 2012 from http://www.lter.uaf.edu/pdf/1576_Finstad_Kielland_2011.pdf.

⁵²⁵ See footnote 521.

⁵²⁶ See footnote 522.

⁵²⁷ Alaska Department of Labor (n.d.). *Alaska Local and Regional Information Network*. Retrieved April 7, 2012 from: <http://live.laborstats.alaska.gov/alari/>.

⁵²⁸ U.S. Census and American Community Survey 2006-2010 estimates.

⁵²⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁵³⁰ While ACS estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

259th of 299 communities from which median household income was estimated. Although Koyuk's small population size may have prevented the American Community Survey from accurately portraying economic conditions, this decrease in per capita income is confirmed by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Koyuk in 2010 was \$7,528, which also indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁵³¹ This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. However, it should be noted that American Community Survey and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

According to the ALARI database, the vast majority of residents are employed by the local government (64.5%), followed by educational and health services (14.8%) and trade, transportation and utilities (10.3%).⁵³² In contrast, according to 2006-10 ACS estimates,⁵³³ 67% of residents aged 16 and over were part of the civilian labor force in 2010. Unemployment was estimated at 33%, compared to an estimated 5.9% statewide; and 57.6% of residents were estimated to be living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. In the 2006-10 time period, of those employed, an estimated 58% worked in the private sector, an estimated 33.3% worked in the public sector, and an estimated 40.6% were unpaid family workers.

By industry, Koyuk's economy was relatively limited in 2010. In that year, most residents were estimated to be working in education services, health care, and social assistance sectors (36.2%), followed by public administration sectors (26.1%) and transportation, warehousing, and utilities sectors (23.2%). An estimated 8.7% of employed residents worked in the retail trade sector; and 5.8% worked in other services, except public administration. By occupation type, most (37.7%) employed residents were estimated to hold service positions in 2010, followed by management/professional positions and production/transportation/material moving positions (each 21.7%); natural resources/construction/maintenance positions (10.1%); and sales/office positions (8.7%). There were significant changes in employment by industry between 2000 and 2010, possibly due to the new Alaska Pipeline Project which aims to construct a pipeline to expand the market for Alaska's North Slope natural gas resources.⁵³⁴ There was a marked drop in the agriculture, forestry, fishing, hunting, mining, and construction sectors in that time from 5.7% in 2000, to 0% in 2010. However, the number of individuals employed in farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Lastly, there were also significant changes in occupation types in 2010. Information regarding employment trends can be found in Figures 3 and 4.

⁵³¹ See footnote 527.

⁵³² Ibid.

⁵³³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵³⁴ Alaska Pipeline Project (n.d.). *Homepage*. Retrieved April 9, 2012 from <http://thealaskapipelineproject.com/home>.

Figure 3. Local Employment by Industry in 2000-2010, Koyuk (U.S. Census).

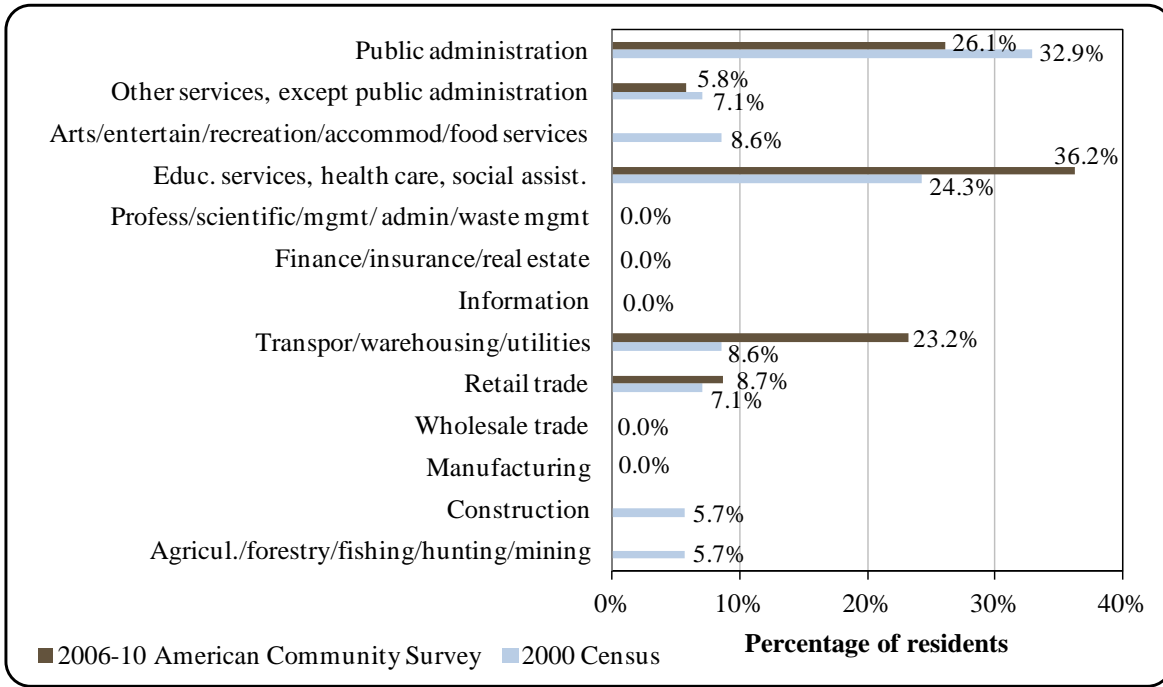
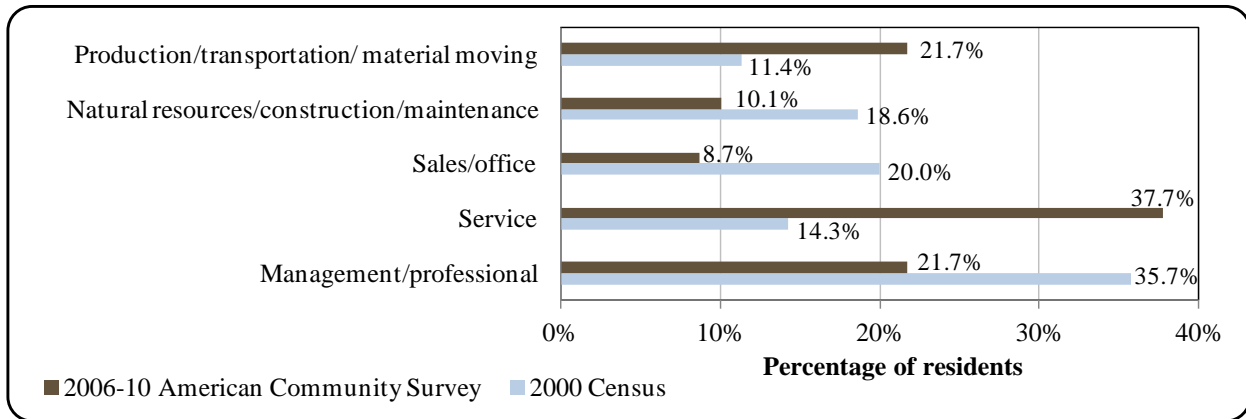


Figure 4. Local Employment by Occupation in 2000-2010, Koyuk (U.S. Census).



Governance

Koyuk was incorporated as a Second-class city in 1970 and is not part of an organized borough. Koyuk has a mayoral form of government with a 7-member city council including the mayor, an 11-member school board, and several municipal employees. In addition, a federally-recognized Tribe is present in the community. The Native Village of Koyuk is represented by a seven-member Indian Reorganization Act (IRA) Council whose members are elected to serve on open seats at each Annual Tribal Members meeting. The meetings are held on the second

Saturday of December. Elections for the Tribal Council members are held in accordance with the procedures outlined within the Tribe's Constitution and By-Laws.⁵³⁵

In 2010, Koyuk administered a 2% sales tax and collected no property tax. When adjusted for inflation,⁵³⁶ total municipal revenues increased by 19.9% between 2000 and 2010 from \$694,889 to \$1.08 million. In 2010, most (83.5%) locally generated revenues were collected from utility rents and other enterprise revenues, followed by contracted services (5.5%) and sales tax revenues (4.6%). Most (44.6%) outside revenues were collected from state revenue sharing. Overall, sales taxes accounted for 3.4% of total municipal revenues for that year, compared to 3.7% in 2000. In addition, state allocated Community Revenue Sharing accounted for 23.7% of total revenues, compared to 4.1% from State Revenue Sharing in 2000.

Fisheries-related state or federal grants awarded to Koyuk between 2000 and 2010 included \$88,670 from The Denali Commission for fuel tank farm upgrades. In addition, Koyuk received \$100,000 as a Community Benefits Share from its Community Development Quota entity, Norton Sound Economic Development Corporation (NSEDC), in 2010. Also from the NSEDC, the village received \$9,558 for the construction of a fisherman's floating dock; \$38,161 for the construction of a solar powered repeater station; \$9,631 for the construction of a burn box; \$2,650 for completion of the Koyuk IRA building; \$11,984 for a fisherman's channel marker; \$8,000 for the Koyuk-Malemute School; and \$1,000 toward a basketball tournament.⁵³⁷ Information regarding municipal finances can be found in Table 2.

The Native Village of Koyuk was included under the Alaska Native Claims Settlement Act (ANCSA). The ANCSA-chartered Native village corporation is Koyuk Native Corporation, and the regional Native Corporation is Bering Strait Native Corporation.⁵³⁸ The Native Village of Koyuk is also a member of Kawerak Inc., a tribal non-profit organization with a mission to "assist, promote and provide programs and services to improve the social, economic, educational, cultural and governmental self-sufficiency for the betterment of the Native people within the region, and to preserve the traditional culture, languages and values."⁵³⁹ Kawerak, Inc. is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁵⁴⁰ Kawerak, Inc. offers children and family services, community services, and education, employment and training opportunities for residents of the 18 member villages located in the Bering Straits region. The non-profit also includes a Natural Resources Division, which incorporates the Eskimo Walrus Commission, Land Management Services, Reindeer Herders Association, and Subsistence Resources Division.⁵⁴¹

⁵³⁵ The Native Village of Koyuk (n.d.). *Homepage*. Retrieved April 9, 2012 from <http://www.kawerak.org/tribalHomePages/koyuk/index.html>.

⁵³⁶ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

⁵³⁷ Norton Sound Economic Development Corporation website. 2003. Retrieved April 13, 2012 from <http://www.nsedc.com/>.

⁵³⁸ See footnote 535.

⁵³⁹ Kawerak, Inc. website. 2006. Retrieved February 17, 2012 from <http://www.kawerak.org/>.

⁵⁴⁰ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁵⁴¹ See footnote 535.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Koyuk from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State and Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$694,889	\$25,439	\$28,474	\$19,265
2001	\$698,631	\$28,118	\$28,473	n/a
2002	\$839,124	\$28,947	\$32,020	\$19,265
2003	\$749,651	\$33,432	\$27,590	\$19,265
2004	\$942,468	\$31,098	-	\$10,598
2005	\$796,895	\$23,656	-	\$10,597
2006	\$881,850	\$32,771	-	\$9,691
2007	\$879,857	\$33,296	-	n/a
2008	\$1,081,538	\$33,355	-	n/a
2009	\$942,037	\$37,581	\$257,562	n/a
2010	\$1,077,727	\$36,515	\$255,470	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

The closest offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community and Economic Development are located in Nome. The closest Offices of the Alaska Department of Natural Resources, National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services are located in Anchorage.

Infrastructure

Connectivity and Transportation

There are no roads connecting Koyuk with other villages. The lack of an extensive road system increases the importance of the winter trail system. The most well-known trail is the 1,151 mile Iditarod trail from Anchorage to Nome. This trail connects the villages of Unalakleet, Shaktoolik, Koyuk, White Mountain, Koyuk, and Elim. There is also a trail connecting Koyuk to Buckland, and a coastal route between Stebbins and St. Michael, Unalakleet, Shaktoolik, Koyuk, Elim, Golovin, White Mountain and Solomon.⁵⁴² Construction has also begun on an 18-mile road segment connecting Koyuk to Six Mile Point. Availability of snowmobiles in winter and ATVs in summer give community residents important access to subsistence resources not limited

⁵⁴² National Oceanic and Atmospheric Administration (2011). *Bering Straits Coastal Resource Service Area Coastal Management Plan*. Retrieved April 18, 2012 from

to the trail system.⁵⁴³ Nevertheless, regular access is primarily limited to air and sea. Supplies arrive in Nome and are lightered to shore.

There is no dock in the village, but the city has received \$9,558 in funding from NSEDC for a fisherman's floating dock through the organization's Shoreside Infrastructure Improvements Program.⁵⁴⁴ Locations being considered for the port are Nanitchitiq and near Coal Creek, and there are also discussions in the community about adding a retractable boat harbor.⁵⁴⁵ The village has also received three boats from NSEDC.

There is a state-owned airport (Koyuk Alfred Adams Airport⁵⁴⁶) with a gravel runway that measures 3,000 feet long by 60 feet wide; improvements are needed to bring the runway up to the standard minimum length of 4,000 feet. Daily flights are accommodated between Nome and Unalakleet. Airline services are provided by Bering Air, Cape Smythe Air, Olson Air, Hageland Aviation, Arctic Transportation Service, Servant Airlines, Era Aviation and Tanana Air.⁵⁴⁷ The price of round-trip airfare between Anchorage and Koyuk in June 2012 was \$789.⁵⁴⁸

*Facilities*⁵⁴⁹

A piped water and sewer system on the west side of town serves 51 households. A washeteria and central watering point also exist. Electricity is provided by Alaska Village Electric Cooperative (AVEC). Water and sewer systems, as well as the washeteria, are operated by the City of Koyuk. The school was recently connected to the new sewer system, since its septic effluent is posing a health hazard.⁵⁵⁰ The DEC has approved the landfill for use, although it is not permitted.

Visitor accommodations include the Hannon's Cabin, Henry's House, and Grace Morris' Bed and Breakfast,⁵⁵¹ the City Library, Koyuk Native Corporation, and Koyuk-Malemute School.⁵⁵² Public safety services are provided by the City of Koyuk Village Public Safety Officers (VPSO) and state troopers in Nome. Fire and rescue services are provided by the Koyuk Volunteer Fire Department and the State VPSO.^{553,554} Fisheries-related businesses and services available in Koyuk include a private hunting and trapping business. Public services available in Koyuk include medical services, a church, a youth center and pool hall, public and school

⁵⁴³ Ibid.

⁵⁴⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁴⁵ Kawerak, Inc. (2004). *Local Economic Development Plan: Koyuk, 2005-2010*. Retrieved April 9, 2012 from <http://www.kawerak.org/ledps/koyuk.pdf>.

⁵⁴⁶ AirNav, LLC (n.d.). *Homepage*. Retrieved April 6, 2012 from: <http://www.airnav.com/airport/PAKK>.

⁵⁴⁷ Alaska Department of Transportation & Public Facilities (2010). *The Economic Benefits and Socioeconomic Effects of the Yukon River Road Corridor*. Retrieved April 9, 2012 from http://dot.alaska.gov/nreg/westernaccess/documents/corridor_planning_report_appx_i.pdf.

⁵⁴⁸ Airfare was calculated using lowest fare from www.travelocity.com. Retrieved April 9, 2012.

⁵⁴⁹ See footnote 544.

⁵⁵⁰ Ibid.

⁵⁵¹ See footnote 545.

⁵⁵² See footnote 544.

⁵⁵³ Ibid.

⁵⁵⁴ See footnote 539.

libraries, and a community hall and bingo parlor. Communications services include cable television and internet, radio, local television, and local and long distance telephone.⁵⁵⁵
*Medical Services*⁵⁵⁶

One health clinic, Ruth Qumiiggan Henry Memorial Clinic, is located in the community. The nearest hospital (Norton Sound Health Corporation) is located in Nome.⁵⁵⁷ Emergency services have coastal and air access. Emergency service is provided by a health aide.⁵⁵⁸

Educational Opportunities

The Koyuk-Malemute School, part of the Bering Strait School District, accommodates grades kindergarten through 12th grade and is the only school in the community.⁵⁵⁹ It was built in 2003⁵⁶⁰ and had approximately 110 students and ten teachers as of FY 2012.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The Inupiaq are historically hunting and gathering societies. They continue to subsist on the land and sea of north and northwest Alaska. Their lives revolve around the whale, walrus, seal, polar bear, caribou, reindeer, and fish. The north and northwest region of Alaska is vast. The land and sea are host to unique groups of people. To the people of the north, the extreme climate is not a barrier, but a natural realm for a variety of mammals, birds and fish, gathered by the people for survival.⁵⁶¹

The Koyuk Native Corporation is a major surface land owner of the Koyuk River Drainage area. This important use area (designated as such for its highly productive wildlife habitat and ability to sustain a large part of villages' subsistence needs) includes the Koyuk River and the coastal waters extending one mile from the ordinary high water of the Koyuk River at its confluence with Norton Bay and then Norton Sound. The drainage provides habitat for one of the region's largest moose populations. ADF&G estimates that about 30,000 caribou winter east of the Koyuk River to within 10 miles of the coast. This is by far the largest gathering of caribou in the Bering Straits Coastal Resource Service Area,⁵⁶² a special form of local government used by village in the unorganized borough to manage coastal resources which includes the area adjacent to Norton Sound and the Seward Peninsula as well as St. Lawrence Island, King Island, and

⁵⁵⁵ Ibid.

⁵⁵⁶ See footnote 544.

⁵⁵⁷ Alaska Department of Health and Social Services (n.d.). *Emergency Medical Services Directory*. Retrieved April 11, 2012 from http://hss.state.ak.us/dph/emergency/ems/assets/EMS_Directory3_Norton_Sound.pdf.

⁵⁵⁸ See footnote 544.

⁵⁵⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁵⁶⁰ Koyuk School (n.d.). *Koyuk School Blog*. Retrieved April 9, 2012 from <http://koyuk.bssd.org/>.

⁵⁶¹ Alaska Native Heritage Center (n.d.). *Yup'ik & Cup'ik - Who We Are website*. Retrieved April 13, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/

⁵⁶² See footnote 542.

Little Diomed Island.⁵⁶³ The lower reaches of the river support one of the region's few shellfish populations. Wetlands south of Koyuk provide excellent shorebird nesting habitat. Extensive coastal mudflats attract thousands of feeding shorebirds, and brant use the area in spring. In summer swans, geese, ducks and cranes feed in the area. Aerial surveys have shown that these wetlands support one of the greatest densities of waterfowl and shorebirds in the region (an estimated 44,000 waterfowl, shorebirds, and song-birds). It has also been noted that these sensitive habitats would be very difficult to protect in the event of a large oil spill.⁵⁶⁴

The Koyuk River, which flows from Kuzitrin Lake to Norton Bay and out into Norton Sound, comprises an essential subsistence use area for Koyuk residents. Villagers harvest fish (e.g., salmon, whitefish, smelt, grayling, Arctic char, and tomcod) from the river and mammals (e.g., moose, caribou, bear, and beaver) and waterfowl from the river valley.⁵⁶⁵

Koyuk is located in Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. With regard to salmon fisheries, Koyuk is located in subdistrict 4 (Norton Bay) of the six Norton Sound salmon subdistricts.⁵⁶⁶ The Village is a member of the NSEDC, a Community Development Quota (CDQ) group that promotes training and employment opportunities for residents, community and development programs for member villages, and offers loans to facilitate involvement of locals in Bering Sea crab and groundfish fisheries. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.⁵⁶⁷ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

The Norton Bay Salmon Subdistrict typically has difficulty attracting buyers due to its remoteness and reputation for watermarked fish. However, in recent years NSEDC has taken measures to rebuild the fishery by helping to reinstate outstanding limited entry permits and by finding markets for watermarked salmon, such as a “marinade program” in which fillets removed from watermarked salmon are sold in vacuum sealed packages containing marinade. Timely salmon escapement information is lacking in the Norton Bay Subdistrict due to a lack of counting projects and limited aerial surveys. Currently, the Subdistrict is typically managed using escapement and catch information from the Shaktoolik and Unalakleet Subdistricts because they are believed to exhibit similar trends in salmon run strength and timing. In 2008, a small scale commercial salmon fishery occurred in Norton Bay Subdistrict for the first time since 1997. The fishery was very limited again in 2010 due to a combination of limited tendering

⁵⁶³ Alaska Department of Commerce, Community, and Economic Development (n.d.). *Coastal Resource Service Area and Municipal Recipient Program: Bering Straits Coastal Resource Service Area*. Retrieved April 24, 2012 from <http://www.commerce.state.ak.us/dca/planning/cciap/recipients/recipient3.htm>.

⁵⁶⁴ National Oceanic and Atmospheric Administration (2011). *Bering Straits Coastal Resource Service Area Coastal Management Plan*. Retrieved April 18, 2012 from

⁵⁶⁵ Ibid.

⁵⁶⁶ Alaska Department of Fish and Game (n.d.). *Norton Sound Shaktoolik and Unalakleet Subdistricts Chinook Salmon Stock Status and Action Plan*. Retrieved April 13, 2012 from <http://www.arlis.org/docs/vol1/57239745.pdf>.

⁵⁶⁷ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

capacity in early July, mechanical breakdowns on tender vessels in August, and limited fishery participation due to concurrent fisheries prosecuted in the Elim and Shaktoolik Subdistricts.⁵⁶⁸

Processing Plants

The 2010 ADF&G's Intent to Operate list does not list a registered processing plant in Koyuk. The closest NSEDC buying station is in Elim, and the closest NSEDC processing plant is in Unalakleet; although, Koyuk does have its own ice delivery system.⁵⁶⁹

Fisheries-Related Revenue

In 2010, Koyuk collected \$148 in fisheries-related revenue.⁵⁷⁰ This amount was collected through Raw Fish Tax and Shared Fisheries Businesses Taxes. Further information regarding fisheries-related revenue accrued between 2000 and 2010 can be found in Table 3.

Commercial Fishing

There is modest participation by Koyuk residents in state fisheries as permit holders, crew members and vessel owners. As such, there is only a small amount of commercial fishing in Koyuk, and only data for herring and salmon have been recorded by the ADF&G. In 2010, 15 residents held a total of 14 permits issued by the Commercial Fisheries Entry Commission (CFEC), compared to 16 and 16 in 2000, respectively. Of these issued permits, 11 were for salmon, compared to 12 in 2000; and three were for herring, compared to four in 2000. Of the CFEC permits issued in 2010, four were actually fished, and they were all salmon permits. No herring permits were fished in 2010. Fisheries prosecuted by residents of Koyuk in 2010 included the Norton Sound gillnet herring and Norton Sound gillnet salmon. Between 2000 and 2010, no fish landings or ex-vessel revenue were recorded in Koyuk.⁵⁷¹

No Federal Fisheries Permits (FFP) or federal License Limitation Program permits (LLP) were issued to Koyuk residents between 2000 and 2010, and no quota share accounts or quota shares were held in federal catch share fisheries for halibut, sablefish or crab during the decade. Information about CFEC, FFP and LLP permits is presented in Table 4, and information about federal quota is presented in Tables 6 through 8.

There were nine residents who held commercial crew licenses in 2010, compared to seven in 2000. In addition, residents held majority ownership of only one vessel in 2010, an 83.3% decline from six vessels in 2000. The number of vessels homeported in Koyuk mirrored

⁵⁶⁸ Alaska Department of Fish and Game, Division of Commercial Fisheries (2010). *2010 Norton Sound Salmon Season Summary*. Retrieved April 13, 2012 from http://www.adfg.alaska.gov/static/fishing/PDFs/commercial/2010_norton_salmon_summary.pdf.

⁵⁶⁹ See footnote 564.

⁵⁷⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

⁵⁷¹ Alaska Commercial Fisheries Entry Commission. (2011). *Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010*. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

this trend, falling from six in 2000 to one in 2010. Further information regarding commercial fishing trends can be found in Tables 4 through 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Koyuk: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$60	\$121	\$121	\$150	\$150	\$70	\$318	\$169	\$168	\$160	\$67
Shared Fisheries Business Tax ¹	\$60	\$120	\$174	n/a	\$71	\$180	\$218	\$169	\$93	\$67	\$81
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$120	\$241	\$295	\$150	\$221	\$250	\$536	\$338	\$261	\$227	\$148
Total municipal revenue⁵	\$694,889	\$698,631	\$839,124	\$749,651	\$942,468	\$796,985	\$881,850	\$879,857	\$1.08 M	\$942,037	\$1.08 M

Note: n/a indicates that no data were reported for that year.

*Reported by community leaders in a survey conducted by the AFSC in 2011.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Koyuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	4	4	3	3	3	2	3	3	3	4	3
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	4	4	3	3	3	2	3	3	3	3	3

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Table 4 cont'd. Permits and Permit Holders by Species, Koyuk: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	12	12	12	12	12	12	12	13	12	12	11
	Fished permits	0	0	0	0	0	0	0	0	0	3	4
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	36%
	Total permit holders	12	12	12	12	12	12	12	13	13	12	12
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>16</i>	<i>16</i>	<i>15</i>	<i>15</i>	<i>15</i>	<i>14</i>	<i>15</i>	<i>16</i>	<i>15</i>	<i>16</i>	<i>14</i>
	<i>Fished permits</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>4</i>
	<i>% of permits fished</i>	<i>6%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>19%</i>	<i>29%</i>
	<i>Permit holders</i>	<i>14</i>	<i>14</i>	<i>14</i>	<i>14</i>	<i>14</i>	<i>13</i>	<i>14</i>	<i>15</i>	<i>15</i>	<i>14</i>	<i>13</i>

¹National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Koyuk: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Koyuk ²	Total Net Pounds Landed In Koyuk ^{2,5}	Total Ex-Vessel Value Of Landings In Koyuk ^{2,5}
2000	7	0	0	6	6	0	0	\$0
2001	0	0	0	4	4	0	0	\$0
2002	0	0	0	1	1	0	0	\$0
2003	1	0	0	0	0	0	0	\$0
2004	1	0	0	0	1	0	0	\$0
2005	4	0	0	0	1	0	0	\$0
2006	3	0	0	0	1	0	0	\$0
2007	1	0	0	0	0	0	0	\$0
2008	2	0	0	0	0	0	0	\$0
2009	5	0	0	0	0	0	0	\$0
2010	9	0	0	1	1	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Koyuk: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Koyuk: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Koyuk: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Koyuk: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Koyuk Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	0	0	0	0	0	0	0	--
Finfish	--	--	--	0	0	0	0	0	0	0	--
Halibut	--	--	--	0	0	0	0	0	0	0	--
Herring	--	--	--	0	0	0	0	0	0	0	--
Other Groundfish	--	--	--	0	0	0	0	0	0	0	--
Other Shellfish	--	--	--	0	0	0	0	0	0	0	--
Pacific Cod	--	--	--	0	0	0	0	0	0	0	--
Pollock	--	--	--	0	0	0	0	0	0	0	--
Sablefish	--	--	--	0	0	0	0	0	0	0	--
Salmon	--	--	--	0	0	0	0	0	0	0	--
<i>Total²</i>	--	--	--	0	0	0	0	0	0	0	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Finfish	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Halibut	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Herring	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Other Groundfish	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Other Shellfish	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Pacific Cod	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Pollock	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Sablefish	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
Salmon	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--
<i>Total²</i>	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010 there were no sport fish guide businesses or licensed sport fish guides in Koyuk. However, starting in 2007, sport fishing licenses were sold in the community, with between 37 and 48 licenses sold per year. Between 2000 and 2010, Koyuk residents purchased between 34 and 58 sport fishing licenses (irrespective of point of sale). In some years, the number of sport fishing licenses sold in Koyuk was greater than the number of licenses purchased by residents of Koyuk, indicating that a small number of non-local resident sport fishermen may use Koyuk as a base of fishing activity. Further information about the sport fishing sector in and near Koyuk is displayed in Table 11.

Table 11. Sport Fishing Trends, Koyuk: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Koyuk ²
2000	0	0	35	0
2001	0	0	41	0
2002	0	0	47	0
2003	0	0	50	0
2004	0	0	47	0
2005	0	0	53	0
2006	0	0	34	0
2007	0	0	46	48
2008	0	0	49	48
2009	0	0	58	50
2010	0	0	37	37

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	0	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

The Alaska Statewide Harvest Survey,⁵⁷² conducted by ADF&G between 2000 and 2010, does not provide information about species targeted by private anglers in Koyuk. Given the lack of charter businesses, no kept/release log book data were reported out of Koyuk between 2000 and 2010.⁵⁷³ Koyuk is located within Alaska Sport Fishing Survey Area W – Seward Peninsula and Norton Sound. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, saltwater sport fishing activity was minimal, with up to 204 non-Alaska resident angler days fished per year, and up to 2,663 Alaska resident angler days fished per year. However, the number of Alaska resident angler days fished per year saw a significant drop in 2010, falling 96.2% from 2009 (from 897 to 34). A majority of sport fishing activity occurred in freshwater, with Alaska resident anglers fishing consistently more angler days (from 6,199 – 17,579 angler days per year) than non-Alaska resident anglers (from 2,087 – 8,307 angler days per year). Still, this number also fell for Alaska residents, 48.3% from 2009 (from 11,995 to 6,199) and 90.3% from 2000 (from 11,795 to 6,199). Further information about the sport fishing sector in and near Koyuk is displayed in Table 11.

Subsistence Fishing

The Koyuk River is the primary source of subsistence fisheries resources for the village of Koyuk. This river contains Chinook, coho, chum, and pink salmon, and is therefore listed by the National Marine Fisheries Service (NMFS) as Essential Fish Habitat.⁵⁷⁴ No information was reported by ADF&G between 2000 and 2010 regarding per capita subsistence harvest or household participation in the subsistence harvest of salmon, halibut, marine mammals, marine invertebrates or non-salmon fish (Table 12). However, permit and harvest data are available for salmon.

According to the species listed by ADF&G in Table 13, pink salmon made up the majority of recorded subsistence salmon harvests in 2008, followed by chum, coho, and Chinook. In that year, reported harvests totaled 9,092 salmon, compared to 7,533 in 2000. Limited sockeye and Chinook salmon are harvested. No marine invertebrates or non-salmon fish harvests were reported during this time period. No information was reported regarding individual subsistence harvest of halibut (Table 14). Between 2000 and 2010, an estimated 53 beluga whales were harvested. Most whales were harvested in 2001 and 2002, with harvests dropping significantly in years following. One walrus was reported harvested in 2005. No information was reported on subsistence harvests of Steller sea lions, harbor seals, or spotted seals (Table 15).

⁵⁷² Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁵⁷³ Alaska Department of Fish and Game (2011). Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵⁷⁴ Bureau of Land Management (2008). *Kobuk-Seward Peninsula Record of Decision and Approved Management Plan*. Retrieved April 13, 2012 from http://www.blm.gov/ak/st/en/prog/planning/ksp/ksp_documents/ksp_rod_and_approved.html.

Table 12. Subsistence Participation by Household and Species, Koyuk: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Koyuk: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	75	70	385	4,580	259	2,290	19	n/a	n/a
2001	82	69	460	4,445	276	5,203	14	n/a	n/a
2002	84	76	557	3,971	509	6,049	n/a	n/a	n/a
2003	81	75	373	3,397	510	4,184	46	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	85	82	187	3,330	1,084	4,489	2	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation,
 Koyuk: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Koyuk: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	13	n/a	n/a	n/a	n/a	n/a	n/a
2002	17	n/a	n/a	n/a	n/a	n/a	n/a
2003	3	n/a	n/a	n/a	n/a	n/a	n/a
2004	9	n/a	n/a	n/a	n/a	n/a	n/a
2005	5	n/a	1	n/a	n/a	n/a	n/a
2006	3	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	3	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Marshall

People and Place

*Location*⁵⁷⁵



Marshall is situated on the north bank of Polte Slough and on the east bank of the Yukon River, in the Yukon-Kuskokwim Delta. It is north of Arbor Island and is located on the northeastern boundary of the Yukon Delta National Wildlife Refuge. The community is located in the Wade Hampton Census Area and Bethel Recording District. The City of Marshall encompasses 4.7 square miles of land, and does not have jurisdiction over water area.

*Demographic Profile*⁵⁷⁶

In 2010, there were 414 residents in Marshall, making it the 134th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Marshall increased by 51.6%. According to Alaska Department of Labor estimates, the population of permanent residents increased by 18.7% between 2000 and 2009, with an average annual growth rate of 1.53%, representing steady growth over time. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that the population of Marshall reaches its peak during summer months, in June and July. They said population fluctuations are somewhat driven by employment in the commercial fishing sector.

In 2010, the majority of the population of Marshall was American Indian and Alaska Native (94.7%), with 2.7% White, 0.2% Asian, and 2.4% individuals identifying with two or more races. In addition, 0.2% of Marshall's population identified themselves as Hispanic. The percentage of the population made up of White residents decreased slightly between 1990 and 2000, from 5.5% to 2.0%, and then increased very slightly by 2010 to 2.4%. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Marshall was 4.14, an increase from 3.84 persons per household in 2000 and 1.9 persons per household in 1990. The number of households in Marshall has increased over time, from 70 households in 1990 to 91 in 2000 and 100 in 2010. Of the 108 housing units surveyed for the 2010 Decennial Census, 58.3% were owner-occupied, 34.3% were rented, and 7.4% were vacant or used only seasonally. In 2010, no residents of Marshall lived in group quarters.

⁵⁷⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁷⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

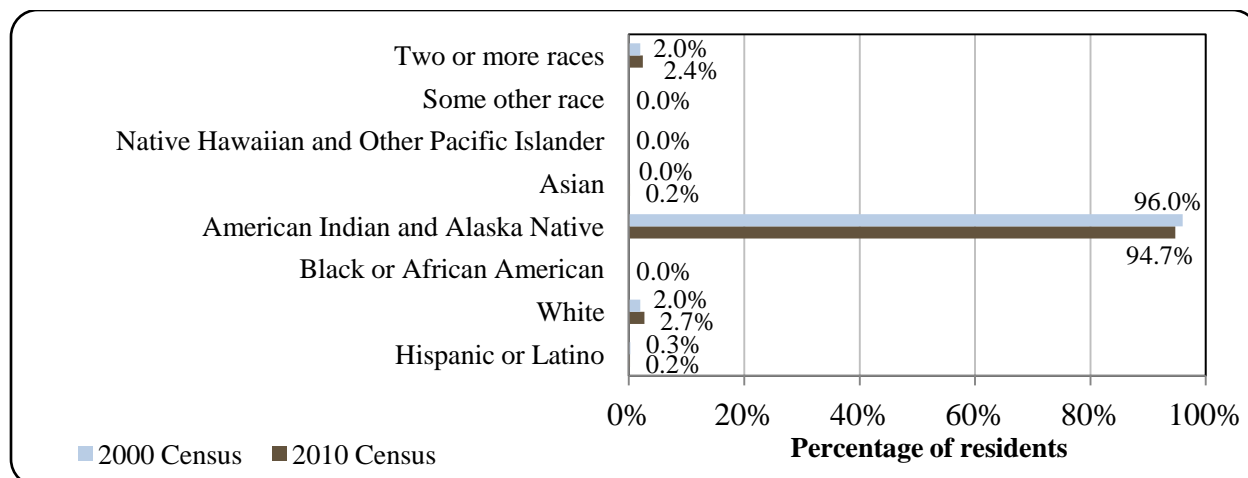
Table 1. Population in Marshall from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	273	-
2000	349	-
2001	-	363
2002	-	364
2003	-	371
2004	-	366
2005	-	375
2006	-	387
2007	-	387
2008	-	416
2009	-	414
2010	414	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

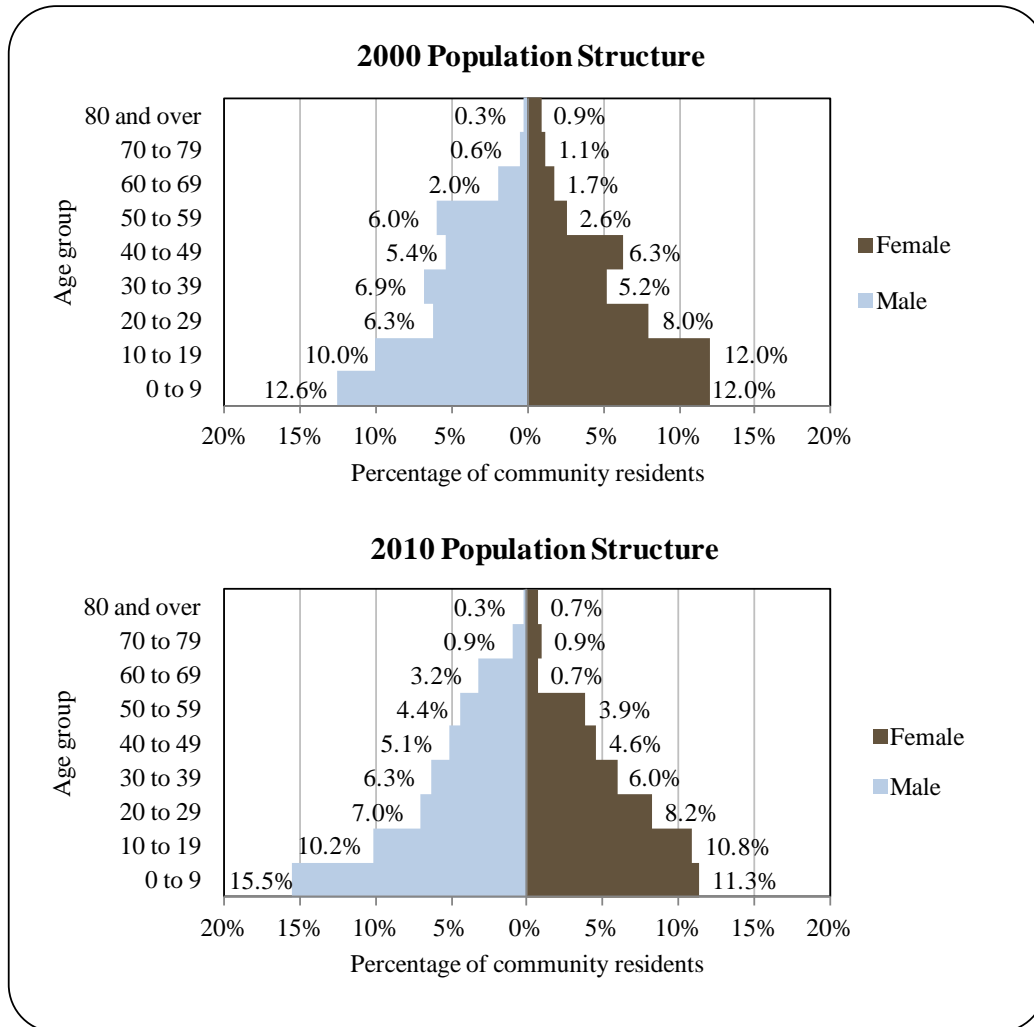
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Marshall: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Marshall’s population (52.7% male and 47.3% female) was very close to the state population as a whole, at 52% male and 48% female. The median age of Marshall residents was 21.3 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the age groups most heavily skewed toward males were 0 to 9 and 60 to 69, while there was a relatively even spread of males and females across other age categories in Marshall. Only 6.7% of Marshall’s population was age 60 or older in 2010. The overall population structure of Marshall in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Marshall Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to 2006-2010 American Community Survey (ACS) estimates,⁵⁷⁷ 72.5% of Marshall residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 11.2% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 16.3% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 15.7% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 0% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 6.7% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 3.4%

⁵⁷⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Marshall is located in traditional Yup'ik Eskimo territory. Alaska Natives living in southwest Alaska are named after the two main dialects of the Yup'ik language, known as Yup'ik and Cup'ik. The arrival of ancestral Eskimo cultures to Alaska is marked by the appearance around 4,000 years ago of the “Arctic Small Tools tradition.” These small, finely-flaked tools first appeared in northwestern Alaska and spread rapidly southward.⁵⁷⁸ Historically the Yup'ik people were very mobile, traveling with the migration of game, fish, and plants. The ancient settlements and seasonal camps contained small populations, with numerous settlements throughout the region consisting of extended families or small groups of families.⁵⁷⁹

Several villages were historically located near the current site of Marshall, including Ohogamiut and Takshak. The site of Marshall itself was known as “Uglouaia”, which means “little bow”, and the area on Polte Slough was known as “Massercullermiut”, meaning “the place to catch chum salmon.”⁵⁸⁰ Because “southwestern Alaska lacked significant amounts of any of the commercially valuable resources that first drew non-Natives to other parts of the state,” the Native people of the southwest region did not experience continual contact with the outside world until missionaries settled in the area beginning in the mid-1800's. The first to arrive were the Russian Orthodox, followed by the Moravians, and finally by the Jesuits.⁵⁸¹

In 1913, gold was discovered in the Massercullermiut area, prompting a gold stampede to the area. The creek where gold was discovered was named Wilson Creek, after President Woodrow Wilson, and the placer mining camp that soon grew to support mining activity was called Marshall after then Vice President Thomas R. Marshall. Between 1914 and 1919, a total of 47,649 oz of gold and 6,800 oz of silver were mined from Wilson and Willow Creeks, and production continued throughout the 20th century.⁵⁸²

When Marshall applied for a federal post office in 1913, the postal service requested that the town use a name other than Marshall, given the high potential for confusion with the existing city of Marshall, Alabama. The miners chose the name Fortuna Ledge, after the first child to have been born in the mining camp, Fortuna Odell Hunter. The official name was not changed back to Marshall until 1984, after the village was incorporated as a 2nd Class City in 1970. In some places, however, Marshall is still referred to as Fortuna Ledge.^{583,584}

Residents of nearby Yup'ik villages had moved to Marshall by the late 1940s due to territorial laws requiring that their children be enrolled in school. Today the community is

⁵⁷⁸ National Park Service (n.d.) *Archaeology of the Tundra and Arctic Alaska website*. Retrieved December 8, 2011 from <http://www.nps.gov/akso/akarc/arctic.htm>.

⁵⁷⁹ Alaska Native Heritage Center (n.d) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁵⁸⁰ Rinear, Jeanne Ostnes and Eleanor Ostnes Vistaunet (2008). *Marshall, Fortuna Ledge and the Mining of Willow Creek*. Retrieved December 8, 2011 from <http://explorenorth.com/alaska/history/marshall-history.html>.

⁵⁸¹ Fienup-Riordan, Ann, William Tyson, Pual John, Marie Meade, and John Active (2000). *Hunting Tradition in a Changing World*. New Brunswick: Rutgers University Press. Pg. 115.

⁵⁸² See footnote 580.

⁵⁸³ Ibid.

⁵⁸⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

predominantly made up of Yup'ik Eskimos. Residents of Marshall continue to participate in the traditional subsistence lifestyle, supplementing income from commercial fishing, processing, and other employment.⁵⁸⁵ The sale, importation, and possession of alcohol are banned in the community.⁵⁸⁶

Natural Resources and Environment

The climate of Marshall is continental with maritime influences, with temperatures ranging between -54 and 86 °F.⁵⁸⁷ Average annual rainfall measures 18 inches, and the average annual snowfall is 23 inches.⁵⁸⁸ Heavy winds in the fall and winter often limit air accessibility. The Lower Yukon is ice-free from mid-June through October.⁵⁸⁹

Marshall is located at the northeastern boundary of the Yukon Delta National Wildlife Refuge (NWR). The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant, and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Inland river corridors of the NWR host moose and black bear, and the Kilbuck Mountains south of Marshall provide habitat for brown bear, caribou, and sometimes wolves. NWR lands are open to sport and subsistence hunting and fishing, as well as trapping. A majority of visitors access the NWR via Bethel.⁵⁹⁰ The southwestern border of the Andreafsky Wilderness Area, covering slightly more than 5% of the Yukon Delta NWR, is located approximately 20 miles north of Marshall.⁵⁹¹

The Yukon-Kuskokwim delta is rich in mineral deposits. Nearby Wilson and Willow Creeks were the focus of mining activity during the 20th century.⁵⁹² Two current gold deposits, Stuyahok and Arnold Kako, are located less than 50 miles east of Marshall.⁵⁹³

Natural hazards identified in the Wade Hampton Census Area include flooding, wildfire, earthquake, severe weather, erosion, and volcanic activity.⁵⁹⁴ A cluster of cinder cone volcanoes known as “Ingakslugwat Hills” is located approximately 50 miles southwest of Marshall in the

⁵⁸⁵ Ibid.

⁵⁸⁶ Alaska Dept. of Public Safety (2011). *Local Option Restrictions*. Retrieved May 31, 2012 from <http://dps.alaska.gov/abc/restrictions.aspx>.

⁵⁸⁷ Ibid.

⁵⁸⁸ Snow and rainfall estimates retrieved December 8, 2011 from <http://www.usa.com>.

⁵⁸⁹ See footnote 584.

⁵⁹⁰ U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge website*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁵⁹¹ Wilderness.net website (n.d). *Andreafsky Wilderness*. Retrieved December 8, 2011 from <http://www.wilderness.net>.

⁵⁹² See footnote 580.

⁵⁹³ Alaska Dept. of Commerce (n.d.) *Mineral Resources of Alaska Map*. Retrieved December 2, 2011 from <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁵⁹⁴ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

Yukon-Kuskokwim Delta. The 32 small cinder cones and eight larger craters covers an area of more than 300 square miles, and are thought to have been active during the Holocene.⁵⁹⁵

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located near Marshall as of August 2013.⁵⁹⁶

Current Economy⁵⁹⁷

The economy of Marshall is very seasonal, based primarily on fishing, fish processing, and Bureau of Land Management fire fighting positions, all of which are for the most part performed in the summer months. Some income is also provided by trapping.⁵⁹⁸ Top employers in Marshall in 2010 included local government, the village Native corporation, the school district, the Yukon Kuskokwim Health Corporation, the Rural Alaska Community Action Program (RurAL CAP), Fortuna Ledge Co-op Association, and a private construction company.⁵⁹⁹ Community members supplement wage income with subsistence activities.⁶⁰⁰

Based on household surveys for the 2006-2010 ACS,⁶⁰¹ in 2010, the per capita income in Marshall was estimated to be \$11,851 and the median household income was estimated to be \$37,500. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$9,597 and \$32,917, respectively). However, if inflation is taken into account by converting the 2000 values to 2010 dollars,⁶⁰² 2010 income is revealed to have decreased slightly from a real per capita income in 2000 of \$12,620, and a real median household income of \$43,285. In 2010, Marshall ranked 243rd of 305 Alaskan communities with per capita income data that year, and 204th in median household income, out of 299 Alaskan communities with household income data.

Although Marshall's small population size may have prevented the ACS from accurately portraying economic conditions,⁶⁰³ this decrease in per capita income is confirmed by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Marshall in 2010 is \$7,921.⁶⁰⁴ This

⁵⁹⁵ Global Volcanism Program website (n.d.). *Ingakslugwat Hills*. Retrieved February 8, 2012 from <http://www.volcano.si.edu/world/volcano.cfm?vnum=1104-03->.

⁵⁹⁶ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁵⁹⁷ Unless otherwise noted, all monetary data are reported in nominal values.

⁵⁹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁵⁹⁹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁰⁰ See footnote 598.

⁶⁰¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁶⁰² Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁰³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁰⁴ See footnotes 599 and 601..

decline in income is reflected in the fact that the community was recognized as “distressed” by the Denali Commission,⁶⁰⁵ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It is important to note that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of personal use and subsistence within the local economy.

In 2010, a slightly smaller percentage of Marshall residents was estimated to be in the civilian labor force (61.5%) compared to the civilian labor force statewide (68.8%). In the same year, 16.5% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 12.1%, compared to a statewide unemployment rate of 5.9%. An alternative estimate of unemployment is based on the ALARI database, which indicates that the 2010 unemployment rate in Marshall was 30.7%, compared to a statewide unemployment rate estimate of 11.5%.⁶⁰⁶

Also based on the 2006-2010 ACS, the greatest number of workers was estimated to be employed in the public sector (60%), and the remaining 40% was estimated to be employed in the private sector (40%). Of the 115 people aged 16 and over that were estimated to be employed in the civilian labor force, the majority was estimated to be working in public administration (23.5%), retail trade (21.7%) and the educational services, health care and social assistance sector (20.9%). The occupations in which the greatest percentages of the workforce were estimated to be employed were sales/office (32.2%), management/professional (22.6%), and natural resources/construction/maintenance occupations (20.9%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. In 2010, only 2.6% of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting, and mining industries. Although 24 workers were estimated to be employed in natural resource/construction/maintenance occupations (20.9%), a breakdown of this category reveals that 0 individuals were employed in farming, fishing, and forestry occupations.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 189 employed residents in Marshall in 2010, of which 69.8% were employed in local government, 7.9% in trade, transportation, and utilities, 4.8% were employed in education and health services, 4.8% in construction, 3.2% in state government, 1.6% in financial activities, 1.1% in information, 0.5% in natural resources and mining, 0.5% in leisure and hospitality, 0.5% in professional and business services, and 5.3% in other industries.⁶⁰⁷ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

⁶⁰⁵ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁶⁰⁶ See footnote 599.

⁶⁰⁷ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Marshall (U.S. Census).

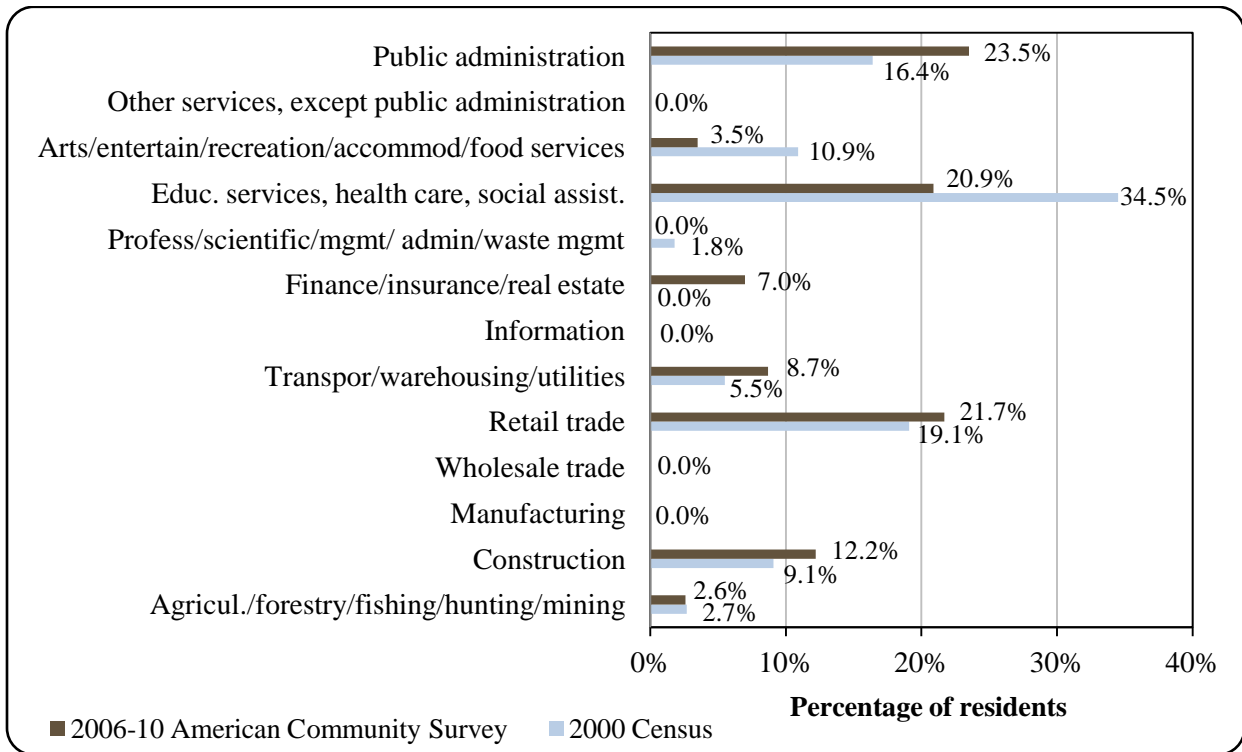
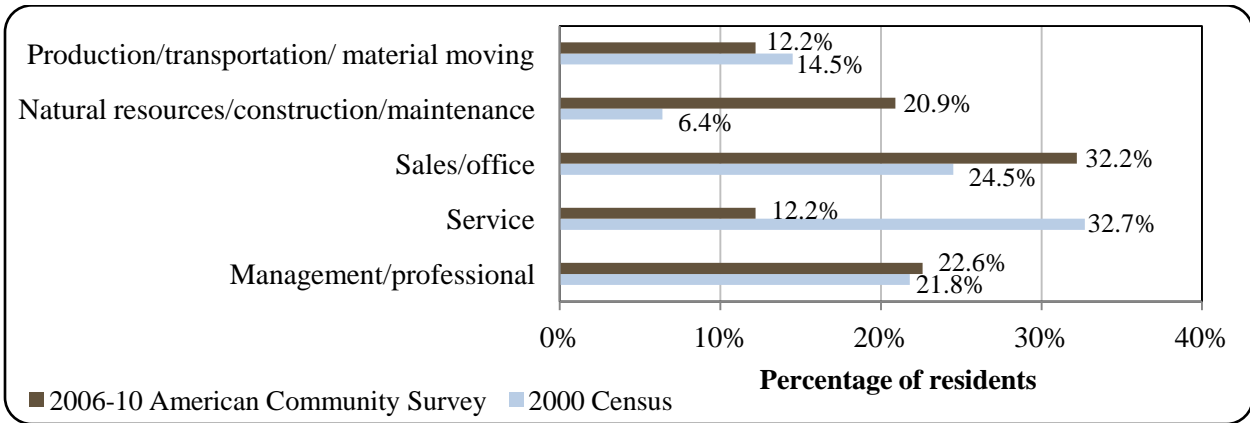


Figure 4. Local Employment by Occupation in 2000-2010, Marshall (U.S. Census).



Governance

Marshall was incorporated as a 2nd Class City in 1970, and is not part of an organized borough. The City has a Strong Mayor form of government, which includes a seven-person city council, including the mayor, a nine-person advisory school board, and several municipal employees. The City administers a 4% sales tax, but no other taxes.⁶⁰⁸ Total municipal revenue,

⁶⁰⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

including locally-generated and outside revenue sources, fluctuated between approximately \$400,000 and over \$800,000 during the 2000-2010 period. In addition to sales tax, local revenue sources during the period included state and federal lease payments, water/sewer and garbage collection service fees, equipment and building rentals, and bingo/pull tabs. Outside revenue sources included the State Revenue Sharing program (approximately \$25,000 in contributions per year from 2000 to 2003) and the Community Revenue Sharing program (contributions of almost \$118,000 per year in 2009 and 2010). Some state revenue sharing came from other programs, such as the Shared Fisheries Business Tax refund (see the *Fisheries-Related Revenue* section of this profile). The City of Marshall also received payments in some years from the federal Payment in Lieu of Taxes program. Capital and special projects grants were also received in some years during the 2000-2010 period, including a \$50,000 grant in 2002 toward construction of a community center, \$41,000 in 2003, and \$25,000 in 2004. . No fisheries-related grants were reported to contribute to community revenue between 2000 and 2010. Information about selected aspects of Marshall’s municipal revenue is presented in Table 2.

Marshall was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Marshall. The office of the Native Village of Ohogamiut is also located in Marshall, and members of this federally recognized Tribe also live in the City. The local village Native corporation is Maserculiq Incorporated, which manages approximately 115,200 acres of land. The regional Native corporation to which Marshall and Ohogamiut belong is the Calista Corporation.⁶⁰⁹

Marshall and Ohogamiut are also members of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development, and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁶¹⁰ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁶¹¹ AVCP is made up of 56 villages and 45 village corporations.⁶¹²

The closest offices of the Alaska Department of Fish and Game (ADF&G) are located in Emmonak and Bethel, although the Emmonak office is only open during the summer season. The closest office of the Alaska Department of Commerce, Community, and Economic Development is also in Bethel. Anchorage has the nearest offices of the National Marine Fisheries Service (NMFS), Alaska Department of Natural Resources, and U.S. Bureau of Citizenship and Immigration Services.

⁶⁰⁹ Ibid.

⁶¹⁰ Association of Village Council Presidents (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

⁶¹¹ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁶¹² Calista Corporation (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Marshall from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$429,242	\$60,606	\$26,943	n/a
2001	\$403,798	\$63,524	\$25,924	n/a
2002	\$820,026	\$52,233	\$25,925	n/a
2003	\$539,398	\$52,845	\$26,108	n/a
2004	\$456,498	\$52,402	n/a	n/a
2005	\$397,491	\$55,628	n/a	n/a
2006	\$420,521	\$54,006	n/a	n/a
2007	\$546,742	\$66,471	n/a	n/a
2008	\$558,089	\$82,855	n/a	n/a
2009	\$585,960	\$92,827	\$117,936	n/a
2010	\$620,506	\$93,229	\$117,956	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at

http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Marshall is accessible for the most part by both air and water; there are no roads which connect it to other communities. The City has a state-owned 3,201-ft-long by 100-ft-wide gravel airstrip.⁶¹³ The approximate cost to travel by air roundtrip to Anchorage from Marshall in early June 2012 was \$690.⁶¹⁴ In a survey conducted by the AFSC in 2011, community leaders reported that a seaplane base is also present. Local residents have boats, but in the winter months they are reliant upon dog teams and snow machines. The City receives barge services.⁶¹⁵

⁶¹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶¹⁴ This price was calculated on November 21, 2011 using kayak.com.

⁶¹⁵ See footnote 613.

Facilities

There are no hotels or accommodations in the Marshall for visitors.⁶¹⁶ The City has a public safety building and jail facility, and police services are available from the state troopers and VPSO (Village Public Safety Officer) stationed in St. Mary's, approximately 50 miles downriver.^{617,618,619} A diesel powerhouse provides electricity to the community, operated by AVEC (the Alaska Village Electric Cooperative). The City operates a piped circulating water system and sewer system that serves the 70% of the community that is fully plumbed. The remainder of the residences must haul water from a central well and use honeybuckets.⁶²⁰ The City also operates a landfill and provides refuse collection services. Telephone service is available in Marshall, but there is no local internet or cable provider.⁶²¹ According the 2011 AFSC survey, community leaders noted the presence of a U.S. post office, and said that improvements in water/sewer pipelines and sewage treatment are under way. They said that a community center/library is also under construction.

According the 2011 AFSC survey, community leaders reported the following fishing-related facilities and services available in Marshall: a fish processing plant, fishing gear sales, boat repair and welding, tackle and bait sales, commercial cold storage facilities, boat fuel sales, ice sales, and a fish cleaning station. According to responses on the survey, no dock space is available for transient, permanent, or public moorage, but new dock space and road access to the dock is under construction. Community leaders said the current dock facility is served by piped water.

Medical Services

Health care is available at Agnes Boliver Health Clinic, which is owned by the City and operated by the Yukon-Kuskokwim Health Corporation. The Clinic is a Community Health Aide Program site. Emergency Services have river and air access. Local emergency service is provided by a health aide.⁶²² In the 2011 AFSC survey, community leaders reported that improvements in emergency services are currently in process.

Educational Opportunities

There is one school in the community, which offers a preschool through 12th grade education. The Marshall School had a total of 132 students and 9 teachers in 2011.⁶²³ In addition,

⁶¹⁶ Ibid.

⁶¹⁷ Ibid.

⁶¹⁸ Dept. of Public Safety (2011). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁶¹⁹ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁶²⁰ A "honeybucket" is an indoor bucket used as a toilet in houses without plumbing.

⁶²¹ See footnote 613.

⁶²² Ibid.

⁶²³ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

RurAL CAP has a school building used for a Head Start program that serves children aged 3 to 5 years.^{624,625}

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources. It is likely that the site of the present day City of Marshall was used seasonally as a camp or subsistence village.⁶²⁶ The Yup'ik name for the area where Marshall is located along Polte Slough is “Massercullermiut”, meaning “the place to catch chum salmon.”⁶²⁷ Subsistence fishing and hunting for salmon, moose, bear, and waterfowl continue to be a primary source of food for Marshall residents, in combination with employment in commercial fishing and processing and other industries.⁶²⁸ Some residents also participate in sport fishing activities.

Indigenous people living along the Yukon River have long harvested salmon for subsistence purposes. Salmon was used for personal subsistence as well as food for sled dogs. The first recorded commercial harvest of salmon on the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure on the Yukon River from 1925 to 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s. Poor returns in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.⁶²⁹

Currently, commercial salmon fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 sub-districts, and 28 statistical areas. Fishing on the lower Yukon River takes place with set and drift gill nets. Subsistence fishermen also most often utilize these gear types. Many subsistence fishermen are also commercial fishermen.⁶³⁰

⁶²⁴ Rural Alaska Community Action Program, Inc. (2011). *2010 Head Start Report*. Retrieved on December 20, 2011 from <http://www.ruralcap.com/>.

⁶²⁵ Personal communication with Raymond D. Alstrom, Marshall Mayor, October 7, 2004.

⁶²⁶ Alaska Native Heritage Center (n.d) Yup'ik & Cup'ik - *Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁶²⁷ Rinear, Jeanne Ostnes and Eleanor Ostnes Vistaunet (2008). Marshall, Fortuna Ledge and the Mining of Willow Creek. Retrieved December 8, 2011 from <http://explorenorth.com/alaska/history/marshall-history.html>.

⁶²⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶²⁹ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶³⁰ Ibid.

In addition to salmon, a number of statewide “freshwater fish” permits were held by Marshall residents in 2009 and 2010. Commercial freshwater fish fisheries may target species such as Arctic char, northern pike, rainbow trout, Dolly Varden char, and sheefish.⁶³¹

Marshall is located approximately 150 miles up the Yukon River from the Bering Sea. This area is included in District 2 of the Lower Yukon River salmon fishery. It is also important to note that the ocean area into which the Yukon River flows is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Marshall is not eligible to participate in the Community Quota Entity (CQE) program, and because the community is located more than 50 miles inland from the ocean, it is not eligible to participate in the Community Development Quota (CDQ) program.

According to a survey conducted by the AFSC in 2011, community leaders reported that Marshall participates in fisheries management processes in Alaska. The primary way in which the community is engaged in fisheries management processes is by sending a representative to sit on a regional fisheries advisory and/or working group run by ADF&G. Community leaders also noted local concern about diminishing Chinook salmon returns along the Yukon, which they attribute to ineffective salmon bycatch management in ocean fisheries.

Processing Plants

Although not listed on ADF&G’s 2010 Intent to Operate list, one processing plant has been active in Marshall in recent years. As recently as 2008, Maserculiq Fish Processors, Inc. was listed on the Intent to Operate list. The company utilizes fish harvested by local Yup’ik Eskimo fishermen and produces value-added salmon products which are distributed by Yukon King Seafoods of Alaska.⁶³²

The 2010 Intent to Operate list did include a registered processing facility in the nearby community of Saint Mary’s (50 miles downriver from Marshall) called Boreal Fisheries, Inc. It is a husband-and-wife operation which began in 1974. Boreal Fisheries purchases salmon from local fishermen, with processing focused on Chinook, chum, and coho.⁶³³

Fisheries-Related Revenue

According to information provided in Marshall’s annual municipal budgets between 2000 and 2010, Marshall received an average of \$813 per year in fisheries-related revenue. The primary source of fisheries-related revenue in Marshall during this period was the Shared Fisheries Business Tax. Information about selected fisheries-related revenue sources is presented in Table 3.⁶³⁴

⁶³¹ Alaska Dept. of Fish and Game (2006). *Our Wealth Maintained: A Strategy for Conserving Alaska’s Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=species.wapview>.

⁶³² Yukon King Seafoods website (2008). *About us*. Retrieved December 8, 2011 from <http://www.yukonking.com>.

⁶³³ Boreal Fisheries website (2009). Retrieved May 31, 2012 from <http://www.borealfish.com/>.

⁶³⁴ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Marshall is a river fishing community, located approximately 150 miles inland along the Yukon River. The primary fisheries resource available to Marshall fishermen is salmon. However, even though Marshall is not a coastal community, several residents also held permits in state fisheries for herring and freshwater fish (“other finfish”) during the 2000-2010 period. Although one shore-side processing facility was registered in Marshall until 2008 (see *Processing Plants* section), no fish buyers were reported to have been present in Marshall between 2000 and 2010 (Table 5). This lack of local fish buyers explains the lack of landings and ex-vessel revenue information reported in the community between 2000 and 2010 (Table 9).

Between 2000 and 2010, several Marshall residents were involved in state commercial fisheries as crew, permit owners, and vessel owners. In 2010, a total of 50 Marshall residents purchased commercial crew licenses, 8 vessels were homeported in the community, and 9 residents were the primary owner of a fishing vessel. Information about landings and ex-vessel revenue earned by Marshall vessel owners between 2000 and 2010 is considered confidential due to the small number of participants (Table 10). According to a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing boats using Marshall as a base of fishing operations were all under 35 ft in length and were mostly gillnetters primarily involved in the salmon fishery.

In 2010, 46 individuals held a total of 53 Commercial Fisheries Entry Commission (CFEC) permits, of which 34 were actively fished that year. Of the total 53 permits, 43 were for the salmon fishery (Lower Yukon gill net fishery), 8 were for the “other finfish” fishery (freshwater set gill net, statewide), and 1 was a herring permit for the Norton Sound roe and food/bait gill net fishery. In 2010, 77% of salmon permits were actively fished, while no “other finfish” permits or the herring permit were actively fished. Marshall residents held between one and three herring permits per year between 2000 and 2010, but none of these permits were actively fished in any year during the period. It is also important to note that, in 2009, one herring permit was also held in the Goodnews Bay roe and food/bait gill net fishery, and that 2009 and 2010 were the only years during the 2000-2010 period that “other finfish” permits were held by Marshall residents. This information about CFEC permits is presented in Table 4.

Between 2000 and 2010, no residents of Marshall held Federal Fisheries Permits (FFP), License Limitation Program permits (LLP), or quota share accounts for federal halibut, sablefish, or crab catch share fisheries. Information about federal permits held by Marshall residents is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community Of Marshall: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	\$557	\$1,011	\$84	n/a	n/a	\$1,047	\$1,052	\$2,758	\$2,351	\$79
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>\$557</i>	<i>\$1,011</i>	<i>\$84</i>	<i>n/a</i>	<i>n/a</i>	<i>\$1,047</i>	<i>\$1,052</i>	<i>\$2,758</i>	<i>\$2,351</i>	<i>\$79</i>
<i>Total municipal revenue</i> ⁵	<i>\$429,242</i>	<i>\$403,798</i>	<i>\$820,026</i>	<i>\$539,398</i>	<i>\$456,498</i>	<i>\$397,491</i>	<i>\$420,521</i>	<i>\$546,742</i>	<i>\$558,089</i>	<i>\$585,960</i>	<i>\$620,506</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Marshall: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	2	2	3	2	2	1	1	1	1	2	1
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	2	2	4	2	2	1	1	1	1	2	1

Table 4 cont'd. Permits and Permit Holders by Species, Marshall: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	20	8
	Fished permits	0	0	0	0	0	0	0	0	0	4	0
	% of permits fished	-	-	-	-	-	-	-	-	-	20%	0%
	Total permit holders	0	0	0	0	0	0	0	0	0	20	8
Salmon (CFEC) ²	Total permits	43	41	40	41	41	40	43	42	42	44	44
	Fished permits	38	1	36	37	36	36	40	38	32	29	34
	% of permits fished	88%	2%	90%	90%	88%	90%	93%	90%	76%	66%	77%
	Total permit holders	48	42	40	42	41	40	45	42	43	46	46
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>45</i>	<i>43</i>	<i>43</i>	<i>43</i>	<i>43</i>	<i>41</i>	<i>44</i>	<i>43</i>	<i>43</i>	<i>66</i>	<i>53</i>
	<i>Fished permits</i>	<i>38</i>	<i>1</i>	<i>36</i>	<i>37</i>	<i>36</i>	<i>36</i>	<i>40</i>	<i>38</i>	<i>32</i>	<i>33</i>	<i>34</i>
	<i>% of permits fished</i>	<i>84%</i>	<i>2%</i>	<i>84%</i>	<i>86%</i>	<i>84%</i>	<i>88%</i>	<i>91%</i>	<i>88%</i>	<i>74%</i>	<i>50%</i>	<i>64%</i>
	<i>Permit holders</i>	<i>48</i>	<i>42</i>	<i>41</i>	<i>42</i>	<i>41</i>	<i>40</i>	<i>45</i>	<i>42</i>	<i>43</i>	<i>55</i>	<i>46</i>

¹ National Marine Fisheries Service. (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Marshall: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Marshall ²	Total Net Pounds Landed In Marshall ^{2,5}	Total Ex-Vessel Value Of Landings In Marshall ^{2,5}
2000	37	0	1	12	10	0	0	\$0
2001	2	0	1	9	8	0	0	\$0
2002	36	0	1	8	6	0	0	\$0
2003	49	0	1	11	10	0	0	\$0
2004	17	0	1	10	9	0	0	\$0
2005	65	0	1	8	7	0	0	\$0
2006	60	0	1	9	8	0	0	\$0
2007	59	0	1	12	10	0	0	\$0
2008	49	0	1	10	9	0	0	\$0
2009	36	0	0	10	9	0	0	\$0
2010	50	0	0	9	8	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Marshall: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Marshall: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Marshall: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Marshall: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Marshall Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

From 2000 to 2010, there were no active sport fish businesses in Marshall, and no licensed sport fish guides were present in the community. During this period, 2007 was the first year in which sport fishing licenses were sold in Marshall. In 2010, 52 sport fishing licenses were sold to Marshall residents (irrespective of point of sale), and 50 licenses were sold in the City of Marshall,⁶³⁵ suggesting that sport fishing by local area residents is the primary source of sport fishing activity in the area. In a survey conducted by the AFSC in 2011, community leaders reported that both Alaska resident and non-Alaska resident sport fishermen fish off the dock in Marshall and also use private boats. They reported that recreational fishermen primarily target chum and Chinook salmon. The Alaska Statewide Harvest Survey,⁶³⁶ conducted by ADF&G between 2000 and 2010, did not report information about species targeted by private anglers in Marshall. However, the survey did note the following species targeted by sport fishermen out of Saint Mary's, a community located 50 miles downriver: coho and chum salmon, Dolly Varden char, Arctic grayling, northern pike, Pacific halibut, and rockfish. The survey also noted harvest of razor clams and hardshell clams by Saint Mary's recreational fishers. No kept/release log book data were reported for fishing charters out of Marshall between 2000 and 2010.⁶³⁷

Marshall is located within Alaska Sport Fishing Survey Area Y – Yukon River Drainage. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, saltwater sport fishing activity was minimal, with between 0 and 81 non-Alaska resident angler days fished per year, and between 0 and 89 Alaska resident angler days fished per year. The low numbers reported for saltwater sport fishing make sense given that a majority of residents in Yukon drainage communities live at a great distance from the ocean, and fishing activities take place primarily in freshwater. Between 2000 and 2010, Alaska resident anglers in the Yukon River drainage consistently fished more days in freshwater (4,783 – 10,400 angler days per year) than non-Alaska resident anglers (2,573 – 5,761 angler days per year). This information about the sport fishing sector in and near Marshall is displayed in Table 11.

⁶³⁵ Alaska Department of Fish and Game (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁶³⁶ Alaska Department of Fish and Game (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁶³⁷ Alaska Department of Fish and Game (2011). Alaska sport fish charter logbook database, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Marshall: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Marshall ²
2000	0	0	25	0
2001	0	0	53	0
2002	0	0	43	0
2003	0	0	26	0
2004	0	0	48	0
2005	0	0	22	0
2006	0	0	35	0
2007	0	0	90	34
2008	0	0	109	104
2009	0	0	31	77
2010	0	0	52	50

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Marshall residents depend on subsistence hunting and fishing to supplement work in commercial fishing and processing and other wage employment.⁶³⁸ In a survey conducted by the AFSC in 2011, Marshall community leaders reported that Chinook salmon, chum salmon, and sheefish⁶³⁹ are some of the most important aquatic subsistence resources harvested by residents.

In 2010, the only year that a subsistence survey was conducted by ADF&G in the community of Marshall between 2000 and 2010, 81% of households were estimated to participate in salmon subsistence, 74% in non-salmon fish subsistence (not including halibut), 46% in marine mammal subsistence, and 4% in halibut subsistence. Zero percent of Marshall households were estimated to participate in marine invertebrate subsistence in 2010. That year, the per capita subsistence harvest of land and sea-based resources in Marshall was estimated to be 1,680 lb (Table 12).

Data are also available from 2000 through 2008 regarding subsistence salmon permits. During this period, between 69 and 86 Marshall households per year were issued subsistence salmon permits. Based on those permits that were returned, Chinook and chum salmon were the two most heavily harvested species, with an average of 3,136 chum salmon and 2,629 Chinook salmon harvested per year. Coho, pink, and sockeye salmon were also harvested in much smaller quantities. Chinook salmon harvest numbers declined substantially after 2001, from harvests of over 3,000 or 4,000 to harvests consistently at or below 2,000 fish per year. In 2008, Chinook harvest rose again to above 3,000 fish. Table 13 presents this information on salmon permits, as well as the total harvest of non-salmon fish reported from the ADF&G 2010 subsistence survey. That year, Marshall residents were estimated to harvest 201,499 lb of non-salmon fish. No information was reported regarding harvest of marine invertebrates. Although Marshall is located approximately 150 miles from the ocean, several residents were reported to participate in the subsistence fishery for Pacific halibut during the 2000-2010 period. Between 2003 and 2007, one Subsistence Halibut Registration Certificate (SHARC) was issued to a Marshall resident each year. However, no information was reported about whether the SHARC card was fished or how many lb of halibut were harvested (Table 14). Between 2000 and 2010, no information was reported by management agencies regarding harvest of marine mammals for subsistence purposes by residents of Marshall (Table 15).

⁶³⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶³⁹ *Stenodus leucichthys*, known as sheefish or inconnu, is the largest member of the whitefish family. It ranges from Arctic drainages to the Kuskokwim, Yukon and Mackenzie Rivers, and is also found in Asia. Coastal populations are anadromous while lake populations are landlocked (Page, L. and B. Burr (1991). *A Field Guide to Freshwater Fishes*. Houghton Mifflin Company, Boston) According to Fish Alaska Magazine, the record sheefish was caught in 1986 and weighed 53 lb, and average size ranges from 5 to 12 lb (retrieved December 15, 2011 from <http://www.fishalaskamagazine.com/fish/sheefish.htm>).

Table 12. Subsistence Participation by Household and Species, Marshall: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	81%	4%	46%	n/a	74%	1,680

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Marshall: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	86	30	3,279	3,234	11	n/a	n/a	n/a	n/a
2001	80	24	4,498	2,605	73	n/a	n/a	n/a	n/a
2002	76	24	2,290	2,824	386	473	n/a	n/a	n/a
2003	75	25	2,060	1,259	64	n/a	n/a	n/a	n/a
2004	73	33	1,990	2,056	425	105	30	n/a	n/a
2005	69	30	1,804	3,816	341	6	n/a	n/a	n/a
2006	76	28	1,897	4,802	191	3	n/a	n/a	n/a
2007	73	31	2,557	3,859	922	n/a	36	n/a	n/a
2008	73	27	3,284	3,771	490	26	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	201

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Marshall: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Marshall: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information⁶⁴⁰

To get to Marshall during the gold stampede of the 1910s, people first traveled 2,500 miles from Seattle to Nome on steamships, where they then transferred to smaller boats and were ferried to St. Michael. From there they transferred again to shallow draft boats that would travel along the coast to the mouth of Yukon River, and up the river to Marshall Landing which is located eight miles upriver from Marshall.

Polte Slough is said to have been named after steamboat skipper Otto Polte.

⁶⁴⁰ Rinear, Jeanne Ostnes and Eleanor Ostnes Vistaunet (2008). Marshall, Fortuna Ledge and the Mining of Willow Creek. Retrieved December 8, 2011 from <http://explorenorth.com/alaska/history/marshall-history.html>.



Mountain Village (A.K.A. Asa'carsarmiut)

People and Place

*Location*⁶⁴¹

Mountain Village is on the north bank of the Yukon River, approximately 20 miles west of St. Mary's and 470 miles northwest of Anchorage. It is at the base of the 500-ft Azachorok Mountain, the first mountain encountered when traveling up the Yukon River. The City encompasses 4.3 square miles of land and 0 square miles of water. Mountain Village is located in the Wade Hampton Census Area and Bethel Recording District.

*Demographic Profile*⁶⁴²

In 2010, there were 813 residents in Mountain Village, making it the 78th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Mountain Village increased by 20.6%. According to estimates by the Alaska Department of Labor, the population of permanent residents increased by 3.5% between 2000 and 2009, with an average annual growth rate between of 0.32%. This reflects small periods of decline within the overall upward population trend over the decade. In 2010, the majority of the population of Mountain Village identified themselves as American Indian and Alaska Native (91.9%), along with 4.2% that identified as White, 0.7% as Asian, and 3.2% that identified with two or more races. In addition, 0.4% of Mountain Village's population identified themselves as Hispanic. The percentages of the population made up of individuals identifying as White decreased over time, from 8.2% in 1990 to 6.4% in 2000, and 4.2% in 2010, while the percentage identifying as Asians, American Indians and Native Alaskans, and individuals of mixed race increased slightly. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Mountain Village was 4.42, greater than household size in 2000 (4.13 persons per household), but an overall decrease from 4.5 persons per household in 1990. The number of households in Mountain Village has increased over time, from 148 households in 1990 to 183 in 2000, and 184 in 2010. Of the 211 housing units surveyed for the 2010 Decennial Census, 56.4% were owner-occupied, 30.8% were rented, and 12.8% were vacant or used only seasonally. From 1990 to 2010, no residents of Mountain Village lived in group quarters.

⁶⁴¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁴² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

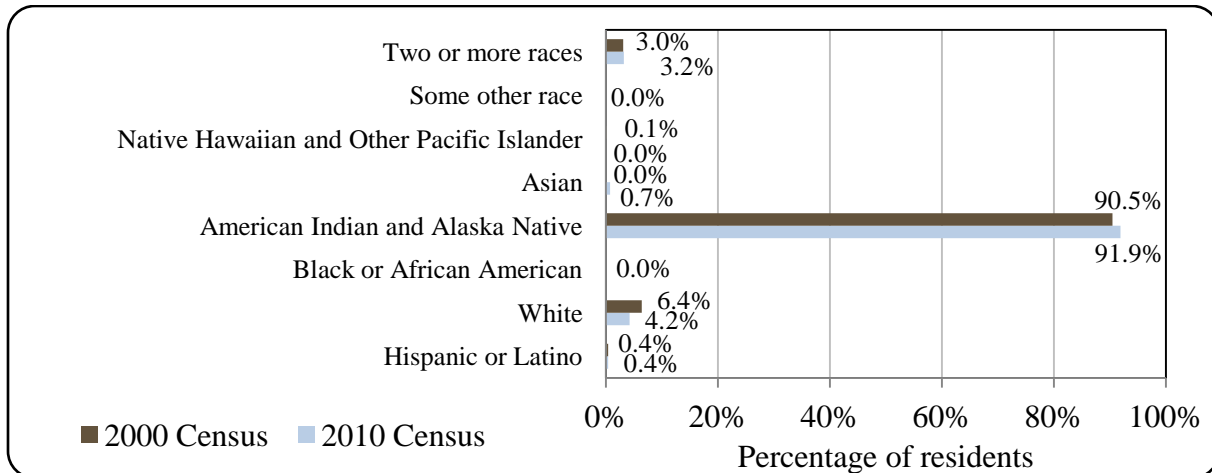
Table 1. Population in Mountain Village from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	674	-
2000	755	-
2001	-	749
2002	-	756
2003	-	752
2004	-	770
2005	-	786
2006	-	798
2007	-	782
2008	-	764
2009	-	782
2010	813	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

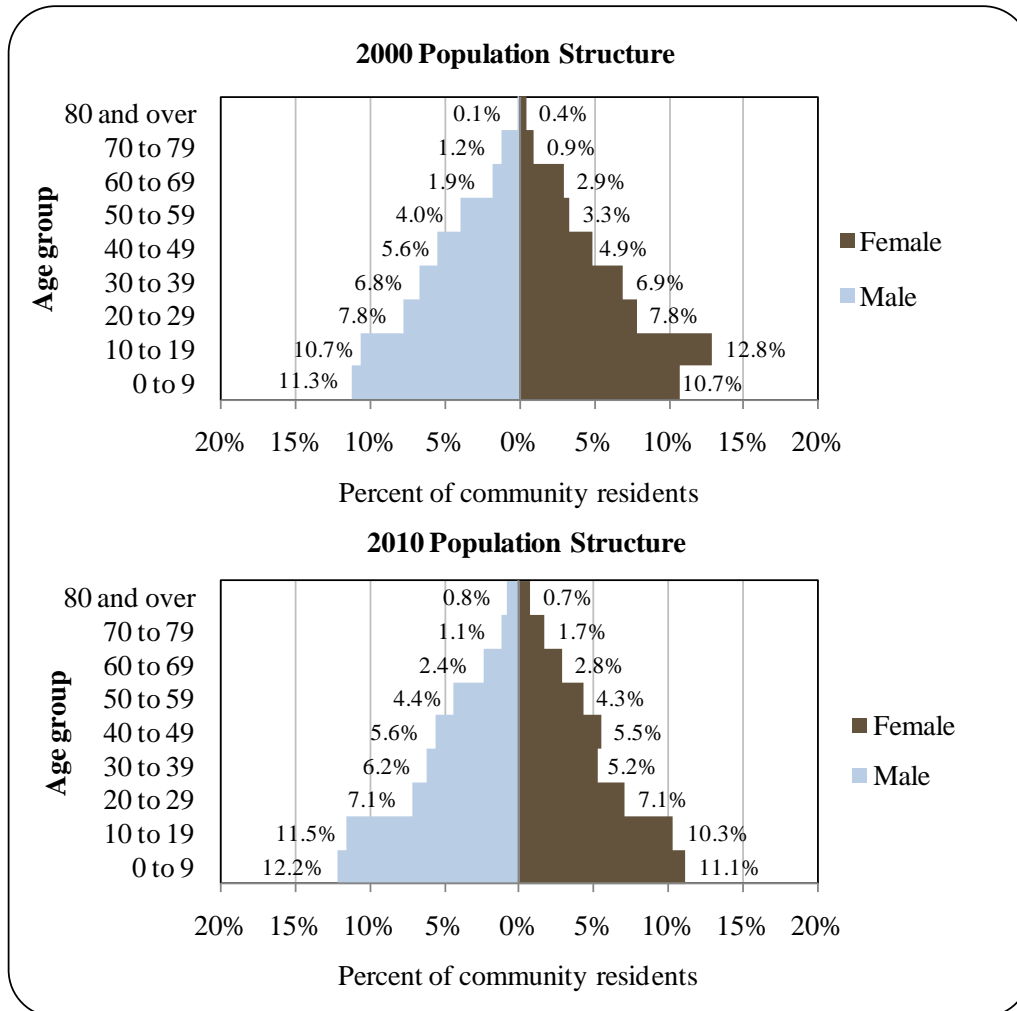
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Mountain Village: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Mountain Village’s population (51.3% male and 48.7% female) was very close to that of the state population as a whole (52% male and 48% female). The median age of Mountain Village residents was 22.6 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, no age groups were more heavily skewed toward males than others, though there were slightly more males in most age group categories. That year 9.5% of Mountain Village’s population was age 60 or older. The overall population structure of Mountain Village in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Mountain Village Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁶⁴³ 72.3% of Mountain Village residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 17.9% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaska residents overall; 9.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 21.4% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 2.7% were estimated to have an Associate’s degree, compared to 8% of Alaska residents overall; 4.7% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaska residents overall; and 5.2%

⁶⁴³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

History, Traditional Knowledge, and Culture

Mountain Village is located in traditional Yup'ik Eskimo territory. Alaska Natives living in southwest Alaska are named after the two main dialects of the Yup'ik language, known as Yup'ik and Cup'ik. Historically, the Yup'ik people were very mobile, traveling with the migration of game, fish and plants. The ancient settlements and seasonal camps contained small populations, with numerous settlements throughout the region consisting of extended families or small groups of families.⁶⁴⁴

Mountain Village was the site of a summer fish camp until the opening of a general store in 1908. This prompted residents of Liberty Landing and Johnny's Place to immigrate. A Covenant Church missionary school was also built in that same year. A post office was established in 1923, followed by a salmon saltery in 1956 and a cannery in 1964. Both have since ceased operating. The city government was incorporated in 1967. Mountain Village became a regional education center in 1976 when it was selected as headquarters for the Lower Yukon School District. Today, residents of Mountain Village continue traditional subsistence practices in combination with income earned from commercial fishing and fish processing. The sale and importation of alcohol is banned in the Village.⁶⁴⁵

Natural Resources and Environment

The climate of Mountain Village is continental with maritime influences. Temperatures range from -44 to 80 °F. Annual precipitation averages 16 inches, with snowfall of 44 inches. The Lower Yukon is ice-free from mid-June to October. High winds and low visibility are common during winter.⁶⁴⁶ Mountain Village has high potential for wind power development due to high average wind speeds, high wind power density, low turbulence and low extreme wind speed probability.⁶⁴⁷

Mountain Village is located within the boundaries of the Yukon Delta National Wildlife Refuge (NWR). The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and cackling geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Nunavaknuk Lake and the Kusilvak Mountains to its south are located approximately 25 miles west of Mountain Village. Inland river corridors of the Refuge host moose and black bear. Refuge lands are open to sport and subsistence hunting and fishing, as well as trapping. A

⁶⁴⁴ Alaska Native Heritage Center (n.d.) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁶⁴⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁴⁶ Ibid.

⁶⁴⁷ V3 Energy LLC. (2011). *Mountain Village, Alaska Wind Resource Report*. Retrieved December 19, 2011 from http://www.akenergyauthority.org/wind/08-2011_MountainVillage-0068-WindResourceReport.pdf.

majority of visitors access the park via Bethel.⁶⁴⁸ The southwestern border of the Andreafsky Wilderness Area, covering slightly more than 5% of the Yukon Delta NWR, is located approximately 15 miles northeast of Mountain Village.⁶⁴⁹

Natural hazards identified in the Wade Hampton Census Area include flooding, wildfire, earthquake, severe weather, erosion and volcanic activity.⁶⁵⁰ A cluster of cinder cone volcanoes, known as “Ingakslugwat Hills” is located approximately 50 miles south of Mountain Village in the Yukon-Kuskokwim Delta. The 32 small cinder cones and eight larger craters covers an area of more than 300 square miles, and is thought to have been active during the Holocene.⁶⁵¹

The Yukon-Kuskokwim delta is rich in mineral deposits. Two current gold deposits, Stuyahok and Arnold Kako, are located approximately 100 miles east of Mountain Village.⁶⁵²

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Mountain Village as of May 2012.⁶⁵³

Current Economy⁶⁵⁴

Mountain Village has a seasonal economy based on commercial fishing and subsistence.⁶⁵⁵ Between 2000 and 2010, the number of Mountain Village residents holding state fishery permits was equal to between 11 and 13% of the total local population, and the number of crew license holders was equal to between 9 and 15%. In 2010, other top local employers included the Lower Yukon School District, local government agencies and the Native village corporation, seafood processing, regional health and education non-profit organizations, and several private construction companies.⁶⁵⁶

Based on household surveys conducted for the 2006-2010 ACS,⁶⁵⁷ in 2010, the per capita income in Mountain Village was estimated to be \$12,645 and the median household income was estimated to be \$47,604. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$9,653 and \$31,250, respectively). However, if inflation is

⁶⁴⁸ U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁶⁴⁹ Wilderness.net (n.d.). *Andreafsky Wilderness*. Retrieved December 8, 2011 from <http://www.wilderness.net/NWPS/wildView?WID=11>.

⁶⁵⁰ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁶⁵¹ Global Volcanism Program (n.d.). *Ingakslugwat Hills*. Retrieved February 8, 2012 from <http://www.volcano.si.edu/world/volcano.cfm?vnum=1104-03->.

⁶⁵² Alaska Dept. of Commerce (n.d.). *Mineral Resources of Alaska Map*. Retrieved December 2, 2011 from <http://commerce.alaska.gov/ded/dev/minerals/mining.htm>.

⁶⁵³ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁶⁵⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁶⁵⁵ See footnote 645.

⁶⁵⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁶⁵⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

taken into account by converting the 2000 values to 2010 dollars,⁶⁵⁸ the real per capita income in 2000 (\$12,694) is shown to be slightly higher than 2010 per capita income. The real median household income in 2000 was \$41,093, still slightly lower than 2010 median household income. In 2010, Mountain Village ranked 228th of 305 Alaskan communities with per capita income data that year, and 144th in median household income, out of 299 Alaskan communities with household income data.

However, Mountain Village's small population size may have prevented the ACS from accurately portraying economic conditions.⁶⁵⁹ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Mountain Village in 2010 is \$8,732.⁶⁶⁰ This estimate is lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Mountain Village between 2000 and 2010. The lower per capita income estimate derived from the ALARI database is reflected in the fact that the community was recognized as "distressed" by the Denali Commission in 2011,⁶⁶¹ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Mountain Village residents was estimated to be in the civilian labor force (56.1%) compared to the percentage of Alaskans in the civilian labor force statewide (68.8%). That year, approximately 23.5% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaska residents overall, and the unemployment rate was estimated to be 12.7%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in Mountain Village in 2010 was 24.7%, compared to a statewide unemployment rate estimate of 11.5%.⁶⁶²

Also based on the 2006-2010 ACS, a majority of the Mountain Village workforce was estimated to be employed in the public sector (55.4%), along with 41.4% in the private sector, and 3.2% that was estimated to be self-employed. Of the 249 people aged 16 and over that were estimated to be employed in the civilian labor force, the industries in which the greatest number were estimated to be working included educational services, health care, and social assistance (46.6%) and public administration (18.9%). Occupations in which the greatest number were estimated to be employed included management/professional (35.5%), natural resources/construction/maintenance (22.9%), and production/transportation/material moving

⁶⁵⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2000 and 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁶⁵⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁶⁶⁰ See footnotes 656 and 657.

⁶⁶¹ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁶⁶² See footnote 656.

occupations (17.3%). Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

It is important to note that the number of individuals employed by fishing is probably underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. According to the 2006-2010 ACS, 5.6% of the civilian labor force was estimated to be working in farming, fishing, and forestry industries and occupations.

Figure 3. Local Employment by Industry in 2000-2010, Mountain Village (U.S. Census).

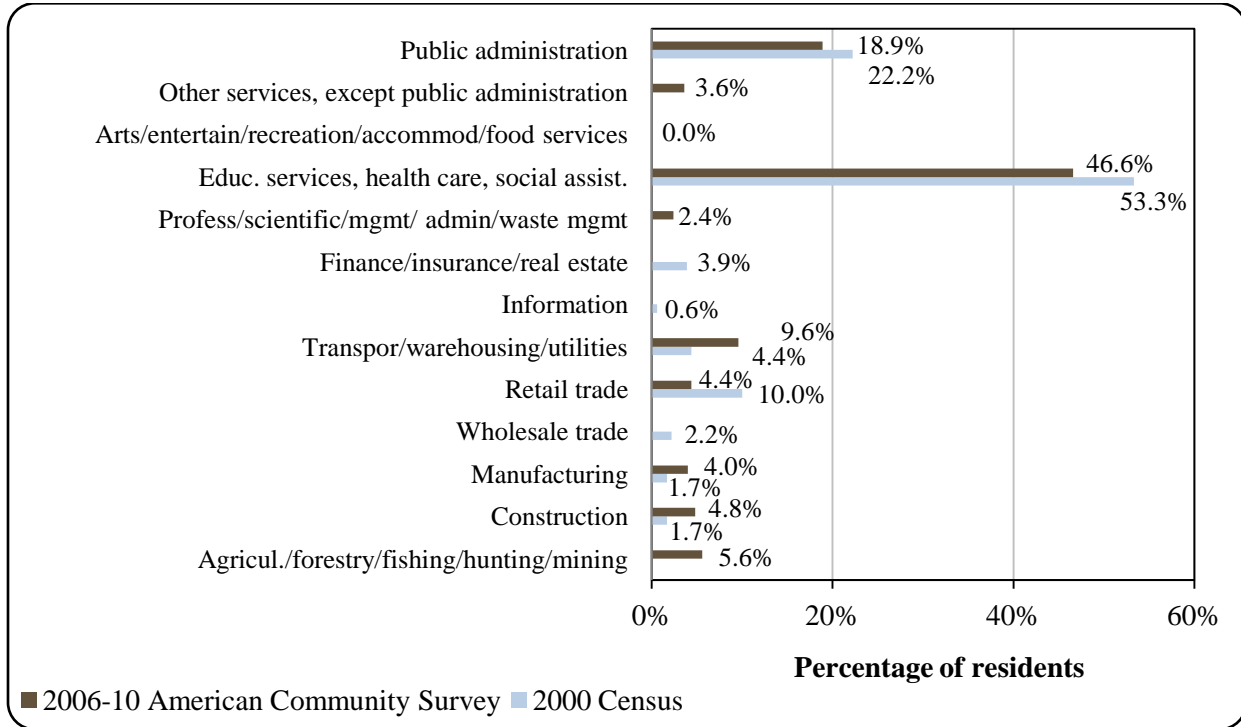
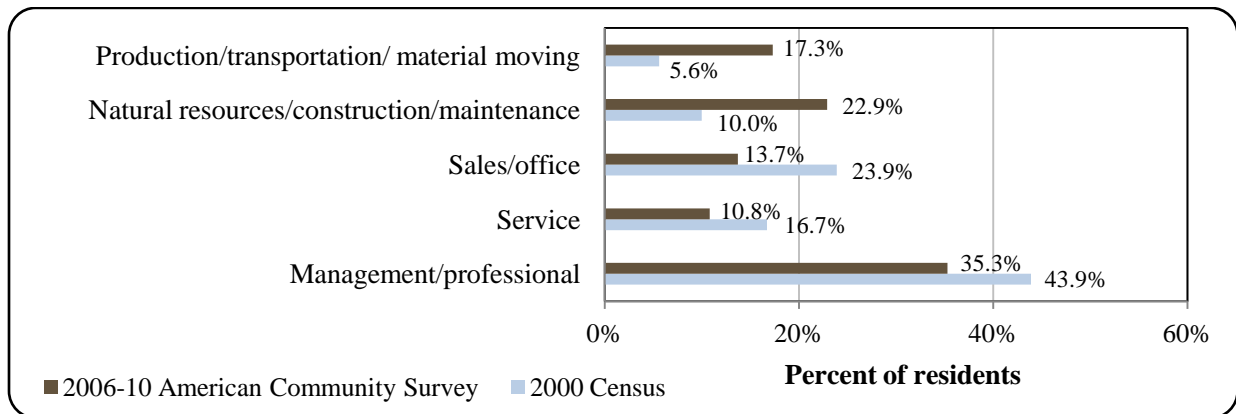


Figure 4. Local Employment by Occupation in 2000-2010, Mountain Village (U.S. Census).



An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 378 employed residents in Mountain Village in 2010, of which 66.7% were employed in local government, 11.1% in trade, transportation, and utilities, 6.9% in manufacturing, 4.8% in educational and health services, 3.4% in construction, 0.8% in natural resources and mining, 0.8% in leisure and hospitality, 0.8% in state government, 0.5% in financial activities, 0.3% in information, and 4% in other industries.⁶⁶³ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Governance

Mountain Village was incorporated as a 2nd Class City in 1967 and is not part of an organized borough. The City has a Strong Mayor form of government, a seven-person city council, including the mayor, a nine-person advisory school board, a seven-person planning commission, and several municipal employees. The City administers a 3% sales tax, but no other taxes. Municipal revenue varied between \$1.4 and \$1.9 million dollars per year from 2000 and 2010. In addition to sales tax revenue, locally-generated revenue sources in Mountain Village during this period included facilities revenue and lease fees, equipment rentals, water and sewer service fees, and bingo and pull tab revenue. Outside revenue sources included contributions from the State Revenue Sharing and Community Revenue Sharing programs in certain years, the Payment In Lieu of Taxes program, and state and federal grants including capital matching and public library grants. No fisheries-related grants were reported from 2000 and 2010. Information about selected aspects of Mountain Village's municipal revenue is presented in Table 2.

Mountain Village was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Asa'carsarmiut Tribal Council. The Native village corporation is Azachorok Incorporated, which manages 138,240 acres of land. The regional Native corporation to which Mountain Village belongs is the Calista Corporation.⁶⁶⁴

Mountain Village is also a member of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁶⁶⁵ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁶⁶⁶ AVCP is made up of 56 villages and 45 village corporations.⁶⁶⁷

⁶⁶³ Ibid.

⁶⁶⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁶⁵ Association of Village Council Presidents. (n.d.). *AVCP homepage*. Retrieved December 6, 2011 from www.avcp.org.

⁶⁶⁶ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁶⁶⁷ Calista Corporation (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Mountain Village from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,479,104	\$69,893	\$43,797	n/a
2001	\$1,533,629	\$68,983	\$56,488	n/a
2002	\$1,577,208	\$66,610	\$30,000	n/a
2003	\$1,505,529	\$82,776	\$27,185	n/a
2004	\$1,416,529	\$97,927	\$n/a	n/a
2005	\$1,372,120	\$116,263	n/a	n/a
2006	\$1,355,532	\$120,673	n/a	n/a
2007	\$1,280,094	\$121,002	n/a	n/a
2008	\$1,563,770	\$129,528	n/a	n/a
2009	\$1,909,582	\$138,182	\$136,403	n/a
2010	\$1,618,805	\$140,000	\$135,026	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Department of Revenue. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

The nearest Alaska Department of Fish and Game (ADF&G) office is located in the city of Emmonak, but is a seasonal office. ADF&G offices are available year round in the communities of Nome and Bethel, although the Anchorage office may be more accessible to people in this region. The nearest Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage. The closest office of the Alaska Department of Commerce, Community and Economic Development is in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage.

Infrastructure

Connectivity and Transportation

A summer road links Mountain Village to the communities of Pitka’s Point, Andreafsky, and St. Mary’s. The community is accessible by riverboat or barge. A state-owned 3,500-ft-long by 75-ft-wide gravel airstrip is available, and floatplanes also land on the Yukon River. In the

winter, passengers, cargo, and mail are flown in by plane.⁶⁶⁸ The price of a roundtrip ticket by plane from Mountain Village to Anchorage in early June of 2012 was \$700.⁶⁶⁹ Snowmobiles and skiffs are used for local transportation.⁶⁷⁰

Facilities

The City of Mountain Village operates a piped water and sewer system that serves 200 households and facilities. A community well and individual wells are also in use, and multiple watering points exist throughout the City.⁶⁷¹ Public safety services are provided by a VPSO (Village Public Safety Officer) and state troopers stationed in St. Mary's, approximately 20 miles west of Mountain Village.^{672,673} Mountain Village also has volunteer firefighters and a city jail. The City operates a piped circulating water system and sewer system that serves the 70% of the community that is fully plumbed. The remainder of the City must haul water from a central well and use outhouses. Water is chlorinated, but not filtered. The City also operates a landfill and provides refuse collection services. A diesel powerhouse provides electricity to the village, operated by AVEC (the Alaska Village Electric Cooperative).⁶⁷⁴ A test wind turbine has been installed east of Mountain Village. Wind resources are excellent in the area. At present the site is not near enough to electrical distribution lines to expand production.⁶⁷⁵

Additional facilities and services in Mountain Village include a city teen center, the city/community hall, the school gymnasium, two school libraries, and one public library. Internet and phone service is available in Mountain Village, but cable service is not offered. Taxi service is available in town, and local flights are provided by Hageland Aviation and Tanana Air Service.⁶⁷⁶

Medical Services

Medical care is available at the George Waskey Memorial Clinic in town. The clinic is owned by the City and operated by the Yukon-Kuskokwim Health Corporation. Emergency Services have limited highway, river, and air access. Emergency service is provided by a health aide.⁶⁷⁷ The nearest hospital is located in Bethel.

⁶⁶⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁶⁹ This price was calculated on November 21, 2011 using kayak.com.

⁶⁷⁰ See footnote 668.

⁶⁷¹ Ibid.

⁶⁷² Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁶⁷³ Alaska Dept. of Public Safety (2012). *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁶⁷⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁷⁵ V3 Energy LLC. (2011). *Mountain Village, Alaska Wind Resource Report*. Retrieved December 19, 2011 from http://www.akenergyauthority.org/wind/08-2011_MountainVillage-0068-WindResourceReport.pdf.

⁶⁷⁶ See footnote 674.

⁶⁷⁷ Ibid.

Educational Opportunities

One school is located in Mountain Village, the Ignatius Beans School, which offers preschool through 12th grade instruction. As of 2011, 242 students were in attendance at the school, and there were a total of 19 teachers.⁶⁷⁸ In addition, the Rural Alaska Community Action Program runs a Head Start program in Mountain Village that serves children aged 3 to 5 years.⁶⁷⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁶⁸⁰ The present site of Mountain Village was originally a summer fish camp.⁶⁸¹ Indigenous people living along the Yukon River have long harvested salmon for subsistence purposes. Salmon was used for personal subsistence as well as food for sled dogs. The first recorded commercial harvest of salmon took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s along the Yukon. Poor returns in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.⁶⁸²

Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but restricted commercial harvest in 2008 and complete closure of Chinook harvest in 2009 led to declaration of a fishery disaster that year.⁶⁸³ A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of Fisheries, and constituents are working together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundant species, including gear and other management restrictions.⁶⁸⁴ Currently, commercial salmon fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 sub-districts and 28 statistical areas. Fishing on the lower Yukon River takes place with set and drift gill nets. Subsistence fishermen also most often utilize

⁶⁷⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁶⁷⁹ Rural Alaska Community Action Program, Inc (2011). *2010 Head Start Report*. Retrieved on December 20, 2011 from <http://www.ruralcap.com/>.

⁶⁸⁰ Alaska Native Heritage Center (n.d) Yup'ik & Cup'ik - *Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁶⁸¹ See footnote 674.

⁶⁸² Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁶⁸³ Upton, Harold F. 2010. *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

⁶⁸⁴ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalChinookdisaster>.

these gear types. Many subsistence fishermen are also commercial fishermen.⁶⁸⁵ In addition to salmon, several Mountain Village residents held permits in the statewide “freshwater fish” fisheries from 2003 to 2010. Commercial freshwater fish fisheries may target species such as Arctic char, Dolly Varden char, northern pike, rainbow trout, and sheefish.⁶⁸⁶

Mountain Village is located approximately 40 miles inland from the Bering Sea coast. This area is included in District 2 of the Lower Yukon River salmon fishery. It is also important to note that the ocean area into which the Yukon River flows is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Mountain Village is a member of the Yukon Delta Fisheries Development Association (YDFDA), a Community Development Quota (CDQ) group. Mountain Village is not eligible to participate in the Community Quota Entity (CQE) program.

Processing Plants

ADF&G’s 2010 Intent to Operate list does not list a registered processing plant in Mountain Village. Processing facilities were registered in the nearby communities of Emmonak and Saint Mary’s.

Fisheries-Related Revenue

According to information provided in Mountain Village’s annual municipal budgets between 2000 and 2010, the community received an average of \$102 per year in fisheries-related revenue. The primary sources of fisheries-related revenue in Mountain Village were a raw fish tax and the Shared Fisheries Business Tax. Information about fisheries-related revenue is presented in Table 3.⁶⁸⁷

Commercial Fishing

Mountain Village is a river fishing community, located approximately 40 miles inland from the ocean on the Yukon River. The community relies primarily on the Lower Yukon salmon gill net fishery, but several residents also participated in “other finfish” freshwater fisheries and saltwater fisheries for herring, halibut, crab, and “other shellfish” between 2000 and 2010. During these years, Mountain Village residents were involved in commercial fisheries as crew, permit holders, and vessel owners. In 2010, 75 Mountain Village residents purchased commercial crew licenses, 13 were the primary owner of a fishing vessel, and 10 vessels were homeported in Mountain Village.

In 2010, 90 individuals (equivalent to 11% of the local population) held a total of 89 Commercial Fisheries Entry Commission (CFEC) permits, of which 60 (67%) were actively fished that year. Of the total 90 permits, 82 were held in the Lower Yukon salmon gill net fishery, 5 were for “other finfish” fisheries, and 1 was a herring permit. In 2010, 71% of salmon

⁶⁸⁵ Ibid.

⁶⁸⁶ Alaska Dept. of Fish and Game (2006). *Our Wealth Maintained: A Strategy for Conserving Alaska’s Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=species.wapview>.

⁶⁸⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

permits were actively fished, along with 40% of “other finfish”, and 0% of herring permits. “Other finfish” permits were held for the freshwater set gill net fishery, and the herring permit was held in the Norton Sound herring roe and food/bait fishery. The last year during the 2000-2010 period in which Mountain Village residents held halibut, crab, and “other shellfish” CFEC permits was 2004. In that year, two residents held “other shellfish” permits (shovel, statewide), one held a halibut permit (longline vessel under 60 ft, statewide), and one held a crab permit (Dungeness crab; pot gear; Cook Inlet). Of these, only the halibut permit was actively fished that year.

Between 2000 and 2010, no residents of Mountain Village held federal License Limitation Program permits (LLP) or Federal Fisheries Permits (FFP) for groundfish or crab. One Mountain Village resident held a quota share account in the federal halibut catch share fishery from 2002 and 2005. A total of 48,480 halibut quota shares were held in 2002 and 2003, and 89,833 shares were held in 2004 and 2005. No quota share accounts in federal sablefish or crab catch share fisheries were held by Mountain Village residents between 2000 and 2010. Information about state and federal permits held by Mountain Village residents is presented in Table 4, information about the commercial fishing sector in the community is presented in Table 5, and information about federal catch share participation is presented in Tables 6 through 8.

No fish buyers or shore-side processors were reported to be present in Mountain Village between 2000 and 2010 (Table 5), and no landings or ex-vessel revenue were generated in the community (Table 9). Information about landings and ex-vessel revenue earned by vessel owners residing in Mountain Village is considered confidential between 2000 and 2010 due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Mountain Village: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	\$271	\$271	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	\$74	n/a	\$121	n/a	n/a	n/a	\$84	\$87	\$102	\$107
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$0	\$74	\$0	\$393	\$271	\$0	\$0	\$84	\$87	\$102	\$107
Total municipal revenue⁵	\$1.5 M	\$1.5 M	\$1.6 M	\$1.5 M	\$1.4 M	\$1.4 M	\$1.4 M	\$1.3 M	\$1.6 M	\$1.9 M	\$1.6 M

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Department of Commerce, Community, and Economic Development. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Mountain Village: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	1	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	0%	0%	-	-	-	-	-	-
	Total permit holders	0	0	0	1	1	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	2	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	0%	-	-	-	-	-	-
	Total permit holders	0	0	0	0	2	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	1	1	0	0	0	0	0	0
	Fished permits	0	0	0	1	1	0	0	0	0	0	0
	% of permits fished	-	-	-	100%	100%	-	-	-	-	-	-
	Total permit holders	0	0	0	1	1	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	1	1	1	1	2	2	2	2	2	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	2	2	2	2	2	2	2

Table 4 cont'd. Permits and Permit Holders by Species, Mountain Village: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	10	6	16	6	3	14	12	5
	Fished permits	0	0	0	8	0	0	1	1	0	3	2
	% of permits fished	-	-	-	80%	0%	0%	17%	33%	0%	25%	40%
	Total permit holders	0	0	0	10	6	16	6	3	14	12	5
Salmon (CFEC) ²	Total permits	89	85	87	88	87	82	85	82	82	82	82
	Fished permits	82	0	80	79	82	75	76	75	66	58	58
	% of permits fished	92%	0%	92%	90%	94%	91%	89%	91%	80%	71%	71%
	Total permit holders	94	89	93	93	91	88	94	88	90	89	88
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>90</i>	<i>86</i>	<i>88</i>	<i>101</i>	<i>99</i>	<i>100</i>	<i>93</i>	<i>87</i>	<i>98</i>	<i>96</i>	<i>89</i>
	<i>Fished permits</i>	<i>82</i>	<i>0</i>	<i>80</i>	<i>88</i>	<i>83</i>	<i>75</i>	<i>77</i>	<i>76</i>	<i>66</i>	<i>61</i>	<i>60</i>
	<i>% of permits fished</i>	<i>91%</i>	<i>0%</i>	<i>91%</i>	<i>87%</i>	<i>84%</i>	<i>75%</i>	<i>83%</i>	<i>87%</i>	<i>67%</i>	<i>64%</i>	<i>67%</i>
	<i>Permit holders</i>	<i>95</i>	<i>90</i>	<i>94</i>	<i>98</i>	<i>94</i>	<i>92</i>	<i>95</i>	<i>90</i>	<i>97</i>	<i>95</i>	<i>90</i>

¹National Marine Fisheries Service. (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Mountain Village: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Mountain Village ²	Total Net Pounds Landed In Mountain Village ^{2,5}	Total Ex-Vessel Value Of Landings In Mountain Village ^{2,5}
2000	93	0	0	10	10	0	0	\$0
2001	3	0	0	8	7	0	0	\$0
2002	104	0	0	7	6	0	0	\$0
2003	111	0	0	9	7	0	0	\$0
2004	118	0	0	11	8	0	0	\$0
2005	124	0	0	12	11	0	0	\$0
2006	122	0	0	13	11	0	0	\$0
2007	122	0	0	13	11	0	0	\$0
2008	100	0	0	13	12	0	0	\$0
2009	85	0	0	12	10	0	0	\$0
2010	75	0	0	13	10	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Mountain Village: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	1	48,480	5,934
2003	1	48,480	5,932
2004	1	89,833	12,173
2005	1	89,833	12,373
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Mountain Village: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Mountain Village: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Mountain Village: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Mountain Village Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other	-	-	-	-	-	-	-	-	-	-	-
Shellfish											
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other	-	-	-	-	-	-	-	-	-	-	-
Shellfish											
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	-	-	-	-	-	-	-	-	-	-	-

Note: Cells showing “-” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lb refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, no active sport fish guide businesses were registered in Mountain Village, although one licensed sport fish guide was present in the community in 2006 only. Starting in 2003, sport fishing licenses were sold to private anglers in Mountain Village. In 2010, 207 sport fishing licenses were sold to Mountain Village residents (irrespective of point of sale), and 200 licenses were sold in the City of Mountain Village.⁶⁸⁸ In most years, the number of licenses sold in Mountain Village was only slightly higher than the number of licenses sold to Mountain Village residents. This indicates that a small number of non-resident anglers came to Mountain Village to participate in sport fishing activity.

The Alaska Statewide Harvest Survey,⁶⁸⁹ conducted by ADF&G between 2000 and 2010, reported information only for the year 2000 about species targeted by private anglers in Mountain Village. In that year, according to the survey, coho salmon was the primary species targeted by private anglers in Mountain Village. More information was reported about sport fishing activity in nearby Saint Mary's, 20 miles east of Mountain Village. The survey noted the following species targeted by private anglers in Saint Mary's: coho and chum salmon, Dolly Varden char, Arctic grayling, northern pike, Pacific halibut, and rockfish. The survey also noted sport harvest of razor and hardshell clams in the Saint Mary's area. No kept/released log book data were reported for fishing charters out of Mountain Village between 2000 and 2010.⁶⁹⁰

Mountain Village is located within Alaska Sport Fishing Survey Area Y – Yukon River Drainage. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, saltwater sport fishing activity was minimal, with between zero and 81 non-Alaska resident angler days fished per year, and between zero and 89 Alaska resident angler days fished per year. The low numbers reported for saltwater sport fishing make sense given that a majority of residents in Yukon drainage communities live at a great distance from the ocean, and fishing activities take place primarily in freshwater. Between 2000 and 2010, Alaska resident anglers in the Yukon River drainage consistently fished more days in freshwater (4,783 – 10,400 angler days per year) than non-Alaska resident anglers (2,573 – 5,761 angler days per year). This information about the sport fishing sector in and near Mountain Village is displayed in Table 11.

⁶⁸⁸ Alaska Department of Fish and Game (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁶⁸⁹ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁶⁹⁰ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Mountain Village: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Mountain Village ²
2000	0	0	118	0
2001	0	0	99	0
2002	0	0	125	0
2003	0	0	133	36
2004	0	0	172	177
2005	0	0	185	185
2006	0	1	203	206
2007	0	0	196	227
2008	0	0	220	242
2009	0	0	197	208
2010	0	0	207	200

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Residents of Mountain Village depend on subsistence hunting and fishing to supplement work in commercial fishing and processing industries.⁶⁹¹ In 2010, the only year that a subsistence survey was conducted by ADF&G in the community of Mountain Village between 2000 and 2010, 76% of households were estimated to participate in salmon subsistence, 70% in non-salmon fish subsistence (not including halibut), 56% in marine mammal subsistence, and 11% in halibut subsistence. Zero percent of Mountain Village households were estimated to participate in marine invertebrate subsistence in 2010. That year, the per capita subsistence harvest of land and sea-based resources in Mountain Village was estimated to be 1,132 lb (Table 12).

Information about household subsistence use of marine mammals and non-salmon fish (not including halibut) is also available from 1980, when a previous subsistence survey was conducted by ADF&G in Mountain Village. That year, Mountain Village households reported harvesting spotted seal, bearded seal, ringed seal, and Steller sea lion. The greatest percentage of households was involved in harvest of spotted and bearded seal that year (31% of households in the case of both species). The species of non-salmon fish that were reported to have been harvested by the greatest percentage of Mountain Village households in 1980 included northern pike (94% of households reported harvesting), broad whitefish (81%), burbot (69%), eel (69%), sheefish (69%), and blackfish (61%).⁶⁹²

Data are available from ADF&G about subsistence salmon permits between 2000 and 2008. During these years, subsistence salmon permits were issued to between 135 and 170 households per year in Mountain Village. Based on those permits that were returned, Chinook and chum were the most heavily harvested salmon species overall. Coho and pink salmon harvests were also reported for all years between 2000 and 2008, and in 2006, coho harvest was slightly higher than Chinook harvest. Historically, Mountain Village residents have relied most on chum salmon. Information about subsistence harvest of salmon in Mountain Village is presented in Table 13, along with information about harvest of non-salmon fish (not including halibut). In 2010, the year the ADF&G subsistence harvest survey was conducted, Mountain Village residents harvested a total of 273,747 lb of non-salmon fish subsistence.

No data were reported regarding marine invertebrate harvest (Table 13). Likewise, no information was reported by management agencies regarding participation of Mountain Village residents in subsistence harvest of Pacific halibut or marine mammals during the 2000-2010 period (Tables 14 and 15).

⁶⁹¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁹² Alaska Department of Fish and Game (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Mountain Village: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	76%	11%	56%	n/a	70%	1,132

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Mountain Village: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	170	59	1,715	7,423	376	61	n/a	n/a	n/a
2001	157	45	1,864	8,954	423	n/a	n/a	n/a	n/a
2002	149	38	1,523	7,004	240	745	n/a	n/a	n/a
2003	147	47	2,367	7,583	736	117	n/a	n/a	n/a
2004	142	59	2,362	11,594	521	891	n/a	n/a	n/a
2005	135	58	2,383	10,151	246	78	n/a	n/a	n/a
2006	150	64	1,659	15,517	1,856	616	n/a	n/a	n/a
2007	146	60	2,077	9,177	1,027	87	n/a	n/a	n/a
2008	144	64	1,645	8,485	518	500	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	273,747

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Mountain Village: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Mountain Village: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nome



People and Place

*Location*⁶⁹³

Nome is located on the south coast of the Seward Peninsula, facing Norton Sound and the Bering Sea. It lies 539 air miles northwest of Anchorage, 102 miles south of the Arctic Circle, and 161 miles east of Russia. Nome is located in the Cape Nome Recording District and the Nome Census Area. The City encompasses 12.5 square miles of land and 9.1 square miles of water.

*Demographic Profile*⁶⁹⁴

In 2010, there were 3,598 residents in Nome, ranking it as the 30th largest of 352 communities in Alaska with recorded populations that year. Between 1990 and 2010, the population of Nome stayed relatively stable, increasing by 2.8% overall. According to Alaska Department of Labor estimates, between 2000 and 2009, the population of permanent residents decreased by 1.1%. However, the average annual growth rate over this period was slightly positive (0.12%), reflecting small increases and decreases from year to year and an overall slight upward population trend. According to a survey conducted by the Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that an additional 500 individuals are present in Nome as seasonal workers or transients. The leaders indicated that these seasonal workers are present in Nome throughout the year, and that Nome's population typically peaks in July. They indicated that the peak is somewhat driven by employment in the fishing industry, and that seasonal workers are also employed in construction and gold mining industries, and at the local hospital. In addition to transient seasonal workers, community leaders estimated that 15-30 permanent residents work seasonally in the local shore-side seafood processing facility.

In 2010, over half of the population of Nome identified themselves as American Indian or Alaska Native (54.8%), along with 30.4% who identified as White, 2.2% as Asian, 0.5% as Black or African American, 0.3% as Native Hawaiian or Other Pacific Islander, 0.5% as "some other race", and 11.4% who identified with two or more races. In addition, 2.4% of Nome residents identified themselves as Hispanic in 2010. The percentage of the population that identified themselves as White decreased over time, from 45% in 1990 and 37.9% in 2000, to 30.4% in 2010. The percentage of the population that identified themselves as American Indian or Alaska Native decreased between 1990 and 2000, from 52.1% to 51%, and then increased again to 54.8% in 2010. The change in population from 1990 to 2010 is provided in Table 1, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

⁶⁹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁶⁹⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

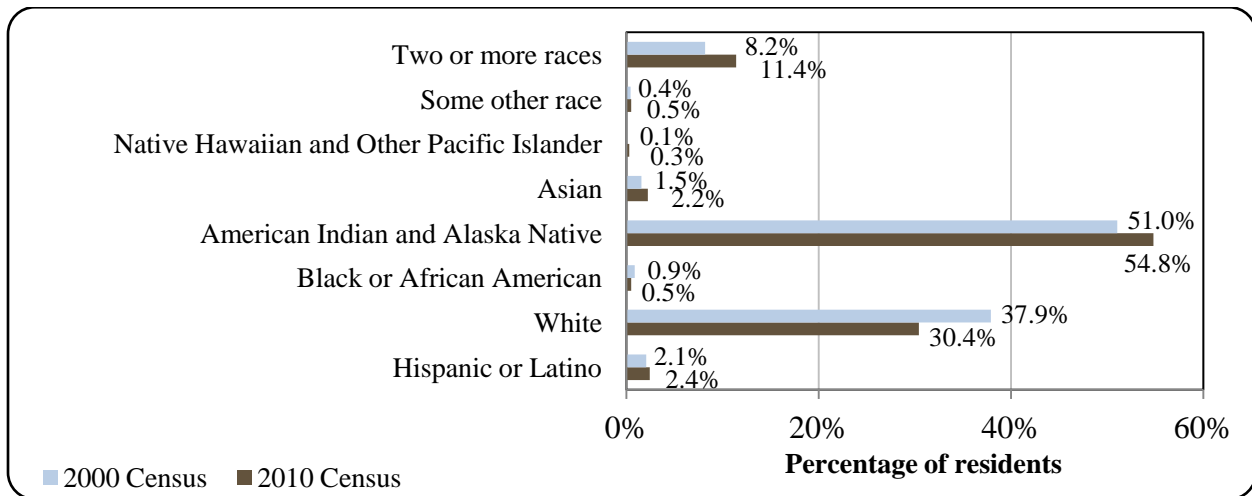
Table 1. Population in Nome from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	3,500	-
2000	3,505	-
2001	-	3,485
2002	-	3,482
2003	-	3,412
2004	-	3,481
2005	-	3,512
2006	-	3,541
2007	-	3,481
2008	-	3,565
2009	-	3,468
2010	3,598	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

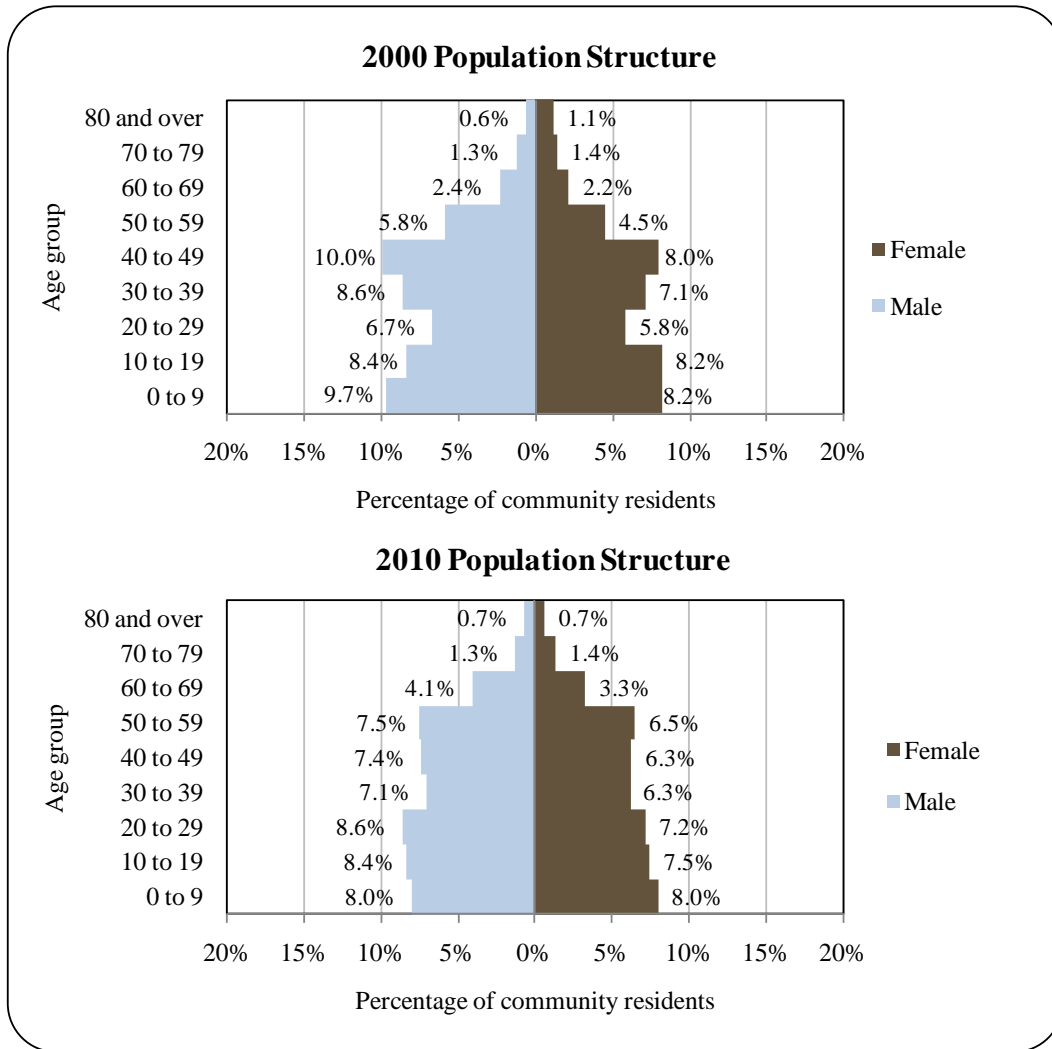
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Nome: 2000-2010 (U.S. Census).



Based on household surveys conducted for the U.S. Census, the average household size in Nome was fairly consistent between 1990 and 2010, with 2.9 persons per household in 1990, 2.8 in 2000, and 2.8 in 2010. The number of households in Nome has increased over time, from 1,119 households in 1990 and 1,184 in 2000, to 1,216 in 2010. Of the total 1,503 housing units surveyed for the 2010 U.S. Decennial Census, 37.1% were owner-occupied, 43.8% were rented, and 19.1% were vacant or used only seasonally. In 2010, 191 Nome residents were reported to be living in group quarters, up from 30 living in group quarters in 1990, but a slight decrease from 202 living in group quarters in the year 2000.

Figure 2. Population Age Structure in Nome Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup of Nome’s population (53.1% male and 46.9% female) was more weighted toward males than the population of the state as a whole, which had 52% males and 48% females. The median age of Nome residents was 31.8 years in 2010, slightly younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. That year, 11.4% of Nome’s population was age 60 or older. The overall population structure of Nome in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁶⁹⁵ 89.9% of Nome residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also

⁶⁹⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

in 2010, 2.7% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 7.4% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 25.6% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 4.1% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 17.4% were estimated to have a Bachelor's degree, the same as the percentage of Alaskan residents overall; and 6.9% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Approximately 10 to 25 thousand years ago, during the Pleistocene Ice Age, the level of the ocean was approximately 300 feet lower than present levels. At that time, the Seward Peninsula was connected to the Asian continent via the Bering Land Bridge, which formed a flat, grassy, treeless plain.⁶⁹⁶ The land bridge is thought to have been a primary route by which humans migrated to the North American continent from Asia. Archaeologists have identified evidence of human inhabitation in the Bering Land Bridge National Preserve dating to 12,000 years before the present.⁶⁹⁷ Malemiut, Kauwamiut, and Unalikmiut Eskimos settled on the Seward Peninsula approximately 4,000 years ago. Today, many Native residents of Nome trace their ancestry to these three distinct groups of Eskimo people, and currently identify with Inupiat culture.⁶⁹⁸ The community is a mixture of Native and non-Native residents. Subsistence activities are important in the community. It is important to note that former villagers from King Island also live in Nome.⁶⁹⁹

The largest pre-contact settlements on the Western Seward Peninsula were located at sites with the greatest access to marine mammals, an important subsistence resource. Other communities were scattered along the coast, often used seasonally for access to fish and wildlife resources.⁷⁰⁰ Until recently, Nome was not thought to have been a settlement site prior to Western contact and the discovery of gold in the area in the late 1800s. However, the 2005 discovery of the remains of a 300-year-old semi-subterranean house on the Snake River Sandspit in Nome provides evidence that the Native people lived here prior to the arrival of Westerners. A second semi-subterranean house and trash midden were discovered in 2006. Radio carbon dating of animal bones from the midden suggest that Inupiat Eskimos may have lived at the site as early as 1700 AD.⁷⁰¹ Russians were active in the area starting in the mid-late 1800s. A large-scale fur

⁶⁹⁶ National Park Service (2010). *Shared Beringian Heritage Program*. Retrieved February 22, 2012 from <http://www.nps.gov/akso/beringia/>.

⁶⁹⁷ National Park Service (2009). *Bering Land Bridge National Preserve*. Retrieved February 17, 2012 from <http://www.nps.gov/bela/>.

⁶⁹⁸ Nome Planning Commission (2003). *City of Nome Hazard Mitigation Plan*. Retrieved February 17, 2012 from <http://www.nwcommission.org/images/Nome-HZM-Plan.pdf>.

⁶⁹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁰⁰ Scientific Technical Committee, Norton Sound Steering Committee (2003). *Research and Restoration Plan for Norton Sound Salmon*. Retrieved February 21, 2012 from <http://69.93.224.39/~aykssi/wp-content/uploads/NS-RR-Plan-rev.pdf>.

⁷⁰¹ Richardson, P. May 23, 2007. Army Corps of Engineers Makes Important Archaeological Find. *U.S. Army*. Retrieved September 10, 2013 from <http://www.army.mil/article/3311/>.

trade was developed, and support services for whaling and trading ships increased trade activity in the Bering Strait region.⁷⁰²

The first reports of the discovery of gold in the area date to 1865, when Western Union surveyors entered the area seeking a route across Alaska and the Bering Sea. The Nome gold rush officially began with the \$1500-to-the-pan gold strike on tiny Anvil Creek in 1898 by three Scandinavians, Jafet Lindeberg, Erik Lindblom, and John Brynteson. This strike brought thousands of miners to the area, which was termed the “Eldorado.” Almost overnight, the isolated stretch of tundra fronting the beach was transformed into a tent-and-log cabin city of 20,000 prospectors, gamblers, claim jumpers, saloon keepers, and prostitutes. The gold-bearing creeks had already been almost completely staked when an entrepreneur discovered the “golden sands of Nome.” With nothing more than shovels, buckets, rockers and wheel barrows, thousands of idle miners descended upon the beaches. Two months later the golden sands had yielded one million dollars in gold (at \$16 an ounce). A narrow-gauge railroad and telephone line from Nome to Anvil Creek was built in 1900. The City of Nome was incorporated in 1901. By 1902, the more easily reached gold claims were exhausted and large mining companies with better equipment took over the mining operations. Since the first strike on tiny Anvil Creek, Nome’s gold fields have yielded a total of \$136 million. The gradual depletion of gold, a major influenza epidemic in 1918, the Great Depression, and World War II each influenced Nome’s population.^{703,704} Nome’s role in war history was to serve as a station for troops and supplies during World War II.⁷⁰⁵

During the gold boom, the Seward Peninsula’s only link to the outside world was by dogsled. Until the early 1900s, all winter dogsled travel to Nome went via Valdez and Fairbanks. In 1908, Major Wilds Richardson ordered Walter Goodwin and a crew of three to blaze a more direct trail from Seward, through Cook Inlet country, and further on to Nome. The trail was made famous in 1925 when an epidemic of diphtheria broke out in Nome. Lacking sufficient serum to treat community members, a wire was sent for help. Twenty mushers carried the serum 674 miles in 127.5 hours. They were greeted as heroes, and the story is the inspiration for the modern day Iditarod competition.⁷⁰⁶

The first commercial airplane flight from Fairbanks to Nome took place in 1925, bringing the era of dogsleds as a primary means of long-distance transportation to an end. In 1934, a disastrous fire started in the Golden Gate Hotel. No one was killed, but 65 businesses and 90 homes were destroyed, leaving many people in danger of starvation as winter approached.⁷⁰⁷

Natural Resources and Environment

Nome is located in a transitional climate zone, with maritime, continental, and arctic influences. January temperatures range between -50 and 11 °F, and July temperatures average between 44 and 65 °F. Average annual precipitation is 18 inches, along with 56 inches of

⁷⁰² See footnote 700.

⁷⁰³ Ibid.

⁷⁰⁴ Nome Planning Commission (2003). *City of Nome Hazard Mitigation Plan*. Retrieved February 17, 2012 from <http://www.nwcommission.org/images/Nome-HZM-Plan.pdf>.

⁷⁰⁵ Ibid.

⁷⁰⁶ Iditarod Historic Trail Alliance (n.d.). *Historic Overview*. Retrieved December 14, 2011 from <http://www.iditarodnationalhistorictail.org/>.

⁷⁰⁷ See footnote 704.

snowfall. Permafrost underlies the Nome area, although waterfront areas have thawed.⁷⁰⁸ The landscape of the southern Seward Peninsula is characterized by a coastal plain dotted with lakes and ponds, rising to 200 feet at Anvil Mountain, 4.5 miles north of Nome. Several mountains of between 1,000 and 2,000 feet are located in the general vicinity, and the higher Kigluaik Mountains are located 35 miles north of the City. The Snake River crosses the coastal plain and enters Norton Sound at Nome, while the Penny and Nome Rivers have their outlets nearby.⁷⁰⁹

Nome is located approximately 75 miles south of Bering Land Bridge National Preserve. The National Preserve was established with the passage of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) with the purpose of habitat protection and archaeological and paleontological study of the process of plant and animal migration, including man, between North America and the Asian Continent. Populations of wildlife residing within the National Preserve include marine mammals, brown bears, moose, wolves, and muskoxen.⁷¹⁰ Muskoxen were reintroduced to the Seward Peninsula as part of an Alaska-wide recovery effort. In 1934, 34 muskoxen were captured in East Greenland and transported to Nunivak Island. By 1968, the Nunivak Island herd numbered 750, and was used as a seed population to reintroduce muskoxen to areas around northern Alaska. By 2000, the population of muskoxen on the Seward Peninsula numbered 1,800.⁷¹¹ The Bering Strait region also provides essential habitat for rare migratory birds, including ducks, geese, swan, crane, eiders, murre, and auklets.⁷¹²

The Norton Basin does not hold significant oil reserves, although it is estimated to contain valuable natural gas reserves. This area is rated as high to moderate in environmental sensitivity. No leases have been scheduled for the 2007-2012 or 2012-2017 Outer Continental Shelf Oil and Gas Leasing Programs.^{713,714}

True to its rich gold mining history, several small gold mines are still present in the Nome area.⁷¹⁵ Operations at Rock Creek Mine, owned by the company NovaGold, were temporarily suspended in 2008.⁷¹⁶ As of 2010, the company was working to comply with clean water requirements and was looking for future ways to bring value from the property,⁷¹⁷ but as of

⁷⁰⁸ Ibid.

⁷⁰⁹ Alaska Consultants (1986). *Nome Comprehensive Development Plan*. Retrieved February 17, 2012 from <http://www.commerce.state.ak.us/dca/plans/Nome-CP-1968.pdf>.

⁷¹⁰ National Park Service (2009). *Bering Land Bridge National Preserve*. Retrieved February 17, 2012 from <http://www.nps.gov/bela/>.

⁷¹¹ Alaska Dept. of Fish and Game (2008). *Muskox – Wildlife Notebook Series*. Retrieved December 15, 2011 from <http://www.adfg.alaska.gov/static/education/wns/muskox.pdf>.

⁷¹² City of Nome. (2003). *Hazard Mitigation Plan*. Updated January 2003. Retrieved December 5, 2012 from <http://www.nwcommission.org/images/Nome-HZM-Plan.pdf>.

⁷¹³ Minerals Management Service (2010). *Preliminary Revised Program Outer Continental Shelf Oil & Gas Leasing Program 2007-2012*. Retrieved January 6, 2012 from <http://www.boemre.gov/>.

⁷¹⁴ Minerals Management Service (2011). *Proposed Outer Continental Shelf Oil & Gas Leasing Program 2012-2017*. Retrieved February 16, 2012 from <http://www.boemre.gov/>.

⁷¹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷¹⁶ NovaGold Nome Operations, Rock Creek Mine. 2009. *Final Temporary Closure Plan, Alaska Gold Company. Final Version, February 20, 2009*. Retrieved September 10, 2013 from <http://dnr.alaska.gov/mlw/mining/largemine/rockcreek/pdf/closureplan2.pdf>.

⁷¹⁷ NovaGold. July 13, 2010. *NovaGold Second Quarter Financial Results and Projects Update*. Retrieved September 10, 2013 from <http://novagold.mwnewsroom.com/press-release/NovaGold-Second-Quarter-Financial-Results-and-Projects-Update-TSX-NG-1289612>.

2013 the mine remained in “care and maintenance” status.⁷¹⁸ In 2010, Cedar Mountain Exploration Inc. staked almost 150 gold mining claims on the Seward Peninsula, NANA⁷¹⁹ Regional Corporation conducted exploration of a zinc-lead-silver prospect, and at least 28 individuals or other companies reported to have engaged in placer mining efforts for gold, tin, and polymetallic mineralization in the area.⁷²⁰

Historical gold mining activity on the Seward Peninsula has had a significant impact on fisheries resources in the area. Some type of mining occurred on nearly every stream on the Seward Peninsula, causing long-term habitat changes in and near Norton Sound salmon streams. Habitat has also been damaged by road building and gravel extraction, likely reducing salmon populations. The rapid increase in human population that coincided with the gold rush likely also impacted salmon stocks. During the late 1800s and early 1900s, salmon were used as the primary source of feed for sled dogs. With the Alaska Board of Fish’s Policy for the Management of Sustainable Salmon Fisheries (adopted April 2000), several area salmon stocks were listed as stocks of concern, including chum salmon stocks in the Nome, Golovin Bay, and Moses Point subdistricts of the Norton Sound District.⁷²¹

Natural hazards identified in Nome include flooding, wildfires, earthquakes, tsunamis, severe weather, and erosion. Storm surges have historically been a source of significant damage to the City, contributing to shoreline erosion. Steel bulkheads were constructed several decades ago to maintain the position of the Snake River mouth. Jetties were constructed between 1919 and 1935 to prevent sand transport, although this resulted in catastrophic beach erosion further down the beach, and required the construction of a seawall. Nome is located near several fault lines, and the immediate area is at risk of earthquakes measuring 3 – 4.5 on the Richter scale. Severe winter weather is also a primary hazard in the Nome area.⁷²²

According to the Alaska Department of Environmental Conservation (DEC), one active environmental cleanup site was present in the Nome area as of May 2012. The West Nome fuel tank farm has been operated by a variety of owners since the 1950s, and the current property owner is the U.S. Air Force. Substantial petroleum releases have entered the soil at the site, and contamination has spread underground to property bordering the site. ChevronTexaco and Nome Joint Utilities System are coordinating construction of a product recovery system. Contaminated soil will be excavated. Some will be disposed of at Nome’s landfill, and some will be treated.⁷²³

⁷¹⁸ Information provided by a Nome city official during community review of this profile. Feedback received July 24, 2012.

⁷¹⁹ The name of the regional Native corporation for the Northwest Arctic was originally derived from a pre-existing non-profit organization known as the Northwest Alaska Native Association (NANA). To avoid confusion, the non-profit was renamed Mauneluk, and later the Manillaq Association, and the corporation is known as NANA Regional Corporation. Source: Manillaq Association website (2003). *Company Information*. Retrieved February 2, 2012 from <http://www.maniilaq.org/companyInfo.html>.

⁷²⁰ Szumigala, D.J., L.A. Harbo, and J.N. (2011) Adleman. *Alaska’s Mineral Industry 2010*. Alaska Dept. of Natural Resources and Alaska Dept. of Commerce, Community and Economic Development, Special Report 65.

⁷²¹ Scientific Technical Committee, Norton Sound Steering Committee (2003). *Research and Restoration Plan for Norton Sound Salmon*. Retrieved February 21, 2012 from <http://69.93.224.39/~aykssi/wp-content/uploads/NS-RR-Plan-rev.pdf>.

⁷²² City of Nome. (2003). *Hazard Mitigation Plan*. Updated January 2003. Retrieved December 5, 2012 from <http://www.nwcommission.org/images/Nome-HZM-Plan.pdf>.

⁷²³ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy⁷²⁴

Nome serves as the regional center of supply, services, and transportation in the Norton Sound and Bering Strait region. Many government offices are located in Nome. State and local government services, the school district, retail businesses, utilities, transportation, mining, medical, and other businesses provide local year-round employment opportunities. As of 2010, the top three local employers in Nome were the Norton Sound Health Corporation, the State of Alaska, and Kawerak, Inc., the Native non-profit organization serving the Bering Strait region.^{725,726} In addition, many residents engage in commercial fishing, and subsistence activities contribute to the local diet.⁷²⁷ According to a survey conducted by the AFSC in 2011, community leaders reported that the most important natural resource-based industries in Nome include mining, commercial fishing, sport hunting and fishing, and ecotourism.

Based on household surveys conducted for the 2006-2010 ACS,⁷²⁸ in 2010, the per capita income in Nome was estimated to be \$33,726 and the median household income was estimated to be \$67,231. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$23,402 and \$59,402, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,⁷²⁹ per capita income is revealed to have had a small increase, from a real per capita income of \$30,773 in 2000. In contrast, the real median household income in 2000 (\$78,113) is significantly higher than the 2010 figure, revealing a decrease in real household income over the decade. In 2010, Nome ranked 38th of 305 Alaskan communities with per capita income data that year, and 53rd in median household income, out of 299 Alaskan communities with household income data.

However, Nome's small population size may have prevented the ACS from accurately portraying economic conditions.⁷³⁰ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nome in 2010 is \$20,472.⁷³¹ This estimate is slightly lower than the 2000 per capita income reported in by the U.S. Census, suggesting that caution is warranted when citing an increase in per capita income in Nome between 2000 and 2010. As of 2010, the Denali Commission did not consider Nome a

⁷²⁴ Unless otherwise noted, all monetary data are reported in nominal values.

⁷²⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷²⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁷²⁷ See footnote 725.

⁷²⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁷²⁹ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁷³⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁷³¹ See footnotes 726 and 728.

“distressed” community.⁷³² It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a larger percentage of Nome’s population (75.7%) was estimated to be in the civilian labor force in 2010 compared to the percentage of the statewide population in the civilian labor force (68.8%). That same year, 5.7% of Nome residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate in Nome was estimated to be 7.7%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 9.9%, compared to a statewide unemployment rate estimate of 11.5%.⁷³³

Also based on the 2006-2010 ACS, the majority of Nome’s workforce was estimated to be employed in the private sector (62.8%), along with 31.6% in the public sector and 5.7% that were estimated to be self-employed. Of the 1,834 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers were estimated to be employed in educational services, health care, and social assistance (30.7%), public administration (16.6%), retail trade (15.8%), and transportation, warehousing, and utilities (10.5%). An estimated 3.6% of the population identified themselves as working in agricultural, forestry, fishing, hunting or mining industries. However, the number of individuals employed in farming, fishing, and forestry occupations and industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 1,778 employed residents in Nome in 2010, of which 27.2% were employed in educational and health services, 22.3% in trade, transportation, and utilities, 14.5% in local government, 11.4% in state government, 7.9% in leisure and hospitality, 5.7% in construction, 3.7% in financial activities, 1.8% in natural resources and mining, 1.6% in professional and business services, 0.9% in information, 0.1% in manufacturing, 0.6% in unknown industries, and 2.4% in other industries.⁷³⁴ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

⁷³² Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁷³³ See footnote 726.

⁷³⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

Figure 3. Local Employment by Industry in 2000-2010, Nome (U.S. Census).

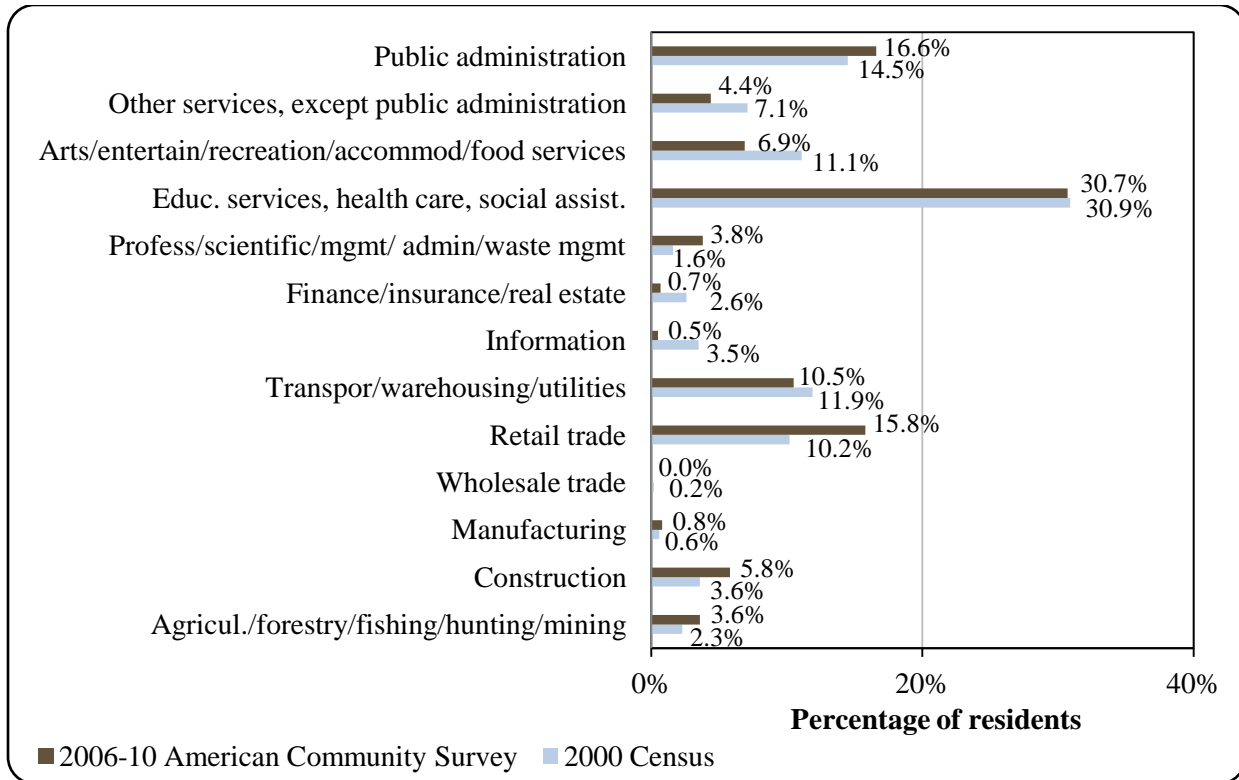
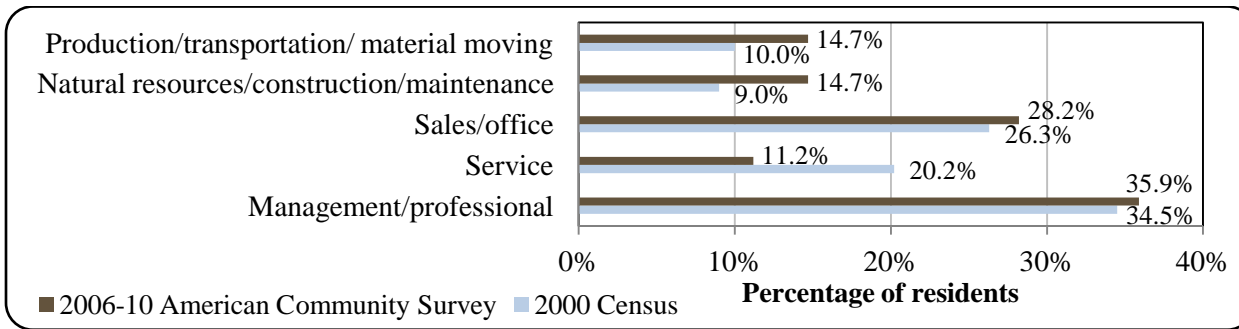


Figure 4. Local Employment by Occupation in 2000-2010, Nome (U.S. Census).



Governance

Nome is a 1st Class City, and is not located in an organized borough. The City was incorporated in 1901. It has a strong manager form of government. The Mayor is the Chief Executive Officer, and works closely with the appointed City Manager and a six-person city council. Nome has a five-member public school board, a five-person joint utilities board, seven-member planning commission, seven-member planning commission, five-member port commission, and nine-member library commission. Commissioners are appointed by the Mayor

and approved by the city council. As of 2012, the city administered a 6% sales tax, 11.0 mills property tax, and 6% bed tax⁷³⁵

Nome’s total municipal revenue in 2010 was \$10,228,045, including \$4,427,911 in sales tax revenue. Municipal revenue increased by almost 70% between 2000 and 2010. The sales tax rate increased from 4% to 5% between 2003 and 2004, reflected in the significant increase in sales tax revenue between these years. It is also important to note that, from 2000 to 2003, Nome received State Revenue Sharing contributions of between \$126,457 and \$160,489 per year, and also received Community Revenue Sharing contributions of approximately \$270,000 per year in 2009 and 2010. In addition, Nome received fisheries-related grants in 2000-2004 and 2007. These grants included \$344,000 in 2000 from the U.S. Army Corps of Engineers (COE) for harbor maintenance dredging, \$10,000 in 2001 from the Alaska Division of Community and Regional Affairs (DCRA) for construction of a harbormasters office, \$970,000 in 2002 from DCRA for a port construction project and harbor and dock construction and renovation, \$10 million in 2002 and \$36 million in 2003 from COE for harbor improvements and construction, \$1.6 million in 2003 from the U.S. Economic Development Administration (EDA) for harbor and dock construction, \$194,691 in 2003 from COE for Maintenance Dredging, and \$1 million in 2007 from the Denali Commission for a low-level dock float.⁷³⁶ Information about selected aspects of revenue sources in Nome are presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nome from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$6,065,595	\$2,236,862	\$160,489	\$344,000
2001	\$6,176,718	\$2,535,440	\$131,307	\$10,000
2002	\$6,649,699	\$2,484,733	\$124,655	\$10,970,000
2003	\$7,065,869	\$2,608,876	\$126,457	\$37,645,882
2004	\$7,950,812	\$3,476,217	n/a	n/a
2005	\$8,427,890	\$3,822,330	n/a	n/a
2006	\$8,192,353	\$3,658,511	n/a	n/a
2007	\$8,554,367	\$4,198,571	n/a	\$1,000,000
2008	\$9,722,818	\$4,275,997	n/a	n/a
2009	\$10,893,945	\$4,629,834	\$278,121	n/a
2010	\$10,228,045	\$4,427,911	\$269,926	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁷³⁵ Information provided by a Nome city official during community review of this profile. Feedback received July 24, 2012.

⁷³⁶ Alaska Dept. of Comm. and Rural Affairs (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Four federally-recognized Tribes are located within the City of Nome. The Nome Eskimo Community, Solomon Tribal Council, King Island Native Community, and the Council Traditional Council all have their Tribal government offices in the community, and many of their members reside in Nome. The self-governing Tribe for Nome, recognized by the Bureau of Indian Affairs, is the Nome Eskimo Community (NEC).⁷³⁷ The NEC was included under the Alaska Native Claims Settlement Act (ANCSA). In addition to acting as the local tribal governing body, NEC offers social services and programs, including family services, tribal services, tribal youth programs, a tribal housing program, and a tribal resources program, which seeks to educate tribal members about local and broader environmental issues.⁷³⁸ The Native village corporation associated with NEC is the Sitnasuak Native Corporation, which manages 242,626 acres of land. The regional Native corporation to which NEC and other three Tribes located in Nome belong is the Bering Strait Native Corporation.⁷³⁹

NEC and the three other Tribes located in Nome are also member villages of Kawerak Inc., a tribal non-profit organization with a mission to “assist, promote and provide programs and services to improve the social, economic, educational, cultural and governmental self-sufficiency for the betterment of the Native people within the region, and to preserve the traditional culture, languages and values.”⁷⁴⁰ Kawerak, Inc. is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁷⁴¹ Kawerak, Inc. offers children and family services, community services, and education, employment and training opportunities for residents of the 18 member villages located in the Bering Straits region. The non-profit also includes a Natural Resources Division, which incorporates the Eskimo Walrus Commission, Land Management Services, Reindeer Herders Association and Subsistence Resources Division.⁷⁴²

Offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Nome. The closest offices of the Alaska Department of Natural Resources (DNR), National Marine Fisheries Service (NMFS) and U.S. Bureau of Citizenship and Immigration Services are located in Anchorage.

Infrastructure

Connectivity and Transportation

Nome is a regional center of transportation for surrounding villages. The Port of Nome plays an essential role in regional transportation infrastructure. Nome is primarily accessible by air, although heavier supplies arrive by water during summer months.⁷⁴³ Two state-owned

⁷³⁷ See footnote 735.

⁷³⁸ Nome Eskimo Community (n.d.). Retrieved February 17, 2012 from <http://www.necalaska.org/>.

⁷³⁹ See footnote 736.

⁷⁴⁰ Kawerak, Inc. (n.d.). Retrieved February 17, 2012 from <http://www.kawerak.org/>.

⁷⁴¹ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁷⁴² See footnote 740.

⁷⁴³ City of Nome (2003). *Nome Comprehensive Plan, Phase I*. Retrieved February 17, 2012 from <http://www.commerce.state.ak.us/dca/plans/Nome-CP-2005.pdf>.

airports are located in the community. The Nome Airport, located one mi northwest of the City, has two paved runways. Nome City Field, less than one mi north of the City, offers an additional gravel strip. Scheduled jet flights are available, as well as charter and helicopter services.⁷⁴⁴ The price of a roundtrip ticket by plane from Nome to Anchorage in early June of 2012 was \$450.⁷⁴⁵ Regional travel is facilitated by a network of 230 miles of gravel roads between Nome and the communities of Teller, Solomon, and Council. A traditional network of winter trails is the only link with outlying communities during winter months.⁷⁴⁶

Facilities

Water in Nome is derived from a well located at Moonlight Springs. The water is treated with chlorine at the Snake River Power Plant and stored in a 50,000-gallon tank. A million-gallon back-up tank is also available. The Nome Joint Utility System operates a piped water system. A utilidor⁷⁴⁷ is used to heat and deliver water to homes. Delivery of water by truck is also available. Most homes are also connected to the City-operated sewer system. A sewage lagoon is used for sewage treatment. Over 95% of residences currently have complete plumbing. Some homes still haul their own honeybuckets and have water delivered to home tanks. Refuse collection services are provided by a contractor that hauls trash to a landfill on Beam Road. Electricity is provided in Nome by a diesel generator, operated by Nome Joint Utility Systems.⁷⁴⁸ Public safety services are provided the City of Nome Police Department and state troopers stationed in Nome.⁷⁴⁹ A Village Public Safety Officer (VPSO) post is also located in Nome.⁷⁵⁰ The VPSO post is managed by Kawerak, Inc., and provides VPSOs to surrounding villages.⁷⁵¹

Additional community facilities and services include a State Superior Court, State Correctional Center, a city recreational center, community center, Boys and Girls club, City Hall, a senior center, a public pool, a City Museum, and three libraries (one public and two located within schools). A private laundromat is also available in the community. Visitor services are available in Nome, including taxi service, car rentals, and a variety of hotels and guest houses. Internet, telephone, and cable service are available in Nome.⁷⁵² In a survey conducted by the AFSC in 2011, community leaders also noted the presence of a food bank, a soup kitchen, job placement services, and publicly subsidized housing in Nome.

With regard to fishing-related infrastructure, community leaders reported in the 2011 AFSC survey that 300 feet of public dock space is available for permanent vessel moorage, along with 2,500 feet for transient vessel moorage. They indicated vessels up to approximately 400 feet in length can moor at Nome docking facilities. Moorage is available for commercial and recreational vessels, and the port can accommodate rescue vessels (i.e. Coast Guard), cruise

⁷⁴⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁴⁵ This price was calculated on November 21, 2011 using kayak.com.

⁷⁴⁶ See footnote 743.

⁷⁴⁷ An aboveground, insulated conduit used for general utility service, especially in Arctic climates. (Definition retrieved from Merriam-Webster online on February 17, 2012.)

⁷⁴⁸ See footnote 744.

⁷⁴⁹ Ibid.

⁷⁵⁰ Dept. of Public Safety (n.d.). *Active VPSO's by Village, December 2011*. Retrieved December 12, 2011 from <http://www.dps.alaska.gov/>.

⁷⁵¹ Information provided by a Nome city official during community review of this profile. Feedback received July 24, 2012.

⁷⁵² See footnote 744.

ships, fuel barges, as well as hazardous material cargos (HAZMAT), depending on the material type. They noted that foreign vessels engaged in seismic studies also moor in Nome.

Community leaders also reported that new dock space and improvements to existing dock infrastructure were completed in 2007. The dock facilities are served by water and electricity, and a fish cleaning station is available. They indicated that a barge landing area, pilings, and a breakwater were all completed within the last 10 years, and that the harbor is dredged annually. Community leaders also reported presence of a fish processing plant, boat repair services (electrical, welding, mechanical, machine shop and hydraulics), dry dock, haulout facilities and tidal grids for small vessels (under 60 tons), commercial cold storage facilities, fishing gear storage, and boat fuel, ice, and tackle sales in Nome. Finally, community leaders reported that Nome residents commonly travel to Anchorage or Fairbanks to access fisheries-related businesses and services not available in Nome. They may also travel to Dutch Harbor, or bring in qualified personnel to Nome. In addition, residents may travel to Seattle, WA for services, or use facilities and services there to maintain or fix their vessels independently.

Medical Services

Nome Health Center and the Norton Sound Regional Hospital are both located in Nome, and operated by the Norton Sound Health Corporation. The hospital is a qualified Acute Care facility and offers Medevac Service. The hospital offers long term care at the Quyaana Care Center, and specialized care of elderly citizens is available at the XYZ Senior Center. Nome also has a volunteer ambulance department. Emergency Services have limited highway, coastal, and airport access. Emergency service is provided by 911 Telephone Service and volunteers.⁷⁵³

As of May, 2011, construction of a new hospital in Nome was over half way completed.⁷⁵⁴ The new facility will expand and enhance existing medical services, including Acute Care Nursing, Labor and Delivery, Dental, Eye, Ambulatory Care, Public Health Programs, Pharmacy, Physical Therapy, Emergency and Urgent Care, Diagnostic, and Support Services. In addition, several new services are anticipated to be offered at the new facility. These include Adult Residential Alcoholism Treatment and Inpatient Mental Health Services.⁷⁵⁵

Educational Opportunities

There are five schools offering elementary and secondary education in the Nome Public School District. Of these, one is a correspondence school. Extensions Correspondence School serves Kindergarten through 12th grade, and as of 2011 had 1 teacher and 14 students participating in the correspondence program. Nome Elementary serves preschool-aged students through 6th grade, and as of 2011 was attended by 396 students and had 29 teachers. Anvil City Science Academy serves grades 5th through 8th, and as of 2011 had 3 teachers and 44 students. Nome Youth Facility serves grades 5th through 12th, and as of 2011 had one teacher and 10

⁷⁵³ Ibid.

⁷⁵⁴ Norton Sound Health Corporation (2011). *New Hospital Construction Updates*. Retrieved February 17, 2012 from <http://www.nortonsoundhealth.org/newhospital.html>.

⁷⁵⁵ City of Nome (2003). *Nome Comprehensive Plan, Phase I*. Retrieved February 17, 2012 from <http://www.commerce.state.ak.us/dca/plans/Nome-CP-2005.pdf>.

students. Finally, Nome-Beltz Junior High School serves grades 7th through 12th, and as of 2011 had 21 teachers and 224 students.⁷⁵⁶

In addition to K-12 education, the Nome Preschool Association provides preschool in the community, and Kawerak, Inc. operates a Head Start program.⁷⁵⁷ Post-secondary education is available at the Northwest Campus (NWC) of the University of Alaska system, which is located in Nome. Originally a community college, NWC maintains its mission of providing vocational and community education in the Bering Strait region, in addition to academic programs.⁷⁵⁸ Vocational training is also available in Nome through NACTEC, or the Northwestern Alaska Career and Technical Center. NACTEC is a joint-venture regional vocational training center that provides high school students with the resources and skills necessary to find successful employment, pursue post-secondary education, and secure independent living skills. Available instruction includes career and technical training, career exploration assistance, life skills training, and work readiness skills training.⁷⁵⁹

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on the Seward Peninsula. Settlements on the west coast of the peninsula targeted marine mammals, and other people moved between seasonal settlements to access fish and wildlife resources. Today, residents of Nome are active in commercial and subsistence fisheries, and recreational fishing is growing in the area as well.⁷⁶⁰

Commercial salmon fisheries began to develop shortly after the purchase of Alaska by the U.S. in 1867. However, the Norton Sound commercial salmon fishery developed later than in other regions of the State. In 1959 and 1960, biologists from the Division of Commercial Fisheries conducted an inventory of salmon resources and determined that harvestable surpluses were present in several Norton Sound river systems. They encouraged processors to develop the fishery after statehood as part of an effort to bring economic benefits to this area of rural Alaska. The first commercial harvest occurred in 1961, and salmon markets in the area have been sporadic since that time. Harvests increased through the 1990s, and have declined since then.⁷⁶¹

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late

⁷⁵⁶ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁷⁵⁷ See footnote 751.

⁷⁵⁸ Northwest Campus, University of Alaska (n.d.). *About UAF Northwest Campus*. Retrieved February 17, 2012 from <http://www.nwc.uaf.edu/>.

⁷⁵⁹ NACTEC. (n.d.). *About Our Program*. Retrieved September 10, 2013 from <http://www.nacteconline.org/mod/resource/view.php?id=2>.

⁷⁶⁰ Scientific Technical Committee, Norton Sound Steering Committee (2003). *Research and Restoration Plan for Norton Sound Salmon*. Retrieved February 21, 2012 from <http://69.93.224.39/~aykssi/wp-content/uploads/NS-RR-Plan-rev.pdf>.

⁷⁶¹ Clark, McGregor, Mecum, Krasnowski, and Carroll (2006). *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. (105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

1970s.⁷⁶² Commercial exploitation of halibut and groundfish first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.⁷⁶³ King crab fisheries developed in the Bering Sea beginning in the 1950s, and Norton Sound is one of the historical centers of this fishery.⁷⁶⁴

Norton Sound has the northernmost fisheries for both Pacific herring and red king crab. Although the Norton Sound herring spawning biomass has been relatively stable in recent times, the market for herring roe has declined due to decreasing consumption of herring roe in Japan. Processor interest in the Norton Sound sac roe fishery has declined more than in other areas of the State, largely due to the timing of the fishery, which takes place later than sac roe fisheries elsewhere in the State and conflicts with the opening of the first salmon fisheries of the season. In addition, ice floes are often present in Norton Sound during the herring season.⁷⁶⁵ In contrast, the Norton Sound red king crab stock has shown an increasing trend since a population low in the 1990s, and today provides small summer and winter fisheries. NMFS and ADF&G jointly manage Bering Sea king crab stocks.⁷⁶⁶ Nome king crab fishermen hold both state-issued king crab permits, as well as permits in the Community Development Quota (CDQ) king crab fishery. The CDQ program “allocates a percentage of all Bering Sea and Aleutian Island quotas for groundfish, prohibited species, halibut, and crab to eligible communities.”⁷⁶⁷

Nome is located in Pacific Halibut Fishery Regulatory Area 4E and the Bering Sea Sablefish Regulatory Area. With regard to salmon fisheries, Nome is located in Subdistrict 1 of six Norton Sound salmon subdistricts.⁷⁶⁸ The City is a member of the Norton Sound Economic Development Corporation (NSEDC), the regional CDQ group that promotes training and employment opportunities for residents, community and development programs for member villages, and offers loans to facilitate involvement of locals in Bering Sea crab and groundfish fisheries. The NSEDC operates a shore-side processing plant in Nome.⁷⁶⁹ The City is not eligible to participate in the Community Quota Entity (CQE) program.

According to a survey conducted by the AFSC in 2011, community leaders reported that Nome participates actively in fisheries management processes in Alaska. They indicated that Nome-based organizations participate by submitting comments and attending fisheries management meetings in person, and Nome also relies on regional organizations to provide information on fisheries management issues. Community leaders also noted political tension between subsistence salmon fisheries and the pollock industry and expressed concern that salmon returns are diminishing due to interception by pollock trawlers in the Bering Sea.

⁷⁶² Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

⁷⁶³ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

⁷⁶⁴ See footnote 762.

⁷⁶⁵ Ibid.

⁷⁶⁶ Alaska Dept. of Fish and Game (2012). *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=redkingcrab.main>.

⁷⁶⁷ NOAA Fisheries (n.d.). *Community Development Quota (CDQ) Program*. Retrieved June 20, 2012 from <http://www.fakr.noaa.gov/cdq/default.htm>.

⁷⁶⁸ See footnote 761.

⁷⁶⁹ Norton Sound Economic Development Corporation (2003). *Homepage* Retrieved February 21, 2012 from <http://www.nsedc.com/>.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, one processing facility was in operation in Nome. Norton Sound Seafood Products is a subsidiary of the NSEDC. Norton Sound Seafood Products was established in 1995 and processes red king crab (mid-June to late August), salmon (mid-July to mid-September), and halibut (August to mid-October). Norton Sound Seafood prides itself as providing an alternative to mass-produced food, in that it provides “exclusive offerings of hand-caught... seafood products.”^{770,771}

Fisheries-Related Revenue

According to information provided in annual municipal budgets, Nome received between \$140,000 and \$4.8 million per year in fisheries-related revenue between 2000 and 2010. In the 2011 AFSC survey, community leaders reported several additional fisheries-related funding sources that were not reported in annual budgets. The primary sources of fisheries-related revenue in Nome were shared revenues from the state raw fish tax and Shared Fisheries Business Tax, along with fees for harbor usage, fishing gear storage, and leasing of public lands. In 2010, Nome received \$5,000 in shared revenue from the state raw fish tax and \$23,169 from the Alaska Department of Revenue’s Shared Fisheries Business Tax. In addition, the Port & Harbor Division of the City of Nome reported that \$18,989 was received in 2010 from harbor usage fees, as well as \$16,085 in fees for fishing gear storage and \$34,479 in revenue from leasing of public land.⁷⁷² Information about fisheries-related revenue is presented in Table 3.⁷⁷³

It is also important to note that the NSEDC uses fisheries revenue from the CDQ program to provide fishery loan assistance, education, employment and training, and other community programs, as well as managing the shore-side processing plant in Nome (see *Processing Plants* section), and development of alternative energy sources in member communities.⁷⁷⁴ In the 2011 AFSC survey, community leaders reported receiving \$100,000 in funding or grants from the NSEDC in 2010.

Commercial Fishing

According to a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing is one of the most important local resource-based industries in Nome, with major fisheries including king crab, salmon, Pacific halibut, and herring. They indicated that king crab is fished between January and April and again between June and September, the halibut seasons goes from July to October, herring is fished in May and June, coho and sockeye salmon are harvested in July and August, and the chum salmon season takes place between July and September. Between 2000 and 2010, Nome residents participated in commercial fisheries as crew members, vessel owners, and permit holders. There were 7 fish buyers operating in Nome

⁷⁷⁰ Ibid.

⁷⁷¹ Norton Sound Seafood Products (n.d.). *Homepage*. Retrieved August, 2012 from <http://nortonsoundseafoodproducts.com>.

⁷⁷² Personal communication, Port & Harbor Division of the City of Nome, October 17, 2013.

⁷⁷³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

⁷⁷⁴ See footnote 769.

that year, down from a peak of 26 buyers in 2001. In 2010, there was one shore-side processing plant located in Nome (see *Processing Plants* section above).

In 2010, 52 Nome residents held a total of 89 Commercial Fisheries Entry Commission (CFEC) permits, including 34 crab permits (king crab, pot gear, vessels under 60 feet), 26 salmon permits (Kotzebue, Lower Yukon, and Norton Sound gillnet fisheries, and the Cook Inlet and Bristol Bay drift gillnet fisheries), 12 halibut permits (statewide, longline vessel under 60 feet), 8 herring permits (Norton Sound roe and food/bait gillnet fishery), 6 groundfish permits (statewide fisheries using hand troll, longline vessel under 60 feet and mechanical jig, and Gulf of Alaska beach seine), 2 ‘other finfish’ permits (statewide fisheries for fresh water fish, using beach seine and set gillnet), and 1 ‘other shellfish’ permit (Southeast Alaska sea cucumber using diving gear).

Of the total 89 CFEC permits, only 42 (47%) were actively fished in 2010. The king crab fishery was the most active in 2010, in terms of both the number and percentage of CFEC permits actively fished. The percentage of king crab permits that were active increased over the decade, from 44% in 2000 to 76% in 2010. The next most active CFEC fishery in 2010 was halibut, with 8 permits actively fished out of a total of 12 held that year. A total of 26 salmon CFEC permits were held in 2010, but only 3 (12%) of these were actively fished that year. Crab, halibut, and salmon permit numbers remained relatively stable between 2000 and 2010. The percentage of crab and halibut permits fished increased over the period, while the percentage of salmon permits fished decreased slightly between 2000 and 2010. Three of six total groundfish CFEC permits, one of eight herring permits, and one of two ‘other finfish’ permits were active in 2010. In addition, one ‘other shellfish’ CFEC permit was held but not actively fished in 2010. The number of herring permits held was relatively stable between 2000 and 2010, but the number fished varied greatly. There was great variance in both the number of permits held and the percentage of permits actively fished in CFEC fisheries for groundfish, ‘other finfish’, and ‘other shellfish’.

Nome residents were also highly engaged in federal fisheries, holding 20 crab License Limitation Program permits (LLPs) and 5 groundfish LLPs in 2010. Of these, eight crab LLPs and three groundfish LLPs were actively fished that year. In addition, four Federal Fisheries Permits (FFP) were held by Nome residents in 2010, and two were actively fished. Information about state and federal permits held by Nome residents is presented in Table 4.

In addition to permits, several Nome residents held quota share accounts in the federally managed catch share fisheries for halibut, sablefish, and crab. The number of halibut quota share account holders varied between one and three between 2000 and 2010, and the amount of quota held varied between 57 shares in 2000-2005 and 224,965 shares in 2009. Sablefish quota share accounts were held between 2005 and 2009, with 1 held between 2005 and 2008, and 2 in 2009. Between 2005 and 2008, 416 sablefish quota shares were held. In 2009, the sablefish quota shares held in Nome jumped dramatically, to 2,866,629 shares held. One crab quota share account was held in one year (2009). That year, 23,033,204 crab quota shares were held in Nome.

The annual halibut individual fishing quota (IFQ) allotment increased by 25% over 2000 levels in 2004, then declined to close to 2000 levels in 2007 before sinking to 90% below 2000 levels in 2010. In the sablefish fishery, the annual IFQ allotment decreased steadily between 2005 and 2009, with 30% less pounds/quota share in 2009 than 2005 levels. Given that crab shares were held in only one year in Nome between 2000 and 2010, no trends in IFQ allotment are visible. Information about federal catch share participation is presented in Tables 6 through 8.

In 2010, a total of 58 Nome residents held commercial crew licenses, a significant increase from 13 crew licenses in 2000. The number of fishing vessels owned by Nome residents, homeported in Nome, and landing catch in Nome remained relatively stable between 2000 and 2010. In 2010, 20 vessels were primarily owned by Nome residents, 20 were homeported there, and 22 vessels landed catch in the community. Between 2000 and 2010, one shore-side processing facility operated each year. In contrast, the number of fish buyers varied dramatically during the period, with 26 buyers present in 2001, declining precipitously to between 4 and 8 from 2004 to 2010. Interestingly, while the number of fish buyers decreased, the total landings and ex-vessel revenue generated in Nome increased, from 42,886 net pounds landed in 2000, valued at \$144,256, to 479,007 net pounds landed in 2010, valued at \$1,707,319. Information about the commercial fishing sector in Nome is presented in Table 5. Information about landings in specific fisheries is considered confidential between 2000 and 2010 due to the small number of participants (Table 9). Overall landings and ex-vessel revenue figures ranked Nome at 42nd in landings and 36th in ex-vessel revenue out of 67 Alaskan communities that received commercial fisheries landings in 2010.

Information is also available regarding landings and ex-vessel revenue in individual fisheries generated by vessel owners residing in Nome, independent of the location of their deliveries. Data were reported in all years between 2000 and 2010 for crab and halibut fisheries, and in three years (2006, 2007, and 2010) for Pacific cod landings and revenue. Information regarding landings and ex-vessel revenue in other fisheries, and other years in the Pacific cod fishery, is considered confidential due to the small number of participants. Crab and halibut landings by Nome residents increased over the period. Crab landings grew from 57,318 net pounds in 2000 to 296,265 net pounds landed in 2010, valued at \$197,463 and \$1,077,917, respectively. Halibut landings grew from 16,411 net pounds in 2000 to 139,910 net pounds in 2008, before declining to 62,894 net pounds in 2010. These landings were valued at \$28,621, \$535,016, and \$220,776, respectively. In 2010, 2,808 net pounds of Pacific cod were landed by Nome residents, generating \$2,218 in ex-vessel revenue. This information about landings and ex-vessel revenue generated by Nome vessel owners is presented in Table 10.

According to the 2011 AFSC survey, community leaders reported that fishing boats using Nome as their base of operation typically use pot, longline, and/or gillnet gear. When asked to describe changes in the fleet over time, they noted that there were more commercial fishing boats of all sizes in 2011 compared to five years prior, with a particularly noticeable increase in the number of smaller vessels (under 35 feet in length).

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nome: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$600	\$285	\$500	\$800	\$300	\$5,000	\$750	\$10,000	\$10,000	\$10,000	\$5,000
Shared Fisheries Business Tax ²	n/a	n/a	\$2,043	\$8,988	\$10,034	\$13,901	\$18,978	\$17,276	\$19,607	\$28,894	\$23,169
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ⁴	\$11,321	\$11,432	\$12,335	\$13,084	\$15,162	\$16,485	\$16,661	\$16,540	\$17,476	\$18,601	\$18,934
Port/dock usage ⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ⁴	\$12,748	\$12,285	\$12,325	\$13,116	\$14,708	\$1,490	\$14,671	\$14,936	\$15,062	\$15,324	\$15,041
Leasing public/tribal land to members of fishing industry ⁴	\$15,715	\$15,715	\$15,715	\$15,715	\$15,715	\$15,715	\$34,479	\$34,479	\$34,479	\$34,479	\$34,479
Marine fuel sales tax ⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁵</i>	<i>\$41,068</i>	<i>\$40,290</i>	<i>\$41,694</i>	<i>\$45,043</i>	<i>\$55,175</i>	<i>\$49,475</i>	<i>\$81,367</i>	<i>\$95,636</i>	<i>\$94,673</i>	<i>\$98,290</i>	<i>\$102,694</i>
<i>Total municipal revenue⁶</i>	<i>\$6,065,595</i>	<i>\$6,176,718</i>	<i>\$6,649,699</i>	<i>\$7,065,869</i>	<i>\$7,950,812</i>	<i>\$8,427,890</i>	<i>\$8,192,353</i>	<i>\$8,554,367</i>	<i>\$9,722,818</i>	<i>\$10,893,945</i>	<i>\$10,228,045</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Revenue, Tax Division. *Revenue Sources Books and Forecasts*. Retrieved October 28, 2013 from <http://www.tax.alaska.gov/programs/sourcebook/>.

³ Alaska Dept. of Comm. and Rural Affairs. n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

⁴ Reported by the Port & Harbor Division of the City of Nome. Personal communication, October 17, 2013.

⁵ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁶ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Nome: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	2	4	4	5	5	5	5	5	5	5	5
	Active permits	0	2	2	2	2	2	3	3	3	3	3
	% of permits fished	0%	50%	50%	40%	40%	40%	60%	60%	60%	60%	60%
	Total permit holders	2	4	4	5	5	5	5	5	5	5	5
Crab (LLP) ¹	Total permits	14	18	18	18	19	19	19	19	20	20	20
	Active permits	1	6	5	5	5	7	8	8	9	8	8
	% of permits fished	7%	33%	27%	27%	26%	36%	42%	42%	45%	40%	40%
	Total permit holders	10	14	14	17	16	16	15	15	16	16	16
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	3	4	4	4
	Fished permits	0	0	0	0	0	0	0	3	3	3	2
	% of permits fished	-	-	-	-	-	-	-	100%	75%	75%	50%
	Total permit holders	0	0	0	0	0	0	0	3	4	3	3
Crab (CFEC) ²	Total permits	34	38	40	35	31	30	33	29	25	25	34
	Fished permits	15	17	24	19	16	22	23	23	21	18	26
	% of permits fished	44%	45%	60%	54%	52%	73%	70%	79%	84%	72%	76%
	Total permit holders	30	33	32	30	26	23	23	20	18	20	25
Other shellfish (CFEC) ²	Total permits	0	4	4	4	4	1	1	1	1	1	1
	Fished permits	0	0	1	0	2	0	0	0	0	0	0
	% of permits fished	-	0%	25%	0%	50%	0%	0%	0%	0%	0%	0%
	Total permit holders	0	2	2	2	2	1	1	1	1	1	1
Halibut (CFEC) ²	Total permits	14	15	16	12	11	11	11	12	11	15	12
	Fished permits	3	0	10	7	7	7	8	9	9	12	8
	% of permits fished	21%	0%	63%	58%	64%	64%	73%	75%	82%	80%	67%
	Total permit holders	14	15	16	12	11	11	11	12	11	15	12
Herring (CFEC) ²	Total permits	4	3	4	3	6	6	4	4	5	6	8
	Fished permits	1	0	0	1	2	1	0	0	0	0	1
	% of permits fished	25%	0%	0%	33%	33%	17%	0%	0%	0%	0%	13%
	Total permit holders	5	3	4	3	7	6	4	4	5	6	8

Table 4 cont'd. Permits and Permit Holders by Species, Nome: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	2	1	1	1	0	0	1	1	2	4	6
	Fished permits	0	0	0	0	0	0	1	1	1	3	3
	% of permits fished	0%	0%	0%	0%	-	-	100%	100%	50%	75%	50%
	Total permit holders	2	1	1	1	0	0	1	1	2	3	5
Other Finfish (CFEC) ²	Total permits	1	0	0	0	0	0	1	1	0	0	2
	Fished permits	0	0	0	0	0	0	1	0	0	0	1
	% of permits fished	0%	-	-	-	-	-	100	0%	-	-	50
	Total permit holders	1	0	0	0	0	0	1	1	0	0	2
Salmon (CFEC) ²	Total permits	31	34	30	32	34	34	32	32	33	29	26
	Fished permits	9	4	2	3	5	4	3	4	4	4	3
	% of permits fished	29%	12%	7%	9%	15%	12%	9%	13%	12%	14%	12%
	Total permit holders	31	34	30	30	32	32	30	30	32	29	25
<i>Total CFEC Permits</i> ²	<i>Permits</i>	86	95	95	87	86	82	83	80	77	80	89
	<i>Fished permits</i>	28	21	37	30	32	34	36	37	35	37	42
	<i>% of permits fished</i>	33%	22%	39%	34%	37%	41%	43%	46%	45%	46%	47%
	<i>Permit holders</i>	63	66	62	60	57	52	50	49	47	51	52

¹National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nome: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Nome ²	Total Net Pounds Landed in Nome ^{2,5}	Total Ex-Vessel Value of Landings in Nome ^{2,5}
2000	13	20	1	22	20	9	42,886	\$144,256
2001	16	26	1	27	23	26	194,824	\$695,096
2002	14	16	1	24	18	32	357,795	\$1,736,913
2003	21	15	1	17	16	24	345,389	\$1,251,016
2004	23	7	1	20	20	26	390,367	\$1,160,354
2005	26	5	1	20	21	29	406,871	\$1,352,240
2006	26	4	1	19	16	25	463,643	\$1,153,386
2007	35	8	1	14	17	27	420,911	\$1,218,035
2008	40	6	1	14	14	18	541,945	\$1,926,825
2009	44	7	1	17	16	26	533,506	\$1,569,132
2010	58	7	1	20	20	22	479,007	\$1,707,319

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Nome: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	1	57	8
2001	1	57	8
2002	1	57	8
2003	1	57	8
2004	1	57	10
2005	2	76,521	11,512
2006	2	76,521	11,324
2007	2	76,749	10,867
2008	2	76,749	9,455
2009	3	224,965	38,083
2010	1	285	4

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nome: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	1	416	49
2006	1	416	48
2007	1	416	46
2008	1	416	44
2009	2	2,866,629	233,894
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nome: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	1	23,033,204	1,380,657
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nome: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other	-	-	-	-	-	-	-	-	-	-	-
Shellfish											
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Groundfish											
Other	-	-	-	-	-	-	-	-	-	-	-
Shellfish											
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nome Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	57,318	97,794	84,153	87,445	116,290	153,664	213,301	158,151	205,647	231,799	296,265
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	16,411	66,238	97,579	48,651	45,801	24,560	37,398	96,143	139,910	122,979	61,894
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	1,499	3,238	-	-	2,808
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>73,729</i>	<i>164,032</i>	<i>181,732</i>	<i>136,096</i>	<i>162,091</i>	<i>178,224</i>	<i>252,198</i>	<i>257,532</i>	<i>345,557</i>	<i>354,778</i>	<i>360,967</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	\$197,463	\$357,579	\$503,472	\$339,279	\$342,489	\$513,380	\$519,177	\$440,426	\$718,116	\$707,824	\$1,077,917
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	\$28,621	\$131,217	\$175,642	\$139,634	\$132,593	\$72,354	\$125,166	\$386,976	\$535,016	\$345,307	\$220,776
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	\$650	\$1,622	-	-	\$2,218
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	-	-	-	-	-	-
<i>Total²</i>	<i>\$226,084</i>	<i>\$488,797</i>	<i>\$679,115</i>	<i>\$478,912</i>	<i>\$475,082</i>	<i>\$585,734</i>	<i>\$644,993</i>	<i>\$829,024</i>	<i>\$1,253,132</i>	<i>\$1,053,131</i>	<i>\$1,300,912</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Although no active sport fish guides were registered in Nome between 2000 and 2010, several licensed sport fish guides were present in the community in most year of the period. In 2010, Nome residents purchased 942 sport fishing licenses (irrespective of point of sale), and 1,217 sport fishing licenses were sold in the City of Nome (Table 11). The fact that a larger number of licenses were sold in Nome than were purchase by residents indicates that Nome serves as a center of outfitting for the region, and possibly attracts sport fishing-related tourism as well.

In a survey conducted by the AFSC in 2011, community leaders reported that recreational fishing activity in Nome includes boat and dock-based fishing by both resident and non-resident anglers, and targets all five salmon species, Pacific halibut, crab, tom cod, and burbot. The Alaska Statewide Harvest Survey,⁷⁷⁵ conducted by ADF&G between 2000 and 2010, noted freshwater sport harvest of coho, sockeye, and pink salmon, Dolly Varden, Arctic grayling, and northern pike, and saltwater harvest of all five salmon species, Pacific halibut, rockfish, and Pacific cod. Recreational harvest of razor clams was also noted in the area. No kept/release log book data were reported for fishing charters out of Nome between 2000 and 2010.⁷⁷⁶

Nome is located within Alaska Sport Fishing Survey Area W – Seward Peninsula – Norton Sound. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, there was significant sport fishing activity in both saltwater and freshwater, although freshwater sport fishing was more important in the region. Alaska resident anglers consistently fished more angler days in both freshwater and saltwater (34 – 2,663 saltwater and 6,199 to 17,579 freshwater angler days) than non-Alaska residents (0 – 204 saltwater and 2,087 – 8,307 freshwater angler days) during the period. This information about the sport fishing sector in and near Nome is displayed in Table 11.

⁷⁷⁵ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁷⁷⁶ Alaska Department of Fish and Game (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Nome: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nome ²
2000	0	6	1,121	1,449
2001	0	10	916	1,368
2002	0	6	578	779
2003	0	4	807	1,058
2004	0	4	1,003	1,428
2005	0	0	907	1,260
2006	0	2	749	994
2007	0	2	751	1,002
2008	0	3	725	1,054
2009	0	5	739	930
2010	0	3	942	1,217

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	0	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Nome has a mixed cash and subsistence economy. Compared to more remote communities in the region, residents of Nome are less engaged in subsistence harvest activities,⁷⁷⁷ although subsistence resources continue to make up an important part of the local diet. Some Nome residents use seasonal fish camps, such as nearby Council, for summer subsistence food gathering activities.⁷⁷⁸ In a survey conducted by the AFSC in 2011, Nome community leaders said that a wide range of sea life is used by Nome residents for subsistence purposes, including salmon – particularly chum and coho – seal, walrus, crab, whale, halibut, and herring.

No information is available from ADF&G regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). However, some data are available from management agencies regarding salmon, halibut, and marine mammal subsistence during the 2000-2010 period. The available data are presented below. It is important to note that, during community review of this profile, Nome officials were concerned about the minimal data available regarding subsistence given the subsistence priority in both state and federal management systems. One Tribal official emphasized that subsistence is Nome Eskimo Community's top priority, not commercial fisheries, and urged the AFSC to expand the years for which subsistence data are reported in these community profiles to include information from the 1980s and 1990s.

For the 2000-2010 period, between 134 and 877 Nome households per year were issued subsistence salmon permits. Of harvests that were reported, pink was the most heavily harvested salmon species over time, with an average harvest of 7,567 fish per year. Sockeye, coho, and chum salmon were the next most heavily harvested species, with an average of 3,133 sockeye, 1,723 coho, and 1,570 chum harvested per year. A small number of Chinook were also harvested by Nome residents each year. No information was reported regarding subsistence harvest of marine invertebrates and non-salmon fish (not including halibut). Information about salmon, marine invertebrates, and non-salmon fish is presented in Table 13.

Nome residents were issued between 10 and 25 Subsistence Halibut Registration Certificates (SHARC) each year between 2003 and 2010. In 2010, 23 SHARC cards were issued, 7 were fished, and 941 pounds of halibut were harvested. This information about the Nome subsistence halibut fishery is presented in Table 14.

Data were available regarding harvest of walrus, polar bear, and beluga whale by Nome residents during the 2000-2010 period. Data reported by the U.S. Fish and Wildlife Service (FWS) indicate that walrus were harvested by Nome residents each year from 2000 to 2007, with total harvest ranging from 4 to 56 animals per year. FWS data also indicates that polar bear were harvested in 2 years of the decade, with harvest of two bears reported in 2001, and one bear taken in 2007. Data reported by the NMFS show beluga harvest by Nome residents in some years of the period as well. It is important to note that beluga harvest numbers are reported for Nome alone until 2006, while 2007-2010 harvest numbers reflect a combined harvest for the communities of Nome and Brevik. No information was available from management agencies

⁷⁷⁷ City of Nome (2003). *Nome Comprehensive Plan, Phase I*. Retrieved February 17, 2012 from <http://www.commerce.state.ak.us/dca/plans/Nome-CP-2005.pdf>.

⁷⁷⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

regarding harvest of sea otters, Steller sea lions, harbor seals, or bearded seals in Nome during the period. Information about subsistence harvest of marine mammals is presented in Table 15.

Additional Information

As in many areas of Alaska, salmon are very important to local culture and economy in Nome. During the gold rush era of the early 1900s, dried salmon was even used as local currency!⁷⁷⁹

The Bering Land Bridge formed the centerpiece of a region known as Beringia. Today, Beringia is defined as “the land and maritime area bounded on the west by the Lena River in Russia; on the east by the Mackenzie River in Canada’s British Columbia; on the north by 72 degrees north latitude; and on the south by the tip of the Kamchatka Peninsula.” Native peoples currently residing on both sides of the Bering Strait remain united by common language, tradition and environment. The area surrounding the land bridge is currently the site of extensive research, including geological, biogeographical, archaeological, and anthropological studies.^{780,781}

Table 12. Subsistence Participation by Household and Species, Nome: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁷⁷⁹ Scientific Technical Committee, Norton Sound Steering Committee (2003). *Research and Restoration Plan for Norton Sound Salmon*. Retrieved February 21, 2012 from <http://69.93.224.39/~aykssi/wp-content/uploads/NS-RR-Plan-rev.pdf>.

⁷⁸⁰ National Park Service (2010). *Shared Beringian Heritage Program*. Retrieved February 22, 2012 from <http://www.nps.gov/akso/beringia/>.

⁷⁸¹ National Park Service (2009). *Bering Land Bridge National Preserve*. Retrieved February 17, 2012 from <http://www.nps.gov/bela/>.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nome: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	134	103	18	394	827	2,778	163	n/a	n/a
2001	151	126	9	872	576	121	324	n/a	n/a
2002	187	151	28	1,159	763	3,752	250	n/a	n/a
2003	268	219	126	712	388	860	1,538	n/a	n/a
2004	877	866	168	1,141	1,909	21,272	4,081	n/a	n/a
2005	358	356	81	1,903	1,506	8,672	5,575	n/a	n/a
2006	352	352	65	1,864	3,821	12,900	6,041	n/a	n/a
2007	329	328	47	4,709	1,618	1,120	6,176	n/a	n/a
2008	458	450	75	1,375	4,097	16,626	4,066	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nome: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	10	5	n/a
2004	14	7	n/a
2005	15	9	n/a
2006	10	n/a	n/a
2007	11	1	n/a
2008	17	7	1,145
2009	25	8	1,281
2010	23	6	941

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nome: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	2	n/a	56	n/a	n/a	n/a	n/a
2001	n/a	n/a	42	2	n/a	n/a	n/a
2002	n/a	n/a	6	n/a	n/a	n/a	n/a
2003	n/a	n/a	12	n/a	n/a	n/a	n/a
2004	n/a	n/a	6	n/a	n/a	n/a	n/a
2005	3	n/a	5	n/a	n/a	n/a	n/a
2006	2	n/a	6	n/a	n/a	n/a	n/a
2007	2*	n/a	4	1	n/a	n/a	n/a
2008	11*	n/a	n/a	n/a	n/a	n/a	n/a
2009	4*	n/a	n/a	n/a	n/a	n/a	n/a
2010	5*	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Note: * indicates a combined harvest total for the communities of Nome and Brevik.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Nunam Iqua (NOO-nam ICK-wa; formerly Sheldon Point)



People and Place

Location

Nunam Iqua is on a south fork of the Yukon River, about 9 miles south of Alakanuk and 18 miles southwest of Emmonak in the Yukon-Kuskokwim Delta.⁷⁸² The community is situated on Sheldon Point, at the confluence of Kwemeluk Pass and Kwiklokchun Channel. It is separated from Norton Sound by Munsen Island.⁷⁸³ The community is built to the north and south of Swan Lake, a two-foot deep tundra pond.⁷⁸⁴ Nunam Iqua is 500 miles northwest of Anchorage. It is located in the Bethel Recording District and Wade Hampton Census Area. The City encompasses 13.2 square miles of land and 5.3 square miles of water.⁷⁸⁵

*Demographic Profile*⁷⁸⁶

In 2010, there were 187 residents in Nunam Iqua, making it the 204th largest of 352 communities in Alaska with recorded populations that year. Overall between 1990 and 2010, the population of Nunam Iqua increased by 71.6%. A majority of this growth occurred between 1990 and 2000, and according to estimates by the Alaska Department of Labor, the population of permanent residents decreased by 4.9% between 2000 and 2009, with an average annual growth rate between of -0.94% (Table 1). In 2010, a majority of the Nunam Iqua residents identified themselves as American Indian and Alaska Native (91.4%), while 5.9% identified as White, 1.1% as Asian, and 1.6% identified with two or more races. No Nunam Iqua residents identified themselves as Hispanic in 2010. The percentage of the population that identified as White increased slightly over time, from 4.6% in 1990 to 5.5% in 2000, and 5.9% in 2010 (Figure 1).

In 2010, the average household size in Nunam Iqua was 4.35, less than household size in 2000 (4.69 persons per household), but an overall increase from 4.0 persons per household in 1990. The number of households in Nunam Iqua has increased over time, from 27 in 1990 to 35 in 2000, and 43 in 2010. Of the 46 housing units surveyed for the 2010 Decennial Census, 67.4% were owner-occupied, 26.1% were rented, and 6.5% were vacant or used only seasonally. From 1990 to 2010, no residents of Nunam Iqua lived in group quarters.

In 2010, the gender makeup of Nunam Iqua's population (52.4% male and 47.6% female) was very close to that of the state population as a whole (52% male and 48% female). That year,

⁷⁸² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁸³ Community of Nunam Iqua. 2005. *Nunam Iqua Strategic Plan for Comprehensive Community Development*. Retrieved March 5, 2012 from <http://www.commerce.state.ak.us/dca/plans/NunamIqua-CP-2005.pdf>.

⁷⁸⁴ Nunam Iqua Advisory Planning Board. (2008). *Nunam Iqua Hazard Mitigation Plan*. Retrieved March 5, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Nunam_Iqua_HMP.pdf.

⁷⁸⁵ See footnote 782.

⁷⁸⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

the median age of Nunam Iqua residents was 21.2 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, 45.4% of the Nunam Iqua population was younger than 20 years of age. There were more males than females in all age groups under 50, but there were more women than men aged 50 to 59 and 70 to 79. That year, 9.6% of Nunam Iqua’s population was age 60 or older. The overall population structure of Nunam Iqua in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁷⁸⁷ 58.9% of Nunam Iqua residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 21.9% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 19.2% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 11% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 5.5% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

Table 1. Population in Nunam Iqua from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	109	-
2000	164	-
2001	-	159
2002	-	157
2003	-	167
2004	-	166
2005	-	152
2006	-	156
2007	-	151
2008	-	156
2009	-	156
2010	187	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). Current population estimates for Alaskan Communities. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

⁷⁸⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Figure 1. Racial and Ethnic Composition, Nunam Iqua: 2000-2010 (U.S. Census).

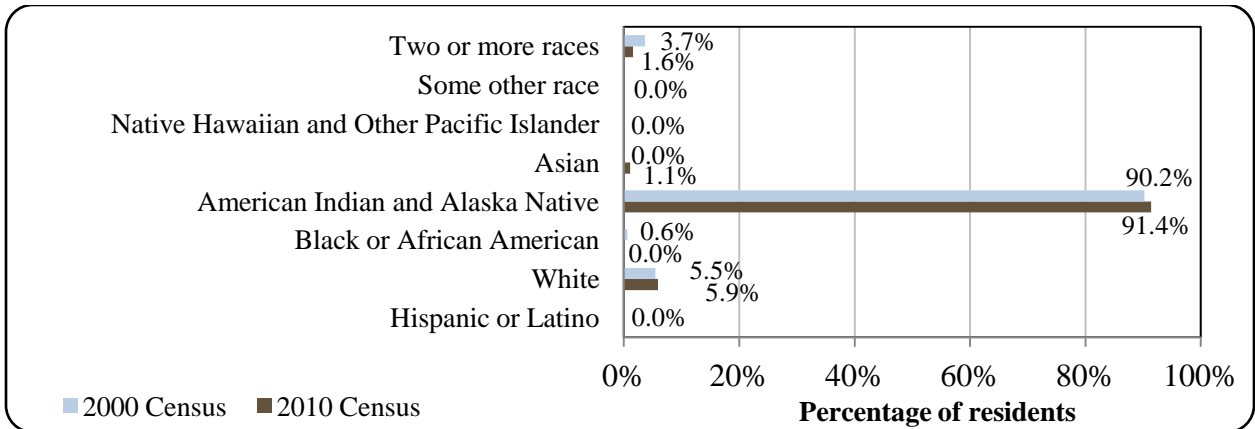
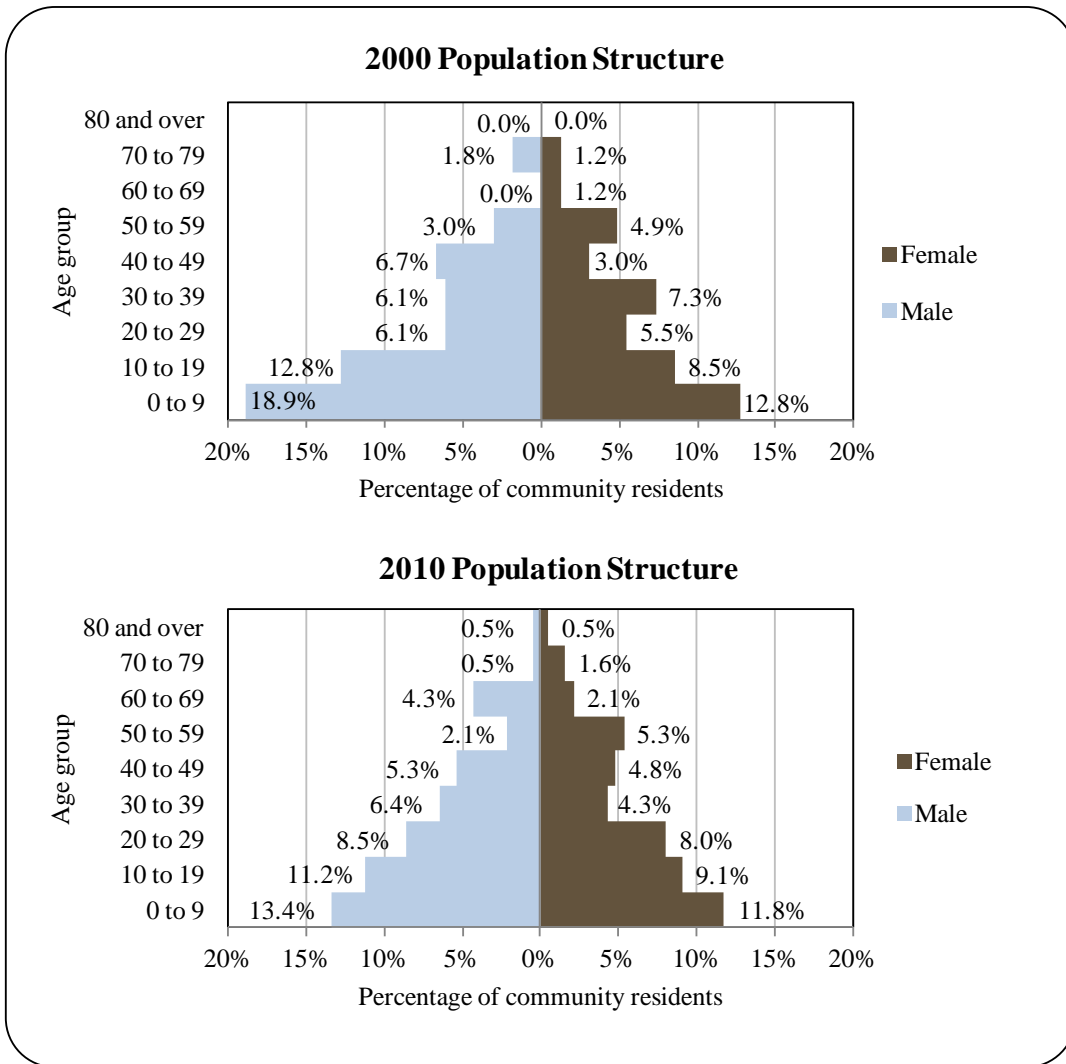


Figure 2. Population Age Structure in Nunam Iqua Based on the 2000 and 2010 U.S. Decennial Census.



*History, Traditional Knowledge, and Culture*⁷⁸⁸

Nunam Iqua was historically the location of summer fish camps, due to its location near the Black River. In Yup'ik, the name means “end of the tundra.” The community was originally called Sheldon Point, after the first permanent resident, a White man named Sheldon who established a small store at the site of the present City.⁷⁸⁹ Sheldon also owned and operated a fish saltery at the site in the late 1930s and early 1940s. The saltery was later operated by Northern Commercial Company.⁷⁹⁰ The community first appeared in U.S. Census records in 1950, recording a population of 43 residents. The Bureau of Indian Affairs (BIA) built a school in the village in 1964, and the City of Sheldon Point was incorporated in 1974. In the 1980s, a new high school, an electric company, and a washeteria were constructed. In 1997, the washeteria burned down and a Community Hall was built.⁷⁹¹ In November 1999, residents voted to change the City's name back to the original Yup'ik name for the site. Today, commercial fishing and subsistence activities are the primary means of support in this Yup'ik Eskimo Village.⁷⁹² The sale, importation, and possession of alcohol are banned in the community.⁷⁹³

Natural Resources and Environment

The climate of Nunam Iqua is maritime in summer and continental in winter, when maritime influences are reduced due to the ice pack on the Bering Sea. Temperatures range from -25 to 78 °F. Annual precipitation averages 18 inches, with an average snowfall of 60 inches. The Bering Sea is ice-free from mid-June through October. Flooding is common in the late fall. Heavy winds in the fall and winter often limit accessibility.⁷⁹⁴

The Yukon-Kuskokwim Delta is an alluvial flood plain. The Nunam Iqua area is characterized by numerous lakes and slough channels interwoven through the tundra wetland complex. Extensive permafrost in the region prevents drainage of surface water. Swan Lake is the largest tundra pond in the vicinity.⁷⁹⁵ Nunam Iqua is located within the boundaries of the Yukon Delta National Wildlife Refuge (NWR). The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and cackling geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Nunavaknuk Lake and the Kusilvak Mountains to its south are located approximately 50 miles south of Nunam Iqua.⁷⁹⁶ The western border of the Andreafsky

⁷⁸⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁷⁸⁹ Community of Nunam Iqua. 2005. *Nunam Iqua Strategic Plan for Comprehensive Community Development*. Retrieved March 5, 2012 from <http://www.commerce.state.ak.us/dca/plans/NunamIqua-CP-2005.pdf>.

⁷⁹⁰ See footnote 788.

⁷⁹¹ See footnote 789.

⁷⁹² See footnote 788.

⁷⁹³ Alaska Dept. of Public Safety. (2011). *Local Option Restrictions*. Retrieved May 31, 2012 from <http://dps.alaska.gov/abc/restrictions.aspx>.

⁷⁹⁴ See footnotes 788 and 789.

⁷⁹⁵ See footnote 789.

⁷⁹⁶ U.S. Fish and Wildlife Service. (2011). *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

Wilderness Area, covering slightly more than 5% of the NWR, is located approximately 50 miles east of Nunam Iqua.⁷⁹⁷

Natural hazards with the highest likelihood of occurring in Nunam Iqua are severe weather, landslides, and river and coastal erosion. Wildland fire, flooding, and earthquakes are also possible. Weather events may include high winds, coastal storms, storm surge, and thunderstorms. One of the greatest dangers is the occurrence of a storm surge that may break up shorefast ice and drive it onshore, an event called an ‘Ivu.’ Ice driven onshore is hazardous for buildings on pilings at flood level, as it can cut through heavy timbers of pile foundations. Storm surges also bring the salt water into Kwemeluk Pass, the primary water source for the community, and contaminate ponds and lakes so that water cannot be processed. Landslides are most likely to be caused by permafrost melting, a process that is accelerating with climate change.⁷⁹⁸ Flooding caused by ice jams and stream overflow is of concern in Nunam Iqua. New buildings are being constructed several feet above the ground surface to account for frequent inundation. Riverbank erosion is a common problem in Nunam Iqua as well, and the community takes this into account during design and construction of local projects. Earthquakes measuring 4.0 to 4.5 on the Richter scale are possible in Nunam Iqua, with the potential to cause structural damage.⁷⁹⁹

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in or near Nunam Iqua as of August 2013.⁸⁰⁰

Current Economy⁸⁰¹

Commercial fishing is the economic foundation of the Nunam Iqua community.⁸⁰² In 2000, the number of Nunam Iqua residents holding state Commercial Fisheries Entry Commission (CFEC) permits was equivalent to 14% of the total local population. This number decreased to 9% in 2010 (see the *Commercial Fishing* section of this profile). A few year-round positions are also available in the community with government organizations and in the private sector.⁸⁰³ In 2010, top employers of local residents included the Lower Yukon School District, utilities providers, local government offices, and regional non-profit organizations providing health and other local services.⁸⁰⁴ Subsistence activities and trapping supplement income. Salmon, beluga whale, seal, moose, and waterfowl are primary subsistence resources for residents of Nunam Iqua.⁸⁰⁵

⁷⁹⁷ Wilderness.net website (n.d). *Andreafsky Wilderness*. Retrieved December 8, 2011 from <http://www.wilderness.net>.

⁷⁹⁸ Nunam Iqua Advisory Planning Board. (2008). *Nunam Iqua Hazard Mitigation Plan*. Retrieved March 5, 2012 from http://commerce.alaska.gov/dca/planning/nfip/Hazard_Mitigation_Plans/Nunam_Iqua_HMP.pdf.

⁷⁹⁹ See footnote 789.

⁸⁰⁰ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁸⁰¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁸⁰² See footnote 788.

⁸⁰³ Ibid.

⁸⁰⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸⁰⁵ See footnote 788.

Based on household surveys for the 2006-2010 ACS,⁸⁰⁶ in 2010, the per capita income in Nunam Iqua was estimated to be \$12,592 and the median household income was estimated to be \$49,167. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$6,725 and \$29,000, respectively). The increase remains when inflation is taken into account by converting the 2000 values to 2010 dollars,⁸⁰⁷ revealing a real per capita income in 2000 of \$8,843 and real median household income of \$38,135. In 2010, Nunam Iqua ranked 230th of 305 Alaskan communities with per capita income data that year, and 135th in median household income, out of 299 Alaskan communities with reported household income data.

Nunam Iqua's small population size may have prevented the ACS from accurately portraying economic conditions.⁸⁰⁸ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Nunam Iqua in 2010 is \$7,315,⁸⁰⁹ slightly higher than the per capita income reported for the year 2000. This suggests that caution is warranted when citing a large increase in per capita income in Nunam Iqua between 2000 and 2010, but provides additional evidence for a slight income increase in the community during this period. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a smaller percentage of Nunam Iqua residents were estimated to be in the civilian labor force (54.2%) compared to the percentage of Alaskans estimated to be in the civilian labor force statewide (68.8%). That year, 32.5% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 0%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 25.9%, compared to a statewide unemployment rate estimate of 11.5%.⁸¹⁰

Based on the 2006-2010 ACS, in 2010, a majority of workers was estimated to be employed in the public sector (69%), along with 31% in the private sector. Of the 58 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number were estimated to be working in educational services, health care, and social assistance (25.9%), transportation, warehousing, and utilities (25.9%), public administration (19%), retail trade (12.1%), and construction (12.1%). No Nunam Iqua residents were estimated to be working in

⁸⁰⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸⁰⁷ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸⁰⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁸⁰⁹ See footnotes 804 and 806.

⁸¹⁰ See footnote 804.

agriculture, forestry, fishing, hunting, and mining in 2010. However, the number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 88 employed residents in 2010, of which 38.6% were employed in local government, 18.2% in unknown industries, 6.8% in trade, transportation, and utilities, 5.7% in educational and health services, 2.3% in professional and businesses services, 1.1% in financial activities, and 27.3% in other industries.⁸¹¹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

Figure 3. Local Employment by Industry in 2000-2010, Nunam Iqua (U.S. Census).

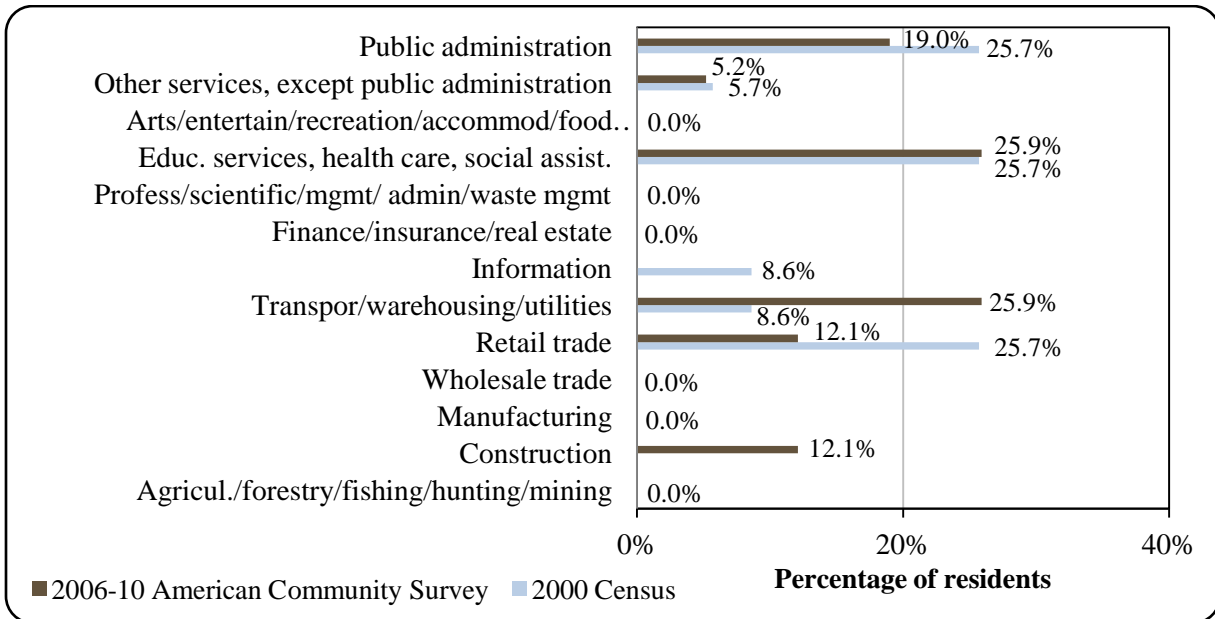
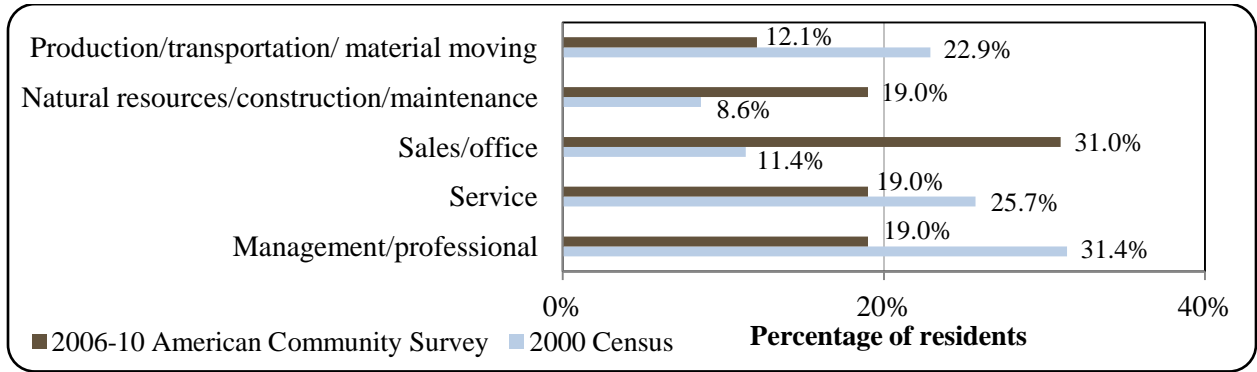


Figure 4. Local Employment by Occupation in 2000-2010, Nunam Iqua (U.S. Census).

⁸¹¹ Ibid.

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Governance

Nunam Iqua was incorporated as a 2nd Class City in 1974, and is not part of an organized borough. The City has a Strong Mayor form of government, with a five-person city council that includes the Mayor, a nine-person advisory school board, a six-person planning commission, and several municipal employees. In 2006, the City increased the sales tax from 2% to 4%.⁸¹² In addition to sales tax revenues, other locally-generated revenue sources include building leases and rentals, equipment rentals, enterprise revenues from businesses such as the local hotel, charges for services including waste-haul, portable water, laundry, shower/sauna, and solid waste and other utilities fees. Outside revenues sources during the 2000-2010 period included state revenue sharing programs and the federal Payment In Lieu of Taxes revenue sharing program. Nunam Iqua received contributions from the State Revenue Sharing program of between \$24,000 and \$29,000 from 2000 to 2004, and state Community Revenue Sharing contributions of just over \$100,000 per year in 2009 and 2010. The Payment In Lieu of Taxes program provided between \$10,000 and \$20,000 per year. No information was reported regarding fisheries-related grants received by Nunam Iqua during the 2000-2010 period. Information about selected aspects of Nunam Iqua’s municipal revenue is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Nunam Iqua from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$205,949	\$3,295	\$29,000	n/a
2001	\$245,114	\$7,396	\$26,566	n/a
2002	\$285,420	\$17,544	\$25,500	n/a
2003	\$267,507	\$4,185	\$25,000	n/a
2004	\$234,579	\$6,003	\$25,775	n/a
2005	\$224,017	\$8,691	n/a	n/a
2006	\$236,917	\$1,364	n/a	n/a
2007	\$268,041	\$9,325	n/a	n/a
2008	\$439,578	\$10,474	n/a	n/a
2009	\$481,272	\$1,393	\$106,359	n/a
2010	\$484,372	\$3,436	\$106,560	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

⁸¹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Nunam Iqua was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the BIA, is the Native Village of Nunam Iqua. The Native village corporation is the Swan Lake Corporation, which manages 96,120 acres of land. The regional Native corporation to which Nunam Iqua belongs is the Calista Corporation.⁸¹³

Nunam Iqua is also a member of the Association of Village Council Presidents (AVCP), a Tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁸¹⁴ The AVCP is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁸¹⁵ AVCP is made up of 56 villages and 45 village corporations.⁸¹⁶

The nearest Alaska Department of Fish and Game (ADF&G) office is located in the City of Emmonak, but is a seasonal office. An ADF&G office is available year round in the community of Nome, although the Anchorage office may be more accessible to people in this region. The closest office of the Alaska Department of Commerce, Community, and Economic Development is in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is located in Anchorage. The nearest Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services offices are located in Anchorage.

Infrastructure

Connectivity and Transportation

Nunam Iqua is easily accessible by boat and barge. It also has a state-owned, city-operated 3,015 feet long by 60 feet wide gravel airstrip. Float plane landing sites are available at Kwemeluk Pass and Swan Lake.⁸¹⁷ As of June 2012, the price of a roundtrip ticket from Nunam Iqua to Anchorage with Era Alaska was approximately \$820.⁸¹⁸ In the winter, snowmobiles serve as the primary mode of inter-village transportation.⁸¹⁹ Other transportation infrastructure in Nunam Iqua includes a boardwalk system and a barge landing / freight storage area.⁸²⁰

⁸¹³ Ibid.

⁸¹⁴ Association of Village Council Presidents. (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

⁸¹⁵ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁸¹⁶ Calista Corporation. (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

⁸¹⁷ See footnote 812.

⁸¹⁸ Flight information retrieved June 21, 2012 from <http://www.flyera.com/timetables>.

⁸¹⁹ See footnote 812.

⁸²⁰ Community of Nunam Iqua. 2005. *Nunam Iqua Strategic Plan for Comprehensive Community Development*. Retrieved March 5, 2012 from <http://www.commerce.state.ak.us/dca/plans/NunamIqua-CP-2005.pdf>.

Facilities

Water is collected from the Yukon River and Swan Lake and treated.⁸²¹ Residents haul treated well water from a new storage tank. Water delivery is also available. There is no piped water or sewer system in Nunam Iqua. Honeybuckets are disposed into bunkers and hauled to a sewage lagoon near the City. A few homes are connected to a community septic tank and have plumbing. Electricity is provided to the City by a diesel powerhouse operated by the Village Council.⁸²² The City has a Public Safety Building with two holding cells. It is used by the local Village Police Officer (VPO).⁸²³ The nearest state trooper posts are located in Emmonak and St. Mary's.⁸²⁴ Firefighting equipment is stored at the Public Safety Building, and the VPO oversees a volunteer fire department.⁸²⁵

Additional community facilities include a Community Hall operated by the Village Council, which hosts the Tribal Office and a community activity room. The building has running water, two bathrooms with flush toilets, and a kitchen area where concessions are sold. The City also maintains a building complex that hosts the City office, the Advisory Planning Board office, the Utility Board office, and a small public meeting space. The City also operates the post office. The Village Corporation also has an office building in Nunam Iqua. The Swan Lake Corporation operates a general store and fuel storage/sales outlet. A Catholic church is present in the community.⁸²⁶ Telephone, cable, and internet service are all available in Nunam Iqua.⁸²⁷

Medical Services

Health care is available at the Nunam Iqua Health Clinic, which is owned by the City and operated by the Yukon-Kuskokwim Health Corporation. The Nunam Iqua Health Clinic is a Community Health Aide Program site. Emergency Services have coastal, floatplane, and air access. Local emergency service is provided by a health aide.⁸²⁸ The nearest hospitals are located in Nome and Bethel.

Educational Opportunities

One school is located in Nunam Iqua. The Sheldon Point School serves preschool through 12th grade. As of 2011, 67 students were in attendance at the school, and there were a total of 6 teachers.⁸²⁹

⁸²¹ Ibid.

⁸²² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸²³ See footnote 820.

⁸²⁴ Alaska Dept. of Public Safety. 2012. *Alaska State Trooper Detachments*. Retrieved June 1, 2012 from <http://www.dps.state.ak.us/ast/detachments.aspx>.

⁸²⁵ See footnote 820.

⁸²⁶ Ibid.

⁸²⁷ See footnote 822.

⁸²⁸ Ibid.

⁸²⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁸³⁰ The present site of Nunam Iqua was historically the site of summer fish camps.⁸³¹ Traditional subsistence fishing activities continue to be a primary source of food for Nunam Iqua residents, in combination with employment in commercial fishing, government services and the private sector.⁸³² Between 2000 and 2010, Nunam Iqua residents were most heavily engaged in commercial fisheries for salmon and 'freshwater fish.'

Nunam Iqua is located near one of the mouths of the Yukon River, and is sheltered from Norton Sound by Munsen Island. Norton Sound is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. The Yukon River commercial salmon fishery is divided into 7 districts, 10 sub-districts, and 28 statistical areas. The Lower Yukon areas (Districts 1, 2 and 3) include some coastal waters and extend up to river mi 301. Nunam Iqua is located near the boundary between District 1 and the Coastal District (District 7).

Commercial salmon takes place along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. Set and drift gillnets are the only gear types allowed in the Lower Yukon Districts. The Coastal District is open to subsistence fishing only. The first recorded commercial harvest of salmon in the Alaskan portion of the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s along the Yukon. Poor returns of Chinook salmon in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.⁸³³ Yukon River Chinook runs showed signs of improvement for several years following the 2001 commercial closure, but low returns required restricted commercial harvest in 2008 and complete closure of Chinook harvest in 2009. A fishery disaster was declared that year.⁸³⁴ A fishery disaster was again declared for the 2012 season, when the commercial Chinook salmon fishery was closed and subsistence fishery was significantly restricted. ADF&G, the Alaska Board of Fisheries, and constituents are working

⁸³⁰ Alaska Native Heritage Center. (n.d.) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁸³¹ Community of Nunam Iqua. 2005. *Nunam Iqua Strategic Plan for Comprehensive Community Development*. Retrieved March 5, 2012 from <http://www.commerce.state.ak.us/dca/plans/NunamIqua-CP-2005.pdf>.

⁸³² See footnote 822.

⁸³³ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁸³⁴ Upton, Harold F. 2010. *Commercial Fishery Disaster Assistance*. Congressional Research Service Report for Congress. Retrieved October 3, 2012 from <http://www.fas.org/sgp/crs/misc/RL34209.pdf>.

together to develop a conservation plan that restricts Chinook harvest while allowing for greater harvest of more abundance species, including gear and other management restrictions.⁸³⁵

In addition to salmon, several Nunam Iqua residents held permits in the statewide ‘freshwater fish’ gillnet fishery between 2002 and 2010. Commercial freshwater fish fisheries may target species such as Arctic char, pike, rainbow trout, Dolly Varden char, and sheefish.⁸³⁶

Nunam Iqua is a member of the Yukon Delta Fisheries Development Association (YDFDA), a Community Development Quota (CDQ) group. Nunam Iqua is not eligible to participate in the Community Quota Entity program.

Processing Plants

ADF&G’s 2010 Intent to Operate list does not list a registered processing plant in Nunam Iqua. According to the Intent to Operate list, processing facilities are available in the nearby communities of Emmonak and Saint Mary’s.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received from taxes or fees in Nunam Iqua (Table 3).⁸³⁷ However, it is important to note that Nunam Iqua did receive funding from YDFDA during this period. Between 2001 and 2007, Nunam Iqua received \$6,000 per year in CDQ contract payments, and as well as \$2,500 in 2009 and \$11,500 in 2010.

Commercial Fishing

Between 2000 and 2010, residents of Nunam Iqua primarily held permits in the Lower Yukon salmon gillnet fishery, but several residents also held permits in fisheries for freshwater fish using gillnet and other gear. During this period, Nunam Iqua residents were also involved in commercial fisheries as commercial crew license holders. In 2010, five Nunam Iqua residents purchased crew licenses, a decline from 20 crew license holders in the year 2000. Between 2000 and 2010, no residents were the primary owner of fishing vessels, no vessels were recorded as homeported in Nunam Iqua, and no fish buyers or shore-side processors were present. This information is presented in Table 5.

In 2010, 17 Nunam Iqua residents held a total of 17 Commercial Fisheries Entry Commission (CFEC) permits, of which 5 (26%) were fished that year. Of the total 19 permits, a majority were for the Lower Yukon salmon gillnet fishery, and the remaining permits were held in the statewide freshwater fish gillnet fishery. These numbers represent a decrease from earlier years in the decade in both the number of permits held and the percentage of permits actively fished. In 2000, 23 total permits were held in the Lower Yukon salmon gillnet fishery and 15

⁸³⁵ Alaska Dept. of Fish and Game. 2012. *2012 Alaska Chinook Salmon Fishery Disaster – FAQ*. Retrieved October, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.federalChinookdisaster>.

⁸³⁶ Alaska Dept. of Fish and Game. 2006. *Our Wealth Maintained: A Strategy for Conserving Alaska’s Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=species.wapview>.

⁸³⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

(65%) were actively fished. The 2001 closure of the Yukon salmon fishery is reflected in the lack of active permits reported in 2001. Fishing activity resumed at close to 2000 levels in 2002, but the number of permits fished declined through the rest of the decade. Permit information is presented in Table 4.

Between 2000 and 2010, no residents of Nunam Iqua held License Limitation Program permits (LLP) or Federal Fisheries Permits (FFP) for groundfish or crab (Table 4). Likewise, no residents held quota share accounts or quota shares in federal catch share fisheries for halibut, sablefish or crab between 2000 and 2010. Information about federal catch share participation is presented in Tables 6 through 8.

No fish buyers or processors were reported to be present in Nunam Iqua between 2000 and 2010 (Table 5), and no landings or ex-vessel revenue were generated in the community (Table 9). No Nunam Iqua residents were reported to be the primary owner of fishing vessels between 2000 and 2010 (Table 5), reflected in the lack of information regarding landings and ex-vessel revenue earned by Nunam Iqua vessel owners (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Nunam Iqua: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>\$205,949</i>	<i>\$245,114</i>	<i>\$285,420</i>	<i>\$267,507</i>	<i>\$234,579</i>	<i>\$224,017</i>	<i>\$236,917</i>	<i>\$268,041</i>	<i>\$439,578</i>	<i>\$481,272</i>	<i>\$484,372</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Nunam Iqua: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Nunam Iqua: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	1	1	1	2	21	10	6	4	3
	Fished permits	0	0	0	0	0	1	4	6	2	0	1
	% of permits fished	-	-	0%	0%	0%	50%	19%	60%	33%	0%	33%
	Total permit holders	0	0	1	1	1	2	21	10	6	4	3
Salmon (CFEC) ²	Total permits	23	24	23	21	18	17	18	17	18	16	16
	Fished permits	15	0	14	14	13	11	11	10	11	6	4
	% of permits fished	65%	0%	61%	67%	72%	65%	61%	59%	61%	38%	25%
	Total permit holders	23	25	23	22	18	18	19	18	20	16	16
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>23</i>	<i>24</i>	<i>24</i>	<i>22</i>	<i>19</i>	<i>19</i>	<i>39</i>	<i>27</i>	<i>24</i>	<i>20</i>	<i>19</i>
	<i>Fished permits</i>	<i>15</i>	<i>0</i>	<i>14</i>	<i>14</i>	<i>13</i>	<i>12</i>	<i>15</i>	<i>16</i>	<i>13</i>	<i>6</i>	<i>5</i>
	<i>% of permits fished</i>	<i>65%</i>	<i>0%</i>	<i>58%</i>	<i>64%</i>	<i>68%</i>	<i>63%</i>	<i>38%</i>	<i>59%</i>	<i>54%</i>	<i>30%</i>	<i>26%</i>
	<i>Permit holders</i>	<i>23</i>	<i>25</i>	<i>24</i>	<i>23</i>	<i>19</i>	<i>20</i>	<i>30</i>	<i>22</i>	<i>21</i>	<i>17</i>	<i>17</i>

¹National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Nunam Iqua: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Nunam Iqua ²	Total Net Pounds Landed In Nunam Iqua ^{2,5}	Total Ex-Vessel Value Of Landings In Nunam Iqua ^{2,5}
2000	20	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	10	0	0	0	1	0	0	\$0
2003	8	0	0	0	0	0	0	\$0
2004	11	0	0	0	0	0	0	\$0
2005	2	0	0	0	0	0	0	\$0
2006	10	0	0	0	0	0	0	\$0
2007	15	0	0	0	0	0	0	\$0
2008	10	0	0	0	0	0	0	\$0
2009	8	0	0	0	0	0	0	\$0
2010	5	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Nunam Iqua: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Nunam Iqua: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Nunam Iqua: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Nunam Iqua: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Nunam Iqua Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2001, no active sport fish guide business or licensed sport fish guides were present in Nunam Iqua. However, residents of Nunam Iqua participated in sport fishing during this period, purchasing between 8 and 32 sport fishing licenses per year (irrespective of point of sale). No sport fishing licenses were sold in Nunam Iqua between 2000 and 2005. In 2006, 18 licenses were purchased locally, 8 were purchased in town in 2008, and 24 were purchased in 2009. The fact that more local residents purchased sport fishing licenses than the number of licenses that were sold in the community indicates that sport fishing is not a major tourism draw in Nunam Iqua.

The Alaska Statewide Harvest Survey,⁸³⁸ conducted by ADF&G between 2000 and 2010, did not report information about species targeted by private anglers in Nunam Iqua. However, the survey did note several freshwater species targeted by sport fishermen out of nearby Emmonak. These included coho salmon and Arctic grayling. No kept/release log book data were reported for fishing charters out of Nunam Iqua between 2000 and 2010.⁸³⁹

Nunam Iqua is located within Alaska Sport Fishing Survey Area Y – Yukon River Drainage. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, saltwater sport fishing activity was minimal, with between zero and 81 non-resident angler days fished per year, and between zero and 89 Alaska resident angler days fished per year. The low numbers reported for saltwater sport fishing make sense given that a majority of residents in Yukon drainage communities live at a great distance from the ocean, and fishing activities take place primarily in fresh water. Between 2000 and 2010, Alaska resident anglers in the Yukon River drainage consistently fished more days in freshwater (4,783 – 10,400 angler days per year) than non-Alaska resident anglers (2,573 – 5,761 angler days per year). This information about the sport fishing sector in and near Nunam Iqua is displayed in Table 11.

⁸³⁸ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁸³⁹ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Nunam Iqua: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Nunam Iqua ²
2000	0	0	12	0
2001	0	0	8	0
2002	0	0	19	0
2003	0	0	27	0
2004	0	0	16	0
2005	0	0	22	0
2006	0	0	21	18
2007	0	0	11	0
2008	0	0	25	8
2009	0	0	32	24
2010	0	0	24	0

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Nunam Iqua residents depend on subsistence hunting, fishing, and trapping activities to supplement work in commercial fishing and other employment. Some of the most important subsistence resources for local residents are salmon, beluga whale, seal, moose, and waterfowl.⁸⁴⁰ In addition to salmon, primary subsistence fish include whitefish, sheefish, lush, blackfish, Bering cisco, tom cod, pike, herring, and smelt. Beaver, otter, muskrat, mink, and fox are used for clothing and handicrafts.⁸⁴¹

No information is available from ADF&G regarding the per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12). Results of a 1980 subsistence survey conducted by ADF&G provide information about household use of some species of marine mammal and non-salmon fish (not including halibut). That year, 86% of Nunam Iqua households reported harvesting ringed seal, 57% reported harvest of bearded seal, and 29% reported harvest of spotted seal. The species of non-salmon fish that were harvested by the greatest percentage of households included sheefish (86% of households reported participating in harvest activities), pike (71%), blackfish (71%), herring (71%), Pacific tom cod (71%), broad whitefish (57%), burbot (57%), cisco (57%), smelt (29%), and stickleback (14%).⁸⁴²

Data are available through 2008 regarding subsistence salmon permits. Between 2000 and 2008, between 32 and 38 Nunam Iqua households were issued subsistence salmon permits per year. Based on those permits that were returned, chum was the most heavily harvested salmon species in all years, followed by Chinook, pink, and coho. No subsistence harvest of sockeye was between 2000 and 2010. This subsistence fishing participation information is presented in Table 13.

No information was reported regarding subsistence harvest of Pacific halibut by Nunam Iqua residents between 2000 and 2010 (Table 14). With regard to subsistence harvest of marine mammals, a NMFS study reported beluga whale harvest varying from 2 to 13 animals harvested per year from 2000 to 2009. No information was reported by management agencies about harvest of sea otter, walrus, Steller sea lion, harbor seal, or spotted seal. Information about marine mammal subsistence harvest is presented in Table 15.

⁸⁴⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁴¹ Community of Nunam Iqua. 2005. *Nunam Iqua Strategic Plan for Comprehensive Community Development*. Retrieved March 5, 2012 from <http://www.commerce.state.ak.us/dca/plans/NunamIqua-CP-2005.pdf>.

⁸⁴² Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Nunam Iqua: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Nunam Iqua: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	38	29	701	3,450	5	n/a	n/a	n/a	n/a
2001	35	27	550	2,119	32	n/a	n/a	n/a	n/a
2002	32	24	393	2,182	56	13	n/a	n/a	n/a
2003	35	23	925	2,780	117	5	n/a	n/a	n/a
2004	32	21	647	2,747	79	32	n/a	n/a	n/a
2005	33	23	338	3,104	241	132	n/a	n/a	n/a
2006	34	31	371	3,638	392	555	n/a	n/a	n/a
2007	35	25	907	2,477	92	170	n/a	n/a	n/a
2008	37	29	163	2,008	24	757	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Nunam Iqua: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Nunam Iqua: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	3	n/a	n/a	n/a	n/a	n/a	n/a
2001	12	n/a	n/a	n/a	n/a	n/a	n/a
2002	13	n/a	n/a	n/a	n/a	n/a	n/a
2003	10	n/a	n/a	n/a	n/a	n/a	n/a
2004	7	n/a	n/a	n/a	n/a	n/a	n/a
2005	9	n/a	n/a	n/a	n/a	n/a	n/a
2006	2	n/a	n/a	n/a	n/a	n/a	n/a
2007	3	n/a	n/a	n/a	n/a	n/a	n/a
2008	8	n/a	n/a	n/a	n/a	n/a	n/a
2009	8	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Pilot Station



People and Place

*Location*⁸⁴³

Pilot Station is located on the northwest bank of the Yukon River, 11 miles east of St. Mary's and 26 miles west of Marshall in the Yukon-Kuskokwim Delta. Pilot Station is located in the Bethel Recording District and Wade Hampton Census Area. The City encompasses 1.7 square miles of land and 0.6 square miles of water.

*Demographic Profile*⁸⁴⁴

In 2010, there were 568 residents in Pilot Station, making it the 105th largest of 352 communities in Alaska with populations recorded that year. Overall between 1990 and 2010, the population of Pilot Station increased by 22.7%. A majority of this growth appears to have taken place between 1990 and 2000. According to Alaska Department of Labor estimates, the population of permanent residents increased by an additional 4.9% between 2000 and 2009, with an average annual growth rate of 0.35%, reflecting slow continued growth with small population decreases in some years. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there is no seasonal or transient population in Pilot Station. They indicated that the population does fluctuate somewhat throughout the year, in part due to subsistence fishing activities.

In 2010, most Pilot Station residents identified themselves as American Indian and Alaska Native (98.1%), while 1.8% of residents identified themselves as White, and 0.2% identified with two or more races. No Pilot Station residents identified themselves as Hispanic in 2010. The percentage of the population that identifies as White decreased between 1990 and 2010, from 4.6% in 1990 to 2.4% in 2000, and 1.8% by 2010. At the same time, the percentage of the population that identifies as American Indian and Alaska Natives increased from 95% in 1990 to 96.9% in 2000, and 98.1% by 2010. The change in population from 1990 to 2010 is provided in Table 1 below, and changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Pilot Station increased from 4.6 in 1990 to 5.05 in 2000, and then decreased to 4.69 by 2010. The number of households in Pilot Station increased steadily over the 1990-2010 period, from 100 occupied households in 1990 to 109 in 2000, and 121 in 2010. Of the 137 total housing units surveyed for the 2010 Decennial Census, 69.3% were owner-occupied, 19% were rented, and 11.7% were vacant or used only seasonally. Between 1990 and 2010, no Pilot Station residents lived in group quarters.

⁸⁴³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁴⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

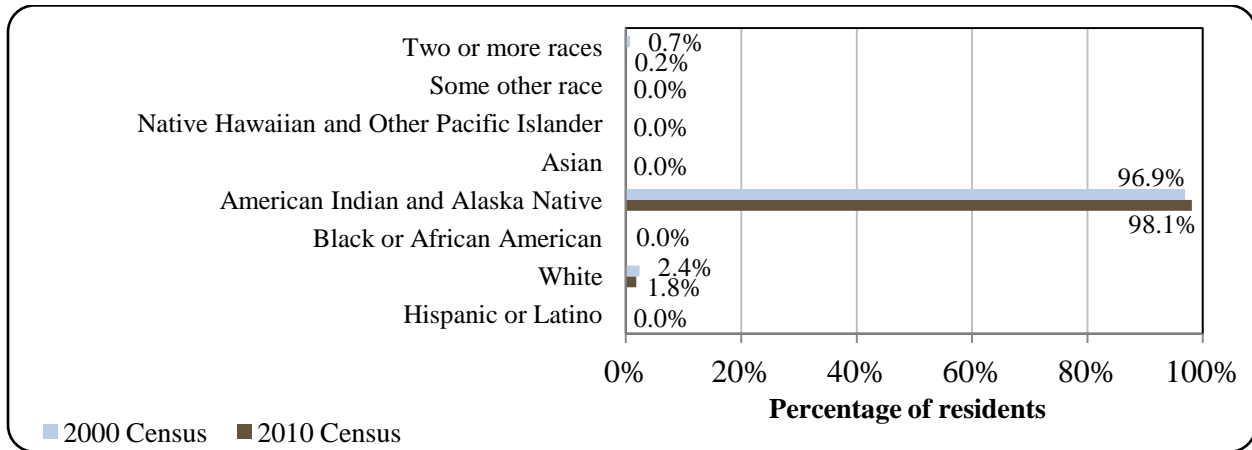
Table 1. Population in Pilot Station from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	463	-
2000	550	-
2001	-	554
2002	-	546
2003	-	561
2004	-	561
2005	-	565
2006	-	573
2007	-	579
2008	-	586
2009	-	577
2010	568	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

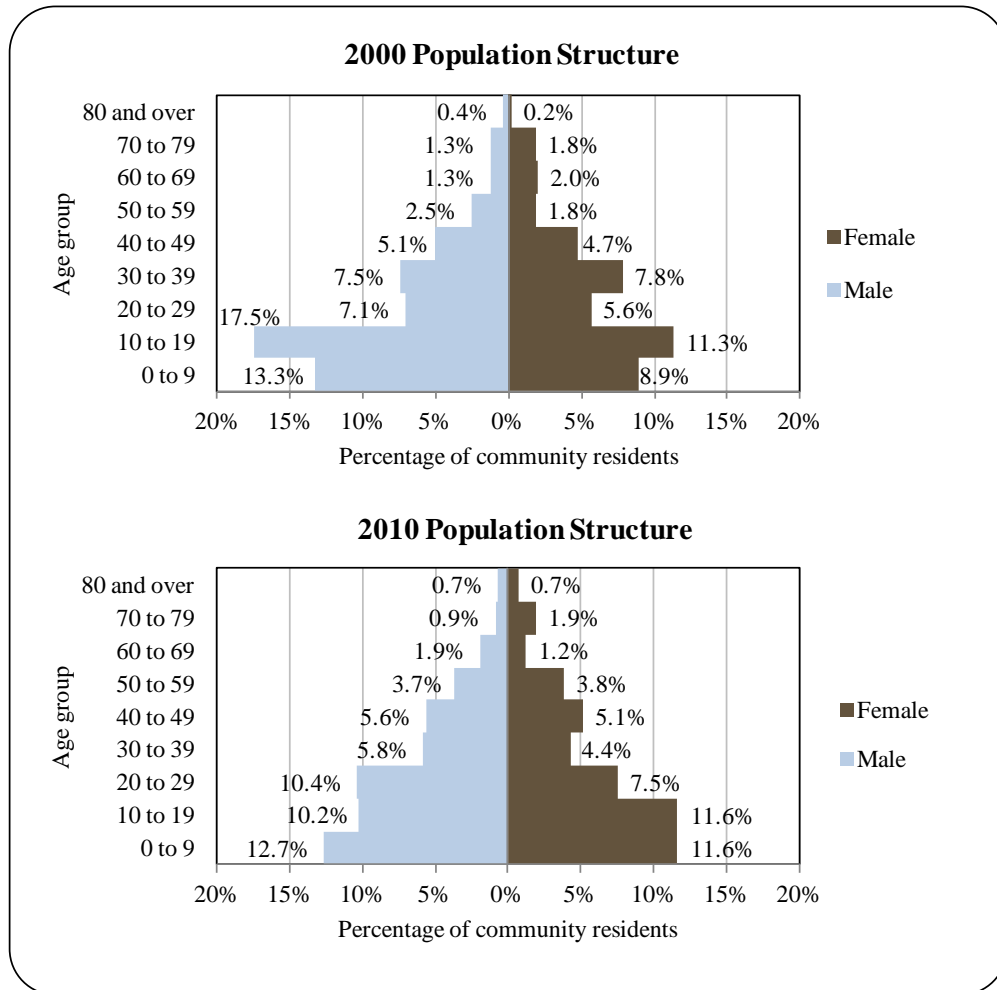
Figure 1. Racial and Ethnic Composition, Pilot Station: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Pilot Station’s population (51.9% male and 48.1% female) was very close to the balance of the state population as a whole, which was 52% male and 48% female. The median age of Pilot Station residents was 21.3 years, much younger than the national average of 36.8 years and the median age for Alaska, 33.8 years. Only 7.4% of Pilot Station’s population was 60 or older in 2010. The overall population structure of Pilot Station in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁸⁴⁵ 74.2% of Pilot Station residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 13.5% of the population was estimated to have less than a 9th grade education, compared to 3.5% of Alaskan residents overall; 12.2% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 19.2% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 5.7% were estimated to have an Associate’s degree, compared to 8% of Alaskan residents overall; 3.5% were estimated to have a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

Figure 2. Population Age Structure in Pilot Station Based on the 2000 and 2010 U.S. Decennial Census.



⁸⁴⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁸⁴⁶ The present village site was a traditional place for seasonal salmon harvest.⁸⁴⁷

The site is a designated historic place. It was occupied during the bow and arrow war period that took place between the Yukon and Coastal Eskimos in the centuries prior to the arrival of Europeans. The timing of the start of the bow and arrow war period is unknown, but one hypothesis asserts that violence between these groups may have started a thousand or more years ago. According to oral history interviews conducted between the late 1970 and early 1990s as part of the Alaska Native Claims Settlement Act (ANCSA), periodic violence between coastal and riverine Yup'ik people in the Yukon-Kuskokwim delta was instigated by murders as well as an eye-poking incident. By the time Russian traders and explorers reached the region in the 1840s, the bow and arrow wars were no longer ongoing.⁸⁴⁸

The historical village at the present site of Pilot Station was called Ankachak, and was later moved one third of a mi upriver to a site called Potiliuk.⁸⁴⁹ Several other old village sites are located near the current site of Pilot Station. Kurgpallermuit (also known as Kurgpaller or Ganny) is one half mi upriver, and Chakaktolik is 40 miles southwest of Pilot Station. At one time, Kurgpallermuit had a school, a store, and a Catholic church. Today, the site is used as a seasonal fish camp by some Pilot Station residents. In the 1950s, the Bureau of Indian Affairs (BIA) planned to build a school in Chakaktolik (name meaning “red as...”), but low water levels forced them to build the school at Pilot Station instead. The new school drew families from the surrounding region. Prior to construction of the school, Pilot Station did not have a consistent year-round population.⁸⁵⁰

A Russian Orthodox church was built in Pilot Station in the early 1900s and is one of the oldest structures in the region. R.H. Sargent of the U.S. Geological Survey first noted the village name of Pilot Station in 1916. Local riverboat pilots who used the village as a checkpoint were responsible for changing the village's name from Ankachak to Pilot Station. The community incorporated as a 2nd Class City in 1969. Today, Pilot Station remains a Yup'ik Eskimo village dependent upon a fishing and subsistence lifestyle. The sale and importation of alcohol is banned in the village.⁸⁵¹

Natural Resources and Environment

The climate in Pilot Station is maritime, averaging 60 inches of snowfall with 16 inches of precipitation per year. Temperatures can range from -44 to 83 °F. The Lower Yukon is ice-

⁸⁴⁶ Alaska Native Heritage Center. (n.d.) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁸⁴⁷ Pilot Station Traditional Council. (2009). *Pilot Station Community Development Plan*. Retrieved April 6, 2012 from <http://www.commerce.state.ak.us/dca/plans/PilotStation-GCP-2006.pdf>.

⁸⁴⁸ Funk, Caroline. (2010). “The Bow and Arrow War Days on the Yukon-Kuskokwim Delta of Alaska.” *Ethnohistory* 57:4.

⁸⁴⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁵⁰ See footnote 847.

⁸⁵¹ See footnote 849.

free from mid-June through October.⁸⁵² Pilot Station is located in the delta of the Yukon River. The topography on the north side of the River is characterized by gentle rolling hills of up to 150 feet above sea level. Flat lowlands are present on the south side of the River, ranging from 10 to 30 feet above sea level. Vegetation includes deciduous/conifer forest and tundra, including alpine and dry/moist tundra at higher elevations and wet tundra in lower elevations. Pilot Station is located at the boundary between continuous and discontinuous permafrost soil.⁸⁵³

Pilot Station is located within the boundaries of the 22 million acre Yukon Delta National Wildlife Refuge (NWR). The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Refuge lands are open to sport and subsistence hunting and fishing, as well as trapping. Nunavaknuk Lake and the Kusilvak Mountains to its south are located approximately 60 miles west of Pilot Station.⁸⁵⁴ The southern border of the Andreafsky Wilderness Area, which covers just over 5% of the Yukon Delta NWR, is located about 25 miles north of Pilot Station.⁸⁵⁵

Natural hazards identified in the Wade Hampton Census Area include flooding, wildfire, earthquake, severe weather, erosion, and volcanic activity.⁸⁵⁶ Areas of the community close to the River are particularly susceptible to annual spring flooding. As of spring 2012, no homes or buildings in Pilot Station were under immediate threat from riverbank erosion. Sediment depositions are currently forming a sandbar along the waterfront of the community. However, one area of low income housing development is located in an area of erosion concern. A cluster of cinder cone volcanoes, known as “Ingakslugwat Hills” is located approximately 50 miles southwest of Pilot Station in the Yukon-Kuskokwim Delta. The 32 small cinder cones and eight larger craters covers an area of more than 300 square miles, and is thought to have been active during the Holocene Period.⁸⁵⁷

In Pilot Station’s Community Development Plan (2009), residents also identified low water levels and drifting wood and debris on the Yukon as environmental hazards that can disrupt barge service between Pilot Station and communities upriver where fuel and supplies originate. In addition, the community is concerned about air quality related to garbage burning at the dump, and the spread of litter due to lack of fences or barriers there. Concern was also expressed regarding unpleasant odors and potential health hazards from the sewage lagoon.⁸⁵⁸

The Yukon-Kuskokwim delta is rich in mineral deposits. Historically, significant mining activity took place in the Marshall mining district, located upriver from Pilot Station. No mining development is currently taking place there, although active development is underway at the Donlin Creek mine in the Kuskokwim Delta. Although the Kuskokwim River does not does not

⁸⁵² Ibid.

⁸⁵³ See footnote 847.

⁸⁵⁴ U.S. Fish and Wildlife Service. (2011). *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁸⁵⁵ Wilderness.net (n.d). *Andreafsky Wilderness*. Retrieved December 8, 2011 from <http://www.wilderness.net>.

⁸⁵⁶ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁸⁵⁷ Global Volcanism Program. (n.d.). *Ingakslugwat Hills*. Retrieved February 8, 2012 from <http://www.volcano.si.edu/world/volcano.cfm?vnum=1104-03->.

⁸⁵⁸ See footnote 847.

directly influence the waters of the Yukon River, Pilot Station residents expressed concern about the potential for wind-blown sediments from Donlin Creek to enter the Yukon River and surrounding natural areas.⁸⁵⁹

According to the Alaska Department of Environmental Conservation, there are no notable active environmental cleanup sites located in Pilot Station as of July 2012.⁸⁶⁰

Current Economy⁸⁶¹

According to a survey conducted by the AFSC in 2011, community leaders indicated that subsistence fishing is the primary activity of local fishermen, while commercial fishing provides a majority of local wage income. In addition to fisheries resources, local residents harvest moose, bear, porcupine, and waterfowl for subsistence purposes.⁸⁶² In 2010, the top local employers in Pilot Station included the Lower Yukon School District, local government offices, health, housing, and other community service providers, the Native village corporation, and local retailers.⁸⁶³ Trapping and Bureau of Land Management (BLM) firefighting also provide some employment.⁸⁶⁴

Based on household surveys conducted for the 2006-2010 ACS,⁸⁶⁵ in 2010, the per capita income in Pilot Station was estimated to be \$12,754 and the median household income was estimated to be \$37,917. This represents an increase from the per capita and median household incomes reported in the year 2000 (\$7,311 and \$31,071, respectively). If inflation is taken into account by converting the 2000 values to 2010 dollars,⁸⁶⁶ real per capita income in 2000 (\$9,614) remains well under 2010 levels, while real median household income in 2000 (\$40,858) was actually slightly higher than the median household income estimated in 2010. In 2010, Pilot Station ranked 227th of 305 Alaskan communities with per capita income data that year, and 202nd in median household income, out of 299 Alaskan communities with household income data.

Although Pilot Station's small population size may have prevented the ACS from accurately portraying economic conditions,⁸⁶⁷ additional evidence for a decrease in per capita income is provided by economic data compiled by the Alaska Local and Regional Information

⁸⁵⁹ Ibid.

⁸⁶⁰ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved April 17, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁸⁶¹ Unless otherwise noted, all monetary data are reported in nominal values.

⁸⁶² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁶³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁸⁶⁴ See footnote 862.

⁸⁶⁵ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁸⁶⁶ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

⁸⁶⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

(ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Pilot Station in 2010 is \$5,467.⁸⁶⁸ The decline in per capita income between 2000 and 2010 is reflected in the fact that the community was recognized as “distressed” by the Denali Commission,⁸⁶⁹ indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010. It should be noted that both ACS and DOLWD data are based on wage earnings, and these income statistics do not take into account the value of subsistence within the local economy.

Based on the 2006-2010 ACS, in 2010, a slightly smaller percentage of Pilot Station residents was estimated to be in the civilian labor force (62.4%) compared to the civilian labor force statewide (68.8%). Also that year, 26.5% of local residents were estimated to be living below the poverty line, compared to 9.5% of Alaskan residents overall, and the unemployment rate was estimated to be 14.7%, compared to a statewide unemployment rate of 5.9%. An additional estimate of unemployment is based on the ALARI database, which indicates that the unemployment rate in 2010 was 26.6%, compared to a statewide unemployment rate estimate of 11.5%.⁸⁷⁰

Also based on the 2006-2010 ACS, a majority of workers was estimated to be employed in the public sector (58.3%), along with 39.1% in the private sector, and 2.6% estimated to be self-employed. Of the 156 people aged 16 and over that were estimated to be employed in the civilian labor force, the greatest number of workers was estimated to be working in educational services, health care, and social assistance (37.2%), public administration (23.1%), and construction (11.5%). In addition, 5.1% of the civilian labor force was estimated to be working in agriculture, forestry, fishing, hunting and mining in 2010. The number of individuals employed in farming, fishing, and forestry industries is probably underestimated in census statistics; fishermen may hold another job and characterize their employment accordingly. This information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

An alternative estimate of employment is provided by economic data compiled in the ALARI database, which indicate that there were 233 employed residents in 2010, of which 60.1% were employed in local government, 8.2% in trade, transportation, and utilities, 6.9% in financial activities, 4.3% in educational and health services, 2.1% in professional and business services, 2.1% in state government, 1.3% in manufacturing, 0.9% in construction, 0.9% in information, 0.4% in natural resources and mining, 0.4% in leisure and hospitality, and 12.4% in other industries.⁸⁷¹ As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents’ activity in the subsistence economy.

⁸⁶⁸ See footnotes 863 and 865.

⁸⁶⁹ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

⁸⁷⁰ See footnote 863.

⁸⁷¹ Ibid.

Figure 3. Local Employment by Industry in 2000-2010, Pilot Station (U.S. Census).

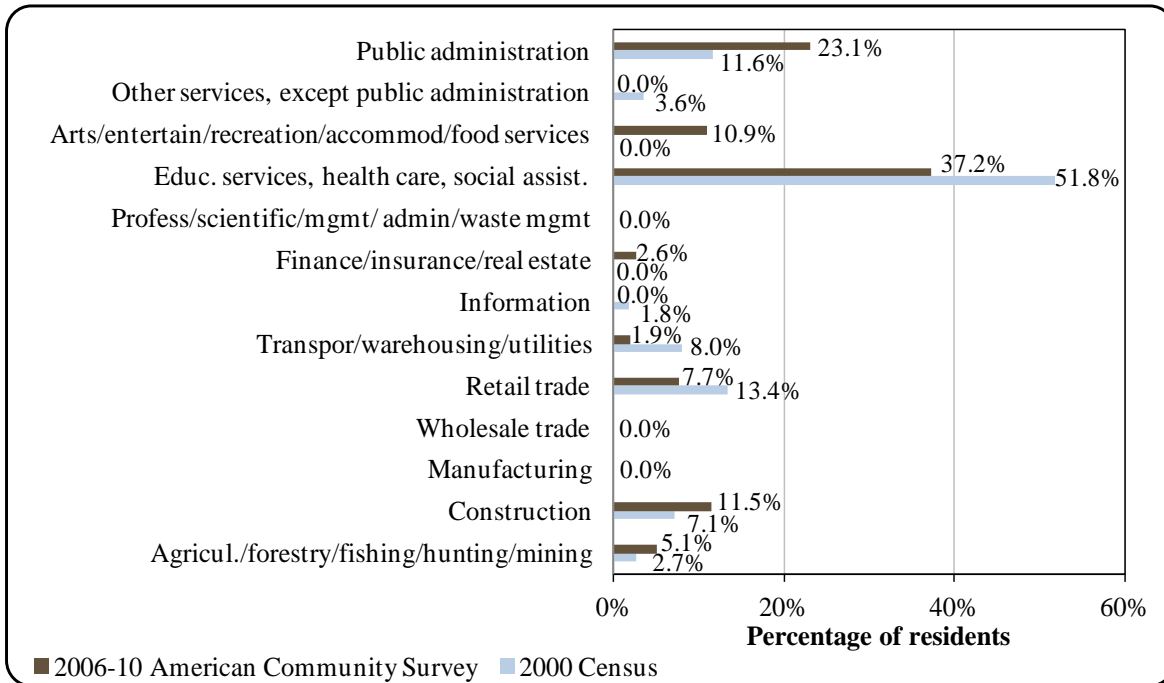
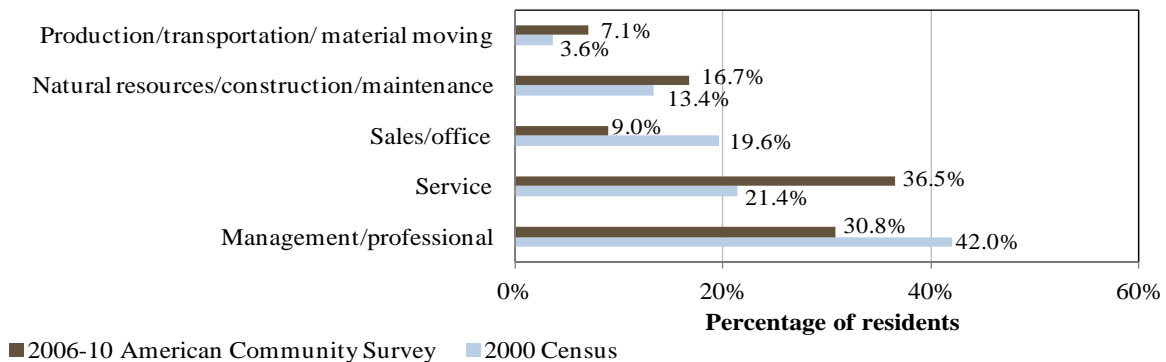


Figure 4. Local Employment by Occupation in 2000-2010, Pilot Station (U.S. Census).



Governance

Pilot Station was incorporated as a 2nd Class City in 1969. The City has a Strong Mayor form of government, which includes a seven-person city council including the Mayor, a five-person advisory school board, and several municipal employees. The City administers a 4% sales tax, but no other taxes. Pilot Station is not part of an organized borough.^{872,873} In addition to sales tax revenue, other locally-generated revenue sources in Pilot Station include leases and rentals, fuel and gravel sales, bingo and raffle receipts, an airport maintenance contract from the State of

⁸⁷² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁷³ Information received from a personal communication with the Pilot Station Tribal Administrator, July 27, 2012.

Alaska, utility service fees, and police department fines and violations. Outside revenues sources included shared funds from state and federal programs and small grants in some years. The increase in total municipal revenue over the decade can be explained in part by increases in sales tax revenue and large Community Revenue Sharing contributions in later years of the period. No fisheries-related grants were reported to contribute to community revenue between 2000 and 2010. Information about selected aspects of Pilot Station’s municipal revenue is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Pilot Station from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$295,752	\$47,848	\$26,943	n/a
2001	\$293,672	\$50,953	\$26,452	n/a
2002	\$274,293	\$58,166	\$26,510	n/a
2003	\$360,713	\$54,556	\$26,668	n/a
2004	\$380,006	\$53,406	n/a	n/a
2005	\$332,600	\$60,420	n/a	n/a
2006	\$455,406	\$68,734	n/a	n/a
2007	\$310,114	\$67,701	n/a	n/a
2008	\$559,045	\$80,921	n/a	n/a
2009	\$497,893	\$78,011	\$125,945	n/a
2010	\$680,714	\$85,838	\$124,937	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Pilot Station was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Pilot Station Traditional Village. The Native village corporation is Pilot Station, Incorporated, which manages 115,200 acres of land. The regional Native corporation to which Pilot Station belongs is the Calista Corporation.⁸⁷⁴

Pilot Station is also a member of the Association of Village Council Presidents (AVCP), a Tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁸⁷⁵ The AVCP is one of the 12

⁸⁷⁴ See footnote 872.

⁸⁷⁵ Association of Village Council Presidents. (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.⁸⁷⁶ AVCP is made up of 56 villages and 45 village corporations.⁸⁷⁷

The nearest Alaska Department of Fish and Game (ADF&G) office is located in the city of Emmonak, but is a seasonal office. An ADF&G office is available year round in the community of Nome, although the Anchorage office may be more accessible to people in this region. The closest office of the Alaska Department of Commerce, Community, and Economic Development is in Bethel. A National Marine Fisheries Service (NMFS) field office is also located in Bethel, and a larger office is in Anchorage. The nearest Alaska Department of Natural Resources and U.S. Bureau of Citizenship and Immigration Services offices are in Anchorage.

Infrastructure

Connectivity and Transportation

A state-owned 2,541 feet long by 55 feet wide gravel airstrip is available. Air transportation is the primary means for freight and mail service, as well as passenger travel. The nearby village of St. Mary's is a hub for freight and mail, and Bethel is a hub for passenger travel.⁸⁷⁸ Heavy winds of up to 50 mph are common during fall and winter.⁸⁷⁹ As of early June, 2012, the price of a roundtrip ticket between Pilot Station and Anchorage was \$692.⁸⁸⁰

Pilot Station is also easily accessible by river-going vessels. Barges deliver fuel and other bulk supplies during the summer. Skiffs and snowmobiles provide inter-village transportation. There are no roads to surrounding communities.⁸⁸¹ However, winter trails are used by residents to travel to surrounding communities and subsistence sites.⁸⁸²

Facilities

Water in Pilot Station is derived from a community well and is chlorinated. More than half of the homes in the community have full plumbing and are connected to a City-operated piped water and sewer system. The 27 homes that are not plumbed currently haul treated water from a central hauling point and use honeybuckets. The City operates a sewage lagoon for sewage treatment. The City also operates a landfill and provides refuse collection services. A diesel powerhouse provides electricity to the village, operated by the Alaska Village Electric Cooperative (AVEC). Police services are provided by three Village Police Officers stationed in

⁸⁷⁶ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁸⁷⁷ Calista Corporation. (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

⁸⁷⁸ Pilot Station Traditional Council. (2009). *Pilot Station Community Development Plan*. Retrieved April 6, 2012 from <http://www.commerce.state.ak.us/dca/plans/PilotStation-GCP-2006.pdf>.

⁸⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁸⁸⁰ Airfare estimate calculated on November 21, 2011 using kayak.com.

⁸⁸¹ See footnote 879.

⁸⁸² See footnote 878.

Pilot Station, as well as a Village Public Safety Officer stationed in nearby St. Mary's.⁸⁸³ For serious criminal incidents and investigations, state troopers are called in from posts in St. Mary's, Aniak, or Bethel.⁸⁸⁴ Fire and rescue services are provided by the City, a Volunteer Fire and Public Safety facility, and Project Code Red Equipment. The City also has a public safety holding cell.⁸⁸⁵

According to a survey conducted by the AFSC in 2011, community leaders indicated that the current water and sewer pipelines and water treatment system were installed in 1997. They also noted several infrastructure improvements expected to be completed in the next 10 years, including a new landfill/solid waste site, a new public safety/police department, and a new fire department facility. Additional community facilities and services include a City office building, Bingo Hall, and school library.⁸⁸⁶ In the 2011 AFSC survey, community leaders noted that telephone service has been present in Pilot Station since 1976 and broadband internet access has been available since 1999. They also noted the presence of a post office in Pilot Station. The City of Pilot Station provides cable service.⁸⁸⁷ The 2009 Community Development Plan also noted the presence of two local stores, one of which is the only local seller of gasoline and diesel.⁸⁸⁸

With regard to fishing-related infrastructure, community leaders reported in the 2011 AFSC survey that 30 feet of dock space is available in Pilot Station for transient vessel moorage, and no dock space is available for permanent moorage. They reported that a barge landing area is available and is maintained annually. No other fisheries-related businesses or services were noted in Pilot Station. Community leaders indicated that local residents travel to Anchorage or Seattle to access fisheries-related businesses and services not available locally in Pilot Station.

Medical Services

Health care is available at the Pilot Station Clinic, which is operated by the Pilot Station Traditional Council.⁸⁸⁹ The Pilot Station Clinic is a Community Health Aide Program site. Emergency Services have river and air access. Local emergency service is provided by a health aide.⁸⁹⁰ The nearest hospital is located in Bethel.

Educational Opportunities

There is one school in the community, which offers preschool through 12th grade. As of 2011, the Pilot Station School had a total of 172 students and 13 teachers.⁸⁹¹ In addition, the Rural Alaska Community Action Program (RurAL CAP) runs Head Start (ages 3 to 5 years) and Early Head Start (birth to 3 years) programs in Pilot Station.⁸⁹²

⁸⁸³ See footnote 879.

⁸⁸⁴ See footnote 878.

⁸⁸⁵ See footnote 879.

⁸⁸⁶ Ibid.

⁸⁸⁷ Ibid.

⁸⁸⁸ See footnote 878.

⁸⁸⁹ Information received from a personal communication with the Pilot Station Tribal Administrator, July 27, 2012.

⁸⁹⁰ See footnote 879.

⁸⁹¹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁸⁹² Rural Alaska Community Action Program, Inc. *2010 Head Start Report*. Retrieved on December 20, 2011 from <http://www.ruralcap.com/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁸⁹³ Indigenous people living along the Yukon River have long harvested salmon for subsistence purposes. Salmon were historically used for personal subsistence as well as food for sled dogs. The first recorded commercial harvest of salmon took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s along the Yukon River. Poor returns in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources. Currently, commercial salmon fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 sub-districts, and 28 statistical areas used by the State to manage fisheries. Fishing on the lower Yukon River takes place with set and drift gillnets. Subsistence fishermen also most often utilize these gear types. Many subsistence fishermen are also commercial fishermen.⁸⁹⁴

Pilot Station is located more than 100 miles up the Yukon River from the Bering Sea. This area is included in District 2 of the Lower Yukon River salmon fishery. It is also important to note that the ocean area into which the Yukon River flows is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Because Pilot Station is more than 50 miles inland, it is not eligible to participate in the Community Development Quota program. Pilot Station is also not eligible to participate in the Community Quota Entity program.

According to a survey conducted by the AFSC in 2011, community leaders expressed strong feelings that State fisheries management processes have not taken local tribal knowledge and concerns into account regarding salmon conservation and regulation of subsistence fisheries on the Yukon River. Pilot Station community leaders stated concern that State fisheries managers are not adequately considering their opinions and concerns to be relevant. As a result, they indicated in the AFSC survey that Pilot Station is not effectively participating in fisheries management processes in Alaska. For more information about the fisheries-management concerns and opinions expressed by Pilot Station community leaders, see the *Additional Information* section at the end of this profile.

Processing Plants

ADF&G's 2010 Intent to Operate list does not list a registered processing plant in Pilot Station. The list did note a seafood processing facility in the nearby community of St. Mary's

⁸⁹³ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁸⁹⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

(approximately 20 miles downriver from Pilot Station) called Boreal Fisheries, Inc. It is a husband-and-wife operation that began operations in 1974. Boreal Fisheries processes salmon: Chinook and chum from June 16-July 10, chum from August 1-September 5, and coho from August 15-September 5. Boreal Fisheries purchases its Chinook salmon from local fishermen.

In addition, although not registered on ADF&G's Intent to Operate list in 2010, a processing plant was active as recently as 2008 in Marshall (approximately 40 miles upriver from Pilot Station). Maserculiq Fish Processors, Inc. utilizes fish harvested by local Yup'ik Eskimo fishermen and produces value-added salmon products, which are distributed by Yukon King Seafoods of Alaska.⁸⁹⁵

Fisheries-Related Revenue

According to information provided in Pilot Station's annual municipal budgets between 2000 and 2010, the primary sources of fisheries-related revenue in Pilot Station were a raw fish tax and the Shared Fisheries Business Tax. In 2010, the City of Pilot Station received \$100 in revenue from raw fish tax and \$93 from the Shared Fisheries Business Tax. Information about fisheries-related revenue is presented in Table 3.⁸⁹⁶

Commercial Fishing

Pilot Station is a river fishing community, located more than 100 miles inland from the ocean on the Yukon River. The community relies primarily on the Lower Yukon River salmon gillnet fishery, although between 2000 and 2010, several residents also participated in the Norton Sound herring gillnet fishery and the statewide 'freshwater fish' gillnet fishery ('other finfish'). Commercial freshwater fish fisheries may target species such as Arctic char, pike, rainbow trout, Dolly Varden, and sheefish.⁸⁹⁷

Between 2000 and 2010, Pilot Station residents were involved in commercial fisheries as crew, permit holders, and vessel owners. In 2010, 54 Pilot Station residents purchased commercial crew licenses, 22 were the primary owner of a fishing vessel, and 21 vessels were homeported in Pilot Station. This information about the commercial fishing sector in Pilot Station is presented in Table 5. In a survey conducted by the AFSC in 2011, community leaders indicated that a majority of the fishing vessels based out of Pilot Station were 35 feet in length or under, and primarily use gillnet fishing gear. They also indicated that the number of fishing vessels present in Pilot Station has remained stable over the past five years.

In 2010, 58 individuals held a total of 57 Commercial Fisheries Entry Commission (CFEC) permits, of which 46 (81%) were actively fished that year. Of the total 57 permits, 54 were for the Lower Yukon River salmon fishery, and 3 were held in the Norton Sound herring roe and food/bait fishery. The number of herring permits held in Pilot Station stayed constant between 2000 and 2010 (three), but the percentage fished declined from 67% in 2000 to 0% by 2010. The last year during the 2000-2010 period that a herring permit was actively fished was

⁸⁹⁵ Yukon King Seafoods. (2008). *About us*. Retrieved December 8, 2011 from <http://www.yukonking.com>.

⁸⁹⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

⁸⁹⁷ Alaska Dept. of Fish and Game. 2006. *Our Wealth Maintained: A Strategy for Conserving Alaska's Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from www.adfg.alaska.gov/index.cfm?ADFG=species.wapview.

2006. In addition to salmon and herring permits, one statewide freshwater fish set gillnet permit was also held in Pilot Station in 2000 and from 2004-2008. This ‘other finfish’ permit was not actively fished in any of these years. Between 2000 and 2010, no residents of Pilot Station held License Limitation Program permits (LLP) or Federal Fisheries Permits (FFP) in federal fisheries for groundfish or crab. In addition, no residents held quota share accounts in federal halibut, sablefish, or crab catch share fisheries between 2000 and 2010. Information about permits held in Pilot Station is presented in Table 4, and information about federal catch share participation is presented in Tables 6 through 8.

No fish buyers or shore-side processors were reported to be present in Pilot Station between 2000 and 2010 (Table 5), and no landings or ex-vessel revenue were generated in the community (Table 9). However, some information was available about salmon landings and ex-vessel revenue generated by vessel owners from Pilot Station. Between 2005 and 2009, Pilot Station vessel owners landed an average of 12,316 net pounds of salmon per year (including all delivery locations). On average, these landings were valued at \$16,398 in ex-vessel revenue. Information about salmon landings in other years between 2000 and 2010 is considered confidential due to the small number of participants. Landings and revenue information for other fisheries is also considered confidential during this period due to limited participation. Information about landings and ex-vessel revenue earned by vessel owners residing in Pilot Station is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Pilot Station: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$87	\$100
Shared Fisheries Business Tax ¹	n/a	\$62	n/a	\$102	n/a	n/a	n/a	\$70	\$73	\$87	\$93
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$0	\$62	\$0	\$102	\$0	\$0	\$0	\$70	\$73	\$174	\$193
Total municipal revenue⁵	\$295,752	\$293,672	\$274,293	\$360,713	\$380,006	\$332,600	\$455,406	\$310,114	\$559,045	\$497,893	\$680,714

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Pilot Station: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	3	3	3	3	3	3	3	3	3	3	3
	Fished permits	2	2	0	2	0	0	1	0	0	0	0
	% of permits fished	67%	67%	0%	67%	0%	0%	33%	0%	0%	0%	0%
	Total permit holders	3	3	3	3	3	3	3	3	3	3	3

Table 4 cont'd. Permits and Permit Holders by Species, Pilot Station: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	1	0	0	0	1	1	1	1	1	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	-	-	-	0%	0%	0%	0%	0%	-	-
	Total permit holders	1	0	0	0	1	1	1	1	1	0	0
Salmon (CFEC) ²	Total permits	55	56	54	54	55	54	56	55	54	54	54
	Fished permits	54	0	53	52	52	53	53	53	48	41	46
	% of permits fished	98%	0%	98%	96%	95%	98%	95%	96%	89%	76%	85%
	Total permit holders	59	59	56	62	56	61	61	62	58	56	58
<i>Total CFEC Permits²</i>	<i>Permits</i>	59	59	57	57	59	58	60	59	58	57	57
	<i>Fished permits</i>	56	2	53	54	52	53	54	53	48	41	46
	<i>% of permits fished</i>	95%	3%	93%	95%	88%	91%	90%	90%	83%	72%	81%
	<i>Permit holders</i>	60	59	56	62	56	61	61	62	58	56	58

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Pilot Station: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Pilot Station ²	Total Net Pounds Landed In Pilot Station ^{2,5}	Total Ex-Vessel Value Of Landings In Pilot Station ^{2,5}
2000	68	0	0	24	19	0	0	\$0
2001	4	0	0	19	15	0	0	\$0
2002	82	0	0	21	16	0	0	\$0
2003	82	0	0	23	18	0	0	\$0
2004	89	0	0	24	18	0	0	\$0
2005	90	0	0	29	23	0	0	\$0
2006	74	0	0	25	22	0	0	\$0
2007	74	0	0	26	25	0	0	\$0
2008	11	0	0	27	26	0	0	\$0
2009	59	0	0	23	21	0	0	\$0
2010	54	0	0	22	21	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Pilot Station: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Pilot Station: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Pilot Station: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Pilot Station: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Pilot Station Residents:
 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	5,812	7,954	8,193	17,942	21,678	-
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>5,812</i>	<i>7,954</i>	<i>8,193</i>	<i>17,942</i>	<i>21,678</i>	<i>-</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	-	-	-	-	-	-	-	-	-	-	-
Finfish	-	-	-	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-	-	-	-
Other Groundfish	-	-	-	-	-	-	-	-	-	-	-
Other Shellfish	-	-	-	-	-	-	-	-	-	-	-
Pacific Cod	-	-	-	-	-	-	-	-	-	-	-
Pollock	-	-	-	-	-	-	-	-	-	-	-
Sablefish	-	-	-	-	-	-	-	-	-	-	-
Salmon	-	-	-	-	-	\$15,922	\$19,025	\$19,896	\$14,827	\$12,322	-
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$15,922</i>	<i>\$19,025</i>	<i>\$19,896</i>	<i>\$14,827</i>	<i>\$12,322</i>	<i>-</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to a survey conducted by the AFSC in 2011, community leaders reported that chum, Chinook, and coho salmon, and whitefish are primary targets of recreational fishing in Pilot Station. However, they indicated that subsistence fishing is much more important than recreational fishing activity locally.

Between 2000 and 2010, no active sport fish guide businesses were present in Pilot Station, and no licensed sport fish guides resided there. The number of sport fishing licenses purchased by Pilot Station residents (irrespective of point of sale) varied from 19 to 131 per year over the decade, and the number of licenses sold in the community of Pilot Station varied from 0 to 120 per year. In some years, a greater number of licenses were sold in Pilot Station than were purchased by local residents, indicating that a small number of visitors may come to Pilot Station to fish recreationally.

The Alaska Statewide Harvest Survey,⁸⁹⁸ conducted by ADF&G between 2000 and 2010, noted freshwater sport harvest of sockeye salmon by recreational fishermen from Pilot Station. The Statewide Harvest Survey provided more detailed information about sport fishing activity in nearby St. Mary's, 20 miles downriver from Pilot Station: private anglers in St. Mary's were reported to target coho and chum salmon, Dolly Varden, Arctic grayling, northern pike, Pacific halibut, and rockfish. The survey also noted sport harvest of razor and hardshell clams by St. Mary's residents. No kept/released log book data were reported for fishing charters out of Pilot Station between 2000 and 2010.⁸⁹⁹

Pilot Station is located within Alaska Sport Fishing Survey Area Y – Yukon River Drainage. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, saltwater sport fishing activity was minimal, with between zero and 81 non-Alaska resident angler days fished per year, and between zero and 89 Alaska resident angler days fished per year. The low numbers reported for saltwater sport fishing make sense given that a majority of residents in Yukon drainage communities live at a great distance from the ocean, and fishing activities take place primarily in fresh water. Between 2000 and 2010, Alaska resident anglers in the Yukon River drainage consistently fished more days in freshwater (4,783 – 10,400 angler days per year) than non-Alaska resident anglers (2,573 – 5,761 angler days per year). This information about the sport fishing sector in and near Pilot Station is displayed in Table 11.

⁸⁹⁸ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

⁸⁹⁹ Alaska Department of Fish and Game. (2011). *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11. Sport Fishing Trends, Pilot Station: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Pilot Station ²
2000	0	0	70	70
2001	0	0	30	71
2002	0	0	88	104
2003	0	0	98	105
2004	0	0	131	120
2005	0	0	65	57
2006	0	0	19	0
2007	0	0	82	50
2008	0	0	45	0
2009	0	0	97	50
2010	0	0	82	55

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Residents of Pilot Station depend on subsistence hunting and fishing to supplement work in commercial fishing, government and educational services, trapping, and firefighting.⁹⁰⁰ According to a survey conducted by the AFSC in 2011, community leaders indicated that subsistence fishing is the most important economic activity in Pilot Station, and all local commercial fishermen are first and foremost subsistence fishermen. Community leaders reported that chum and Chinook salmon and whitefish are three of the most important aquatic resources utilized for subsistence purposes in Pilot Station.

No information is available from ADF&G between 2000 and 2010 regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes (Table 12). However, some data are available during the 2000-2010 period regarding total annual subsistence harvest of salmon. From 2000 to 2008, subsistence salmon permits were issued to between 94 and 111 Pilot Station households per year. Based on those permits that were returned, chum and Chinook were the two most heavily harvested salmon species in all years. On average between 2000 and 2008, 6,157 chum salmon were harvested by Pilot Station residents each year, along with 2,228 Chinook salmon. Smaller harvests of coho salmon harvests were reported each year, pink salmon harvest was reported in some years, and no sockeye salmon were reported harvested for subsistence purposes during the 2000-2008 period. Information about subsistence salmon harvests is presented in Table 13.

No information was reported regarding subsistence harvest of marine invertebrates or non-salmon fish (not including halibut) between 2000 and 2010 (Table 13). Likewise, no information was available from management agencies about subsistence harvest of Pacific halibut or marine mammals by Pilot Station residents during the period (Tables 14 and 15).

Table 12. Subsistence Participation by Household and Species, Pilot Station: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

⁹⁰⁰ See footnote 843.

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Pilot Station: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	111	55	2,334	5,997	1,708	6	n/a	n/a	n/a
2001	103	44	2,614	6,850	222	n/a	n/a	n/a	n/a
2002	102	37	2,530	7,170	230	22	n/a	n/a	n/a
2003	97	44	2,913	5,102	371	n/a	n/a	n/a	n/a
2004	95	46	2,406	6,887	296	5	n/a	n/a	n/a
2005	94	52	1,658	5,171	241	n/a	n/a	n/a	n/a
2006	108	51	1,976	6,855	225	1	n/a	n/a	n/a
2007	102	45	2,028	4,452	263	n/a	n/a	n/a	n/a
2008	107	53	1,597	6,929	268	34	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Pilot Station: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Pilot Station: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Additional Information

In response to a survey conducted by the AFSC in 2011, Pilot Station community leaders shared information about efforts by the Pilot Station Traditional Council to advocate for the interests of local subsistence fishermen. Community leaders have written two letters to Governor Sean Parnell in 2010 and 2011, one letter written to the Federal Subsistence Board in 2011, and a pamphlet outlining local views and experiences related to subsistence salmon fishing. These materials were included with the survey returned to the AFSC in 2011 to elaborate on the concerns of the Traditional Council related to current management of the Yukon River salmon fishery by the ADF&G Board of Fisheries (BOF) and the Federal Subsistence Board.

The Traditional Council objects to a recent state regulation requiring reduced mesh size in Yukon River set and drift gillnet fisheries. In recent years, concern has been raised about perceived reductions in size and earlier age at maturation of Chinook salmon, which could affect population productivity and lead to continued decreasing size over time.⁹⁰¹ Increasing attention has also been placed on the status of Yukon River Chinook salmon after the stocks were designated a yield concern⁹⁰² in 2000 following several years of poor Chinook returns to the

⁹⁰¹ U.S. Fish and Wildlife Service. Bromaghin, Jeffrey, Ryan Nielson, and Jeffery Hard. (2008). “An Investigation of the Potential Effects of Selective Exploitation on the Demography and Productivity of Yukon River Chinook Salmon.” *Alaska Fisheries Technical Report Number 100*. Retrieved April 9, 2012 from http://alaska.fws.gov/fisheries/fish/Technical_Reports/t_2008_100.pdf.

⁹⁰² A ‘yield concern’ is the least severe of three levels of concern used by the Alaska Board of Fisheries to identify stocks of concern. A stock is designated as a yield concern if expected harvest levels are not maintained over a 4 to 5 year period. See Clark, McGregor, Mecum, Krasnowski and Carroll (2006). *The Commercial Salmon Fishery in*

Yukon River⁹⁰³ and closure of commercial fisheries in the region in 2001.⁹⁰⁴ Commercial fisheries were also closed in the Yukon in 2008 and 2009, and subsistence harvest was cut in half by 2009.⁹⁰⁵

Several studies have been conducted along the Yukon River to compare selectivity of different mesh sizes to help inform decisions regarding mesh size in Yukon gillnet fisheries. A 2010 study by ADF&G compared catch compositions in Lower Yukon River gillnets with mesh sizes 7, 7.5, and 8 inches. The study found that, “as mesh size increases, the catch contains more Chinook salmon relative to chum salmon, a greater proportion of older fish, a greater proportion of females, and more larger fish in respect to length, weight and girth.”⁹⁰⁶ When considering a balance between potential selectivity benefits of reduced mesh size and the negative trade-off of increased catch of non-targeted species (such as chum salmon), the study found that while use of 7-inch mesh effectively targeted smaller and younger fish, it also resulted in significantly lower Chinook-to-chum-salmon ratio than larger mesh sizes. A move to 7.5-inch mesh, however, appeared to retain a higher Chinook-to-chum-salmon ratio while targeting smaller and younger Chinook.⁹⁰⁷

In 2011, based on this and other studies, ADF&G reduced legal mesh size from 8.5 to 7.5 inches. In a letter to Governor Parnell in December 15, 2010, the Pilot Station Traditional Council stated its opposition to this regulation and requested that it be rescinded. Tribal leaders stated in the letter that, although they understand the conservation intent of the regulation, they oppose it for several reasons. First, they question the uncertain results of the scientific studies used to set the mesh sizes. The Traditional Council is not convinced that reducing mesh size will improve the long-term size and viability of Chinook populations, while increased waste (from increased catch of non-targeted species) will be a certain result of the regulation. In a letter sent to Governor Sean Parnell on February 3, 2011, the Traditional Council explained that, based on the experience of local subsistence fishermen, “large fish are more likely to get caught in smaller net size than small fish that can easily swim through the next larger net size. In any net size, the largest salmon is guaranteed to get caught. Restricting everyone to require the use of a smaller net size is guaranteed to catch more fish, including all larger salmon, and guaranteed to catch more non-targeted salmon than the next larger net size.”

Second, the Traditional Council believes the manner in which the mesh size reduction regulation was implemented ignored the opinions and needs of the Tribe, and is an example of ‘absentee management.’ In a letter from the Traditional Council to the Federal Subsistence Board dated January 17, 2011, the Traditional Council stated that opposition to the mesh size reduction was unanimous among federally-recognized Lower Yukon River Tribes, and the fact that this

Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹⁰³ Alaska Dept. of Fish and Game. Katherine Howard, Steve Hayes and Danielle Evenson. (2009). *Yukon River Chinook Salmon Stock Status and Action Plan 2010; a Report to the Alaska Board of Fisheries*. Special Publication No. 09-26. Retrieved April 10, 2012 from <http://www.sf.adfg.state.ak.us/FedAidpdfs/Sp09-26.pdf>.

⁹⁰⁴ Clark, McGregor, Mecum, Krasnowski and Carroll (2006). The Commercial Salmon Fishery in Alaska. *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹⁰⁵ Juneau Empire. February 2, 2010. “Fisheries Board limits Yukon salmon gillnet mesh.” Retrieved April 9, 2012 from http://juneauempire.com/stories/020210/sta_557878935.shtml.

⁹⁰⁶ Alaska Dept. of Fish and Game. Katherine Howard and Danielle Everson. (2010). *Yukon River Chinook Salmon Comparative Mesh Size Study*. Fishery Data Series No. 10-92. Retrieved April 9, 2012 from <http://www.sf.adfg.state.ak.us/FedAidPDFs/FDS10-92.pdf>.

⁹⁰⁷ Ibid.

opinion was ignored by the BOF and the Federal Subsistence Board shows the lack of consideration of managers for tribal opinions and knowledge. The letter also expresses the opinion that Lower Yukon River communities are not effectively included in management processes. The letter stated that the last Regional Advisory Committee (RAC) meeting that physically took place in the Lower Yukon region was in 2007, leading the Council to ask whether the Arctic Yukon Kuskokwim RAC area is too large to be an effective management region. In addition, the Traditional Council feels the recommendations of the RAC are categorically ignored by the Federal Subsistence Board, leading the Traditional Council to wonder whether or not the RAC is a useful entity through which the tribe should attempt to make its voice heard.

More generally, these letters from the Pilot Station Traditional Council expressed frustration about communication difficulties stemming from cultural differences between local subsistence users and state and federal managers. In the 2010 letter to Governor Parnell, the Council wrote that the concerns of tribal members “are usually not understood, but customarily ignored by federal and state management agencies because the concerns that they address are often incomprehensible to non-tribal members and westernized concept of resource management.” The letter explained that these communication differences stem in part from different motivations for harvest. For example, it is easy for sport fishermen and hunters to relate to each others’ motivations to catch larger salmon for trophies, while the primary motivation of traditional harvesters is simply to have enough. They acknowledged the difficulties for managers to effectively balance the needs and desires of different user groups, but they believe managers are more readily able to understand the underlying motivations of commercial and sport fishing groups, building in an inherent bias against subsistence fishery users.

Conservation of the Yukon River Chinook is a complicated task. There are many factors with the potential to affect the population characteristics of the stock, including climatic or ocean conditions, density-dependent effects, and selective fisheries.⁹⁰⁸ The listing of Yukon Chinook as a species of yield concern, as well as obligations to an international treaty with Canada, requires managers to take action that will improve yields and survival of the stocks. A proposal for mesh-size reduction to 6 inches was amended by the Board of Fisheries to 7.5 inches. Although the decision causes short-term hardship to Yukon River communities by forcing them to purchase new fishing gear, one BOF member voted for the mesh-size reduction in 2010 because “it’s going to be a lot harder on these people if the fish disappear.”⁹⁰⁹ One BOF member voted against the reduction in 2010, citing unfair focus on gillnet fishermen, when other fishermen – such as those using fish wheels – are not being asked to change their gear.⁹¹⁰

The Pilot Station Traditional Council continues to oppose the regulation, and has instructed tribal members to continue to use “any net size to meet their traditional Yukon River salmon harvest needs for the season, and we do not see this as a reason to criminalize harvest methods to meet their needs for basic survival.”⁹¹¹

⁹⁰⁸ U.S. Fish and Wildlife Service. Bromaghin, Jeffrey, Ryan Nielson, and Jeffery Hard. (2008). “An Investigation of the Potential Effects of Selective Exploitation on the Demography and Productivity of Yukon River Chinook Salmon.” *Alaska Fisheries Technical Report Number 100*. Retrieved April 9, 2012 from http://alaska.fws.gov/fisheries/fish/Technical_Reports/t_2008_100.pdf.

⁹⁰⁹ Juneau Empire. February 2, 2010. “Fisheries Board limits Yukon salmon gillnet mesh.” Retrieved April 9, 2012 from http://juneauempire.com/stories/020210/sta_557878935.shtml.

⁹¹⁰ Ibid.

⁹¹¹ Pilot Station Traditional Council. December 15, 2010. Letter to Governor Sean Parnell.

Russian Mission

People and Place



*Location*⁹¹²

Russian Mission, also known as Iqurmiut, is located on the west bank of the Yukon River in the Yukon-Kuskokwim Delta, 25 miles southeast of Marshall. It lies 70 air miles northeast of Bethel and 376 miles west of Anchorage. Russian Mission is located in the Bethel Recording District and the Wade Hampton Census Area, and is not located within an organized Borough. The community encompasses 5.7 square miles of land and 0.5 square miles of water.

*Demographic Profile*⁹¹³

In 2010, there were 312 residents in Russian Mission, making it the 160th largest out of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 22.6%. According to Alaska Department of Labor population estimates, the average annual growth rate in Russian Mission between 2000 and 2009 was 1.73%, indicating slow, steady growth. In a survey conducted by NOAA’s Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that, in addition to 336 year-round residents of Russian Mission, an additional 117 people come to Russian Mission as seasonal workers or transients each year. Community leaders reported that Russian Mission’s annual population fluctuation is “entirely” driven by employment in the fishing sectors. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, the majority of residents of Russian Mission identified themselves as American Indian and Alaska Native (95.8%), with only 3.2% of residents identifying themselves as White and 1% identifying themselves as two or more races. There were no residents of Russian Mission that identified themselves as Hispanic in 2010. The percentage of the population identifying themselves as White decreased by 2.9% between 2000 and 2010, with corresponding increases in the percentage of the population identifying themselves as American Indian and Alaska Native and two or more races. The changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size was 4.27, which is a slight decrease from 4.30 in 1990, but is a slight increase from 4.23 in 2000. Also in that year, there were a total of 74 housing units, compared to 58 in 1990 and 81 in 2000. Of the 74 housing units surveyed for the 2010 Decennial Census, 51 were owner-occupied, 22 were renter-occupied, and one unit was vacant. Throughout this period, no residents of Russian Mission were reported to be living in group quarters.

⁹¹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹¹³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

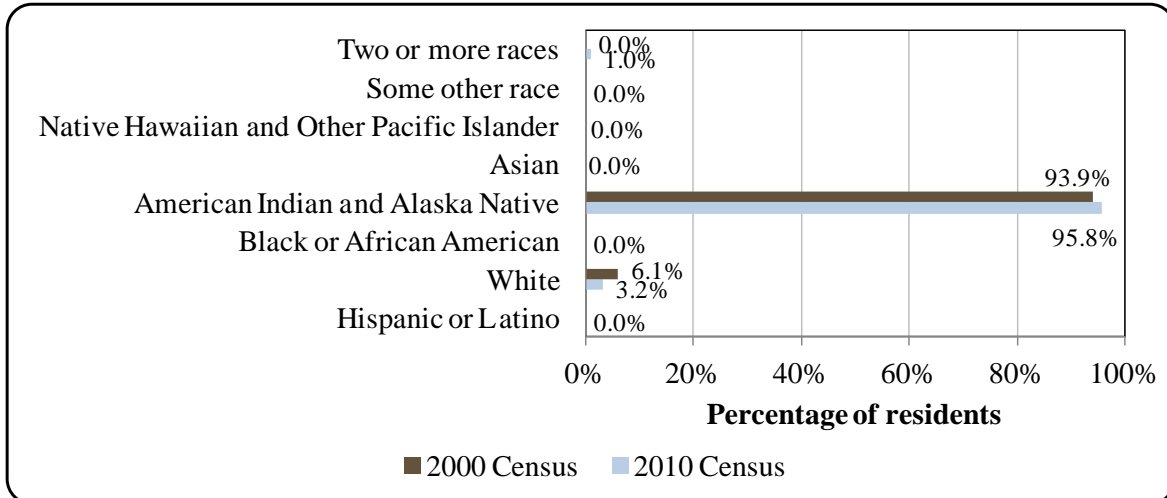
Table 1. Population in Russian Mission from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	246	-
2000	296	-
2001	-	315
2002	-	328
2003	-	327
2004	-	335
2005	-	330
2006	-	329
2007	-	332
2008	-	364
2009	-	363
2010	312	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

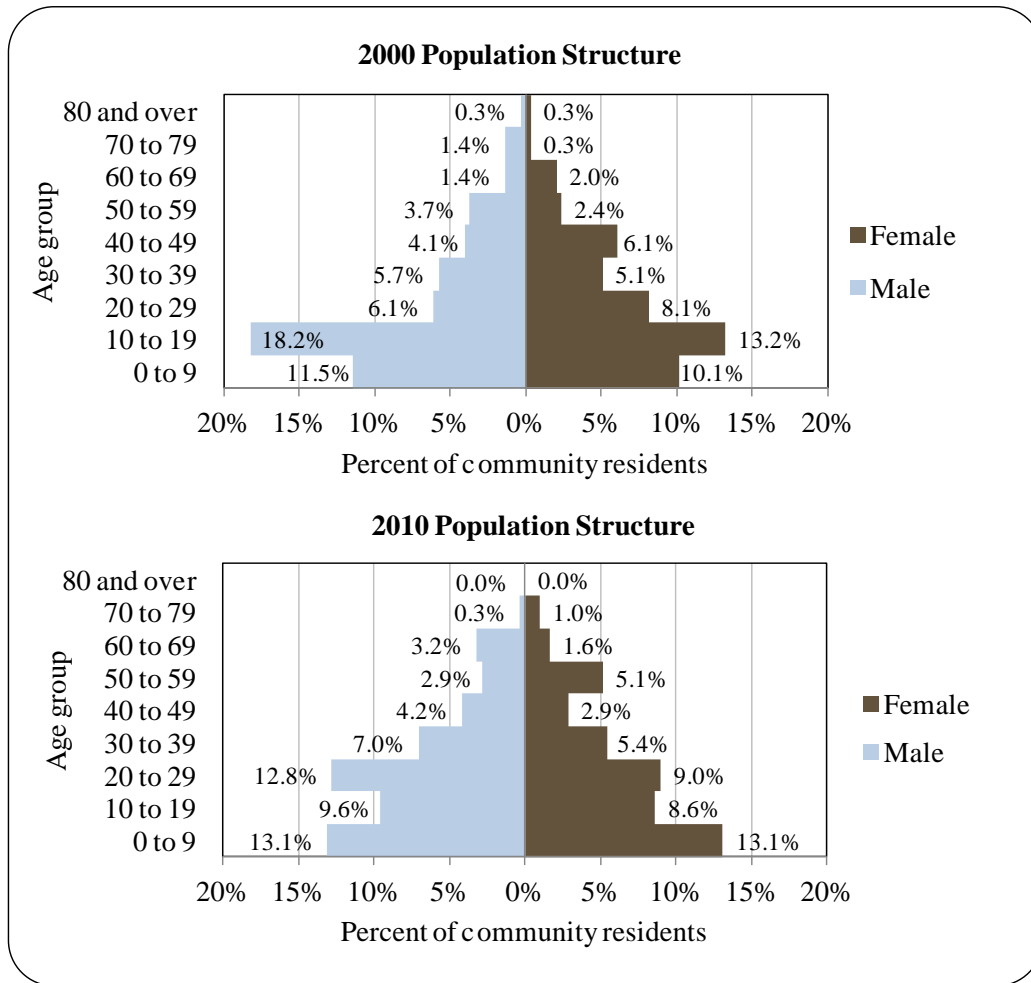
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Russian Mission: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Russian Mission was slightly skewed, at 53.2% male and 46.8% female, similar to the state as a whole (52% male, 48% female). The median age in Russian Mission was 21.8 years, considerably lower than both the U.S. national average of 36.8 years and the median age in Alaska, 33.8 years. The greatest percentage of residents in 2010 fell within the age category 0-29 years old, with the next largest percentage for the age category 30-50 years old. Relatively few people were aged 60 or older. The overall population structure in Russian Mission in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Russian Mission Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁹¹⁴ an estimated 80.3% of residents aged 25 and over had a high school diploma or higher degree, compared with 90.7% of Alaskan residents overall. Also in 2009, an estimated 4.9% of the population had a less than ninth grade education, compared to 3.5% of Alaskan residents overall; an estimated 14.8% had a 9th to 12th grade education but no diploma, compared with 5.8% of Alaskan residents overall; an estimated 44.8% had a high school diploma or equivalent, compared with 27.4% of Alaskan residents overall; an estimated 25.4% had some college but no degree, compared with 28.3% of Alaskan residents overall; an estimated 5.6% had a Bachelor’s degree, compared with 17.4% of Alaskan residents overall, and an estimated 4.9% had a graduate or professional degree, compared with 9.6% of Alaskan residents overall.

⁹¹⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

*History, Traditional Knowledge, and Culture*⁹¹⁵

In 1837, the first Russian American Company fur trading post on the Yukon River was established where Russian Mission is now located. The settlement was recorded by the Russian explorer Zagoskin in 1842 as “Ikogmiut,” meaning “people of the point.” The first Russian Orthodox mission in Interior Alaska was established here in 1857 by the Russian-Aleut priest Jacob Netzuetov. The mission was called “Pokrovskaya Mission,” and the village name was changed to Russian Mission in 1900. It was often confused with a village on the Kuskokwim that was also called “Russian Mission,” but was renamed Chuathbaluk. The City was incorporated in 1970. Russian Mission is a Yup’ik Eskimo village. Subsistence is the focus of the culture. The sale and importation of alcohol is banned in the village.

Natural Resources and Environment⁹¹⁶

The climate of Russian Mission exhibits a significant maritime influence. Temperatures range from -54 to 86 °F (-47.8 to 30 °C). Annual precipitation averages 16 inches, with 60 inches of snowfall. Heavy northern winds often limit air access in the fall and winter. The Lower Yukon is ice-free from mid-June through October. In a survey conducted by the AFSC in 2011, community leaders reported that Russian Mission’s economy relies on fishing, a natural resource based industry.

Russian Mission is located within the boundaries of the 22 million acre Yukon Delta National Wildlife Refuge (Refuge). The Refuge was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” Refuge lands are open to sport and subsistence hunting and fishing, as well as trapping.⁹¹⁷

Natural hazards identified in the Wade Hampton Census Area include flooding, wildfire, earthquake, severe weather, erosion and volcanic activity.⁹¹⁸ Areas of the community close to the river are particularly susceptible to annual spring flooding.

The Yukon-Kuskokwim delta is rich in mineral deposits. Historically, significant mining activity took place in the Marshall mining district, located near Russian Mission. No mining development is currently taking place there, although active development is underway at the Donlin Creek mine in the Kuskokwim Delta.⁹¹⁹

⁹¹⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹¹⁶ Ibid.

⁹¹⁷ U.S. Fish and Wildlife Service. (2011). *Yukon Delta National Wildlife Refuge website*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁹¹⁸ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁹¹⁹ Pilot Station Traditional Council. (2009). *Pilot Station Community Development Plan*. Retrieved April 6, 2012 from <http://www.commerce.state.ak.us/dca/plans/PilotStation-GCP-2006.pdf>.

Current Economy⁹²⁰

According to the 2006-2010 ACS,⁹²¹ the per capita income in Russian Mission in 2010 was estimated to be \$13,772, and the median household income in 2010 was estimated to be \$46,875, compared to \$8,358 and \$27,500 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁹²² the real per capita income (\$10,991) and the real median household income (\$36,162) indicate a substantial increase in both values between 2000 and 2010. However, Russian Mission's small population size may have prevented the ACS from accurately portraying economic conditions.⁹²³ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database, the per capita income in Russian Mission in 2010 was \$8,306, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁹²⁴ This is supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.⁹²⁵ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

In 2010, Russian Mission ranked 215th of 305 Alaskan communities with per capita income data for that year, and 151st out of 299 Alaskan communities with household income data. Based on the ACS, in that same year, 73.1% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 23.8%, compared to the statewide unemployment rate of 5.9%. Approximately 27.4% of local residents were living below the poverty line in 2010, compared with 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Russian Mission are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Russian Mission. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 26.7%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the private sector (58%), while 42% were employed in the public sector. By industry sector, most (36.6%) employed residents were estimated to work in education services, health care, and social assistance sectors; followed by retail trade (17.9%); construction (13.4%); and public administration (12.5%) sectors. Overall, there was significant variability in proportional sector employment between 2000 and 2010. This could be attributed to Russian Mission's relatively small labor force and the fact that ACS sampling methods may misrepresent communities with small populations. Between those years, there was a significant decline in the

⁹²⁰ Unless otherwise noted, all monetary data are reported in nominal values.

⁹²¹ See footnote 914.

⁹²² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationscale.htm>).

⁹²³ See footnote 914.

⁹²⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹²⁵ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

percentage of employed residents represented in professional, scientific, management, administrative, and waste management, as well as transportation, warehousing, and utilities sectors. Conversely, there were significant proportional increases in the number of residents working in public administration, agriculture, forestry, fishing, hunting, and mining sectors (Figure 3). According to 2010 ALARI estimates, most (55.3%) employed residents worked in local government sectors; followed by trade, transportation, and utilities (12.9%) and construction (6.5%) sectors.

In terms of employment by occupation type, most (31.3%) employed residents were estimated to hold service positions; followed by sales or office (24.1%); management or professional (19.6%); natural resources, construction, or maintenance (16.1%); and production, transportation, or material moving (8.9%). However, of those holding natural resource, construction, or maintenance positions, none reported holding occupations in fisheries sectors. This may be attributed to the fact that many fishermen consider themselves self-employed, or hold positions in other sectors of employment. Because of this, the number of active fishermen may be underreported in Census data. Between 2000 and 2010, there was a significant proportional decline in the number of residents hold management or professional positions. Conversely, there was a significant proportional gain in the number of residents holding construction positions (Figure 4).

Figure 3. Local Employment by Industry in 2000-2010, Russian Mission (U.S. Census).

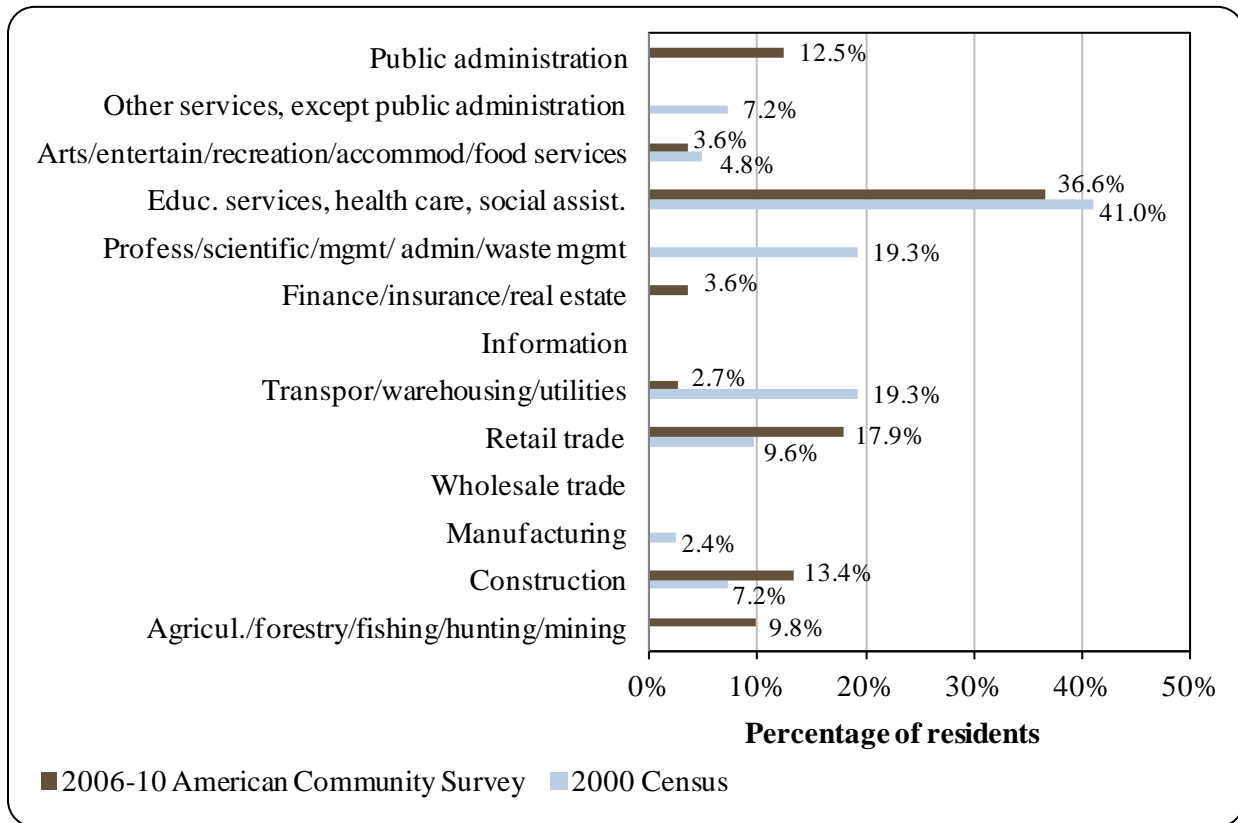
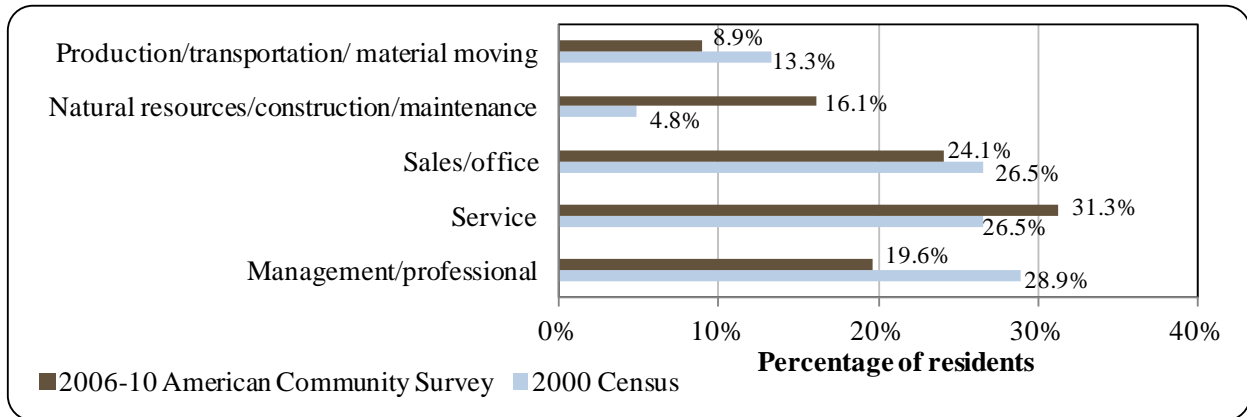


Figure 4. Local Employment by Occupation in 2000-2010, Russian Mission (U.S. Census).



Governance

Russian Mission was incorporated as a Second-class city in 1970. The City has a Strong Mayor form of government, with a seven-person city Council including the Mayor, a nine-person advisory school board, a planning commission, and several municipal employees. No taxes are administered by the City or the Borough.⁹²⁶ Russian Mission did not receive any fisheries-related grants between 2000 and 2010.

Russian Mission was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Iqurmuit Traditional council. The Native village corporation is Russian Mission Native Corporation, which manages 92,160 acres of land. The regional Native corporation to which Russian Mission belongs is the Calista Corporation.⁹²⁷

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and the Department of Commerce, Community, and Economic Development are located in Bethel. The nearest office of the Alaska Department of Natural Resources is located in McGrath, and the nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services (BCIS), and U.S. Immigration and Customs Enforcement are located in Anchorage.

When adjusted for inflation,⁹²⁸ total municipal revenues increased by 18.3% between 2000 and 2010 from \$244,889, to \$373,782. In 2010, only 18.0% of total municipal revenues were generated from local sources. In that year, most (59.6%) locally generated revenues came from Alaska Village Electric Cooperative refunds, followed by office space rentals (29.5%) and other land leases (10.5%). The majority (36.1%) of outside revenue was generated by state allocated Community Revenue Sharing, followed by Municipal Energy Assistance Program grants (28.6%) and Alaska Department of Commerce, Community, and Economic development grants (15.8%).⁹²⁹ Information regarding municipal revenues can be found in Table 2.

⁹²⁶ See footnote 915.

⁹²⁷ Ibid.

⁹²⁸ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

⁹²⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Russian Mission from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$244,889	n/a	\$27,176	n/a
2001	\$198,034	n/a	\$27,176	n/a
2002	\$198,034	n/a	\$25,777	n/a
2003	\$226,124	n/a	\$26,159	n/a
2004	\$144,135	n/a	-	n/a
2005	\$49,605	n/a	-	n/a
2006	\$88,999	n/a	-	n/a
2007	\$601,192	n/a	-	n/a
2008	\$601,192	n/a	-	n/a
2009	\$252,655	n/a	\$113,161	n/a
2010	\$373,782	n/a	\$114,467	n/a

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Russian Mission's location on the Yukon River allows barge and small boat travel during the summer. Passengers, mail, and light goods arrive primarily by air. A 3,600 feet long by 100 feet wide gravel airstrip and seaplane landing area are owned and operated by the state. Scheduled daily flights are available. Snowmobiles are used for inter-village transportation in the winter, and a trail is marked to Kalskag (25 miles away).⁹³⁰ Roundtrip airfare to Anchorage in June 2012 was \$578.⁹³¹

*Facilities*⁹³²

Water is derived from a deep well and is treated and distributed via buried pipes throughout the community. Most homes are also connected to the piped sewage system. Refuse is disposed of by individuals at the landfill. Russian Mission is served by a Village Public Safety

⁹³⁰ Ibid.

⁹³¹ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

⁹³² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Officer (VPSO), a City Police Department, and state troopers stationed downriver in St. Mary's. Fire and rescue services are provided by the State, the local VPSO, the Volunteer Fire Department, and Project Red Code Equipment. The City maintains a public safety holding cell, a recreation center, a community hall, a facility for bingo, and a school library.

In a survey conducted by the AFSC in 2011, community leaders reported that, while there is no dock space available for permanent vessels, vessels up to 300 feet long are able to use moorage in Russian Mission. In the same survey, community leaders indicated that Russian Mission is capable of handling fuel barges and freight vessels.

*Medical Services*⁹³³

There is a local health clinic, the Russian Mission Clinic, which is owned by the City of Russian Mission and operated by the Yukon Kuskokwim Health Corporation. The clinic is a Community Health Aid Program site. Emergency services have river, floatplane, and air access. Emergency service is provided by a health aide. The nearest hospital is located in Bethel.

*Educational Opportunities*⁹³⁴

There is one school in Russian Mission that provides instruction to students from pre-school through 12th grade. In 2011, the school had 8 teachers employed and 117 students enrolled.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁹³⁵ Salmon has long been of particular importance to indigenous people living along the Yukon River. Salmon was used for personal subsistence as well as food for sled dogs. The first recorded commercial harvest of salmon on the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure on the Yukon River between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s. Poor returns in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.⁹³⁶

Currently, commercial salmon fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts,

⁹³³ Ibid.

⁹³⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁹³⁵ Alaska Native Heritage Center (n.d) Yup'ik & Cup'ik - *Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁹³⁶ Clark, McGregor, Mecum, Krasnowski and Carroll 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

10 sub-districts and 28 statistical areas. Fishing on the lower Yukon River takes place with set and drift gillnets. Subsistence fishermen also most often utilize these gear types. Many subsistence fishermen are also commercial fishermen.⁹³⁷

Russian Mission is located almost 200 miles up the Yukon River from the Bering Sea. This area is included in District 3 of the Lower Yukon River salmon fishery. It is also important to note that the ocean area into which the Yukon River flows is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Russian Mission is not eligible to participate in the Community Quota Entity (CQE) program, and because the community is located more than 50 miles inland from the ocean, it is not eligible to participate in the Community Development Quota (CDQ) program.

In a survey conducted by the AFSC in 2011, community leaders reported that Russian Mission's annual population peak is "entirely" driven by employment in the fishing sectors (e.g., processing plants, commercial fishing, subsistence fishing, recreation and sport fishing, and charter fishing). Community leaders also reported that commercial fishing boats under 35 feet use Russian Mission as their base of operation during the fishing season, that gill nets are the primary gear type used by these vessels, and that there are "a lot more" commercial fishing boats in Russian Mission compared to five years ago.

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Russian Mission did not have a registered processing plant. Although not listed on ADF&G's 2010 Intent to Operate list, one processing plant has been active in nearby Marshall in recent years. As recently as 2008, Maserculiq Fish Processors, Inc. was listed on the Intent to Operate list. The company utilizes fish harvested by local Yup'ik Eskimo fishermen and produces value-added salmon products which are distributed by Yukon King Seafoods of Alaska.⁹³⁸ In addition, the 2010 Intent to Operate list did include a registered processing facility in the community of Saint Mary's (approximately 100 miles downriver from Russian Mission) called Boreal Fisheries, Inc. It is a husband-and-wife operation which began in 1974. Boreal Fisheries purchases salmon from local fishermen, with processing focused on Chinook, chum, and coho.⁹³⁹

Fisheries-Related Revenue

Available data on fisheries-related revenue received by Russian Mission between 2000 and 2010 show a small amount of revenue received in some years from a raw fish tax and the Shared Fisheries Business Tax (Table 3).⁹⁴⁰

⁹³⁷ Ibid.

⁹³⁸ Yukon King Seafoods. (2008). *About us*. Retrieved December 8, 2011 from <http://www.yukonking.com>.

⁹³⁹ Boreal Fisheries. (2009). *Homepage*. Retrieved May 31, 2012 from <http://www.borealfish.com/>.

⁹⁴⁰ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

In 2010, 15 residents of Russian Mission held salmon permits issued by the Commercial Fisheries Entry Commission (CFEC), and no residents held Federal Fisheries Permits (Table 4). Seven of those 15 permits (47%) were reported as fished in 2010 and all were issued for the Lower Yukon salmon gill net fishery. Between 2000 and 2010, the number of salmon CFEC permits varied between 11 and 16, with 0% to 85% of these permits reported as actively fished, depending on the year.

Between 2000 and 2010, there were no vessels recording landings in Russian Mission (Table 5). While no landings were reported between 2000 and 2010 (Table 9), residents of Russian Mission made landings in other communities between 2000 and 2010; however, data regarding landings and ex-vessel revenue generated by Russian Mission vessel owners are considered confidential due to the small number of participants (Table 10). In 2010, there were 17 registered crew license holders residing in Russian Mission, a number which has varied from 1 to 27 between 2000 and 2010. Also in 2010, there were five vessels owned primarily by Russian Mission residents, and three vessels were homeported locally (Table 5). In addition, no residents of Russian Mission held quota share account in federal catch share fisheries for halibut, sablefish, or crab between 2000 and 2010 (Tables 6, 7, and 8).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Russian Mission: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	\$48	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	\$49	n/a	\$79	n/a	n/a	n/a	\$55	\$57	\$68	\$75
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>\$49</i>	<i>\$48</i>	<i>\$79</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$55</i>	<i>\$57</i>	<i>\$68</i>	<i>\$75</i>
<i>Total municipal revenue⁵</i>	<i>\$244,889</i>	<i>\$198,034</i>	<i>\$198,034</i>	<i>\$226,124</i>	<i>\$144,135</i>	<i>\$49,605</i>	<i>\$88,999</i>	<i>\$601,192</i>	<i>\$601,192</i>	<i>\$252,655</i>	<i>\$373,782</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Russian Mission: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Russian Mission: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	13	11	11	12	12	12	13	16	16	15	15
	Fished permits	8	0	9	9	5	10	11	11	7	0	7
	% of permits fished	62%	-	82%	75%	42%	83%	85%	69%	44%	-	47%
	Total permit holders	13	11	11	12	12	14	14	16	17	15	15
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>13</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>12</i>	<i>12</i>	<i>13</i>	<i>16</i>	<i>16</i>	<i>15</i>	<i>15</i>
	<i>Fished permits</i>	<i>8</i>	<i>0</i>	<i>9</i>	<i>9</i>	<i>5</i>	<i>10</i>	<i>11</i>	<i>11</i>	<i>7</i>	<i>0</i>	<i>7</i>
	<i>% of permits fished</i>	<i>62%</i>	<i>-</i>	<i>82%</i>	<i>75%</i>	<i>42%</i>	<i>83%</i>	<i>85%</i>	<i>69%</i>	<i>44%</i>	<i>-</i>	<i>47%</i>
	<i>Permit holders</i>	<i>13</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>12</i>	<i>14</i>	<i>14</i>	<i>16</i>	<i>17</i>	<i>15</i>	<i>15</i>

¹National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Russian Mission: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Russian Mission ²	Total Net Pounds Landed In Russian Mission ^{2,5}	Total Ex-Vessel Value Of Landings In Russian Mission ^{2,5}
2000	20	0	0	2	2	0	0	\$0
2001	1	0	0	2	2	0	0	\$0
2002	18	0	0	2	2	0	0	\$0
2003	22	0	0	2	2	0	0	\$0
2004	12	0	0	2	2	0	0	\$0
2005	27	0	0	1	1	0	0	\$0
2006	19	0	0	2	2	0	0	\$0
2007	19	0	0	5	3	0	0	\$0
2008	16	0	0	6	4	0	0	\$0
2009	3	0	0	6	4	0	0	\$0
2010	17	0	0	5	3	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Russian Mission: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Russian Mission: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Russian Mission: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Russian Mission: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Russian Mission Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	--	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to the ADF&G Statewide Harvest Survey, whitefish and Northern pike are caught by private anglers in Russian Mission. According to a survey conducted by the AFSC in 2011, community leaders reported that Chinook/king salmon, coho/silver salmon, and sockeye/red salmon are targeted by recreational fishermen that use boats based in Russian Mission.

Between 2000 and 2010 there were no registered sport fish guide businesses or licensed sport fish guides in Russian Mission. A total of 119 sport fishing licenses were sold to residents of Russian Mission (irrespective of the location of point of sale). In comparison, a total of 141 sport fishing licenses were sold in Russian Mission, indicating the potential that visitors to Russian Mission are participating in recreational fishing activities.

Russian Mission is located within the Yukon River Drainage Alaska Sport Fishing Survey Area. There were no saltwater angler days fished reported in this survey area between 2005 and 2010. Between 2000 and 2004, the number of saltwater angler days fished by non-Alaska residents decreased from 81 in 2000 to 17 in 2004, though there were no angler days fished by non-Alaska residents in 2002 and 2003. The number of saltwater angler days fished by Alaska residents was highly variable between 2000 and 2003, and there were no saltwater angler days fished by Alaska residents between 2004 and 2010. During this period, freshwater angler days fished varied considerably for both Alaska residents and non-Alaska residents. Alaska residents fished consistently more angler days in freshwater in this region between 2000 and 2010, averaging 7,355 angler days fished per year compared to an average of 3,861 angler days fished by non-Alaska residents. Information about the sport fishing sector in and near Russian Mission is presented in Table 11.

Table 11. Sport Fishing Trends, Russian Mission: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Russian Mission ²
2000	0	0	68	79
2001	0	0	84	95
2002	0	0	108	154
2003	0	0	75	144
2004	0	0	76	137
2005	0	0	118	132
2006	0	0	108	134
2007	0	0	113	128
2008	0	0	143	152
2009	0	0	134	147
2010	0	0	119	141

Table 11, cont'd. Sport Fishing Trends, Russian Mission: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence activities are prevalent amongst the residents of Russian Mission. Salmon, moose, black bear, porcupine, rabbit, and waterfowl are utilized.⁹⁴¹ In a survey conducted by the AFSC in 2011, community leaders reported that fish, meat, and birds are the three most important subsistence resources to the residents of Russian Mission.

While data were not available for subsistence participation by household and species between 2000 and 2010 (Table 12), data from the ADF&G Division of Subsistence show that Chinook salmon, chum salmon, coho salmon, and pink salmon have been historically important subsistence species in Russian Mission (Table 13). In 2008, the last year for which data were available, 69 subsistence salmon permits were issued to households in Russian Mission, a number which is consistent with the number of permits issued between 2000 and 2007. In 2008, 26 of those permits were reported as fished, a slight increase from the years between 2000 and 2007. No data were reported by management agencies regarding subsistence harvest of halibut or marine mammals between 2000 and 2010 (Tables 14 and 15).

⁹⁴¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 12. Subsistence Participation by Household and Species, Russian Mission: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Russian Mission: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	68	21	1,860	1,354	24	8	n/a	n/a	n/a
2001	69	18	3,428	242	n/a	n/a	n/a	n/a	n/a
2002	63	17	1,887	559	115	n/a	n/a	n/a	n/a
2003	61	18	2,057	786	178	n/a	n/a	n/a	n/a
2004	61	25	2,337	1,056	151	6	n/a	n/a	n/a
2005	56	20	1,894	1,592	133	n/a	n/a	n/a	n/a
2006	60	20	1,851	1,579	19	8	n/a	n/a	n/a
2007	60	20	1,851	1,579	19	8	n/a	n/a	n/a
2008	69	26	2,949	2,978	372	436	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. *Alaska subsistence salmon fisheries 2008 annual report*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Russian Mission: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Russian Mission: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Saint Mary's



People and Place

*Location*⁹⁴²

Saint Mary's is located on the north bank of the Andreafsky River, five miles from its confluence with the Yukon River. It lies 450 air miles west-northwest of Anchorage. The City of Saint Mary's encompasses the Yup'ik villages of Saint Mary's and Andreafsky. Saint Mary's is located in the Bethel Recording District and the Wade Hampton Census Area. The City boundaries encompass 44.0 square miles of land and 6.3 square miles of water.

*Demographic Profile*⁹⁴³

In 2010, there were 507 residents in Saint Mary's, making it the 117th largest of 352 total Alaskan communities with recorded populations that year. Overall since 1990, the population has increased by 10.6%. According to Alaska Department of Labor estimates, there was an overall increase in permanent resident of 10.6% between 2000 and 2009. The average annual growth rate during this period was -0.14%, reflecting a small population peak from 2003-2006 followed by a slight decline in the end of the decade. The change in population from 1990 to 2010 is provided in Table 1.

The majority of residents in Saint Mary's in 2010 identified themselves as American Indian and Alaska Native (91.5%), with 4.7% of residents identifying themselves as two or more races and 3.7% identifying themselves as White. There were no residents of Saint Mary's that identified themselves as Hispanic in 2010. The percentage of the population identifying themselves as American Indian and Alaska Natives increased by 5.5% between 2000 and 2010, with corresponding decreases in the percentage of the population identifying themselves as White, Asian, and Hispanic or Latino. The percentage of the population identifying themselves as two or more races also increased between 2000 and 2010. The change in racial and ethnic composition between 2000 and 2010 is provided in Figure 1 below.

In 2010 the average household size was 3.34, a slight decrease from 3.70 in 1990 and 3.58 in 2000. However, there has been an overall increase in the number of households from 118 in 1990 to 137 in 2000 to 151 in 2010. Of the 209 housing units surveyed for the 2010 Decennial Census, 102 were owner-occupied, 49 were renter-occupied, and 58 were vacant. In 2010, there were three residents of Saint Mary's that were reported to be living in group quarters.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that seven people live in Saint Mary's as seasonal workers or transient residents.

⁹⁴² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁴³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

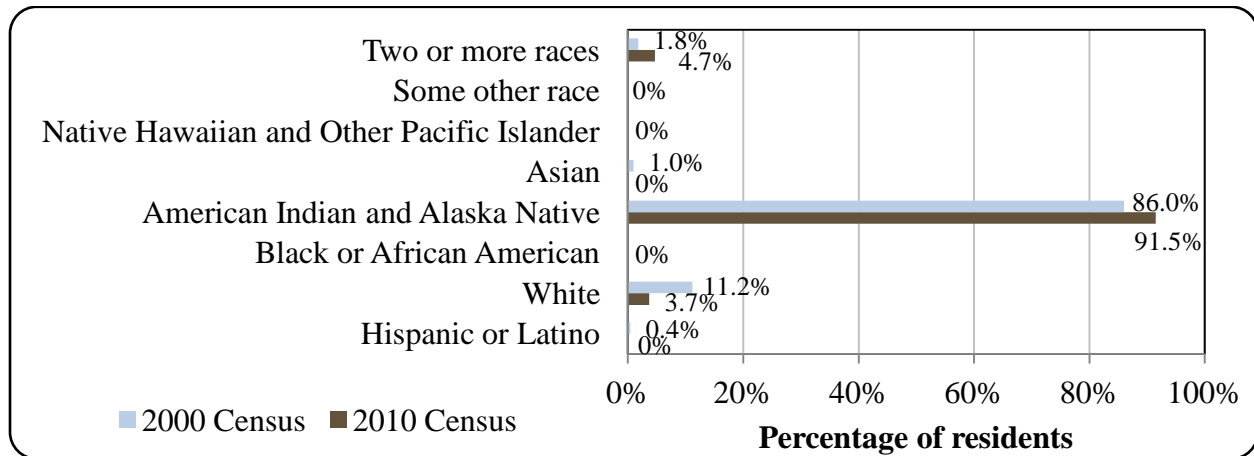
Table 1. Population in Saint Mary’s from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	441	-
2000	500	-
2001	-	512
2002	-	546
2003	-	581
2004	-	537
2005	-	562
2006	-	539
2007	-	518
2008	-	535
2009	-	553
2010	507	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

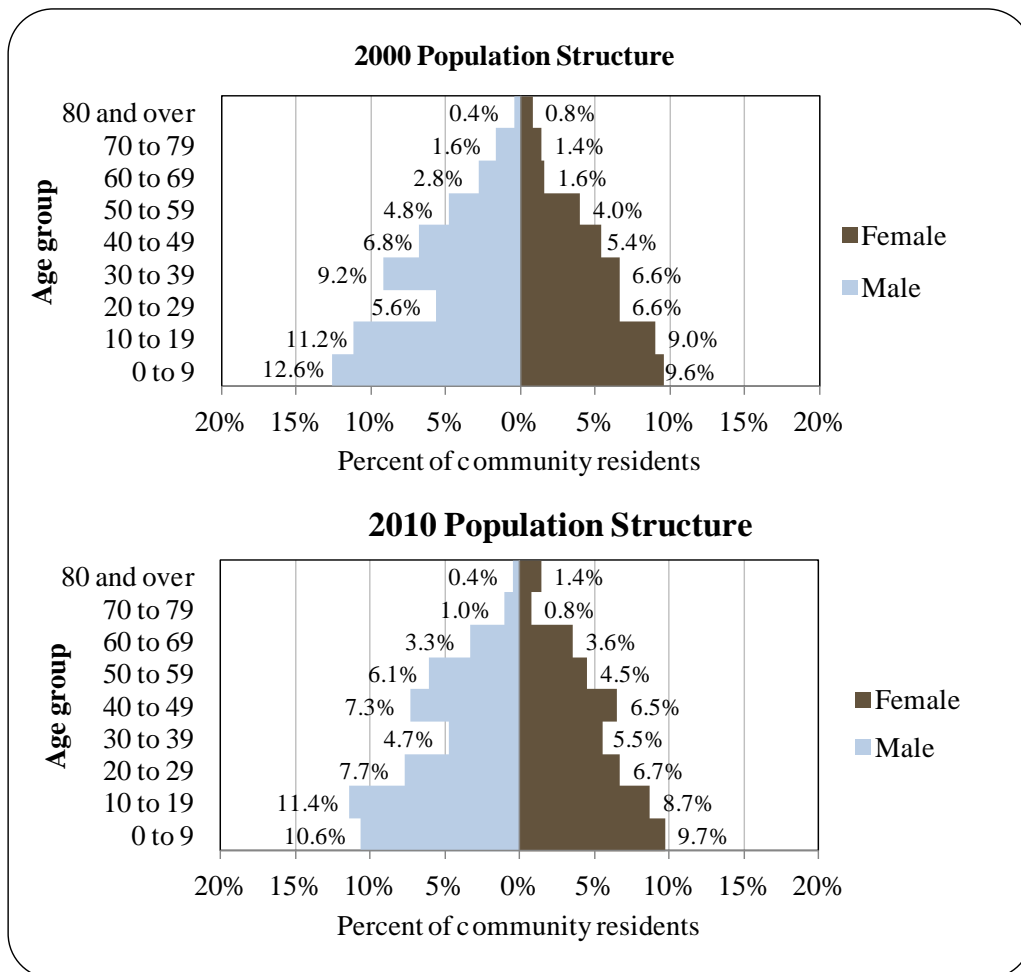
Figure 1. Racial and Ethnic Composition, Saint Mary’s: 2000-2010 (U.S. Census).



In 2010, the gender makeup was slightly skewed, at 52.7% male and 47.3% female, which is similar to the state as a whole (52% male, 48% female). The median age in Saint Mary’s was 26.3 years, lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell into the age category 0 to 19 years old, with 20-29 years old and 40-49 years old as the next largest categories. Relatively few people were 70 or older. Males and females were relatively evenly distributed in each age category. The 30-39 year old age group is disproportionately small compared to the other age groups. The overall population structure of Saint Mary’s in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁹⁴⁴ 81.3% of residents aged 25 and older were estimated to hold a high school diploma or higher degree, compared with 90.7% of Alaskan residents overall. Also in 2010, 15.4% of the population had less than a ninth grade education, compared with 3.5% of Alaskan residents overall; 3.4% had a 9th to 12th grade education but no diploma, compared with 5.8% of Alaskan residents overall; 33.2% held a high school diploma or equivalent, compared with 27.4% of Alaskan residents overall; 28.8% had some college but no degree, compared with 28.3% of Alaskan residents overall; 1.9% held an Associate's degree, compared with 8% of Alaskan residents overall; 3.4% held a Bachelor's degree, compared with 17.4% of Alaskan residents overall; and 13.9% held a graduate or professional degree, compared with 9.6% of Alaskan residents overall.

Figure 2. Population Age Structure in Saint Mary's Based on the 2000 and 2010 U.S. Decennial Census.



⁹⁴⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Saint Mary's is located in traditional Yup'ik Eskimo territory. Alaska Natives living in southwest Alaska are named after the two main dialects of the Yup'ik language, known as Yup'ik and Cup'ik. The arrival of ancestral Eskimo cultures to Alaska is marked by the appearance around 4000 years ago of the "Arctic Small Tools tradition." These small, finely-flaked tools first appeared in northwestern Alaska and spread rapidly southward.⁹⁴⁵ Historically the Yup'ik people were very mobile, traveling with the migration of game, fish and plants. The ancient settlements and seasonal camps contained small populations, with numerous settlements throughout the region consisting of extended families or small groups of families.⁹⁴⁶ Because "southwestern Alaska lacked significant amounts of any of the commercially valuable resources that first drew non-Natives to other parts of the state," the native people of the southwest region did not experience continual contact with the outside world until missionaries settled in the area beginning in the mid-1800's. The first to arrive were the Russian Orthodox, followed by the Moravians, and finally by the Jesuits.⁹⁴⁷

The modern settlement of Saint Mary's was originally established in 1899 as a supply depot and winter headquarters for the Northern Commercial Company's fleet of riverboats. The community originally went by the name of Andreafsky, named after the Andrea family who settled on the river around the same time and built a Russian Orthodox church. Later, in 1903, Jesuit missionaries arrived and constructed a mission 90 miles downriver from Andreafsky at a site known as "Akulurak." The Jesuits offered education and care for children orphaned by the flu epidemic that swept through the region in 1900-1901. The mission school flourished, and grew to 70 full-time students by 1915. However, the slough on which Akulurak was situated silted in severely, and in the late 1940s, the villagers relocated to the present site of Saint Mary's where a new mission was constructed.⁹⁴⁸

In the years that followed, a number of Yup'ik families moved into the Andreafsky area to be near the Jesuit mission. In 1967, the area adjacent to the mission incorporated as the City of Saint Mary's, although Andreafsky chose to remain independent. In 1980, the residents of Andreafsky voted for annexation into the City. In 1987, the Catholic Church closed the mission school. Today, Saint Mary's is a Yup'ik Eskimo community that maintains a fishing and subsistence lifestyle. The sale of alcohol is prohibited in the City.⁹⁴⁹

⁹⁴⁵ National Park Service (n.d.) *Archaeology of the Tundra and Arctic Alaska website*. Retrieved December 8, 2011 from <http://www.nps.gov/akso/akarc/arctic.htm>.

⁹⁴⁶ Alaska Native Heritage Center (n.d) Yup'ik & Cup'ik - *Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

⁹⁴⁷ Fienup-Riordan, Ann, William Tyson, Pual John, Marie Meade, and John Active (2000). *Hunting Tradition in a Changing World*. New Brunswick: Rutgers University Press. Pg. 115.

⁹⁴⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁴⁹ Ibid.

Natural Resources and Environment

Saint Mary's is located within the Yukon River delta. The topography on the north side of the River is characterized by gentle rolling hills of up to 150 ft above sea level. Flat lowlands are present on the south side of the River, ranging from 10 to 30 ft above sea level. Vegetation includes deciduous/conifer forest and tundra, including alpine and dry/moist tundra at higher elevations and wet tundra in lower elevations.⁹⁵⁰ A shallow and discontinuous permafrost layer is present in the area, with a depth ranging between 1.5 and 3 ft deep depending on ground cover and weather.⁹⁵¹ The climate in Saint Mary's is continental with a significant maritime influence. Temperatures range between -44 and 83 °F (-42.2 to 28.3 °C). Annual precipitation averages 16 inches, with 60 inches of snowfall. The Yukon River is ice-free from June through October.⁹⁵²

The community is located in the northern third of the 22 million-acre Yukon Delta National Wildlife Refuge (NWR), and approximately 25 miles south of the southern border of the Andreafsky Wilderness Area, which covers slightly more than 5% of the Yukon Delta NWR. Wildlife in the Andreafsky region includes moose, foxes, beavers, martens, minks, wolves, wolverines, caribou, and large populations of black and brown bears.⁹⁵³ The Yukon Delta NWR supports millions of water birds, including shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds." In addition to protecting species and their habitats, the NWR was established to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity." Refuge lands are open to sport and subsistence hunting and fishing, as well as trapping. Nunavaknuk Lake and the Kusilvak Mountains to its south are located approximately 45 miles west of Saint Mary's.⁹⁵⁴

Natural hazards identified in the Wade Hampton Census Area include flooding, wildfire, earthquake, severe weather, erosion and volcanic activity.⁹⁵⁵ Areas of the community close to the River are particularly susceptible to annual spring flooding. A cluster of cinder cone volcanoes, known as "Ingakslugwat Hills" is located approximately 50 miles southwest of Saint Mary's in the Yukon-Kuskokwim Delta. The 32 small cinder cones and eight larger craters covers an area of more than 300 square miles, and is thought to have been active during the Holocene Period.⁹⁵⁶

The Yukon-Kuskokwim delta is rich in mineral deposits. Historically, significant mining activity took place in the Marshall mining district, located upriver from Saint Mary's. No mining

⁹⁵⁰ Pilot Station Traditional Council. (2009). *Pilot Station Community Development Plan*. Retrieved April 6, 2012 from <http://www.commerce.state.ak.us/dca/plans/PilotStation-GCP-2006.pdf>.

⁹⁵¹ City of Saint Mary's, WHPacific, and Bechtol Planning and Development. (2009). *City of Saint Mary's, Alaska Local Multi-Hazard Mitigation Plan*. Retrieved March 12, 2013 from <http://www.commerce.alaska.gov/dca/plans/StMarys%20-%20Feb%202010.pdf>.

⁹⁵² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁵³ Wilderness.net website (n.d). *Andreafsky Wilderness*. Retrieved December 8, 2011 from <http://www.wilderness.net>.

⁹⁵⁴ U.S. Fish and Wildlife Service (2011). *Yukon Delta National Wildlife Refuge website*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

⁹⁵⁵ State of Alaska. 2002. *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁹⁵⁶ Global Volcanism Program (n.d.). *Ingakslugwat Hills*. Retrieved February 8, 2012 from <http://www.volcano.si.edu/world/volcano.cfm?vnum=1104-03->.

development is currently taking place there, although active development is underway at the Donlin Creek mine in the Kuskokwim Delta.⁹⁵⁷

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in the Saint Mary’s area as of March 2013.⁹⁵⁸

Current Economy⁹⁵⁹

The economy of Saint Mary’s is largely seasonal, based primarily on commercial fishing, trapping, and subsistence harvest. Important subsistence resources for local residents include salmon, moose, bear, and waterfowl. A small seafood processing facility also operates in the community, and there are two general stores and a regional post office.⁹⁶⁰ Other local employers in 2010 included Saint Mary’s School District, local government offices, regional health, housing and other community services, Hageland Aviation Services Inc., local retailers, and the State of Alaska.⁹⁶¹

Based on the 2006-2010 ACS,⁹⁶² the per capita income in Saint Mary’s in 2010 was \$15,688, and the median household income in 2010 was \$38,000, compared to \$15,837 and \$39,375 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,⁹⁶³ the real per capita income in 2000 (\$20,825) and the real median household income in 2000 (\$51,778) indicated a substantial decrease in these values between 2000 and 2010. However, Saint Mary’s small population size may have prevented the ACS from accurately portraying economic conditions.⁹⁶⁴ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Saint Mary’s in 2010 is \$11,320, which provides support for an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.⁹⁶⁵

In 2010, Saint Mary’s ranked 196th out of 305 Alaskan communities with reported per capita income that year, and 201st out of 299 Alaskan communities with reported household income data. Based on the ACS, in the same year, 60.1% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local

⁹⁵⁷ See footnote 950.

⁹⁵⁸ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 5, 2012 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁹⁵⁹ Unless otherwise noted, all monetary data are reported in nominal values.

⁹⁶⁰ See footnote 952.

⁹⁶¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

⁹⁶² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁹⁶³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationscale.htm>).

⁹⁶⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

⁹⁶⁵ See footnotes 961 and 962.

unemployment rate was 25.7%, compared to the statewide unemployment rate of 5.9%. Approximately 15.6% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskans overall. It should be noted, however, that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Saint Mary's are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Saint Mary's. An alternative estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 24.6%.⁹⁶⁶

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was estimated to be employed in the public sector (61.2%), along with 38.8% in the private sector. Out of the 139 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest numbers were estimated to work in education services, health care, and social assistance (53.2%) and public administration (19.4%). When compared to 2000, there was a more than 60% increase in the estimated percentage of the workforce employed in educational services, health care, and social assistance industries, a small increase in public administration employment, and decreases in transportation, warehousing, and utilizes industries and retail trade employment. Information about employment by industry is presented in Figure 3.

When viewing employment in terms of occupation, in 2010, a majority of the workforce was estimated to be employed in management/professional occupations (48.2%), along with 20.1% in service occupations and 19.4% in sales/office occupations. Compared to 2000, the percentage of the workforce employed in management/professional occupations increased by approximately 47%, while the percentage in service occupations remained stable. There were declines in employment in other occupation sectors between 2000 and 2010. Employment in Saint Mary's in 2000 and 2010 is broken down by occupation in Figure 4.

In 2010, no residents of Saint Mary's were estimated to be working in industries or occupations that included fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in farming, fishing, and forestry industries may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly.

⁹⁶⁶ See footnote 961.

Figure 3. Local Employment by Industry in 2000-2010, Saint Mary's (U.S. Census).

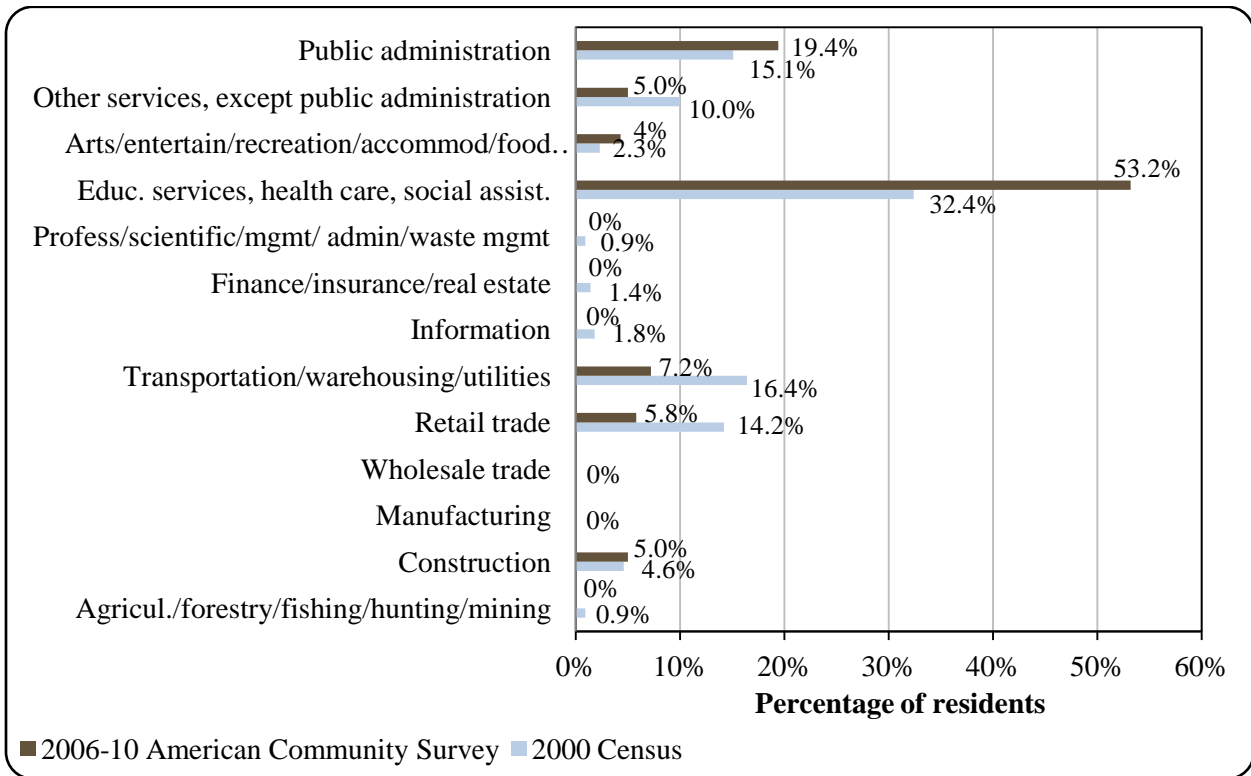
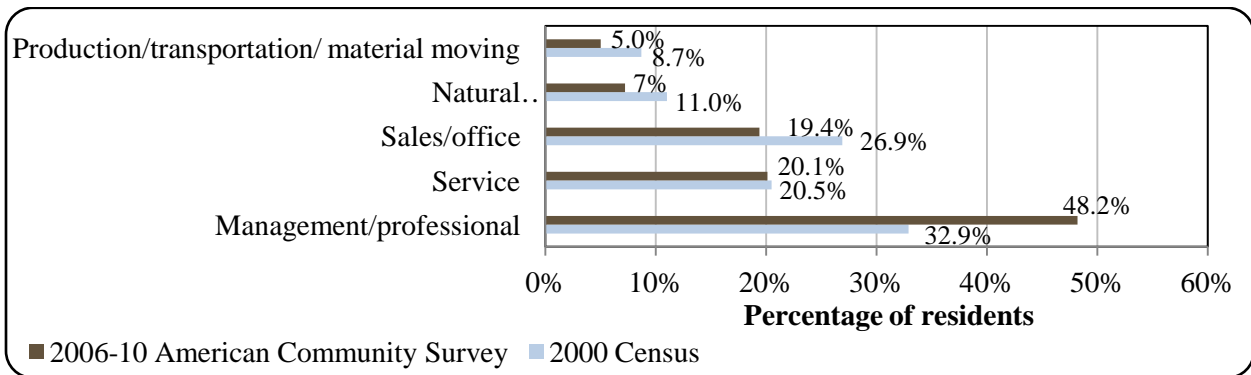


Figure 4. Local Employment by Occupation in 2000-2010, Saint Mary's (U.S. Census).



Governance

Saint Mary's is a 1st Class City and is not located within an organized borough. As of 2010, the City of Saint Mary's administered a 3% sales tax and a 3% Alcohol Use Tax.⁹⁶⁷ In addition to tax revenues, other locally-generated income sources in Saint Mary's between 2000 and 2010 included enterprise revenues from water/sewer and the electrical utility, building leases

⁹⁶⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

and rentals, dock, and equipment rentals, gravel sales, land sales, bingo and pull tab receipts, interest income, and parks and recreation fees. Outside revenue sources included shared revenues and grant. State sources of shared funds included the State Revenue Sharing program from 2000 to 2003 (between \$27,000 and \$48,000 per year) and the Community Revenue Sharing program (just under \$125,000 each year). Federal revenue sharing came from the Payment in Lieu of Taxes program in several years during the decade. One fisheries-related grant was reported received in 2002 for a harbor hydrographic survey, in the amount of \$88,908. Information about selected municipal, state, or federal revenue sources are presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Saint Mary’s from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,569,774	\$83,812	\$33,809	n/a
2001	\$1,930,841	\$131,590	\$47,855	n/a
2002	\$1,777,664	\$106,912	\$27,638	\$88,908
2003	\$1,978,054	\$106,347	\$33,550	n/a
2004	\$1,027,973	\$107,105	n/a	n/a
2005	\$1,367,877	\$100,997	n/a	n/a
2006	\$1,133,810	\$93,870	n/a	n/a
2007	\$2,367,858	\$96,337	n/a	n/a
2008	\$1,112,956	\$105,484	n/a	n/a
2009	\$1,342,794	\$111,989	\$124,007	n/a
2010	\$1,006,349	\$107,198	\$123,734	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Two federally recognized Native Traditional Councils are based in Saint Mary’s. They are the Algaaciq Native Village (Yupiiit of Andreafski) and the Native Village of Pitkas Point which represents the nearby small village of Pitkas Point, located less than 6 miles from Saint Mary’s by road. Under the Alaska Native Claims Settlement Act (ANCSA), Native village corporations were created for each of these Tribes, and both have office locations in Saint Mary’s. The village corporation associated with the Algaaciq Native Village is Saint Mary’s Native Corporation, which manages 115,200 acres of land. The village corporation associated with the Native Village of Pitka’s Point is Pitka’s Point Native Corporation, which manages 69,120 acres of land. The regional Native corporation to which both Native Villages belong is the Calista Corporation.⁹⁶⁸

⁹⁶⁸ Ibid.

The Algaaciq and Pitka’s Point Villages are also members of the Association of Village Council Presidents (AVCP), a tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development, and culturally relevant programming to “promote tribal self-determination and self-governance and to work to protect tribal culture and traditions.”⁹⁶⁹ The AVCP is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.⁹⁷⁰ AVCP is made up of 56 villages and 45 village corporations.⁹⁷¹

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and the Department of Commerce, Community, and Economic Development are located in Bethel. The nearest office of the Alaska Department of Natural Resources is located in McGrath, and the nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Saint Mary’s is served by barge and aircraft. The state-owned 6,008 ft long by 150 ft wide gravel runway with 1,520 ft long by 60 ft wide crosswind strip provides year-round access. The airfield is capable of receiving large jet aircraft. A 22-mi road links Saint Mary’s to Andreafsky, Pitka’s Point, and Mountain Village. These roads are not maintained during winter months but are used by snowmobiles. The Andreafsky River provides the only deep-water dock in the area.⁹⁷² Roundtrip airfare between Saint Mary’s and Anchorage in June 2012 was \$460.⁹⁷³

Facilities

Water is derived from Alstrom Creek reservoir and is treated. A majority of the homes in the City have complete plumbing and are connected to the piped water and sewer system. Waste heat from the power plant supports the circulating water system. A 1.7-million-gallon sewage lagoon provides waste treatment. Six residences haul water and use honeybuckets. The City

⁹⁶⁹ Association of Village Council Presidents (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

⁹⁷⁰ U.S. Government Accountability Office (2005). *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

⁹⁷¹ Calista Corporation (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

⁹⁷² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁷³ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

provides honeybucket⁹⁷⁴ pickup services. A washeteria⁹⁷⁵ is available nearby at Pitka’s Point. An unpermitted landfill is shared with Pitka’s Point.⁹⁷⁶

Law enforcement services are provided by the City Police Department, Village Public Safety Officers (VPSO), and a local state trooper. A City Volunteer Fire Department operates a fire truck and ambulance. Saint Mary’s also has a Boys and Girls Club youth center and a school library.⁹⁷⁷

In a survey conducted by the AFSC in 2011, community leaders reported that new dock space was completed in the last ten years, including 70 ft of dock space for permanent vessels to moor and 30 ft of dock space available for transient vessels to moor. Community leaders also indicated that vessels up to 300 ft long can use moorage in Saint Mary’s and that Saint Mary’s is capable of handling fuel barges and gravel barges.

Medical Services

Medical services are provided by the John Afcan Memorial Clinic, which is owned and operated by the Yukon Kuskokwim Health Corporation. The clinic is a Community Health Aid Program site and is staffed by an operations manager, a health practitioner, a dentist, and four health aides. Emergency services have river, limited highway, and air access and are provided by a health aide.⁹⁷⁸ The nearest hospital is located in Bethel.

Educational Opportunities

The Saint Mary’s School provides instruction to students from pre-school through 12th grade. The school had 185 students and 14 teachers in 2011.⁹⁷⁹ In addition, the Rural Alaska Community Action Program (RurAL CAP) runs Head Start (ages 3 to 5 years) and Early Head Start (birth to 3 years) programs in Saint Mary’s.⁹⁸⁰

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Yup’ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.⁹⁸¹ Indigenous people living along the Yukon River have long harvested salmon for subsistence purposes. Salmon were historically used for personal subsistence as well as food for sled dogs. The first recorded commercial harvest of salmon took place in 1918, and early harvests were relatively large. Concerns about providing sufficient

⁹⁷⁴ A “honeybucket” is an indoor bucket used as a toilet in houses without plumbing.

⁹⁷⁵ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

⁹⁷⁶ See footnote 972.

⁹⁷⁷ Ibid.

⁹⁷⁸ Ibid.

⁹⁷⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

⁹⁸⁰ Rural Alaska Community Action Program, Inc. *2010 Head Start Report*. Retrieved on December 20, 2011 from <http://www.ruralcap.com/>.

⁹⁸¹ Alaska Native Heritage Center. (n.d) *Yup’ik & Cup’ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s along the Yukon River. Poor returns in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.⁹⁸²

Currently, commercial fishing is allowed along the entire 1,200 miles of the main stem of the Yukon River, as well as 225 miles of the Tanana River. There are 7 fishing districts, 10 sub-districts and 28 statistical areas used by the State to manage fisheries. Fishing on the lower Yukon River takes place with set and drift gillnets. Subsistence fishermen also most often utilize these gear types. Many subsistence fishermen are also commercial fishermen.⁹⁸³

In addition to salmon, several Saint Mary’s residents held permits in fisheries for ‘freshwater fish’ and herring during the 2000-2010 period. Commercial freshwater fish fisheries may target species such as Arctic char, pike, rainbow trout, Dolly Varden, and sheefish.⁹⁸⁴ Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent years, in part due to lack of processing capacity in the region.⁹⁸⁵

Saint Mary’s is located more than 100 miles up the Yukon River from the Bering Sea. This area is included in District 2 of the Lower Yukon River salmon fishery. It is also important to note that the ocean area into which the Yukon River flows is encompassed by Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Because Pilot Station is more than 50 miles inland, it is not eligible to participate in the Community Development Quota (CDQ) program. Saint Mary’s is also not eligible to participate in the Community Quota Entity (CQE) program.

In a survey conducted by the AFSC in 2011, community leaders reported that commercial fishing boats under 35 ft in length use Saint Mary’s as their base of operations during the fishing season, and that the primary gear type used by these boats is gillnets. Community leaders also indicated that Saint Mary’s participates in the fisheries management process in Alaska, both through a representative that sits on regional fisheries advisory and/or working groups run by the ADF&G, as well as by relying on regional organizations to provide information on fisheries management issues. In the same survey, community leaders note that the biggest challenge for local fishermen is fishing quotas.

⁹⁸² Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. “The Commercial Salmon Fishery in Alaska.” *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

⁹⁸³ Ibid.

⁹⁸⁴ Alaska Dept. of Fish and Game. 2006. *Our Wealth Maintained: A Strategy for Conserving Alaska’s Diverse Wildlife and Fish Resources*. Retrieved June 21, 2012 from <http://www.adfg.alaska.gov/index.cfm?adfg=species.wapview>.

⁹⁸⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, one seafood processing facility was located in Saint Mary's that year. Boreal Fisheries, Inc. is a husband-and-wife operation that began operations in 1974. Boreal Fisheries processes salmon: Chinook and chum from June 16-July 10, chum from August 1-September 5, and coho from August 15-September 5. Boreal Fisheries purchases its Chinook salmon from local fishermen.

In addition, although not registered on ADF&G's Intent to Operate list in 2010, a processing plant was active as recently as 2008 in Marshall (approximately 60 miles upriver from Saint Mary's). Maserculiq Fish Processors, Inc. utilizes fish harvested by local Yup'ik Eskimo fishermen and produces value-added salmon products which are distributed by Yukon King Seafoods of Alaska.⁹⁸⁶

Fisheries-Related Revenue

Between 2000 and 2010, Saint Mary's received revenue from the Shared Fisheries Business Tax, harbor usage fees, and port/dock usage fees. The amount received from the Shared Fisheries Business Tax was minimal between 2000 and 2007, though it increased to an amount between \$3,300 and \$4,397 from 2008 to 2010. The amount of revenue received from harbor usage also varied from year to year, between \$50,500 and \$186,260 from 2000 to 2009. The amount of revenue received from port/dock usage fees varied somewhat between 2000 and 2009, from \$10,608 to \$20,750 (Table 3).⁹⁸⁷

Commercial Fishing

In 2010, 83 Saint Mary's residents held Commercial Fisheries Entry Commission (CFEC) permits. While there were four herring CFEC permits and four other finfish CFEC permits held by Saint Mary's residents that year, none of these permits were actively fished. Herring CFEC permits issued in 2010 were for the Norton Sound gillnet fishery, and other finfish CFEC permits issued in 2010 were for the statewide freshwater fish set gillnet fishery. There were 74 salmon CFEC permits held by Saint Mary's residents in 2010 for the Lower Yukon gillnet fishery, 91% of which were as actively fished that year. The number of salmon CFEC permits and permit holders increased slightly between 2000 and 2010; though the percentage of permits reported as fished remained relatively stable (Table 4).

There were 83 crew license holders in Saint Mary's in 2010, a number that remained relatively stable between 2000 and 2010, with the exception of 2001 when there were only 2 reported crew license holders (Table 5). According to ADF&G records, between one and four fish buyers were in operation in Saint Mary's in some years between 2000 and 2005, although none were reported from 2006 to 2010. According to NMFS reports, a shore-side processing facility was in operation in Saint Mary's in 2002 and again from 2005 to 2010. There were 38 vessels owned primarily by Saint Mary's residents in 2010, a number which increased slightly between 2000 and 2010. The number of vessels homeported in Saint Mary's also increased from

⁹⁸⁶ Yukon King Seafoods website. (2008). *About us*. Retrieved December 8, 2011 from <http://www.yukonking.com>.

⁹⁸⁷ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

32 in 2000 to 43 in 2010. Vessels landed catch in Saint Mary's in only three years during the 2000-2010 period – 2002, 2003, and 2005.

No residents of Saint Mary's held quota shares or were allocated Individual Fisheries Quota (IFQ) between 2000 and 2010 for halibut or crab (Tables 6 and 8). There was one resident holding 136 shares of sablefish quota and 11 lbs of sablefish IFQ allotment in 2010 (Table 7). The number of sablefish quota share holders and quota shares held remained consistent between 2002 and 2010, though the number of lbs of IFQ allotment varied from year to year.

No landings were reported in 2010 in Saint Mary's (Table 9). For the only years between 2000 and 2010 where landings were reported (2000, 2002, 2003, 2005), the landings and ex-vessel value are confidential due to the small number of participants. Landings and ex-vessel value, when reported by vessel owner residence, were confidential for all species and all years due to the small number of participants with the exception of landings and value for salmon between 2006 and 2009 (Table 10). Landings were somewhat variable during this time period, though the ex-vessel value of those landings decreased overall between 2006 and 2009.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Saint Mary’s: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries											
Business Tax ¹	n/a	\$58	n/a	\$98	n/a	n/a	n/a	\$70	\$3,300	\$4,397	\$3,979
Fisheries											
Resource Landing											
Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial											
fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel											
transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	\$78,000	\$112,043	\$96,500	\$93,500	\$186,260	\$180,260	\$130,500	\$51,120	\$50,500	\$110,500	n/a
Port/dock usage ²	\$20,500	\$14,671	\$13,713	\$14,500	\$10,608	\$14,806	\$21,306	\$19,000	\$20,750	\$14,338	n/a
Fishing gear											
storage on public											
land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales											
tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-</i>											
<i>related revenue</i> ⁴	\$98,500	\$126,772	\$110,213	\$108,098	\$196,868	\$195,066	\$151,806	\$70,190	\$74,550	\$129,235	\$3,979
<i>Total municipal</i>											
<i>revenue</i> ⁵	\$3,051,450	\$1,930,841	\$1,777,664	\$1,978,054	\$1,027,973	\$1,367,877	\$1,133,810	\$2,367,858	\$1,112,956	\$1,342,794	\$1,006,349

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Saint Mary's: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	1	0	0	0	0	1	1	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	1	0	0	0	0	1	1	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	2	4	4	4	5	5	5	4	4	4	4
	Fished permits	0	2	1	0	0	3	4	0	0	0	0
	% of permits fished	-	50%	25%	-	-	60%	80%	-	-	-	-
	Total permit holders	2	4	4	4	5	5	5	4	4	4	4

Table 4 Cont. Permits and Permit Holders by Species, Saint Mary’s: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	1	1	1	25	24	6	7	7	8	7	4
	Fished permits	0	0	0	14	0	0	2	0	0	0	0
	% of permits fished	-	-	-	56%	-	-	29%	-	-	-	-
	Total permit holders	1	1	1	25	24	6	7	7	8	7	4
Salmon (CFEC) ²	Total permits	66	65	67	65	67	70	73	74	76	74	74
	Fished permits	59	0	62	60	63	68	72	70	64	59	67
	% of permits fished	89%	-	93%	92%	94%	97%	99%	95%	84%	80%	91%
	Total permit holders	71	65	68	65	71	77	77	80	86	80	83
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>69</i>	<i>70</i>	<i>72</i>	<i>95</i>	<i>96</i>	<i>81</i>	<i>85</i>	<i>85</i>	<i>89</i>	<i>86</i>	<i>82</i>
	<i>Fished permits</i>	<i>59</i>	<i>2</i>	<i>63</i>	<i>74</i>	<i>63</i>	<i>71</i>	<i>78</i>	<i>70</i>	<i>64</i>	<i>59</i>	<i>67</i>
	<i>% of permits fished</i>	<i>86%</i>	<i>3%</i>	<i>88%</i>	<i>78%</i>	<i>66%</i>	<i>88%</i>	<i>92%</i>	<i>82%</i>	<i>72%</i>	<i>69%</i>	<i>82%</i>
	<i>Permit holders</i>	<i>71</i>	<i>66</i>	<i>69</i>	<i>79</i>	<i>82</i>	<i>78</i>	<i>77</i>	<i>80</i>	<i>87</i>	<i>80</i>	<i>83</i>

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Saint Mary’s: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Saint Mary’s ²	Total Net Pounds Landed In Saint Mary’s ^{2,5}	Total Ex-Vessel Value Of Landings In Saint Mary’s ^{2,5}
2000	93	1	0	23	32	0	--	--
2001	2	0	0	18	19	0	0	\$0
2002	88	1	1	21	26	2	--	--
2003	97	4	0	27	29	3	--	--
2004	98	0	0	27	27	0	0	\$0
2005	88	3	1	29	28	9	--	--
2006	81	0	1	36	33	0	0	\$0
2007	96	0	1	33	34	0	0	\$0
2008	84	0	1	32	35	0	0	\$0
2009	82	0	1	33	36	0	0	\$0
2010	83	0	1	38	43	0	0	\$0

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Data on Alaska fish processors*. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Saint Mary’s: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Saint Mary’s: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	1	136	14
2003	1	136	16
2004	1	136	17
2005	1	136	16
2006	1	136	15
2007	1	136	15
2008	1	136	14
2009	1	136	12
2010	1	136	11

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Islands Crab Catch Share Program Participation by Residents of Saint Mary’s: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Saint Mary's: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	0	--	--	0	--	0	0	0	0	0
Halibut	--	0	--	--	0	--	0	0	0	0	0
Herring	--	0	--	--	0	--	0	0	0	0	0
Other Groundfish	--	0	--	--	0	--	0	0	0	0	0
Other Shellfish	--	0	--	--	0	--	0	0	0	0	0
Pacific Cod	--	0	--	--	0	--	0	0	0	0	0
Pollock	--	0	--	--	0	--	0	0	0	0	0
Sablefish	--	0	--	--	0	--	0	0	0	0	0
Salmon	--	0	--	--	0	--	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	\$0	--	--	\$0	--	\$0	\$0	\$0	\$0	\$0
Halibut	--	\$0	--	--	\$0	--	\$0	\$0	\$0	\$0	\$0
Herring	--	\$0	--	--	\$0	--	\$0	\$0	\$0	\$0	\$0
Other Groundfish	--	\$0	--	--	\$0	--	\$0	\$0	\$0	\$0	\$0
Other Shellfish	--	\$0	--	--	\$0	--	\$0	\$0	\$0	\$0	\$0
Pacific Cod	--	\$0	--	--	\$0	--	\$0	\$0	\$0	\$0	\$0
Pollock	--	\$0	--	--	\$0	--	\$0	\$0	\$0	\$0	\$0
Sablefish	--	\$0	--	--	\$0	--	\$0	\$0	\$0	\$0	\$0
Salmon	--	\$0	--	--	\$0	--	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Saint Mary’s Residents:
 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	11,597	36,537	27,121	21,511	--
<i>Total²</i>	--	--	--	--	--	--	<i>11,597</i>	<i>36,537</i>	<i>27,121</i>	<i>21,511</i>	--
	<i>Ex-vessel Value (Nominal U.S. Dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	\$24,551	\$34,282	\$20,969	\$12,377	--
<i>Total²</i>	--	--	--	--	--	--	<i>\$24,551</i>	<i>\$34,282</i>	<i>\$20,969</i>	<i>\$12,377</i>	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to the ADF&G Statewide Harvest Survey, coho salmon, chum salmon, Dolly Varden, Atlantic grayling, northern pike, Pacific halibut, and rockfish are caught by private anglers in Saint Mary’s. According to a survey conducted by the AFSC in 2011, community leaders reported that recreational fishing in Saint Mary’s takes place on small boats owned by private anglers.

During the 2000-2010 period, one licensed sport fish guide was present in 2000 only. No active sport fish guide businesses were in operation in Saint Mary’s in any year during the decade. The number of sport fishing licenses sold to residents of Saint Mary’s was often higher than the total number sold in the community, suggesting that Saint Mary’s residents may travel to other communities to prepare for and engage in sport fishing activities (Table 11).

Saint Mary’s is located within the Yukon River Drainage Alaska Sport Fishing Survey Area. No saltwater angler days were reported to be fished in this survey area between 2005 and 2010. Between 2000 and 2004, the number of saltwater angler days fished by non-Alaska residents decreased from 81 in 2000 to 17 in 2004, though there were no angler days fished by non-Alaska residents in 2002 and 2003. The number of saltwater angler days fished by Alaska residents was highly variable between 2000 and 2003, and there were no saltwater angler days fished by Alaska residents between 2004 and 2010. During this period, freshwater angler days fished varied considerably for both Alaska residents and non-Alaska residents. Alaska residents fished consistently more angler days in freshwater in this region between 2000 and 2010, averaging 7,355 angler days fished per year compared to an average of 3,861 angler days fished by non-Alaska residents. Information about the sport fishing sector in and near Saint Mary’s is presented in Table 11.

Table 11. Sport Fishing Trends, Saint Mary’s: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to residents²	Sport Fishing Licenses Sold in Saint Mary’s²
2000	0	1	107	79
2001	0	0	101	64
2002	0	0	120	82
2003	0	0	152	117
2004	0	0	171	99
2005	0	0	107	85
2006	0	0	165	100
2007	0	0	159	101
2008	0	0	124	158
2009	0	0	85	113
2010	0	0	147	142

Table 11 Cont. Sport Fishing Trends, Saint Mary’s: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	81	45	3,345	7,878
2001	29	14	4,063	6,454
2002	0	89	5,761	9,194
2003	0	17	3,344	5,756
2004	17	0	5,479	7,613
2005	0	0	4,182	4,783
2006	0	0	3,607	7,816
2007	0	0	3,168	8,226
2008	0	0	2,573	10,400
2009	0	0	2,969	7,639
2010	0	0	3,983	5,151

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

For residents of Saint Mary’s, cash income is supplemented by subsistence activities, including trapping. Important local subsistence resources include salmon, moose, bear, and waterfowl.⁹⁸⁸

For the 2000-2010 period, no data were available regarding the percentage of households participating in subsistence of marine resources or per capita subsistence harvest (Table 12). Likewise, no data were available on subsistence harvest of halibut (Table 14) or marine mammals (Table 15) by Saint Mary’s residents. However, data were reported about subsistence salmon harvest. The number of subsistence salmon permits issued to residents of Saint Mary’s varied between and 104 and 148 per year, and the number reported as fished varied between 41 and 61. The salmon species harvested in the greatest volume was chum. Chinook were also heavily used, although the number of fish harvested was on average less than one-third of total chum harvest. Coho and pink salmon were harvested in smaller numbers. A small sockeye harvest was reported in one year of the period. No information was available from ADF&G regarding harvest of marine invertebrates or non-salmon fish during the 2000-2010 period (Table 13).

⁹⁸⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 12. Subsistence Participation by Household and Species, Saint Mary’s: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Saint Mary’s: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	148	52	1,800	8,286	117	54	n/a	n/a	n/a
2001	130	41	3,815	10,253	610	n/a	n/a	n/a	n/a
2002	118	41	2,045	7,387	209	7	n/a	n/a	n/a
2003	112	47	1,917	5,411	276	n/a	n/a	n/a	n/a
2004	109	51	2,358	7,098	258	137	15	n/a	n/a
2005	104	49	2,693	7,367	252	144	n/a	n/a	n/a
2006	125	61	2,233	7,811	171	236	n/a	n/a	n/a
2007	125	61	2,233	7,811	171	236	n/a	n/a	n/a
2008	124	61	1,756	7,281	591	367	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Saint Mary’s: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Saint Mary’s: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Saint Michael



People and Place

*Location*⁹⁸⁹

Saint Michael is located on the east coast of Saint Michael Island, along the southern inner coast of Norton Sound. It lies 125 miles southeast of Nome and 48 miles southwest of Unalakleet. Saint Michael is located in the Cape Nome Recording District and the Nome Census Area and is not located within an organized borough. The City boundaries encompass 21.8 square miles of land and 6.3 square miles of water.

*Demographic Profile*⁹⁹⁰

In 2010, there were 401 residents in Saint Michael, making it the 139th largest of 352 total Alaskan communities with recorded populations that year. Overall between 2000 and 2010, the population increased by 21.2%. The Saint Michael's average annual growth rate between 2000 and 2009 was 1.06%, indicating a steady growth trend. The change in population from 1990 to 2010 is provided in Table 1.

A majority of residents in Saint Michael in 2010 identified themselves as American Indian and Alaska Native (92%), with 5.5% of the population identifying themselves as White, 2.5% of the population identifying themselves as two or more races, and 0.7% of the population identifying themselves as Hispanic or Latino. The percentage of the population identifying themselves as American Indian and Alaska Native decreased very slightly, by 0.7%, from 2000 to 2010, as did the percentage of the population identifying themselves as White, which decreased by 1.3%. During the same period there was a corresponding increase in the percentage of the population identifying themselves as two or more races and as Hispanic or Latino. The change in racial and ethnic composition from 2000 to 2010 is provided in Figure 1.

The average household size in Saint Michael remained relatively stable over the three decades, shifting from 4.2 persons per household in 1990 to 2.09 in 2000, and 4.18 in 2010. Over the same period the number of households increased, from 69 in 1990 to 90 in 2000, and 96 in 2010. Of the 117 housing units surveyed for the 2010 Decennial Census, 62 were owner-occupied, 34 were renter-occupied, and 21 were vacant. Between 1990 and 2010, no residents of Saint Michael were reported to be living in group quarters.

⁹⁸⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁹⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

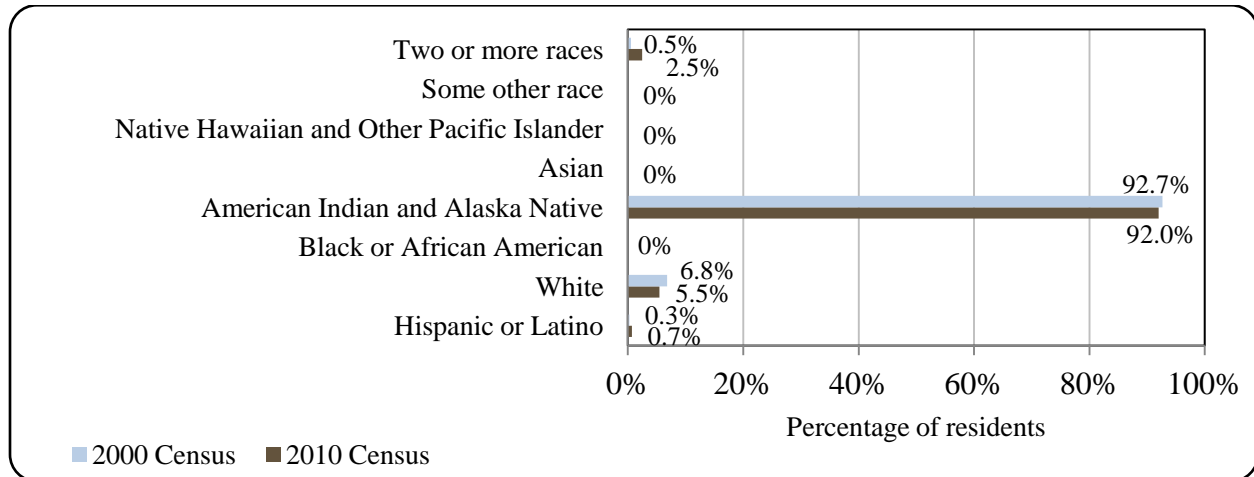
Table 1. Population in Saint Michael from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	295	-
2000	368	-
2001	-	377
2002	-	390
2003	-	413
2004	-	411
2005	-	427
2006	-	446
2007	-	444
2008	-	433
2009	-	446
2010	401	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

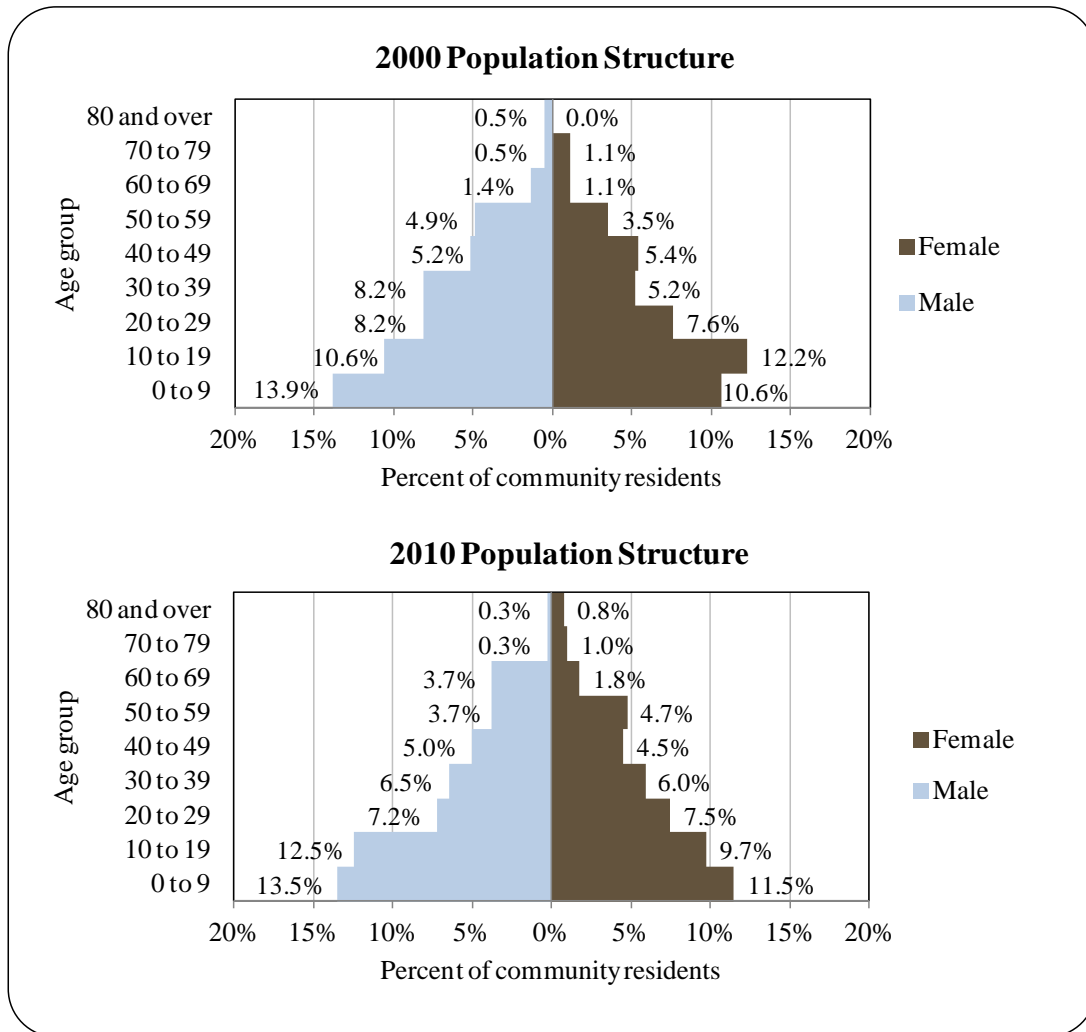
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Saint Michael: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Saint Michael was slightly skewed, at 52.6% male and 47.4% female, similar to the State as a whole (52% male, 48% female). The median age in Saint Michael was 21.7 years that year, considerably lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 0-19 years old, with the next largest percentage for the age category 20-39 years old. Relatively few people were age 59 or older in 2010, with most residents under the age of 20. In 2010, the population was slightly skewed towards males in the younger age groups. The overall population structure of Saint Michael in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Saint Michael Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),⁹⁹¹ 89.1% of residents aged 25 and older were estimated to hold a high school diploma or higher degree, compared to 90.7% of Alaskan residents overall. Also in 2010, 4.5% of the population of Saint Michael held less than a 9th grade education, compared with 3.5% of Alaskan residents overall; 6.4% held a 9th-12th grade education but no diploma, compared with 5.8% of Alaskan residents overall; 50% held a high school diploma or equivalent, compared with 27.4% of Alaskan residents overall; 24.4% had some college but no degree, compared with 28.3% of Alaskan residents overall; 7.1% held an Associate’s degree, compared with 8% of Alaskan residents overall; 5.1% held a Bachelor’s degree, compared with 17.4% of Alaskan

⁹⁹¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

residents overall; and 2.6% held a graduate or professional degree, compared with 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*⁹⁹²

Saint Michael's population is largely Yup'ik Eskimo today, and many residents are also descendants of Russian traders. Seal, beluga whale, moose, caribou, fish, and berries are important staples. The sale and importation of alcohol is banned in the village.

A fortified trading post called "Redoubt Saint Michael" was built by the Russian-American Company at this location in 1833. At the time, it was the northernmost Russian settlement in Alaska. The Native village of "Tachik" stood to the northeast. When the Russians left Alaska in 1867, several of the post's traders remained. "Fort Saint Michael," a U.S. military post, was established in 1897. During the gold rush of 1897, it was a major gateway to Interior Alaska via the Yukon River. As many as 10,000 persons were said to live in Saint Michael during the gold rush. Saint Michael was also a popular trading post for Eskimos to trade their goods for Western supplies. Centralization of many Yup'iks from the surrounding villages intensified after the measles epidemic of 1900 and the influenza epidemic of 1918. The village remained an important trans-shipment point until the Alaska Railroad was built. The city government was incorporated in 1969.

Natural Resources and Environment

Saint Michael has a subarctic climate with maritime influences during the summer. Summer temperatures average 40 to 60 °F (4.4 to 15.5 °C); winters average -4 to 16 °F (-20 to -8.9 °C). Extremes from -55 to 70 °F (-48.3 to 21.1 °C) have been recorded. Annual precipitation averages 12 inches, with 38 inches of snow. Summers are rainy, and fog is common. Norton Sound is ice free from early June to mid-November.⁹⁹³

The landscape of eastern Saint Michael Island is typical of the Yukon-Kuskokwim delta, characterized by flat, marshy lowlands and gently rolling hills. The highest point in the vicinity of the City is Saint Michael Mountain, rising to 450 ft. Vegetation in the area consists primarily of moist tundra, including moss, grass, scrub, willow, and alder. Saint Michael Island is separated from the mainland coast by a narrow channel known as "the Canal." The topography and vegetation of the mainland coast is similar to that of Saint Michael Island, and the landscape increases in elevation eastward toward the Nulato Hills. A permafrost layer underlies most of the City, with the exception of the coastline.⁹⁹⁴

Saint Michael is located near the Andreafsky Wilderness. The U.S. Congress designated the Andreafsky Wilderness in 1980, and the area now includes a total of 1,300,000 acres. The area is managed by the U.S. Fish and Wildlife Service (FWS). The Andreafsky Wilderness covers only slightly more than 5 percent of the vast 20-million-acre Yukon Delta National Wildlife Refuge, America's largest unit of the National Wildlife Refuge System. Animals found

⁹⁹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

⁹⁹³ Ibid.

⁹⁹⁴ Rodney P. Kinney Associates, Inc. (2007). *Saint Michael Long Range Transportation Plan*. Prepared for the Saint Michael IRA Council in cooperation with the Kawerak Transportation Program. Retrieved March 5, 2013 from <http://www.kawerak.org/servedivisions/csd/trans/LRTP/St.MichaelLRTP.pdf>.

in the Refuge include moose, foxes, beavers, martens, minks, wolves, wolverines, caribou, large populations of black and brown bears, and millions of salmon.⁹⁹⁵

According to a state assessment, natural hazards with the potential of occurring in the Nome Census Area include earthquake, flood, wildfire, severe weather, erosion, and tsunami or seiche. The probability of occurrence of earthquakes was rated as high, tsunami/seiche activity was rated at low probability, and the other hazards had unknown probabilities.⁹⁹⁶

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in the Saint Michael area as of March 2013.⁹⁹⁷

Current Economy⁹⁹⁸

The Saint Michael economy is based on subsistence food harvests supplemented by part-time wage earning. Most jobs are held in city government, the Indian Reorganization Act (IRA) council, the village corporation, schools, utilities, health services and housing services, and local stores.^{999,1000}

According to the 2006-2010 ACS,¹⁰⁰¹ the per capita income in Saint Michael in 2010 was estimated to be \$11,403, and the median household income in 2010 was estimated to be \$33,750, compared to reported \$10,692 and \$33,306 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,¹⁰⁰² the real per capita income (\$14,060) and the real median household income (\$43,442) in 2000 indicate a decrease in both values between 2000 and 2010. However, Saint Michael's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁰⁰³ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Saint Michael in 2010 is \$7,322,¹⁰⁰⁴ which provides support for an overall decrease in per capita income from 2000 and 2010. This is reflected by the fact that

⁹⁹⁵ The University of Montana. Wilderness.net. (n.d.): *Andreafsky Wilderness*. Retrieved from <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&WID=11> on March 22, 2012.

⁹⁹⁶ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

⁹⁹⁷ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 5, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

⁹⁹⁸ Unless otherwise noted, all monetary data are reported in nominal values.

⁹⁹⁹ See footnote 992.

¹⁰⁰⁰ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁰⁰¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁰⁰² Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁰⁰³ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁰⁰⁴ See footnotes 1000 and 1001.

the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁰⁰⁵ However, it should be noted both ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

In 2010, Saint Michael ranked 250th of 305 Alaskan communities with reported per capita income that year, and 225th of 299 Alaskan communities with reported household income data. Based on the 2006-2010 ACS, in that same year, 68% of the population aged 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 21.6%, compared to the statewide unemployment rate of 5.9%. Approximately 45.9% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskans overall. It should be noted, however, that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Saint Michael are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Saint Michael.¹⁰⁰⁶ An alternative estimate of unemployment is based on the ALARI database, which indicates that the 2010 unemployment rate in Saint Michael was 26.4%, compared to a statewide unemployment rate estimate of 11.5%.¹⁰⁰⁷

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the public sector (55.2%), with 44.8% of the workforce employed in the private sector. Out of 105 people age 16 and over that were estimated to be employed in the civilian labor force in 2010, the majority worked in the following industries: education services, health care, or social assistance (49.5%) and public administration (15.2%). The most common occupations in 2010 were management/professional (47.6%), service (21.9%), and sales and office occupations (10.5%). No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in fishing may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

¹⁰⁰⁵ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

¹⁰⁰⁶ See footnote 1003.

¹⁰⁰⁷ See footnote 1000.

Figure 3. Local Employment by Industry in 2000-2010, Saint Michael (U.S. Census).

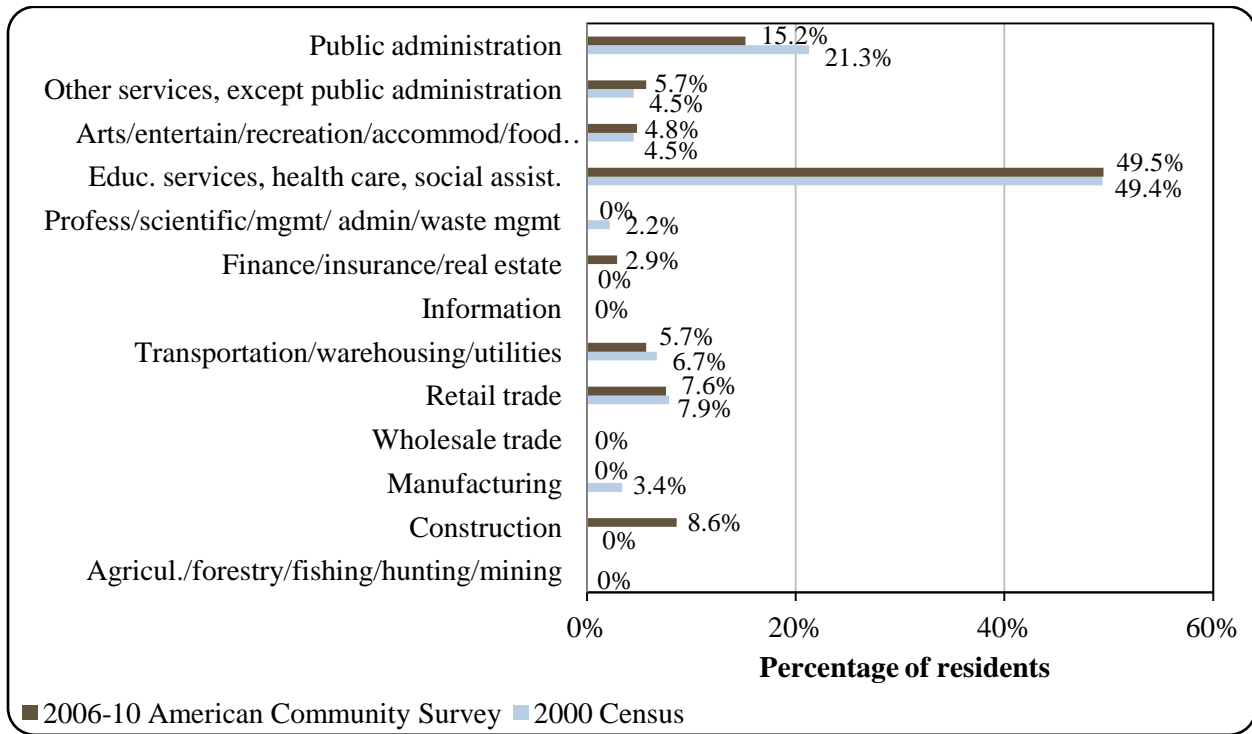
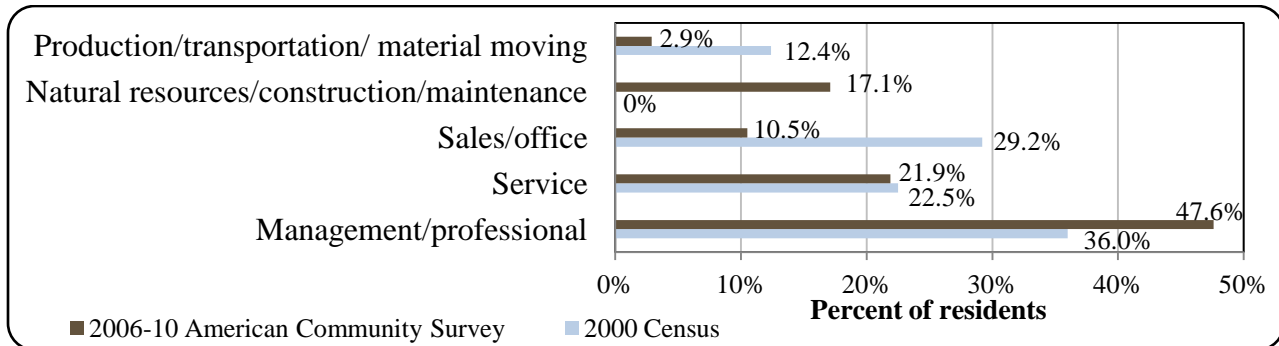


Figure 4. Local Employment by Occupation in 2000-2010, Saint Michael (U.S. Census).



Governance

Saint Michael is a 2nd Class City that was incorporated in 1969, and is not located within an organized borough. Saint Michael is governed by a City Council.¹⁰⁰⁸ As of 2010, Saint Michael City administered a 4% sales tax.¹⁰⁰⁹ In addition to sales tax revenue, other locally-generated revenue sources in Saint Michael between 2000 and 2010 included water/sewer and washeteria/sauna fees, bingo, pull tab, and concessions receipts, fuel sales, building and

¹⁰⁰⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁰⁹ Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

equipment rentals, land leases, and airport and electric facility maintenance contracts. Outside revenue sources included funds from various shared revenue programs, and grants. State shared revenues came from the State Revenue Sharing program from 2000 to 2003 (between \$20,000 and \$35,000 per year), the Community Revenue sharing program in 2009 and 2010 (almost \$120,000 each year), along with revenue in some years from the SAFE Communities program (public safety, utilities, infrastructure, etc.), municipal energy assistance, and raw fish tax and shared fisheries business tax refunds (see the *Fisheries-Related Revenue* section). Federal shared revenues came from the Payment in Lieu of Taxes program. Saint Michael received state grants for suicide prevention efforts, and capital project grants for health clinic expansion, washeteria upgrade, purchase of heavy equipment, and other work on community facilities, among others.

Municipal revenue was higher than average from 2002 to 2004 due to substantial capital project grants in those years. In these years, Saint Michael received between \$2 and \$3.5 million per year from agencies toward water and sewer improvements, including more than \$1 million from the State Village Safe Water program and more than \$1 million from the Indian Health Service for water and sewer improvements in 2002, and more than \$2 million each year in 2003 and 2004 in Rural Development funds from the U.S. Department of Agriculture. Information about selected aspects of community revenue in Saint Michael is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Saint Michael from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$495,831	\$73,464	\$34,628	n/a
2001	\$424,985	\$68,909	\$34,628	n/a
2002	\$3,029,450	\$60,625	\$23,801	n/a
2003	\$4,312,403	\$72,355	\$29,789	n/a
2004	\$4,402,448	\$76,094	n/a	n/a
2005	\$855,801	\$90,965	n/a	n/a
2006	\$962,499	\$88,117	n/a	n/a
2007	\$987,469	\$107,350	n/a	n/a
2008	\$873,321	\$118,113	n/a	n/a
2009	\$714,051	\$120,328	\$118,933	n/a
2010	\$757,442	\$135,528	\$118,140	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Saint Michael was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Saint Michael. The village corporation is the Saint Michael Native Corporation, which manages 125,440 acres of land. The regional Native corporation to which Saint Michael belongs is the Bering Strait Native Corporation.¹⁰¹⁰

The Village of Saint Michael is also a member of Kawerak Inc., a tribal non-profit organization with a mission to “assist, promote and provide programs and services to improve the social, economic, educational, cultural and governmental self-sufficiency for the betterment of the Native people within the region, and to preserve the traditional culture, languages and values.”¹⁰¹¹ Kawerak, Inc. is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer services to villages in their regions.¹⁰¹² Kawerak, Inc. offers children and family services, community services, and education, employment and training opportunities for residents of 18 member villages in the Bering Straits region. The non-profit also includes a Natural Resources Division, which incorporates the Eskimo Walrus Commission, Land Management Services, Reindeer Herders Association, and Subsistence Resources Division.¹⁰¹³

The nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, Alaska Department of Natural Resources, and U.S. Immigration and Customs Enforcement are located in Anchorage. The nearest office of the Alaska Department of Fish and Game (ADF&G) is in Unalakleet, and the nearest office of the Alaska Department of Commerce, Community, and Economic Development is located in Nome.

Infrastructure

Connectivity and Transportation

Saint Michael is primarily accessible by air and sea, and also via a 10.5 mi road to the City of Stebbins. In addition, primitive roads allow for winter travel to Unalakleet and Kotlik. The State owns a 4,001 ft long by 75 ft wide gravel airstrip. Regular and charter flights are available from Nome and Unalakleet.¹⁰¹⁴ In June 2012, round-trip airfare between Saint Michael and Anchorage was \$620.¹⁰¹⁵ A seaplane base is also available, but infrequently used.¹⁰¹⁶

Saint Michael is near the Yukon River Delta and has a good natural harbor but no dock. Lighterage service is provided on a frequent basis from Nome. Saint Michael receives at least one annual shipment of bulk cargo.¹⁰¹⁷

¹⁰¹⁰ See footnote 1008.

¹⁰¹¹ Kawerak, Inc.. 2006. *Homepage*. Retrieved February 17, 2012 from <http://www.kawerak.org/>.

¹⁰¹² U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹⁰¹³ See footnote 1008.

¹⁰¹⁴ Rodney P. Kinney Associates, Inc. (2007). *Saint Michael Long Range Transportation Plan*. Prepared for the Saint Michael IRA Council in cooperation with the Kawerak Transportation Program. Retrieved March 5, 2013 from <http://www.kawerak.org/servicedivisions/csd/trans/LRTP/St.MichaelLRTP.pdf>.

¹⁰¹⁵ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on November 16, 2011.

¹⁰¹⁶ See footnote 1014.

¹⁰¹⁷ See footnote 1008.

Facilities

Water is derived from Clear Lake and is treated and stored in a 1.2 million-gallon tank. The system includes water delivery/holding tanks for homes, a piped gravity and vacuum sewer system with septic treatment, and household plumbing. The City operates a washeteria¹⁰¹⁸ which serves as a central watering point for the community. The City also operates a Class 3 landfill, though refuse collection is not provided and residents must haul refuse independently. Electricity is provided by a diesel powerhouse operated by the Alaska Village Electric Cooperative.¹⁰¹⁹

Law enforcement services are provided by a Village Public Safety Officer, as well as state troopers based in Nome. There is a community hall and the school has a library.¹⁰²⁰

*Medical Services*¹⁰²¹

Medical care is provided by the Katherine Kobuk Memorial Clinic (Saint Michael), which is owned by the City and operated by the Norton Sound Health Corporation. The clinic is a Community Health Aid Program site. Emergency services have coastal air and floatplane access and are provided by a health aide. The clinic in nearby Stebbins is a qualified Emergency Care Center.

*Educational Opportunities*¹⁰²²

The Anthony A. Andrews School provides instruction for students from pre-school through 12th grade. In 2011 the school had 172 students and 18 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on in the Norton Sound region. Settlements on the west coast of the Seward Peninsula targeted marine mammals, and other people moved between seasonal settlements to access fish and wildlife resources. Today, residents of Saint Michael are active in commercial and subsistence fisheries, and recreational fishing is growing in the area as well.¹⁰²³ Between 2000 and 2010, Saint Michael residents were most engaged in commercial fisheries for salmon and herring, and a number of crab permits were also acquired by residents in 2010 (see *Commercial Fisheries* section below).

¹⁰¹⁸ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

¹⁰¹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰²⁰ Ibid.

¹⁰²¹ Ibid.

¹⁰²² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰²³ Norton Sound Steering Committee, Scientific Technical Committee. 2003. *Research and Restoration Plan for Norton Sound Salmon*. Retrieved February 21, 2012 from <http://69.93.224.39/~aykssi/wp-content/uploads/NS-RR-Plan-rev.pdf>.

Commercial salmon fisheries began to develop shortly after the purchase of Alaska by the United States in 1867. However, the Norton Sound commercial salmon fishery developed later than in other regions of the State. In 1959 and 1960, biologists from the Division of Commercial Fisheries conducted an inventory of salmon resources and determined that harvestable surpluses were present in several Norton Sound river systems. They encouraged processors to develop the fishery after statehood as part of an effort to bring economic benefits to this area of rural Alaska. The first commercial harvest occurred in 1961, and salmon markets in the area have been sporadic since that time. Harvests increased through the 1990s, and have declined since then. Saint Michael is located west of the southernmost of six Norton Sound salmon subdistricts (Subdistrict 6 – Unalakleet).¹⁰²⁴

Commercial catch of herring for human consumption began in Alaska in 1878, commercial harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s. King crab fisheries developed in the Bering Sea beginning in the 1950s, and Norton Sound is one of the historical centers of this fishery. Today, Norton Sound has the northernmost fisheries for both Pacific herring and red king crab. Although the Norton Sound herring spawning biomass has been relatively stable in recent times, the market for herring roe has declined due to decreasing consumption of herring roe in Japan. Processor interest in the Norton Sound sac roe fishery has declined more than in other areas of the State, largely due to the timing of the fishery, which takes place later than sac roe fisheries elsewhere in the state and conflicts with the opening of the first salmon fisheries of the season. In addition, ice floes are often present in Norton Sound during the herring season.¹⁰²⁵ In contrast, the Norton Sound red king crab stock has shown an increasing trend since a population low in the 1990s, and today provides small summer and winter fisheries. NMFS and ADF&G jointly manage Bering Sea king crab stocks.¹⁰²⁶

Saint Michael is located in Pacific Halibut Fishery Regulatory Area 4E and the Bering Sea Sablefish Regulatory Area. Saint Michael participates in the Community Development Quota (CDQ) program. In 1995, management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). In the Bering Sea – Aleutian Islands (BSAI) region, quota shares are also allocated to six CDQ non-profit organizations representing 65 communities in Western Alaska.¹⁰²⁷ The CDQ non-profit representing the Native Village of Saint Michael is the Norton Sound Economic Development Corporation (NSEDC), which promotes training and employment opportunities for residents, community and development programs for member villages, and offers loans to facilitate involvement of locals in Bering Sea crab and groundfish fisheries.¹⁰²⁸ In 2010, the

¹⁰²⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹⁰²⁵ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁰²⁶ Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=redkingcrab.main>.

¹⁰²⁷ Fina, Mark. 2011. Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹⁰²⁸ Norton Sound Economic Development Corporation. 2003. *Homepage*. Retrieved February 21, 2012 from <http://www.nsedc.com/>.

NSEDC received an allocation of 146,250 pounds of CDQ halibut quota, all of which was allocated for harvest within Area 4D.¹⁰²⁹ Total BSAI sablefish CDQ allocations in 2009 and 2011 were 1.3 million lbs in each year. No sablefish CDQ report was available from NOAA for the 2010 season.¹⁰³⁰ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the CDQ allocations.¹⁰³¹ Saint Michael is not eligible to participate in the Community Quota Entity program.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Saint Michael did not have a registered processing plant. The nearest registered processing plant was located in Unalakleet.

Fisheries-Related Revenue

Between 2000 and 2010, Saint Michael received a small amount of revenue from the Shared Fisheries Business Tax (Table 3). No other fisheries-related revenue sources were reported in Saint Michael during the 2000-2010 period.¹⁰³²

Commercial Fishing

Between 2000 and 2009, between 5 and 8 Saint Michael residents held commercial fishing permits, and in 2010 this number increased to 15. In 2010, residents of Saint Michael held crab, herring, and salmon permits issued by the Commercial Fisheries Entry Commission (CFEC). Overall, the percentage of permits reported as actively fished in each year between 2000 and 2010 varied substantially between 11% and 57%. In 2010, 29% of the overall permits held by Saint Michael residents were reported as actively fished (Table 4). In 2010, herring CFEC permits were issued for the Norton Sound gillnet fishery, while crab CFEC permits were issued for the Norton Sound king crab pot fishery using vessels under 60 ft. The majority of the salmon CFEC permits issued in 2010 were for the Lower Yukon gillnet fishery, with the remainder issued for the Norton Sound gillnet fishery.

Between 2000 and 2010, the number of crew license holders in Saint Michael varied between 2 and 13, with 11 crew license holders in 2010. While two commercial fishing vessels were primarily owned by Saint Michael residents in 2010 and one vessel was homeported in Saint Michael, there were no fish buyers, shore-side processing facilities, or vessels landing catch in the community. While the numbers of crew license holders, vessels primarily owned by Saint Michael residents, and vessels homeported varied widely between 2000 and 2010, the number of fish buyers, shore-side processing facilities, and vessels landing catch in the community remained stable for each year of this period (Table 5).

¹⁰²⁹ NOAA National Marine Fisheries Service. 2010. *Memorandum: 2010 Community Development Quota (CDQ) Halibut Allocations*. Retrieved January 8, 2013 from <http://www.fakr.noaa.gov/ram/10ifqcdqtac.pdf>.

¹⁰³⁰ NOAA National Marine Fisheries Service. (n.d.). *IFQ Halibut/Sablefish Reports and CDQ Halibut Program Reports*. Retrieved February 22, 2013 from <http://www.fakr.noaa.gov/ram/ifqreports.htm>.

¹⁰³¹ International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved October 16, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

¹⁰³² A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Between 2000 and 2010, no residents of Saint Michael held quota share accounts or quota share allotments in federal catch share fisheries for halibut, sablefish, or crab (Tables 6, 7, and 8). Additionally, no landings were reported in Saint Michael for any commercial species between 2000 and 2010 (Table 9). With the exception of herring landings in 2000, landings and ex-vessel value generated by Saint Michael vessel owners are considered confidential due to the small number of participants between 2000 and 2010. In the year 2000, Saint Michael vessel owners landed 143,342 net lbs of herring valued at \$12,901 in ex-vessel revenue (Table 10).

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Saint Michael: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$64	\$134	\$189	n/a	\$75	\$194	\$231	\$182	\$100	\$74	\$89
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries- related revenue⁴</i>	<i>\$64</i>	<i>\$134</i>	<i>\$189</i>	<i>n/a</i>	<i>\$75</i>	<i>\$194</i>	<i>\$231</i>	<i>\$182</i>	<i>\$100</i>	<i>\$74</i>	<i>\$89</i>
<i>Total municipal revenue⁵</i>	<i>\$495,831</i>	<i>\$424,985</i>	<i>\$3,029,450</i>	<i>\$4,312,403</i>	<i>\$4,402,448</i>	<i>\$855,801</i>	<i>\$962,499</i>	<i>\$987,469</i>	<i>\$873,321</i>	<i>\$714,051</i>	<i>\$757,442</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Saint Michael: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	1	1	0	0	0	0	0	0	0	0	7
	Fished permits	0	0	0	0	0	0	0	0	0	0	1
	% of permits fished	-	-	-	-	-	-	-	-	-	-	14%
	Total permit holders	1	1	0	0	0	0	0	0	0	0	7
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	6	7	5	6	4	4	5	4	5	4	4
	Fished permits	3	3	2	2	0	2	3	0	0	0	2
	% of permits fished	50%	43%	40%	33%	-	50%	60%	-	-	-	50%
	Total permit holders	7	8	6	7	4	4	5	4	5	4	4

Table 4 Cont. Permits and Permit Holders by Species, Saint Michael: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	1	1	2	4	5	4	4	5	6	5	6
	Fished permits	0	0	2	2	1	2	1	2	3	1	2
	% of permits fished	-	-	100%	50%	20%	50%	25%	40%	50%	20%	33%
	Total permit holders	1	1	2	3	4	3	3	4	5	5	6
<i>Total CFEC Permits²</i>	<i>Permits</i>	8	9	7	10	9	8	9	9	11	9	17
	<i>Fished permits</i>	3	3	4	4	1	4	4	2	3	1	5
	<i>% of permits fished</i>	38%	33%	57%	40%	11%	50%	44%	22%	27%	11%	29%
	<i>Permit holders</i>	7	8	7	8	6	5	6	6	8	7	15

¹National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Saint Michael: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Saint Michael ²	Total Net Pounds Landed In Saint Michael ^{2,5}	Total Ex-Vessel Value Of Landings In Saint Michael ^{2,5}
2000	13	0	0	5	5	0	0	\$0
2001	12	0	0	6	5	0	0	\$0
2002	5	0	0	3	3	0	0	\$0
2003	12	0	0	5	4	0	0	\$0
2004	2	0	0	3	2	0	0	\$0
2005	8	0	0	3	2	0	0	\$0
2006	13	0	0	4	3	0	0	\$0
2007	5	0	0	2	1	0	0	\$0
2008	2	0	0	4	3	0	0	\$0
2009	3	0	0	1	0	0	0	\$0
2010	11	0	0	2	1	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Totals only represent non-confidential data.

⁴ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 6. Halibut Catch Share Program Participation in Saint Michael: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Saint Michael: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Saint Michael: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Saint Michael: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Saint Michael Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	143,342	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>143,342</i>	--	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$12,901	--	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$12,901</i>	--	--	--	--	--	--	--	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

According to the ADF&G Statewide Harvest Survey,¹⁰³³ coho salmon, chum salmon, whitefish, Arctic grayling, and northern pike are caught by private anglers in Saint Michael. Although one sport fish guide business was registered in the community in all but one year between 2000 and 2010, the business was not active in any year during the period. The number of licensed sport fish guides residing in Saint Michael generally declined over the same period, from seven in 2001 and 2002 to two in 2010. The number of sport fishing licenses purchase by Saint Michael residents (irrespective of point of sale) varied between 13 and 41 per year during the 2000-2010 period. No sport fishing licenses were sold within the community of Saint Michael during the decade, suggesting that Saint Michael residents travel to other communities to purchase licenses and prepare for recreational fishing activity.

Saint Michael is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, saltwater sport fishing activity was minimal, with between 0 and 28 non-Alaska resident angler days fished per year, and between 0 and 108 Alaska resident angler days fished per year. A majority of sport fishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sport fishing sector in and near Saint Michael is displayed in Table 11.

Table 11. Sport Fishing Trends, Saint Michael: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Saint Michael ²
2000	0	4	14	0
2001	0	7	28	0
2002	0	7	13	0
2003	0	6	23	0
2004	0	5	15	0
2005	0	2	19	0
2006	0	2	24	0
2007	0	2	21	0
2008	0	0	20	0
2009	0	1	26	0
2010	0	2	41	0

¹⁰³³ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11, Cont. Sport Fishing Trends, Saint Michael: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ ADF&G. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² ADF&G. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ ADF&G. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

The Saint Michael economy is based on subsistence food harvests supplemented by part-time wage earning. Seal, beluga whale, moose, caribou, fish, and berries are important staples.¹⁰³⁴ While data were not available regarding per capita subsistence harvest or the percentage of households utilizing various marine resources for subsistence purposes between 2000 and 2010 (Table 12), subsistence salmon permit data show levels of participation and harvest between 2000 and 2008 (Table 13). The number of subsistence salmon permits issued and returned, as well as harvest levels for chum salmon, coho salmon, and pink salmon remained relatively stable between 2000 and 2007, though in 2007 the number of sockeye salmon reported harvested decreased from that in previous years. In 2008, the last year for which data were available, the number of permits issued and returned as well as the harvest numbers for the various species of salmon decreased substantially from previous years. Data were not available on subsistence halibut fishing participation between 2000 and 2010 (Table 14). Data reported by NMFS show regular harvest of beluga whales between 2000 and 2006, though the amount of individual animals harvested in each year is variable, while data reported by the U.S. FWS show one walrus harvested for subsistence use in 2006. No data were available from management agencies regarding harvest of sea otter, Steller sea lion, harbor seal, or spotted seal between 2000 and 2010 (Table 15).

¹⁰³⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 12. Subsistence Participation by Household and Species, Saint Michael: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Saint Michael: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	85	80	160	1,381	1,180	80	16	n/a	n/a
2001	90	74	282	2,246	490	229	17	n/a	n/a
2002	93	90	227	1,136	989	583	20	n/a	n/a
2003	94	85	295	1,994	1,438	577	89	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	96	88	805	2,916	1,208	1,405	49	n/a	n/a
2006	97	94	246	2,383	1,138	435	315	n/a	n/a
2007	115	103	452	2,119	622	265	9	n/a	n/a
2008	70	40	35	229	58	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Saint Michael: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Saint Michael: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	8	n/a	n/a	n/a	n/a	n/a	n/a
2001	21	n/a	n/a	n/a	n/a	n/a	n/a
2002	13	n/a	n/a	n/a	n/a	n/a	n/a
2003	2	n/a	n/a	n/a	n/a	n/a	n/a
2004	3	n/a	n/a	n/a	n/a	n/a	n/a
2005	6	n/a	n/a	n/a	n/a	n/a	n/a
2006	5	n/a	1	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Savoonga (suh-VOON-guh)



People and Place

*Location*¹⁰³⁵

Savoonga is located on the northern coast of St. Lawrence Island in the northern Bering Sea, 164 miles west of Nome. It lies 39 miles southeast of Gambell. Savoonga is located in the Cape Nome Recording District and the Nome Census Area, but is not located within an organized borough. The city boundaries encompass 6.1 square miles of land and do not include any water.

*Demographic Profile*¹⁰³⁶

In 2010, there were 671 residents in Savoonga, making it the 93rd largest of 352 total Alaskan communities with recorded populations in that year. Overall between 1990 and 2010, the population has increased by 12.13%. Between 2000 and 2010, the average annual growth rate was 0.46%, indicating a slow rate of growth. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, nearly all residents of Savoonga identified themselves as American Indian and Alaska Native (94.5%), with the remaining racial composition as follows: White (4.9%), two or more races (0.4%), and Asian (0.1%). The percentage of the population identifying themselves as American Indian and Alaskan Natives decreased by 0.8% between 2000 and 2010, with corresponding increases in the percentage of the population that identified themselves as White and as two or more races (Figure 1).

In 2010, the average household size was 4.04, a slight decrease from 4.40 in 1990 and 4.43 in 2000. However, there has been an increase in the number of households from 116 in 1990 to 145 in 2000 to 166 in 2010. Of the 151 housing units surveyed for the 2010 Decennial Census, 137 were owner-occupied and 29 were renter-occupied, with 19 vacant housing units. None of the population of Savoonga was estimated to be living in group quarters in 2010.

In 2010, the gender makeup was slightly skewed, at 51.7% male and 48.3% female, similar to the state as a whole (52% male, 48% female). The median age in Savoonga in 2010 was 26.6 years, lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 0-19 years old, with the next largest percentage for the age category 20-39 years old. Relatively few people were 80 or older. The overall population age structure from 2000 to 2010 is detailed in Figure 2.

¹⁰³⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰³⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Savoonga from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	519	-
2000	643	-
2001	-	655
2002	-	686
2003	-	703
2004	-	713
2005	-	697
2006	-	712
2007	-	711
2008	-	721
2009	-	721
2010	671	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Savoonga: 2000-2010 (U.S. Census).

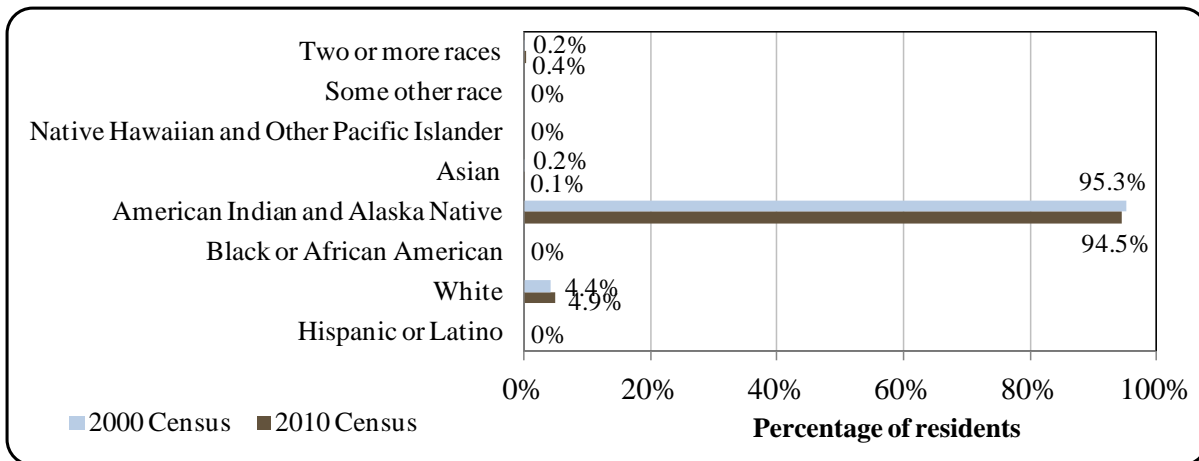
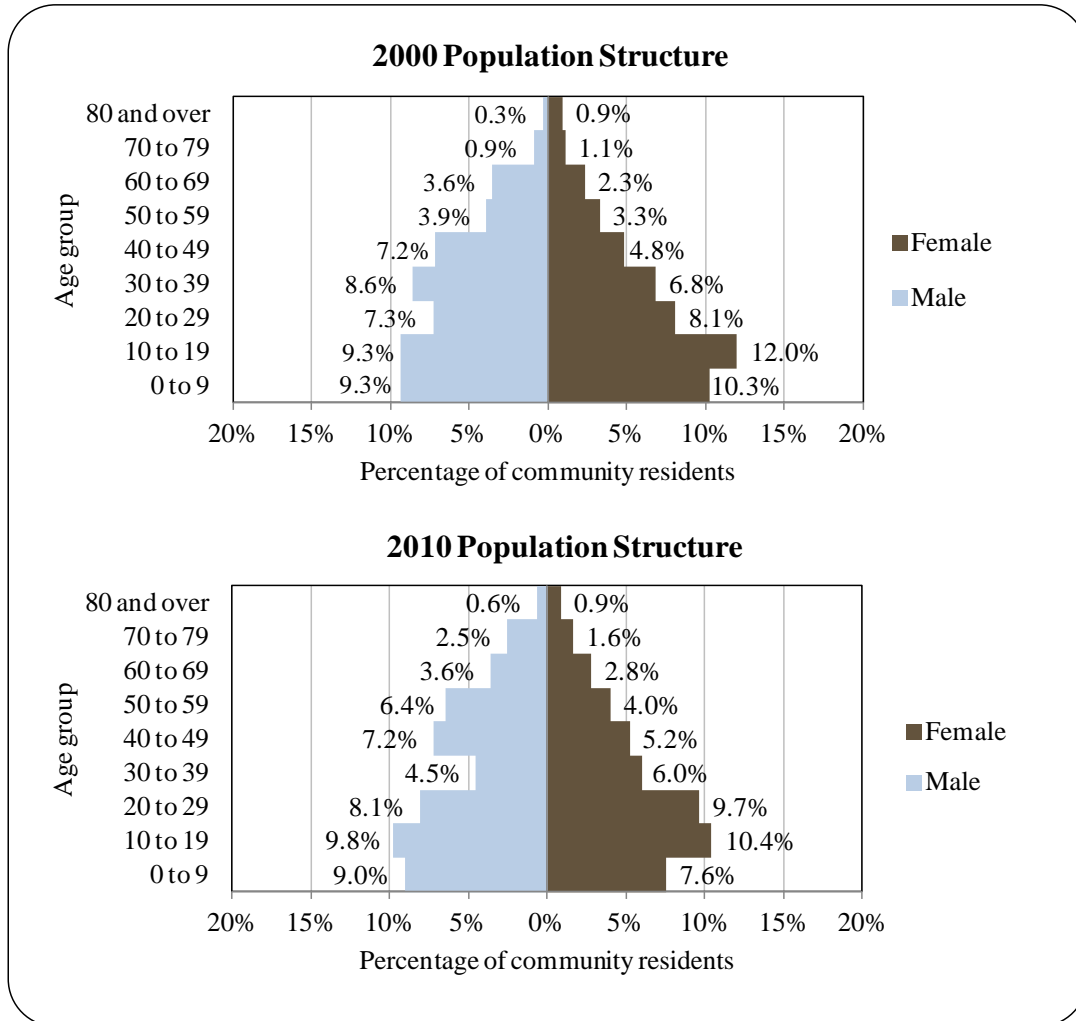


Figure 2. Population Age Structure in Savoonga Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁰³⁷ 63.1% of Savoonga residents age 25 and over were estimated to hold a high school diploma or higher degree, compared to 90.7% of Alaskan residents overall. Also in 2010, 19% of the population had less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 19% had a ninth-12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 46.8% held a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 12.9% had some college but no degree, compared to 28.3% of Alaskan residents overall; 2.7% held an Associate’s degree, compared to 8% of Alaskan residents overall; and 0.7% held a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

¹⁰³⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaska communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

St. Lawrence Island has been inhabited intermittently for the past 2,000 years by Yup'ik Eskimos. In the 1800s, numerous villages were located on the island with a population totaling about 4,000 people. The population was dramatically reduced when a tragic famine swept across the island between 1878 and 1880. In 1900, a herd of reindeer was moved to the island, and President Roosevelt declared the island a 'reindeer reservation' in 1903. The herd grew to over 10,000 animals by 1917.^{1038,1039} The modern community of Savoonga grew around a reindeer camp established at the site in 1916. Grazing lands were better in this portion of the island, and the herd tended to remain in the area. Additional residents were attracted by the good hunting and trapping in the area. A post office was established in 1934, the same year that the traditional form of governance was reorganized under the Indian Reorganization Act. The City of Savoonga was incorporated in 1969.¹⁰⁴⁰

Given the proximity of St. Lawrence Island to the former Soviet Union, the island was an important defense site beginning during World War II. The U.S. Army and U.S. Navy built radar, sonar, and communication installations, and an airstrip was constructed by the Civil Aeronautics Commission along with lodgings and support buildings. St. Lawrence Island remained an important strategic defense site through the Cold War.¹⁰⁴¹

In the years leading up to the passage of the 1971 Alaska Native Claims Settlement Act (ANCSA), St. Lawrence Island's status as a federal reserve meant that Savoonga and the neighboring community of Gambell underwent a different process during land claims settlement than other Alaska Native villages. Under ANCSA, most Alaska Native villages received a combination of money and land entitlement. In addition, previous federal reserves were granted land ownership under ANCSA and controlled by Native corporations. Because Savoonga and Gambell were located within the St. Lawrence Island Reserve, they had the option to choose a larger land entitlement in lieu of the monetary portion of the ANCSA settlement. Together, the communities of Gambell and Savoonga received title to the entire 1.136-million acres of land that made up the former St. Lawrence Island Reserve.¹⁰⁴²

Today, St. Lawrence Island remains jointly owned by Savoonga and Gambell. Savoonga is a traditional St. Lawrence Yup'ik village with a subsistence lifestyle based on walrus and whale hunting. Due to the island's isolation, most residents are bilingual – Siberian Yup'ik is still the first language, with English as the second language. The sale, importation, and possession of alcohol are banned in the village.¹⁰⁴³

¹⁰³⁸ Mikulski, P. (2012). *Savoonga Local Economic Development Plan 2009-2013, with Addendum*. Kawerak, Inc. Retrieved March 13, 2013 from <http://www.kawerak.org/ledps/savoonga.pdf>.

¹⁰³⁹ Franklin, Jonathan. 1993. "Digging for Ivory: The Challenge of Preserving Native Alaskan Archaeological Sites." *Stanford Environmental Law Journal*, 12 (164-210). Retrieved July 11, 2012 from <http://heinonline.org>.

¹⁰⁴⁰ See footnote 1038.

¹⁰⁴¹ Hogan, M., S. Christopherson, and A. Rothe. 2006. *Formerly Used Defense Sites (FUDS) in the Norton Sound Region: Location, History of Use, Contaminants Present, and Status of Clean Up Efforts*. Report prepared for Alaska Community Action on Toxics.

¹⁰⁴² Cook Inlet Region, Incorporated. 2012. *ANCSA – LAND*. Retrieved July 11, 2012 from http://www.ciri.com/content/history/ancsa_land.aspx.

¹⁰⁴³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Natural Resources and Environment

Savoonga is located on the north-central shore of St. Lawrence Island, a 90-mi long island of volcanic origin. Half of the island contains low mountains of approximately 1,000 ft in elevation, while the remainder of the island's area is low, wet tundra. Vegetation at higher altitudes is primarily dry alpine tundra. Steep cliffs surround much of the coastline, providing excellent nesting habitat for sea birds.¹⁰⁴⁴ The climate is subarctic maritime with some continental influences during the winter. Summer temperatures average 40 to 51 °F (4.4 to 10.6 °C); winters average -7 to 11 °F (-21.7 to -11.7 °C). Temperature extremes from -34 to 67 °F (-36.7 to 19.4 °C) have been recorded. Average precipitation is 10 inches annually, with 58 inches of snowfall. The island is subject to prevailing winds, averaging 18 mph. Freeze-up on the Bering Sea occurs in mid-November, with break-up in late May.¹⁰⁴⁵

The people of Savoonga have begun to witness changing weather patterns resulting from climate change. Information compiled by Aksik (Stories about Adaptation and Subsistence: Native voices from the frontlines of climate change) indicate that hunters, gatherers, and village leaders have taught them about climate change in their area. According to accounts compiled by Aksik,¹⁰⁴⁶ a multi-year scientific and advocacy project involved in documenting climate changes witnessed by native people in the Bering Sea, the weather in Savoonga is more random, severe, and unpredictable than it has been in previous times. Subsistence hunters have observed changes in ocean currents and migratory patterns of marine mammals, reduced sea ice coverage and quality, increased erosion due to larger storms and melting permafrost. Inland, they note drying or disappearance of some tundra lakes, changes in the timing of berry harvest, and the appearance of animals not previously known to inhabit the island, such as Arctic hares and a larger number of wolves.¹⁰⁴⁷

Natural hazards of particular concern in Savoonga include coastal erosion and flooding during fall and winter storms. Several large storms in the past decade have caused serious damage, and the threat of erosion is increased with decreased protection from sea ice as the pack diminishes with climate change. Development of a hazard mitigation plan has been identified as a high priority for the community.¹⁰⁴⁸

According to the Alaska Department of Environmental Conservation (DEC), two active environmental cleanup sites are located on St. Lawrence Island. Both are "Formerly Used Defense Sites" following the presence of the U.S. Military on the island during World War II and the Cold War. One is an Aircraft Control and Warning Station that was operated by the U.S. Air Force in Gambell from 1948 to 1956. The other is the White Alice Communication Site, which operated from 1957 to 1972 at Northeast Cape, 50 miles east of Savoonga. Petroleum contamination is present in soils and groundwater at both sites, along with low-level concentrations of polychlorinated biphenyls (PCBs), dioxins, arsenic, chromium and other

¹⁰⁴⁴ Rausch, R.L. (1953). "On the Land Mammals of St. Lawrence Island, Alaska." *Arctic Health Research Center*. Retrieved March 13, 2013 from

<http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1535&context=parasitologyfacpubs>.

¹⁰⁴⁵ See footnote 1043.

¹⁰⁴⁶ "Aksik is a Siberian Yupik term called out by captains to turn the boat quickly, as if to avoid danger or move in a new direction, by placing an oar against the bow and down in to the water and pulling back using the gunnel as a fulcrum point." (Source: Aksik. (2011). *Stories about Adaptation and Subsistence: Native voices from the frontlines of climate change - Savoonga*. Retrieved May 4, 2012 from <http://aksik.org/village/savoonga>)

¹⁰⁴⁷ Ibid.

¹⁰⁴⁸ See footnote 1038.

metals in places. Local residents are concerned about a possible link with cancer rates on the island, as well as impacts on the safety of subsistence food sources from these areas of the island. The DEC and the U.S. Army Corps of Engineers are currently working to remove known contaminated soil, identify additional areas of contamination, and plan continued cleanup.¹⁰⁴⁹

Current Economy¹⁰⁵⁰

Subsistence harvest of marine mammals and fish provides a foundation for Savoonga's local economy. Important subsistence species include walrus, seal, fish, and bowhead and gray whales. Wage income is also provided by commercial fishing and seafood processing, fox trapping, and ivory carving. There is a tourism sector on the island, primarily drawing bird watchers. Some harvest of the unmanaged reindeer herd on the island also contributes to the local economy.¹⁰⁵¹ In 2010, other local employers included the Bering Strait School District, local government offices, local retailers, regional education, health, housing, and other community services, airport construction, the regional Community Development Quota (CDQ) group (the Norton Sound Economic Development Corporation).¹⁰⁵²

Based on the 2006-2010 ACS,¹⁰⁵³ the per capita income in Savoonga in 2010 was estimated to be \$8,326, and the median household income was estimated to be \$30,313, compared to \$7,725 and \$23,438 in 2000, respectively. However, after accounting for inflation by converting 2000 values to 2010 dollars,¹⁰⁵⁴ the real per capita income (\$10,158) decreased during the period and the median household income (\$30,821) decreased only slightly between 2000 and 2010. However, Savoonga's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁰⁵⁵ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Savoonga in 2010 is \$5,675, which provides support for an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.¹⁰⁵⁶ The decrease in per capita income is reflected by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 70% of residents aged 16 and older

¹⁰⁴⁹ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 13, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁰⁵⁰ Unless otherwise noted, all monetary data are reported in nominal values.

¹⁰⁵¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁵² Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹⁰⁵³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁰⁵⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁰⁵⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaska communities with small populations that have a low probability of being adequately sampled.

¹⁰⁵⁶ See footnotes 1052 and 1053.

earned less than \$16,120 in 2010.¹⁰⁵⁷ However, it should be noted that both ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

In 2010, Savoonga had the 291st largest per capita income out of 305 communities in Alaska, and the 246th largest median household income out of 299 communities in Alaska. Also in 2010, 38% of the civilian labor force was estimated to be unemployed, and 47.6% of local residents were estimated to be living below the poverty line. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Savoonga are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Savoonga. A potentially more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 21.9%.

Based on the 2006-2010 ACS, in 2010, the greatest number of workers was estimated to be employed in the private sector (54.2%), along with 45.8% employed in the public sector. Out of 155 people aged 16 and over estimated to be employed in the civilian labor force, the majority were employed in education services, health care, and social assistance (35.5%). Large percentages of the labor force were also employed in construction (17.4%), public administration (14.8%), arts, entertainment, recreation, accommodations, and food service (9%), and transportation, warehousing, and utilities (7.7%). Compared to 2000, there were substantial increases in the percentage of the workforce employed in both construction industries and arts, entertainment, recreation, accommodation and food service industries. Some employment in manufacturing industries was estimated in 2010 (2.5% of the workforce), compared to 0% in 2000. In 2010, only a small percentage of the workforce was estimated to be employed in agriculture, forestry, fishing, hunting, and mining industries (1.9%). However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the fishing industry may be underestimated in census statistics. Fishermen may hold another job and characterize their employment accordingly. It is also important to note that subsistence fishing is not captured in these figures. Information about employment by industry is presented in Figure 3.

When viewing employment in terms of occupation, employment was relatively evenly distributed among occupation categories, with the highest percentages estimated to be working in service and management/professional occupations (25.8% and 27.1%, respectively). Compared to 2000, there was a reduction in the percentage of the workforce employed in management/professional and sales/office occupations, while the percentage in other occupations appears to have increased. Employment by occupation is presented in Figure 4.

¹⁰⁵⁷ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Figure 3. Local Employment by Industry in 2000-2010, Savoonga (U.S. Census).

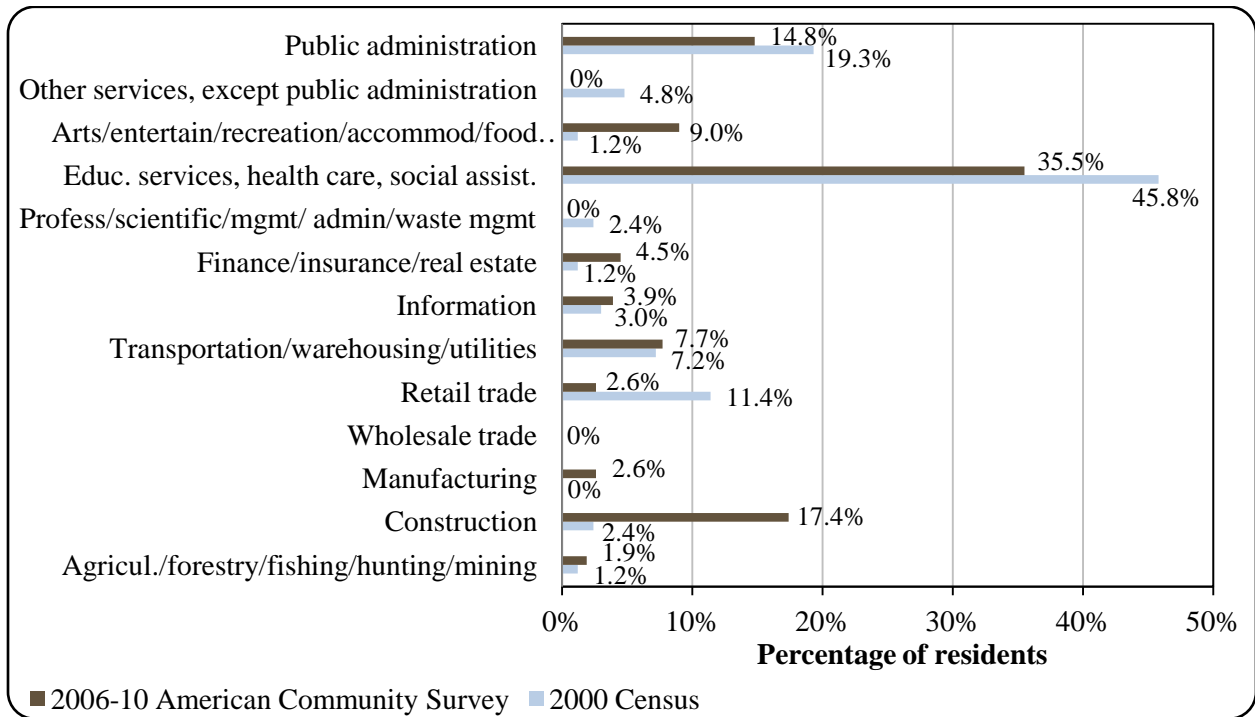
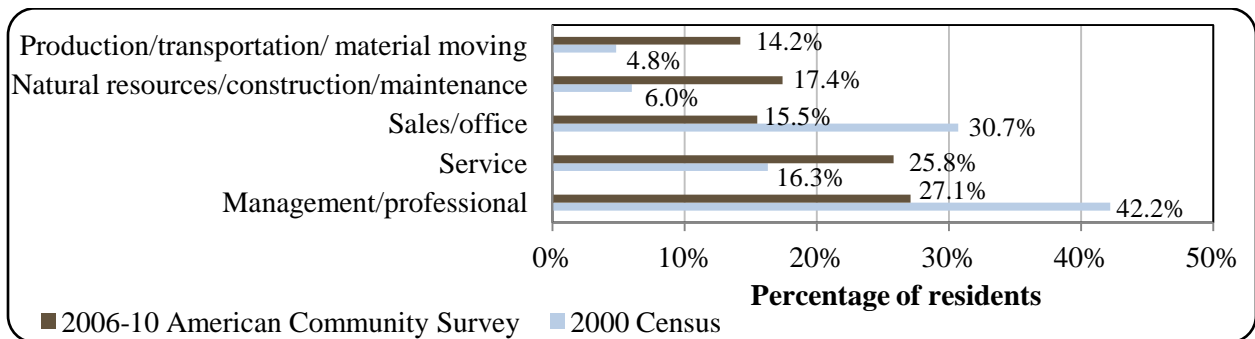


Figure 4. Local Employment by Occupation in 2000-2010, Savoonga (U.S. Census).



Governance

Savoonga is a 2nd Class City, and is not located in an organized borough. The City was incorporated in 1969 and has a Strong Mayor form of government with a seven-person city council including the Mayor, an eleven-person advisory school board, a planning commission, and several municipal employees. As of 2010, the City administers a 3% sales tax.¹⁰⁵⁸ In addition to sales tax revenues, locally-generated revenues in Savoonga between 2000 and 2010 came from enterprises such as water/sewer service charges, washeteria/sauna fees, electric utility and garbage collection fees, proceeds from the Teen Center and Deli, harbor/dock charges, and bingo

¹⁰⁵⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

and pull tab receipts. Other local revenues came from a contract for maintenance of the electric utility and building and equipment rentals. Outside revenue sources included shared revenues from state and federal sources and from grants in many years. Sources of state revenue sharing included the State Revenue Sharing program from 2000 to 2003 (more than \$20,000 per year), the Community Revenue Sharing program in 2009 and 2010 (over \$130,000 each year), a telephone/ electric co-op tax refund, and a state raw fish tax refund (see the *Fisheries-Related Revenues* section for more details).

Savoonga did not receive any fisheries-related state or federal grants between 2000 and 2010. However, the City’s Certified Financial Statements included reported revenues received in some years from the Norton Sound region’s Community Development Quota (CDQ) non-profit, the Norton Sound Economic Development Council (NSEDC). Funds were received from the NSEDC to purchase equipment including a front loader and boat trailers. The NSEDC also provided funds to Savoonga through the Community Benefit Share program, part of the non-profit’s effort to sustain fisheries-related economies in the Norton Sound region.¹⁰⁵⁹

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Savoonga from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$839,363	\$45,058	\$28,700	n/a
2001	\$780,091	\$32,784	\$25,000	n/a
2002	\$887,033	\$34,562	\$28,000	n/a
2003	\$931,498	\$42,466	\$22,000	n/a
2004	\$777,446	\$41,585	n/a	n/a
2005	\$842,184	\$33,649	n/a	n/a
2006	\$835,236	\$41,361	n/a	n/a
2007	\$1,110,410	\$44,184	n/a	n/a
2008	\$1,076,909	\$52,231	n/a	n/a
2009	\$1,046,490	\$64,588	\$132,693	n/a
2010	\$1,062,281	\$72,622	\$132,832	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Savoonga was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Savoonga. The community has a Native

¹⁰⁵⁹ Norton Sound Economic Development Corporation. (n.d.) *Community Benefit Share Program*. Retrieved September 6, 2013 from <http://www.nsedc.com/cbs.html>.

village corporation, Kukulget, Incorporated, that runs businesses in tourism and gravel sales.¹⁰⁶⁰ The regional Native corporation to which Savoonga belongs is the Bering Straits Native Corporation.¹⁰⁶¹

Because of the unique history of St. Lawrence Island as a federal reindeer reserve (the St. Lawrence Island Reserve), the communities of Savoonga and Gambell opted to receive title to all 1,135,843 acres of the St. Lawrence Island Reserve in lieu of the monetary portion of ANCSA land claims (see the *History, Traditional Knowledge, and Culture* section).¹⁰⁶² These combined lands are still held in common between Gambell and Savoonga, and are managed by the St. Lawrence Island Economic Development Corporation.¹⁰⁶³

Savoonga is also a member of Kawerak Inc., a Tribal non-profit organization with a mission to “assist, promote and provide programs and services to improve the social, economic, educational, cultural and governmental self-sufficiency for the betterment of the Native people within the region, and to preserve the traditional culture, languages and values.”¹⁰⁶⁴ Kawerak, Inc. is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹⁰⁶⁵ Kawerak, Inc. offers children and family services, community services, and education, employment and training opportunities for residents of the 18 member villages located in the Bering Straits region. The non-profit also includes a Natural Resources Division, which incorporates the Eskimo Walrus Commission, Land Management Services, Reindeer Herders Association, and Subsistence Resources Division.¹⁰⁶⁶

Offices of the Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Commerce, Community, and Economic Development are located in Nome. The closest offices of the Alaska Department of Natural Resources, National Marine Fisheries Service (NMFS), and Bureau of Citizenship and Immigration Services are located in Anchorage.

Infrastructure

Connectivity and Transportation

Savoonga’s isolated location, with no seaport and iced-in conditions during the winter, means a dependence on air transport. The state-owned gravel airstrip is 4,400 ft long and 100 ft wide. Daily air service is available between Savoonga and Nome. There is no dock, and supplies

¹⁰⁶⁰ Kawerak, Inc. 2012. *Savoonga Local Economic Development Plan, 2009-2013*. (Addendum added February 13, 2012.) Retrieved August 26, 2013 from <http://www.kawerak.org/ledps/savoonga.pdf>.

¹⁰⁶¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁶² Franklin, Jonathan. 1993. “Digging for Ivory: The Challenge of Preserving Native Alaskan Archaeological Sites.” *Stanford Environmental Law Journal*, 12 (164-210). Retrieved July 11, 2012 from <http://heinonline.org>.

¹⁰⁶³ See footnote 1061.

¹⁰⁶⁴ Kawerak, Inc.. 2006. *Homepage*. Retrieved February 17, 2012 from <http://www.kawerak.org/>.

¹⁰⁶⁵ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹⁰⁶⁶ See footnote 1064.

are lightered from Nome or off-loaded on the beach.¹⁰⁶⁷ In June 2012, round-trip airfare from Savoonga to Anchorage was \$882.¹⁰⁶⁸

*Facilities*¹⁰⁶⁹

Utilities are operated by Savoonga Joint Utilities, a non-profit arm of the City, and run by a utility board. Well water is treated and stored in a 100,000-gallon tank at the washeteria.¹⁰⁷⁰ A circulating water and sewer system serves 45 households; the remaining 32 homes currently haul water and honeybuckets.¹⁰⁷¹ The clinic and school have independent wells and septic systems. An unpermitted landfill is available. Law enforcement is provided by the City Police and the state troopers post in Nome, while fire and rescue services are provided by the Savoonga First Responders/Rescue Team. Savoonga also has a city jail, a city teen center, a municipal building, a high school gym, and a school library.¹⁰⁷²

Medical Services

Medical services are provided by the Savoonga Clinic, which is owned by the city and operated by the Norton Sound Health Corporation. The clinic is a Community Health Aid Program site. Alternate health care is provided by the Savoonga First Responders/Rescue Team. Emergency Services have coastal and air access and are provided by a health aide.¹⁰⁷³ The nearest qualified Emergency Care Center is in Gambell, and the nearest hospital is in Nome.

Educational Opportunities

The Hogarth Kingeekuk Senior Memorial High School provides instruction for students from pre-school through 12th grade. In 2011, the school had 245 students and 19 teachers.¹⁰⁷⁴ Savoonga is also a Head Start site.¹⁰⁷⁵

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

The life of the St. Lawrence Island Yupik people has long been based on subsistence hunting and gathering, practices which continue to this day. Historically, whales and other marine mammals were hunted, pink and chum salmon, inconnu, whitefish, herring, crab, and

¹⁰⁶⁷ See footnote 1061.

¹⁰⁶⁸ Airfare was obtained from the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹⁰⁶⁹ See footnote 1061.

¹⁰⁷⁰ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

¹⁰⁷¹ A “honeybucket” is an indoor bucket used as a toilet in houses without plumbing.

¹⁰⁷² See footnote 1061.

¹⁰⁷³ Ibid.

¹⁰⁷⁴ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁰⁷⁵ Rural Alaska Community Action Program, Inc. *2010 Head Start Report*. Retrieved on December 20, 2011 from <http://www.ruralcap.com/>.

halibut were harvested, and birds and eggs were also an important part of the diet.¹⁰⁷⁶ Today, Savoonga is a traditional St. Lawrence Yup'ik village with a subsistence lifestyle based on walrus and whale hunting. Savoonga is hailed as the “Walrus Capital of the World.” Whale, seal, walrus, and reindeer comprise 80% of islanders’ diets. Seal, polar bear, caribou, and fish are also important for subsistence purposes.¹⁰⁷⁷

A commercial halibut fishery has increased in importance for residents of St. Lawrence Island in recent decades. Savoonga is located with the International Pacific Halibut Commission area 4D. The community participates in the CDQ program as a member of the Norton Sound Economic Development Corporation (NSEDC). Federal halibut quota held by the NSEDC is harvested by area residents using locally owned fishing vessels, and is delivered to a processing plant located in Savoonga (see *Processing Plants* section).¹⁰⁷⁸ This system began in 1995, when management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). In the Bering Sea – Aleutian Islands (BSAI) region, quota shares are also allocated to six CDQ non-profit organizations representing 65 communities in Western Alaska.¹⁰⁷⁹ In 2010, the NSEDC received an allocation of 146,250 lbs of CDQ halibut quota, all of which was allocated for harvest within Area 4D.¹⁰⁸⁰ In addition to CDQ quota, a number of Savoonga residents hold individual halibut quota share accounts and IFQ, as well as state-issued Commercial Fisheries Entry Commission (CFEC) halibut permits (see *Commercial Fishing* section).

Marine mammal subsistence harvests are managed under several co-management efforts. The first co-management system was established with the creation of the Alaska Eskimo Whaling Commission (AEWC) in 1977. The AEWC represents whalers from Kaktovik, Nuiqsut, Barrow, Wainwright, Point Hope, Kivalina, Little Diomedea, Wales, Savoonga, and Gambell. Savoonga is also a member community in the Eskimo Walrus Commission (formed in 1978), the Beluga Whale Committee (formed in 1988), and the Nanuq Commission (formed in 1994 for polar bear management). In 1994, Section 119 of the reauthorization for the Marine Mammal Protection Act provided a legislative basis for these cooperative agreements with Alaska Native organizations.¹⁰⁸¹

Processing Plants

ADF&G’s 2010 Intent to Operate list notes one processing plant currently operating in Savoonga. According to a survey of plant managers conducted by the Alaska Fisheries Science Center in 2011, the Savoonga Norton Sound Seafood Products plant reportedly processes halibut, red king crab, salmon, and herring, and was founded in 1992. Norton Sound Seafood Products is

¹⁰⁷⁶ Alaska Native Heritage Center. 2008. *Inupiaq & St. Lawrence Island Yupik People – Who We Are*. Retrieved July 11, 2012 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/inupiaq/.

¹⁰⁷⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁷⁸ Norton Sound Economic Development Corporation. (n.d.). *Halibut Target Fishery*. Retrieved July 11, 2012 from <http://www.nsedc.com/halibut.html>.

¹⁰⁷⁹ Fina, Mark. 2011. Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹⁰⁸⁰ NOAA National Marine Fisheries Service. 2010. *Memorandum: 2010 Community Development Quota (CDQ) Halibut Allocations*. Retrieved January 8, 2013 from <http://www.fakr.noaa.gov/ram/10ifqcdqtac.pdf>.

¹⁰⁸¹ Glenn Gray and Associates (2007). *North Slope Borough Coastal Management Plan*. Retrieved February 29, 2012 from http://www.co.north-slope.ak.us/programs/coastal_management/NSB_Coastal_Management_Plan.pdf.

a subsidiary of the NSEDC, with plants located in Savoonga, Unalakleet, and Nome, and buying stations at Elim, Golovin, and Shaktoolik.¹⁰⁸² According to the plant managers survey, the Savoonga Norton Sound Seafood Products plant employs between 4 and 10 employees, with the largest number of workers in the month of August.

Fisheries-Related Revenue

Savoonga receives a small amount of fisheries-related revenue from a raw fish tax and the Shared Fisheries Business Tax. While the amount of revenue received from raw fish tax was relatively stable for years in which data were reported, the amount of revenue received from the Shared Fisheries Business Tax varied between 2000 and 2010 (Table 3).¹⁰⁸³

In addition to the revenues listed in Table 3, the City of Savoonga reported in its Certified Financial Statements that funds were received from the NSEDC to fund purchase of equipment including a front loader and boat trailers. In addition, the NSEDC provided funding to Savoonga through the Community Benefit Share program, part of the non-profit's effort to sustain fisheries-related economies in the Norton Sound region.¹⁰⁸⁴

Commercial Fishing

Savoonga residents held halibut Commercial Fisheries Entry Commission (CFEC) permits in many years during the 2000-2010 period, with the most active participation in the halibut fishery between 2007 and 2010. In 2010, 14 permits were held, of which 12 (86%) were actively fished that year. Both the number of permits held and the percentage of permits actively fished remained relatively stable between 2007 and 2010. In 2010, all 14 halibut CFEC permits were for the statewide long line fishery using vessels under 60 ft in length. Although some residents held halibut CFEC permits in previous years during the 2000-2010 period, none were actively fished. No state or federal permits were held by Savoonga residents in fisheries for other species between 2000 and 2010 (Table 4).

Prior to 2006, there were few crew license holders or fish buyers in Savoonga, as well as few vessels owned by local residents or vessels homeported or landing catch in the community. Between 2006 and 2010, however, there were between 12 and 20 crew license holders and 1 fish buyer in Savoonga, as well as 1 shore-side processing facility (as described above), which was operational for all years between 2000 and 2010. Also between 2006 and 2010, there were between 8 and 13 vessels owned primarily by Savoonga residents, and between 7 and 13 vessels homeported in Savoonga. Between 7 and 11 vessels landed catch in Savoonga between 2006 and 2010; however, the landings and associated ex-vessel value are considered confidential due to the small number of participants, with the exception of halibut landings by Savoonga residents between 2007 and 2010 (Tables 5 and 9). Both landings and ex-vessel value for halibut increased overall between 2007 and 2010 (Table 10). No residents of Savoonga held quota shares for halibut (Table 6), sablefish (Table 7), or crab (Table 8) between 2000 and 2010.

¹⁰⁸² Norton Sound Economic Development Corporation. (n.d.). *Norton Sound Seafood Products (NSSP)*. Retrieved July 11, 2012 from <http://www.nsedc.com/nssp.html>.

¹⁰⁸³ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

¹⁰⁸⁴ Norton Sound Economic Development Corporation. (n.d.) *Community Benefit Share Program*. Retrieved September 6, 2013 from <http://www.nsedc.com/cbs.html>.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Savoonga: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$300	\$480	n/a	n/a	n/a	\$247	\$200	\$227	\$225	n/a	n/a
Shared Fisheries											
Business Tax ¹	\$82	\$171	\$1,034	\$112	\$97	\$247	\$298	\$227	\$124	\$92	\$1,303
Fisheries Resource	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Landing Tax ¹											
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$382</i>	<i>\$651</i>	<i>\$1,034</i>	<i>\$112</i>	<i>\$97</i>	<i>\$495</i>	<i>\$498</i>	<i>\$454</i>	<i>\$349</i>	<i>\$92</i>	<i>\$1,303</i>
<i>Total municipal revenue⁵</i>	<i>\$839,363</i>	<i>\$780,091</i>	<i>\$887,033</i>	<i>\$931,498</i>	<i>\$777,446</i>	<i>\$842,184</i>	<i>\$835,236</i>	<i>\$1,110,410</i>	<i>\$1,076,909</i>	<i>\$1,046,490</i>	<i>\$1,062,281</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Savoonga: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	8	4	1	0	0	0	11	12	8	16	14
	Fished permits	0	0	0	0	0	0	0	10	6	12	12
	% of permits fished	-	-	-	-	-	-	-	83%	75%	75%	86%
	Total permit holders	8	4	1	0	0	0	11	12	8	15	14
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 Cont. Permits and Permit Holders by Species, Savoonga: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	8	4	1	0	0	0	11	12	8	16	14
	<i>Fished permits</i>	0	0	0	0	0	0	0	10	6	12	12
	<i>% of permits fished</i>	-	-	-	-	-	-	-	83%	75%	75%	86%
	<i>Permit holders</i>	8	4	1	0	0	0	11	12	8	15	14

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Savoonga: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Savoonga ²	Total Net Pounds Landed In Savoonga ^{2,5}	Total Ex-Vessel Value Of Landings In Savoonga ^{2,5}
2000	1	1	1	8	8	1	--	--
2001	0	0	1	4	4	0	0	\$0
2002	0	0	1	1	1	0	0	\$0
2003	0	0	1	0	0	0	0	\$0
2004	0	0	1	0	0	0	0	\$0
2005	0	0	1	0	0	0	0	\$0
2006	5	0	1	11	10	0	0	\$0
2007	12	1	1	12	11	10	--	--
2008	23	1	1	8	7	7	--	--
2009	28	1	1	13	13	11	--	--
2010	20	1	1	11	11	11	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Savoonga: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Savoonga: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Savoonga: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

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Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Savoonga: 2000-2010.

	<i>Total Net Lbs¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	0	0	0	0	0	0	--	--	--	--
Finfish	--	0	0	0	0	0	0	--	--	--	--
Halibut	--	0	0	0	0	0	0	--	--	--	--
Herring	--	0	0	0	0	0	0	--	--	--	--
Other Groundfish	--	0	0	0	0	0	0	--	--	--	--
Other Shellfish	--	0	0	0	0	0	0	--	--	--	--
Pacific Cod	--	0	0	0	0	0	0	--	--	--	--
Pollock	--	0	0	0	0	0	0	--	--	--	--
Sablefish	--	0	0	0	0	0	0	--	--	--	--
Salmon	--	0	0	0	0	0	0	--	--	--	--
<i>Total²</i>	--	0	0	0	0	0	0	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
Finfish	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
Halibut	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
Herring	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
Other Groundfish	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
Other Shellfish	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
Pacific Cod	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
Pollock	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
Sablefish	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
Salmon	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--
<i>Total²</i>	--	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Savoonga Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	0	0	0	--	--	--	--	--
Finfish	--	--	--	0	0	0	--	--	--	--	--
Halibut	--	--	--	0	0	0	--	29,607	22,865	25,762	61,406
Herring	--	--	--	0	0	0	--	--	--	--	--
Other Groundfish	--	--	--	0	0	0	--	--	--	--	--
Other Shellfish	--	--	--	0	0	0	--	--	--	--	--
Pacific Cod	--	--	--	0	0	0	--	--	--	--	--
Pollock	--	--	--	0	0	0	--	--	--	--	--
Sablefish	--	--	--	0	0	0	--	--	--	--	--
Salmon	--	--	--	0	0	0	--	--	--	--	--
<i>Total²</i>	--	--	--	0	0	0	--	29,607	22,865	25,762	61,406
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	\$0	\$0	\$0	--	--	--	--	--
Finfish	--	--	--	\$0	\$0	\$0	--	--	--	--	--
Halibut	--	--	--	\$0	\$0	\$0	--	\$127,073	\$68,344	\$79,940	\$197,557
Herring	--	--	--	\$0	\$0	\$0	--	--	--	--	--
Other Groundfish	--	--	--	\$0	\$0	\$0	--	--	--	--	--
Other Shellfish	--	--	--	\$0	\$0	\$0	--	--	--	--	--
Pacific Cod	--	--	--	\$0	\$0	\$0	--	--	--	--	--
Pollock	--	--	--	\$0	\$0	\$0	--	--	--	--	--
Sablefish	--	--	--	\$0	\$0	\$0	--	--	--	--	--
Salmon	--	--	--	\$0	\$0	\$0	--	--	--	--	--
<i>Total²</i>	--	--	--	\$0	\$0	\$0	--	\$127,073	\$68,344	\$79,940	\$197,557

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

No active sport fish guide businesses or licensed sport fish guides were registered in Savoonga between 2000 and 2010. Likewise, no sport fishing licenses were sold in Savoonga during this period, although a small number of Savoonga residents purchased sport fishing licenses in most years (irrespective of the point of sale) (Table 11). Additionally, no charter fishing activity was documented in Savoonga between 2000 and 2010.

The ADF&G Statewide Harvest Survey does not include St. Lawrence Island (including Savoonga) within a survey region; therefore there are no data available from the Statewide Harvest Survey for this area. The nearest survey area is Area W-Seward Peninsula and Norton Sound.

Table 11. Sport Fishing Trends, Savoonga: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold In Savoonga ²	Saltwater Angler Days Fished – Non-Residents ³	Saltwater Angler Days Fished – Alaska Residents ³
2000	0	0	3	0	n/a	n/a
2001	0	0	7	0	n/a	n/a
2002	0	0	7	0	n/a	n/a
2003	0	0	5	0	n/a	n/a
2004	0	0	5	0	n/a	n/a
2005	0	0	4	0	n/a	n/a
2006	0	0	1	0	n/a	n/a
2007	0	0	5	0	n/a	n/a
2008	0	0	0	0	n/a	n/a
2009	0	0	7	0	n/a	n/a
2010	0	0	3	0	n/a	n/a

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Many residents of Savoonga supplement their incomes and diet with subsistence resources. Whale, seal, walrus, and reindeer comprise 80% of islanders' diets.¹⁰⁸⁵ Traditional subsistence culture is of utmost importance to the people of Savoonga. The culture of Savoonga is an extension of the land and sea with intricate, ancient rituals revolving around walrus and whale hunting. Savoonga is noted as the "Walrus Capitol of the World," but whaling is equally, if not more important to the people.¹⁰⁸⁶

Data were not available or were minimal regarding per capita subsistence harvest and the percentage of Savoonga households that utilized various marine resources for subsistence purposes between 2000 and 2010 (Table 12). Data are also not available regarding annual subsistence harvests of salmon, marine invertebrates, and non-salmon fish (not including halibut) (Table 13).

However, data were available from management agencies regarding halibut and marine mammal subsistence. Data for annual subsistence halibut harvest show a substantial decline in the number of residents holding Subsistence Halibut Registration Certificate (SHARC) cards between 2003 and 2010, as well as a decline in the number of SHARC cards reported as fished, and the amount of lbs of halibut harvested per year (Table 14). Data reported about marine mammal subsistence show average harvest of 546 walrus and 6 polar bears by Savoonga residents between 2000 and 2010. Information on subsistence harvest of beluga whale, sea otter, Steller sea lion, harbor seal, and spotted seal was not reported by management agencies between 2000 and 2010 (Table 15).

¹⁰⁸⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁸⁶ Aksik. (2011). *Stories about Adaptation and Subsistence: Native voices from the frontlines of climate change - Savoonga*. Retrieved May 4, 2012 from <http://aksik.org/village/savoonga>.

Table 12. Subsistence Participation by Household and Species, Savoonga: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (lbs)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Savoonga: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Savoonga: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	43	19	4,275
2004	45	33	14,520
2005	44	15	5,813
2006	43	22	8,297
2007	43	25	7,810
2008	19	11	3,276
2009	17	7	668
2010	17	3	323

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Savoonga: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	849	4	n/a	n/a	n/a
2001	n/a	n/a	503	7	n/a	n/a	n/a
2002	n/a	n/a	435	25	n/a	n/a	n/a
2003	n/a	n/a	656	5	n/a	n/a	n/a
2004	n/a	n/a	486	n/a	n/a	n/a	n/a
2005	n/a	n/a	238	3	n/a	n/a	n/a
2006	n/a	n/a	375	11	n/a	n/a	n/a
2007	n/a	n/a	744	10	n/a	n/a	n/a
2008	n/a	n/a	397	1	n/a	n/a	n/a
2009	n/a	n/a	706	1	n/a	n/a	n/a
2010	n/a	n/a	617	4	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Scammon Bay (SKAMM-in)



People and Place

*Location*¹⁰⁸⁷

Scammon Bay is on the south bank of the Kun River, one mi inland from the Bering Sea. It lies to the north of the 2,300-ft Askinuk Mountains in the Yukon-Kuskokwim Delta. Scammon Bay is located in the Bethel Recording District and the Wade Hampton Census Area, and is not part of an organized borough. The city boundaries encompass 0.6 square miles of land and no water area.

*Demographic Profile*¹⁰⁸⁸

In 2010, there were 474 residents in Scammon Bay, making it the 123rd largest of 352 total Alaskan communities with recorded populations that year. Overall between 1990 and 2010, the population increased by 38.2%. The average annual growth rate between 2000 and 2009 was 1.4%, indicating slow steady growth. It should be noted that the Alaska Department of Labor Estimate of Permanent Residents shows a slightly higher population than that indicated by the U.S. Census, but the population of Scammon Bay increased between 1990 and 2010 by both estimates. The change in population between 1990 and 2010 is shown in Table 1.

A large majority of residents of Scammon Bay in 2010 identified themselves as American Indian or Alaska Native (99.4%), with only small portions of the population identifying themselves as White (0.4%) or two or more races (0.2%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian or Alaska Native increased by 3.3%, with corresponding decreases in the percentage of the population identifying themselves as White, Hispanic or Latino, Black or African American, Native Hawaiian or Other Pacific Islander, some other race, and two or more races. The change in racial and ethnic composition in Scammon Bay from 2000 to 2010 is detailed in Figure 1.

In 2010, the average household size in Scammon Bay was 4.94, an increase from 4.0 in 1990 and 4.84 in 2000. There has also been an overall increase in the number of households between 1990 and 2010, with 85 households in 1990, 96 in 2000, and 94 in 2010. Of those households surveyed in 2010, 66 were estimated to be owner-occupied and 16 were vacant, with 28 households being rented. None of the population of Scammon Bay was estimated to be living in group quarters in 2010.

¹⁰⁸⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁸⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

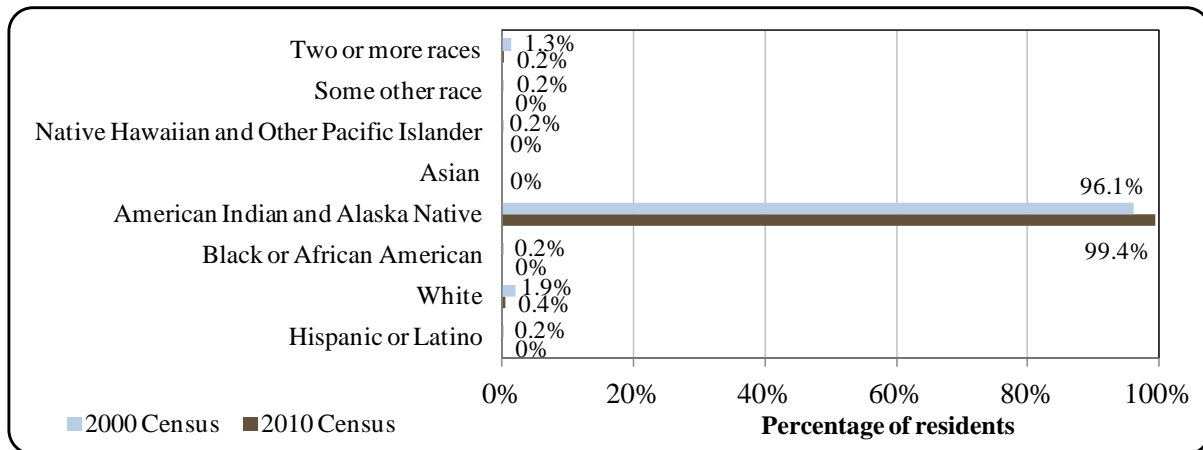
Table 1. Population in Scammon Bay from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	343	-
2000	465	-
2001	-	474
2002	-	492
2003	-	467
2004	-	488
2005	-	508
2006	-	520
2007	-	516
2008	-	533
2009	-	528
2010	474	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

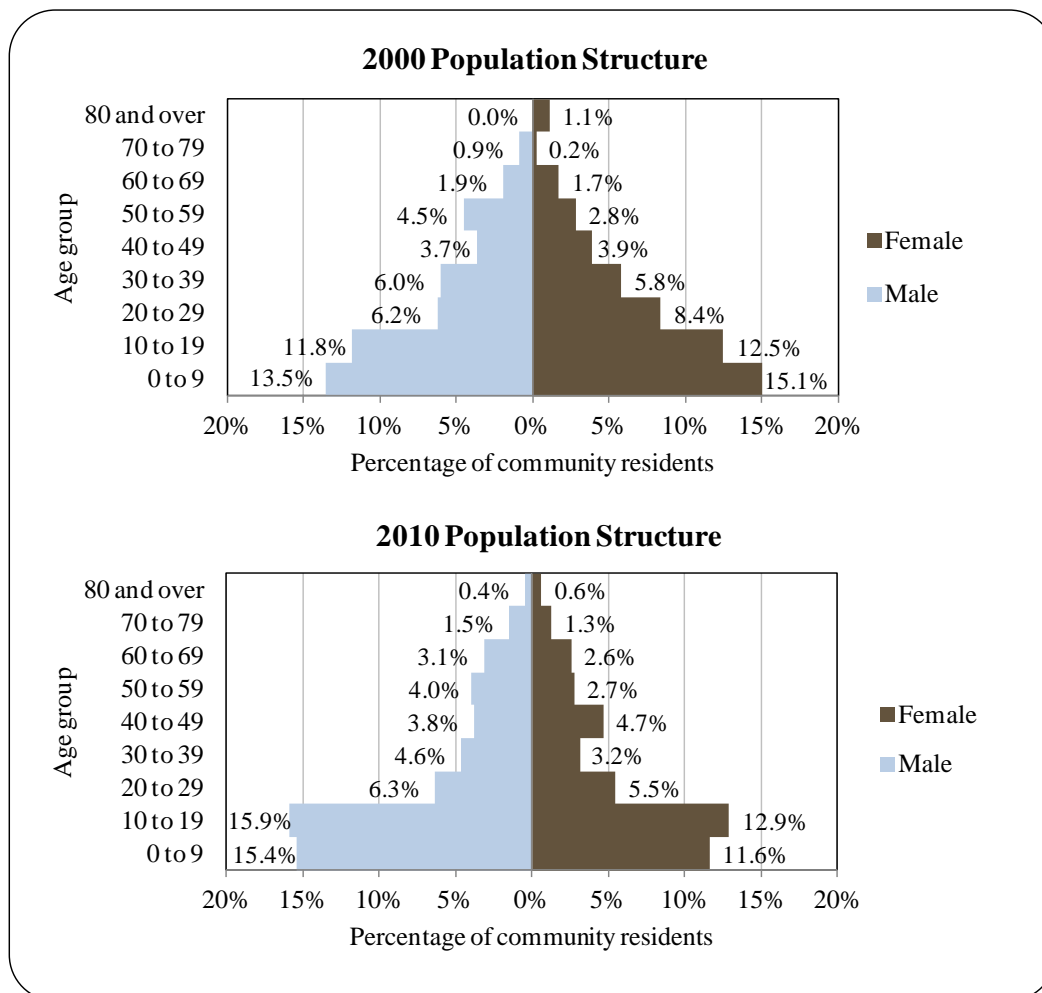
Figure 1. Racial and Ethnic Composition, Scammon Bay: 2000-2010 (U.S. Census).



In 2010, the gender makeup of Scammon Bay was 55% male and 45% female, slightly more skewed than the Alaska state gender makeup (52% male, 48% female). The median age in Scammon Bay was 17.6 years, much lower than the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. The greatest percentage of residents fell within the age category 0-19 years old, with the next largest percentage for the age category 20-39 years old. Relatively few people were 60 or older. The population age structure in Scammon Bay in 2000 and 2010 is shown in Figure 2.

In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹⁰⁸⁹ 66.7% of residents aged 25 and over were estimated to hold a high school diploma or higher degree, compared to 90.7% of Alaskan residents overall. Also in 2010, 17.5% of Scammon Bay residents had less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 15.8% had a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 37.2% had a high school diploma or equivalent, compared to 28.5% of Alaskan residents overall; 17.5% had some college but no degree, compared to 27.8% of Alaskan residents overall; 2.2% held an Associate’s degree, compared to 7.9% of Alaskan residents overall; 6.6% held a Bachelor’s degree, compared to 17.1% of Alaskan residents overall; and 3.3% held a graduate or professional degree, compared to 9.5% of Alaskan residents overall.

Figure 2. Population Age Structure in Scammon Bay Based on the 2000 and 2010 U.S. Decennial Census.



¹⁰⁸⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.¹⁰⁹⁰ The settlement of Scammon Bay was known in Eskimo as “Marayaarmiut,” which means ‘people of the little mudflats’. Other names for the site included Kutmiut, Mawagmiut, Mariakmiut, and Mariak.¹⁰⁹¹ The ancestors of the Scammon Bay Yup'ik were the Asquinurmiut, who inhabited a number of villages north and west of the current village site.¹⁰⁹² The nearby bay was named after Capt. Charles Scammon, who served as the marine chief of the Western Union Telegraph Expedition from 1856 to 1867. The name came into use when the Scammon Bay Post Office was established in 1951. The city government was incorporated in 1967.¹⁰⁹³

Ancestors of Scammon Bay residents were involved in the centuries-long Bow and Arrow War Days, involving conflict between Yup'ik people living along the Bering Sea coast south of the Yukon River and riverine Yup'ik people living along the Yukon. Scammon Bay is located in the region known as ‘the Triangle’, which also includes the villages of Chevak and Hooper Bay and smaller villages that no longer exist today. People within the Triangle often banded together during raids to the north and came to each others’ aid when under attack. The Bow and Arrow War Days continued up until the arrival of Russian explorers in the 1840s.¹⁰⁹⁴

Fishing and other subsistence activities remain important to both the culture and economy in Scammon Bay. Most residents travel 50 miles to the north to the Black River each summer for fish camp. The sale, importation, and possession of alcohol are banned in the village.¹⁰⁹⁵

Natural Resources and Environment

The community of Scammon Bay is located approximately one mi up the Kun River from Scammon Bay, which empties into the Bering Sea.¹⁰⁹⁶ Scammon Bay is somewhat sheltered from the Bering Sea by a group of low sandy barrier islands known as the Sand Islands.¹⁰⁹⁷ The community is within the Yukon-Kuskokwim Delta, an alluvial flood plain characterized by numerous lakes and slough channels interwoven through the tundra wetland complex. Vegetation is primarily subarctic tundra underlain by permafrost. The Askinuk Mountains rise from these marshy lowlands to over 2,200 of elevation just south of the community.¹⁰⁹⁸ The area’s climate

¹⁰⁹⁰ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are website*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

¹⁰⁹¹ Alaska OCS Socioeconomic Studies Program. (1982). *Navarin Basin Sociocultural Systems Analysis*. Prepared by A. Fienup-Riordan for the Bureau of Land Management Outer Continental Shelf Office. Retrieved March 11, 2013 from http://www.boem.gov/BOEM-Newsroom/Library/Publications/1982/82_TR70.aspx.

¹⁰⁹² Funk, Caroline. 2010. “The Bow and Arrow War Days on the Yukon-Kuskokwim Delta of Alaska.” *Ethnohistory* 57(4).

¹⁰⁹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁰⁹⁴ See footnote 1092.

¹⁰⁹⁵ Ibid.

¹⁰⁹⁶ See footnote 1093.

¹⁰⁹⁷ U.S. Fish and Wildlife Service. (1988). *Alaska Maritime National Wildlife Refuge : summary : final comprehensive conservation plan, wilderness review, and environmental impact statement*. Retrieved March 12, 2013 from <http://catalog.hathitrust.org/Record/001536756>.

¹⁰⁹⁸ U.S. Fish and Wildlife Service. 2011. *Yukon Delta National Wildlife Refuge*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

is maritime, with temperatures ranging between -25 and 79 °F (-31.7 to 26.1 °C). Annual precipitation averages 14 inches, with 65 inches of snowfall. Severe easterly winds during the fall and winter limit accessibility. The Bering Sea is ice-free from mid-June through October.¹⁰⁹⁹ In winter, the ice can extend out to sea as far as 500 miles, although sea ice coverage has been declining in recent decades with warming temperatures in the Bering Sea.¹¹⁰⁰

The community of Scammon Bay is located within the Yukon Delta National Wildlife Refuge (NWR). The NWR was established “to conserve fish and wildlife populations and habitats in their natural diversity, including, but not limited to shorebirds, seabirds, tundra swans, emperor, white-fronted and Cackling Geese, black brant and other migratory birds, salmon, muskoxen, and marine mammals; to fulfill treaty obligations; to provide the opportunity for continued subsistence uses; and to ensure water quality and necessary water quantity.” NWR lands are open to sport and subsistence hunting and fishing.¹¹⁰¹

Another protected area in the region is the Bering Sea Unit of the Alaska Maritime NWR. The unit includes the previously mentioned Sand Islands, a group of low barrier islands that protect the mouth of Scammon Bay. The islands are used by migrating shorebirds and offer nesting habitat for Arctic terns, mew gulls, and glaucous gulls, as well as haul out sites for harbor seals.¹¹⁰² Overall, the Bering Sea Unit of the Alaska Maritime NWR includes more than 300 islands, islets, rocks, and capes as well as headlands and capes on the mainland.¹¹⁰³ In addition to the Bering Sea, the Alaska Maritime NWR includes units in the Aleutian Islands, the Southeast Alaska Panhandle, Bristol Bay, and the Chukchi Sea. It was created in part to promote a program of scientific research on marine ecosystems. The Alaska Maritime NWR “protects breeding habitat for seabirds, marine mammals, and other wildlife on more than 2,500 islands, spires, rocks, and coastal headlands.”¹¹⁰⁴

In a 2002 state hazard assessment, natural hazards identified as having potential to occur in the Wade Hampton Census Area include flood, wildfire, earthquake, volcanic activity, severe weather, and erosion. No information about the probability of these different events was reported.¹¹⁰⁵ Climate models project that the Bering Sea region will experience increased storm activity and coastal erosion as temperatures warm.¹¹⁰⁶ Scammon Bay has suffered from flooding and coastal erosion in the past, and the Division of Homeland Security and Emergency

¹⁰⁹⁹ See footnote 1093.

¹¹⁰⁰ Pippins, K.A. (2012). *Alaska Maritime National Wildlife Refuge Wilderness: A Report on Wilderness Character Monitoring*. U.S. Fish and Wildlife Service. Retrieved March 12, 2013 from <http://www.wilderness.net/index.cfm?fuse=toolboxes&sec=WC#>

¹¹⁰¹ U.S. Fish and Wildlife Service. (2011). *Yukon Delta National Wildlife Refuge website*. Retrieved December 8, 2011 from <http://yukondelta.fws.gov/>.

¹¹⁰² U.S. Fish and Wildlife Service. (1988). *Alaska Maritime National Wildlife Refuge : summary : final comprehensive conservation plan, wilderness review, and environmental impact statement*. Retrieved March 12, 2013 from <http://catalog.hathitrust.org/Record/001536756>.

¹¹⁰³ See footnote 1100.

¹¹⁰⁴ U.S. Fish and Wildlife Service (n.d.). *Alaska Maritime National Wildlife Refuge*. Retrieved January 4, 2012 from <http://alaskamaritime.fws.gov/>.

¹¹⁰⁵ State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

¹¹⁰⁶ See footnote 1100.

Management has identified Scammon Bay a community in need of assistance due to weather or climate hazards posing a threat to safety or life as well as existing public infrastructure.¹¹⁰⁷

According to the Alaska Department of Environmental Conservation, there is an active environmental cleanup site approximately 15 miles west of Scammon Bay at the Cape Romanzof Long Range Radar Site owned by the U.S. Air Force. A landfill at the radar site has been determined to be contaminated with Polychlorinated Biphenyls (PCBs). In order to protect human health in the area, the Air Force has proposed to remove soil and sediment contaminated at levels greater than 1 milligram per kilogram. The comment period on this proposal was set to close in August, 2012.¹¹⁰⁸

Current Economy¹¹⁰⁹

Employment in Scammon Bay centers on commercial fishing, and subsistence activities provide an important food source. Important subsistence resources include fish, beluga whale, walrus, seal, birds, and berries.¹¹¹⁰ In 2010, top local employers included the Lower Yukon School District, local government offices, the regional Community Development Quota (CDQ) group (Coastal Villages Region Fund (CVRF)) and subsidiary seafood company (Coastal Villages Seafoods, Inc), the Native village corporation (Asikinuk Corporation), and non-profit organizations providing health, housing, and other local services.¹¹¹¹ In addition, firefighting for the Bureau of Land Management, construction, and handicrafts provide seasonal income.¹¹¹²

According to the 2006-2010 ACS,¹¹¹³ the per capita income in Scammon Bay in 2010 was estimated to be \$9,999, and the median household income in 2010 was estimated to be \$43,750, compared to \$7,719 and \$25,625 in 2000, respectively. However, after accounting for inflation by converting the 2000 values to 2010 dollars,¹¹¹⁴ the real per capita income (\$10,150) and the real median household income (\$33,697) in 2000 indicate a slight decrease in median per capita income between 2000 and 2010 and a substantial increase in median household income between 2000 and 2010. However, Scammon Bay's small population size may have prevented the ACS from accurately portraying economic conditions.¹¹¹⁵ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska

¹¹⁰⁷ Immediate Action Workgroup. (2009). *Recommendations to the Governor's Subcabinet on Climate Change*. Black, B. and P. Opheen, eds. Retrieved March 11, 2013 from <http://www.dggs.alaska.gov/webpubs/dggs/mp/text/mp147p.pdf>.

¹¹⁰⁸ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 5, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹¹⁰⁹ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹¹⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹¹¹ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹¹² See footnote 1110.

¹¹¹³ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹¹⁴ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹¹¹⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Local and Regional Information (ALARI) database, maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Scammon Bay in 2010 is \$5,860, providing support for an overall decrease in per capita income from 2000 to 2010.¹¹¹⁶ This is supported by the fact that the community was recognized as “distressed” by the Denali Commission, indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹¹¹⁷ However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

In 2010, Scammon Bay ranked 274th of 305 Alaskan communities with per capita income that year, and 168th of 299 Alaskan communities with household income data. Based on the ACS, in the same year, 53.1% of the population age 16 and over was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 18.5%, compared to the statewide unemployment rate of 5.9%. Approximately 33% of local residents were living below the poverty line in 2010, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Scammon Bay are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Scammon Bay. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 20.5%.

Based on the 2006-2010 ACS, the greatest number of workers in Scammon Bay in 2010 was estimated to be employed in the public sector (60.5%), along with 39.5% in the private sector. Out of 119 people age 16 and over estimated to be in the civilian labor force in Scammon Bay in 2010, the greatest number were estimated to work in education services, health care, and social assistance (56.3%), retail trade (21.8%), and public administration (6.7%). Compared to 2000, a slightly greater percentage of the workforce was estimated to be employed in education, health care and social assistance, construction, and retail trade industries, with a comparable reduction in other industries. When viewing employment in terms of occupation, the most common job types were management/professional (47.9% of the labor force), and sales and office occupations (25.2%). The distribution of employment by occupation remained relatively stable in Scammon Bay between 2000 and 2010, although there was a notable decrease in sales/office occupations and a slight increase in management/professional occupations. In 2010, no Scammon Bay residents reported themselves as working in natural resource industries or occupations that would include commercial fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in fishing may be underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

¹¹¹⁶ See footnotes 1111 and 1113.

¹¹¹⁷ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Figure 3. Local Employment by Industry in 2000-2010, Scammon Bay (U.S. Census).

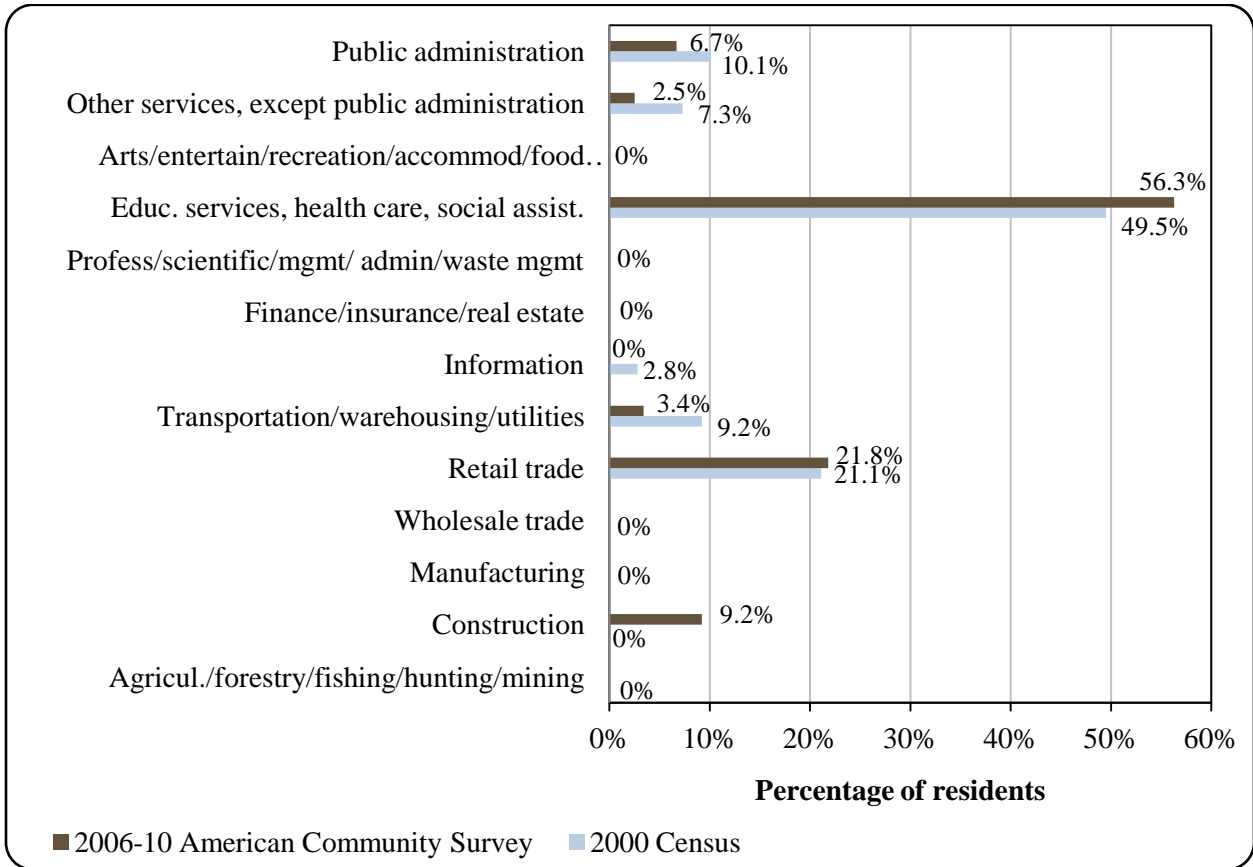
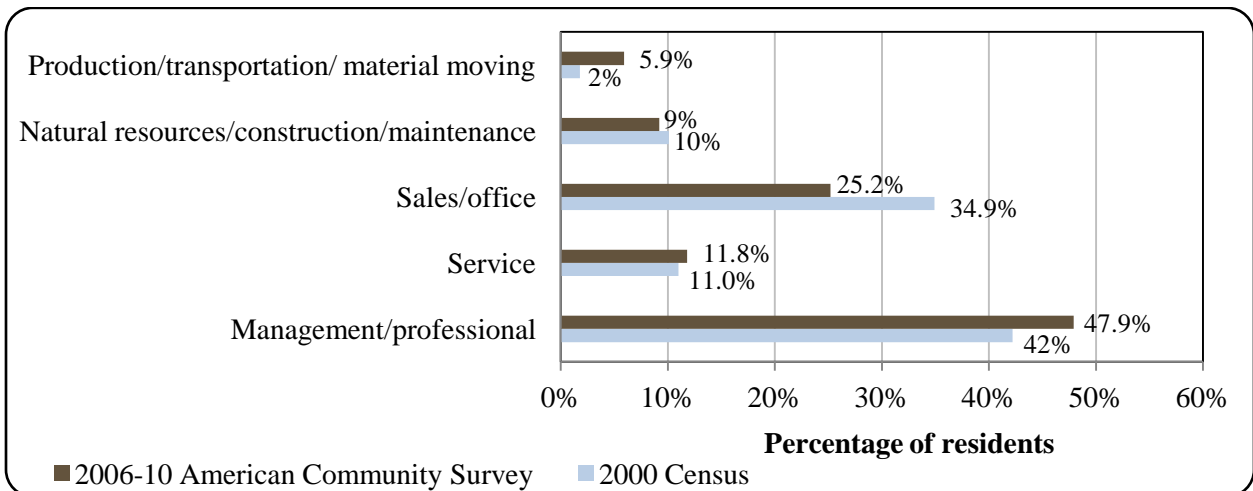


Figure 4. Local Employment by Occupation in 2000-2010, Scammon Bay (U.S. Census).



Governance

Scammon Bay is a 2nd Class City governed by a mayor and a city council and is not located within an organized borough. Between 2000 and 2010, the total municipal revenue received by Scammon Bay increased, though there was some variation between years during this period. As of 2010, Scammon Bay administered a 2% sales tax.¹¹¹⁸ In addition to sales tax revenues, other locally-generated income sources in Scammon Bay during the decade included enterprise revenues from water and sewer utilities, an electric utility maintenance contract, building and land leases, equipment rentals, bingo, pull tab, and concession receipts, and fees for snow removal and boat hauls. Outside revenue sources included state and federal shared funds and grants in some years. Sources of shared revenue from the State of Alaska included the State Revenue Sharing program from 2000 to 2003 (over \$25,000 per year), the Community Revenue Sharing program in 2009 and 2010 (over \$120,000 each year), along with funds in some years from a state fuel grant, a state telephone / electric co-op tax refund, and the SAFE Communities program (public safety, utilities, infrastructure projects, etc.). Federal revenue sharing was received in some years from the Payment in Lieu of Taxes program. State grants were received for projects such as “waste heat” (from the Renewable Energy Grant Program), sewage lines and manhole replacement, and a suicide prevention program. Total municipal revenue in 2008 was higher than average due to particularly high amount of state grants, totaling over \$250,000 that year. No fisheries-related grants were reported received over the decade (Table 2).

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Scammon Bay from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$241,287	\$28,202	\$27,196	n/a
2001	\$256,523	\$23,491	\$26,180	n/a
2002	\$243,103	\$18,941	\$26,050	n/a
2003	\$236,924	\$24,805	\$26,459	n/a
2004	\$214,721	\$17,579	n/a	n/a
2005	\$128,426	\$26,030	n/a	n/a
2006	\$230,822	\$30,034	n/a	n/a
2007	\$276,649	\$27,104	n/a	n/a
2008	\$619,424	\$24,208	n/a	n/a
2009	\$393,313	\$30,349	\$123,191	n/a
2010	\$233,637	\$21,005	\$122,480	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹¹¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Scammon Bay was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Native Village of Scammon Bay. The Native village corporation is the Askinuk Corporation, which manages 92,160 acres of land. The regional Native corporation to which Scammon Bay belongs is the Calista Corporation.¹¹¹⁹

The Village of Scammon Bay is also a member of the Association of Village Council Presidents (AVCP), a Tribal 501(c)(3) non-profit organization headquartered in Bethel that serves communities in the Yukon-Kuskokwim Delta. At the request of villages, AVCP provides social services, human development and culturally relevant programming to “promote Tribal self-determination and self-governance and to work to protect Tribal culture and traditions.”¹¹²⁰ The AVCP is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹¹²¹ AVCP is made up of 56 villages and 45 village corporations.¹¹²²

The nearest offices of the Alaska Department of Fish and Game (ADF&G) and the Department of Commerce, Community, and Economic Development are located in Bethel. The nearest office of the Alaska Department of Natural Resources is located in McGrath, and the nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Scammon Bay is accessible by air and water. A state-owned 3,000 ft long by 75 ft wide gravel airstrip and city-owned seaplane base on the Kun River serve air traffic. Barges bring in bulk supplies each summer. Winter trails exist to Hooper Bay (32 miles) and Chevak (25 miles). Snowmobiles and skiffs are the primary means of local transportation.¹¹²³ Roundtrip airfare to Anchorage in June 2012 was \$820.¹¹²⁴

¹¹¹⁹ Ibid.

¹¹²⁰ Association of Village Council Presidents. (n.d.). *Homepage*. Retrieved December 6, 2011 from www.avcp.org.

¹¹²¹ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹¹²² Calista Corporation. (2011). *Our Communities: The Villages of the Calista Region*. Retrieved February 6, 2012 from <http://www.calistacorp.com/shareholders/communities>.

¹¹²³ See footnote 1118.

¹¹²⁴ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

Facilities

Water in Scammon Bay is sourced from a small stream south of the city using an infiltration gallery system.¹¹²⁵ Water is treated and stored in a 100,000-gallon tank. Nearly all homes and the school are fully plumbed and connected to the piped water and sewer system. Only a few residents use honeybuckets,¹¹²⁶ typically due to frozen pipe damage. There is no washeteria in the community.¹¹²⁷ An unpermitted landfill is available. Electricity is provided by an Alaska Village Electric Cooperative (AVEC) diesel powerhouse.¹¹²⁸ AVEC is currently engaged in conceptual design and a feasibility study to develop a wind turbine in Scammon Bay to supplement diesel power generation. As of early 2012, grant agreement was in place and a site for the turbine had been identified.¹¹²⁹ Law enforcement services are provided by the city, a Village Public Safety Officer (VPSO), and state troopers in Bethel. Fire and rescue is provided by the VPSO and a city volunteer fire department. Additional community facilities and services include a community hall, bingo, and both public and school libraries.¹¹³⁰

*Medical Services*¹¹³¹

Medical care is provided by the Scammon Bay Clinic, which is owned by the city and operated by the Yukon Kuskokwim Health Corporation. The clinic is a Community Health Aid Program site. Emergency services have coastal floatplane and air access and are provided by a health aide. The nearest hospital is located in Bethel.

*Educational Opportunities*¹¹³²

The Scammon Bay School provides instruction for students from pre-school through 12th grade. In 2011, the school had 212 students and 16 teachers.

¹¹²⁵ Infiltration galleries are a type of well constructed near rivers or ponds to collect infiltrated surface waters. Since the water infiltrates through a layer of soil/sand, it is significantly free from suspended impurities including microorganisms usually present in surface water. (Definition retrieved February 22, 2012 from http://phys4.harvard.edu/~wilson/arsenic/conferences/Feroze_Ahmed/Sec_3.htm.)

¹¹²⁶ A “honeybucket” is an indoor bucket used as a toilet in houses without plumbing.

¹¹²⁷ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

¹¹²⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹²⁹ Alaska Energy Authority. (2012). Alaska Renewable Energy Fund Status Report. Retrieved March 12, 2013 from http://www.akenergyauthority.org/re-fund-5/4_Program_Update/StatusReport2012.pdf.

¹¹³⁰ See footnote 1128.

¹¹³¹ Ibid.

¹¹³² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Yup'ik Eskimo people were historically very mobile, following the migration and seasonal availability of subsistence resources.¹¹³³ Traditional subsistence fishing activities continue to be a primary source of food for Scammon Bay residents, in combination with employment in commercial fishing and government services.^{1134,1135} Between 2000 and 2010, Scammon Bay residents were most heavily engaged in commercial fisheries for salmon, herring, and halibut.

The City of Scammon Bay is located in the Yukon-Kuskokwim Delta where the Kun River empties into Scammon Bay and the Bering Sea. The marine area bordering Scammon Bay is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. Scammon Bay is also included in the Coastal District (District 7) of the Yukon commercial salmon fishery.

The Yukon River commercial salmon fishery is divided into 7 districts, 10 sub-districts, and 28 statistical areas. The Coastal District is open to subsistence fishing only. Between 2000 and 2010, all commercial salmon permits held by Scammon Bay residents were held in the Lower Yukon salmon gillnet fishery. The first recorded commercial harvest of salmon in the Alaskan portion of the Yukon River took place in 1918, and early harvests were relatively large. Concerns about providing sufficient salmon resources for subsistence harvest led to limitations on commercial salmon fishing during several periods, including a complete commercial fishing closure between 1925 and 1931. In the 1980s, concerns about possible overharvest of Chinook runs led to reduced commercial fisheries in the late 1980s and 1990s along the Yukon. Poor returns in the late 1990s and early 2000s resulted in restrictive management of the commercial fishery and complete closure in 2001 to ensure subsistence resources.¹¹³⁶ Chinook runs have continued to have unexpectedly low returns in recent years, resulting in a need for cooperative efforts between managers, fishermen, tribal council representatives, and other stakeholders to ensure that adequate numbers of fish reach spawning grounds in the event that low returns continue in future years.¹¹³⁷

Commercial catch of herring for bait began in Alaska around 1900, and herring sac roe fisheries developed in the late 1970s. Along the Yukon/Kuskokwim coast there are six commercial gillnet sac roe districts: Security Cove, Goodnews Bay, Cape Avinof, Nelson Island, Nunivak Island, and Cape Romanzof. Harvests in these areas have been declining in recent

¹¹³³ Alaska Native Heritage Center. (n.d) *Yup'ik & Cup'ik - Who We Are*. Retrieved December 8, 2011 from http://www.alaskanative.net/en/main_nav/education/culture_alaska/yupik/.

¹¹³⁴ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹³⁵ See footnote 1128.

¹¹³⁶ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. "The Commercial Salmon Fishery in Alaska." *Alaska Fisheries Research Bulletin* 12(1):1-146. Alaska Dept. of Fish and Game. Retrieved January 4, 2012 from <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹¹³⁷ Alaska Dept. of Fish and Game. 2012. *2012 Yukon Area Subsistence, Personal Use, and Commercial Salmon Fisheries Outlook and Management Strategies*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/FedAidpdfs/RIR.3A.2012.04.pdf>.

years, in part due to lack of processing capacity in the region.¹¹³⁸ Pacific herring are present in coastal waters near Scammon Bay during May and June, typically appearing immediately following ice break-up. Herring and spawn-on-kelp herring roe are also harvested for subsistence purposes by Scammon Bay residents.¹¹³⁹

Commercial exploitation of halibut first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹¹⁴⁰ Today, Pacific halibut fisheries are managed under the International Pacific Halibut Commission. In 1995, management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). In the Bering Sea – Aleutian Islands (BSAI) region, quota shares are also allocated to six Community Development Quota (CDQ) non-profit organizations representing 65 communities in Western Alaska.¹¹⁴¹ The CDQ non-profit representing the Native Village of Saint Michael is the Coastal Villages Region Fund (CVRF), which that promotes employment opportunities for residents of member villages as well as participation in the Bering Sea crab and groundfish fisheries.¹¹⁴² In 2010, CVRF received an allocation of 348,000 pounds of CDQ halibut quota, 66% of which was allocated for harvest within Area 4E, and 34% in Area 4D.¹¹⁴³ Total BSAI sablefish CDQ allocations in 2009 and 2011 were 1.3 million lbs in each year. No sablefish CDQ report was available from NOAA for the 2010 season.¹¹⁴⁴ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the CDQ allocations.¹¹⁴⁵ Scammon Bay is not eligible to participate in the Community Quota Entity program.

Processing Plants

According to the ADF&G's 2010 Intent to Operate list, Scammon Bay did not have a registered processing plant. The nearest processing plant was located in Bethel.

¹¹³⁸ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹¹³⁹ Ceñaliulriit Coastal Resource Service Area. (2008). *Coastal Management Plan: Final Plan Amendment*. Retrieved February 9, 2012 from

http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

¹¹⁴⁰ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://ww.iphc.int/publications/scirep/Report0005.pdf>.

¹¹⁴¹ Fina, Mark. 2011. Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹¹⁴² Coastal Villages Region Fund (n.d.). *Homepage*. Retrieved December 12, 2011 from <http://www.coastalvillages.org/>.

¹¹⁴³ NOAA National Marine Fisheries Service. 2010. *Memorandum: 2010 Community Development Quota (CDQ) Halibut Allocations*. Retrieved January 8, 2013 from <http://www.fakr.noaa.gov/ram/10ifqcdqtac.pdf>.

¹¹⁴⁴ NOAA National Marine Fisheries Service. (n.d.). *IFQ Halibut/Sablefish Reports and CDQ Halibut Program Reports*. Retrieved February 22, 2013 from <http://www.fakr.noaa.gov/ram/ifqreports.htm>.

¹¹⁴⁵ International Pacific Halibut Commission. 2012. *Pacific Halibut Fishery Regulations 2012*. Retrieved October 16, 2012 from <http://www.iphc.int/publications/regs/2012iphcregs.pdf>.

Fisheries-Related Revenue

Between 2000 and 2010, the only source of fisheries-related revenue received by Scammon Bay was the Shared Fisheries Business Tax. The total amount was less than \$100 per year (Table 3).¹¹⁴⁶

Commercial Fishing

In 2010, 47 residents of Scammon Bay held commercial fishing permits, a number that remained relatively stable between 2000 and 2010. While the number of permit holders has remained steady, the number of permits held decreased during the same period. Of the 54 permits held in 2010, 34 of those were salmon Commercial Fisheries Entry Commission (CFEC) permits. For salmon CFEC permits, the number of permits held, the number of permit holders, and the percentage of permits reported as fished all decreased between 2000 and 2010. All the salmon CFEC permits issued in 2010 were for the Lower Yukon gill net fishery. While 20 permit holders held 19 herring CFEC permits for the Cape Romanzof gill net fishery in 2010, numbers which also remained stable between 2000 and 2010, none of those permits were actively fished between 2007 and 2010. As mentioned in the *History and Evolution of Fisheries* section above, harvests in Yukon-Kuskokwim herring fisheries have declined in recent years, in part due to lack of processing capacity.¹¹⁴⁷ One permit holder held a halibut CFEC permit for the statewide hand troll fishery in 2010, but between 2000 and 2010, the only years in which halibut CFEC permits were actively fished were 2008 and 2009. Overall, the percentage of all CFEC permits reported as fished decreased between 2000 and 2010 (Table 4).

In 2010, there were 16 crew license holders residing in Scammon Bay, a number that has been variable between 2000 and 2010. There were no fish buyers or shore-side processing facilities in Scammon Bay between 2000 and 2010. There were 13 vessels owned primarily by residents in 2010 and 16 vessels homeported in Scammon Bay in 2010. Both of these numbers represented declines from 2000 levels, when 25 vessels were primarily owned by residents and 34 vessels were homeported in the community. Between 2000 and 2010, there were no vessels landing catch in the community, so there were no landings or ex-vessel value of landings to report during this period (Tables 5 and 9). When looking at landings and ex-vessel revenue generated by Scammon Bay vessel owners, including all delivery locations, data are considered confidential for most species in most years. The exceptions to this were herring between 2000 and 2006 (overall decrease in landings and value), halibut in 2008, and salmon in 2005-2007 (landings and value were variable during these years) (Table 10).

Between 2000 and 2010, no Scammon Bay residents held quota share accounts, quota shares, or individual fishing quota (IFQ) allotments in federal catch share fisheries for halibut or sablefish (Table 6 and Table 7). In addition, no residents held accounts, shares, or IFQ allotments in federal crab catch share fisheries between 2005 and 2010 (Table 8).

¹¹⁴⁶ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

¹¹⁴⁷ See footnote 1138.

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Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Scammon Bay: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	\$58	n/a	\$94	n/a	n/a	n/a	\$66	\$69	\$82	\$88
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>n/a</i>	<i>\$58</i>	<i>n/a</i>	<i>\$94</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>\$66</i>	<i>\$69</i>	<i>\$82</i>	<i>\$88</i>
<i>Total municipal revenue⁵</i>	<i>\$241,287</i>	<i>\$256,523</i>	<i>\$243,103</i>	<i>\$236,924</i>	<i>\$214,721</i>	<i>\$128,426</i>	<i>\$230,822</i>	<i>\$276,649</i>	<i>\$619,424</i>	<i>\$393,313</i>	<i>\$233,637</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Scammon Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	5	14	11	8	4	3	12	4	1
	Fished permits	0	0	0	0	0	0	0	0	4	1	0
	% of permits fished	-	-	-	-	-	-	-	-	33%	25%	-
	Total permit holders	0	0	5	10	9	7	4	3	12	4	1
Herring (CFEC) ²	Total permits	21	21	21	19	20	21	20	20	20	19	19
	Fished permits	14	7	7	6	10	6	5	0	0	0	0
	% of permits fished	67%	33%	33%	32%	50%	29%	25%	-	-	-	-
	Total permit holders	24	21	22	20	20	21	20	20	20	19	20

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Table 4 Cont. Permits and Permit Holders by Species, Scammon Bay: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	41	40	41	40	41	39	39	39	37	35	34
	Fished permits	27	0	27	27	31	27	28	27	12	0	17
	% of permits fished	66%	-	66%	68%	76%	69%	72%	69%	32%	-	50%
	Total permit holders	43	40	42	41	42	40	42	39	40	36	36
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>62</i>	<i>61</i>	<i>67</i>	<i>73</i>	<i>72</i>	<i>68</i>	<i>63</i>	<i>62</i>	<i>69</i>	<i>58</i>	<i>54</i>
	<i>Fished permits</i>	<i>41</i>	<i>7</i>	<i>34</i>	<i>33</i>	<i>41</i>	<i>33</i>	<i>33</i>	<i>27</i>	<i>16</i>	<i>1</i>	<i>17</i>
	<i>% of permits fished</i>	<i>66%</i>	<i>11%</i>	<i>51%</i>	<i>45%</i>	<i>57%</i>	<i>49%</i>	<i>52%</i>	<i>44%</i>	<i>23%</i>	<i>2%</i>	<i>31%</i>
	<i>Permit holders</i>	<i>53</i>	<i>49</i>	<i>53</i>	<i>52</i>	<i>52</i>	<i>50</i>	<i>52</i>	<i>48</i>	<i>55</i>	<i>48</i>	<i>47</i>

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Scammon Bay: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Scammon Bay ²	Total Net Pounds Landed In Scammon Bay ^{2,5}	Total Ex-Vessel Value Of Landings In Scammon Bay ^{2,5}
2000	25	0	0	35	34	0	0	\$0
2001	5	0	0	23	23	0	0	\$0
2002	22	0	0	29	29	0	0	\$0
2003	9	0	0	33	34	0	0	\$0
2004	17	0	0	34	35	0	0	\$0
2005	15	0	0	27	26	0	0	\$0
2006	43	0	0	21	21	0	0	\$0
2007	41	0	0	19	20	0	0	\$0
2008	14	0	0	24	25	0	0	\$0
2009	4	0	0	14	16	0	0	\$0
2010	16	0	0	13	16	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in Scammon Bay: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Scammon Bay: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Scammon Bay: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Scammon Bay: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Scammon Bay Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	1,193	--	--
Herring	337,808	132,956	56,534	111,841	46,892	153,159	156,899	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	5,661	13,806	8,679	--	--	--
<i>Total²</i>	<i>337,808</i>	<i>132,956</i>	<i>56,534</i>	<i>111,841</i>	<i>46,892</i>	<i>158,820</i>	<i>170,705</i>	<i>8,679</i>	<i>1,193</i>	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	\$5,250	--	--
Herring	\$24,295	\$4,848	\$2,712	\$6,039	\$8,487	\$7,964	\$8,002	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	\$12,473	\$33,127	\$14,173	--	--	--
<i>Total²</i>	<i>\$24,295</i>	<i>\$4,848</i>	<i>\$2,712</i>	<i>\$6,039</i>	<i>\$8,487</i>	<i>\$20,437</i>	<i>\$41,129</i>	<i>\$14,173</i>	<i>\$5,250</i>	--	--

Note: Cells showing “--” indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses or licensed sport fish guides present in Scammon Bay. However, some sport fishing activity did take place in the community. The number of sport fishing licenses sold to Scammon Bay residents (irrespective of the location of the point of sale) varied between 14 and 78 per year. A small number of sport fishing licenses were sold in Scammon Bay in some years during the period.

Scammon Bay is located within Alaska Sport Fishing Survey Area V – Kuskokwim River and Bay Drainages. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, saltwater sport fishing activity was minimal, with between zero and 28 non-Alaska resident angler days fished per year, and between zero and 108 Alaska resident angler days fished per year. A majority of sport fishing activity occurred in freshwater, with non-Alaska resident anglers fishing consistently more angler days (12,624 – 17,582 angler days per year) than Alaska resident anglers (5,166 – 9,152 angler days per year). This information about the sport fishing sector in and near Scammon Bay is displayed in Table 11.

Table 11. Sport Fishing Trends, Scammon Bay: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Scammon Bay²
2000	0	0	48	41
2001	0	0	39	12
2002	0	0	22	26
2003	0	0	14	0
2004	0	0	50	0
2005	0	0	54	0
2006	0	0	27	18
2007	0	0	61	0
2008	0	0	71	0
2009	0	0	38	0
2010	0	0	78	0

Table 11, Cont. Sport Fishing Trends, Scammon Bay: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	27	13	13,388	6,602
2001	0	0	16,437	4,236
2002	0	0	14,583	6,062
2003	28	63	16,923	7,355
2004	0	15	16,239	9,152
2005	19	18	13,725	5,685
2006	0	0	14,773	7,616
2007	0	0	13,390	7,816
2008	0	108	17,582	8,172
2009	0	0	12,625	5,166
2010	0	0	14,033	5,422

¹ Alaska Department of Fish and Game. (2011). *Alaska sport fish guide licenses and businesses, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). *Alaska sport fish and crew license holders, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence harvests are an important part of Scammon Bay’s culture and economy. Common species utilized by Scammon Bay residents for subsistence purposes include fish, beluga whale, walrus, seal, birds, and berries. Most residents travel 50 miles to the north to the Black River each summer for fish camp.¹¹⁴⁸ Lower Yukon communities such as Scammon Bay typically focus subsistence hunting and fishing activities on salmon, several non-salmon fish species, bearded, ringed, and spotted seal, beluga whale, walrus, and tundra and riverine furbearers. In spring, Scammon Bay residents harvest herring and spawn-on-kelp roe and hunt waterfowl.¹¹⁴⁹

Data were not available from ADF&G during the 2000-2010 period regarding the percentage of Scammon Bay households participating in subsistence for selected species, or per capita subsistence harvest (Table 12). However, information was reported by management agencies regarding subsistence harvests of salmon, halibut, and several marine mammal species.

¹¹⁴⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁴⁹ Ceñaliulriit Coastal Resource Service Area. (2008). *Coastal Management Plan: Final Plan Amendment*. Retrieved February 9, 2012 from http://www.alaskacoast.state.ak.us/District/DistrictPlans_Final/Cenaliulriit/plan/plan-4-08.pdf.

The number of subsistence salmon permits issued to Scammon Bay households decreased slightly over the decade, from 89 in 2000 to 74 in 2007. The number of salmon reported harvested was variable from year to year between 2000 and 2010, with the greatest volume of chum, pink, and Chinook salmon harvested per year on average during the 2000-2010 period. Some coho harvest was also reported, while no sockeye harvest was reported in any year during the period. This information is presented in Table 13. No data were available regarding total harvest of marine invertebrates or non-salmon fish (not including halibut) during the 2000-2010 period (Table 13).

Following 2003, when seven Subsistence Halibut Registration Certificate (SHARC) cards issued to Scammon Bay residents, the total decreased sharply, falling to one SHARC card issued each year in 2008 and 2009. The last year in which any SHARC cards were reported as returned was 2005. That year, Scammon Bay residents reported harvesting 269 lbs of halibut through this program. No data were reported regarding Scammon Bay residents' participation in the SHARC program in 2010 (Table 14).

Data on subsistence harvest of marine mammals in Scammon Bay are sparse, but do show that beluga whales and walrus have historically been harvested for subsistence use (Table 15).

Table 12. Subsistence Participation by Household and Species, Scammon Bay: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Scammon Bay: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	89	24	449	3,886	4	96	n/a	n/a	n/a
2001	85	22	732	1,518	63	362	n/a	n/a	n/a
2002	82	25	840	5,256	123	417	n/a	n/a	n/a
2003	81	32	1,128	3,781	48	997	n/a	n/a	n/a
2004	82	31	1,008	5,139	54	2,508	n/a	n/a	n/a
2005	78	30	691	4,655	279	1,645	n/a	n/a	n/a
2006	78	30	507	4,744	160	1,381	n/a	n/a	n/a
2007	74	31	768	4,057	84	1,435	n/a	n/a	n/a
2008	80	33	1,104	6,170	50	2,766	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Scammon Bay: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	7	4	181
2004	7	4	105
2005	7	3	269
2006	2	n/a	n/a
2007	2	n/a	n/a
2008	1	n/a	n/a
2009	1	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Scammon Bay: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	12	n/a	n/a	n/a	n/a	n/a	n/a
2001	12	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	11	n/a	n/a	n/a	n/a	n/a	n/a
2004	11	n/a	n/a	n/a	n/a	n/a	n/a
2005	6	n/a	n/a	n/a	n/a	n/a	n/a
2006	7	n/a	n/a	n/a	n/a	n/a	n/a
2007	10	n/a	1	n/a	n/a	n/a	n/a
2008	7	n/a	n/a	n/a	n/a	n/a	n/a
2009	9	n/a	n/a	n/a	n/a	n/a	n/a
2010	5	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Shaktoolik (*shock-TOO-lick*)



People and Place

*Location*¹¹⁵⁰

Shaktoolik is located on the east shore of Norton Sound. It lies 125 miles east of Nome and 33 miles north of Unalakleet. Shaktoolik is located in the Cape Nome Recording District and the Nome Census Area, and is not located within an organized borough. The city boundaries encompass 1.1 square miles of land and do not include any water.

*Demographic Profile*¹¹⁵¹

In 2010, there were 251 residents in Shaktoolik, making it the 177th largest of 352 total Alaskan communities with recorded populations that year. According to Alaska Department of Labor estimate, overall between 2000 and 2009, the population of permanent residents grew by 0.43%. However, population increases and decreases throughout the period resulted in a negative average annual growth rate during this period (-0.48%). The change in population from 1990 to 2010 is provided in Table 1.

In 2010, a large majority of Shaktoolik residents identified themselves as American Indian and Alaska Native (96%). Other ethnic groups present in Shaktoolik in 2010 included residents who identified themselves as White (3.6%) and two or more races (0.4%). The percentage of the population identifying themselves as American Indian and Alaska Native increased by 1.7% between 2000 and 2010, with a corresponding decrease in the percentage of the population identifying themselves as White. Changes in racial and ethnic composition between 2000 and 2010 are presented in Figure 1.

In 2010, the average household size in Shaktoolik was 3.92, an increase from 3.80 persons per household in 1990 and 3.83 in 2000. The total number of households in Shaktoolik increased from 46 in 1990 to 60 in 2000 to 64 in 2010. Of the 70 total housing units surveyed for the 2010 Decennial Census, 34 were owner-occupied and 30 were renter-occupied, with six units that were vacant. Throughout this period, no residents of Shaktoolik were reported to be living in group quarters.

In 2010, the gender makeup in Shaktoolik was 54.2% male and 45.8% female, slightly more skewed than the state as a whole (52% male, 48% female). The median age was estimated to be 25.8 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the age category 0-19 made up the largest percentage of the population, with 30-49 the next largest percentage. Relatively few residents were age 70 or older. The overall population structure of Shaktoolik in 2000 and 2010 is shown in Figure 2.

¹¹⁵⁰ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁵¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

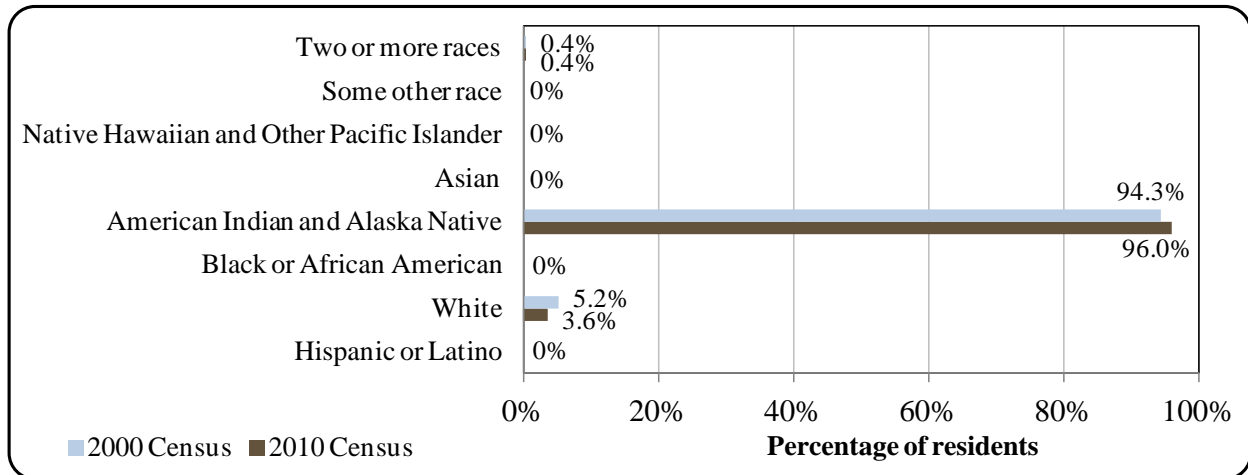
Table 1. Population in Shaktoolik from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	178	-
2000	230	-
2001	-	209
2002	-	218
2003	-	223
2004	-	210
2005	-	224
2006	-	214
2007	-	213
2008	-	223
2009	-	231
2010	251	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

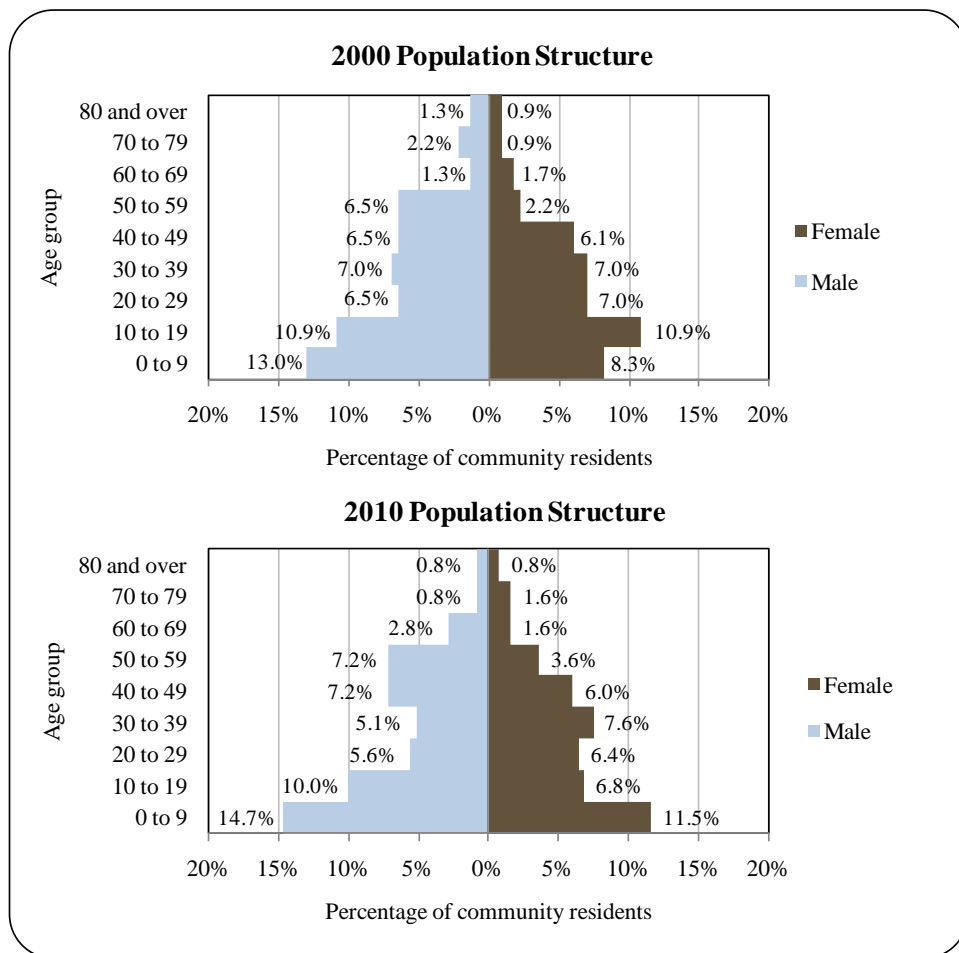
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Shaktoolik: 2000-2010 (U.S. Census).



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹¹⁵² 92.7% of Shaktoolik residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 4.6% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 2.6% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 62.3% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 19.9% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 7.3% were estimated to hold a Bachelor’s degree, compared to 17.4% of Alaskan residents overall; and 3.3% were estimated to hold a graduate or professional degree, compared to 9.6% of Alaskan residents overall. No residents of Shaktoolik were estimated to hold an Associate’s degree in 2010.

Figure 2. Population Age Structure in Shaktoolik Based on the 2000 and 2010 U.S. Decennial Census.



¹¹⁵² While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

History, Traditional Knowledge, and Culture

The inner coast of Norton Sound has been occupied for thousands of years. The site of an ancient village known as “Iyatayet” is located twelve miles northeast of Shaktoolik on Cape Denbigh, and is thought to have been inhabited as long as 6,000 to 8,000 years ago.¹¹⁵³ According to a late elder, another village site called Nukleet is also located nearby, and is now several feet underground.¹¹⁵⁴

The community of Shaktoolik was first included in written records in 1842 by Lt. L.A. Zagoskin of the Imperial Russian Navy.¹¹⁵⁵ The community had grown in the late 1830s with the arrival of small groups of people from the Kotzebue Sound region who migrated south to Norton Sound. These people, known in Yup’ik as “Malemiut” after the dialect of Inupiat they spoke, may have traveled south due to famine in the areas of the Selawik and Kobuk Rivers. They entered the territory of the Unalit people and advanced southward over time. They married into Yup’ik families in the Norton Sound region, and settled in communities such as Shaktoolik, as well as Koyuk and Unalakleet.^{1156,1157} The arrival of the Malemiut did not represent a full takeover of the region, but rather occupation of abandoned sites or settlements along the coast.¹¹⁵⁸ According to Edward Nelson, who visited the community in the early 1880s, Shaktoolik and Unalakleet were primarily inhabited by Malemiut people at that time.¹¹⁵⁹

Shaktoolik has been known by several names over time, including Shaktloik, Shaktolik, Shaktolit, Tshakhtog-mut, and Tshakhtog-mut. The Russian Navy recorded it as “Tshakhtog-mut,” which is Yup’ik in origin, meaning “twig piles” or “not clean.” This name is related to the presence of beach silt along the coast at Shaktoolik, which is isolated to the area near the village site. Another name given to Shaktoolik is “Saniiquq,” meaning, “scattered things,” or “spread out”.¹¹⁶⁰ The village has also been relocated several times over the last century. It was historically located six miles up the Shaktoolik River, and was moved to the mouth of the river in 1933. Later, because the river mouth site lacked a breakwater to protect the village from severe storms and winds, the village was again relocated to its present, more sheltered location in 1967. The City was incorporated in 1969. Following a severe storm in 1976, the village was relocated once again.¹¹⁶¹

Today, Shaktoolik is a primarily Malemiut village with a fishing and subsistence lifestyle. The sale and importation of alcohol is banned in the community.¹¹⁶²

¹¹⁵³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁵⁴ Kawerak, Incorporated. (2007). *Shaktoolik Local Economic Development Plan 2006-2011 with Addendum*. Retrieved on May 10, 2012 from www.kawerak.org/ledps/shaktoolik.pdf.

¹¹⁵⁵ See footnote 1153.

¹¹⁵⁶ Encyclopedia of World Cultures. (1996). *North Alaska Eskimos*. Retrieved March 18, 2013 from <http://www.encyclopedia.com/doc/1G2-3458000164.html>.

¹¹⁵⁷ Bering Straits Native Corporation. (2013). *Regional Background*. Retrieved March 18, 2013 from <http://www.beringstraits.com/northriver/wb/pages/shareholders/regional-background.php>.

¹¹⁵⁸ See footnote 1154.

¹¹⁵⁹ Nelson, E.W. (1983). *The Eskimo about Bering Strait*. Smithsonian Institution Press, Washington D.C. E-book retrieved March 18, 2013 from <http://www.ebooksread.com/authors-eng/edward-william-nelson/the-eskimo-about-bering-strait-hci.shtml>.

¹¹⁶⁰ See footnote 1154.

¹¹⁶¹ See footnotes 1153 and 1154.

¹¹⁶² Ibid.

Natural Resources and Environment

The inner coast of Norton Sound has a subarctic climate, with maritime influences during the period of the year that the Sound is ice free, which is usually between May and October. Summer temperatures have averaged 47 to 62 °F (8.3 to 16.7 °C), with winter temperatures averaging -4 to 11 °F (-20 to -11.7 °C). Extremes from -50 to 87 °F (-45.6 to 30.6 °C) have been recorded. Average annual precipitation is 14 inches, with 43 inches of snowfall.¹¹⁶³ However, in recent year the people of Shaktoolik have begun to witness changing weather patterns resulting from climate change. Information compiled by the *Aksik*¹¹⁶⁴ project (Stories about Adaptation and Subsistence: Native voices from the frontlines of climate change) indicate that the most visible impact is the increasing frequency and severity of fall storms. The village was nearly destroyed by storms in both 2005 and 2009.¹¹⁶⁵

The City of Shaktoolik is located near the mouth of the Shaktoolik River. The City is directly situated on a spit of land between the coast of Norton Sound and the bank of the Tagoomenik River, a smaller tributary which runs parallel to the coastline for several miles before emptying into Shaktoolik Bay. The proximity of the Tagoomenik River to the coastline, and the exposure of the area to coastal erosion and flooding, threatens to erode the spit, creating an island.¹¹⁶⁶

The immediate landscape of the spit is devoid of trees, with vegetation consisting of tundra with willow and shrubs, and marshy areas with many lakes and ponds. Moving inland, the Shaktoolik River flats extend approximately 15 miles inland to the Nulato Hills, a low mountain range that rises gently to between 1,000 and 2,000 feet in elevation. The Nulato Hills separate the Norton Sound river drainage from the Yukon River delta to the east. Stands of spruce and deciduous trees are found along the Shaktoolik River.¹¹⁶⁷

In addition to the threats of severe weather, flooding and coastal erosion described above, a 2010 State of Alaska Hazard Mitigation Plan identified additional hazards present in the Bering Strait region to include wildfire, earthquake, snow avalanche, and ground failure.¹¹⁶⁸ A 2002 State of Alaska Hazard Mitigation Plan also identified low risk of tsunami and seiche in the Nome Census Area.¹¹⁶⁹ According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in the Shaktoolik area as of March 2013.¹¹⁷⁰

¹¹⁶³ See footnote 1153.

¹¹⁶⁴ “Aksik is a Siberian Yupik term called out by captains to turn the boat quickly, as if to avoid danger or move in a new direction, by placing an oar against the bow and down in to the water and pulling back using the gunnel as a fulcrum point.” (Source: Aksik. (2011). *Stories about Adaptation and Subsistence: Native voices from the frontlines of climate change - Savoonga*. Retrieved May 4, 2012 from <http://aksik.org/village/savoonga>)

¹¹⁶⁵ Ibid.

¹¹⁶⁶ See footnote 1154.

¹¹⁶⁷ Ibid.

¹¹⁶⁸ Division of Homeland Security and Emergency Management. (2010). *State of Alaska Hazard Mitigation Plan*. Retrieved March 22, 2013 from <http://www.ready.alaska.gov/plans/mitigationplan.htm>.

¹¹⁶⁹ State of Alaska. (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

¹¹⁷⁰ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 5, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

Current Economy¹¹⁷¹

The Shaktoolik economy is based on subsistence fishing and hunting, supplemented by part-time wage earnings. Fish, crab, moose, beluga whale, caribou, seal, rabbit, geese, cranes, ducks, ptarmigan, berries, greens, and roots are primary food sources.¹¹⁷² In 2010, top local employers in Shaktoolik included the Bering Strait School District, local government offices, the regional Community Development Quota (CDQ) group (Norton Sound Economic Development Corporation), the regional Native corporation (Kawerak, Inc.), local retailers, and regional health, housing, and other community service providers.¹¹⁷³

Based on the 2006-2010 ACS,¹¹⁷⁴ in 2010, the per capita income in Shaktoolik was estimated to be \$14,800 and the median household income was estimated to be \$32,250, compared to \$10,491 and \$31,875 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹¹⁷⁵ the real per capita income in 2000 is shown to have been \$13,796 and the real household income is shown to have been \$41,915. This shows that per capita income increased during this period, while there was a real decrease in median household income. However, Shaktoolik's small population size may have prevented the ACS from accurately portraying economic conditions.¹¹⁷⁶ An alternative estimate of per capita income is provided by economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Shaktoolik in 2010 is \$8,304.¹¹⁷⁷ This estimate is lower than both the per capita income reported by the 2000 Census and the 2006-2010 ACS estimate and suggests that caution is warranted when citing an increase in per capita income over the decade. This is supported by the fact that the community was recognized as "distressed" by the Denali Commission (using a plus/minus 3% formula),¹¹⁷⁸ prioritizing it for economic assistance. However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

In 2010, Shaktoolik ranked 207th of 305 Alaskan communities with per capita income that year, and 235th out of 299 Alaskan communities with household income data. Based on the ACS, in that same year, 58.8% of the population age 16 and older was estimated to be in the

¹¹⁷¹ Unless otherwise noted, all monetary data are reported in nominal values.

¹¹⁷² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹¹⁷³ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹¹⁷⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹¹⁷⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alasak.gov/research/cpi/inflationcalc.htm>).

¹¹⁷⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹¹⁷⁷ See footnotes 1173 and 1174.

¹¹⁷⁸ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 17.1%, compared to the statewide unemployment rate of 5.9%. Approximately 23.4% of local residents were estimated to be living below the poverty line, compared to 9.6% of Alaskan residents overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Shaktoolik are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Shaktoolik.¹¹⁷⁹ A potentially more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 30%.¹¹⁸⁰

Based on household surveys conducted for the 2006-2010 ACS, the greatest number of workers was employed in the public sector (54.6%), while 41.2% were employed in the private sector and 4.1% were self-employed. Out of 97 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest number worked in education services, health care, and social assistance (51.5%) and transportation, warehousing, and utilities industries (15.5%). Compared to 2000, there were substantial increases in the percentage of the workforce estimated to be employed in education, health care, and social assistance and finance/insurance/real estate industries, while declines were observed in the percentage employed in public administration and retail trade. When viewing employment in terms of occupation, a majority of the workforce was employed in management/professional occupations in 2010 (46.4%), representing an increase from 2000. An increase was also observed in employment in natural resource/construction/maintenance occupations, while declines were estimated in sales/office and service occupations. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

In 2010, 0% of the Shaktoolik workforce was estimated to be employed in agriculture, forestry, fishing, hunting or mining industries. Likewise, detailed occupation tables show 0% of the workforce employed in farming, fishing, and forestry occupations that year. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the fishing industry may be underestimated in census statistics as fishermen may hold another job and characterize their employment accordingly. As with income statistics, it should also be noted that ACS and DOLWD employment statistics do not reflect residents' activity in the subsistence economy.

¹¹⁷⁹ See footnote 1176.

¹¹⁸⁰ See footnote 1173.

Figure 3. Local Employment by Industry in 2000-2010, Shaktoolik (U.S. Census).

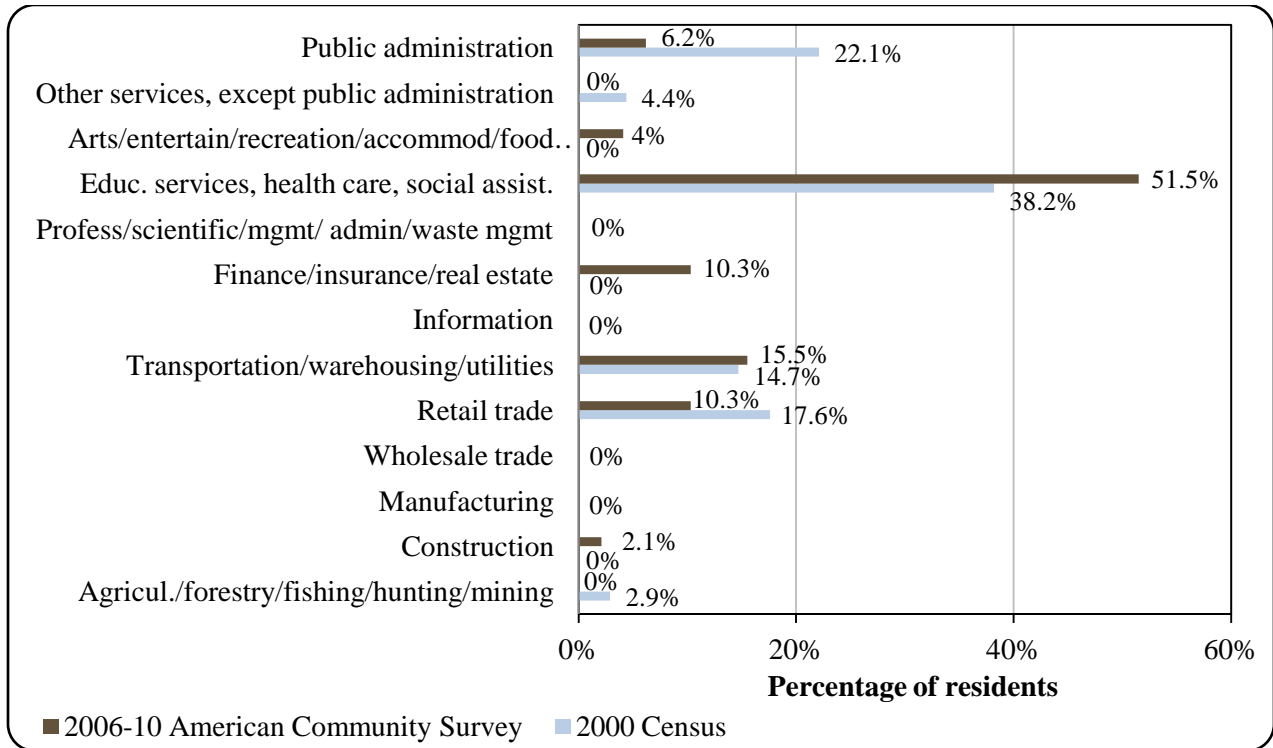
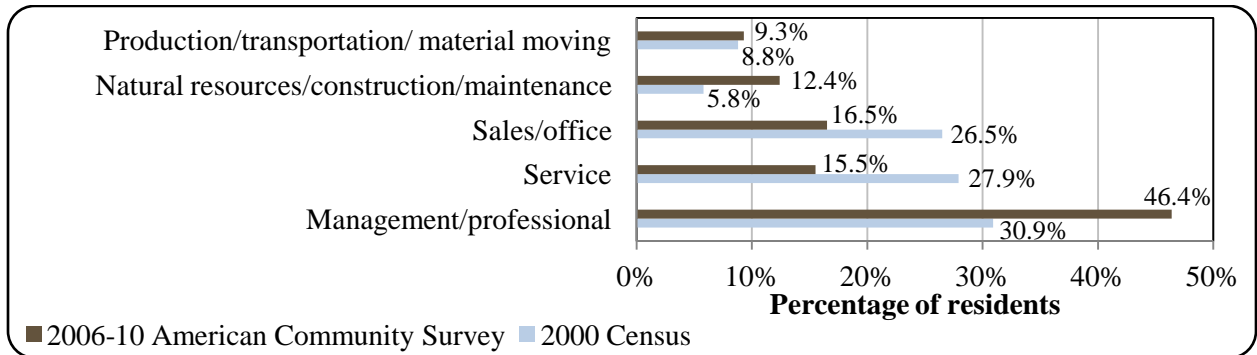


Figure 4. Local Employment by Occupation in 2000-2010, Shaktoolik (U.S. Census).



Governance

Shaktoolik is a 2nd Class City that is not located within an organized borough. The City has a “Strong Mayor” form of government, with a seven-person city council including the Mayor, a nine-person school board, and several municipal employees. The City of Shaktoolik administered a 4% sales tax in 2010, though in previous years the sales tax was 2%. In addition to sales tax revenues, locally-generated revenue sources for the City of Shaktoolik included a contract for operation of the electric utility and the health clinic, enterprise revenues including water/sewer and washeteria/sauna fees and revenues from the teen center, and building and equipment rentals. Outside revenue sources consisted primarily in state shared revenues and special project grants. Sources of shared revenue included the State Revenue Sharing program

from 2000 to 2003 and the Community Revenue Sharing program in 2009 and 2010, as well as the SAFE Communities program (public safety, utilities, infrastructure, etc.), municipal energy assistance, refunds from the telephone / electric co-op tax, and refunds from state raw fish taxes (see the *Fisheries-Related Revenue* section for more details). Federal shared revenues were also received in some years through the Payment In Lieu of Taxes program. Total municipal revenue was slightly higher than average from 2008 to 2009. In 2008, this can be explained by the over \$100,000 in municipal energy assistance received by the City that year. In addition to large Community Revenue Sharing contributions in 2009 and 2010, Shaktoolik received almost \$200,000 in capital project grants from the State of Alaska in 2010. Between 2000 and 2010, Shaktoolik was not reported to receive fisheries-related grants. Information about selected aspects of Shaktoolik’s municipal revenue is provided in Table 2.

Shaktoolik is federally recognized as a Native Village. The community was included under the Alaska Native Claims Settlement Act (ANCSA). The authorized traditional entity, recognized by the Bureau of Indian Affairs, is the Native Village of Shaktoolik. The Native village corporation is Shaktoolik Native Corporation, and the regional Native corporation to which Shaktoolik belongs is the Bering Strait Native Corporation.¹¹⁸¹

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Shaktoolik from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$245,620	\$19,622	\$28,381	\$150
2001	\$205,719	\$20,601	\$27,329	n/a
2002	\$236,631	\$19,622	\$27,327	n/a
2003	\$237,316	\$21,000	\$27,500	n/a
2004	\$231,880	\$19,500	n/a	n/a
2005	\$304,880	\$27,600	n/a	n/a
2006	\$245,560	\$31,050	n/a	n/a
2007	\$224,790	\$33,250	n/a	n/a
2008	\$453,638	\$34,250	n/a	n/a
2009	\$391,916	\$33,160	\$107,376	n/a
2010	\$510,606	\$53,500	\$107,585	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹¹⁸¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

The Native Village of Shaktoolik is also a member of Kawerak Inc., a Tribal non-profit organization with a mission to “assist, promote and provide programs and services to improve the social, economic, educational, cultural and governmental self-sufficiency for the betterment of the Native people within the region, and to preserve the traditional culture, languages and values.”¹¹⁸² Kawerak, Inc. is one of the 12 regional Alaska Native 501(c)(3) nonprofit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native Associations receive federal funding to administer a broad range of services to villages in their regions.¹¹⁸³ Kawerak, Inc. offers children and family services, community services, and education, employment and training opportunities for residents of the 18 member villages located in the Bering Strait region. The non-profit also includes a Natural Resources Division, which incorporates the Eskimo Walrus Commission, Land Management Services, Reindeer Herders Association, and Subsistence Resources Division.¹¹⁸⁴

The nearest office of the Alaska Department of Commerce, Community, and Economic Development is located in Nome, and the nearest office of the Alaska Department of Fish and Game (ADF&G) is located in Unalakleet. The nearest offices of the Alaska Department of Natural Resources, the National Marine Fisheries Service (NMFS), the Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are all located in Anchorage.

Infrastructure

*Connectivity and Transportation*¹¹⁸⁵

Shaktoolik is primarily accessible by air and sea. A state-owned 4,000 ft long by 75 ft wide gravel airstrip is available. The Alex Sookiayak Memorial Airstrip allows for regular service from Unalakleet. Summer travel is by ATVs, motorbikes, trucks, and boats; winter travel is by snowmobile and dog team. Cargo is delivered on a barge from Nome then lightered to shore. In June 2012, round-trip airfare between Shaktoolik and Anchorage was \$758.¹¹⁸⁶

*Facilities*¹¹⁸⁷

Water is pumped from the Togoomenik River three miles away to a pumphouse, where it is treated and stored in a 848,000-gallon insulated tank adjacent to the washeteria.¹¹⁸⁸ A piped water and sewage collection system serves most homes. Seventy-five percent (75%) of households have complete plumbing and kitchen facilities. The school is also connected to city water. The unpermitted landfill is available year-round. Law enforcement services are provided by state troopers in Nome and by a Village Public Safety Officer, while fire and rescue services

¹¹⁸² Kawerak, Inc.. 2006. *Homepage*. Retrieved February 17, 2012 from <http://www.kawerak.org/>.

¹¹⁸³ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹¹⁸⁴ See footnote 1182.

¹¹⁸⁵ Ibid.

¹¹⁸⁶ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹¹⁸⁷ See footnote 1181.

¹¹⁸⁸ “Washeteria” is another word for laundromat. In Alaska, washeterias often include shower facilities.

are provided by a volunteer fire department. The City has a city jail, a teen center, and a community building, and the school has a library.

*Medical Services*¹¹⁸⁹

Medical care is provided by the Shaktoolik Clinic, which is owned by the City and operated by the Norton Sound Health Corporation. The clinic is a Community Health Aid Program site. Emergency services have coastal and air access and are provided by a health aide. The nearest qualified Emergency Care Center is located in Unalakleet and the nearest hospital is located in Nome.

*Educational Opportunities*¹¹⁹⁰

The Shaktoolik School provides instruction to students from pre-school through 12th grade. In 2011 the school had 69 students and 8 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial salmon fisheries began to develop in Norton Sound shortly after the purchase of Alaska from Russia by the United States in 1867. However, the Norton Sound commercial salmon fishery developed later than in other regions of the State. In 1959 and 1960, biologists from the Division of Commercial Fisheries conducted an inventory of salmon resources and determined that harvestable surpluses were present in several Norton Sound river systems. They encouraged processors to develop the fishery after statehood as part of an effort to bring economic benefits to this area of rural Alaska. The first commercial harvest occurred in 1961, and salmon markets in the area have been sporadic since that time. Harvests increased through the 1990s, and have declined since then. Shaktoolik is located in Subdistrict 5 of the six Norton Sound salmon subdistricts.¹¹⁹¹

Commercial exploitation of halibut and groundfish first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹¹⁹² Shaktoolik is located in Pacific Halibut Fishery Regulatory Area 4E and the Bering Sea Sablefish Regulatory Area. Federal halibut quota held by the Norton Sound Economic Development Council (NSEDC), the regional CDQ non-profit entity, is harvested by fishermen from member villages using locally owned fishing vessels. Catch is delivered to

¹¹⁸⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹¹⁹⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹¹⁹¹ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹¹⁹² Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://ww.iphc.int/publications/scirep/Report0005.pdf>.

processing plants in Savoonga and Nome.¹¹⁹³ The CDQ system began in 1995, when management of the Pacific halibut and sablefish fisheries shifted from limited entry to a catch share program. The program also includes allocation of the annual Total Allowable Catch (TAC) of halibut and sablefish via Individual Fishing Quota (IFQ). In the Bering Sea – Aleutian Islands (BSAI) region only, a portion of the TAC is also allocated to the six CDQ non-profit organizations representing 65 communities in Western Alaska.¹¹⁹⁴ In 2010, the NSEDC received an allocation of 146,250 lbs of CDQ halibut quota, all of which was allocated for harvest within Area 4D.¹¹⁹⁵

Norton Sound has the northernmost fisheries for both Pacific herring and red king crab. Commercial catch of herring in Alaska for human consumption began in 1878, while commercial harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.¹¹⁹⁶ Although the Norton Sound herring spawning biomass has been relatively stable in recent times, the market for herring roe has declined due to decreasing consumption of herring roe in Japan. Processor interest in the Norton Sound sac roe fishery has declined more than in other areas of the State, largely due to the timing of the fishery, which takes place later than sac roe fisheries elsewhere in the state and conflicts with the opening of the first salmon fisheries of the season. In addition, ice floes are often present in Norton Sound during the herring season.¹¹⁹⁷

In contrast, the Norton Sound red king crab stock has shown an increasing trend since a population low in the 1990s, and today provides small summer and winter fisheries. King crab fisheries first developed in the Bering Sea beginning in the 1950s, and Norton Sound is one of the historical centers of this fishery.¹¹⁹⁸ NMFS and ADF&G jointly manage Bering Sea king crab stocks.¹¹⁹⁹ In addition to participation in state and federal king crab fisheries, Shaktoolik community members are eligible to participate in the CDQ king crab fishery. Most BSAI king, Tanner, and snow crab fisheries were included under a 2005 rationalization program. The program was proposed in response to overcapitalization and very short seasons in these fisheries. The crab rationalization program allocated harvest shares to historical license holders as well as to CDQ non-profit entities. In addition, processors were issued processing shares, and community interests were protected through community landing requirements. The crab rationalization program has been credited with improving safety and fuel savings in BSAI crab fisheries, and also resulted in a significant reduction of the total number of vessels involved in the fishery. For many communities, a problematic result of the program has been a dramatic reduction in employment for crew members.¹²⁰⁰

Shaktoolik is not eligible to participate in the Community Quota Entity (CQE) program.

¹¹⁹³ Norton Sound Economic Development Corporation. (n.d.). *Halibut Target Fishery*. Retrieved July 11, 2012 from <http://www.nsedc.com/halibut.html>.

¹¹⁹⁴ Fina, Mark. 2011. Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

¹¹⁹⁵ NOAA National Marine Fisheries Service. 2010. *Memorandum: 2010 Community Development Quota (CDQ) Halibut Allocations*. Retrieved January 8, 2013 from <http://www.fakr.noaa.gov/ram/10ifqcdqtac.pdf>.

¹¹⁹⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹¹⁹⁷ Ibid.

¹¹⁹⁸ See footnote 1196.

¹¹⁹⁹ Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=redkingcrab.main>.

¹²⁰⁰ See footnote 1194.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Shaktoolik does not have a registered processing plant. Processing facilities were listed in nearby Norton Sound communities of Nome and Unalakleet.

Fisheries-Related Revenue

Between 2000 and 2010, Shaktoolik received fisheries-related revenue from a raw fish tax and the Shared Fisheries Business Tax. Amounts received from raw fish tax revenue were relatively stable between 2000 and 2010, and amounts received from the shared Fisheries Business Tax declined between 2000 and 2010. In all years except 2000, less than \$500 was from fisheries-related sources. Information about known fisheries-related revenue received by Shaktoolik is presented in Table 3.¹²⁰¹

Commercial Fishing

In 2010, a total of 44 Shaktoolik residents (17.5% of the population) held 52 Commercial Fisheries Entry Commission (CFEC) permits for crab, halibut, herring, and salmon. The number of crab CFEC permits varied between 2000 and 2010, and in 2010, 75% of the crab CFEC permits were reported as fished. Between 2000 and 2010, there were between zero and two individuals holding halibut CFEC permits, and the percentage of those permits fished during that time period varied from zero to 100%. There were 21 individuals (8.4% of the population) holding 18 herring CFEC permits in 2010, both numbers which remained relatively stable between 2000 and 2010. For years in which herring CFEC permits were reported as fished, 2010 saw the lowest percentage of permits reported as fished between 2000 and 2010. The number of salmon CFEC permits and permit holders remained relatively stable between 2000 and 2010, and the percentage of those permits reported as fished decreased and then increased during the same period. There were three individuals holding three crab License Limitation Program (LLP) permits in 2010, an increase from one permit and permit holder in 2000. However the percentage of those crab LLP permits reported as fished varied from year to year during that same period. Information regarding state and federal commercial fishing permits is presented in Table 4.

The 18 herring CFEC permits issued in 2010 were for the Norton Sound gillnet fishery, and the 4 crab CFEC permits were for the king crab pot fishery using vessels under 60 ft in Norton Sound. It is important to note that, between 2003 and 2006, the community of Shaktoolik actively fished CDQ king crab permits as well as individually-held permits. Of the 29 salmon CFEC permits issued in 2010 in Shaktoolik, nearly all (27) were for the gill net fishery in Norton Sound and the remaining 2 were for the gillnet fishery in the Lower Yukon River. One halibut CFEC permit was issued in 2010 for the statewide longline fishery using vessels under 60 ft.

In 2010 there were 41 crew license holders (16.3% of the population) in Shaktoolik, though the number of crew license holders was variable between 2000 and 2010. There were no fish buyers or shore-side processing facilities located in Shaktoolik between 2000 and 2010. Also in 2010, 31 vessels were primarily owned by Shaktoolik residents and 32 vessels homeported in the community. Both of these numbers represent increased from 2000 levels. Between 2000 and

¹²⁰¹ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

2010, no vessels landed catch in Shaktoolik. Information regarding characteristics of the commercial fishing sector in Shaktoolik is provided in Table 5.

Between 2000 and 2010, no halibut or sablefish quota share account were held in Shaktoolik, and no quota shares or Individual Fishing Quota (IFQ) allotments were held (Table 6 and 7). Similarly, between 2005 and 2010, there were no crab quota share account holders in Shaktoolik, and no associated quota shares held or IFQ allotments for crab (Table 8).

Since there were no vessels landing catch in the community between 2000 and 2010, there are no landings or ex-vessel value data to report during this period (Table 9). When viewing landings and ex-vessel revenue generated by vessel owners residing in Shaktoolik, a majority of data are considered confidential due to the small number of participants. However, data can be reported in some years for crab, herring, and salmon fisheries. Crab landings decreased substantially between 2006 and 2009, as did the ex-vessel value of those landings. Herring landings are reported from 2000 to 2003, 2005 to 2006, and in 2010. During these years, the amount of herring landed by Shaktoolik residents, as well as the ex-vessel value of those landings, declined. Salmon landings, for years in which data were available (2001 and 2004 to 2006), appear to have increased during this period, as did the ex-vessel value of those landings. Information regarding landed lbs and ex-vessel value by species for Shaktoolik residents is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Shaktoolik: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$228	\$200	\$162	\$150	\$200	\$250	n/a	n/a	\$148	\$148	\$148
Shared Fisheries Business Tax ¹	\$4,886	\$112	\$162	n/a	\$63	\$159	\$187	\$148	\$79	\$58	\$72
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$5,114</i>	<i>\$312</i>	<i>\$324</i>	<i>\$150</i>	<i>\$263</i>	<i>\$409</i>	<i>\$187</i>	<i>\$148</i>	<i>\$227</i>	<i>\$206</i>	<i>\$220</i>
<i>Total municipal revenue⁵</i>	<i>\$245,620</i>	<i>\$205,719</i>	<i>\$236,631</i>	<i>\$237,316</i>	<i>\$231,880</i>	<i>\$304,880</i>	<i>\$245,560</i>	<i>\$224,790</i>	<i>\$453,638</i>	<i>\$391,916</i>	<i>\$510,606</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Shaktoolik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	1	1	1	2	2	3	3	3	3	3	3
	Active permits	0	0	0	1	1	3	2	3	2	1	1
	% of permits fished	-	-	-	50%	50%	100%	66%	100%	66%	33%	33%
	Total permit holders	1	1	1	2	3	3	3	3	3	3	3
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	1	2	0	7	4	7	8	5	4	6	4
	Fished permits	0	0	0	3	3	6	7	5	3	4	3
	% of permits fished	-	-	-	43%	75%	86%	88%	100%	75%	67%	75%
	Total permit holders	1	2	0	6	3	6	6	5	4	5	4
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	1	1	2	1	0	1	2	1
	Fished permits	0	0	0	1	1	2	0	0	1	1	0
	% of permits fished	-	-	-	100%	100%	100%	-	-	100%	50%	-
	Total permit holders	0	0	0	1	1	2	1	0	1	2	1
Herring (CFEC) ²	Total permits	19	18	18	18	16	20	20	19	18	19	18
	Fished permits	15	15	11	12	0	17	16	0	0	0	7
	% of permits fished	79%	83%	61%	67%	-	85%	80%	-	-	-	39%
	Total permit holders	19	20	19	19	16	21	21	18	19	20	21

Table 4 Cont. Permits and Permit Holders by Species, Shaktoolik: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	21	20	19	19	18	18	23	23	28	31	29
	Fished permits	16	11	6	9	10	10	18	17	22	19	23
	% of permits fished	76%	55%	32%	47%	56%	56%	78%	74%	79%	61%	79%
	Total permit holders	26	19	18	18	19	18	25	23	29	34	30
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>41</i>	<i>40</i>	<i>37</i>	<i>45</i>	<i>39</i>	<i>47</i>	<i>52</i>	<i>47</i>	<i>51</i>	<i>58</i>	<i>52</i>
	<i>Fished permits</i>	<i>31</i>	<i>26</i>	<i>17</i>	<i>25</i>	<i>14</i>	<i>35</i>	<i>41</i>	<i>22</i>	<i>26</i>	<i>24</i>	<i>33</i>
	<i>% of permits fished</i>	<i>76%</i>	<i>65%</i>	<i>46%</i>	<i>56%</i>	<i>36%</i>	<i>74%</i>	<i>79%</i>	<i>47%</i>	<i>51%</i>	<i>41%</i>	<i>63%</i>
	<i>Permit holders</i>	<i>36</i>	<i>32</i>	<i>30</i>	<i>31</i>	<i>30</i>	<i>32</i>	<i>37</i>	<i>35</i>	<i>41</i>	<i>49</i>	<i>44</i>

¹National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

²Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Shaktoolik: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Shaktoolik ²	Total Net Pounds Landed In Shaktoolik ^{2,5}	Total Ex-Vessel Value Of Landings In Shaktoolik ^{2,5}
2000	38	0	0	24	29	0	0	\$0
2001	39	0	0	23	30	0	0	\$0
2002	36	0	0	19	25	0	0	\$0
2003	45	0	0	21	27	0	0	\$0
2004	10	0	0	11	14	0	0	\$0
2005	52	0	0	28	33	0	0	\$0
2006	45	0	0	28	31	0	0	\$0
2007	15	0	0	20	25	0	0	\$0
2008	24	0	0	23	27	0	0	\$0
2009	20	0	0	28	27	0	0	\$0
2010	41	0	0	31	32	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Shaktoolik: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Shaktoolik: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Shaktoolik: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Shaktoolik: 2000-2010.

	<i>Total Net Lbs¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Shaktoolik Residents: 2000-2010.

	<i>Total Net Lbs¹</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	92,991	62,693	69,711	58,903	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	1,079,387	912,814	720,134	1,525,237	--	1,064,657	585,505	--	--	--	181,625
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	6,847	--	--	43,903	77,960	66,789	--	--	--	--
Total²	1,079,387	919,661	720,134	1,525,237	43,903	1,142,617	745,285	62,693	69,711	58,903	181,625
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Crab	--	--	--	--	--	--	\$230,299	\$177,269	\$251,211	\$185,812	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$97,145	\$75,764	\$50,001	\$80,838	--	\$90,496	\$29,861	--	--	--	\$24,519
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	\$ 1,902	--	--	\$18,015	\$41,655	\$33,847	--	--	--	--
Total²	\$97,145	\$77,666	\$50,001	\$80,838	\$18,015	\$132,151	\$294,006	\$177,269	\$251,211	\$185,812	\$24,519

Note: Cells showing "--" indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net lbs refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing in Shaktoolik is extremely limited. Between 2000 and 2010, there were no active sport fish guide businesses in the community, while one licensed sport fish guide was present in 2008 only. During the 2000-2010 time period, an average of 12 sport fishing licenses were sold to Shaktoolik residents per year (irrespective of the location of the point of sale). Also during this period, an average of 10 licenses were sold in the community (Table 11).

Table 11. Sport Fishing Trends, Shaktoolik: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Shaktoolik ²
2000	0	0	8	8
2001	0	0	10	15
2002	0	0	5	1
2003	0	0	12	13
2004	0	0	17	18
2005	0	0	9	7
2006	0	0	12	8
2007	0	0	16	16
2008	0	1	13	9
2009	0	0	22	8
2010	0	0	10	8

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	0	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Shaktoolik is located within Alaska Sport Fishing Survey Area W – Seward Peninsula – Norton Sound. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, there was significant sport fishing activity in both saltwater and freshwater, although freshwater sport fishing was more important in the region. Alaska resident anglers consistently fished more angler days in both freshwater and saltwater (34 – 2,663 saltwater and 6,199 to 17,579 freshwater angler days) than non-Alaska residents (0 – 204 saltwater and 2,087 – 8,307 freshwater angler days) during the period. This information about the sport fishing sector in and near Shaktoolik is displayed in Table 11.

The Alaska Statewide Harvest Survey, conducted by ADF&G between 2000 and 2010, noted that razor clams and hardshell clams are targeted by private anglers in Shaktoolik.

Subsistence Fishing

The Shaktoolik economy is based on subsistence, supplemented by part-time wage earnings. Fish, crab, moose, beluga whale, caribou, seal, rabbit, geese, cranes, ducks, ptarmigan, berries, greens, and roots are primary food sources.¹²⁰² Data for subsistence participation by household and species between 2000 and 2010 were not available. Neither was information about per capita subsistence harvest during this period (Table 12). However, data was reported by ADF&G regarding subsistence salmon permits. Between 2000 and 2008, a relatively stable number of subsistence salmon permits were issued to Shaktoolik households, and a consistent number were reported as fished each year. Total harvests of different salmon species were more variable from year to year. Pink and coho salmon were harvested in the greatest numbers, followed by chum and Chinook. A small number of sockeye salmon were also reported harvested each year. ADF&G did not report data regarding harvests of marine invertebrates or non-salmon fish during the 2000-2010 period. Data regarding subsistence harvests for salmon, marine invertebrates, and non-salmon fish are available in Table 13.

There were no data available regarding Subsistence Halibut Registration Certificate (SHARC) cards issued to Shaktoolik residents households between 2003 and 2010 (Table 14). Between 2000 and 2010, available data from the U.S. Fish and Wildlife Service and NMFS indicate that beluga whales and walrus were harvested by Shaktoolik residents for subsistence purposes in most years during this period. No data were reported by management agencies regarding subsistence harvest of sea otters, polar bear, Steller sea lions, harbor seals, or spotted seals by Shaktoolik residents between 2000 and 2010 (Table 15).

¹²⁰² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Table 12. Subsistence Participation by Household and Species, Shaktoolik: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Shaktoolik: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	56	54	440	2,412	2,799	5,432	20	n/a	n/a
2001	60	51	936	1,553	2,090	10,172	143	n/a	n/a
2002	59	57	1,230	800	2,169	8,769	4	n/a	n/a
2003	62	58	881	587	2,941	12,332	50	n/a	n/a
2004	66	55	655	138	1,385	5,063	8	n/a	n/a
2005	60	58	672	169	1,594	10,062	n/a	n/a	n/a
2006	63	58	382	351	1,968	4,817	36	n/a	n/a
2007	68	60	515	465	1,443	2,708	28	n/a	n/a
2008	57	51	422	201	1,504	4,920	2	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Shaktoolik: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Shaktoolik: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	2	n/a	n/a	n/a	n/a
2001	40	n/a	3	n/a	n/a	n/a	n/a
2002	12	n/a	n/a	n/a	n/a	n/a	n/a
2003	10	n/a	3	n/a	n/a	n/a	n/a
2004	26	n/a	11	n/a	n/a	n/a	n/a
2005	13	n/a	4	n/a	n/a	n/a	n/a
2006	14	n/a	7	n/a	n/a	n/a	n/a
2007	19	n/a	21	n/a	n/a	n/a	n/a
2008	12	n/a	6	n/a	n/a	n/a	n/a
2009	17	n/a	3	n/a	n/a	n/a	n/a
2010	11	n/a	3	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Shishmaref (SHISH-muh-reff)



People and Place

*Location*¹²⁰³

Shishmaref is located on Sarichef Island, in the Chukchi Sea just north of the Bering Strait. Shishmaref is 5 miles from the mainland, 126 miles north of Nome, and 100 miles southwest of Kotzebue. The village is surrounded by the 2.6 million-acre Bering Land Bridge National Preserve. It is part of the Beringian National Heritage Park, endorsed by Presidents Bush and Gorbachev in 1990. Shishmaref is located in the Cape Nome Recording District and the Nome Census Area, and is not located within an organized borough. The City encompasses 2.8 square miles of land and 4.5 square miles of water.

*Demographic Profile*¹²⁰⁴

In 2010, there were 563 residents in Shishmaref, making it the 106th largest of 352 total Alaskan communities with recorded populations that year. According to Alaska Department of Labor population estimates, between 2000 and 2009, the population of Shishmaref grew by 7.83%, with an average annual growth rate of 0.66%, indicating slow growth. However, the U.S. Census shows that the population remained relatively stable between 2000 and 2010. The change in population from 1990 to 2010 is shown in Table 1.

In 2010, almost all Shishmaref residents identified themselves as American Indian or Alaska Native (94.8%). Other ethnic groups present in Shishmaref that year included two or more races (1.2%), Asian (0.4%), White (3.6%), and Hispanic or Latino (0.2%). Between 2000 and 2010, the percentage of the population identifying themselves as American Indian or Alaska Native increased by 1.6% and the percentage of the population identifying themselves as Asian increased by 0.4%, with corresponding decreases in the percentage of the population identifying themselves as White, Hispanic or Latino, and two or more races. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

In 2010, the average household size in Shishmaref was 3.99, an increase from 3.96 persons per household in 2000 and 3.80 in 1990. The total number of households in Shishmaref increased from 119 in 1990 to 142 in 2000 then decreased by one to 141 in 2010. Of the 151 total housing units surveyed for the 2010 Decennial Census, 84 were owner-occupied, 57 were renter-occupied, and 10 were vacant. Throughout this period, no residents of Shishmaref were reported to be living in group quarters.

¹²⁰³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁰⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

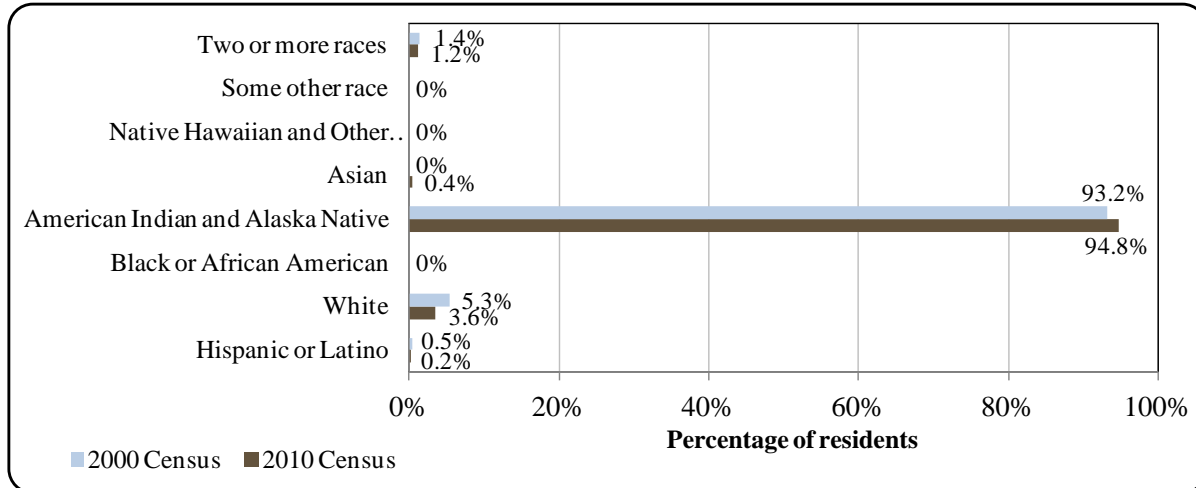
Table 1. Population in Shishmaref from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	456	-
2000	562	-
2001	-	586
2002	-	589
2003	-	594
2004	-	595
2005	-	582
2006	-	617
2007	-	607
2008	-	586
2009	-	606
2010	563	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

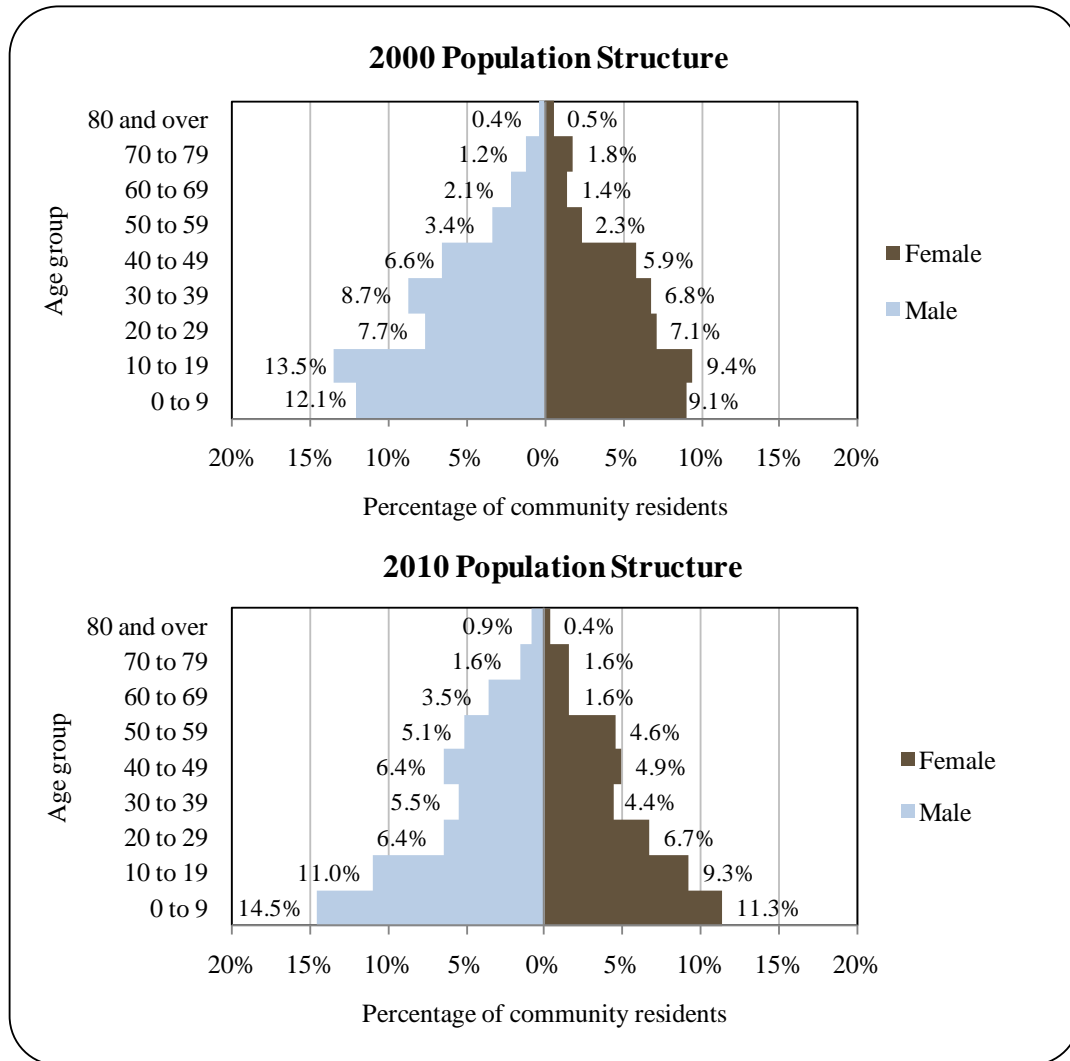
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Shishmaref: 2000-2010 (U.S. Census).



The gender makeup in Shishmaref in 2010 was 55.1% male and 44.9% female, slightly more skewed than the state as a whole (52% male, 48% female). The median age was estimated to be 22.5 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of residents fell within the age group zero to 19 years old, with the next largest percentage in the 20 to 39 year old age group. The overall population structure of Shishmaref in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Shishmaref Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, according to the 2006-2010 American Community Survey (ACS),¹²⁰⁵ 79.1% of Shishmaref residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 12.3% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 8.6% were estimated to have a ninth to 12th grade education, compared to 5.8% of Alaskan residents overall; 48.9% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 24.3% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 2.2% were estimated to have an Associate's degree, compared to 8%

¹²⁰⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

of Alaskan residents overall; and 3.7% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall. There were no Shishmaref residents estimated to hold a graduate or professional degree in 2010.

*History, Traditional Knowledge, and Culture*¹²⁰⁶

The original Inuit name for the island was “Kigiktaq.” In 1816, Lt. Otto Von Kotzebue named the inlet “Shishmarev,” after a member of his crew. Excavations at “Keekiktuk” by archaeologists around 1821 provided evidence of Inuit habitation from several centuries ago. Shishmaref has an excellent harbor, which became a supply center for gold mining activities to the south around 1900. The village was named after the inlet, and a post office was established in 1901. The city government was incorporated in 1969. During October 1997, a severe storm eroded over 30 feet of the north shore, requiring 14 homes and the National Guard Armory to be relocated. Five additional homes were relocated in 2002. Other storms have continued to erode the shoreline an average of three to five feet per year on the north shore. In July 2002 residents voted to relocate the community. Shishmaref is a traditional Inupiat village with a fishing and subsistence lifestyle. The sale and importation of alcohol is banned.

Natural Resources and Environment

On the northern shore of the Seward Peninsula, the area experiences a transitional climate between the frozen Arctic and the continental Interior. Summers can be foggy, with average temperatures ranging from 47 to 54 °F (8.3 to 12.2 °C); winter temperatures average -12 to 2 °F (-24.4 to -16.7 °C). Average annual precipitation is about 8 inches, with 33 inches of snow. The Chukchi Sea is frozen from mid-November through mid-June.¹²⁰⁷

According to the Shishmaref Erosion and Relocation Coalition, the community of Shishmaref has determined that the threat to life and property from reoccurring beachfront erosion requires immediate action. The community has taken the first step by establishing an erosion and relocation coalition made up of the governing members of the City, Indian Reorganization Act (IRA) Council and Shishmaref Native Corporation Board of Directors. Faced with the decision of whether to remain at its present location or to move, the majority of the community is in favor of moving. Shishmaref is situated on a barrier island no wider than 1/4 mi, and 3 miles in length. The island is comprised of fine sand deposits and permafrost that is vulnerable to erosion. The community has experienced erosion of its north shoreline an average of 3-5 feet per year, except for the storms of: November 9th and 10th, 1973, October 4th, 1997, and October 7th, 2001 where extensive erosion in highly vulnerable areas was as much as 125 feet in horizontal distance. Shishmaref is also experiencing erosion of the southern side of the island, which is noticeably reducing the size of the island. The community is most vulnerable when tidal high water is combined with intense wave action of the Chukchi Sea during storms. Erosion has been heightened by continual degradation of permafrost. An average high tide is three feet above the normal tide, during storms; the wave action can increase the high tide by three feet, which causes the waves to crest over the bluff. The loss of land through erosive action and increasing risk to property and lives has caused a dangerous situation for the community of

¹²⁰⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁰⁷ Ibid.

Shishmaref. The community has determined that staying on the island to face the ever-present threat from ocean-based storms is unacceptable. The only viable solution is to relocate the community off the island to a nearby mainland location that is accessible to the sea, suitable for the subsistence lifestyle of the community, and preserves the culture and integrity of the community.¹²⁰⁸

Shishmaref is located adjacent to the Bering Land Bridge National Preserve, which is part of the Beringian National Heritage Park. The Bering Land Bridge National Preserve has the wildlife and permafrost features of the icy north, but has also had explosive volcanic events. It is a place where the presence of the Bering Land Bridge was confirmed. The Preserve has a rich diversity of offerings for those wishing to experience the raw, wild nature of Alaska's far northwestern ecosystems through recreation as well as for scientific research.¹²⁰⁹

Current Economy¹²¹⁰

The Shishmaref economy is based on subsistence supplemented by part-time wage earnings. In 2010, one resident held a commercial fishing permit. Year-round jobs are limited. Villagers rely on fish, walrus, seal, polar bear, rabbit, and other subsistence foods. Two reindeer herds are managed from here. Reindeer skins are tanned locally, and meat is available at the village store. The Friendship Center, a cultural center and carving facility, was constructed for local artisans.¹²¹¹

Based on household surveys conducted for the 2006-2010 ACS,¹²¹² in 2010, the per capita income in Shishmaref was estimated to be \$10,203 and the median household income was estimated to be \$39,063, compared to \$10,487 and \$30,714 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹²¹³ the real per capita income in 2000 is shown to have been \$13,790 and the real household income was \$40,388. This shows that both per capita and household income decreased between 2000 and 2010. In 2010, Shishmaref ranked 272nd of 305 Alaskan communities with per capita income that year, and 195th out of 299 Alaskan communities with household income data.

However, Shishmaref's small population size may have prevented the ACS from accurately portraying economic conditions.¹²¹⁴ An alternative understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce

¹²⁰⁸ Shishmaref Erosion and Relocation Coalition. 2012. *Shishmaref: We Are Worth Saving!* Retrieved on May 9, 2012 from <http://www.shishmarefrelocation.com/>.

¹²⁰⁹ National Park Service (n.d.). *Bering Land Bridge National Preserve. Nature and Science*. Retrieved March 12, 2012 from <http://www.nps.gov/bela/naturescience/index.htm>.

¹²¹⁰ Unless otherwise noted, all monetary data are reported in nominal values.

¹²¹¹ See footnote 1208.

¹²¹² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²¹³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹²¹⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

Development (DOLWD). If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Census, the resulting per capita income estimate for Shishmaref in 2010 is \$7,189.^{1215,1216} This estimate provides support for an overall decrease in per capita income in Shishmaref between 2000 and 2010. These relatively low income figures are reflected in the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹²¹⁷

Based on the 2006-2010 ACS, in 2010, 54.5% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 9.6%, compared to the statewide unemployment rate of 5.9%. Approximately 26.9% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Shishmaref are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the population of Shishmaref. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 23.6%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was employed in the private sector (50%), while 45.2% were employed in the public sector, and 4.8% were estimated to be self-employed. Out of 186 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentages worked in education services, health care, and social assistance industries (41.4%), retail trade (14%), services other than public administration (12.4%), and public administration (11.3%). Occupations in which the greatest percentages of the workforce were estimated to be employed were sales and office (29.6%) and management, business, science, and arts occupations (29%). No residents were estimated to be working in fishing-related industries or occupations in 2010. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed by fishing is likely underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. In addition, as with income and poverty statistics, it is important to note that these employment figures reported for Shishmaref do not reflect the value of subsistence to the local economy. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

¹²¹⁵ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²¹⁶ See footnote 1212.

¹²¹⁷ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from www.denali.gov.

Figure 3. Local Employment by Industry in 2000-2010, Shishmaref (U.S. Census).

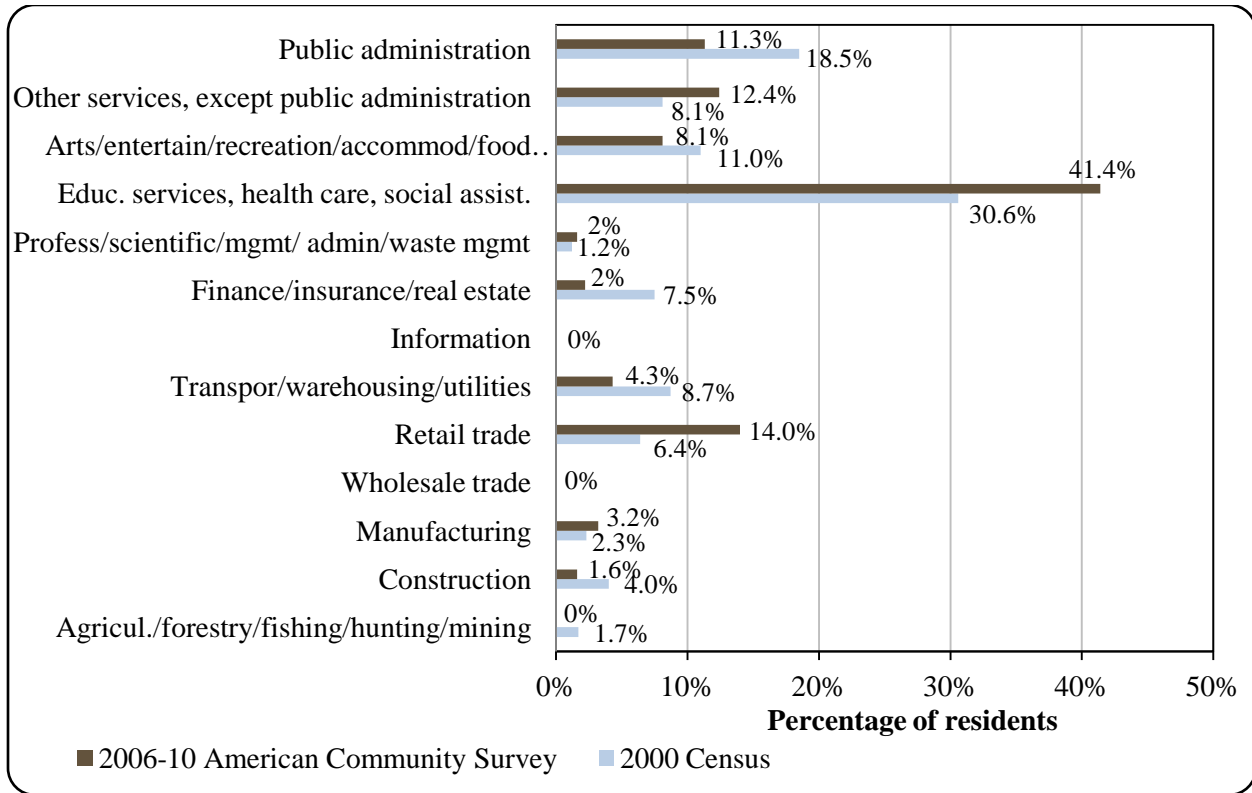
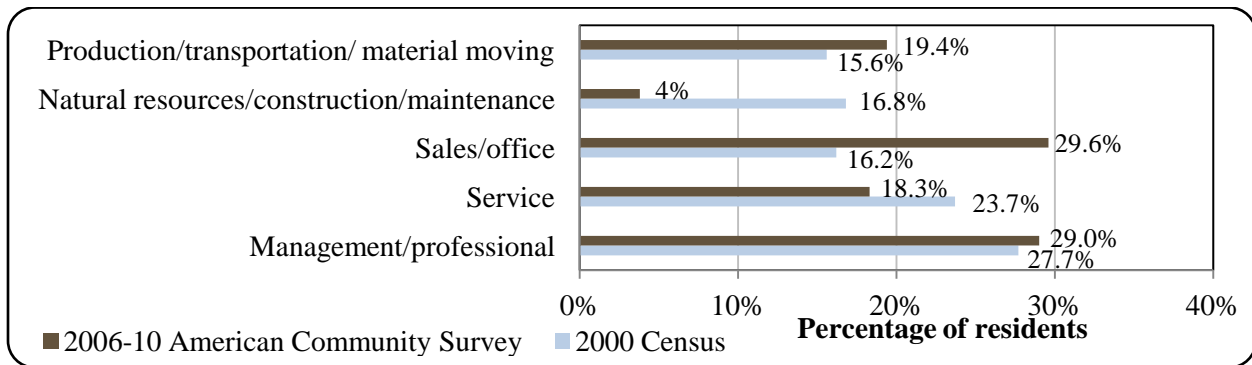


Figure 4. Local Employment by Occupation in 2000-2010, Shishmaref (U.S. Census).



Governance

Shishmaref is a 2nd Class City, and is not located in an organized borough.¹²¹⁸ The City administers a 2% sales tax, and there appears to have been an overall increase in sales tax revenues received between 2000 and 2010. Other locally-generated revenue sources in Shishmaref between 2000 and 2010 included bingo and pull tab receipts, contracted services

¹²¹⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

such as operation of the electric utility and health clinic and road and airport maintenance, rentals of buildings and equipment, charges for use of services such as the washeteria/sauna, water and sewer, garbage collection, honeybucket bin removal, solid waste, and fuel sales. Outside revenue sources included state and federal grants and shared revenue. Sources of shared revenue included the State Revenue Sharing program (between \$28,000 and \$40,000 per year from 2000 to 2003), the Community Revenue Sharing program (approximately \$125,000 per year in 2009 and 2010), the SAFE Communities program (public safety, utilities, infrastructure, etc.), and state Payment In Lieu of Taxes funds. Fisheries-related grants received by the City of Shishmaref during the 2000-2010 period included funds in 2006 and 2008 for beach seawall protection and capital improvements, including hauls and port improvements. Information on selected municipal, state, or federal revenue streams for Shishmaref is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Shishmaref from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$839,405	\$40,894	\$28,163	n/a
2001	\$908,442	\$36,669	\$28,000	n/a
2002	\$416,772	\$37,305	\$27,107	n/a
2003	\$395,170	\$38,316	\$27,150	n/a
2004	\$728,127	\$34,277	\$40,000	n/a
2005	\$802,945	\$29,556	n/a	n/a
2006	\$516,695	\$25,354	n/a	\$496,000
2007	\$1,030,816	\$31,713	n/a	n/a
2008	\$804,397	\$63,709	n/a	\$37,730
2009	\$843,315	\$64,979	\$127,385	n/a
2010	\$925,098	\$60,364	\$125,945	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

A federally-recognized Native Tribe is also located in Shishmaref. The Native Village of Shishmaref was included in the Alaska Native Claims Settlement Act. The Native village corporation in Shishmaref Native Corporation. The regional Native corporation representing the Village is the Bering Strait Native Corporation (BSNC).¹²¹⁹ The mission of the BSNC is, “To improve the quality of life of our people through economic development while protecting our land, and preserving our culture and heritage.” The BSNC, owned by Alaska Native

¹²¹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

shareholders, actively pursues responsible development of resources and other business opportunities. Through its subsidiaries, BSNC serves government and commercial customers throughout the region, Alaska, the United States and the world.¹²²⁰

The Native Village of Shishmaref is also a member of Kawerak Inc., a Tribal non-profit organization with a mission to “assist, promote and provide programs and services to improve the social, economic, educational, cultural and governmental self-sufficiency for the betterment of the Native people within the region, and to preserve the traditional culture, languages and values.”¹²²¹ Kawerak, Inc. is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer a broad range of services to villages in their regions.¹²²² Kawerak, Inc. offers children and family services, community services, and education, employment and training opportunities for residents of the 18 member villages located in the Bering Straits region. The non-profit also includes a Natural Resources Division, which incorporates the Eskimo Walrus Commission, Land Management Services, Reindeer Herders Association, and Subsistence Resources Division.¹²²³

The closest offices of the Alaska Department of Fish and Game (ADF&G) and Department of Commerce, Community, and Economic Development are located in Kotzebue and Nome. The nearest office of the Alaska Department of Natural Resources is located in Fairbanks. The nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Shishmaref’s primary link to the rest of Alaska is by air. A state-owned 5,000 feet long by 70 feet wide paved runway is available for charter and freight services from Nome. Most people use boats for trips to the mainland.¹²²⁴ In June 2012, roundtrip airfare to Anchorage (connecting in Nome) was \$792.¹²²⁵

*Facilities*¹²²⁶

Water is derived from a surface source, treated, and stored in a new tank. A flush/haul system provides services to some homes. Unserved homes continue to haul water. Honeybuckets and flush tanks are hauled by the City. The school, clinic, Friendship Center, city hall, and fire hall are connected to a sewage lagoon. Law enforcement services are provided by a Village

¹²²⁰ Bering Straits Native Corporation. 2012. Retrieved May 9, 2012 from <http://www.beringstraits.com/>.

¹²²¹ Kawerak, Inc.. 2006. *Homepage*. Retrieved February 17, 2012 from <http://www.kawerak.org/>.

¹²²² U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹²²³ See footnote 1221.

¹²²⁴ Ibid.

¹²²⁵ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹²²⁶ See footnote 1219.

Public Safety Officer (VPSO) and by state troopers based in Nome. Fire and rescue services are provided by the State VPSO and by the city volunteer fire department and emergency services. The city also operates a city jail. The Melvin Olanna Friendship Center has a youth center, community hall, and senior services. There is a school gym, a city sports center, and a public and school library.

*Medical Services*¹²²⁷

Medical services are provided by the Katherine Miksruaq Olanna Health Clinic, which is owned by the Village Council and operated by the Norton Sound Health Corporation. The clinic is a Community Health Aid Program site. Alternate health care is provided by the city volunteer fire department/emergency services. Emergency services have coastal and air access and are provided by a health aide. The nearest hospital is located in Nome.

*Educational Opportunities*¹²²⁸

The Shishmaref School provides instruction to students in pre-school through 12th grade. In 2011 the school had 192 students and 17 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Shishmaref is included in the Arctic Management Area. Commercial fishing for all species is currently prohibited in federally regulated waters of the Arctic Management Area, “until sufficient information is available to support the sustainable management of a commercial fishery.”¹²²⁹ The community is not located within a Pacific Halibut Fishery Regulatory Area or a Sablefish Regulatory Area. Shishmaref is not eligible to participate in the Community Development Quota or Community Quota Entity programs.

Processing Plants

According to ADF&G’s 2010 Intent to Operate list, Shishmaref does not have a registered processing plant. The nearest processing plants are located in Nome and Kotzebue.

Fisheries-Related Revenue

Between 2000 and 2010, no data were reported about fisheries-related revenue received by Shishmaref (Table 3).

¹²²⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/comddb/CF_BLOCK.htm.

¹²²⁸ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹²²⁹ North Pacific Fishery Management Council. (2009). *Arctic Fishery Management Plan*. Retrieved February 29, 2012 from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf>.

Commercial Fishing

Between 2010, Shishmaref residents held a total of two commercial salmon fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for the Kotzebue and Norton Sound gillnet fisheries. The only year during the 2000-2010 period in which one of these salmon permits was actively fished was 2010. Information on commercial fishing permits and permit holders by species between 2000 and 2010 for Shishmaref residents is presented in Table 4. Between 2000 and 2010, the number of crew license holders residing in Shishmaref varied between zero and two. No fish buyers or shore-side processing facilities were present in the community during the 2000-2010 period. As a result, no vessels landed catch in the community. Likewise, no vessels were primarily owned by Shishmaref residents and no vessels were homeported in Shishmaref (Table 5). Also between 2000 and 2010, no Shishmaref residents held quota share accounts in federal catch share fisheries for halibut, sablefish, or crab (Tables 6 through 8). Given the lack of fish buyers operating locally or vessel owners residing in Shishmaref (Table 5), no commercial landings or associated ex-vessel revenue were reported locally (Table 9) and no landings and ex-vessel revenue were generated by Shishmaref vessel owners (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Shishmaref: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Total municipal revenue⁵	\$839,405	\$908,442	\$416,772	\$395,170	\$728,127	\$802,945	\$516,695	\$1,030,816	\$804,397	\$843,315	\$925,098

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Shishmaref: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Shishmaref: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	2	2	2	2	2	2	2	2	2	2	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	1
	% of permits fished	-	-	-	-	-	-	-	-	-	-	50%
	Total permit holders	2	2	2	2	2	2	2	2	2	2	2
<i>Total CFEC Permits²</i>	<i>Permits</i>	2	2	2	2	2	2	2	2	2	2	2
	<i>Fished permits</i>	0	0	0	0	0	0	0	0	0	0	1
	<i>% of permits fished</i>	-	-	-	-	-	-	-	-	-	-	50%
	<i>Permit holders</i>	2	2	2	2	2	2	2	2	2	2	2

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Shishmaref: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Shishmaref ²	Total Net Pounds Landed In Shishmaref ^{2,5}	Total Ex-Vessel Value Of Landings In Shishmaref ^{2,5}
2000	1	0	0	0	0	0	0	\$0
2001	0	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	0	0	0	0	0	0	0	\$0
2005	1	0	0	0	0	0	0	\$0
2006	0	0	0	0	0	0	0	\$0
2007	2	0	0	0	0	0	0	\$0
2008	2	0	0	0	0	0	0	\$0
2009	1	0	0	0	0	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Shishmaref: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Shishmaref: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Shishmaref: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Shishmaref: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Shishmaref Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no active sport fish guide businesses or licensed sport fish guides registered in Shishmaref. However, some sport fishing activity was reported by ADF&G. Between 2000 and 2010, the number of sport fishing licenses sold in Shishmaref varied between 0 and 52 per year. The number of licenses purchased by Shishmaref was generally higher, varying between 8 and 71 purchased per year (irrespective of point of sale). That fact that Shishmaref residents purchase more licenses than were sold in the City suggests that residents travel to other communities to prepare for and engage in sport fishing activities.

Shishmaref is located within Alaska Sport Fishing Survey Area W – Seward Peninsula – Norton Sound. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, there was significant sport fishing activity in both saltwater and freshwater, although freshwater sport fishing was more important in the region. Alaska resident anglers consistently fished more angler days in both freshwater and saltwater (34 – 2,663 saltwater and 6,199 to 17,579 freshwater angler days) than non-Alaska residents (0 – 204 saltwater and 2,087 – 8,307 freshwater angler days) during the period. This information about the sport fishing sector in and near Shishmaref is displayed in Table 11.

The Alaska Statewide Harvest Survey, conducted by the ADF&G between 2000 and 2010, noted that coho salmon, Dolly Varden, and Arctic grayling are generally targeted by private anglers in Shishmaref.¹²³⁰ Given the lack of sport fish guide businesses in Shishmaref, no kept/release log book data were reported for fishing charters out of the community between 2000 and 2010.¹²³¹

Table 11. Sport Fishing Trends, Shishmaref: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Shishmaref ²
2000	0	0	71	37
2001	0	0	66	48
2002	0	0	45	20
2003	0	0	46	40
2004	0	0	40	21
2005	0	0	49	35
2006	0	0	60	51
2007	0	0	56	52
2008	0	0	49	37
2009	0	0	48	39
2010	0	0	8	0

¹²³⁰ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

¹²³¹ Alaska Department of Fish and Game. 2011. *Alaska sport fish charter logbook database, 2000 – 2010*. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 11 cont'd. Sport Fishing Trends, Shishmaref: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	0	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

The Shishmaref economy is based on subsistence harvesting supplemented by part-time wage earnings. Year-round jobs are limited. Villagers in Shishmaref rely on fish, walrus, seal, polar bear, rabbit, and other subsistence foods.¹²³² According to information compiled by the Shishmaref Erosion and Relocation Coalition, it is a common sight to observe drying racks outside Shishmaref homes full of drying bearded seal, ugzruk, fish, reindeer, and caribou meat. They also note that seal oil is an important resource utilized by residents, with each family putting up an average of 50 gallons per year. Local people say that the subsistence hunting lifestyle is an important reason why families remain in Shishmaref rather than moving to urban centers such as Nome that offer a greater opportunity for cash employment.¹²³³

No information is available from ADF&G between 2000 and 2010 regarding the percentage of Shishmaref households participating in the harvest of various subsistence resources, or per capita subsistence harvest (Table 12). However, data are available regarding

¹²³² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²³³ Shishmaref Erosion and Relocation Coalition. 2012. *Our Culture*. Retrieved on May 9, 2012 from http://www.shishmarefrelocation.com/our_culture.html.

total subsistence harvest of some resources, including salmon, halibut, and some marine mammal species.

Data about annual subsistence salmon permits are available between 2001 and 2005. During this period, between one and two subsistence salmon permits were issued to households in Shishmaref each year, and between one and two of these permits were reported as actively fished. Species harvested included chum, coho, pink, and sockeye salmon, though numbers of each species harvested were relatively low and varied from year to year. Data were not available regarding harvest of marine invertebrates or non-salmon fish (not including halibut) during this period. Information on subsistence harvest of salmon, marine invertebrates, and non-salmon fish is presented in Table 13.

Between 2003 and 2007, one individual held a Subsistence Halibut Registration Certificate (SHARC) card in Shishmaref. However, data regarding whether the SHARC card was fished and any associated harvest were not available (Table 14).

Data reported regarding subsistence harvest of marine mammals in Shishmaref between 2000 and 2010 suggest that sea otters, walrus, and polar bears were the primary species harvested by residents. Annually, walrus made up the most significant component of annual marine mammals harvests, varying between 1 and 109 animals harvested per year, with an average of 33 walrus harvested for subsistence each year between 2000 and 2010. No data were reported by management agencies regarding subsistence harvest of beluga whale, Steller sea lion, harbor seal, or spotted seal between 2000 and 2010. Information about marine mammal subsistence harvests is presented in Table 15.

Although limited data were available regarding subsistence harvests of non-salmon fish, marine invertebrates, and marine mammal between 2000 and 2010, a subsistence survey conducted by the ADF&G Division of Subsistence in the mid-1990s provides some information about species utilized locally. According to the survey, in 1995, Shishmaref households reported harvesting the following species of marine invertebrates: blue mussels, sea cucumber, shrimp, unknown clams, unknown king crab, unknown marine invertebrates, and whelk. Marine mammals reported as harvested for subsistence use included adult bearded seals, bowhead, gray whale, ribbon seal, ringed seal, spotted seal, and young bearded seal. Non-salmon fish reported as harvested for subsistence use included: Arctic cod, Bering cisco, broad whitefish, burbot, Dolly Varden, grayling, herring, humpback whitefish, least cisco, round whitefish, saffron cod, sheefish, sucker, unknown flounder, unknown non-salmon fish, unknown sculpin, and unknown smelt.¹²³⁴

¹²³⁴ Alaska Department of Fish and Game. (2011). *Community Subsistence Information System (CSIS)*. ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 12. Subsistence Participation by Household and Species, Shishmaref: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Shishmaref: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	1	1	n/a	n/a	n/a	n/a	18	n/a	n/a
2002	2	1	n/a	n/a	n/a	n/a	20	n/a	n/a
2003	2	2	n/a	n/a	n/a	n/a	55	n/a	n/a
2004	2	2	n/a	3	19	34	n/a	n/a	n/a
2005	2	2	n/a	n/a	n/a	14	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Shishmaref: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Shishmaref: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	42	2	2	n/a	n/a	n/a
2001	n/a	n/a	24	6	n/a	n/a	n/a
2002	n/a	n/a	109	2	n/a	n/a	n/a
2003	n/a	n/a	38	2	n/a	n/a	n/a
2004	n/a	n/a	70	n/a	n/a	n/a	n/a
2005	n/a	n/a	51	n/a	n/a	n/a	n/a
2006	n/a	n/a	28	3	n/a	n/a	n/a
2007	n/a	n/a	13	3	n/a	n/a	n/a
2008	n/a	n/a	1	n/a	n/a	n/a	n/a
2009	n/a	n/a	7	n/a	n/a	n/a	n/a
2010	n/a	1	21	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Stebbins (STEB-inz)



People and Place

*Location*¹²³⁵

Stebbins is located on the northwest coast of St. Michael Island, on Norton Sound. It lies 8 miles north of St. Michael and 120 miles southeast of Nome. Stebbins is located in the Cape Nome Recording District and the Nome Census Area, and is not located within an organized Borough. The community encompasses 35.2 square miles of land and 1.7 square miles of water.

*Demographic Profile*¹²³⁶

In 2010, there were 556 inhabitants in Stebbins, making it the 109th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2010, the population of Stebbins grew by 10.6%, with an average annual growth rate of 1.58%. The change in population from 1990 to 2010 is provided in Table 1.

In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders did not report the presence of seasonal workers or transients in Stebbins; however, they did report that the annual peak in population is during the subsistence fishing season (between May and October).

In 2010, a majority of Stebbins residents identified themselves as American Indian and Alaska Native (95.3%). Other ethnic groups present in Stebbins that year included White (4.3%), Asian (0.2%), and Black or African American (0.2%). Between 2000 and 2010, the population of residents identifying themselves as American Indian and Alaska Native increased by 1.3%, and the population of residents identifying themselves as Asian increased by 0.2%. There were corresponding decreases in the percentages of the population identified as White and as two or more races. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Stebbins in 2010 was 4.15, a decrease from 4.6 persons per household in 1990 and 4.45 in 2000. The total number of households in Stebbins increased from 86 in 1990 to 123 in 2000 to 134 occupied housing units in 2010. Of the 153 total housing units surveyed for the 2010 Decennial Census, 63 were owner-occupied, 71 were renter-occupied, and 19 were vacant. Throughout this period, no residents of Stebbins were reported to be living in group quarters.

¹²³⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²³⁶ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Stebbins from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	400	-
2000	547	-
2001	-	599
2002	-	587
2003	-	570
2004	-	589
2005	-	597
2006	-	613
2007	-	597
2008	-	577
2009	-	605
2010	556	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Stebbins: 2000-2010 (U.S. Census).

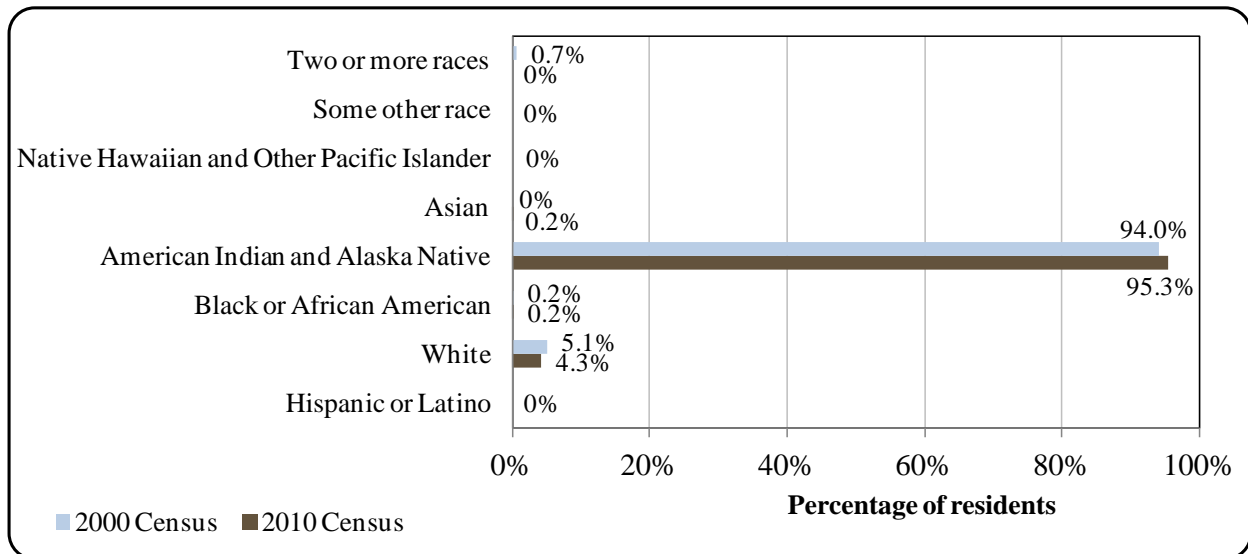
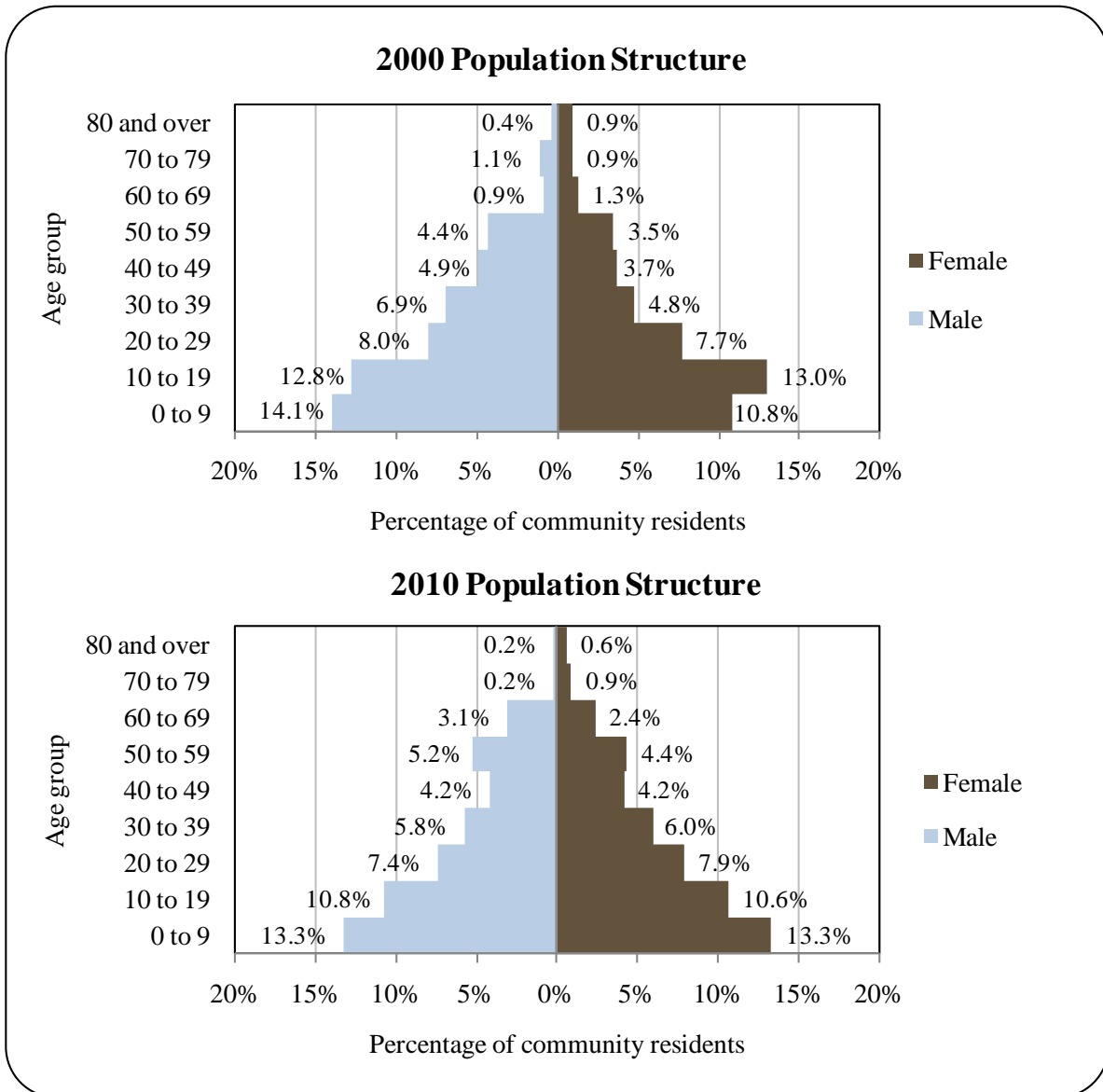


Figure 2. Population Age Structure in Stebbins Based on the 2000 and 2010 U.S. Decennial Census.



In 2010, the gender makeup in Stebbins was even 50% male and 50% female, slightly different from the state as a whole (52% male, 48% female). The median age was estimated to be 21.5 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the largest percentage of the population fell within the age group zero to nine years old, with the next largest percentage falling within the age group 10 to 19 years old. Relatively few Stebbins residents were age 70 or older. The overall population structure of Stebbins in 2000 and 2010 is shown in Figure 2.

According to the 2006-10 American Community Survey (ACS),¹²³⁷ in terms of educational attainment, 73.1% of Stebbins residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 13.5% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 13.5% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 47.6% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 16.8% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 1.9% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 1% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 5.8% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The Ipiutak culture occupied the Norton Sound region from the Seward Peninsula to the Kuskokwim around 1,700 years ago, although Bering Sea traditions in the area can be traced back over 7,000 years by evidence of Denbigh flint tool technologies.¹²³⁸ Redoubt St. Michael was built at nearby St. Michael by the Russian-American Company in 1833. The Eskimo village of “Atroik” or “Atowak” was recorded north of there in 1898 by the U.S. Coast and Geodetic Survey. The Yup'ik name for the community is “Tapraq,” and the name Stebbins was first recorded in 1900. The first U.S. Census population count in Stebbins occurred in 1950, indicating a community population of 80 Yup'ik Eskimos. The city government was incorporated in 1969. Stebbins is a Yup'ik Eskimo village with a commercial fishing and subsistence lifestyle. The sale and importation of alcohol is banned in the village.¹²³⁹

Natural Resources and Environment

Stebbins experiences a subarctic climate with a maritime influence during the summer. Norton Sound is ice-free from June to November, but clouds and fog are common. Average summer temperatures are 40 to 60 °F (4.4 to 15.6 °C); winter temperatures range from -4 to 16 °F (-20 to -8.9 °C). Extremes have been measured from -55 to 77 °F (-48.3 to 25 °C). Annual precipitation averages 12 inches, with 38 inches of snowfall.¹²⁴⁰

Stebbins is located near the Andreafsky Wilderness Area. The U.S. Congress designated the Andreafsky Wilderness Area in 1980, and the area now has a total of 1,300,000 acres. The Wilderness Area is managed by the U.S. Fish & Wildlife Service. The expansive 1.3-million-acres of the Andreafsky Wilderness Area cover only slightly more than 5 percent of the monstrously vast 20-million-acre Yukon Delta National Wildlife Refuge, America's largest unit

¹²³⁷ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²³⁸ Collins, H. B. (n.d.). *Archaeological Research in the North American Arctic*. Retrieved July 10, 2012 from: <http://136.159.25.41/ojstest/index.php/arctic/article/viewFile/1267/775>.

¹²³⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁴⁰ Ibid.

of the National Wildlife Refuge System. Most of the delta is wetland tundra and marsh, and about one-third of it lies underwater. Local wildlife populations include moose, foxes, beavers, martens, minks, wolves, wolverines, caribou, large populations of black and brown bears, and millions of salmon. Forests of white spruce and balsam poplar grow along the riverbanks of the Andreafsky River through the Wilderness Area. Near the headwaters the forests give way to alpine tundra, and a relatively flat, treeless delta. The area is known for its fishing opportunities. Both rivers are scenic, but the East Fork has more trees and runs closer to the mountains. One hundred twenty-five miles of the Andreafsky and 137 miles of the East Fork are designated National Wild and Scenic Rivers, attracting river runners and anglers.¹²⁴¹

According to a state assessment, natural hazards with the potential of occurring in the Nome Census Area include earthquake, flood, wildfire, severe weather, erosion, and tsunami or seiche. The probability of occurrence of earthquakes was rated as high, tsunami/seiche activity was rated at low probability, and the other hazards had unknown probabilities.¹²⁴²

According to the Alaska Department of Environmental Conservation, there were no notable active environmental cleanup sites located in the Stebbins area as of March 2013.¹²⁴³

Current Economy¹²⁴⁴

The Stebbins economy is based on subsistence harvests supplemented by part-time wage earnings. The city and schools provide the only full-time positions.¹²⁴⁵ Top employers in 2010 included the City of Stebbins, Bering Strait School District, Rural Alaska Community Action Program, Stebbins Native Store, Stebbins Community Association, Norton Sound Health Corporation, Kawerak Inc., Stebbins Housing Authority, Bering Straits Regional Housing Authority, and the Norton Sound Economic Development Corporation.¹²⁴⁶

According to household surveys conducted for the 2006-2010 ACS,¹²⁴⁷ in 2010, the per capita income in Stebbins was estimated to be \$8,552 and the median household income was estimated to be \$31,250, compared to \$8,249 and \$23,125 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹²⁴⁸ the real per capita income in 2000 is shown to have been \$10,847 and the real 2000 median household income was \$30,409. This shows that per capita income decreased between 2000 and 2010, while the household income

¹²⁴¹ The University of Montana. Wilderness.net: Andreafsky Wilderness. Retrieved from <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&WID=11> on March 22, 2012.

¹²⁴² State of Alaska (2002). *Hazard Mitigation Plan*. Retrieved February 8, 2012 from <http://biotech.law.lsu.edu/blaw/DOD/manual/.%5CFull%20text%20documents%5CState%20Authorities%5CAla.%20SHMP.pdf>.

¹²⁴³ Alaska Dept. of Environmental Conservation (n.d.). *List of Contaminated Sites by Region*. Retrieved March 5, 2013 from <http://dec.alaska.gov/spar/csp/list.htm>.

¹²⁴⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹²⁴⁵ See footnote 1239.

¹²⁴⁶ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²⁴⁷ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹²⁴⁸ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

increased. In 2010, Stebbins ranked 289th of 305 Alaskan communities with per capita income that year, and 239th out of 299 Alaskan communities with household income data.

However, Stebbins' small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹²⁴⁹ An alternative understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. If total wages reported in the ALARI database for 2010 are divided by the 2010 population reported by the U.S. Decennial Census, the resulting per capita income estimate for Stebbins in 2010 is \$5,663.¹²⁵⁰ This estimate provides additional support for an overall decrease in per capita income between 2000 and 2010. These relatively low income figures are reflected in the fact that the community was recognized as "distressed" by the Denali Commission, and is prioritized for economic assistance.¹²⁵¹ It should be noted that both ACS and DOLWD data are based on wage earnings, and do not take into account the economic value of subsistence.

Also based on the 2006-2010 ACS, in 2010, 63.5% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 17.2%, much higher than the statewide unemployment rate of 5.9%. Approximately 35.6% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Stebbins are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Stebbins. An alternative estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 25.6%.¹²⁵²

Based on data reported by the 2006-2010 ACS, the greatest percentage of workers was estimated to be employed in the public sector (54%), while 44.5% were employed in the private sector, and 1.5% were unpaid family workers. Out of 137 people aged 16 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in education services, health care, and social assistance (46%), retail trade (11.7%), public administration (10.2%), and other services, except public administration (9.5%). Occupations in which the greatest percentages of the workforce were estimated to be employed were management, business, science, and arts (35.8%) and service occupations (29.9%). It is important to note that 1.5% of the workforce was estimated to be employed in fishing, farming, and forestry-related industries and occupations in 2010. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed by fishing is likely underestimated in census statistics, as fishermen may hold another job and characterize their employment accordingly. As with income and poverty statistics, it should also be noted that these employment statistics do not reflect residents' activity in the subsistence economy. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

¹²⁴⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²⁵⁰ See footnotes 1246 and 1247.

¹²⁵¹ Denali Commission. (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

¹²⁵² See footnote 1246.

Figure 3. Local Employment by Industry in 2000-2010, Stebbins (U.S. Census).

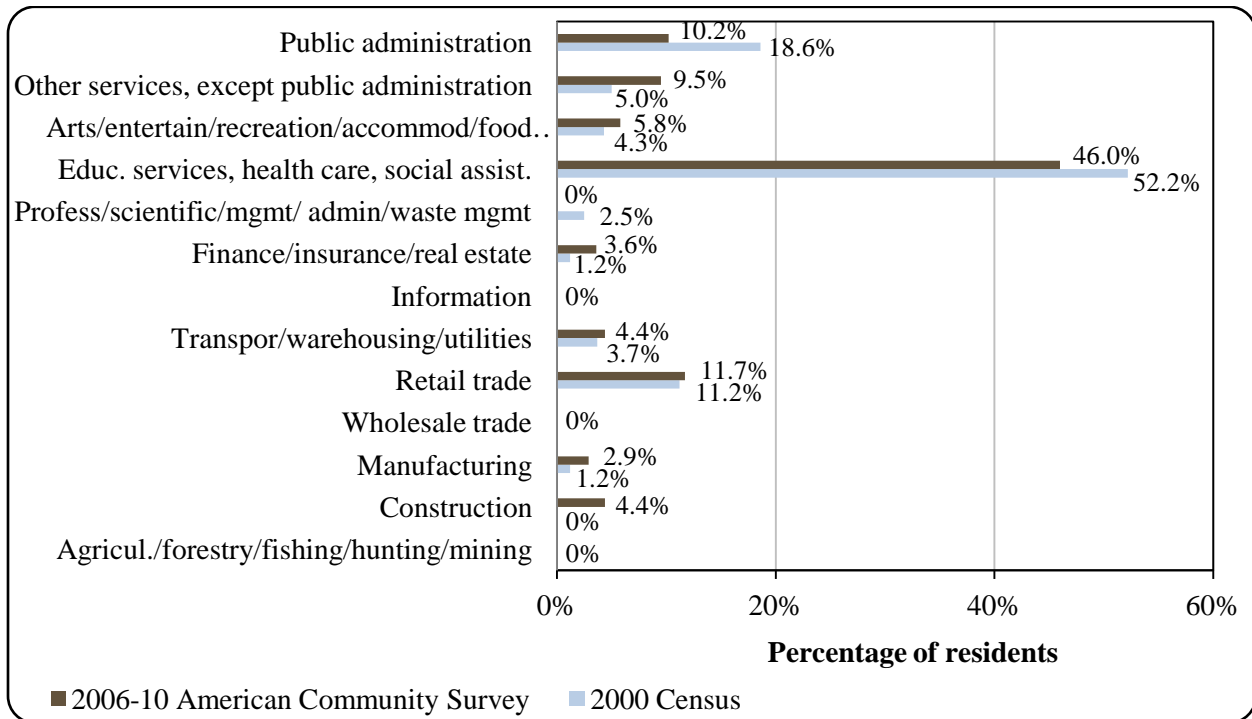
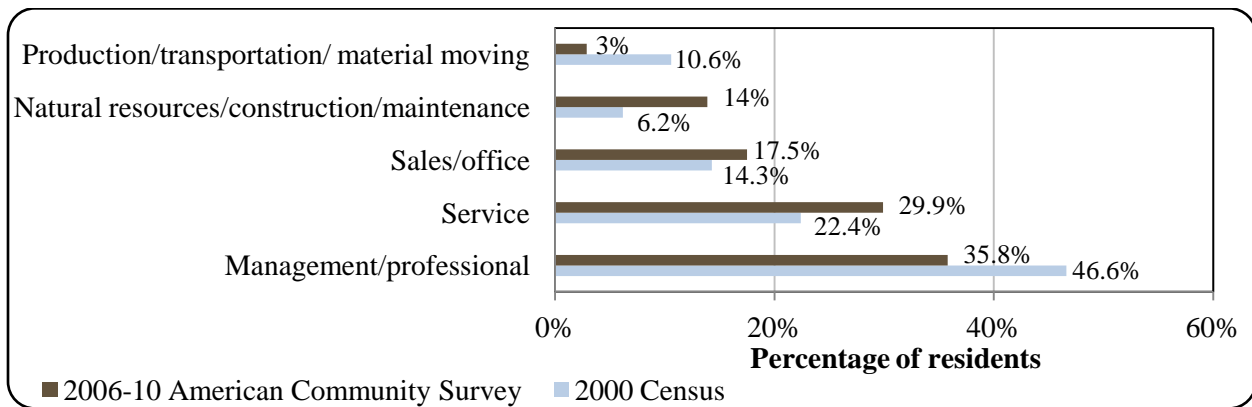


Figure 4. Local Employment by Occupation in 2000-2010, Stebbins (U.S. Census).



Governance

Stebbins is a 2nd Class City, and is not located in an organized borough. The city administers a 3% municipal sales tax.¹²⁵³ In addition to sales tax revenue, other locally-generated income sources in Stebbins between 2000 and 2010 included contracts for operation of the electric utility and health clinic and maintenance of the airport, building and equipment rentals, bingo and pull tab receipts, and charges for services such as water and sewer, washeteria/sauna,

¹²⁵³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

garbage collection, and cable TV. Outside revenue sources included state and federal grants and shared revenues. Sources of shared revenue included the State Revenue Sharing program (approximately \$28,000 per year from 2000 to 2003), the Community Revenue Sharing programs (\$125,000 each year in 2009 and 2010), the SAFE Communities program (public safety, utilities, infrastructure, etc.), state telephone and electric co-op tax refunds, and state raw fish tax refunds in some years (see the *Fisheries-Related Revenue* section). Stebbins did not receive any fisheries-related grants between 2000 and 2010. Information about selected aspects of the Stebbins community revenue is presented in Table 2.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Stebbins from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$478,462	\$50,812	\$28,951	n/a
2001	\$507,549	\$51,928	\$27,906	n/a
2002	\$559,617	\$46,666	\$27,906	n/a
2003	\$710,809	\$55,649	\$28,051	n/a
2004	\$680,946	\$45,997	n/a	n/a
2005	\$675,017	\$51,215	n/a	n/a
2006	\$628,186	\$47,190	n/a	n/a
2007	\$606,729	\$48,904	n/a	n/a
2008	\$981,520	\$59,538	n/a	n/a
2009	\$744,663	\$71,755	\$126,818	n/a
2010	\$848,826	\$66,161	\$125,435	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Stebbins was included under the Alaska Native Claims Settlement Act (ANCSA), and is federally recognized as a Native Village. The authorized traditional entity recognized by the Bureau of Indian Affairs (BIA) is the Stebbins Community Association. The Native village corporation is Stebbins Native Corporation, and the regional Native corporation to which Stebbins belongs is the Bering Strait Native Corporation.¹²⁵⁴

The Stebbins Community Association is also a member of Kawerak Inc., a Tribal non-profit organization with a mission to “assist, promote and provide programs and services to improve the social, economic, educational, cultural and governmental self-sufficiency for the betterment of the Native people within the region, and to preserve the traditional culture,

¹²⁵⁴ Ibid.

languages and values.”¹²⁵⁵ Kawerak, Inc. is one of the 12 regional Alaska Native 501(c)(3) non-profit organizations that were identified under ANCSA and charged with naming incorporators to create regional for-profit corporations. Today, these regional Native associations receive federal funding to administer services to villages in their regions.¹²⁵⁶ Kawerak, Inc. offers children and family services, community services, and education, employment and training opportunities for residents of 18 member villages in the Bering Straits region. The non-profit also includes a Natural Resources Division, which incorporates the Eskimo Walrus Commission, Land Management Services, Reindeer Herders Association, and Subsistence Resources Division.¹²⁵⁷

The nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, Alaska Department of Natural Resources, and U.S. Immigration and Customs Enforcement are located in Anchorage. The nearest office of the Alaska Department of Fish and Game (ADF&G) is in Unalakleet, and the nearest office of the Alaska Department of Commerce, Community, and Economic Development is located in Nome.

Infrastructure

Connectivity and Transportation

Stebbins is accessible by air and sea. There is a state-owned 3,000 foot long by 60 foot wide gravel runway. Regular flights, charters, and freight services are available from Bethel. A cargo ship brings supplies annually. There is no dock, and goods must be lightered out of Nome. Overland travel in the winter is by snowmobile.¹²⁵⁸ Round-trip airfare between Stebbins and Anchorage in June 2012 was \$620.¹²⁵⁹

Facilities

Water is derived during the summer from Big Clear Creek and is treated and stored in a 1,000,000-gallon steel water tank. Refuse is collected by the city from central bins. The washeteria is operated by the city. Law enforcement is provided by a Village Public Safety Officer (VPSO) and the city police department. Fire and rescue services are provided by the state VPSO and the city, which uses volunteer fire project code red equipment. The community has a teen center and a city/community hall, as well as a school gym and school library. The nearest state trooper post is located in Unalakleet.¹²⁶⁰

In a survey conducted by the AFSC in 2011, community leaders reported that the following infrastructure projects have been completed in the last 10 years: roads, airport, water treatment facility, new landfill/solid waste site, community center/library, public safety – police department, school, telephone service, and post office. In the same survey, community leaders

¹²⁵⁵ Kawerak, Inc.. 2006. *Homepage*. Retrieved February 17, 2012 from <http://www.kawerak.org/>.

¹²⁵⁶ U.S. Government Accountability Office. 2005. *Alaska Native Villages: Report to Congressional Addressees and the Alaska Federation of Natives*. Retrieved February 7, 2012 from <http://www.gao.gov/new.items/d05719.pdf>.

¹²⁵⁷ See footnote 1255.

¹²⁵⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁵⁹ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹²⁶⁰ See footnote 1258.

noted that the following infrastructure projects are currently in progress: barge landing area, diesel powerhouse, and emergency response. In addition, community leaders indicated that there are no docking facilities available for permanent or transient vessels, and there is no dock space available for public moorage, but that the port of Stebbins is capable of handling fuel barges.

Medical Services

Medical care is provided by the Tapraqmuit Yungcarviat Clinic, which is owned by the city and operated by the Norton Sound Health Corporation. The clinic is a Community Health Aid Program (CHAP) site and a qualified Emergency Care Center. Emergency services have coastal and air access and are provided by a health aide.¹²⁶¹ The nearest qualified Emergency Care Center is located in Unalakleet, and the nearest hospital is located in Nome.

Educational Opportunities

The Tukumgailnguq School provides instruction to students from pre-school through 12th grade.¹²⁶² In 2011 the school had 193 students and 18 teachers. Stebbins is also a Head Start site.¹²⁶³

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial salmon fisheries began to develop shortly after the purchase of Alaska by the U.S. in 1867. However, the Norton Sound commercial salmon fishery developed later than in other regions of the State. In 1959 and 1960, biologists from the Division of Commercial Fisheries conducted an inventory of salmon resources and determined that harvestable surpluses were present in several Norton Sound river systems. They encouraged processors to develop the fishery after statehood as part of an effort to bring economic benefits to this area of rural Alaska. The first commercial harvest occurred in 1961, and salmon markets in the area have been sporadic since that time. Harvests increased through the 1990s, and have declined since then.¹²⁶⁴

Commercial exploitation of halibut and groundfish first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake

¹²⁶¹ Ibid.

¹²⁶² Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹²⁶³ Rural Alaska Community Action Program. (2011). 2010 Annual Report. Retrieved from www.ruralcap.com on December 20, 2011.

¹²⁶⁴ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

longer trips.¹²⁶⁵ King crab fisheries developed in the Bering Sea beginning in the 1950s, and Norton Sound is one of the historical centers of this fishery.¹²⁶⁶

Commercial fishing of herring by domestic fishermen dates back to 1916 when a fall food fishery began in Golovin Bay. By 1981, the herring fleet in Norton Sound was harvesting approximately 20% of the observed biomass with over 300 fishermen were participating in the fishery.¹²⁶⁷ The observed herring biomass within the Norton Sound District was 53,786 tons in 2011.¹²⁶⁸

In 1976, red king crab (legal) biomass within the Norton Sound was approximately 1.7 million crabs. By 1982, that number had fallen to roughly 0.8 million crabs. In 1999, the estimated crab population reached a near historical high of 1.6 million, which fell again to approximately 0.8 million in 2002. In 2008, the legal population was estimated at 1.5 million. Total open access red king crab harvest for the Norton Sound District in 2008 was 364,235 pounds. Total Community Development Quota (CDQ) red king crab harvest that year was 30,900 pounds.¹²⁶⁹

Norton Sound has the northernmost fisheries for both Pacific herring and red king crab. Although the Norton Sound herring spawning biomass has been relatively stable in recent times, the market for herring roe has declined due to decreasing consumption of herring roe in Japan. Processor interest in the Norton Sound sac roe fishery has declined more than in other areas of the State, largely due to the timing of the fishery, which takes place later than sac roe fisheries elsewhere in the state and conflicts with the opening of the first salmon fisheries of the season. In addition, ice floes are often present in Norton Sound during the herring season.¹²⁷⁰ In contrast, the Norton Sound red king crab stock has shown an increasing trend since a population low in the 1990s, and today provides small summer and winter fisheries. NMFS and ADF&G jointly manage Bering Sea king crab stocks.¹²⁷¹ Nome king crab fishermen hold both state-issued king crab permits, as well as permits in the CDQ king crab fishery. The CDQ program “allocates a percentage of all Bering Sea and Aleutian Island quotas for groundfish, prohibited species, halibut, and crab to eligible communities.”¹²⁷²

In 1959 and 1960 an experimental salmon fishery was established in the Norton Sound area. State officials encouraged seafood processors to explore and develop fisheries in the region in hopes of providing economic benefits to local communities. In 1961, commercial harvesters began targeting Chinook and coho salmon in the Unalakleet and Shaktoolik areas. Back then,

¹²⁶⁵ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹²⁶⁶ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert. 2005. *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹²⁶⁷ Lean, C. (1989). *The Development of the Norton Sound Herring Fishery, 1979-1988*. Retrieved April 3, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidPDFs/RIR.3N.1989.04.pdf>.

¹²⁶⁸ Alaska Department of Fish and Game. (2012). *2012 Arctic-Yukon-Kuskokwim Herring Outlook*. Retrieved April 3, 2012 from: http://www.adfg.alaska.gov/static/fishing/PDFs/commercial/2012_ayk_herring_outlook.pdf.

¹²⁶⁹ Menard, J.; Soong, J.; & Kent, S. (2010). *2008 Annual Management Report Norton Sound, Port Clarence, and Kotzebue*. Retrieved April 3, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR10-49.pdf>.

¹²⁷⁰ Ibid.

¹²⁷¹ Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=redkingcrab.main>.

¹²⁷² NOAA Fisheries. (n.d.). *Community Development Quota (CDQ) Program*. Retrieved June 20, 2012 from <http://www.fakr.noaa.gov/cdq/default.htm>.

catch was cleaned and shipped to Anchorage for further processing. A single freezer ship processed pink and chum salmon in the area during 1961. By 1962, two floating processors were in operation, and commercial salmon fishing extended into Norton Bay, Moses Point, and Golovin Bay. Peak canning operations occurred in 1963. Commercial Chinook harvests peaked in the 1980s when the 10-year annual average harvest was about 8,000 fish. Commercial harvests of sockeye salmon have always been minor. Coho salmon harvests averaged about 40,000 annually during the 1980s. By the 1990s, that number increased to approximately 55,000 fish, but decreased by half by 2000. Pink salmon harvests are sporadic, and fluctuate by year. In 1994, almost one million pink salmon were commercially harvested while in more recent years, harvests have dropped to zero. Commercial harvests of chum salmon averaged 150,000 fish annually during the 1970s and 1980s. Stricter escapement goals reduced that number in the 1990s.¹²⁷³

Stebbins is located in Pacific Halibut Fishery Regulatory Area 4E and the Bering Sea Sablefish Regulatory Area. Stebbins participates in the CDQ program as a member of the Norton Sound Economic Development Corporation. In a survey conducted by the AFSC in 2011, community leaders reported that Stebbins does not participate in the fisheries management process in Alaska.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Stebbins does not have a registered processing plant. The nearest processing plant is located in Unalakleet.

Fisheries-Related Revenue

Stebbins received fisheries-related revenue from the raw fish tax and the Shared Fisheries Business Tax between 2000 and 2010. Amounts received from both sources were variable from year to year. In all years during this period, fisheries-related was minimal compared to the total municipal revenue received. Information on known fisheries-related revenue received by the community of Stebbins between 2000 and 2010 is presented in Table 3.¹²⁷⁴

In a survey conducted by the AFSC in 2011, community leaders reported that no community services are specifically funded by the raw fish tax or the Shared Fisheries Business Tax, and that Stebbins does not have local fishing-related fee programs that specifically support public services and infrastructure.

Commercial Fishing

In the 2011 AFSC survey, community leaders reported that no commercial fishing boats use Stebbins as their base of operations during the fishing season, and that Stebbins does not currently have commercial fishing. Community leaders also noted that commercial fishermen from the area go to Yukon.

¹²⁷³ Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 10, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹²⁷⁴ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

In 2010, there were a total of 24 permit holders that held 29 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for crab, herring, and salmon. Herring CFEC permits were issued for the gill net fishery in Norton Sound, while crab CFEC permits were issued for the king crab pot fishery using vessels under 60 feet in Norton Sound. Salmon CFEC permits were issued for the gill net fishery in the Lower Yukon. The total number of CFEC permits and permit holders varied between 2000 and 2010. Crab CFEC permits were only held in 2002 and 2010, and none of the crab CFEC permits were reported as fished in either of those years. The total number of herring permits and permit holders remained relatively stable during this period, though the number of herring CFEC permits reported as fished varied considerably from year to year. The number of salmon CFEC permits and permit holders decreased slightly between 2000 and 2010, and the number of salmon CFEC permits reported as fished varied from year to year. Information about commercial fishing permits and permit holders by species between 2000 and 2010 is presented in Table 4.

There were nine crew license holders in Stebbins in 2010, a decrease from 16 in 2000 and a high of 19 in 2005. Between 2000 and 2010 there were no fish buyers or shore-side processing facilities located in Stebbins. Both the number of vessels owned primarily by Stebbins residents and the number of vessels homeported in Stebbins decreased between 2000 and 2010. Also between 2000 and 2010, there were no commercial fishing vessels landing catch in Stebbins and therefore no associated landings or ex-vessel revenue to report. Information on the characteristics of the commercial fishing sector in Stebbins is provided in Table 5.

There were no individuals holding quota share accounts for halibut (Table 6), sablefish (Table 7) or crab (Table 8) between 2000 and 2010. As previously stated, there were no landings or associated ex-vessel revenue in Stebbins between 2000 and 2010 as there were no vessels landing catch in the community during this period (Table 9). For landings by vessel owner residence, all landings and ex-vessel revenue for all species were considered confidential between 2000 and 2010 due to a small number of participants, with the exception of landings and ex-vessel revenue for herring in 2001. Information on landed pounds and ex-vessel revenue by community residents is presented in Table 10.

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Stebbins: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$276	100	n/a	n/a	n/a	n/a	\$270	\$270	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$76	\$154	\$223	\$106	\$90	\$223	\$270	\$210	\$115	\$84	\$101
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total fisheries-related revenue⁴	\$352	\$254	\$223	\$106	\$90	\$223	\$540	\$480	\$115	\$84	\$101
Total municipal revenue⁵	\$478,462	\$507,549	\$559,617	\$710,809	\$680,946	\$675,017	\$628,186	\$606,729	\$981,520	\$744,663	\$848,826

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its financial statements. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Stebbins: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	3	0	0	0	0	0	0	0	7
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	3	0	0	0	0	0	0	0	7
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	12	13	13	12	11	10	10	10	11	11	12
	Fished permits	1	6	3	1	0	3	0	0	0	0	2
	% of permits fished	8%	46%	23%	8%	-	30%	-	-	-	-	17%
	Total permit holders	12	13	14	13	12	10	11	10	11	11	13

Table 4 cont'd. Permits and Permit Holders by Species, Stebbins: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	11	10	11	9	10	9	9	9	9	10	10
	Fished permits	3	0	7	6	4	6	6	3	2	1	3
	% of permits fished	27%	-	64%	67%	40%	67%	67%	33%	22%	10%	30%
	Total permit holders	12	10	11	9	10	9	10	9	9	10	10
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>23</i>	<i>23</i>	<i>27</i>	<i>21</i>	<i>21</i>	<i>19</i>	<i>19</i>	<i>19</i>	<i>20</i>	<i>21</i>	<i>29</i>
	<i>Fished permits</i>	<i>4</i>	<i>6</i>	<i>10</i>	<i>7</i>	<i>4</i>	<i>9</i>	<i>6</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>5</i>
	<i>% of permits fished</i>	<i>17%</i>	<i>26%</i>	<i>37%</i>	<i>33%</i>	<i>19%</i>	<i>47%</i>	<i>32%</i>	<i>16%</i>	<i>10%</i>	<i>5%</i>	<i>17%</i>
	<i>Permit holders</i>	<i>20</i>	<i>19</i>	<i>23</i>	<i>19</i>	<i>19</i>	<i>16</i>	<i>18</i>	<i>16</i>	<i>17</i>	<i>18</i>	<i>24</i>

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Stebbins: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Stebbins ²	Total Net Pounds Landed In Stebbins ^{2,5}	Total Ex-Vessel Value Of Landings In Stebbins ^{2,5}
2000	16	0	0	12	12	0	0	\$0
2001	17	0	0	13	13	0	0	\$0
2002	17	0	0	14	14	0	0	\$0
2003	12	0	0	8	8	0	0	\$0
2004	9	0	0	5	5	0	0	\$0
2005	19	0	0	10	10	0	0	\$0
2006	10	0	0	8	9	0	0	\$0
2007	11	0	0	5	4	0	0	\$0
2008	5	0	0	6	5	0	0	\$0
2009	2	0	0	3	4	0	0	\$0
2010	9	0	0	8	8	0	0	\$0

Note: Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Stebbins: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Stebbins: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (Pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Stebbins: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (Pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Stebbins: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Note: Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Stebbins Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	117,523	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	<i>117,523</i>	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	--	--	--	--	--	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	--	\$ 9,754	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	--	<i>\$ 9,754</i>	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

One active sport fish guide business was present in Stebbins in two years during the 2000-2010 period, and one licensed sport fish guide was present in four years of the period. The number of sport fishing licenses sold in the City varied between 0 and 50 per year. The number sold to residents was very similar, ranging from 13 to 41 per year (irrespective of point of sale). In some years, a greater number of sport fishing licenses was sold in the community than the total sold to residents. This indicates that a small number of visitors may come to Stebbins and engage in sport fishing activity.

Stebbins is located within Alaska Sport Fishing Survey Area W – Seward Peninsula – Norton Sound. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, there was significant sport fishing activity in both saltwater and freshwater, although freshwater sport fishing was more important in the region. Alaska resident anglers consistently fished more angler days in both freshwater and saltwater (34 – 2,663 saltwater and 6,199 to 17,579 freshwater angler days) than non-Alaska residents (0 – 204 saltwater and 2,087 – 8,307 freshwater angler days) during the period. This information about the sport fishing sector in and near Stebbins is displayed in Table 11.

Although no data were available from the ADF&G Statewide Harvest Survey regarding species targeted by sport fishermen in Stebbins between 2000 and 2010, information was available regarding species targeted by private anglers in nearby Saint Michael. They included coho salmon, chum salmon, whitefish, Arctic grayling, and northern pike.¹²⁷⁵ In a survey conducted by the AFSC in 2011, community leaders reported that the following species are targeted by recreational fishermen that use boats based in Stebbins: all five species of salmon, herring, and tomcod. In the same survey, community leaders also noted that recreational fishing in Stebbins primarily takes place from private boats owned by local residents.

Table 11. Sport Fishing Trends, Stebbins: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Stebbins ²
2000	0	0	38	0
2001	0	1	23	0
2002	0	1	39	39
2003	1	1	41	47
2004	1	1	33	39
2005	0	0	25	15
2006	0	0	13	14
2007	0	0	23	22
2008	0	0	19	17
2009	0	0	21	27
2010	0	0	32	50

¹²⁷⁵ Alaska Department of Fish and Game. 2011. *Alaska Sport Fishing Survey results, 2000 – 2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Stebbins: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-Residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	0	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

The Stebbins economy is based on subsistence harvests supplemented by part-time wage earnings. Residents subsist upon fish, seal, walrus, reindeer, and beluga whale.¹²⁷⁶ In a survey conducted by the AFSC in 2011, community leaders reported that subsistence is much more common than commercial or recreational use of marine resources in Stebbins, and that the three most important local subsistence marine or aquatic resources are fish and marine mammals. Seals are of particular importance. In the same survey, community leaders noted that the annual peak in population in Stebbins is entirely driven by subsistence fishing.

Data were not available regarding subsistence participation by household and species between 2000 and 2010, or per capita subsistence harvest (Table 12). However, data were available regarding total salmon and marine mammals harvests.

In years for which data were reported regarding subsistence salmon permits between 2000 and 2010, an average of 126 permits were issued to Stebbins households. The most heavily harvested salmon species shifted from year to year, between chum, coho, and pink salmon. Chinook salmon and sockeye salmon were also harvested for subsistence during this period,

¹²⁷⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

although in much lower quantities. Data were not available regarding the subsistence harvest of marine invertebrates or non-salmon fish during this period. Information about subsistence harvest of salmon, marine invertebrates, and non-salmon fish (not including halibut) is presented in Table 13. Although data were available during the 2000-2010 period regarding subsistence harvest of non-salmon fish in Stebbins, an earlier subsistence survey conducted by the ADF&G Division of Subsistence provides additional insight into subsistence harvest patterns in Stebbins. In 1980, the following species of non-salmon fish were reported to have been harvested for subsistence purposes by Stebbins households: saffron cod (92% of households harvested), herring (83%), cisco (75%), sheefish (33%), broad whitefish (8%), and sculpin (8%).¹²⁷⁷ No data were reported regarding subsistence halibut fishing participation in Stebbins during the 2000-2010 period (Table 14).

Although community leaders report heavy use of seal by Stebbins residents, no information was reported by ADF&G regarding harvest of spotted seal or harbor seal during the 2000-2010 period. This discrepancy is likely due in part to the fact that not all seal species are represented in Table 15. According to a 1980 subsistence survey conducted by ADF&G in Stebbins, the primary species of seal harvested by Stebbins households were ringed seal (100% of households reported harvest) and bearded seal (75%), along with a smaller percentage that harvested spotted seal (33%).¹²⁷⁸ Likewise, no information was reported regarding the harvest of sea otters, walrus, polar bear, or Steller sea lion during this period. The only marine mammal for which data are available between 2000 and 2010 was beluga whale. From 2000 to 2006, the number of beluga harvested by Stebbins residents varied between 9 and 21. Information about subsistence harvest of marine mammals is presented in Table 15.

¹²⁷⁷ Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹²⁷⁸ Ibid.

Table 12. Subsistence Participation by Household and Species, Stebbins: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Stebbins: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	128	111	294	2,876	2,398	360	337	n/a	n/a
2001	124	107	570	3,999	2,759	202	n/a	n/a	n/a
2002	122	108	469	3,586	2,324	7,459	300	n/a	n/a
2003	122	98	265	2,399	1,215	2,685	171	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	133	128	425	4,519	2,364	3,809	52	n/a	n/a
2006	132	126	318	3,804	4,360	3,880	126	n/a	n/a
2007	136	117	742	4,980	2,006	1,881	n/a	n/a	n/a
2008	113	103	709	4,407	2,949	3,854	17	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Stebbins: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Stebbins: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	15	n/a	n/a	n/a	n/a	n/a	n/a
2001	18	n/a	n/a	n/a	n/a	n/a	n/a
2002	21	n/a	n/a	n/a	n/a	n/a	n/a
2003	20	n/a	n/a	n/a	n/a	n/a	n/a
2004	8	n/a	n/a	n/a	n/a	n/a	n/a
2005	9	n/a	n/a	n/a	n/a	n/a	n/a
2006	9	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Teller



People and Place

*Location*¹²⁷⁹

Teller is located on a spit between Port Clarence and Grantley Harbor, 72 miles northwest of Nome, on the Seward Peninsula. Teller is located in the Cape Nome Recording District and the Nome Census Area and is not located within an organized Borough. The community encompasses 1.9 square miles of land and 0.2 square miles of water.

*Demographic Profile*¹²⁸⁰

In 2010, there were 229 inhabitants in Teller, making it the 184th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population fell by 2.61%, with an average annual growth rate of -0.29%, indicating a very slow rate of decline. The change in population from 1990 to 2010 is provided in Table 1.

In 2010, a majority of Teller residents identified themselves as American Indian and Alaska Native (96.1%), with 3.9% of community residents identifying themselves as White. Between 2000 and 2010, the percentage of the population identifying themselves as American Indian and Alaska Native increased by 3.6%, with corresponding declines in the percentages of the population identifying themselves as White and Hispanic or Latino. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Teller in 2010 was 3.18, a decrease from 3.4 persons per household in 1990 and 3.53 in 2000. The total number of households in Teller increased from 68 in 1990 to 76 in 2000, then declined to 72 occupied housing units by 2010. Of the 86 total housing units surveyed for the 2010 Decennial Census, 22 were owner-occupied, 50 were renter-occupied, and 14 were vacant or used only seasonally. Throughout this period no residents of Teller were reported to be living in group quarters.

In 2010, the gender makeup in Teller was 51.5% male and 48.5% female, similar to the state as a whole (52% male, 48% female). The median age was estimated to be 25.1 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the greatest percentage of the population fell within the age group 10 to 19 years old, with the second largest percentage falling within the age group zero to nine years old. No residents of Teller were age 80 or over in 2010, and relatively few individuals were between ages 70 and 79. The overall population structure of Teller in 2000 and 2010 is shown in Figure 2.

¹²⁷⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁸⁰ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Teller from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	151	-
2000	268	-
2001	-	239
2002	-	247
2003	-	242
2004	-	242
2005	-	263
2006	-	258
2007	-	255
2008	-	259
2009	-	261
2010	229	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Teller: 2000-2010 (U.S. Census).

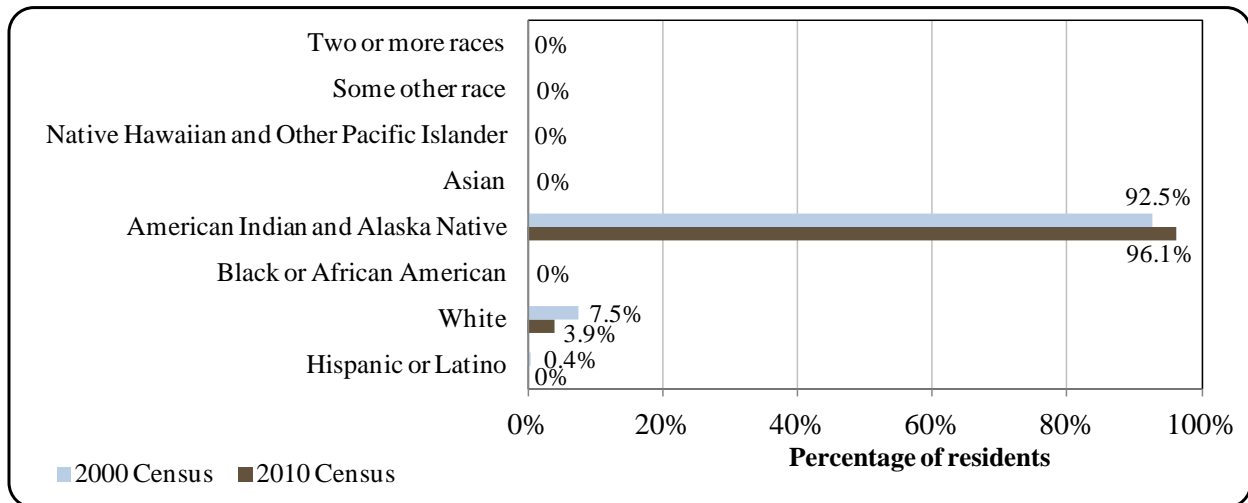
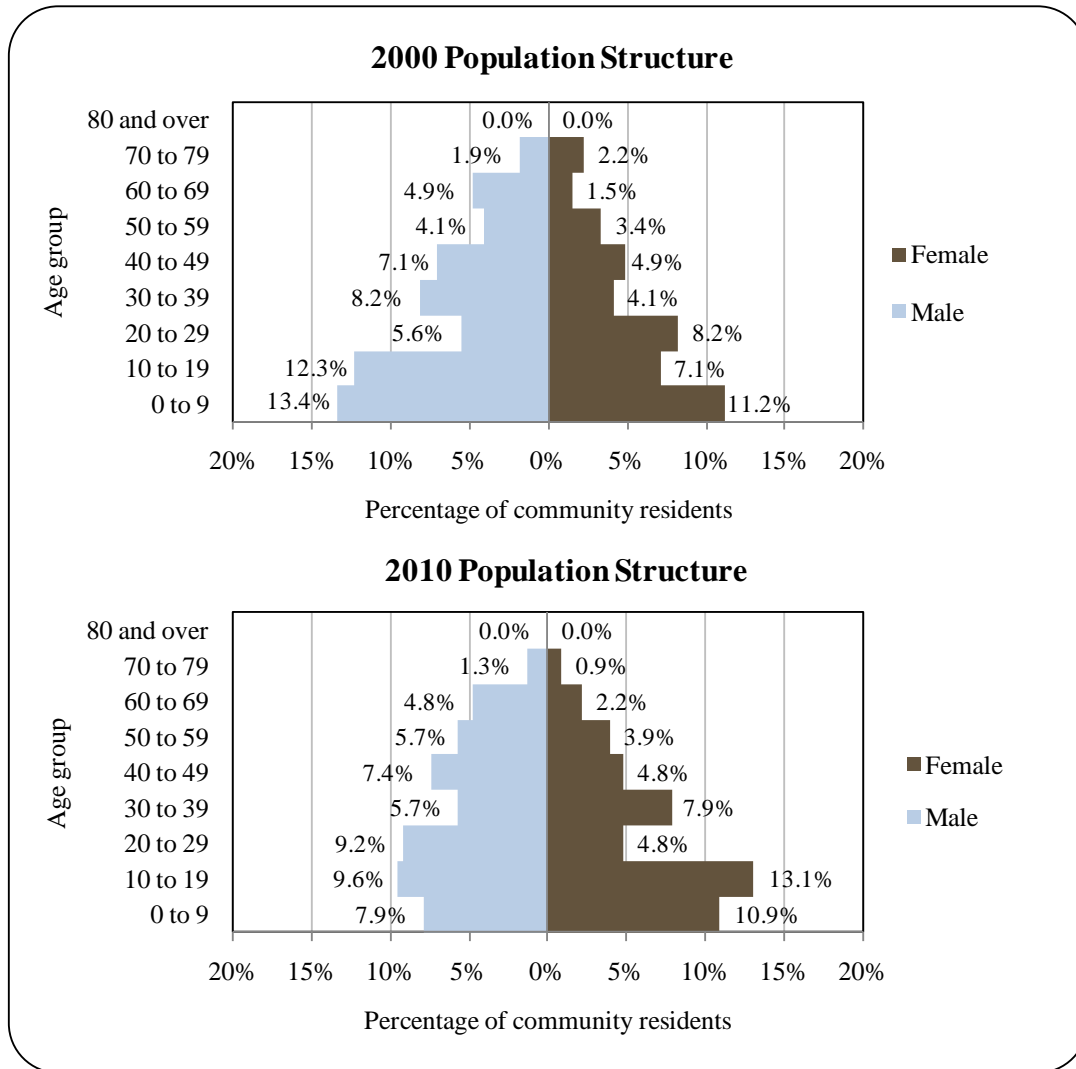


Figure 2. Population Age Structure in Teller Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey (ACS),¹²⁸¹ in terms of educational attainment, 70.9% of Teller residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaska residents overall. Also in 2010, 21.4% of residents aged 25 and older were estimated to have less than a ninth grade education, compared to 3.5% of Alaska residents overall; 7.7% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaska residents overall; 43.6% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaska residents overall; 20.5% were estimated to have some college but no degree, compared to 28.3% of Alaska residents overall; 0.9% were estimated to have an Associate’s degree, compared to 8% of Alaska

¹²⁸¹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

residents overall; 1.7% were estimated to have a Bachelor's degree, compared to 17.4% of Alaska residents overall; and 4.3% were estimated to have a graduate or professional degree, compared to 9.6% of Alaska residents overall.

*History, Traditional Knowledge, and Culture*¹²⁸²

The Eskimo fishing camp called "Nook" was reported 20 miles south of Teller in 1827. A Western Union Telegraph expedition wintered at the present site in 1866 and 1867; it was then called "Libbyville" or "Libby Station." The Teller Reindeer Station was operated by the U.S. Government at a nearby site from 1892 to 1900. The station was named in 1892 by Sheldon Jackson for U.S. Senator and Secretary of the Interior Henry Moore Teller. Teller Mission, a Norwegian Evangelical Lutheran mission, was built in 1900 across the harbor at the current site of Brevig Mission. It was renamed Brevig Mission in 1903, after Reverend T.L. Brevig. Present-day Teller was also established in 1900 after the Bluestone Placer Mine discovery 15 miles to the south. During these boom years, Teller had a population of about 5,000 and was a major regional trading center, attracting Natives from Diomedea, Wales, Mary's Igloo, and King Island. In May 1926, bad weather caused the dirigible "Norge" to detour to Teller on its first flight over the North Pole from Norway to Nome. A city was formed in 1963.

Today, Teller is a traditional Eskimo village with a subsistence lifestyle. Many residents today were originally from Mary's Igloo. Seals, beluga whales, fish, reindeer, and other local resources are utilized. A herd of reindeer roams the area. The sale of alcohol is banned in the village.

Natural Resources and Environment

The climate is maritime when ice-free, and then changes to a continental climate after freezing. Grantley Harbor is generally ice-free from early June to mid-October. Average summer temperatures range from 44 to 57 °F (6.7 to 13.9 °C); winter temperatures average -9 to 8 °F (-22.8 to -13.3 °C). Extremes have been measured from -45 to 82 °F (-42.8 to 27.8 °C). Annual precipitation averages 11.5 inches, with 50 inches of snowfall.¹²⁸³

Teller is located near the Bering Land Bridge National Preserve, which is part of the Beringian National Heritage Park. The Bering Land Bridge National Preserve has the wildlife and permafrost features of the icy north and in contrast has had explosive volcanic events. It is a place where research is conducted on twenty-first Century issues and where the story of the Bering Land Bridge was worked out. The Preserve has a rich diversity of offerings for those wishing to experience the raw, wild nature of Alaska's far northwestern ecosystems through recreation as well as for scientific research.¹²⁸⁴

The community itself lies on a gently sloping coastal plain at the base of a spit separating Grantley Harbor with Port Clarence. Soils are generally poorly-drained alluvial deposits of silt and sand. Hilly areas and ridges support low shrubs and alpine tundra, and are generally well-drained. The steeper slopes boarding mountains are poorly drained and support sedges and

¹²⁸² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹²⁸³ Ibid.

¹²⁸⁴ National Park Service (n.d.). *Bering Land Bridge National Preserve: Nature and Science*. Retrieved March 12, 2012 from <http://www.nps.gov/bela/naturescience/index.htm>.

mosses. Permafrost varies in depth and is discontinuous throughout the Teller area.¹²⁸⁵ Harvestable vegetation in the area includes a variety of berries, roots, mushrooms, and greens. Wildlife in the area includes a variety of terrestrial and aquatic life. Terrestrial wildlife includes moose, caribou, bear, wolf, lynx, wolverine, shorebirds and other waterfowl. Aquatic wildlife includes seal, beluga whale, all five species of Pacific salmon whitefish, lingcod, tomcod, smelt, northern pike, and trout. No critical habitat areas, refuges, or sanctuaries are located in the area.¹²⁸⁶

Teller is exposed to flooding and erosion caused by storm surges and wave action from the Bering Sea. The U.S. Army Corps of Engineers has determined that nearly half of the homes in Teller are located in a 100 year floodplain. Several historic flood events had flood levels ranging from three to four feet. Most flooding occurs in the fall.¹²⁸⁷

Mineral resources in the area include a gold project under development outside of Nome. As of 2010, NovaGold Resources Inc.'s Rock Creek Mine was under temporary closure resulting from capital and permitting issues.¹²⁸⁸ There is an estimated 320,000 ounces of gold reserves at the Rock Creek site.¹²⁸⁹

According to the Alaska Department of Environmental Conservation (DEC), there are no significant environmental remediation sites active in Teller.¹²⁹⁰

Current Economy¹²⁹¹

The Teller economy is based on subsistence activities supplemented by part-time wage earnings. Fish, seal, moose, beluga whale, and reindeer are the primary meat sources. There is a herd of over 1,000 reindeer in the area, and the annual round-up provides meat and a cash product that is sold mainly on the Seward Peninsula. Over one-third of households produce crafts or artwork for sale, and some residents trap fox.¹²⁹² Top employers in 2010 included Bering Strait School District, City of Teller, Teller Native Corp., Kawerak Inc., Norton Sound Economic Development Corp., Norton Sound Health Corp., Mary's Igloo Native Corp., Bering Straits Development Corp., Teller Traditional Council, and Mary's Igloo Traditional Council.

In 2010, the per capita income in Teller was estimated to be \$11,716 and the median household income was estimated to be \$34,688, compared to \$8,617 and \$23,000 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars,¹²⁹³ the real per capita income in 2000 is shown to have been \$11,331 and the real median household income in 2000 was \$30,245. This shows a real increase in both per capita and household income between 2000 and 2010. In 2010, Teller ranked 245th of 305 Alaskan communities with per

¹²⁸⁵ Kawerak Inc. (2005). *Teller Local Economic Development Plan 2006-2010*. Retrieved July 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Teller-EDP-2005.pdf>.

¹²⁸⁶ Kawerak, Inc. (2007). *Brevig Mission Local Economic Development Plan 2007-2012*. Retrieved January 10, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Brevig%20Mission-EP-2007.pdf>.

¹²⁸⁷ See footnote 1285.

¹²⁸⁸ AND. (2008). *NovaGold Forced to Suspend Operation of Rock Creek Mine*. Retrieved January 10, 2012 from: <http://www.adn.com/2008/11/24/600762/novagold-forced-to-suspend-operation.html>.

¹²⁸⁹ Alaska Dept. of Natural Resources. (2010). *Alaska's Mineral Industry 2010*.

¹²⁹⁰ Alaska Dept. of Environmental Conservation. (n.d.). *Contaminated Sites Program*. Retrieved June 20, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm#Western>.

¹²⁹¹ Unless otherwise noted, all monetary data are reported in nominal values.

¹²⁹² See footnote 1282.

¹²⁹³ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved October 18, 2011 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

capita income that year, and 215th of 299 Alaskan communities with household income data. While 2006-2010 ACS estimates can provide a good estimate for larger populations, smaller populations like that of Teller can be misrepresented. This is especially problematic for Alaska communities with small populations that have a low probability of being adequately sampled. Although Teller's small population size may have prevented the ACS from accurately portraying economic conditions,¹²⁹⁴ data are supported by the fact that the community was recognized as "distressed" by the Denali Commission indicating that over 67% of residents aged 16 and older earned less than \$16,604 (using a plus/minus 3% formula) in 2010.¹²⁹⁵ In addition, economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development (DOLWD). According to the ALARI database show that the per capita income in Teller in 2010 was \$8,845, which indicates an overall decrease compared to the real per capita income values reported by the U.S. Census in 2000.^{1296,1297} However, it should be noted that ACS and DOLWD data are based on wage earnings and do not take into account the value of subsistence within the local economy.

Based on the ACS, in the same year, 61.8% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 13.6%, compared to the statewide rate of 5.9%. Approximately 40.4% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Teller are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Teller. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 19.5%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was employed in the public sector (62.1%), while 35.8% were employed in the private sector and 2.1% were self-employed. Out of 95 people aged 15 and over that were estimated to be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (28.6%), transportation, warehousing, and utilities (20.9%), arts, entertainment, recreation, accommodation, and food services (16.5%), other services, except public administration (14.3%), and professional, scientific, management, administration, and waste management (12.1%). Smaller percentages of the workforce were employed in public administration (4.4%) and finance, insurance, and real estate (3.3%). No individuals characterized themselves as working in natural resource based occupations or industries that include fishing. However, given the data reported in the *Commercial Fishing* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and

¹²⁹⁴ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹²⁹⁵ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

¹²⁹⁶ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹²⁹⁷ Calculated as the total wages earned by those employed in the community divided by the total population. The wages earned do not include income collected by residents that are self employed.

characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Teller (U.S. Census).

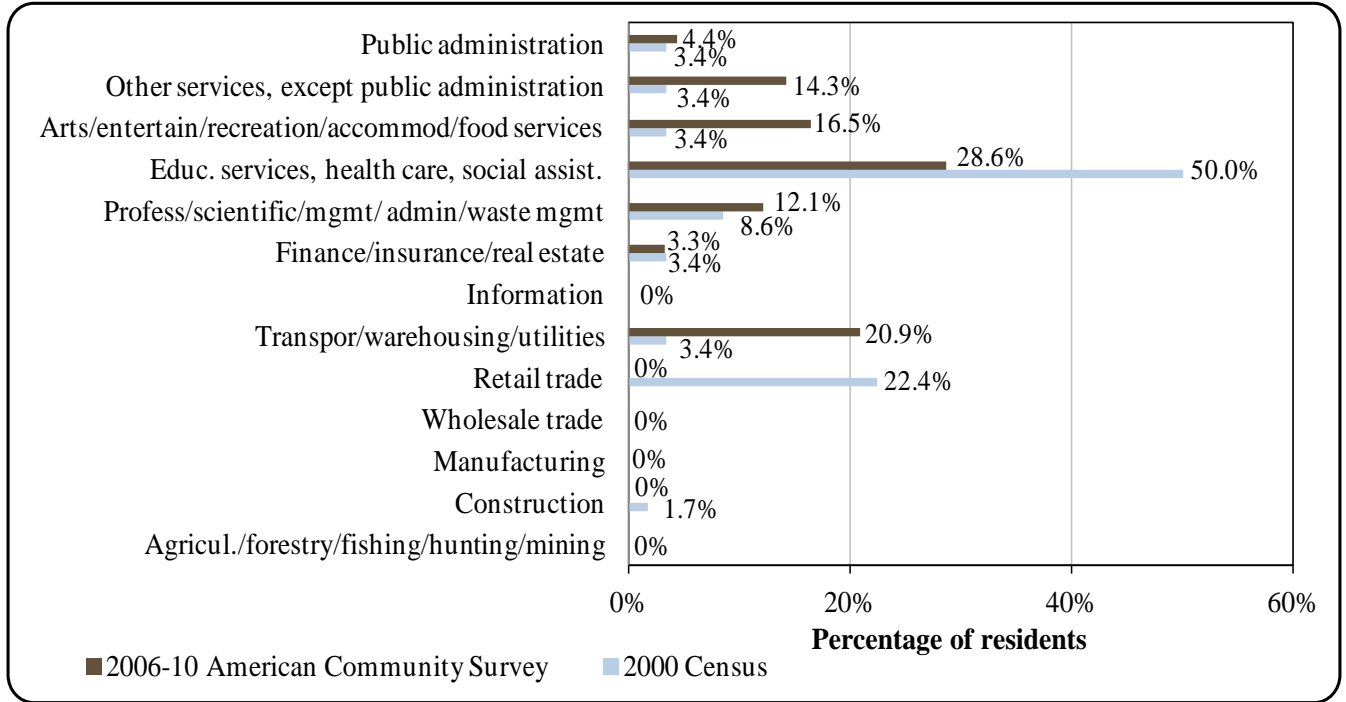
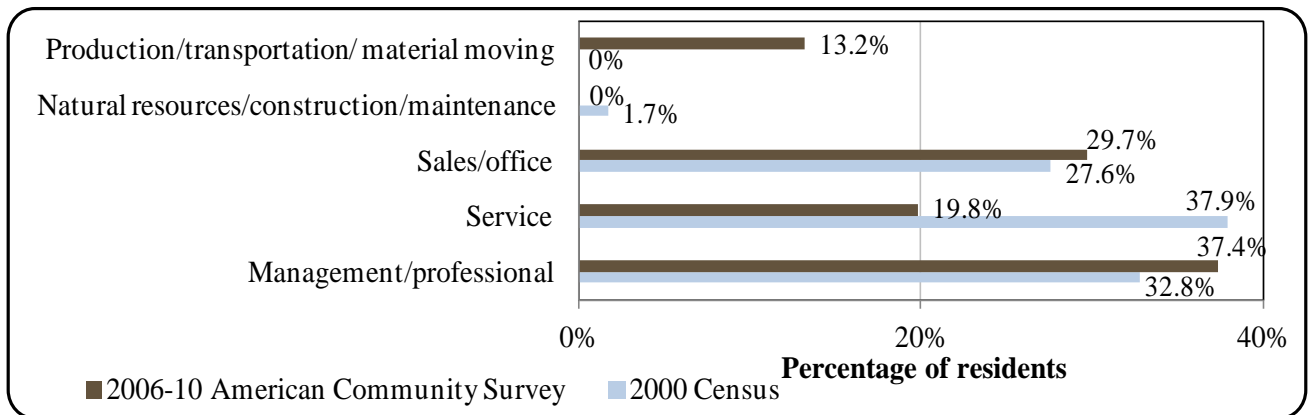


Figure 4. Local Employment by Occupation in 2000-2010, Teller (U.S. Census).



Governance

Teller is a Second-class city and is not located within an organized borough. In 2010, the City administered a 3% sales tax. Municipal revenues reported in Table 2 were taken from Certified Financial Statements. When adjusted for inflation,¹²⁹⁸ total municipal revenues declined by 78.6% between 2000 and 2010 from \$1.1 million, to \$304,030. Municipal revenues varied significantly by year, peaking in 2006 at \$1.94 million and bottoming in 2007 at \$155,314. Municipal revenues averaged \$869,377 between 2000 and 2010. In 2010, 17.5% of total municipal revenues were collected locally, most (74.9%) of which came from sales taxes. “Washeteria” fees, utility rents, and landfill fees accounted for the remaining revenues. Most (43.0%) outside revenues were collected from state allocated Community Revenue Sharing, followed by Norton Sounds Economic Development Corporation (NSED) grants (42.4%) and payments in lieu of taxes (13.6%). Sales taxes accounted for 13.1% of total municipal revenues in 2010, compared to 2.5% in 2000. In addition, Community Revenue Sharing accounted for 31.3% of total municipal revenues in that year, compared to 2.5% from State Revenue Sharing in 2000. No fisheries related grants were reported between 2000 and 2010.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Teller from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,100,791	\$27,891	\$27,890	n/a
2001	\$1,179,817	\$27,036	\$31,900	n/a
2002	\$662,756	\$16,797	\$26,834	n/a
2003	\$1,059,698	\$18,523	\$19,689	n/a
2004	\$1,174,613	\$15,098	-	n/a
2005	\$533,077	\$10,129	-	n/a
2006	\$1,944,475	\$16,834	-	n/a
2007	\$155,314	\$1,990	-	n/a
2008	\$1,173,453	\$12,000	-	n/a
2009	\$275,128	\$11,784	\$109,193	n/a
2010	\$304,030	\$39,935	\$95,215	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹²⁹⁸ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Teller was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA), is the Teller Native Corporation. The regional Native corporation to which Teller belongs is the Bering Straits Native Corporation.¹²⁹⁹ The mission of the BSNC is, “To improve the quality of life of our people through economic development while protecting our land, and preserving our culture and heritage.” The BSNC, owned by Alaska Native shareholders, actively pursues responsible development of resources and other business opportunities. Through its subsidiaries, BSNC serves government and commercial customers throughout the region, Alaska, the United States and the world.¹³⁰⁰

The closest offices of the Alaska Department of Fish and Game (ADF&G) and Department of Commerce, Community, and Economic Development are located in Nome. The nearest office of the Alaska Department of Natural Resources is located in Fairbanks. The nearest offices of the National Marine Fisheries Service (NMFS), Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Teller has a road link to Nome from May to September via a 72-mile gravel road. The community can also be accessed by sea and air. There is a state-owned 3,000 foot long by 60 foot wide gravel runway with regular flights from Nome. There is no dock; goods are lightered from Nome and offloaded on the beach. Port Clarence is a nearby natural harbor.¹³⁰¹ In June of 2012, round-trip airfare between Teller and Anchorage (via connections in Nome and Kotzebue) was \$702.¹³⁰²

*Facilities*¹³⁰³

During the summer, water is hauled from the Gold Run River (20 miles away) by the city water truck and delivered to home storage tanks. A few residents use their own All-Terrain Vehicles (ATVs) or snowmobiles to haul water. During winter, treated water is delivered from a large storage tank at the washeteria or melted ice from area creeks is used. The school operates its own sewer system. Forty-two residents (18%) use “honeybuckets,” which are hauled by the city. A few homes and facilities have septic tanks. The community participates in hazardous waste collection.

Law enforcement services are provided by the city Village Police Officer and state troopers in Nome. Fire and rescue services are provided by the City Volunteer Fire department.

¹²⁹⁹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁰⁰ Bering Straits Native Corporation (2012). *Homepage*. Retrieved May 9, 2012 from <http://www.beringstraits.com/>.

¹³⁰¹ Ibid.

¹³⁰² Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹³⁰³ See footnote 1299.

A teen center is under construction, and Teller has a community center/bingo hall. The school has a gym and library.

*Medical Services*¹³⁰⁴

The Teller Health Clinic provides medical care and is owned by the Village Corporation and operated by the Norton Sound Health Corporation. The clinic is a Community Health Aid Program site. Emergency services have limited highway, coastal, and air access and are provided by a health aide. The nearest hospital is located in Nome.

*Educational Opportunities*¹³⁰⁵

The James C. Isabell School provides instruction to students in pre-school through 12th grade. In 2011 the school had 73 students and nine teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Subsistence is heavily practiced in Teller. According to Teller's *2006-2010 Economic Development Plan*,¹³⁰⁶ residents annually harvest approximately 519 pounds of wild foods per person. The nutritional contribution of this harvest accounts for about 45% of the annual average caloric intake of residents. Declining natural resources, pollution, and extensive subsistence regulations are a concern to Teller residents.

Commercial fisheries prosecuted by residents in 2010 were limited to Norton Sound salmon fisheries. In 1959 and 1960 an experimental salmon fishery was established in the Norton Sound area. State officials encouraged seafood processors to explore and develop fisheries in the region in hopes of providing economic benefits to local communities. In 1961, commercial harvesters began targeting Chinook and coho salmon in the Unalakleet and Shaktoolik areas. Back then, catch was cleaned and shipped to Anchorage for further processing. A single freezer ship processed pink and chum salmon in the area during 1961. By 1962, two floating processors were in operation, and commercial salmon fishing extended into Norton Bay, Moses Point, and Golovin Bay. Peak canning operations occurred in 1963. Commercial Chinook harvests peaked in the 1980s when the 10-year annual average harvest was about 8,000 fish. Commercial harvests of sockeye salmon have always been minor. Coho salmon harvests averaged about 40,000 annually during the 1980s. By the 1990s, that number increased to approximately 55,000 fish, but decreased by half by 2000. Pink salmon harvests are sporadic, and fluctuate by year. In 1994, almost one million pink salmon were commercially harvested while in more recent years, harvests have dropped to zero. Commercial harvests of chum salmon averaged 150,000 fish annually during the 1970s and 1980s. Stricter escapement goals reduced that number in the

¹³⁰⁴ Ibid.

¹³⁰⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹³⁰⁶ Kawerak Inc. (2005). *Teller Local Economic Development Plan 2006-2010*. Retrieved July 11, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Teller-EDP-2005.pdf>.

1990s.¹³⁰⁷ Commercial fishing has been in decline in Teller since the downturn of the salmon and herring fisheries in the 1980s combined with high operating costs.¹³⁰⁸

The area is included in Federal Statistical and Reporting Area 514, Pacific Halibut Fishery Regulatory Area 4E, and the Bering Sea Sablefish Regulatory Area. The community participates in the Community Development Quota (CDQ) program through the NSEDC. NSEDC participates in the Bering Sea Fisheries to provide economic development through education, employment, training and financial assistance to its member communities. NSEDC is a private 501(c)(4) non-profit corporation representing 15 member communities and over 8,700 people in the Bering Strait region of Northwestern Alaska. NSEDC is one of six CDQ organizations in Alaska.¹³⁰⁹ The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹³¹⁰ Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, Teller does not have a registered processing plant. The nearest processing plant is located in Nome.

Fisheries-Related Revenue

The city of Teller received a small amount of fisheries-related revenue from the raw fish tax in 2001, 2005, and 2006, and a small amount of revenue from the Shared Fisheries Business Tax between 2000 and 2010 (except 2003). Information about fisheries-related revenue received by the city of Teller is presented in Table 3.

Commercial Fishing

In 2010, there were a total of five salmon permits issued by the Commercial Fisheries Entry Commission (CFEC) to five permit holders in Teller. Four were issued for the gill net fishery in Norton Sound and one was issued for the statewide hand troll fishery. However, none of those five permits were reported as fished. The number of salmon CFEC permits and permit holders remained stable from 2007 to 2010, though only three permits were reported as fished in 2007 and one permit was reported as fished in 2008. There was one crab CFEC permit issued in 2003 for the king crab pot fishery using vessels under 60 feet in Norton Sound, which was reported as fished. There was also one halibut CFEC permit issued in 2003 for the statewide longline fishery using vessels under 60 feet, which was not reported as fished. There were no

¹³⁰⁷ Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 10, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹³⁰⁸ See footnote 1306.

¹³⁰⁹ Norton Sound Economic Development Corporation (2003). Retrieved on May 11, 2012 from <http://www.nsedc.com/>.

¹³¹⁰ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

Federal Fisheries Permits or License Limitation Program (LLP) permits issued to Teller residents between 2000 and 2010. Information regarding commercial fishing permits and permit holders by species is presented in Table 4.

There were no crew license holders in Teller in 2010. Between 2000 and 2010, there were between zero and six crew license holders in Teller in any given year. There were no fish buyers or shore-side processing facilities located in Teller between 2000 and 2010. There were between one and three vessels owned primarily by Teller residents between 2007 and 2009, but there were no vessels owned primarily by Teller residents in 2010. In 2000 and 2007 through 2009, there were between one and two vessels homeported in Teller. There were no vessels landing catch in Teller between 2000 and 2010, and therefore no associated landings or ex-vessel value reported during this period. Information on characteristics of the commercial fishing sector in Teller between 2000 and 2010 is presented in Table 5.

There were no halibut, sablefish or crab quota share account holders reported in Teller between 2000 and 2010 (Tables 6, 7, and 8). As previously stated, there were no landings or associated ex-vessel value recorded in Teller between 2000 and 2010 (Table 9). There were no landings or associated ex-vessel revenue reported by Teller residents between 2000 and 2006 or in 2010; landings and associated ex-vessel revenue recorded by Teller residents between 2007 and 2009 are considered confidential due to the small number of participants (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Teller: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	\$200	n/a	n/a	n/a	\$65	\$65	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$58	\$119	\$172	n/a	\$65	\$162	\$194	\$154	\$83	\$61	\$75
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$58</i>	<i>\$319</i>	<i>\$172</i>	<i>\$0</i>	<i>\$65</i>	<i>\$227</i>	<i>\$259</i>	<i>\$154</i>	<i>\$83</i>	<i>\$61</i>	<i>\$75</i>
<i>Total municipal revenue⁵</i>	<i>\$1.10 M</i>	<i>\$1.18 M</i>	<i>\$662,756</i>	<i>\$1.06 M</i>	<i>\$1.17 M</i>	<i>\$533,077</i>	<i>\$1.94 M</i>	<i>\$155,314</i>	<i>\$1.17 M</i>	<i>\$275,128</i>	<i>\$304,030</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, Teller: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	1	0	0	0	0	0	0	0
	Fished permits	0	0	0	1	0	0	0	0	0	0	0
	% of permits fished	-	-	-	100%	-	-	-	-	-	-	-
	Total permit holders	0	0	0	1	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	1	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	1	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Teller: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	5	5	5	5
	Fished permits	0	0	0	0	0	0	0	3	1	0	0
	% of permits fished	-	-	-	-	-	-	-	60%	20%	0%	0%
	Total permit holders	0	0	0	0	0	0	0	5	5	5	5
<i>Total CFEC Permits²</i>	<i>Permits</i>	0	0	0	2	0	0	0	5	5	5	5
	<i>Fished permits</i>	0	0	0	1	0	0	0	3	1	0	0
	<i>% of permits fished</i>	-	-	-	50%	-	-	-	60%	20%	0%	0%
	<i>Permit holders</i>	0	0	0	1	0	0	0	5	5	5	5

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Teller: 2000-2010.

Year	Crew License Holders ¹	Count Of All Fish Buyers ²	Count Of Shore-Side Processing Facilities ³	Vessels Primarily Owned By Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch In Teller ²	Total Net Pounds Landed In Teller ^{2,5}	Total Ex-Vessel Value Of Landings In Teller ^{2,5}
2000	0	0	0	0	1	0	0	\$0
2001	1	0	0	0	0	0	0	\$0
2002	0	0	0	0	0	0	0	\$0
2003	0	0	0	0	0	0	0	\$0
2004	1	0	0	0	0	0	0	\$0
2005	1	0	0	0	0	0	0	\$0
2006	2	0	0	0	0	0	0	\$0
2007	6	0	0	3	2	0	0	\$0
2008	2	0	0	2	2	0	0	\$0
2009	1	0	0	1	1	0	0	\$0
2010	0	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals represent only non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Teller: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Teller: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Teller: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Teller: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Teller Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	--	--	--	0
Finfish	0	0	0	0	0	0	0	--	--	--	0
Halibut	0	0	0	0	0	0	0	--	--	--	0
Herring	0	0	0	0	0	0	0	--	--	--	0
Other Groundfish	0	0	0	0	0	0	0	--	--	--	0
Other Shellfish	0	0	0	0	0	0	0	--	--	--	0
Pacific Cod	0	0	0	0	0	0	0	--	--	--	0
Pollock	0	0	0	0	0	0	0	--	--	--	0
Sablefish	0	0	0	0	0	0	0	--	--	--	0
Salmon	0	0	0	0	0	0	0	--	--	--	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	--	--	--	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>\$0</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were no sport fish guide businesses located in Teller nor did any residents hold sport fish guide licenses. The number of sport fishing licenses sold to Teller residents (irrespective of the location of the point of sale) varied considerably between 2000 and 2010, with 21 sport fishing licenses sold in Teller in 2010. There were no sport fishing licenses sold in Teller until 2006, and the number of licenses sold between 2006 and 2010 was also highly variable. The lower number of licenses sold in Teller indicates the potential that community residents may be pursuing recreational fishing activities in other communities.

Teller is located within Alaska Sport Fishing Survey Area W – Seward Peninsula – Norton Sound. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, there was significant sport fishing activity in both saltwater and freshwater, although freshwater sport fishing was more important in the region. Alaska resident anglers consistently fished more angler days in both freshwater and saltwater (34 – 2,663 saltwater and 6,199 to 17,579 freshwater angler days) than non-Alaska residents (0 – 204 saltwater and 2,087 – 8,307 freshwater angler days) during the period. This information about the sport fishing sector in and near Teller is displayed in Table 11.

The Alaska Statewide Harvest Survey¹³¹¹ did not report any species as being targeted by private anglers in Teller between 2000 and 2010.

Table 11. Sport Fishing Trends, Teller: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Teller ²
2000	0	0	31	0
2001	0	0	24	0
2002	0	0	7	0
2003	0	0	33	0
2004	0	0	34	0
2005	0	0	7	0
2006	0	0	32	17
2007	0	0	19	0
2008	0	0	26	2
2009	0	0	37	18
2010	0	0	21	4

¹³¹¹ Alaska Department of Fish and Game. (2011). *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 Cont. Sport Fishing Trends, Teller: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	0	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

The Teller economy is based on subsistence activities supplemented by part-time wage earnings. Fish, seal, moose, beluga whale, and reindeer are the primary meat sources.¹³¹² Data were not reported between 2000 and 2010 for the subsistence participation by household and species or the per capita subsistence harvest (Table 12). However, data are reported for total harvests of subsistence resources by residents of Teller between 2000 and 2010.

In years for which data were reported for salmon harvests between 2000 and 2010, an average of 59 subsistence salmon permits were issued to Teller residents, with an average of 55 of those permits returned each year. Pink salmon, sockeye salmon, and chum salmon were the primary species harvested under subsistence permits (an average of 1,656 pink salmon, 1,472 sockeye salmon, and 1,159 chum salmon each year), along with Chinook salmon and coho salmon. Data regarding subsistence harvest of non-salmon fish (other than halibut) and marine invertebrates were not reported between 2000 and 2010. Further information about subsistence harvest of these species is presented in Table 13.

¹³¹² Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Between 2004 and 2010, an average of four Subsistence Halibut Registration Certificates (SHARC) were issued to Teller residents. However, data regarding how many SHARC were fished each year and the number of pounds of halibut harvested was not reported during this period. Information on subsistence halibut fishing participation is provided in Table 14.

In terms of marine mammals, and estimated 11 walrus were harvested between 2000 and 2010, although harvests were almost exclusively reported in 2010 (Table 15).

Table 12. Subsistence Participation by Household and Species, Teller: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Teller: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	80	70	39	747	369	557	1,784	n/a	n/a
2001	72	61	40	863	209	715	1,483	n/a	n/a
2002	77	71	50	1,152	433	1,043	1,440	n/a	n/a
2003	67	59	28	959	269	1,017	1,090	n/a	n/a
2004	46	45	90	1,170	376	2,509	1,938	n/a	n/a
2005	40	39	41	685	300	2,952	1,388	n/a	n/a
2006	52	51	15	1,608	281	2,433	2,511	n/a	n/a
2007	54	54	16	2,307	93	592	1,184	n/a	n/a
2008	47	44	38	941	94	3,082	427	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Teller: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	2	n/a	n/a
2005	2	n/a	n/a
2006	3	n/a	n/a
2007	2	n/a	n/a
2008	2	n/a	n/a
2009	10	n/a	n/a
2010	10	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Teller: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	1	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	10	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Unalakleet (YOO-nuh-luh-kleet)



People and Place

*Location*¹³¹³

Unalakleet is located on Norton Sound at the mouth of the Unalakleet River, 148 miles southeast of Nome and 395 miles northwest of Anchorage. Unalakleet is located in the Cape Nome Recording District and the Nome Census Area, but is not located within an organized Borough. The community encompasses 2.9 square miles of land and 2.3 square miles of water.

*Demographic Profile*¹³¹⁴

In 2010, there were 688 inhabitants in Unalakleet, making it the 88th largest of 352 total Alaskan communities with recorded populations that year. Between 2000 and 2009, the population of Unalakleet decreased by 2.95%, with an average annual growth rate of -0.32%, indicating a slow rate of population decline. The change in population from 1990 to 2010 is provided in Table 1.

A majority of Unalakleet residents identified themselves as American Indian and Alaska Native in 2010 (77.3%). Other ethnic groups present in Unalakleet in that year included White (15%), two or more races (6.4%), Hispanic or Latino (1%), Black or African American (0.6%), Asian (0.6%), and some other race (0.1%). The percentage of the population identifying themselves as American Indian and Alaska Native decreased by 8%, with corresponding increases in the percentages of the population identifying themselves as White, two or more races, some other race, Asian, Black or African American, and Hispanic or Latino. Changes in racial and ethnic composition from 2000 to 2010 are shown in Figure 1.

The average household size in Unalakleet in 2010 was 3.06, a decrease from 3.4 persons per household in 1990 and 3.33 in 2000. The total number of households in Unalakleet increased from 207 in 1990 to 224 in 2000 to 225 occupied housing units in 2010. Of the 268 total housing units surveyed for the 2010 Decennial Census, 138 were owner-occupied, 87 were renter-occupied, and 43 were vacant or used only seasonally. Throughout this period no residents of Unalakleet were reported to be living in group quarters.

¹³¹³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

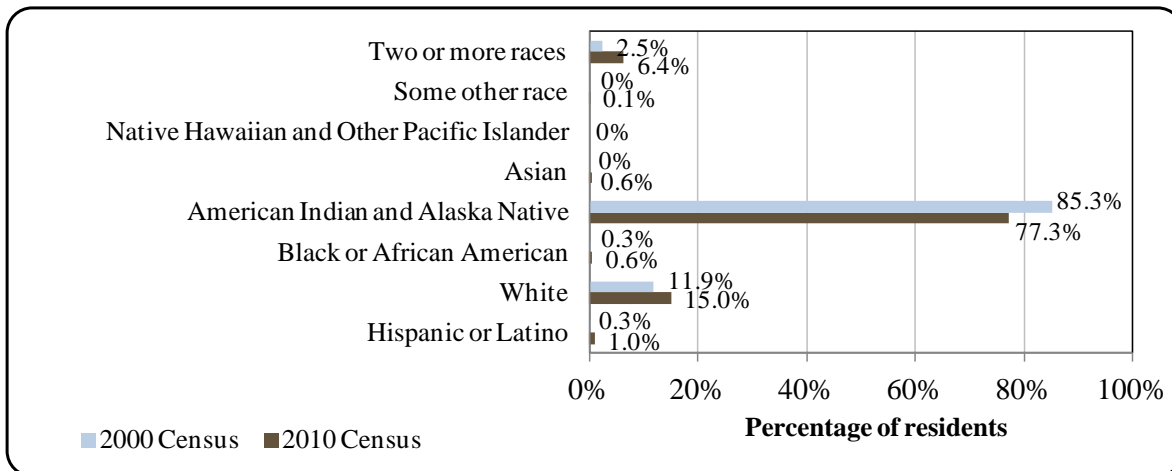
¹³¹⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

Table 1. Population in Unalakleet from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	714	-
2000	747	-
2001	-	737
2002	-	727
2003	-	739
2004	-	730
2005	-	713
2006	-	728
2007	-	723
2008	-	722
2009	-	725
2010	688	-

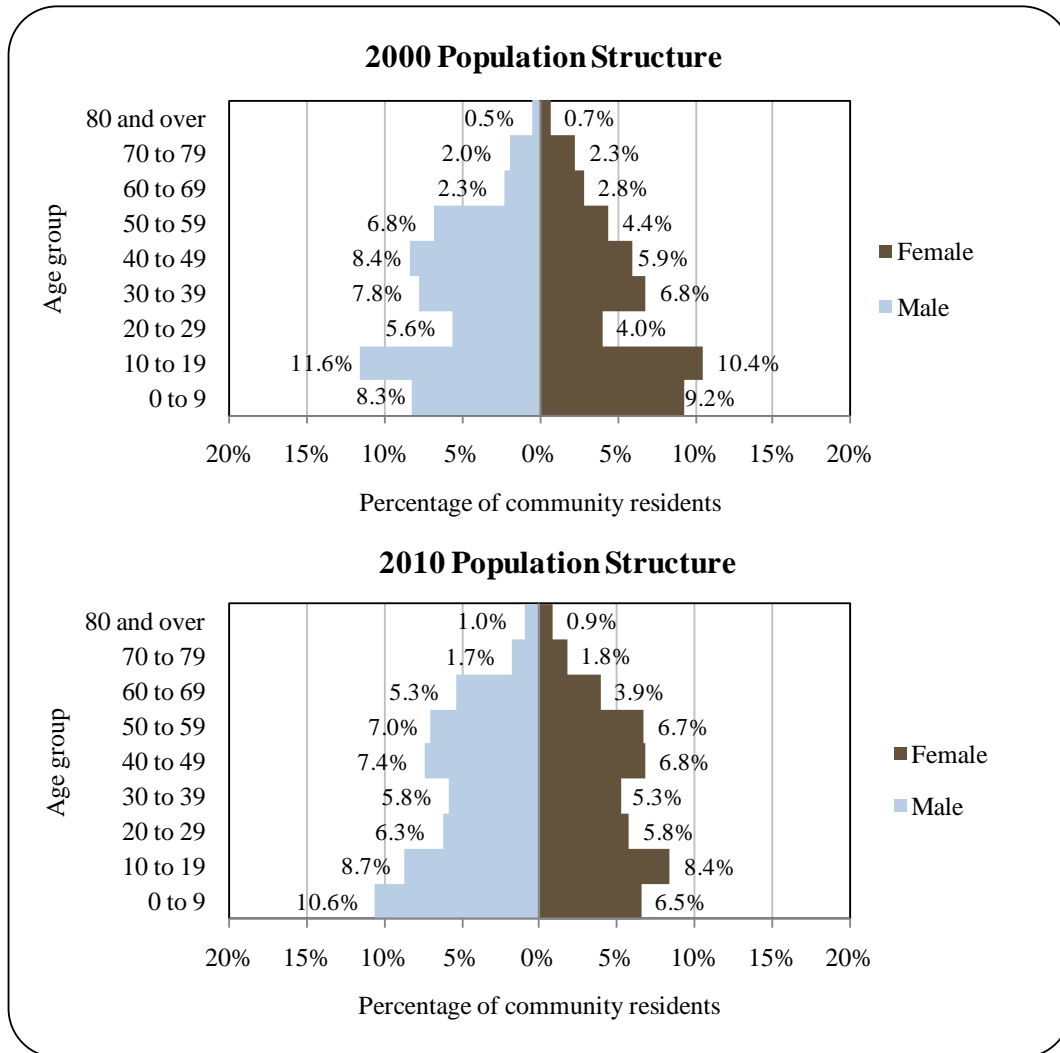
¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.
² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Unalakleet: 2000-2010 (U.S. Census).



In 2010, the gender makeup in Unalakleet was 53.9% male and 46.1% female, slightly more skewed than the state as a whole (52% male, 48% female). The median age was estimated to be 33.1 years, lower than both the U.S. national average of 36.8 years and the median age for Alaska, 33.8 years. In 2010, the greatest percentage of the population fell within the age group zero to 19 years old, with the next largest percentage falling within the age group 40-59 years old. Relatively few individuals were age 70 or older in 2010. The overall population structure of Unalakleet in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Unalakleet Based on the 2000 and 2010 U.S. Decennial Census.



According to the 2006-10 American Community Survey (ACS),¹³¹⁵ in terms of educational attainment, 79.7% of Unalakleet residents aged 25 and over were estimated to hold a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. Also in 2010, 10.6% of residents aged 25 and over were estimated to have less than a ninth grade education, compared to 3.5% of Alaskan residents overall; 9.7% were estimated to have a ninth to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 44.3% were estimated to have a high school diploma or equivalent, compared to 27.4% of Alaskan residents overall; 13.1% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 5.4% were estimated to have an Associate’s degree, compared to

¹³¹⁵ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

8% of Alaskan residents overall; 15.3% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 1.5% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

*History, Traditional Knowledge, and Culture*¹³¹⁶

Archaeologists have dated house remnants along the beach ridge from 200 B.C. to 300 A.D. The name Unalakleet means "from the southern side." Unalakleet has long been a major trade center as the terminus for the Kaltag Portage, an important winter travel route connecting to the Yukon River. Indians on the upper river were considered "professional" traders with a monopoly on the Indian-Eskimo trade across the Kaltag Portage. The Russian-American Company built a post here in the 1830s. In 1898, reindeer herders from Lapland were brought to Unalakleet to establish sound herding practices. In 1901, the Army Signal Corps built over 605 miles of telegraph line from St. Michael to Unalakleet, over the portage to Kaltag and Fort Gibbon. The city was incorporated in 1974.

Unalakleet has a history of diverse cultures and trade activity. Unalakleet has a vibrant local economy, along with a traditional Unaligmiut Eskimo subsistence lifestyle. Fish, seal, caribou, moose, and bear are utilized as subsistence resources. The sale of alcohol is prohibited in the community, although importation and possession is allowed.

Natural Resources and Environment

Unalakleet has a subarctic climate with considerable maritime influences when Norton Sound is ice-free, usually from May to October. Winters are cold and dry. Average summer temperatures range 47 to 62 °F (8.3 to 16.7 °C); winter temperatures average -4 to 11 °F (-20 to -11.7 °C). Extremes have been measured from -50 to 87 °F (-45.6 to 30.6 °C). Precipitation averages 14 inches annually, with 41 inches of snow.¹³¹⁷

Unalakleet is located near the Andreafsky Wilderness Area. The United States Congress designated the Andreafsky Wilderness Area in 1980. The area now has a total of 1,300,000 acres and is managed by the U.S. Fish & Wildlife Service. The expansive 1.3 million acres of the Andreafsky Wilderness Area cover only slightly more than 5 percent of the monstrously vast 20-million-acre Yukon Delta National Wildlife Refuge, America's largest unit of the National Wildlife Refuge System. Most of the delta is wetland tundra and marsh, and about one-third of it lies underwater. Here you'll find moose, foxes, beavers, martens, minks, wolves, wolverines, caribou, large populations of black and brown bears, and millions of salmon. Forests of white spruce and balsam poplar grow along the riverbanks of the Andreafsky River through the Wilderness Area. Near the headwaters the forests give way to alpine tundra, and a relatively flat, treeless delta. Fishing is excellent, and the bears know it. Both rivers are scenic, but the East Fork has more trees and runs closer to the mountains. One hundred twenty-five miles of the Andreafsky River and 137 miles of the East Fork River are designated National Wild and Scenic

¹³¹⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³¹⁷ Ibid.

Rivers, attracting river runners and anglers. Summers are cool and gentle by Alaskan standards, with days of fog. Winters are cold, dry, and severe.¹³¹⁸

Current Economy¹³¹⁹

Both commercial fishing for herring and herring roe and subsistence activities are major components of Unalakleet's economy. Norton Sound Economic Development Council (NSEDC) operates a fish processing plant. Government and school positions are relatively numerous. Tourism is becoming increasingly important; there is world-class silver fishing in the area.¹³²⁰ Top employers in 2010¹³²¹ included Bering Strait School District, Norton Sound Economic Development Corp., Native Village of Unalakleet, City of Unalakleet, Norton Sound Health Corp., Alaska Commercial Co., Pro-West Contractors LLC, Kawerak Inc., and State of Alaska.

In 2010, per capita income in Unalakleet was estimated to be \$20,575 and the median household income was estimated to be \$47,222, compared to \$15,845 and \$42,083 in 2000, respectively. Taking inflation into account by converting the 2000 values to 2010 dollars, the real per capita income in 2000 is shown to have been \$20,836 and the real 2000 median household income was \$55,339. This shows that per capita income decreased very slightly over the period, and there was also a real decrease in median household income. In 2010, Unalakleet ranked 147th of 305 Alaskan communities with per capita income that year, and 147th out of 299 Alaskan communities with household income data. However, Unalakleet's small population size may have prevented the ACS from accurately portraying economic conditions.¹³²² A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, the per capita income in Unalakleet in 2010 was \$18,022, which indicates a more pronounced decrease in per capita income compared to the real per capita income values reported by the U.S. Census in 2000.¹³²³

Based on the 2006-2010 ACS, 56.6% of the population age 16 and older was estimated to be in the civilian labor force, compared to the statewide rate of 68.8%. The local unemployment rate was 9.5%, compared to the statewide unemployment rate of 5.9%. Approximately 14.5% of local residents were living below the poverty line, compared to 9.6% of Alaskans overall. It should be noted that income and poverty statistics are based on wage income and other money sources; the relatively low income figures and high poverty rates reported for Unalakleet are not reflective of the value of subsistence to the local economy. In addition, these unemployment and poverty statistics are likely inaccurate given the small population of Unalakleet. A more accurate estimate is based on the ALARI database, which indicates that the unemployment rate in 2010 was 13.3%.

Based on household surveys conducted for the 2006-2010 ACS, the greatest percentage of workers was employed in the private sector (47%), while 46.6% were employed in the public sector and 6.5% were self-employed. Out of 247 people aged 16 and over that were estimated to

¹³¹⁸ The University of Montana (n.d.). *Andreafsky Wilderness*. Retrieved March 22, 2012 from <http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&WID=11>.

¹³¹⁹ Unless otherwise noted, all monetary data are reported in nominal values.

¹³²⁰ See footnote 1316.

¹³²¹ Alaska Department of Labor and Workforce Development (n.d.). Alaska Local and Regional Information Database. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹³²² See footnote 1315.

¹³²³ See footnote 1321.

be employed in the civilian labor force in 2010, the greatest percentage worked in educational services, health care, and social assistance (42.2%), transportation, warehousing, and utilities (15.5%), and construction (10.7%). Smaller percentages of the workforce were estimated to be employed in public administration (7.8%), other services except public administration (2.4%), arts, entertainment, recreation, accommodations, and food services (3.4%), professional, scientific, management, administration, and waste management (2.9%), retail trade (2.4%), manufacturing (7.3%), and agriculture, forestry, fishing, hunting, and mining (5.3%). However, given the data reported in the *Commercial Fisheries* section below, the number of individuals employed in the farming, fishing, and forestry industries may be underestimated by census statistics as fishermen may hold another job and characterize their employment accordingly. Information about employment by industry is presented in Figure 3, and employment is broken down by occupation in Figure 4.

Figure 3. Local Employment by Industry in 2000-2010, Unalakleet (U.S. Census).

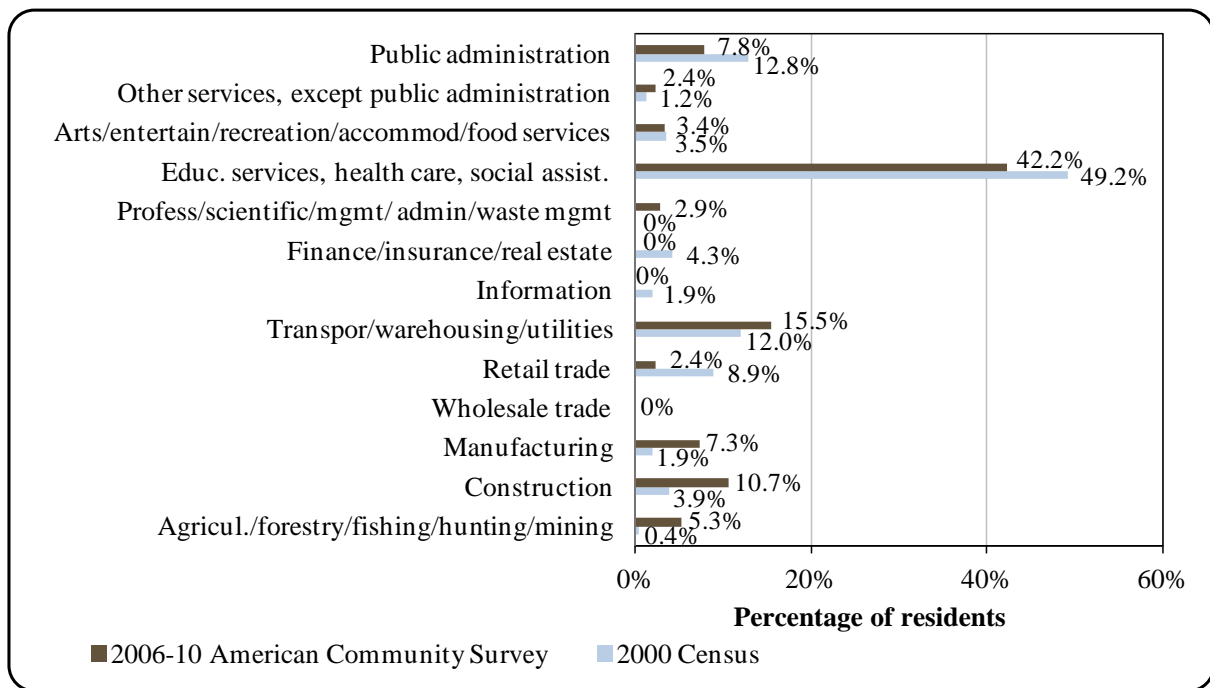
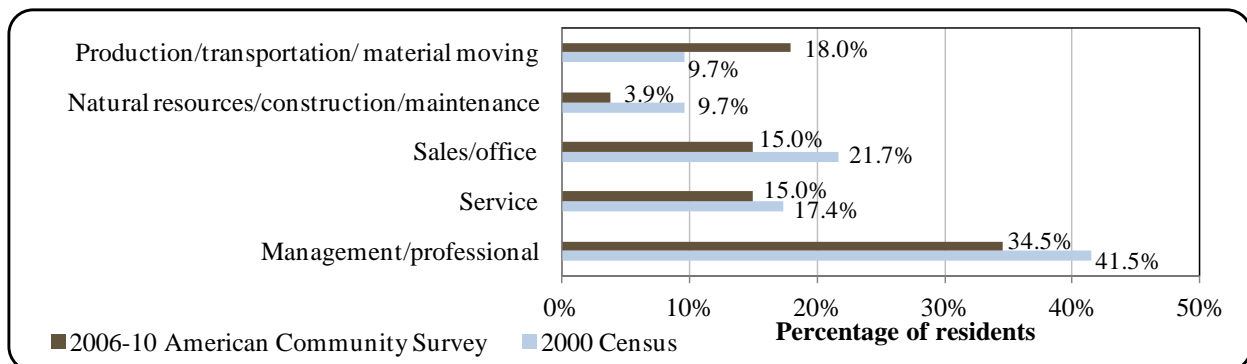


Figure 4. Local Employment by Occupation in 2000-2010, Unalakleet (U.S. Census).



Governance

Unalakleet is a Second-class city that is not located in an organized Borough. Total municipal revenue received by Unalakleet increased overall between 2000 and 2010. The city administered a 5% sales tax in 2010, as well as a liquor and accommodations tax. Municipal revenue figures were taken from financial audits. When adjusted for inflation,¹³²⁴ total municipal revenues increased 23.0% between 2000 and 2010 from \$1.04 million, to \$1.65 million. In 2010, most (25.4%) municipal revenues were collected from local taxes, followed by gaming revenues (19.1%) and service charges (18.5%). Sales taxes accounted for 24.7% of total revenues in 2010, compared to 23.6% in 2000. In addition, state allocated Community Revenue Sharing accounted for 8.0% of total revenues that year, compared to 2.8% from State Revenue Sharing in 2000. Unalakleet received fisheries related grants between 2000 and 2010 for projects including a harbor feasibility and design and construction project. In addition, grants were received from NSEDC. Information regarding municipal finances can be found in Table 2.

Unalakleet was included under the Alaska Native Claims Settlement Act (ANCSA) and is federally recognized as a Native village. The authorized traditional entity, recognized by the Bureau of Indian Affairs (BIA) is the Unalakleet Native Corporation. The regional native corporation to which Unalakleet belongs is the Bering Straits Native Corporation.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of Unalakleet from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$1,039,880	\$245,605	\$29,130	n/a
2001	\$1,095,705	\$272,800	\$28,086	n/a
2002	\$1,244,650	\$275,860	\$28,512	\$800,000
2003	\$1,522,050	\$275,000	\$28,635	\$5,000,000
2004	\$1,161,000	\$271,753	-	n/a
2005	\$1,380,749	\$278,802	-	n/a
2006	\$1,408,092	\$262,773	-	\$75,000
2007	\$1,469,668	\$254,948	-	n/a
2008	\$1,528,444	\$344,136	-	n/a
2009	\$1,985,792	\$377,471	\$132,883	n/a
2010	\$1,653,644	\$408,411	\$132,360	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

¹³²⁴ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

The closest office of the Alaska Department of Fish and Game (ADF&G) is located in Unalakleet, and the closest office of the Alaska Department of Commerce, Community, and Economic Development is located in Nome. The closest offices of the Alaska Department of Natural Resources, the National Marine Fisheries Service (NMFS), the Bureau of Citizenship and Immigration Services, and U.S. Immigration and Customs Enforcement are located in Anchorage.

Infrastructure

Connectivity and Transportation

Unalakleet has a state-owned 5,900 foot long by 150 foot wide gravel runway and a gravel strip that is 1,900 feet long and 75 feet wide. There are regular flights to Anchorage. In June 2012, round-trip airfare between Unalakleet and Anchorage was \$450.¹³²⁵ Cargo is lightered from Nome to the dock in Unalakleet. Local overland travel is mainly by ATVs, snowmobiles, and dogsleds in winter.¹³²⁶

*Facilities*¹³²⁷

Water is derived from an infiltration gallery on Powers Creek and is treated and stored in a million-gallon steel tank. The water source is not sufficient during extremely cold weather. One-hundred-ninety (190) households are connected to the piped water and sewer system and have complete plumbing. Only two households haul water and honeybuckets. Residents haul refuse to the baler facility for transportation to the landfill. Refuse collection is available for commercial customers. Matanuska Electric Association owns and operates the electrical system in Unalakleet, through the Unalakleet Valley Electric Cooperative.

Law enforcement services are provided by a Village Public Safety Officer (VPSO) and a state troopers post. Fire and rescue services are provided by the city volunteer fire department using Project Code Red Equipment. There is a city jail and a community hall, as well as a school gym, two school libraries, and a public library.

*Medical Services*¹³²⁸

Health care is provided by the Anikkan Inuit Illuaqtaat Sub-Regional Clinic, which is owned by the Village Council and operated by the Norton Sound Health Corporation. The clinic is a Community Health Aid Program site and a qualified Emergency Care Center. Emergency services have river and air access and are provided by volunteers and a health aide. The nearest hospital is located in Nome.

¹³²⁵ Airfare was obtained on the travel website <http://www.travelocity.com> for a round-trip ticket for travel from June 1 to June 8, 2012. Retrieved on December 1, 2011.

¹³²⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³²⁷ Ibid.

¹³²⁸ Ibid.

*Educational Opportunities*¹³²⁹

The Unalakleet school provides instruction to students from pre-school through 12th grade. In 2011, the school had 188 students and 18 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Commercial salmon fisheries began to develop shortly after the purchase of Alaska by the U.S. in 1867. However, the Norton Sound commercial salmon fishery developed later than in other regions of the State. In 1959 and 1960, biologists from the Division of Commercial Fisheries conducted an inventory of salmon resources and determined that harvestable surpluses were present in several Norton Sound river systems. They encouraged processors to develop the fishery after statehood as part of an effort to bring economic benefits to this area of rural Alaska. The first commercial harvest occurred in 1961, and salmon markets in the area have been sporadic since that time. Harvests increased through the 1990s, and have declined since then.¹³³⁰

Commercial exploitation of halibut and groundfish first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹³³¹ King crab fisheries developed in the Bering Sea beginning in the 1950s, and Norton Sound is one of the historical centers of this fishery.

Commercial fishing of herring by domestic fishermen dates back to 1916 when a fall food fishery began in Golovin Bay. By 1981, the herring fleet in Norton Sound was harvesting approximately 20% of the observed biomass with over 300 fishermen were participating in the fishery.¹³³² The observed herring biomass within the Norton Sound District was 53,786 tons in 2011.¹³³³

In 1976, red king crab (legal) biomass within the Norton Sound was approximately 1.7 million crabs. By 1982, that number had fallen to roughly 0.8 million crabs. In 1999, the estimated crab population reached a near historical high of 1.6 million, which fell again to approximately 0.8 million in 2002. In 2008, the legal population was estimated at 1.5 million. Total open access red king crab harvest for the Norton Sound District in 2008 was 364,235 pounds. Total Community Development Quota (CDQ) red king crab harvest that year was 30,900 pounds.¹³³⁴

¹³²⁹ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹³³⁰ Clark, McGregor, Mecum, Krasnowski and Carroll. 2006. *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹³³¹ Thompson, William F. and Norman L. Freeman. 1930. *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹³³² Lean. C. (1989). *The Development of the Norton Sound Herring Fishery, 1979-1988*. Retrieved April 3, 2012 from: <http://www.sf.adfg.state.ak.us/FedAidPDFs/RIR.3N.1989.04.pdf>.

¹³³³ Alaska Department of Fish and Game. (2012). *2012 Arctic-Yukon-Kuskokwim Herring Outlook*. Retrieved April 3, 2012 from: http://www.adfg.alaska.gov/static/fishing/PDFs/commercial/2012_ayk_herring_outlook.pdf.

¹³³⁴ Menard, J.; Soong, J.; & Kent, S. (2010). *2008 Annual Management Report Norton Sound, Port Clarence, and Kotzebue*. Retrieved April 3, 2012 from: <http://www.adfg.alaska.gov/FedAidPDFs/FMR10-49.pdf>.

Norton Sound has the northernmost fisheries for both Pacific herring and red king crab. Although the Norton Sound herring spawning biomass has been relatively stable in recent times, the market for herring roe has declined due to decreasing consumption of herring roe in Japan. Processor interest in the Norton Sound sac roe fishery has declined more than in other areas of the State, largely due to the timing of the fishery, which takes place later than sac roe fisheries elsewhere in the state and conflicts with the opening of the first salmon fisheries of the season. In addition, ice floes are often present in Norton Sound during the herring season.¹³³⁵ In contrast, the Norton Sound red king crab stock has shown an increasing trend since a population low in the 1990s, and today provides small summer and winter fisheries. NMFS and ADF&G jointly manage Bering Sea king crab stocks.¹³³⁶ Nome king crab fishermen hold both state-issued king crab permits, as well as permits in the Community Development Quota (CDQ) king crab fishery. The CDQ program “allocates a percentage of all Bering Sea and Aleutian Island quotas for groundfish, prohibited species, halibut, and crab to eligible communities.”¹³³⁷

In 1959 and 1960 an experimental salmon fishery was established in the Norton Sound area. State officials encouraged seafood processors to explore and develop fisheries in the region in hopes of providing economic benefits to local communities. In 1961, commercial harvesters began targeting Chinook and coho salmon in the Unalakleet and Shaktoolik areas. Back then, catch was cleaned and shipped to Anchorage for further processing. A single freezer ship processed pink and chum salmon in the area during 1961. By 1962, two floating processors were in operation, and commercial salmon fishing extended into Norton Bay, Moses Point, and Golovin Bay. Peak canning operations occurred in 1963. Commercial Chinook harvests peaked in the 1980s when the 10-year annual average harvest was about 8,000 fish. Commercial harvests of sockeye salmon have always been minor. Coho salmon harvests averaged about 40,000 annually during the 1980s. By the 1990s, that number increased to approximately 55,000 fish, but decreased by half by 2000. Pink salmon harvests are sporadic, and fluctuate by year. In 1994, almost one million pink salmon were commercially harvested while in more recent years, harvests have dropped to zero. Commercial harvests of chum salmon averaged 150,000 fish annually during the 1970s and 1980s. Stricter escapement goals reduced that number in the 1990s.¹³³⁸

Unalakleet is located on Norton Sound at the mouth of the Unalakleet River.¹³³⁹ The area is not located within a Federal Statistical and Reporting Area, but is located within Pacific Halibut Fishery Regulatory Area 4E and the Bering Sea Sablefish Regulatory Area. Unalakleet participates in the Community Development Quota (CDQ) program through the NSEDC. The CDQ program was implemented to help alleviate economic distress in rural communities in western Alaska by allocating a percentage of halibut, crab, and groundfish to six CDQ non-profit organizations representing 65 communities in the Bering Strait and Aleutian Islands region.¹³⁴⁰

¹³³⁵ Ibid.

¹³³⁶ Alaska Dept. of Fish and Game. 2012. *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=redkingcrab.main>.

¹³³⁷ NOAA Fisheries. (n.d.). *Community Development Quota (CDQ) Program*. Retrieved June 20, 2012 from <http://www.fakr.noaa.gov/cdq/default.htm>.

¹³³⁸ Clark, J. H. et al. (2006). *The Commercial Salmon Fishery in Alaska*. Retrieved July 10, 2012 from: <http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1.pdf>.

¹³³⁹ Ibid.

¹³⁴⁰ Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, Vol. 36(4). Retrieved September 12, 2012 from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf.

Managers of CDQ organizations authorize individual fishermen and fishing vessels to harvest a certain portion of the allocated CDQ.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, one shoreside processing plant is present in the community. The Norton Sound Seafoods Products plant in Unalakleet is owned by the NSEDC, the CDQ group for the Norton Sound area. The processing plant was established in 1992.¹³⁴¹ The Unalakleet facility processes Red King crab, salmon and halibut.¹³⁴² In 2010, the plant employed a total of 100 workers during peak season (from June through September).¹³⁴³

Fisheries-Related Revenue

Unalakleet received fisheries-related revenue from the Shared Fisheries Business Tax and port/dock usage fees between 2000 and 2010. Revenue received from the Shared Fisheries Business Tax varied considerably during this period, from \$145 in 2004 to \$15,706 in 2010. Revenue received from port/dock usage fees remained relatively stable between 2000 and 2007, then more than doubled in 2008 before decreasing substantially in 2009 and 2010. Information about fisheries-related revenue received by Unalakleet between 2000 and 2010 is presented in Table 3.¹³⁴⁴

Commercial Fishing

In 2010, a total of 126 Unalakleet residents held 151 commercial fishing permits issued by the Commercial Fisheries Entry Commission (CFEC) for the crab, herring, groundfish, and salmon fisheries (Table 4). Overall, the number of permits, permit holders, and permits reported as fished decreased before increasing again between 2000 and 2010. The number of crab CFEC permits and permit holders decreased between 2000 and 2010, while the number of crab CFEC permits reported as fished increased and then decreased during this period. In 2010, crab CFEC permits were issued for the Norton Sound king crab pot fishery using vessels under 60 feet. The number of herring CFEC permits and permit holders increased slightly during this period, while the number of herring CFEC permits reported as fished was highly variable. In 2010, 71 herring CFEC permits were issued for the Norton Sound gill net fishery, while one was issued for the Norton Sound herring food/bait gill net fishery. There was one groundfish CFEC permit held between 2000 and 2002, and two held in 2010 for the statewide miscellaneous saltwater finfish hand troll fishery. Both groundfish CFEC permits were reported as fished in 2010, the first year during this period that groundfish CFEC permits were reported as fished. The number of salmon CFEC permit holders increased slightly between 2000 and 2010, while the number of salmon CFEC permits decreased slightly and the number of permits reported as fished increased during

¹³⁴¹ A survey conducted by NOAA's Alaska Fisheries Science Center with shore-based processing plant managers in 2011.

¹³⁴² Norton Sound Economic Development Corporation (n.d.). *Norton Sound Seafood Products*. Retrieved April 26, 2012 from <http://www.nsedc.com/nssp.html>.

¹³⁴³ See footnote 1341.

¹³⁴⁴ A direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

this period. In 2010, 70 salmon CFEC permits were issued for the Norton Sound gill net fishery, while one permit was issued for the Lower Yukon gill net fishery and one permit was issued for the Peninsula-Aleutians set gill net fishery. There were no Federal Fisheries Permits held by Unalakleet residents between 2000 and 2010. There was one groundfish License Limitation Program (LLP) permit held between 2000 and 2010, though the permit was not reported as fished between 2001 and 2010. There were 13 Unalakleet residents holding 13 crab LLP permits in 2010, a number that decreased slightly between 2000 and 2010 (Table 4).

The number of crew license holders in Unalakleet varied between 2000 and 2010, with an average of 49 crew license holders per year. The number of fish buyers in Unalakleet also varied during this period, with an average of five fish buyers in Unalakleet between 2000 and 2010. There was one shore-side processing facility located in Unalakleet during this period. The number of vessels owned primarily by Unalakleet residents decreased between 2000 and 2010, as did the number of vessels homeported in Unalakleet (Table 5).

The number of vessels landing catch in Unalakleet varied during this period, averaging 54 per year. The number of pounds of catch landed in Unalakleet and the associated ex-vessel revenue was considered confidential in 2002, 2004, and 2009 due to a small number of participants. In other years between 2000 and 2010, landings were variable, averaging 2,730,640 pounds per year (Table 5). During this period, the ex-vessel revenue received from catch landed in Unalakleet increased substantially. In 2010, Unalakleet ranked 32nd in landings and 39th in ex-vessel revenue out of 67 Alaskan communities with landings and ex-vessel revenue reported that year.

Landings by species and associated ex-vessel revenue in Unalakleet were considered confidential between 2000 and 2010, with the exception of crab landings and revenue between 2000 and 2010 (zero landings recorded) and herring landings in 2000 and 2001. Herring landings and ex-vessel revenue increased substantially between 2000 and 2001. Information on landed pounds and ex-vessel revenue by species in Unalakleet between 2000 and 2010 is presented in Table 9. Landings by Unalakleet residents were considered confidential between 2000 and 2010 due to a small number of participants with the exception of landings for crab, herring, and salmon in select years. Landings of crab and associated ex-vessel revenue increased and then decreased between 2000 and 2009. Landings and associated ex-vessel revenue for herring were highly variable between 2000 and 2003, 2005 and 2007, and 2009 and 2010. Landings and ex-vessel revenue for salmon were also variable in 2001 and between 2003 and 2008. Information on landed pounds and ex-vessel revenue by Unalakleet residents is presented in Table 10.

There were no halibut quota share account holders (Table 6) or sablefish quota share account holders (Table 7) between 2000 and 2010, and no crab quota share account holders between 2005 and 2010 (Table 8).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Unalakleet: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared Fisheries Business Tax ¹	\$2,213	\$10,431	\$9,800	\$2,309	\$145	\$1,226	\$2,393	\$5,661	\$7,283	\$9,818	\$15,706
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	\$12,000	\$11,000	\$11,000	\$11,000	\$11,000	\$12,000	\$12,000	\$12,000	\$25,000	\$2,500	\$2,000
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$14,213</i>	<i>\$21,431</i>	<i>\$20,800</i>	<i>\$13,309</i>	<i>\$11,145</i>	<i>\$13,226</i>	<i>\$14,393</i>	<i>\$17,661</i>	<i>\$32,283</i>	<i>\$12,318</i>	<i>\$17,706</i>
<i>Total municipal revenue in millions⁵</i>	<i>\$1.04 M</i>	<i>\$1.10 M</i>	<i>\$1.24 M</i>	<i>\$1.52 M</i>	<i>\$1.16 M</i>	<i>\$1.38 M</i>	<i>\$1.41 M</i>	<i>\$1.47 M</i>	<i>\$1.53 M</i>	<i>\$1.99 M</i>	<i>\$1.65 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Unalakleet: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	1	1	1	1	1	1	1	1	1	1	1
	Active permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	1	1	1	1	1	1	1	1	1	1	1
Crab (LLP) ¹	Total permits	15	15	18	18	16	15	14	13	13	13	13
	Active permits	2	6	6	6	6	7	6	4	3	4	4
	% of permits fished	13%	40%	33%	33%	37%	46%	42%	30%	23%	30%	30%
	Total permit holders	15	15	18	18	16	15	14	13	13	13	13
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	13	16	27	22	15	11	9	8	8	6	5
	Fished permits	5	6	16	12	9	6	7	6	7	4	3
	% of permits fished	38%	38%	59%	55%	60%	55%	78%	75%	88%	67%	60%
	Total permit holders	12	15	19	13	11	9	8	7	6	5	5
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	1	0	2	3	3	1	0	0	0	0	0
	Fished permits	1	0	1	1	2	1	0	0	0	0	0
	% of permits fished	100%	-	50%	33%	67%	100%	-	-	-	-	-
	Total permit holders	1	0	2	3	3	1	0	0	0	0	0
Herring (CFEC) ²	Total permits	69	67	64	63	63	60	64	65	67	68	72
	Fished permits	21	11	7	6	0	15	11	8	12	6	14
	% of permits fished	30%	16%	11%	10%	%	25%	17%	12%	18%	9%	19%
	Total permit holders	70	70	64	64	63	61	65	65	69	69	75

Table 4 cont'd. Permits and Permit Holders by Species, Unalakleet: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	-	-	-	-	-	-	-	-	-	-	-
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	1	1	1	0	0	0	0	0	0	0	2
	Fished permits	0	0	0	0	0	0	0	0	0	0	2
	% of permits fished	0%	0%	0%	-	-	-	-	-	-	-	100%
	Total permit holders	1	1	1	0	0	0	0	0	0	0	2
Other Finfish (CFEC) ²	Total permits	3	3	3	0	0	0	0	0	0	0	0
	Fished permits	1	1	0	0	0	0	0	0	0	0	0
	% of permits fished	33%	33%	0%	-	-	-	-	-	-	-	-
	Total permit holders	3	3	3	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	73	69	65	65	65	63	67	66	69	70	72
	Fished permits	40	29	5	20	24	26	39	43	52	46	56
	% of permits fished	55%	42%	8%	31%	37%	41%	58%	65%	75%	66%	78%
	Total permit holders	76	69	64	64	65	63	69	69	76	75	81
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>160</i>	<i>156</i>	<i>162</i>	<i>153</i>	<i>146</i>	<i>135</i>	<i>140</i>	<i>139</i>	<i>144</i>	<i>144</i>	<i>151</i>
	<i>Fished permits</i>	<i>68</i>	<i>47</i>	<i>29</i>	<i>39</i>	<i>35</i>	<i>48</i>	<i>57</i>	<i>57</i>	<i>71</i>	<i>56</i>	<i>75</i>
	<i>% of permits fished</i>	<i>43%</i>	<i>30%</i>	<i>18%</i>	<i>25%</i>	<i>24%</i>	<i>36%</i>	<i>41%</i>	<i>41%</i>	<i>49%</i>	<i>39%</i>	<i>50%</i>
	<i>Permit holders</i>	<i>115</i>	<i>110</i>	<i>103</i>	<i>100</i>	<i>100</i>	<i>97</i>	<i>105</i>	<i>108</i>	<i>118</i>	<i>121</i>	<i>126</i>

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Unalakleet: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Unalakleet ²	Total Net Pounds Landed in Unalakleet ^{2,5}	Total Ex-Vessel Value of Landings in Unalakleet ^{2,5}
2000	68	7	1	85	103	71	2,482,527	\$311,633
2001	29	6	1	87	97	96	4,268,028	\$431,962
2002	20	2	1	77	85	57	--	--
2003	27	5	1	62	73	51	3,068,738	\$246,486
2004	23	3	1	67	78	23	--	--
2005	41	6	1	54	66	80	4,245,772	\$809,061
2006	52	5	1	56	68	71	2,316,674	\$654,099
2007	62	7	1	52	65	88	1,260,057	\$790,747
2008	74	4	1	47	59	12	1,440,263	\$1,306,525
2009	67	3	1	45	53	10	--	--
2010	73	4	1	51	59	31	2,763,063	\$1,490,781

Note: Cells showing -- indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Unalakleet: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Unalakleet: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Unalakleet: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Unalakleet: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	1,979,519	4,035,863	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>1,979,519</i>	<i>4,035,863</i>	--	--	--	--	--	--	--	--	--
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$182,416	\$370,132	--	--	--	--	--	--	--	--	--
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	--	--	--	--	--	--	--	--	--	--
<i>Total²</i>	<i>\$182,416</i>	<i>\$370,132</i>	--	--	--	--	--	--	--	--	--

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

[URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

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Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by Unalakleet Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	35,088	48,806	53,814	61,542	108,007	118,509	91,225	46,587	83,387	73,259	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	1,218,501	359,670	399,156	492,495	--	732,512	235,828	65,774	--	56,376	677,541
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	63,771	--	25,573	124,997	208,586	231,511	195,320	84,005	--	--
<i>Total²</i>	<i>1,253,589</i>	<i>472,247</i>	<i>452,970</i>	<i>579,610</i>	<i>233,004</i>	<i>1,059,607</i>	<i>558,564</i>	<i>307,681</i>	<i>167,392</i>	<i>129,635</i>	<i>677,541</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$106,436	\$160,903	\$323,741	\$243,416	\$336,231	\$405,514	\$241,493	\$131,737	\$283,186	\$230,580	--
Finfish	--	--	--	--	--	--	--	--	--	--	--
Halibut	--	--	--	--	--	--	--	--	--	--	--
Herring	\$110,979	\$65,008	\$26,310	\$26,102	--	\$62,264	\$16,473	\$21,072	--	\$16,913	\$90,872
Other Groundfish	--	--	--	--	--	--	--	--	--	--	--
Other Shellfish	--	--	--	--	--	--	--	--	--	--	--
Pacific Cod	--	--	--	--	--	--	--	--	--	--	--
Pollock	--	--	--	--	--	--	--	--	--	--	--
Sablefish	--	--	--	--	--	--	--	--	--	--	--
Salmon	--	\$18,452	--	\$10,887	\$50,424	\$110,368	\$119,665	\$117,772	\$56,310	--	--
<i>Total²</i>	<i>\$217,415</i>	<i>\$244,363</i>	<i>\$350,051</i>	<i>\$280,405</i>	<i>\$386,655</i>	<i>\$578,146</i>	<i>\$377,630</i>	<i>\$270,581</i>	<i>\$339,496</i>	<i>\$247,493</i>	<i>\$90,872</i>

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Between 2000 and 2010, there were between one and two sport fish guide businesses registered in Unalakleet. However, none of them were reported as active during those years. The number of sport fish guide licenses held in the community increased from five in 2000, to nine in 2010. Between those years there were an average of five sport fish guide licenses held in the community during any given year. No kept/released log book data were reported for fishing charters out of Unalakleet between 2000 and 2010.¹³⁴⁵

An average of 222 sport fishing licenses were sold to Unalakleet residents between 2000 and 2010 (irrespective of the location of the point of sale). In contrast, an average of 449 sport fishing licenses were sold in Unalakleet during this period, indicating the potential that visitors to Unalakleet participated in sport fishing activities.

Unalakleet is located within Alaska Sport Fishing Survey Area W – Seward Peninsula – Norton Sound. Information is available about both saltwater and freshwater sport fishing activity at this regional scale. Between 2000 and 2010, there was significant sport fishing activity in both saltwater and freshwater, although freshwater sport fishing was more important in the region. Alaska resident anglers consistently fished more angler days in both freshwater and saltwater (34 – 2,663 saltwater and 6,199 to 17,579 freshwater angler days) than non-Alaska residents (0 – 204 saltwater and 2,087 – 8,307 freshwater angler days) during the period. This information about the sport fishing sector in and near Unalakleet is displayed in Table 11.

The Alaska Statewide Harvest Survey,¹³⁴⁶ conducted by ADF&G between 2000 and 2010, noted the following species targeted by private anglers in Unalakleet: all five species of salmon, Dolly Varden, whitefish, Arctic grayling, Northern pike, sheefish, Pacific halibut, and smelt.

Table 11. Sport Fishing Trends, Unalakleet: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in Unalakleet²
2000	0	5	187	346
2001	0	4	165	273
2002	0	4	194	340
2003	0	5	247	383
2004	0	5	200	406
2005	0	1	167	475
2006	0	2	236	495
2007	0	1	242	514
2008	0	10	284	600
2009	0	9	276	573
2010	0	9	243	538

¹³⁴⁵ Alaska Department of Fish and Game. (2011). Alaska sport fish charter logbook database, 2000-2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹³⁴⁶ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000-2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, Unalakleet: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	0	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Residents of Unalakleet actively practice a traditional Unaligmiut Eskimo Subsistence lifestyle. Fish, seal, caribou, moose, and bear are utilized for subsistence.¹³⁴⁷ Data regarding subsistence participation by household and species and per capita subsistence harvest were not reported between 2000 and 2010 (Table 12). However, data on total harvests in the community by species are available to some extent.

In years for which data were reported for salmon harvests between 2000 and 2010, an average of 219 subsistence salmon permits were issued to Unalakleet households, with an average of 200 permits returned. This represents the use of almost one permit per household in the community, indicating the extremely wide use of salmon in the diet of households in Unalakleet. Pink salmon were the primary species harvested under subsistence permits (an average of 14,134 pink salmon per year), along with several thousand coho, Chinook, and chum salmon and several hundred sockeye salmon per year (Table 13). Data on the amount of marine invertebrates and non-salmon fish (not including halibut) harvested for subsistence use were not reported between 2000 and 2010.

¹³⁴⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

Halibut fishing in the community appears minimal. Between 2003 and 2010, one Subsistence Halibut Registration Certificate (SHARC) was issued each year. However, information on permit activity and the number of pounds of halibut harvested was not reported (Table 14).

In years for which data were reported between 2000 and 2010, a total of 142 beluga whales were reported harvested. Of those, most (62.0%) were reported harvested between 2000 and 2002. In 2002 and 2006, there were an estimated two and three walrus harvested for subsistence, respectively. Information on subsistence harvest of marine mammals in Unalakleet between 2000 and 2010 is presented in Table 15.

Table 12. Subsistence Participation by Household and Species, Unalakleet: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, Unalakleet: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	206	188	2,390	2,936	5,931	10,522	203	n/a	n/a
2001	205	140	2,810	2,918	6,270	11,279	359	n/a	n/a
2002	225	222	2,367	3,877	5,490	15,557	280	n/a	n/a
2003	220	210	2,585	1,785	6,192	21,777	283	n/a	n/a
2004	245	200	1,868	1,797	4,600	15,557	303	n/a	n/a
2005	225	221	1,742	1,240	5,723	17,983	499	n/a	n/a
2006	211	208	1,974	1,109	5,716	11,814	205	n/a	n/a
2007	220	213	1,570	1,117	4,916	10,288	255	n/a	n/a
2008	217	201	1,279	960	5,680	12,425	120	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Unalakleet: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	1	n/a	n/a
2009	1	n/a	n/a
2010	1	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Unalakleet: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	29	n/a	n/a	n/a	n/a	n/a	n/a
2001	21	n/a	n/a	n/a	n/a	n/a	n/a
2002	38	n/a	2	n/a	n/a	n/a	n/a
2003	5	n/a	n/a	n/a	n/a	n/a	n/a
2004	4	n/a	n/a	n/a	n/a	n/a	n/a
2005	4	n/a	n/a	n/a	n/a	n/a	n/a
2006	10	n/a	3	n/a	n/a	n/a	n/a
2007	6	n/a	n/a	n/a	n/a	n/a	n/a
2008	9	n/a	n/a	n/a	n/a	n/a	n/a
2009	7	n/a	n/a	n/a	n/a	n/a	n/a
2010	9	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

Wales (A.K.A. Kingigin)



People and Place

*Location*¹³⁴⁸

Wales, also known as Kingigin, is a second-class city located on Cape Prince of Wales at the western tip of the Seward Peninsula, 111 miles northwest of Nome and 636 miles away from Anchorage. The area encompasses 2.8 square miles of land and 0.0 square miles of water. The city is located within the Nome Census Area and the Cape Nome Recording District, and is the westernmost settlement on the North American mainland. The city is situated at the juncture of the Pacific and Arctic Oceans. Siberia lies about 50 miles west across the Bering Strait, with the island of Little Diomedede approximately midway between Siberia and Wales. The eastern boundary of the Bering Land Bridge National Preserve is located approximately 21 miles away from Wales.

*Demographic Profile*¹³⁴⁹

In 2010, there were 145 residents in Wales, making it the 222nd largest community out of 352 Alaska communities with a recorded population. Since the 1990 Census, which recorded 161 residents, the population of Wales has declined by 9.9%. Between 2000 and 2010, the population fell by 4.6%. Wales' annual growth rate between 2000 and 2009 was -0.19%, indicating a slowly declining population over this period. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders reported that there is slight seasonal fluctuation in population, attributable to a small number (<10) of Bering Strait School District teachers residing in the community during the school year.

In 2010, 84.8% of the population reported themselves as American Indian and Alaska Native (93.8% identifying themselves as any part American Indian or Alaska Native), a slight increase from 83.6% of the population in 2000. Those residents reporting themselves as White made up a smaller share of the population in 2010 (6.2%) than in 2000 (8.6%), while the percentage of the population identifying with two or more races increased from 6.6% to 9.0% during this period. No residents in 2010 identified themselves as Hispanic, Asian, Native Hawaiian or Pacific Islander, or Black or African American. Table 1 shows changes in the population of Wales from 1990 to 2010, while Figure 1 shows changes in the city's racial and ethnic composition between 2000 and 2010.

¹³⁴⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁴⁹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

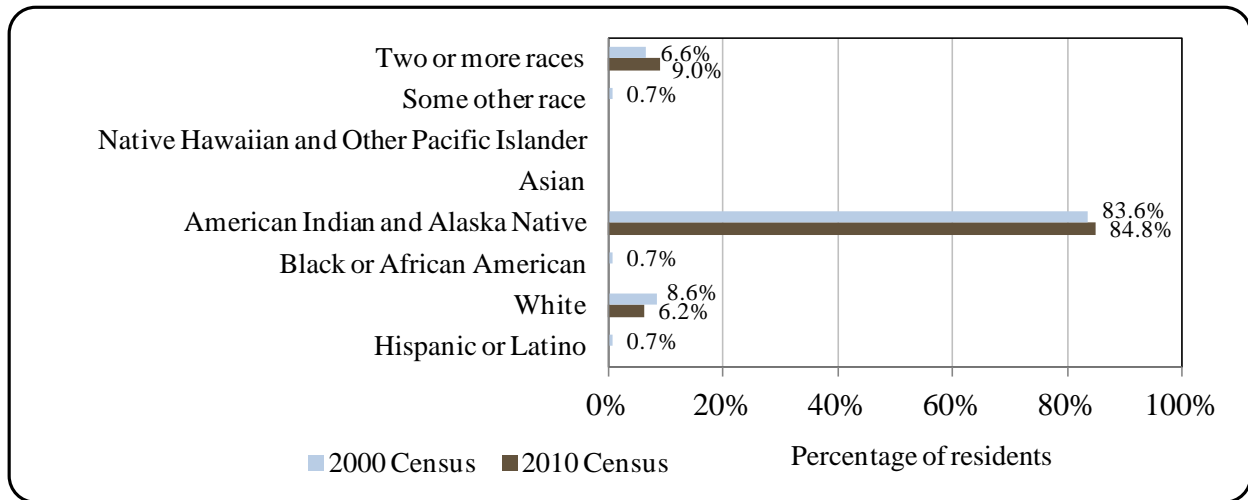
Table 1. Population in Wales from 1990 to 2010 by source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimates of Permanent Residents ²
1990	161	-
2000	152	-
2001	-	158
2002	-	159
2003	-	158
2004	-	152
2005	-	151
2006	-	139
2007	-	135
2008	-	139
2009	-	148
2010	145	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, Wales: 2000-2010 (U.S. Census).

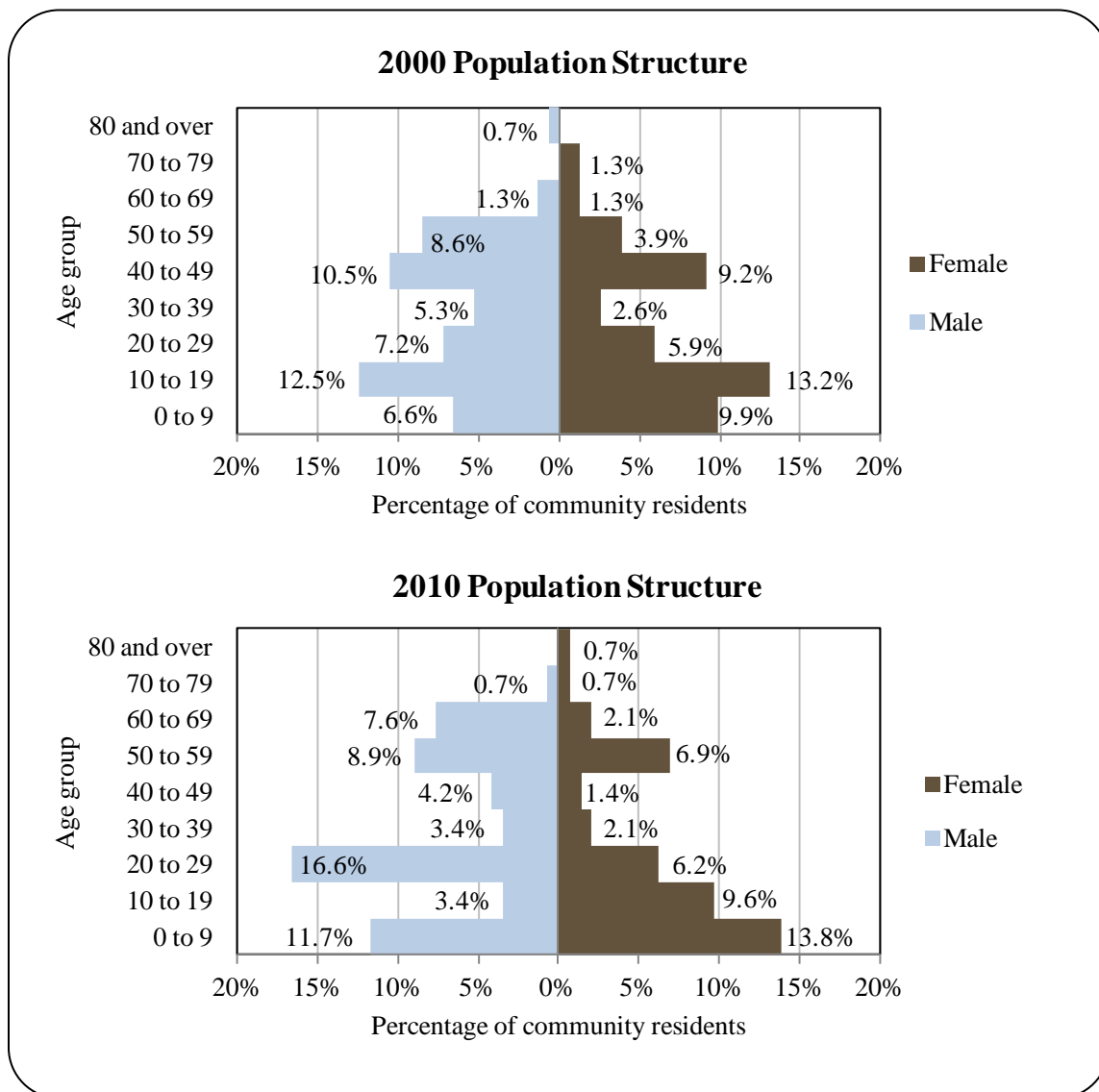


In 2010, the average household size in Wales in 2010 was 3.37, an increase from the 2000 average household size of 3.04. No individuals in 2010 resided in group quarters. Of the 51 housing units recorded in the 2010 Census, 37% were owner-occupied, 47% were renter-occupied, and 16% were vacant or used seasonally. Since the 1990 Census, the number of households in Wales has generally declined, and there has been a shift from family households to

non-family households: family households made up 78% of the 49 households recorded in the 1990 Census and only 55% of the 43 households recorded in the 2010 Census.

In 2010, the gender makeup of the population of Wales (56.6% male and 43.5% female) was less balanced than in the state as a whole (52.1% male and 47.9% female). There was a general bias towards males in the 20 to 29 and 60 to 69 age categories and towards females in the 10 to 19 age category. Between 2000 and 2010, the median age of Wales residents declined slightly from 26.0 years to 25.4 years. Median age in the community in 2010 was significantly lower than the national median of 37.2 years and the statewide median of 33.8 years. In 2010, 11.7% of Wales' population was age 60 or older, compared to 4.6% in 2000. The overall population structure of Wales in 2000 and 2010 is shown in Figure 2.

Figure 2. Population Age Structure in Wales in 2000 and 2010 (U.S. Census).



In terms of educational attainment, the 2006-2010 American Community Survey (ACS)¹³⁵⁰ an estimated 80.4% of Wales residents aged 25 and older held a high school diploma or higher degree in 2010, compared to 90.7% of Alaskan residents overall. An estimated 9.8% held a bachelor's degree or higher, compared to 27.0% of Alaska residents overall. Also in 2010, 13.7% of Wales' 25-and-over population was estimated to have less than a 9th grade education, compared to 3.5% of residents statewide overall; 5.9% were estimated to have a 9th to 12th grade education but no diploma, compared to 5.8% of Alaskan residents overall; 9.8% were estimated to have some college but no degree, compared to 28.3% of Alaskan residents overall; 0.0% were estimated to have an Associate's degree, compared to 8% of Alaskan residents overall; 9.8% were estimated to have a Bachelor's degree, compared to 17.4% of Alaskan residents overall; and 0.0% were estimated to have a graduate or professional degree, compared to 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

Wales' archaeological record dates back to at least 900 AD and indicates that the village was one of the earliest major settlements of coastal sea-mammal hunters in Northwestern Alaska.¹³⁵¹ Artifacts of the Birnirk culture, the earliest recognizable manifestation of modern Eskimo culture in Alaska (500-900 AD), are present in the area, and the village is currently listed as a National Historic Landmark for archaeological significance.¹³⁵² Historical records for the area date back to 1732, when the village became the first mainland Native village to be observed by the Russian explorer Mikhail Gvozdev.¹³⁵³ A century later, Captain William Beechey of the British Royal Navy recorded the presence of the villages of "Ei-dan-noo" near the coast and "King-a-ghee" further inland, noting that the latter was "a place which...must be important among the Esquimaux (sic) villages upon the coast."¹³⁵⁴

True to Beechey's assessment, Wales was one of the largest Eskimo settlements in the region during the early nineteenth Century. Natural resources were abundant in the area: migrations of sea mammals and salmon were concentrated near the community by the narrowing of the Bering Strait; coastal lagoons and sea cliffs provided habitat for waterfowl, whitefish, and seabirds; and caribou were available on the Seward Peninsula until the mid-1800s.¹³⁵⁵ The village was also strategically located to control trade with Siberia.¹³⁵⁶

¹³⁵⁰ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹³⁵¹ Krupnik, I. and W. Weyapuk Jr. (2010). Qanuq Ilitaavut: 'How We Learned What We Know' (Wales Inupiaq Sea Ice Dictionary). In I. Krupnik et al. (Eds.), *SIKU: Knowing our ice: documenting Inuit sea ice knowledge and use* (pp. 321-356). New York: Springer.

¹³⁵² National Park Service (n.d.). *National Historic Landmarks Program: Wales*. Retrieved January 31, 2012 from <http://www.nps.gov/history/nhl/designations/listsofNHLs.htm>.

¹³⁵³ Harritt, R. (2010). Variations of late prehistoric houses in coastal northwest Alaska: a view from Wales. *Arctic Anthropology*, 47(1), 57-70.

¹³⁵⁴ USGS (2012). Wales – populated place. *Geographic Names Information Service (GNIS)*. Retrieved January 31, 2012 from <http://geonames.usgs.gov>.

¹³⁵⁵ Magdanz, J. et al. (2002). *The production and distribution of wild food in Wales and Deering, Alaska*. ADF&G, Technical Paper No. 259. Retrieved January 31, 2012 from <http://www.adfg.alaska.gov/techpap/tp259.pdf>.

¹³⁵⁶ Ibid.

Following the expansion of American commercial whaling north of the Bering Strait in the 1850s, Wales emerged as a whaling center, with people moving to the village for new employment and trade opportunities.¹³⁵⁷ In 1890, the American Missionary Association of the Congregational Church established a mission in the village. In 1894, a reindeer station was established in Wales as part of a regional effort by missionaries to introduce reindeer herding as an alternative food source—and potential “civilizing” influence—for the native population.^{1358,}
¹³⁵⁹ A number of young men from Wales apprenticed as reindeer herders, eventually acquiring herds of their own.¹³⁶⁰

Wales’ role as a regional commerce center was assumed in the 20th century by the communities of Nome, the site of a gold rush from 1899 to 1909, and Kotzebue, a traditional center of trade and commerce located on the mouths of two rivers.¹³⁶¹

Though the region’s Native population was decimated by numerous epidemics between the mid-19th and early 20th centuries, the Spanish Influenza epidemic of 1918 took the most significant toll on Wales, reducing the village’s population by approximately half and claiming the lives of many of the village’s best whalers.^{1362, 1363} The U.S. Census recorded a population of 136 in 1920, down from the 337 recorded in 1910. Over the subsequent decades, Census population counts have fluctuated from a high of 193 in 1940 to a low of 128 in 1960.¹³⁶⁴

The Native Village of Wales was organized in 1939 under the Indian Reorganization Act. In 1964, the community organized as a municipality under the State of Alaska and was incorporated as a second class city.

The community today retains a strong Iñupiat Eskimo whaling culture, with traditional songs, dances, and customs still practiced.¹³⁶⁵ Since 1999, the village has held the Kingikmiut (“people of the high place”¹³⁶⁶) Dance Festival on a yearly basis, attracting participants and spectators from other communities in the region.¹³⁶⁷

Natural Resources and Environment

Wales has a maritime climate while the Bering Strait is ice-free, which is typically from June to November; an abrupt transition to a cold continental climate takes place following the

¹³⁵⁷ Freeman, M. (1998). *Inuit, whaling, and sustainability*. Walnut Creek, CA: AltaMira.

¹³⁵⁸ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁵⁹ Finstad, G. et al. (2006). Reindeer herding in transition: historical and modern day challenges for Alaskan reindeer herders. *Nomadic Peoples*, 10(2), 31-49.

¹³⁶⁰ Olson, D. (1969). *Alaska reindeer herders: A study of native management in transition*. Fairbanks, AK: University of Alaska. Retrieved January 31, 2012 from http://www.alaskool.org/projects/reindeer/history/iser1969/RDEER_1.html.

¹³⁶¹ See Footnote 1355.

¹³⁶² See Footnote 1358.

¹³⁶³ Native Village of Wales (n.d.). *Native Village of Wales - History*. Retrieved January 31, 2012 from <http://www.kawerak.org/tribalHomePages/wales/index.html>.

¹³⁶⁴ See Footnote 1358.

¹³⁶⁵ Ibid.

¹³⁶⁶ Hopfinger, T. (2011, May 19). I can see Russia from Wales, Alaska.” *Alaska Dispatch*. Retrieved January 31, 2012 from <http://www.alaskadispatch.com/article/i-can-see-russia-wales-alaska>.

¹³⁶⁷ Alaska Department of Natural Resources (2010). *Bering Straits coastal resources service area: Coastal management plan*. Retrieved January 31, 2012 from http://dnr.alaska.gov/coastal/acmp/District/DistrictPlans_Final/BSCRSA/Bering_Straits_Final_Plan_Amendment_1-27-11_submittal.pdf.

formation of sea ice. Average summer temperatures in Wales range from 40 to 50 °F, while winter temperatures range from -10 to 6 °F. Annual precipitation averages 10 inches, with 35 inches of snow. Frequent fog, wind, and blizzards limit access to Wales.¹³⁶⁸

Cape Prince of Wales is characterized by rocky, mostly barren, steep terrain; sea cliffs extend from Wales to Tin City, located five miles to the southeast. Kingigin, meaning “high place,” is the Inupiaq name for Cape Mountain, located behind the community.¹³⁶⁹ The city itself extends along a low pebble spit at the base of the ridge. As with other coastal communities in the region, Wales is vulnerable to beach erosion and to flooding from coastal waters during fall storms.¹³⁷⁰

Lopp Lagoon, located approximately two miles northwest of the village, is designated in the Bering Straits Coastal Resource Service Area Management Plan as an area for habitat and subsistence. In addition to being one of the primary waterfowl and shorebird nesting areas in the region, the lagoon area is utilized by Wales residents for such subsistence resources as salmon, shellfish, waterfowl, and moose.¹³⁷¹

Changes in sea ice thickness and distribution are the most significant environmental factor for Wales residents. As well as regulating climate conditions during the winter, the ice is used for hunting, fishing, and travel along the shore. Migration of marine mammal stocks, including whales, walrus and seals, takes place through the Bering Strait during the fall advance and spring retreat of the ice, and the hunting season takes place in spring.¹³⁷²

Residents have observed climate change effects with respect to sea ice. Historically, sea ice was present eight to nine months of the year, typically from late October until early July. More recently, sea ice formation has been delayed until late November or even early December, with the spring retreat occurring in late May or early June. Sea ice thickness has also thinned over the past few decades. These changes have affected the duration of seasonal migration of marine mammals and of the spring hunting season.¹³⁷³

Current Economy¹³⁷⁴

Like other rural communities in the Bering Strait region, Wales has a mixed economy based on cash and subsistence practices. The cash economy consists primarily of jobs in local government; hunting, fishing, and trapping for whales, walrus, polar bear, moose, musk ox, caribou, clam, crab, salmon, and other fish form the basis of the subsistence economy. Native arts and crafts, including carved walrus ivory and skin sewing, are sold locally or marketed in Nome, Anchorage, or Fairbanks.¹³⁷⁵ A private reindeer herd is managed out of Wales, with local residents employed to assist in the harvest. Wales additionally serves as a

¹³⁶⁸ See Footnote 1358.

¹³⁶⁹ See Footnote 1355.

¹³⁷⁰ Alaska Department of Natural Resources (2010). *Bering Straits coastal resources service area: Coastal management plan*. Retrieved January 31, 2012 from http://dnr.alaska.gov/coastal/acmp/District/DistrictPlans_Final/BSCRSA/Bering_Straits_Final_Plan_Amendment_1-27-11_submittal.pdf.

¹³⁷¹ Ibid.

¹³⁷² See Footnote 1351.

¹³⁷³ Ibid.

¹³⁷⁴ Unless otherwise noted, all monetary data are reported in nominal values.

¹³⁷⁵ Carr, E. (2005). Wales. *American Local History Network – Nome Census Area*. Retrieved January 31, 2012 from <http://www.rootsweb.ancestry.com/~aknome/wales.html>.

supply base for residents of Diomede, located approximately 28 miles to the northwest on Little Diomede Island.¹³⁷⁶ Top employers in 2010¹³⁷⁷ included: Bering Strait School District, Native Village of Wales, City of Wales, Kawerak Inc., Wales Native Corp., Norton Sound Health Corp., Wales Native Store, Norton Sound Economic Development Corp., Bering Straits Regional Housing Authority, and Bering Air Inc.

In 2010, the median household income in Wales was \$21,667, compared to \$66,521 statewide; and per capita household income was \$10,027, compared to \$30,726 statewide. Wales ranked 273rd out of 299 Alaska communities with data on median income, and 273rd out of 305 Alaska communities with data on per capita income. Median and per capita income in Wales in 2010 represented a sharp decline from 1999 levels, which were \$43,832 and \$19,563, respectively, in 2010 dollars. From 2000 to 2010, the percentage of residents below the poverty line increased from 18.3% to 28.2%. The 2010 poverty rate in Wales was notably higher than the statewide rate of 9.5%. It should be noted income and poverty statistics are based on wage income and other cash sources; the relatively low income figures and high poverty rates reported for Wales are not reflective of the value of subsistence to the local economy.

Wales' small population size may have prevented the American Community Survey from accurately portraying economic conditions.¹³⁷⁸ Another understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by the Alaska Department of Labor and Workforce Development. According to the ALARI database, residents earned \$1.32 million in total wages in 2010.¹³⁷⁹ When matched with the population in 2010, the per capita income equals \$9,081, which was similar to 2006-2010 ACS estimates.¹³⁸⁰

Based on 2006-2010 ACS estimates, 49 residents out of 77 Wales residents aged 16 years and older were in the civilian labor force. Of the civilian labor force in 2010, 27.3% were unemployed. This is notably higher than the statewide rate of 5.9% and represents a twofold increase from 2000 unemployment rate of 13.3%. Of the employed civilian labor force (28 individuals), 40% were employed in the private sector, and 60% in the public sector. The largest industries in terms of employment were transportation, warehousing, and utilities (35.7% of the employed civilian labor force) and educational services, healthcare, and social assistance (32.1% of the employed civilian labor force). Top employers in 2010 were the Bering Strait School District, the Native Village of Wales, and the City of Wales.¹³⁸¹ No residents were reported as being employed in agriculture or natural resource extraction (fishing and hunting, forestry, and mining).¹³⁸² As with income and poverty statistics, however, it should be noted that these

¹³⁷⁶ See Footnote 1370.

¹³⁷⁷ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

¹³⁷⁸ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹³⁷⁹ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹³⁸⁰ See footnote 1377

¹³⁸¹ Ibid.

¹³⁸² U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

employment statistics do not reflect residents’ activity in the subsistence economy. Additional statistics on employment by industry and by occupation are shown in Figures 3 and 4.

Figure 3. Local Employment by Industry in 2000-2010, Wales (U.S. Census).

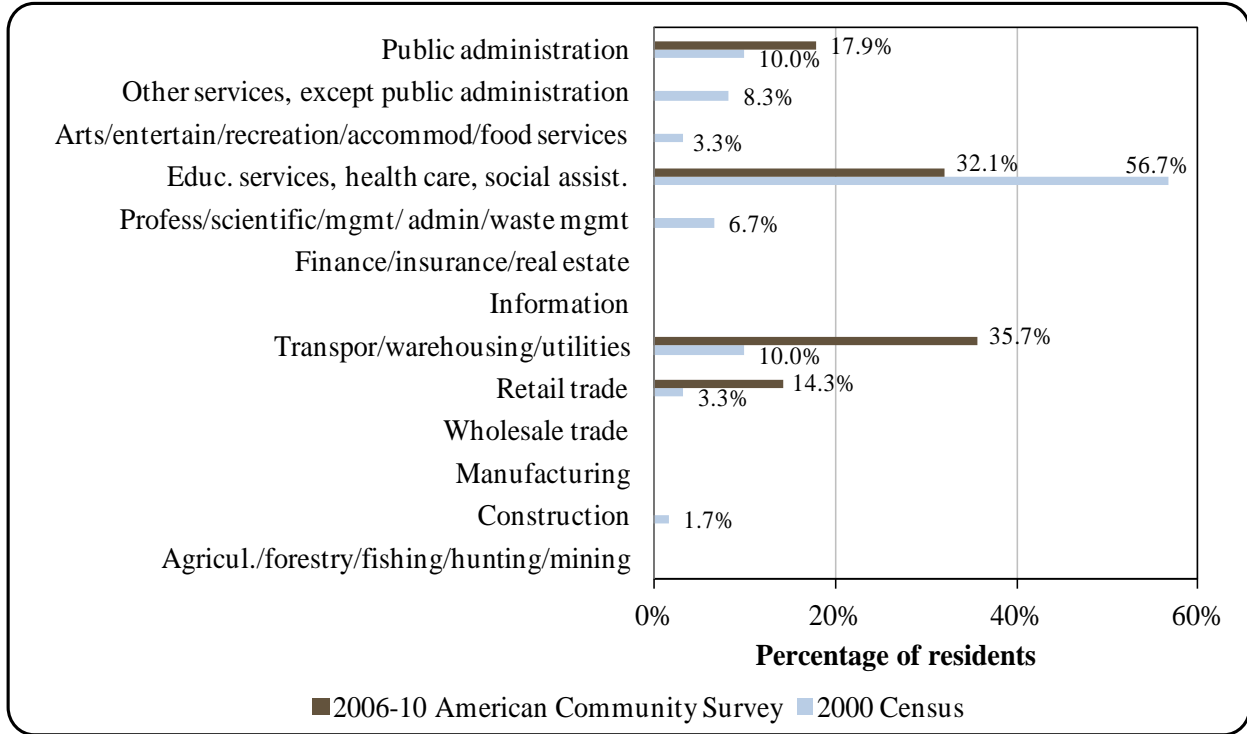
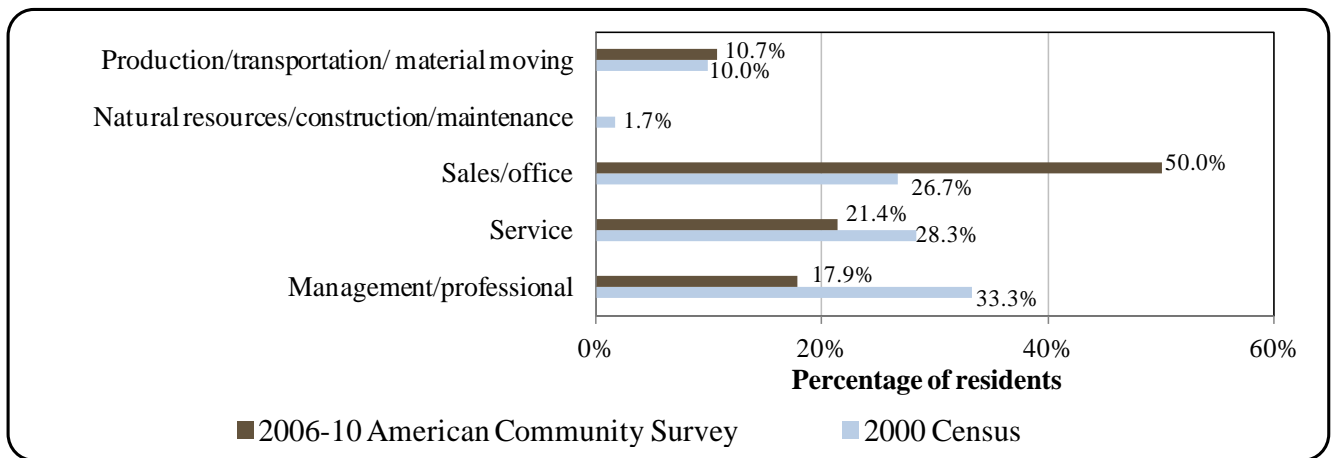


Figure 4. Local Employment by Occupation in 2000-2010, Wales (U.S. Census).



Governance

Incorporated in 1964 as a Second-class city, Wales has a strong-mayor form of government, with the mayor holding the seventh seat on the City Council. The Native Village of Wales, organized in 1939, is a federally recognized Indian tribe governed by a seven-member Indian Reorganization Act Council.¹³⁸³ The Wales Native Village Corporation currently holds land entitlements under the Alaska Native Claims Settlement Act (ANCSA) of approximately 108,000 acres. Wales is also served by the Bering Straits Native Corporation (BSNC) and the Bering Straits Native Association (BSNA), the regional for-profit and non-profit corporations formed under ANCSA. Kawerak, Inc. is the administrative arm of the BSNA.¹³⁸⁴

In 2010, the city administered a 3% sales tax. Municipal revenue figures were taken from Certified Financial Statements. When adjusted for inflation,¹³⁸⁵ total municipal revenues declined by 28.9% between 2000 and 2010 from \$238,407, to \$219,123. Municipal revenues peaked in 2009 at \$367,724, and were at their lowest in 2005 at \$178,242. In 2010, most (54.3%) municipal revenues were collected from outside sources including state allocated Community Revenue Sharing and payments in lieu of taxes. Locally generated sources accounted for remaining revenues, most (41.9%) of which were collected from enterprise services including utility rents, fuel sales, and sewage hauls. Contracted services accounted for 20.9% of locally revenues, cigarette sales accounted for 16.1%, and sales taxes accounted for 13.3%. Sales taxes accounted for 6.1% of total municipal revenues in 2010, compared to 5.3% in 2000. In addition, Community Revenue Sharing accounted for 47.0% of total municipal revenues that year, compared to 11.7% from State Revenue Sharing in 2000. Information regarding municipal finances can be found in Table 2.

The closest regional office of the Alaska Department of Fish and Game (ADF&G) is located in Nome. The nearest Alaska Department of Natural Resources office is located in Fairbanks. The closest offices of the Alaska Department of Commerce, Community and Economic Development are located in Kotzebue and Nome. Anchorage is the site of the closest offices of the National Marine Fisheries Service (NMFS) and the U.S. Bureau of Citizenship and Immigration Services.

The nearest postings of the Alaska State Troopers and the Alaska Wildlife Troopers are located in Nome. Wales participates in the Village Public Safety Officer (VPSO) program, though the position was vacant as of March 2012.¹³⁸⁶ The sale or importation of alcohol is banned in the village.

¹³⁸³ Native Village of Wales (n.d.). *Native Village of Wales - Council Members*. Retrieved January 31, 2012 from <http://www.kawerak.org/tribalHomePages/wales/counmemb.html>.

¹³⁸⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹³⁸⁵ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

¹³⁸⁶ Kawerak, Inc. (2012). *Kawerak Service Divisions – Village Public Safety Officers*. Retrieved April 10, 2012 from <http://www.kawerak.org/servicedivisions/csd/vpsso/index.html>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Wales Municipal Government from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ³	Fisheries-Related Grants (State and Federal) ⁴
2000	\$238,407	\$12,681	\$27,953	n/a
2001	\$223,853	\$14,002	\$29,000	n/a
2002	\$240,037	\$13,415	\$26,898	n/a
2003	\$220,469	\$12,231	\$27,087	n/a
2004	\$263,386	\$13,167	-	n/a
2005	\$178,242	\$22,800	-	n/a
2006	\$208,336	\$11,114	-	n/a
2007	\$275,500	\$24,000	-	n/a
2008	\$284,965	\$14,000	-	n/a
2009	\$367,724	\$12,426	\$123,829	n/a
2010	\$219,123	\$13,304	\$103,040	n/a

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*.

Retrieved at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm. Data retrieved April 15, 2011.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved at http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm. Data retrieved April 15, 2011.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Accessed at www.tax.state.ak.us. Data retrieved April 15, 2011.

⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved at http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm. Data retrieved April 15, 2011.

Infrastructure

Connectivity and Transportation

Wales is accessible by air and sea only. A 4,000-foot gravel runway owned and maintained by the state is located one mile northwest of Wales.¹³⁸⁷ Sea ice is also used frequently as a landing area by planes in the winter.¹³⁸⁸ As of February 2012, scheduled passenger air service is available from multiple carriers, including Bering Air and Era Alaska.¹³⁸⁹ The price of a roundtrip ticket by plane from Anchorage to Wales in early June of 2012 was \$792.¹³⁹⁰ A winter trail system connects Wales to the communities of Brevig Mission, located 50 miles away, and Shishmaref, located 70 miles away.¹³⁹¹ There is also a 6.5 mile road to Tin City

¹³⁸⁷ Magdanz, J. et al. (2002). *The production and distribution of wild food in Wales and Deering, Alaska*. ADF&G, Technical Paper No. 259. Retrieved January 31, 2012 from <http://www.adfg.alaska.gov/techpap/tp259.pdf>.

¹³⁸⁸ See Footnote 1384.

¹³⁸⁹ Retrieved February 1, 2012 from carrier websites (www.beringair.com; www.flyera.com)

¹³⁹⁰ This price was calculated on November 21, 2011 using [kayak.com](http://www.kayak.com).

¹³⁹¹ Alaska Department of Transportation and Public Facilities (2004). *Northwest Alaska transportation plan: Community transportation analysis*. Retrieved January 31, 2012 from <http://dot.alaska.gov/stwdplng/areaplans/nwplan.shtml>.

that provides access to the Tin City dock and airport. Heavy freight and cargo is delivered to Tin City and hauled by truck to Wales.¹³⁹²

Aluminum boats are used for sea travel. On land, snowmobiles and ATVs are used on- and off-trail and provide year-round access to subsistence areas.¹³⁹³

Communications in Wales include local and long distance phone service, radio, Internet, and television. Wales is one of 235 Alaskan communities that receive television service from the state-owned Alaska Rural Communication Service.¹³⁹⁴

*Facilities*¹³⁹⁵

The City of Wales operates an unpermitted landfill, a water and honeybucket haul system, and a washeteria with a 500,000 gallon tank for storing treated water. Water is derived from Gilbert and Village Creeks during the summer, and ice blocks are cut in winter. Water and sewage system upgrades were among the development goals included in Wales' 5-year local economic development plan, prepared in 2004.¹³⁹⁶ As of 2004, two groundwater wells had been drilled, and piped water was available for the school, clinic, and city building.¹³⁹⁷ A Master Plan to implement a piped water system had also been completed.¹³⁹⁸ The City of Wales received fiscal year 2010 funding through the Alaska Department of Environment Conservation Village Safe Water program for the design and construction of a new washeteria, water treatment plant, and associated wastewater treatment and disposal systems. In a survey conducted by NOAA's Alaska Fisheries Science Center (AFSC) in 2011, community leaders also reported that a new landfill is planned for completion within the next ten years.

Wales is served by the Alaska Village Electric Cooperative (AVEC). Diesel fuel is the primary source of energy. Two hybrid wind-diesel turbines are also in operation.¹³⁹⁹

Community facilities in Wales include a U.S. post office, school library, and a community building.¹⁴⁰⁰ The Wales School provides space for community activities, a gymnasium for community use, and housing as needed for visitors.¹⁴⁰¹ Several stores operate in the community.¹⁴⁰²

With respect to fishing-related infrastructure, community leaders reported in the 2011 AFSC survey that no dock space is available for permanent or transient vessel moorage in Wales.

¹³⁹² Community of Wales (2004). *Local economic development plan for Wales 2004-2009*. Retrieved January 31, 2012 from <http://www.kawerak.org/ledps/wales.pdf>.

¹³⁹³ Alaska Department of Natural Resources (2010). *Bering Straits coastal resources service area: Coastal management plan*. Retrieved January 31, 2012 from http://dnr.alaska.gov/coastal/acmp/District/DistrictPlans_Final/BSCRSA/Bering_Straits_Final_Plan_Amendment_1-27-11_submittal.pdf.

¹³⁹⁴ See Footnote 1384.

¹³⁹⁵ Ibid.

¹³⁹⁶ See Footnote 1392.

¹³⁹⁷ Ibid.

¹³⁹⁸ Ibid.

¹³⁹⁹ See Footnote 1392.

¹⁴⁰⁰ See Footnote 1384.

¹⁴⁰¹ Native Village of Wales (n.d.). *Native Village of Wales - Community Directory*. Retrieved January 31, 2012 from <http://www.kawerak.org/tribalHomePages/wales/index.html>.

¹⁴⁰² Ibid.

They also reported that fishing support services available in Wales include fishing gear and tackle sales, and that residents travel to Nome, Anchorage, and Fairbanks for fishery support services not available in Wales.

Medical Services

The Norton Sound Health Corporation (NSHC) operates the city-owned Toby Anungazuk Sr. Memorial Health Clinic. The clinic is a designated Community Health Aid Program (CHAP) site. Emergency Services have coastal and air access to the community. Volunteers staff the fire department and search & rescue operations.¹⁴⁰³ NSHC operates the nearest hospital, the Norton Sound Regional Hospital, which is located in Nome. As of May 2011, construction on a new hospital in Nome was halfway complete; its opening is scheduled for 2012.¹⁴⁰⁴

Educational Opportunities

Wales School (Kingikmiut Iisagvik), operated by Bering Straits School District, serves students in kindergarten through twelfth grade. As of 2011 there are 46 students and 4 teachers.¹⁴⁰⁵

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Wales has been an important site for harvest of marine resources for over a thousand years. Ancient tools and animal remains in Wales' archaeological record show that fishing and hunting for marine mammals, along with other subsistence activities, formed the backbone of the village economy, as they do today.¹⁴⁰⁶ A whaling shore station was established in Wales following the expansion of the American commercial whaling industry into the Arctic in the 1850s.¹⁴⁰⁷ By 1910, most commercial whaling activities had ended with the decline in the market for whale products.¹⁴⁰⁸ Subsistence bowhead whale hunting ceased in Wales following the 1918 influenza epidemic and did not resume until 1970.¹⁴⁰⁹

Current engagement by Wales residents in fisheries is limited to subsistence fishing and some recreational fishing. Commercial fishing opportunities in the Arctic are extremely limited. In a 2011 survey conducted by the AFSC, community leaders reported the fishing season as

¹⁴⁰³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁰⁴ Norton Sound Health Corporation (2011). *New Hospital Construction Updates*. Retrieved April 10, 2012 from <http://www.nortonsoundhealth.org/newhospital.html>.

¹⁴⁰⁵ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

¹⁴⁰⁶ Harritt, R. (2010). Variations of late prehistoric houses in coastal northwest Alaska: a view from Wales. *Arctic Anthropology*, 47(1), 57-70.

¹⁴⁰⁷ Freeman, M. (1998). *Inuit, whaling, and sustainability*. Walnut Creek, CA: AltaMira.

¹⁴⁰⁸ Ibid.

¹⁴⁰⁹ See Footnote 1387.

taking place from July to August; residents fish for four species of salmon (pink, chum, coho, and sockeye) and sea trout.

Wales is located adjacent to the Arctic Management Area for federal fisheries management. The community is located in Federal Fisheries Reporting Area 514, International Pacific Halibut Commission (IPHC) Regulatory Area 4E, the Bering Sea Sablefish Regulatory District, and the Norton Sound – Port Clarence Management Area for Alaska Department of Fish & Game subsistence fisheries management. The community participates in the Community Development Quota Program (CDQ) as a member of the Norton Sound Economic Development Council (NSEDC). Wales has a representative on the Federal Subsistence Management Program regional advisory council for Seward Peninsula. The community also participates on the Alaska Eskimo Whaling Commission, which manages bowhead whale hunting by ten whaling communities, and the Eskimo Walrus Commission.

In the 2011 AFSC survey, community leaders reported “limits on fishing quota” as the potential future fishery policy or management action of most concern to Wales.

Processing Plants

According to the 2010 Alaska Department of Fish and Game’s Intent to Operate list, Wales does not have any registered processing plants. The closest seafood processor is located in Nome.

Fisheries-Related Revenue

Between 2000 and 2003, Wales received a small amount of revenue from raw fish taxes and Shared Fisheries Business Taxes. This revenue accounted for 1-2% of the total municipal revenue in each year (Table 3). No known fisheries-related revenue was reported for the community after 2003. However, in a survey conducted by the AFSC in 2011, community leaders reported that in 2010, Wales received \$100,000 in grants from its CDQ entity, NSEDC.

Commercial Fishing

Residents of Wales do not currently participate in commercial fisheries either as permit holders, holders of Individual Fishing Quota (IFQ) quota share or fishing vessel owners. Between 2000 and 2010, no commercial fishery landings were made by vessels owned by Wales residents, irrespective of location of landing. With the exception of one commercial fishing crew license holder in 2009, no residents participated as crew members in Alaska commercial fisheries. Information on commercial fishing trends can be found Table 4 through 10.

Table 3. Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of Wales: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$210	\$210	\$3,901	\$3,901	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shared fisheries business tax ¹	\$52	\$106	\$148	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fisheries resource landing tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue</i> ⁴	<i>\$262</i>	<i>\$316</i>	<i>\$4,049</i>	<i>\$3,901</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Total municipal revenue</i> ⁵	<i>\$238,407</i>	<i>\$223,853</i>	<i>\$240,037</i>	<i>\$220,469</i>	<i>\$263,386</i>	<i>\$178,242</i>	<i>\$208,336</i>	<i>\$275,500</i>	<i>\$284,965</i>	<i>\$367,724</i>	<i>\$219,123</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the city reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

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Table 4. Permits and Permit Holders by Species, Wales: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, Wales: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	--	--	--	--	--	--	--	--	--	--	--
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Fished permits</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
	<i>Permit holders</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

Note: -- indicates that no data were reported for that year.

¹ National Marine Fisheries Service. (2011). Data on Limited Liability Permits, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in Wales: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in Wales ²	Total Net Pounds Landed in Wales ^{2,5}	Total Ex-Vessel Value of Landings in Wales ^{2,5}
2000	0	0	0	0	1	0	0	\$0
2001	0	0	0	0	1	0	0	\$0
2002	0	0	0	0	1	0	0	\$0
2003	0	0	0	0	1	0	0	\$0
2004	0	0	0	0	1	0	0	\$0
2005	0	0	0	0	1	0	0	\$0
2006	0	0	0	0	1	0	0	\$0
2007	0	0	0	0	1	0	0	\$0
2008	0	0	0	0	1	0	0	\$0
2009	1	0	0	0	1	0	0	\$0
2010	0	0	0	0	1	0	0	\$0

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation by Residents of Wales: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of Wales: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of Wales: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. 2011. Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in Wales: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Note: n/a indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by species, by Wales Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Note: Not Reported indicates that no data were reported for that year. Cells showing – indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Given Wales’ remote location and the absence of nearby rivers, opportunities for non-resident recreational fishing in the community are limited. As shown in Table 11, no sport fish guide businesses were registered in the community between 2000 and 2010, and no residents held sport fish guide licenses during this period. Additionally, there were no reports of charter operations in the community between 2000 and 2010.

In 2010, there were 3 sport fishing licenses sold in the community, down from a 10-year high of 23 in 2001. Also in 2010, three sport fishing licenses were sold to Wales residents, irrespective of location of sale. Given the correspondence of in-community license sales with the numbers of license sales to residents, it is probable that most licenses sales in the community are made to residents, and most Wales residents who purchase sport fishing licenses do so within the community.

Wales is located in the Seward Peninsula-Norton Sound area (Area W) of the Alaska Department of Fish & Game Sport Division Statewide Harvest Survey. The area includes all waters north of the Yukon River drainage; north and west of Pastol Bay and south of the Selawik River drainage. Freshwater fishing sites include the Sinuk and Snake Rivers, and the drainages of the Nome, Fish, Niukluk, and Unalakleet Rivers. Freshwater fishing dominates in this area, accounting for 92% of all angler days fished between 2000 and 2010. Residents typically outnumber non-residents in terms of angler days fished. From 2000 to 2010, the number of angler days fished (across freshwater and saltwater fishing and fishing by residents and non-residents) has fluctuated from a high of 21,995 in 2008 to a low of 10,610 in 2010, with a ten-year average of 15,871. Freshwater fishing days, irrespective of residency, has fluctuated from a high of 17,579 in 2008 and a low of 6,199 in 2010, with a ten-year average of 10,454.

Table 11. Sport Fishing Trends, Wales: 2000-2010.

Year	Active Sport Fish Guide Businesses ¹	Sport Fish Guide Licenses ¹	Sport Fishing Licenses Sold to Residents ²	Sport Fishing Licenses Sold in Wales ²
2000	0	0	21	22
2001	0	0	23	23
2002	0	0	21	22
2003	0	0	18	19
2004	0	0	18	15
2005	0	0	15	18
2006	0	0	12	10
2007	0	0	7	7
2008	0	0	13	13
2009	0	0	8	10
2010	0	0	3	3

Table 11. Sport Fishing Trends, Wales: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non- residents ³	Angler Days Fished – Alaska Residents ³	Angler days fished – Non- residents ³	Angler days fished – Alaska residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	n/d	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

Note: n/a indicates that no data were reported for that year.

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence resources are the basis of Wales' economy, with the harvest, production, and distribution of wild foods involving extensive cooperation among households and through extended family networks.¹⁴¹⁰ Bowhead whale hunting takes place in the spring, when whales migrate north through the Bering Strait to summer feeding areas in the Beaufort Sea.¹⁴¹¹ Whale hunters use hand-held hunting technologies based on those introduced by American whalers in the nineteenth Century, including darting guns and grenades. After a successful whale hunt, captains distribute shares of landed whale throughout the community.¹⁴¹² Walrus and seal hunting also take place in the spring, following the whale hunt.¹⁴¹³ Community leaders in the

¹⁴¹⁰ Magdanz, J. et al. (2002). *The production and distribution of wild food in Wales and Deering, Alaska*. ADF&G, Technical Paper No. 259. Retrieved January 31, 2012 from <http://www.adfg.alaska.gov/techpap/tp259.pdf>.

¹⁴¹¹ Freeman, M. (1998). *Inuit, whaling, and sustainability*. Walnut Creek, CA: AltaMira.

¹⁴¹² Ibid.

¹⁴¹³ Krupnik, I. and W. Weyapuk Jr. (2010). Qanuq Ilitaavut: 'How We Learned What We Know' (Wales Inupiaq Sea Ice Dictionary). In I. Krupnik et al. (Eds.), *SIKU: Knowing our ice: documenting Inuit sea ice knowledge and use* (pp. 321-356). New York: Springer.

2011 AFSC survey also reported that residents participate in fishing for salmon and sea trout from July to August. They noted that salmon, seal meat, and walrus were the most important subsistence marine or aquatic resources harvested by Wales residents.

According to a 1994 survey conducted by the ADF&G Division of Subsistence, marine mammals contributed 78% of the total harvest, by weight, of subsistence resources by Wales residents in that year. Fish accounted for 13.3%, and land mammals, marine invertebrates, birds and eggs, and plants and berries accounted for 3.4%, 3.1%, 1.6%, and 0.6%, respectively. However, it was noted that one bowhead whale accounted for most of the marine mammal weight; fish and land mammals likely comprise a larger proportion of the harvest in years where no bowhead whales are landed. Excluding teacher households, Wales households reported an average of 2,643 edible pounds of subsistence resources, including non-marine resources.¹⁴¹⁴

Data on subsistence harvests in Wales for the 2000 to 2010 period is limited. Data on the percentage of households using subsistence resources and on residents' subsistence fishing activity for salmon, marine invertebrates and non-salmon fish for the years 2000 to 2010 are unavailable. No data are available on residents' participation in subsistence halibut fishing, although Wales residents and members of the Native Village of Wales are eligible to engage in subsistence halibut fishing in IPHC regulatory area 4E. Available data on marine mammal harvest show that 19 walrus were harvested by Wales residents in 2010, higher than the 2000-2010 average of 14.4.

According to the ADF&G *Community Subsistence Information System*,¹⁴¹⁵ non-salmon/halibut species which residents harvest or use include mussels, giant scale worm, sea cucumber, shrimp, king crab, clams, Tanner crab, whelk, bearded seal, bowhead whale, ribbon seal, ringed seal, spotted seal, Arctic cod, Bering cisco, broad whitefish, burbot, Dolly Varden, grayling, herring, humpback whitefish, least cisco, round whitefish, saffron cod, sheefish, flounder, sculpin, and smelt.

Additional Information

The Wales Inupiaq Sea Ice Dictionary contains approximately 110 terms in the Kingikmiut dialect. Terms were documented in 2007 and 2008 and describe types of sea ice and associated phenomena.¹⁴¹⁶

The Wales Sea Ice Webcam, operated by the University of Alaska at Fairbanks, provides a daily impression of sea-ice conditions off Wales, as well as a long-term record of seasonal change in sea ice patterns. Webcam video may be viewed at: http://seaice.alaska.edu/gi/observatories/wales_webcam

¹⁴¹⁴ See Footnote 1410.

¹⁴¹⁵ Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

¹⁴¹⁶ Krupnik, I. and W. Weyapuk Jr. (2010). Qanuq Ilitaavut: 'How We Learned What We Know' (Wales Inupiaq Sea Ice Dictionary). In I. Krupnik et al. (Eds.), *SIKU: Knowing our ice: documenting Inuit sea ice knowledge and use* (pp. 321-356). New York: Springer.

Table 12. Subsistence Participation by Household and Species, Wales: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates and Non-Salmon Fish, Wales: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, Wales: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	n/a	n/a	n/a
2004	n/a	n/a	n/a
2005	n/a	n/a	n/a
2006	n/a	n/a	n/a
2007	n/a	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, Wales: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	14	n/a	n/a	n/a	n/a
2001	n/a	n/a	40	n/a	n/a	n/a	n/a
2002	n/a	n/a	27	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	4	n/a	n/a	n/a	n/a
2005	n/a	n/a	13	n/a	n/a	n/a	n/a
2006	n/a	n/a	5	n/a	n/a	n/a	n/a
2007	n/a	n/a	9	n/a	n/a	n/a	n/a
2008	n/a	n/a	2	n/a	n/a	n/a	n/a
2009	n/a	n/a	11	n/a	n/a	n/a	n/a
2010	n/a	n/a	19	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

White Mountain



People and Place

*Location*¹⁴¹⁷

White Mountain is located on the west bank of the Fish River, near the head of Golovnin Lagoon, on the Seward Peninsula. It is 63 miles east of Nome. The area encompasses 1.8 square miles of land and 0.2 square miles of water. The City was incorporated in 1969, is located in the Nome Census Area, and is not under the jurisdiction of a borough.

*Demographic Profile*¹⁴¹⁸

In 2010, there were 190 residents, ranking White Mountain 202nd of 352 Alaskan communities in terms of population size. Between 1990 and 2010, the population grew by 5.6%. Between 2000 and 2009, the population fell by 0.5% with an average annual growth rate of -0.5%, which was less than the statewide average of 0.75% and indicative of very little population growth. In a survey conducted by NOAA's Alaska Fishery Science Center (AFSC) in 2011, community leaders reported that there were an estimated 209 to 225 permanent residents living in White Mountain in 2010. This estimate significantly varied from the 2010 Decennial Census, and more closely resembles the 2009 Alaska Department of Labor and Workforce Development (DOLWD) 2009 estimate. On average, seasonal workers live in White Mountain between June and October, and seasonal population peaks are mostly driven by employment in fisheries sectors. Information regarding population trends can be found in Table 1.

White Mountain's racial composition is predominately Ibaohiufmuit Eskimo, although there are historical influences by Kawerak and Yup'ik Eskimos. In 2010, 81.6% of residents identified themselves as American Indian or Alaska Native, compared to 83.7% in 2000; 12.1% identified themselves as White, compared to 13.3% in 2000; and 6.3% identified themselves as two or more races, compared to 2.5% in 2000. In addition, 1.1% of residents identified themselves as Hispanic or Latino in 2010, compared to 0.5% in 2000. Information regarding trends in race and ethnicity can be found in Figure 1.

In 2010, the average household size was 2.92, compared to 3.10 in 1990 and 2.94 in 2000. In that year there were a total of 79 housing units, compared to 69 in 1990 and 75 in 2000. Of the households surveyed in 2010, 58% were owner-occupied, compared to 71% in 2000; 24% were renter-occupied, compared to 21% in 2000; 18% were vacant, compared to 1% in 2000; and 0% were occupied seasonally, compared to 7% in 2000.

¹⁴¹⁷ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴¹⁸ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

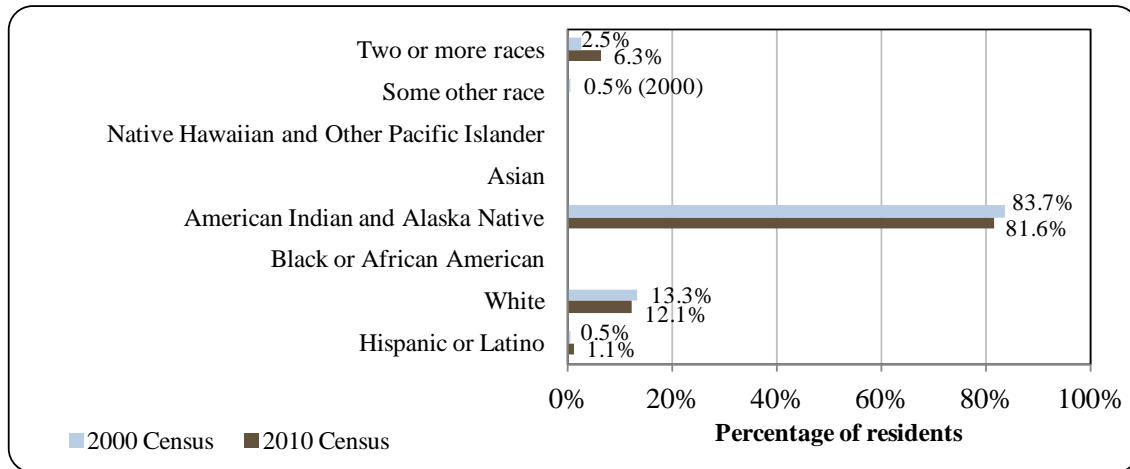
Table 1. Population in White Mountain from 1990 to 2010 by Source.

Year	U.S. Decennial Census ¹	Alaska Dept. of Labor Estimate of Permanent Residents ²
1990	180	-
2000	203	-
2001	-	203
2002	-	210
2003	-	214
2004	-	213
2005	-	224
2006	-	224
2007	-	214
2008	-	191
2009	-	202
2010	190	-

¹ (1) U.S. Census Bureau (1990). *CP-1: General Population Characteristics of all places within Alaska*. Retrieved November 1, 2011 from <http://www.census.gov/prod/www/abs/decennial/1990.html>. (2) U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2000 (SF1 100% and SF3 sample data) and 2010 (Demographic Profile SF) Decennial Census and the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

² Alaska Department of Labor. (2011). *Current population estimates for Alaskan Communities*. Retrieved April 15, 2011, from <http://labor.alaska.gov/research/pop/popest.htm>.

Figure 1. Racial and Ethnic Composition, White Mountain: 2000-2010 (U.S. Census).



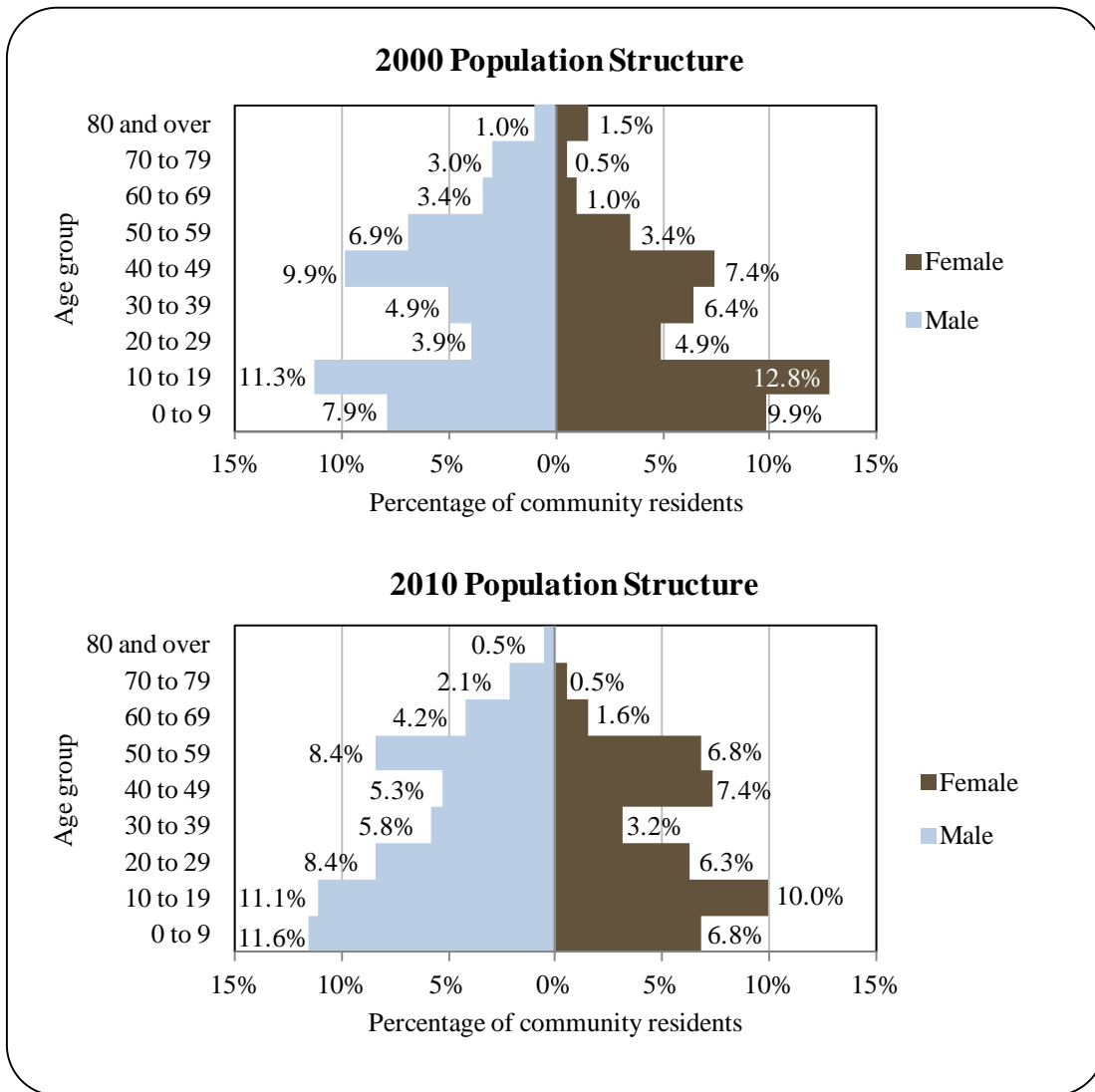
Gender distribution in 2010 was skewed towards males at 57.4% male and 42.6% female. This was less even than both the distribution statewide (52.0% male, 48.0% female), and distribution in 2000 (52.2% male, 47.8% female). The median age in 2010 was 27.2 years, which was younger than both the statewide median of 33.8 years and 2000 median of 29.3 years.

Overall, the population structure was expansive in both 2000 and 2010. Compared with 2000, cohorts in 2010 loosely retained their structural character as they aged, possibly indicating a relatively stable population. In that year, 39.5% of residents were under the age of 20, compared to 41.9% in 2000; 8.9% were over the age of 59, compared to 10.4% in 2000; 36.9%

were between the ages of 30 and 59, compared to 38.9% in 2000; and 14.7% were between the ages of 20 and 29, compared to 8.8% in 2000.

Gender distribution by age cohort was slightly less even in 2010 than in 2000. In that year, the greatest absolute gender difference occurred within the 0 to 9 range (11.6% male, 6.8% female), followed by the 30 to 39 (5.8% male, 3.2% female) and 60 to 69 (4.2% male, 1.6% female) ranges. Of those three, the greatest relative gender difference occurred within the 60 to 69 range (Figure 2).

Figure 2. Population Age Structure in White Mountain Based on the 2000 and 2010 U.S. Decennial Census.



In terms of educational attainment, the 2006-2010 American Community Survey (ACS)¹⁴¹⁹ estimated that 84.8% of residents aged 25 and older held a high school diploma or higher degree in 2010, compared to an estimated 90.7% of Alaskan residents overall. Also in that year, an estimated 7.6% of residents had less than a ninth grade education, compared to an estimated 3.5% of Alaskan residents overall; an estimated 7.6% had a ninth to twelfth grade education but no diploma, compared to an estimated 5.8% of Alaskan residents overall; an estimated 26.1% had some college but no degree, compared to an estimated 28.3% of Alaskan residents overall; and an estimated 5.4% held a graduate or professional degree, compared to an estimated 9.6% of Alaskan residents overall.

History, Traditional Knowledge, and Culture

The Seward Peninsula was the backbone of the Bering Land Bridge that once connected Asia with North America during the last Ice Age. Indigenous people settled the area over 4,000 years ago, and their ethnicity is reflected in the area's demographics. Siberian Yupik people made their home on St. Lawrence Island and Malemiut, Kauweramiut and Unaliksiut Ekimos have occupied the Seward Peninsula historically, mostly around areas of abundant resources. Western Union surveyors seeking a route across Alaska and the Bering Sea reported gold around nearby Council in 1867. However, it was not until a major strike at Anvil Creek in the fall of 1898 that rumors of gold became widespread. By 1899, over 8,000 prospectors flocked to the area, and by 1900, nearby Nome had swelled to over 20,000 residents.¹⁴²⁰

Formerly the location of the Eskimo village of *Nutchirviq*, White Mountain grew during the gold rush of the early twentieth century. During that time, an influx of prospectors led to the establishment of the first non-Native structures including a warehouse built by Charles Lane to store supplies for his nearby gold claim. The warehouse later became the site of a government-subsidized orphanage, which became an industrial school in 1926. A Russian Orthodox Church was built in 1920 and the Covenant Church was built in 1937. A post office was opened in 1932, and a Tribal government was organized following the Indian Reorganization Act in 1939.¹⁴²¹

There is an ancient village site 15-18 miles upriver from White Mountain. There are also a few grave sites in or near town. Ski trails are located on a valued historical recreational site to regional village.¹⁴²²

Natural Resources and Environment

White Mountain has a transitional climate with less extreme seasonal and daily temperatures than Interior Alaska. Continental influences prevail in the ice-bound winter.

¹⁴¹⁹ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁴²⁰ City of Nome (2003). *Nome Comprehensive Plan*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/Nome-CP-2005.pdf>.

¹⁴²¹ Northwest Planning and Grants Development (2004). *Community Strategic Development Plan for White Mountain 2004-2024*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2003.pdf>.

¹⁴²² Mikulski, P. (2008). *White Mountain Local Economic Development Plan 2008-2012*. Kawerak Inc. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2008.pdf>.

Average summer temperatures range from 43 to 80 °F (6 to 27 °C); winter temperatures average -7 to 15 °F (-22 to -9 °C). Annual precipitation averages 15 inches, with 60 inches of snow. The Fish River freezes up in November; break-up occurs in mid to late May.¹⁴²³

White Mountain lies at the edge of a large drainage basin which transitions into Golovnin Lagoon. To the north and east, White Mountain is surrounded by high, rolling hills covered with evergreen trees, willow, berry bushes, grass, and moss. To the south and west of the community lie the Fish River and a low, wet tundra marsh that drains the highlands of the Seward Peninsula.¹⁴²⁴ Large areas of wetlands and tidal flats line the northwest end of Golovnin Lagoon to the south. Southern lowland soils consist of sands and gravels. Upland soils around White Mountain tend to be poorly drained, with a peaty surface layer and shallow permafrost.¹⁴²⁵

Vegetation on the Seward Peninsula is principally tundra, with alpine dryas-lichen tundra and barrens at high elevations and moist sedge-tussock tundra at lower elevations. Patches of low-growing ericaceous and willow-birch shrubs occur on better-drained areas. Vegetation in White Mountain is generally limited to evergreen trees, alder, cottonwood, and willow trees. Understory groundcover include berry bushes, wild flowers, lichens, shrubs, mosses, low bush berries, and various grasses. Local residents harvest a variety of berries, roots, mushrooms, and greens. Since 2005, there has been increasing concern of the impacts of birch-bark beetles. Infested wood have been a growing fire hazard in the area.¹⁴²⁶

Terrestrial wildlife includes moose, caribou, wolf, lynx, wolverine, beaver, and porcupine. Fish species include all five species of Pacific salmon, whitefish, lingcod, tomcod, smelt, pike, and trout. Marine mammal species include seal and beluga whale. No critical habitat areas, National Wildlife Refuges, or sanctuaries are present in the area surrounding White Mountain.¹⁴²⁷

There are no large scale mineral extraction projects in the immediate area of White Mountain. However, there are several active claims near the community including a gold deposit at Daniels Creek to the west and an inactive placer gold site and uranium occurrence near Eagle Creek to the east.¹⁴²⁸

Locally, subsistence and recreational natural resources are most abundant. A wide variety of subsistence foods are available, including birds, eggs, berries, plants, fish, and marine and terrestrial mammals. The vast tundra and wetland ecosystem provides protection from wind and snowdrifts. Local forests provide small scale timber harvesting opportunities. Tourism opportunities include fishing, sight-seeing, camping, hiking, and biking. There is also potential for the development of ski trails. Gravel resources are also abundant in the area.¹⁴²⁹

White Mountain lies in seismic risk zone three, which is subject to earthquakes of a magnitude 6.0 or greater. There is no record historically of damage in White Mountain from earthquakes or tsunamis. The community is subjected to ice-jams and stream-overflow flooding

¹⁴²³ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴²⁴ Mikulski, P. (2008). *White Mountain Local Economic Development Plan 2008-2012*. Kawerak Inc. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2008.pdf>.

¹⁴²⁵ Mikulski, P. (2009). *Golovin Local Economic Development Plan 2009-2013*. Kawerak Inc. Retrieved August 9, 2012 from: <http://www.kawerak.org/ledps/golovin.pdf>.

¹⁴²⁶ See footnote 1424.

¹⁴²⁷ Ibid.

¹⁴²⁸ U.S. Geological Survey (n.d.). *Distribution of Mineral Occurrences: Solomon Quadrangle*. Retrieved August 9, 2012 from: http://ardf.wr.usgs.gov/ardf_data/Solomon.pdf.

¹⁴²⁹ See footnote 1424.

from the Fish River. The U.S. Army Corps of Engineers reports that there is a low frequency of flooding at White Mountain and has found the community to be in a low flood hazard area. Seasonal low river levels have the potential to delay barge shipments and fuel deliveries.¹⁴³⁰

According to the Alaska Department of Environmental Conservation (DEC), there were no significant environmental remediation projects active in 2010. However, there were several less significant cleanup projects active including a diesel fuel spill at the White Mountain Washeteria and diesel contamination at a drum disposal site.¹⁴³¹

Current Economy¹⁴³²

White Mountain's economy is dependent on subsistence hunting and fishing, and most residents spend the entire summer at fish camps. Salmon, other fish, beluga whale, seal, moose, reindeer, and brown bear are utilized. The main sources of local employment include the Tribal government, city, school, Native store, and private guiding businesses. Seasonal employment includes construction, firefighting, and commercial fishing.¹⁴³³

In 2010,¹⁴³⁴ the estimated per capita income was \$15,749 and the estimated median household income was \$29,375, compared to \$10,034 and \$25,833 in 2000. However, after adjusting for inflation by converting 2000 values into 2010 dollars,¹⁴³⁵ the real per capita income (\$13,195), and real median household income (\$33,980) indicates that while individual earnings increase, household earnings declined. In 2010, White Mountain ranked 193rd of 305 communities from which per capita income was estimated, and 250th of 299 communities from which median household income was estimated.

White Mountain's small population size may have prevented the ACS from accurately portraying economic conditions.¹⁴³⁶ A potentially more accurate understanding of per capita income is obtained through economic data compiled by the Alaska Local and Regional Information (ALARI) database maintained by DOLWD.¹⁴³⁷ According to the ALARI database, residents earned \$1.80 million in total wages in 2010.¹⁴³⁸ When matched with the 2010 Decennial Census population, the estimated per capita income equals \$9,459, which was less than the per capita income reported by the U.S. Census in 2000 (when adjusted for inflation).

¹⁴³⁰ Ibid.

¹⁴³¹ Alaska Dept. of Environmental Conservation (n.d.). *Contaminated Sites Program*. Retrieved August 9, 2012 from: <http://dec.alaska.gov/spar/csp/list.htm>.

¹⁴³² Unless otherwise noted, all monetary data are reported in nominal values.

¹⁴³³ Northwest Planning and Grants Development (2004). *Community Strategic Development Plan for White Mountain 2004-2024*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2003.pdf>.

¹⁴³⁴ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁴³⁵ Inflation was calculated using the Anchorage Consumer Price Index for 2010 (retrieved January 5, 2012 from the Alaska Department of Labor, <http://labor.alaska.gov/research/cpi/inflationcalc.htm>).

¹⁴³⁶ While American Community Survey (ACS) estimates can provide a good snapshot estimate for larger populations, smaller populations can be misrepresented by ACS estimates if demographic information is not collected from a representative sample of the population. This is especially problematic for Alaskan communities with small populations that have a low probability of being adequately sampled.

¹⁴³⁷ ALARI estimates based on wages reported for unemployment insurance purposes. Estimates do not include self-employed or federally employed residents.

¹⁴³⁸ Alaska Department of Labor and Workforce Development (n.d.). *Alaska Local and Regional Information Database*. Retrieved April 23, 2012 from <http://live.laborstats.alaska.gov/alari/>.

This is supported by the fact that the community was recognized as “distressed” by the Denali Commission indicating that over 70% of residents aged 16 and older earned less than \$16,120 in 2010.¹⁴³⁹

According to 2006-2010 ACS estimates,¹⁴⁴⁰ 51.7% of residents aged 16 and over were part of the civilian workforce in 2010, compared to an estimated 62.9% of Alaskan residents overall. In that year, unemployment was estimated at 16.1%, compared to an estimated 5.9% statewide; and an estimated 38.3% of residents were living below the poverty line, compared to an estimated 9.5% of Alaskan residents overall. However, it should be noted that ACS and DOLWD data are based on wage earnings and does not take into account the value of subsistence within the local economy. Of those employed in 2010, an estimated 41.2% worked in the private sector, an estimated 54.9% worked in the public sector, and an estimated 3.9% were self-employed.

By industry, most (35.3%) of those employed were estimated to work in public administration sectors; followed by education services, health care, and social assistance sectors (23.5%); construction sectors (13.7%); retail trade sectors (11.8%); and other service sectors (11.8%) (Figure 4).¹⁴⁴¹ Between 2000 and 2010, there was a strong proportional declines in education services, healthcare, and social assistance sectors in favor of a more diversified economy.¹⁴⁴² However, White Mountain’s small population size may have impacted the ability of the ACS to accurately gather a representative sample of the community’s economic character. According to 2010 ALARI estimates,¹⁴⁴³ most (64.9%) employed residents worked in local government sectors; followed by education and health service sectors (20.2%); and trade, transportation, and utility sectors (6.4%). By occupation type, most (35.3%) of employed residents were estimated to hold management or professional positions; followed by service positions (27.5%); sales or office positions (23.5%); and natural resources, construction, or maintenance positions (13.7%) (Figure 4). Between 2000 and 2010, there was a significant proportional decline in the number of service positions, as well as a significant proportional increase in the number of natural resources, construction, and maintenance positions.

No individuals who were surveyed by the 2006-2010 ACS characterized themselves as working in natural resource based occupations or industries that include fishing. Data reported in the *Commercial Fishing* section below may support ACS estimates since no commercial permits were actively fished in 2010.

¹⁴³⁹ Denali Commission (2011). *Distressed Community Criteria 2011 Update*. Retrieved April 16, 2012 from: www.denali.gov.

¹⁴⁴⁰ See footnote 1436.

¹⁴⁴¹ U.S. Census Bureau (n.d.). *Profile of selected social, economic and housing characteristics of all places within Alaska*. Datasets utilized include the 2010 American Community Survey 5-year estimates. Retrieved November 1, 2011 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

¹⁴⁴² Ibid.

¹⁴⁴³ See footnote 1438.

Figure 3. Local Employment by Industry in 2000-2010, White Mountain (U.S. Census).

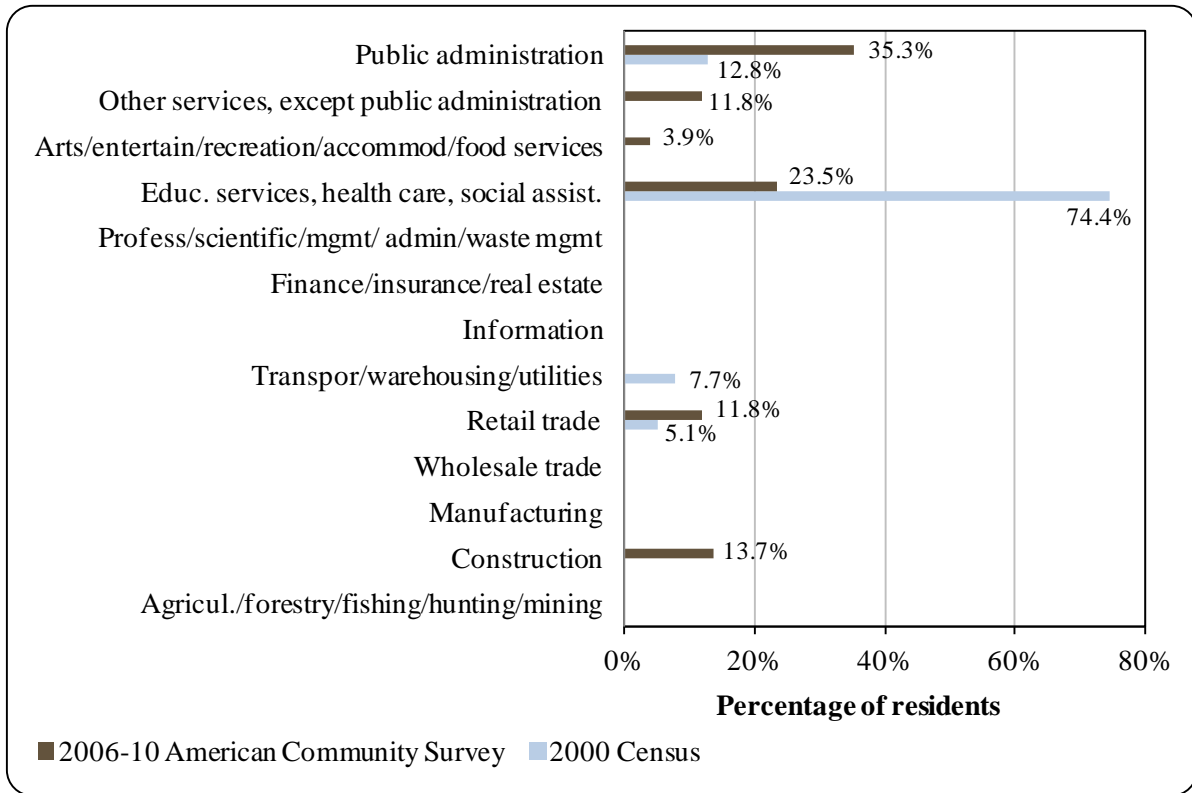
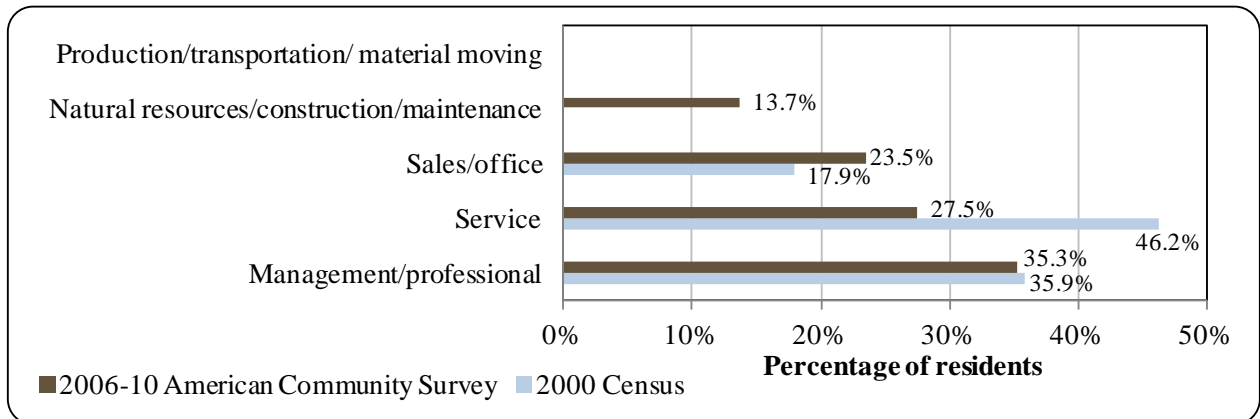


Figure 4. Local Employment by Occupation in 2000-2010, White Mountain (U.S. Census).



Governance

White Mountain is a Second-class city with a mayoral form of government. In addition, there is a U.S. Bureau of Indian Affairs recognized Tribal government. The local Alaska Native Claims Settlement Act (ANCSA) chartered village council is White Mountain Native Corporation. The regional ANCSA chartered for-profit corporation is the Bering Straits Native Corporation and the regional ANCSA chartered non-profit corporation is Kawerak Inc. The closest Alaska Department of Fish and Game (ADF&G) and U.S. Bureau of Citizenship and Immigration Services offices are located in Nome, 63 miles west. The closest National Marine Fisheries Service (NMFS) office is located in Anchorage, 480 miles southeast.

The City of White Mountain administered a 1% sales tax in 2010. Total municipal revenue figures were taken from Certified Financial Statements, with the exception of 2003 which was referenced by audit.¹⁴⁴⁴ When adjusted for inflation,¹⁴⁴⁵ total municipal revenues increased by 2.9% between 2000 and 2010 from \$877,012, to \$1.18 million. Revenues varied significantly between 2000 and 2010, reaching their peak in 2009 at \$1.45 million, and their lowest in 2002 at \$454,416. In 2010, locally generated revenues accounted for 62.7% of total municipal revenues. In that year, most (80.7%) locally generated revenues were collected from enterprise sources including utilities, water/sewer, fuel sales, and cable television charges. Rentals contributed 6.2% of local revenues, while finance charges and contracted services contributed 4.1% and 3.8%, respectively. Most (65.1%) outside revenues were collected from Norton Sound Economic Development Corporation (NSEDCC) grants and state grants for an elementary school demolition project. Other sources of outside revenues include state allocated Community Revenue Sharing, payments in lieu of taxes, and library grants. Overall, Community Revenue Sharing accounted for 9.0% of the total municipal budget in 2010, compared to 2.7% from State Revenue Sharing in 2000. In addition, sales taxes accounted for 1.2% of total revenues that year, compared to less than one-percent in 2000. Federal and state fisheries-related grants awarded to White Mountain between 2000 and 2010 included \$101,298 for a bulk fuel storage project, and \$38,716 for a fish/meat cutting facility. Information regarding municipal finances can be found in Table 2.

¹⁴⁴⁴ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dkra/commfin/CF_FinRec.cfm.

¹⁴⁴⁵ Inflation calculated using Anchorage CPI from Alaska DOL: <http://labor.alaska.gov/research/cpi/cpi.htm>.

Table 2. Selected Municipal, State, or Federal Revenue Streams for the Community of White Mountain from 2000 to 2010.

Year	Total Municipal Revenue ¹	Sales Tax Revenue ²	State/Community Revenue Sharing ^{3,4}	Fisheries-Related Grants (State and Federal) ⁵
2000	\$887,012	\$3,750	\$24,129	\$50,000
2001	\$795,144	\$3,750	\$23,260	\$27,660
2002	\$454,416	\$7,965	\$23,256	n/a
2003	\$581,498	n/a	\$23,377	n/a
2004	\$1,068,382	\$16,646	-	n/a
2005	\$1,053,832	\$6,864	-	n/a
2006	\$979,358	\$14,176	-	\$23,638
2007	\$691,989	\$9,126	-	n/a
2008	\$1,063,034	\$16,733	-	\$38,716
2009	\$1,449,197	\$19,574	\$104,213	n/a
2010	\$1,180,148	\$14,713	\$105,744	n/a

¹ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Financial Documents Delivery System*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

² Alaska Dept. of Comm. and Econ. Dev. (n.d.). *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

³ Alaska Dept. of Rev. (n.d.). *(2000-2009) Taxes and Fees Annual Report*. Retrieved April 15, 2011 from <https://www.tax.state.ak.us>.

⁴ The State Revenue Sharing program ceased in 2003 and was replaced by the Community Revenue Sharing program starting in 2009.

⁵ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Funding Database*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_Grants.htm.

Infrastructure

*Connectivity and Transportation*¹⁴⁴⁶

Access to White Mountain is by air and sea. There are no roads. The 3,000-foot long by 60-foot wide gravel runway is operated by the state, and scheduled flights are available daily from Nome. Roundtrip airfare between Anchorage and White Mountain in June 2012 was \$702.¹⁴⁴⁷ Airline services include Bering Air, ERA Alaska, and Ryan Air Service. There is no dock in the village; supplies are lightered from Nome and offloaded on the beach. Cargo barges cannot land at White Mountain.

Facilities

Water is derived from a well near the Fish River and is treated. Forty-eight (48) households and facilities are connected to the piped water and sewer system. Eighteen (18) additional households haul honeybuckets. The school operates its own water and sewer system. Accommodations include the high school, city office guest room, and the village council office

¹⁴⁴⁶ Alaska Dept. of Comm. and Rural Affairs. (n.d.). *Community Database Online*. Retrieved October 17, 2011 from http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.htm.

¹⁴⁴⁷ Airfare was calculated using lowest fare. Retrieved November 7, 2011 from: www.travelocity.com.

Bed and Breakfast. Public safety services are provided by local Village Public Safety Office. Fire and rescue services are provided by White Mountain volunteer fire department. Additional public facilities include a community building and two libraries. Communication services include local and long distance telephone, internet, local and cable television, and local radio.¹⁴⁴⁸

In a survey conducted by the AFSC in 2011, community leaders reported that infrastructure projects completed between 2000 and 2010 included a fish cleaning station, barge landing area, water and sewer pipelines, diesel generator, sewage treatment, water treatment, new landfill site, community center/library improvements, fire department improvements, school improvements, telephone service improvements, and post office improvements. Infrastructure projects underway as of 2010 included broadband internet service, airport improvements, alternative energy projects, public safety improvements, and emergency response improvements. Fisheries-related businesses and services available in White Mountain include fishing gear sales, boat repair (welding), recreational fishing vessel moorage, tackle sales, fish lodges, fishing related bookkeeping, water taxi services, air taxi services, and sport fish guide services. Additional public services include publicly-subsidized housing. Residents typically travel to Nome, Golovin, and Anchorage for services not available locally.

*Medical Services*¹⁴⁴⁹

The Natchirsvik Health Clinic provides basic health care. There are several local health aides, and a public health nurse visits annually to conduct vaccinations. A medical doctor and a physical therapist visit bi-annually to White Mountain to see patients. Physician's assistants visit every two months. Eye doctors, dentists, and audiologists visit annually. The closest hospital is located in Nome.

*Educational Opportunities*¹⁴⁵⁰

White Mountain School provides preschool through 12th grade instruction. As of 2011, there were 52 students enrolled and 11 teachers.

Involvement in North Pacific Fisheries

History and Evolution of Fisheries

Prior to the arrival of Europeans, subsistence hunting and fishing was the basis of the economy for people living on the Seward Peninsula. Settlements on the west coast of the Peninsula targeted marine mammals, and other people moved between seasonal settlements to

¹⁴⁴⁸ See footnote 1446.

¹⁴⁴⁹ Northwest Planning and Grants Development (2004). *Community Strategic Development Plan for White Mountain 2004-2024*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2003.pdf>.

¹⁴⁵⁰ Alaska Department of Education and Early Development. (2012). *Statistics and Reports*. Retrieved April 24, 2012 from <http://eed.alaska.gov/stats/>.

access fish and wildlife resources. Today, residents of White Mountain are active in subsistence and recreational fishing.¹⁴⁵¹

Commercial salmon fisheries began to develop shortly after the purchase of Alaska by the U.S. in 1867. However, the Norton Sound commercial salmon fishery developed later than in other regions of the State. In 1959 and 1960, biologists from the Division of Commercial Fisheries conducted an inventory of salmon resources and determined that harvestable surpluses were present in several Norton Sound river systems. They encouraged processors to develop the fishery after statehood as part of an effort to bring economic benefits to this area of rural Alaska. The first commercial harvest occurred in 1961, and salmon markets in the area have been sporadic since that time. Harvests increased through the 1990s, and have declined since then.¹⁴⁵²

Commercial catch of herring for human consumption began in 1878 in Alaska, while harvest of herring for bait began around 1900, and herring sac roe fisheries developed in the late 1970s.¹⁴⁵³ Commercial exploitation of halibut and groundfish first extended into the Bering Sea region in 1928 after development of diesel engines, which allowed fishing vessels to undertake longer trips.¹⁴⁵⁴ King crab fisheries developed in the Bering Sea beginning in the 1950s. Norton Sound is one of the historical centers of this fishery.¹⁴⁵⁵

Norton Sound has the northernmost fisheries for both Pacific herring and red king crab. Although the Norton Sound herring spawning biomass has been relatively stable in recent times, the market for herring roe has declined due to decreasing consumption of herring roe in Japan. Processor interest in the Norton Sound sac roe fishery has declined more than in other areas of the State, largely due to the timing of the fishery, which takes place later than sac roe fisheries elsewhere in the state and conflicts with the opening of the first salmon fisheries of the season. In addition, ice floes are often present in Norton Sound during the herring season.¹⁴⁵⁶ In contrast, the Norton Sound red king crab stock has shown an increasing trend since a population low in the 1990s, and today provides small summer and winter fisheries. NMFS and ADF&G jointly manage Bering Sea king crab stocks.¹⁴⁵⁷ Nome king crab fishermen hold both state-issued king crab permits and permits used to participate in the Community Development Quota (CDQ) king crab fishery. The CDQ program “allocates a percentage of all Bering Sea and Aleutian Island quotas for groundfish, prohibited species, halibut, and crab to eligible communities.”¹⁴⁵⁸ In this region, communities are represented by the NSEDC.

¹⁴⁵¹ Scientific Technical Committee, Norton Sound Steering Committee (2003). *Research and Restoration Plan for Norton Sound Salmon*. Retrieved February 21, 2012 from <http://69.93.224.39/~aykssi/wp-content/uploads/NS-RR-Plan-rev.pdf>.

¹⁴⁵² Clark, McGregor, Mecum, Krasnowski and Carroll (2006). *The Commercial Salmon Fishery in Alaska*. Alaska Dept. of Fish and Game, Pgs. 105-146. Retrieved December 28, 2011 from http://www.adfg.alaska.gov/static/home/library/PDFs/afrb/clarv12n1_p4.pdf.

¹⁴⁵³ Woodby, Doug, Dave Carlile, Shareef Siddeek, Fritz Funk, John H. Clark, and Lee Hulbert (2005). *Commercial Fisheries of Alaska*. Alaska Dept. of Fish and Game, Special Publication No. 05-09. Retrieved December 29, 2011 from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>.

¹⁴⁵⁴ Thompson, William F. and Norman L. Freeman (1930). *History of the Pacific Halibut Fishery*. Report of the International Fisheries Commission. Number 5. Retrieved June 1, 2012 from <http://www.iphc.int/publications/scirep/Report0005.pdf>.

¹⁴⁵⁵ See footnote 1453.

¹⁴⁵⁶ Ibid.

¹⁴⁵⁷ Alaska Dept. of Fish and Game (2012). *Red King Crab Species Profile*. Retrieved June 20, 2012 from <http://www.adfg.alaska.gov/index.cfm?ADFG=redkingcrab.main>.

¹⁴⁵⁸ NOAA Fisheries (n.d.). *Community Development Quota (CDQ) Program*. Retrieved June 20, 2012 from <http://www.fakr.noaa.gov/cdq/default.htm>.

According to a survey conducted by the AFSC in 2011, community leaders reported that residents participate in salmon fisheries from mid-June through September. However, there is very limited commercial fishing in White Mountain, and most participate solely in recreational or subsistence fisheries. In addition, community leaders reported that White Mountain does not participate directly in the fisheries management process in Alaska. However, NSEDC does represent White Mountain's interests as their CDQ entity.

White Mountain is located within Federal Reporting Area 514, International Pacific Halibut Commission Regulatory Area 4E, and the Bering Sea Sablefish Regulatory District.

Processing Plants

According to ADF&G's 2010 Intent to Operate list, White Mountain does not have a registered processing plant. The closest seafood processor is located in Nome

Fisheries-Related Revenue

White Mountain received very little in fisheries-related revenue between 2000 and 2010 (Table 3). In 2010, \$128 was collected from raw fish taxes and Shared Fisheries Business Tax, compared to \$373 in 2000. Fisheries-related revenue peaked in 2006 at \$377. In addition, White Mountain also received \$100,000 from its CDQ entity in 2010, according to a survey conducted by the AFSC in 2011.

It should be noted that a direct comparison between fisheries-related revenue and total municipal revenue cannot reliably be made as not all fisheries-related revenue sources are included in the municipal budget.

Commercial Fishing

Commercial fishing is not practiced in White Mountain, as evidenced by the lack of permit activity between 2001 and 2010 noted in Table 4. In 2010, three residents, or 1.5% of the population, held three salmon permits issued by the Commercial Fisheries Entry Commission (CFEC); although none were actively fished. In 2000, five residents held a total of five CFEC permits; three of which were for salmon, and two for crab. In that that year, only one salmon permit was actively fished. That year was also the only year permits were actively fished between 2000 and 2010. Between 2000 and 2010, no residents held Federal Fisheries Permits, of License Limitation Program permits. In addition, no residents participated in the halibut, crab, or sablefish catch share programs during this period (Tables 6 to 8).

In 2010, one resident held a commercial crew license, compared to none in 2000. In addition, no residents held primary ownership of any vessels (Table 5). No landings were reported in White Mountain between 2000 and 2010 (Table 9). No landings were reported by residents in 2010, and landings reported in 2000 are considered confidential (Table 10).

Table 3. Known Fisheries-Related Revenue (in U.S. Dollars) Received by the Community of White Mountain: 2000-2010.

Revenue source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Raw fish tax ¹	\$320	n/a	\$158	\$158	\$157	\$62	\$188	\$188	\$188	\$80	\$58
Shared Fisheries Business Tax ¹	\$53	\$109	\$158	n/a	\$62	\$157	\$188	\$148	\$80	\$58	\$69
Fisheries Resource Landing Tax ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel transfer tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Extraterritorial fish tax ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bulk fuel transfers ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boat hauls ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Harbor usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Port/dock usage ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fishing gear storage on public land ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Marine fuel sales tax ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Total fisheries-related revenue⁴</i>	<i>\$373</i>	<i>\$109</i>	<i>\$316</i>	<i>\$158</i>	<i>\$219</i>	<i>\$219</i>	<i>\$377</i>	<i>\$336</i>	<i>\$268</i>	<i>\$138</i>	<i>\$128</i>
<i>Total municipal revenue⁵</i>	<i>\$887,012</i>	<i>\$795,144</i>	<i>\$454,416</i>	<i>\$581,498</i>	<i>\$1.07 M</i>	<i>\$1.05 M</i>	<i>\$979,358</i>	<i>\$691,898</i>	<i>\$1.06 M</i>	<i>\$1.45 M</i>	<i>\$1.18 M</i>

Note: n/a indicates that no data were reported for that year.

¹ Alaska Dept. of Comm. and Econ. Dev. (n.d.) *Alaska Taxable (2000-2010)*. Retrieved April 15, 2011 from http://www.commerce.state.ak.us/dca/osa/osa_summary.cfm.

² Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

³ Reported by community leaders in a survey conducted by the AFSC in 2011.

⁴ Total fisheries related revenue represents a sum of all known revenue sources in the previous rows.

⁵ Total municipal revenue represents the total revenue that the City reports each year in its municipal budget. Alaska Dept. of Comm. and Rural Affairs. (n.d.) *Financial Documents Delivery System*. Retrieved April 15, 2011 at http://www.commerce.state.ak.us/dcra/commfin/CF_FinRec.cfm.

Table 4. Permits and Permit Holders by Species, White Mountain: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Groundfish (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (LLP) ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Active permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Federal Fisheries Permits ¹	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Crab (CFEC) ²	Total permits	2	1	1	1	1	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	0%	0%	0%	0%	0%	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	2	1	1	1	1	0	0	0	0	0	0
Other shellfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Halibut (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Herring (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0

Table 4 cont'd. Permits and Permit Holders by Species, White Mountain: 2000-2010.

Species		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sablefish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Groundfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Other Finfish (CFEC) ²	Total permits	0	0	0	0	0	0	0	0	0	0	0
	Fished permits	0	0	0	0	0	0	0	0	0	0	0
	% of permits fished	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total permit holders	0	0	0	0	0	0	0	0	0	0	0
Salmon (CFEC) ²	Total permits	3	3	3	3	3	3	3	3	3	3	3
	Fished permits	1	0	0	0	0	0	0	0	0	0	0
	% of permits fished	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Total permit holders	3	3	3	3	3	3	3	3	3	3	3
<i>Total CFEC Permits²</i>	<i>Permits</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>
	<i>Fished permits</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>% of permits fished</i>	<i>20%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>
	<i>Permit holders</i>	<i>5</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>

¹ National Marine Fisheries Service. (2011). Data on License Limitation Program, Alaska Federal Processor Permits (FPP), Federal Fisheries Permits (FFP), and Permit holders. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 5. Characteristics of the Commercial Fishing Sector in White Mountain: 2000-2010.

Year	Crew License Holders ¹	Count of All Fish Buyers ²	Count of Shore-Side Processing Facilities ³	Vessels Primarily Owned by Residents ⁴	Vessels Homeported ⁴	Vessels Landing Catch in White Mountain ²	Total Net Pounds Landed in White Mountain ^{2,5}	Total Ex-Vessel Value of Landings in White Mountain ^{2,5}
2000	0	0	0	4	5	0	0	\$0
2001	0	0	0	3	3	0	0	\$0
2002	0	0	0	3	2	0	0	\$0
2003	0	0	0	3	2	0	0	\$0
2004	2	0	0	3	2	0	0	\$0
2005	1	0	0	0	0	0	0	\$0
2006	1	0	0	0	0	0	0	\$0
2007	1	0	0	0	0	0	0	\$0
2008	3	0	0	0	0	0	0	\$0
2009	6	0	0	0	0	0	0	\$0
2010	1	0	0	0	0	0	0	\$0

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Data on Alaska fish processors. ADF&G Division of Commercial Fisheries. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁴ Alaska Commercial Fisheries Entry Commission. (2011). Alaska commercial fishing permits, permit holders, and vessel licenses, 2000 – 2010. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

⁵ Totals only represent non-confidential data.

Table 6. Halibut Catch Share Program Participation in White Mountain: 2000-2010.

Year	Number of Halibut Quota Share Account Holders	Halibut Quota Shares Held	Halibut IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 7. Sablefish Catch Share Program Participation by Residents of White Mountain: 2000-2010.

Year	Number of Sablefish Quota Share Account Holders	Sablefish Quota Shares Held	Sablefish IFQ Allotment (pounds)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 8. Bering Sea and Aleutian Island Crab Catch Share Program Participation by Residents of White Mountain: 2000-2010.

Year	Number of Crab Quota Share Account Holders	Crab Quota Shares Held	Crab IFQ Allotment (pounds)
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

Source: National Marine Fisheries Service. (2011). Alaska Individual Fishing Quota (IFQ) permit data. NMFS Alaska Regional Office. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

Table 9. Landed Pounds and Ex-vessel Revenue, by Species, in White Mountain: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	0	0	0	0	0	0	0	0	0	0	0
Finfish	0	0	0	0	0	0	0	0	0	0	0
Halibut	0	0	0	0	0	0	0	0	0	0	0
Herring	0	0	0	0	0	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	0	0	0	0	0	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	0	0	0	0	0	0	0	0	0	0	0
<i>Total²</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Herring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Table 10. Landed Pounds and Ex-vessel Revenue, by Species, by White Mountain Residents: 2000-2010.

	<i>Total Net Pounds¹</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	0	0	0	0	0	0
Finfish	--	--	--	--	--	0	0	0	0	0	0
Halibut	--	--	--	--	--	0	0	0	0	0	0
Herring	--	--	--	--	--	0	0	0	0	0	0
Other Groundfish	0	0	0	0	0	0	0	0	0	0	0
Other Shellfish	--	--	--	--	--	0	0	0	0	0	0
Pacific Cod	0	0	0	0	0	0	0	0	0	0	0
Pollock	0	0	0	0	0	0	0	0	0	0	0
Sablefish	0	0	0	0	0	0	0	0	0	0	0
Salmon	--	--	--	--	--	0	0	0	0	0	0
<i>Total²</i>	--	--	--	--	--	0	0	0	0	0	0
	<i>Ex-vessel Value (nominal U.S. dollars)</i>										
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Crab	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Finfish	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Halibut	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Herring	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Other Groundfish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Shellfish	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
Pacific Cod	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pollock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sablefish	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Salmon	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0
<i>Total²</i>	--	--	--	--	--	\$0	\$0	\$0	\$0	\$0	\$0

Note: Cells showing -- indicate that the data are considered confidential.

Source: Alaska Department of Fish and Game, and Alaska Commercial Fisheries Entry Commission. (2011). Alaska fish ticket data. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

¹ Net pounds refers to the landed weight recorded in fish tickets.

² Totals only represent non-confidential data.

Recreational Fishing

Recreational fishing is practiced in the community, although participation is minimal. At least one licensed sport fish guide was present in the community in all years of the 2000-2010 period except 2009, although no active sport fish guide businesses were registered in any year of the decade. However, nearby Alaskan Northwest Adventures specializes in grayling fly fishing on the Niukluk River. Private angler fishing is equally minimal. In 2010, 16 sport fishing licenses were sold in White Mountain, and residents held a total of 30 sport fishing licenses, compared to 10 and 12 in 2000, respectively. This indicates that residents are travelling to other communities to undertake recreational fishing activities. The number of sport fishing licenses held by residents peaked in 2002 at 53 (Table 11).

White Mountain is located in the Seward Peninsula-Norton Sound ADF&G Harvest Survey Area which includes all waters north of the Yukon River drainage and south of the Selawik River Drainage. In 2010, there were 77 total saltwater angler days fished in the region, compared to 2,859 in 2000. In that year, non-Alaska residents accounted for 55.8% of saltwater angler days fished in the region, compared to 6.9% in 2000. Although annual Alaska resident saltwater angler days fished varied between 2000 and 2010, there was a significant decline in 2010 compared to previous years. Also in 2010, there was a total of 10,533 freshwater angler days fished, compared to 15,584 in 2000. Of that total, non-Alaska residents accounted for 41.1%, compared to 24.3% in 2000. Information regarding sport fishing trends can be found in Table 11.

According to ADF&G harvest survey records, local private anglers target coho salmon and Pacific halibut.¹⁴⁵⁹ In a survey conducted by the AFSC in 2011, private anglers also target pink, chum, and Chinook salmon, and trout. Recreational fishing is conducted by private boat owned by both local residents, and non-residents.

Table 11. Sport Fishing Trends, White Mountain: 2000-2010.

Year	Active Sport Fish Guide Businesses¹	Sport Fish Guide Licenses¹	Sport Fishing Licenses Sold to Residents²	Sport Fishing Licenses Sold in White Mountain²
2000	0	4	12	10
2001	0	2	46	29
2002	0	5	53	23
2003	0	5	49	16
2004	0	6	37	34
2005	0	2	46	22
2006	0	2	49	26
2007	0	3	46	28
2008	0	1	49	10
2009	0	0	42	8
2010	0	1	30	16

¹⁴⁵⁹ Alaska Department of Fish and Game (2011). *Alaska Sport Fishing Survey results, 2000-2010*. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sf/sportfishingsurvey/> (Accessed September 2011).

Table 11 cont'd. Sport Fishing Trends, White Mountain: 2000-2010.

Year	Saltwater		Freshwater	
	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³	Angler Days Fished – Non-residents ³	Angler Days Fished – Alaska Residents ³
2000	196	2,663	3,789	11,795
2001	64	988	2,087	7,816
2002	94	1,650	4,321	12,260
2003	30	1,530	3,632	7,211
2004	204	497	4,183	8,439
2005	56	1,940	8,307	6,764
2006	90	1,400	3,547	12,535
2007	49	530	3,688	12,400
2008	n/a	655	3,761	17,579
2009	133	897	4,198	11,995
2010	43	34	4,334	6,199

¹ Alaska Department of Fish and Game. (2011). Alaska sport fish guide licenses and businesses, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

² Alaska Department of Fish and Game. (2011). Alaska sport fish and crew license holders, 2000 – 2010. ADF&G Division of Administrative Services. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. [URL not publicly available as some information is confidential.]

³ Alaska Department of Fish and Game. (2011). Alaska Sport Fishing Survey results, 2000 – 2010. ADF&G Division of Sport Fish, Alaska Statewide Harvest Survey project. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. http://www.adfg.alaska.gov/sf/sport_fishingsurvey/ (Accessed September 2011).

Subsistence Fishing

Subsistence fishing is an important part of community life in White Mountain. Subsistence fishing has been practiced widely by the areas inhabitants for thousands of years and by the 19th century, the Niukluk River community *Iialuit* was a prominent fish camp. Chum and pink salmon harvests are cyclical with more chum salmon being harvested on odd years. Beach seines are the most popular type of gear for catching salmon; however, set gill nets and rods and reels are also used. In a community survey conducted in 2011, elders commented that salmon harvests had been in decline over the years.¹⁴⁶⁰

The community's economy depends on subsistence fishing, hunting, and gathering; and most residents spend the entire summer at fish camps.¹⁴⁶¹ ADF&G subsistence data are limited, and information on subsistence participation by household is unavailable (Table 12). However, in a survey conducted by the AFSC in 2011, community leaders reported that pink salmon, crab,

¹⁴⁶⁰ Magdanz, J. S.; Tahbone, S.; Kamletz, K.; and Ahmasuk, A. (2001). *Subsistence Salmon Fishing by Residents of Nome, Alaska, 2001*. Technical Paper 274. Retrieved August 10, 2012 from: <http://alaska.fws.gov/asm/pdf/fisheries/reports/01-224final.pdf>.

¹⁴⁶¹ Northwest Planning and Grants Development (2004). *Community Strategic Development Plan for White Mountain 2004-2024*. Retrieved August 9, 2012 from: <http://www.commerce.state.ak.us/dca/plans/WhiteMountain-EDP-2003.pdf>.

and chum salmon are the three most important subsistence resources to residents of White Mountain.

ADF&G does report use of marine resources for subsistence at the community level. Of the species listed by ADF&G in Table 13, while all five species of salmon are used, residents report harvesting pink salmon most often; followed by chum, coho, Chinook, and sockeye salmon. In 2010, residents reported harvesting 5,667 salmon, compared to 7,941 in 2000. In each year (with the exception of 2001 and 2007), pink salmon were harvested at a significant majority.

Halibut are not fished extensively for subsistence purposes by White Mountain residents. Between 2003 and 2007, one residents held a Subsistence Halibut Registration Certificate (SHARC) although no halibut was reported harvested in any of those years (Table 14). No specific harvest data are available for marine mammals (Table 15).

Additional Information

In a survey conducted by the AFSC in 2011, community leaders reported that current challenges facing the portion of White Mountain’s economy based on fishing included the cost of fishing gear, catch limits, low harvest levels, and the lack of a local commercial fishing industry. Fisheries policies or management actions that have had a positive influence on the community include conservation and escapement practices that have ensured that most fish are allowed to return and spawn. Negative influences include bag limits that create a difficult environment for residents who are dependent on fisheries.

Table 12. Subsistence Participation by Household and Species, White Mountain: 2000-2010.

Year	% Households Participating in Salmon Subsistence	% Households Participating in Halibut Subsistence	% Households Participating in Marine Mammal Subsistence	% Households Participating in Marine Invertebrate Subsistence	% Households Participating in Non-Salmon Fish Subsistence	Per Capita Subsistence Harvest (pounds)
2000	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Alaska Department of Fish and Game. 2011. Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 13. Subsistence Fishing Participation for Salmon, Marine Invertebrates, and Non-Salmon Fish, White Mountain: 2000-2010.

Year	Subsistence Salmon Permits Issued ¹	Salmon Permits Returned ¹	Chinook Salmon Harvested ¹	Chum Salmon Harvested ¹	Coho Salmon Harvested ¹	Pink Salmon Harvested ¹	Sockeye Salmon Harvested ¹	Lbs of Marine Inverts ²	Lbs of Non-Salmon Fish ²
2000	67	65	120	289	932	6,600	n/a	n/a	n/a
2001	65	63	21	2,083	557	1,497	4	n/a	n/a
2002	65	59	27	706	581	6,014	n/a	n/a	n/a
2003	62	56	79	961	131	4,484	n/a	n/a	n/a
2004	55	55	21	404	318	6,941	6	n/a	n/a
2005	60	59	20	1,083	406	5,892	5	n/a	n/a
2006	48	48	24	440	685	6,253	4	n/a	n/a
2007	54	53	101	2,342	524	2,022	214	n/a	n/a
2008	56	56	59	78	886	4,644	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Fall, J.A., C. Brown, N. Braem, J.J. Simon, W.E. Simeone, D.L. Holen, L. Naves, L. Hutchinson-Scarborough, T. Lemons, and T.M. Krieg. 2011, revised. Alaska subsistence salmon fisheries 2008 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 359, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² Alaska Department of Fish and Game. (2011). Community Subsistence Information System (CSIS). ADF&G Division of Subsistence. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle. <http://www.adfg.alaska.gov/sb/CSIS/> (Accessed February 2011).

Table 14. Subsistence Halibut Fishing Participation, White Mountain: 2003-2010.

Year	SHARC Issued	SHARC Cards Fished	SHARC Halibut Lbs Harvested
2003	1	n/a	n/a
2004	1	n/a	n/a
2005	1	n/a	n/a
2006	1	n/a	n/a
2007	1	n/a	n/a
2008	n/a	n/a	n/a
2009	n/a	n/a	n/a
2010	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

Source: Fall, J.A. and D. Koster. (2011). Subsistence harvests of Pacific halibut in Alaska, 2009. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 357, Anchorage. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

Table 15. Subsistence Harvests of Marine Mammal Resources, White Mountain: 2000-2010.

Year	# of Beluga Whales ¹	# of Sea Otters ²	# of Walrus ²	# of Polar Bears ²	# of Steller Sea Lions ³	# of Harbor Seals ³	# of Spotted Seals ³
2000	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2001	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2003	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: n/a indicates that no data were reported for that year.

¹ Frost, K.J., and R.S. Suydam. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987–2006. *J. Cetacean Res. Manage.* 11(3): 293–299. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

² U.S. Fish and Wildlife Service. 2011. Marking, Tagging and Reporting Program data bases for northern sea otter, Pacific walrus and polar bear. Office of Marine Mammals Management. Anchorage, Alaska. Data compiled by Alaska Fisheries Information Network for Alaska Fisheries Science Center, Seattle.

³ Wolfe, R.J., Fall, J.A. and M. Riedel. 2009. The subsistence harvest of harbor seals and sea lions by Alaska Natives in 2008. Alaska Native Harbor Seal Commission and Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 347, Anchorage.

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